

Session Abstracts of the 2026 SAA 91st Annual Meeting, San Francisco, California

The ANNUAL MEETING of the Society for American Archaeology provides a forum for the dissemination of knowledge and discussion. The views expressed at the sessions are solely those of the speakers and the Society does not endorse, approve, or censor them. Descriptions of events and titles are those of the organizers, not the Society.

[16] Symposium • Archaeology, Collaboration, and Community Empowerment: Are We Living Up to Expectations?

In this presidential session organized for the 2026 Society for American Archaeology meeting in San Francisco, archaeologists and community members will discuss the successes, failures, lessons learned, and insights gleaned from collaborative projects conducted in vastly different contexts from the Western Hemisphere. The practice of archaeology involves myriad entanglements with neighbors; descendant communities; and local, national, and international entities, many of whom have significant vested interests in archaeological remains and knowledge. In spite of this and with several notable exceptions, the field has traditionally overlooked or marginalized these groups beyond what has been absolutely necessary to facilitate investigations. Community archaeology, in contrast, roots scientific methodology and interpretation in explicit and sustained engagement with those affected by our research. The three projects showcased in this session highlight the vastly different approaches such a relationship can take.

[21] Symposium • Histories of Mismeasure: Archaeology's Entanglement with Anthropometric Study in Mexico and Guatemala

Throughout the twentieth century, archaeological sites in Mexico and Central America became magnets for a constellation of researchers beyond the field of archaeology. Institutional affiliations from entities like the Smithsonian, the Carnegie Institute of Science, and private companies galvanized support and networks of researchers to take advantage of the platform of archaeological work for myriad projects. While scholars have long contextualized archaeological work within greater political economic projects, few have sought to problematize the troubling relationship between twentieth-century anthropometric studies and archaeological research. This is especially worth disentangling for sites with descendant communities that were historically and often artificially separated from their ancestral lands via anthropometric studies, which conveniently tried to disaggregate community relationships to historical places. Focusing on Mexican and Guatemalan sites in the twentieth century, these papers bring together a history of these anthropometric entanglements with archaeological work, from the sites of Zaculeu, Guatemala; El Tajín, Mexico; and Chichen Itza, Mexico. We ask: How did projects of racialization co-construct each other between anthropometric studies and archaeological studies? How were people, in the context of the archaeological site, "datafied?" And what are the legacies of these datafications that have impacted the reading of the archaeological record?

[22] General Session • Historic Cemeteries

[23] General Session • *CA Archaeology for the Present in California

[24] Symposium • Land of the Dead: Bioarchaeological Perspectives on Mortuary Practices in Mesoamerican Subterranean Spaces

As places of religious and cosmological significance, Mesoamerican subterranean spaces serve as fitting sites central to ritual and communal activities, including mortuary practices. The subterranean mortuary landscape is incredibly diverse and dynamic, which contributes to its interpretative complexity. The processes of human body disposal in both funerary and non-funerary treatments and mortuary site formation are often challenging to reconstruct due to a host of issues. These include, but are not limited to, protracted mortuary treatment, reduction or addition of complete or partial bodies, taphonomic actions, and the reuse of space over extended periods of time. Interdisciplinary, problem-oriented research provides a means to understand the myriad mortuary practices encountered in subterranean spaces. The goal of this session is to advance theoretical perspectives and methodological approaches in subterranean bioarchaeology.

[25] Symposium • Health in Ancient Northern Mexican Populations

This symposium explores the health of prehispanic and historic populations in Northern Mexico through a bioarchaeological framework. We aim to highlight the complex interplay between individuals, their social

groups, environmental conditions, and cultural traditions. Contributors are encouraged to engage directly with the **osteological paradox**, critically examining how skeletal evidence reflects both biological and social dimensions of health. We seek studies that integrate osteological data with archaeological context to provide a nuanced understanding of past lifeways and how it is tied to health. Presentations should be deeply rooted in their temporal and spatial archaeological settings, offering robust analyses of skeletal manifestations of disease, trauma, and other physiological stressors. Beyond documenting pathology, we invite participants to explore how these conditions illuminate broader aspects of social life, such as responses to climate change, expressions of identity(s), caregiving practices, and social inequalities. This symposium aims to foster dialogue and highlight innovative research focusing on bridging biological data with the archaeological context. We ask that presenters please indicate in their abstract whether or not their presentation includes images of human remains, to follow SAA's submission guidelines.

[26] Symposium • Tradition, Innovation, and Technology: Living Legacies of Juan Quezada and the Mata Ortiz Ceramic Community

This session explores the dynamic foundations of the Mata Ortiz pottery tradition, inspired by master potter Juan Quezada (1940–2022), whose internationally renowned artistic legacy was sparked by encounters with prehistoric Casas Grandes pottery. Moving beyond this artistic acclaim, we demonstrate how interdisciplinary inquiry reveals that the deeper significance of Mata Ortiz pottery lies in the interplay between innovative geologic knowledge, the community's social networks, and relationships with the Chihuahuan landscape. Integrating ethnography, artisan knowledge, and compositional analysis, our interdisciplinary presenters address three core themes. First, we explore Quezada's geologic knowledge and innovations in clay selection, processing, and firing, providing an ethnographic lens to interpret archaeological compositional data. Second, we use compositional data from multiple Mata Ortiz potters to trace how innovation diffuses through social networks to form regional traditions. Third, we explore concepts of geo-identity and living histories to understand how relationships between land and material heritage are formed and sustained. Finally, we explore how our collaborative research has transformed the perspectives of participating researchers, and how these insights can be extended into meaningful engagement with local communities. The results presented aim to generate new frameworks to enrich archaeological interpretations while supporting the living vitality of the Mata Ortiz community.

[27] Forum • For the People: Harnessing the Community of Practice for Heritage Education

Public outreach and heritage education are central to archaeology's mission of fostering stewardship, cultural understanding, and public engagement. Over the past 40-plus years, archaeologists, educators, and community partners have built a substantial body of heritage education curricula, activities, and interpretive resources for audiences ranging from K–12 students to adult learners. Yet, as our field continues to evolve, it remains essential to harness the collective wisdom and experience of our heritage education community, ensuring that curriculum and program development are innovative, grounded in proven practices, and accessible—thus avoiding the perpetual reinvention of the wheel. This forum brings together members of the heritage education community to discuss their experiences with and approaches for engaging our publics. The forum will focus on integrating archaeological knowledge into educational contexts that resonate with formal school systems, informal learning environments, and the public. Participants will be invited to join breakout groups, fostering dialogue and creativity among educators, practitioners, and attendees. These interactive sessions aim to identify fresh perspectives, emerging challenges, and devise practical solutions for engaging our publics with archaeology's relevance and potential.

[28] Forum • Mind the Gap: Guidelines and Justifications for Geoarchaeology and Deep Testing in CRM

Archaeological sites are shaped by both human activity and natural processes, yet cultural resource management (CRM) in the United States often fails to consider how to sufficiently address deeply buried deposits. The SAA's Geoarchaeology Task Force (2025) reports that 54% of states lack guidance on deep testing, creating a "testing gap" between the depth limits of shovel testing and project impacts that exceed these limits. This increases the risk for buried intact cultural resources, unanticipated discoveries during construction, and costly project delays. Further, 68% of states have no qualification standards for

geoarchaeologists, raising concerns about consistency and reliability in current deep testing. This panel will examine the need for consistent countrywide guidelines for geoarchaeological assessment, the benefits they provide, and role of qualified practitioners in producing scientifically robust outcomes and risk reduction. Panelists will highlight methods such as trenching, coring, stratigraphic analysis, and landscape modeling—approaches that improve site discovery rates, reduce compliance risks, and support avoidance strategies that can save millions in mitigation costs. By incorporating geomorphic analysis and deep testing early in project planning, CRM practitioners can more effectively meet Section 106 obligations, protect significant buried resources, and advance a more efficient, scientifically grounded practice of archaeology.

[29] Lightning Round • Navigating, Creating, and Sustaining Collaborative Research in Graduate School: Perspectives from Current Students

Collaborating with communities is an important tenet of archaeological research. Many graduate students and young professionals recognize the need to establish these relationships early on in their careers, yet there are often obstacles associated with that process. Some issues faced are traditional time to degree, ethical concerns regarding research, and building a network of collaborators. This results in many people feeling intimidated to initiate collaborative research. Although this process looks different depending on individual communities and their experiences, many students have succeeded by using varied approaches. We feel it is important to have a space to facilitate these conversations among students and young professionals.

[30] General Session • Are You What You Eat? Examining Ancient Foodways

[31] Symposium • Oh Deer! Trials, Tribulations, and Triumphs in the Study of Human-Cervid Interactions

Human-cervid relationships are a cornerstone in understanding subsistence practices, hunting strategies, and cultural values globally. From early European and Asian Neolithic hunting practices and ceremonial use of antler in headdresses to the varied representation of deer in precolonial iconography of the Andes, cervids hold a range of meanings to past societies. In this session, we implore participants to consider the successes and difficulties in studying cervids across distinct geographic regions. We seek to spark a rich dialogue of common and divergent goals, challenges, and solutions to investigating the life histories of these important species to comprehend the myriad of ways that people engaged with their environments and valued this diverse taxonomic group of other-than-human beings.

[32] Symposium • Lifeways of Prehistoric Coastal Populations of Northern Chile / Formas de vida de las antiguas poblaciones costeras del norte de Chile

The north coast of Chile has been a locus of human occupation for at least 11,000 years. Juxtaposed against the barren and “inhospitable” Atacama Desert that lies to its east, the Pacific Ocean coastline provided a rich and reliable resource base for marine hunter-gatherer-fishers. This dichotomy decreases to the south, where the high coastal range and rivers connect the interior with the sea, offering greater habitability. Nevertheless, direct (logistical forays) and indirect (trade with other groups) provisioning of certain goods only found extra-locally was vital to prehistoric coastal lifeways. These movements and interactions (accomplished through pedestrian travels and seafaring), while of undeniable economic importance, facilitated the exchange of social information and thus promotes intercultural relations and expansion of inhabited material and social worlds. This symposium brings together new research that illuminates the deeply interconnected nature of prehistoric societies on the coast of northern Chile, and examines how the movement of goods, people, and ideas created social entanglements, forming a landscape inhabited, shaped, claimed, and deeply understood by its prehistoric inhabitants.

[33] Symposium • Developing Tool Kits for Exploring Relational Worlds in the Andes

For many Indigenous peoples, reality comprises the relationships that compose it. Within a relational world, beings—human, animal, atmospheric, and ancestral—do not preexist their interactions; rather, they emerge from them. Such an ontological orientation challenges foundational assumptions of modern Western knowledge systems, including those that underlie much of archaeological practice. Session participants consider what it would mean to make relational thinking central to archaeological investigations rather than

assuming a universal understanding of things as discrete, immutable, and autonomous. What would an archaeology that begins from a native Andean metaphysical position look like? What might be evidenced of local ontologies by focusing, for instance, on contextually specific relations among elements of assemblages found in different settings? Or on trans-temporal/trans-local objects, substances, or phenomena? How does Andean relational thinking compel researchers to modify their methodological tool kit? The aim of the papers in this session is to think outside of conventional archaeological classification schemes that treat artifacts and objects as isolated and essentialized entities and look instead at what new kinds of relational taxonomies might bring into view about ancient/non-Western worlds.

[34] Symposium • Community-Engaged Archaeology in the American Southwest

The American Southwest has a long-standing commitment to collaborative, community-engaged archaeology. Such work builds inclusive understandings of the past, fosters trust and goodwill, educates about the importance of archaeology, and provides venues for marginalized voices. This symposium demonstrates the continued benefits of working with a variety of stakeholders, from Indigenous groups and descendant communities to the general public and even avocational and professional archaeologists.

[35] Symposium • Bajos, Soils, and Swamps in Maya and Caribbean Environmental Archaeology: Session in Honor of the Ongoing Career of Nick Dunning

Professor Nicholas Dunning is a leading influence in Maya, Caribbean archaeology, and world geoarchaeology, soils geomorphology, and geography research. His leadership roles include scientist, peer, mentor, advisor, teacher, and friend to many across his fields of influence, from his BA and MA at the University of Chicago and his PhD at the University of Minnesota, to his long career at the University of Cincinnati as professor and head of geography, Environmental Geoarchaeology Lab director, director of Latin American Studies, and his ongoing role as Distinguished Research Professor. Nick has mentored and elevated the careers of scores of students and colleagues at all levels. He has also advised a remarkable number of doctorates and master's degrees at the University of Cincinnati. This symposium brings together scholarship related to the considerable contributions and influence of Dr. Nicholas Dunning to Maya, Caribbean and world archaeology, geoarchaeology, and paleoenvironmental science. An international slate of speakers will focus on the following topics: novel research presentations on Maya and Caribbean environmental archaeology that Nick has supported, influenced, and contributed to over many decades; discussions on his research, pedagogy, and mentorship; and complementary special topics on field archaeology, geoarchaeology, remote sensing innovations in archaeology, and paleoecology.

[36] Symposium • Ancient Maya Household Production

Since Wendy Ashmore's edited volume *Ancient Maya Settlement Patterns* in 1981, much field research has been carried out, including focusing on Maya residences. Maya households were the basic unit of production for many goods and resources. This session includes a discussion of the identification of ancient Maya households as well as the types of production carried out. Households are identified by lidar and/or pedestrian survey for mounds or stone architecture, chemical patterns in the soil or marine sediment, underwater survey for wooden building posts, and excavation for buried remains. Several measures are used to evaluate wealth among ancient Maya households, both within communities and more broadly in the Maya area. Some household production was for family use, but in many cases, householders exchanged goods and resources within their community or for marketplace trade at markets within or beyond their community. Some communities were located near natural resources of various sizes, such as chert or salt. Obsidian, jadeite, and marine shell were traded as raw materials and produced into objects. Papers in this session discuss methods for identifying households and their wealth or ranking, as a basis for discussing household production and its integration with larger exchange systems.

[37] Symposium • Tribal Engagement for the Start: Integrating Tribes into Archaeological Fieldwork and Project Workflow

The cultural resource management (CRM) industry is marked by increased Tribal involvement in cultural resources planning, yet invitations for Tribal engagement are consistently focused on the back end of project development, particularly during mitigation planning. Early engagement and collaboration with Tribal partners

not only broaden cultural and archaeological understanding but support agencies and project proponents in building meaningful relationships with communities most likely affected by development. Today, we are moving beyond questions like “What is Tribal engagement?” toward asking ourselves, “How do we engage Tribes meaningfully and sustainably as part of standard CRM workflow?” This presentation explores the innovative strategies co-created with Indigenous partners and employed by WestLand Resources and our clients to engage Tribes in all phases of project development, from initial planning to resource identification, interpretation of data, mitigation, and continued outreach after project completion. This discussion summarizes best practices for integrating Tribes into archaeological fieldwork and project workflow in order to build transparent, productive, and respectful working relationships between Tribes, archaeologists, and project proponents. The panel will also offer practical recommendations for long-term Tribal engagement strategies, partnership-building, and project budgeting, as well as development and implementation of resource management agreements and data-sharing best practices.

[38] Symposium • Ideational Cognitive Archaeology (ICA): Beyond Mind-Blind Approaches to the Past

The archaeological record documents human behavior. While behavioral evidence is the object of our analyses, it cannot logically also be our subject of study, especially if explanation is a goal. Behavior is instead explained by cognition—human thought—occurring within constraints imposed by contexts and circumstances. Ideational Cognitive Archaeology foregrounds the importance of the fully evolved (rather than still evolving) human mind in its archaeological analyses, in the process moving beyond the tautology of behaviorist approaches. We illustrate this approach in a series of studies that use ethnography, natural models, neuropsychology, analogy, the Direct-Historical Approach, and other methods to develop archaeological interpretations of symbolism, ritual, religion, social processes, and ideology more generally.

[40] Symposium • Mapping the Gaps: Toward a Better Understanding of the Circum-Titicaca Basin

The circum-Titicaca basin, a high-altitude environment with intense climate variations and challenging living conditions, is one of the oldest population centers in the Andes. Despite being the focus of scientific interest for at least two centuries, the research across the circum-Titicaca basin has been uneven, with a focus on certain areas, sociocultural centers, and chronologies. The border between Peru and Bolivia has not facilitated the integration of project results to build a thorough overview of the Titicaca basin through time. There are several recent innovative projects that contribute to filling the knowledge gaps and provide new insights into major archaeological questions. This symposium will gather contributions presenting the latest research in the area and enable the comparison of those trends at the regional scale. We hope the symposium will enable participants to explore new avenues of research into material culture, chronologies from the Archaic period (8500 BCE) to the colonial period (1532–1825 CE), and settlement patterns, as well as the impact of climate change on agropastoral practices and the land-management strategies adopted by local populations.

[41] Symposium • Complex Biface Technologies of the Terminal Pleistocene and Early Holocene: A View from Latin America

Complex chipped stone bifaces offer an important artifact category for comparing archaeological cultures and for defining sequences of cultural change. Because these distinctive specimens result from reduction sequences that are often long, complex, and culturally specific, they are used by archaeologists to provide much of the framework for culture change, provide evidence for social interactions, and document the appearance and evolution of culture areas. Although these inferences are both imperfect and incomplete, in the archaeological record of the Terminal Pleistocene to Early Holocene, chipped stone tools are often important evidence for studying and reconstructing cultural behaviors. This symposium includes studies of diagnostic complex biface assemblages from Central America and South America that have been recovered from very early contexts. These assemblages offer important clues about the Peopling process, and for how regions were filled in between ca. 13,000 and 10,000 years ago. Discussions will cover a range of issues related to regionalization, mobility, and raw material sources, as well as the social and symbolic characteristics that encompass the manufacture of bifaces.

[42] Symposium • Emerging Multiscalar Approaches to the Life Course in Bioarchaeology

Use of the life course perspective, which views the body as the sum of all social and biological experiences (Agarwal 2016), is a well-established paradigm within bioarchaeology. As an inherently biocultural endeavor, the life course draws on developments across several disciplines and proposes an intellectual framework to address wider anthropological goals. While a broad suite of methods have been used to explore the life course, theoretical treatment of the ways in which we integrate and interpret multiscalar data, including across the skeletal body, within different mineralized tissues, before and after death, and across geographic and temporal scales, has at present not been fully holistically explored. Contemporary approaches in social theory have encouraged viewing the creation of the embodied subject as emergent, an active and iterative process, as well as adopting a deep-time perspective extending the life course to include evolutionary and postdepositional processes. It also works to situate historical and contextual analysis as more than descriptive—as explanatory of the material phenomena we observe. This session brings together participants to explore the prospects and challenges of multiscalar approaches to the study of the life course, including scholarship related to skeletal, fossil, archival, histological, isotopic, and paleopathological analyses.

[43] Symposium • Knots, Glyphs, and Data: The Landscape of Modern Decipherment in the Ancient Americas

In recent decades, decipherment work across the Americas has been transformed, particularly in Mesoamerica and the Andes. Continued systematic data collection and the growing availability of digital resources have generated large-scale corpora, making the study of precolumbian records more accessible than before. At the same time, new approaches leveraging data science, artificial intelligence (AI), and machine learning (ML) are being used to analyze, classify, and predict patterns in these ancient records. These methods are emerging alongside a rise in interdisciplinary collaboration, bringing together universities, museums, independent scholars, and data scientists. Collectively, these advances hold the potential to significantly accelerate decipherment efforts and generate new insights into the histories and cultures of the ancient Americas through their own records. Rather than reinforcing disciplinary divisions—such as those between Mesoamerican epigraphy and Andean khipu studies—this integrated session brings together scholars working on decipherment across regions into a single forum. In doing so, it will highlight shared challenges and foster cross-regional dialogue in the ever-growing landscape of precolumbian scripts and communication systems. We welcome contributions that employ computational methods, including the creation of digital databases, novel approaches to script recognition and analysis, encoding, and broader reflections on the implications of technology for precolumbian studies.

[44] Symposium • Advances in Applications of Microbotanical Analyses: Methodologies and Applications in Archaeological Research

Microbotanical analyses, broadly defined to include starch grains, phytoliths, pollen, and non-pollen palynomorphs, in paleoethnobotanical research have provided insights into ancient foodways, agricultural practices, and paleoenvironmental conditions. Microbotanical methodologies have been used for over a century, beginning with early palynological applications to archaeological investigations. We aim to foster a dialogue among researchers working with different microbotanical remains and highlight emerging research directions. We welcome contributions that address methodological and taphonomical issues and/or interpretive challenges, and report new findings that highlight the analytical potential of microbotanical remains to address archaeological questions. This session also seeks to demonstrate how integrative approaches and cross-disciplinary collaboration that use microbotanical evidence continue to revolutionize our understanding of human-environment interactions.

[45] Symposium • Beyond the Osseous: Applications of Soft-Tissue Analysis in Zooarchaeology

The preservation of organic, non-osseous material is a luxury for archaeological research. Whether through intentional preservation, rapid deposition, aridity, or extreme cold, the soft tissue preservation opens avenues for understanding human culture that are not possible through the study of osseous material alone. While the most popular examples of these studies focus on human mummification, similar research questions can be pursued with preserved soft tissue from faunal remains. This includes, but is not limited to, the preservation of whole animal carcasses, hair, wool, feathers, claws, talons, and leather. Zooarchaeological

research is naturally biased toward the identification and quantification of hard, osseous tissues, leaving gaps in the study of soft, non-osseous material. These topics include differences in the zooarchaeological versus textile analysis of animal hair fibers, the application of biomolecular approaches, like stable isotope analysis (SIA) and Zooarchaeology by Mass Spectrometry (ZooMS), and alternative methods of taxonomic identification. This symposium is open to researchers from both zooarchaeological, textiles, and bioarchaeology backgrounds to share research on non-osseous material in zooarchaeological research.

[46] Symposium • Geophysical Archaeology as Anthropology: Advances in Method, Theory, and Practice

Geophysics are widely utilized methods in archaeology for assessing buried cultural landscapes. Yet these techniques are often cast in a preliminary or exploratory role as feature-discovery tools. This is reinforced by the typical modus operandi: geophysical specialists arrive before projects begin, collect data, hand off subsurface maps to excavators, then vanish, often with no further communication between excavators and geophysicists. But what happens when we invert this relationship, placing geophysics in the driver's seat of archaeological inquiry? This session presents case studies where geophysical methods are not merely supporting tools but central to research design, execution, and interpretation. Over 20 years ago, Ken Kvamme envisioned a future of "geophysical survey as landscape archaeology." Here, we revisit that vision—exploring how far the field has come and what new possibilities emerge when geophysics moves to the forefront of archaeological practice. This is a conversation with deep roots in geophysics and one that continues to evolve as our tools and interpretive frameworks become more sophisticated.

[47] Symposium • Relational Ecologies in Archaeology: Incorporating Human, Plant, and Animal Histories

This session invites papers that critically engage with the enmeshed relationships between plants, animals, landscapes, and humans in archaeological practice and interpretation. Despite the ecological and social interdependence of human-animal-plant worlds, archaeological methodologies often treat specialist-produced datasets as separate analytical domains. This disciplinary siloing not only fragments our reconstructions of past lifeways, but also risks flattening the complex, relational dynamics that animate multispecies histories. This session seeks to reimagine archaeological narratives about the environment and its inhabitants through the lens of interdependence, relationality, and co-becoming, centering Indigenous knowledge systems, ecological reciprocity, and more-than-human agency. How might we understand plants and animals as active participants in social life—kin, collaborators, and agents of transformation, at all stages, and in all subfields of archaeological analysis and interpretation?

[48] Poster Symposium • Creative Pedagogy in Archaeology: Science, Innovation, and Impact

Creative pedagogy in archaeology has the power to transform disciplinary learning, broaden public engagement, and inspire a new generation of archaeologists. Sponsored by the SAA's teaching award committee for the Binford Family and the Robert S. Peabody Institute Awards, this session highlights innovative approaches to teaching archaeology across diverse educational contexts—including K–12 classrooms, undergraduate and graduate instruction, and public outreach. Posters will explore a range of teaching strategies for archaeological method and theory that foster analytic skills, cultural understanding, and interdisciplinary collaboration. Collectively, these contributions demonstrate how archaeological education can spark curiosity, promote equity, strengthen scientific literacy, and transform public understanding of the scientific study of the past.

[49] General Poster Session • Not on Tinder: Dating Methods and Chronological Modeling

[50] General Session • *CA California Historical Archaeology

[51] General Poster Session • Colorful Posters: Analyzing Pigments, Dyes, and Paints

[52] Poster Symposium • Multiple Perspectives on Mitigating the Curation Crisis through Integration and Publication of Archaeological Collections Data

This poster session introduces a prototype nationwide collections locator, a collaborative effort designed to address important aspects of the long-standing archaeological curation crisis, one of American archaeology's most difficult issues. Our participants seek to make information available regarding archaeological collections, rendering them more findable, accessible, and integral to efforts by different stakeholders. The session presents four interconnected perspectives on the project's development and implementation. First, the state archaeologists describe how the publication of archaeological collections metadata is a vital aspect of public stewardship, explaining how their efforts will facilitate the ethical and scientific charges of their offices, and create efficiencies for navigating the complex systems involved. Second, several repository curators and Airlie House 2.0 (AH2) members detail the practicalities and ethical considerations required to collect and share collections information, balancing open access with cultural sensitivity and security. Third, the developers of the Digital Index of North American Archaeology (DINAA) explain the technical and practical aspects of integrating collections information through this project, an important step toward a linked, open data infrastructure and ecosystem for North American archaeology. Fourth, several repository curators and AH2 members look to the future beyond this prototype which finds resources for all willing participants.

[53] Symposium • Ancient Pasts, Collaborative Futures: Celebrating the Transformative Career of Patricia A. McAnany Part I

Patricia A. McAnany is an anthropological archaeologist whose intellect has shaped Maya archaeology and anthropological inquiry more broadly. She is an accomplished field director, brilliant writer, beloved teaching professor, as well as a leader and advocate within the profession. After field experience elsewhere, her long career in Maya archaeology started with the Pulltrouser Swamp Project and included sites in northern and southern Belize, and the Sibun Valley. She also conducted research in Yucatán, first at Sayil and more recently at Tahcabo. Dr. McAnany's fundamental insight that Preclassic period mortuary patterns reflected ancestral ties to specific landscapes reverberated throughout the Maya world. This and other theoretical insights related to ritual economies, collaborative methods, and archaeology's wider impacts for descendant communities extended to other arenas of anthropology and cultural heritage. Her distinguished career is characterized by an ability to illuminate emerging ideas, from bioarchaeological analysis of ancestral remains to increasing participation of Maya people in archaeology as a practice. This session reflects those impacts that she has had on our field, with contributions from scholars working around the world to understand different times in human history. Invited participants include graduate school mentors, colleagues and friends, students and advisees, and nonprofit collaborators.

[54] Poster Symposium • Geoarchaeological Research at Lechaion Harbor, Greece

This poster symposium highlights the work of student researchers involved with the Lechaion Harbor Environmental Archaeology Program. The program is a collaboration between the Earth Science and Classics Departments at California State University, Long Beach, to train undergraduate students in geoarchaeological research. The posters present a range of findings related to population change, paleoenvironmental context, and landscape modification at the site of Lechaion, the first harbor of ancient Corinth, Greece from at least the late eighth century BCE to sixth century CE.

[55] General Poster Session • Architecture, Settlement, and Urbanization**[56] General Poster Session • Friends, Not Food: Domestication, Pets, and Other Zooarchaeological Research****[57] General Poster Session • Go with the Flow: Water Management and Irrigation****[58] General Poster Session • Iconography, Art, and Epigraphy****[60] General Session • Recent Research in the Central Andes**

[61] Forum • Big Data Approaches to Andean Archaeology

There is growing interest in the Andes in studying broad, long-term trends in the archaeological record. A central challenge in this work lies in identifying, coding, and analyzing standardized, cross-regional indices that can serve as reliable measures of cultural change—such as inequality or sociopolitical complexity. Advancing big-data approaches in the Andes, as elsewhere, depends on coordinated efforts to build and improve underlying datasets. This forum brings together scholars with experience or interest in big-data methods to discuss both their potential and their limitations. Our aim is to identify key themes, challenges, and research strategies that can guide the next generation of data-intensive work in the Andes and help establish a foundation for more integrated, robust, and comparative archaeological modeling.

[62] General Session • Ritual Landscapes of Death**[63] Forum • Equity Summit: Cultivating Diversity and Inclusion in SAA Leadership**

This forum creates space for an audience-engaged discussion of (1) the current SAA protocol for electing directors and officers (D & O), (2) the duties and workload of D & O, (3) whether and how SAA election protocols and D & O workload may be hindering diversity and inclusion in leadership, and (4) how systemic interventions could address the SAA's challenges while improving the leadership experience for everyone. The session intentionally blurs the lines between formal panelists and audience members. Listed panelists comprise representatives of the Committee on DEI and people who now serve or recently served as SAA president, treasurer, secretary, director, and/or Nominating Committee chair. Pre-recruited participants from the audience include delegates from myriad other SAA committees doing DEI-related work (e.g., COSWA and CNAR), committees related to key Society operating structures (e.g., Bylaws and Ethics), and current D & O. Together, we will share information and experiences and brainstorm pathways for promoting diversity and inclusion among our elected leaders while also improving the leadership experience for all who serve.

[64] Lightning Round • Overcoming Access Barriers in Archaeology

A recent survey showed that almost one in four archaeologists has at least one disability, yet archaeology workplaces, classrooms, field sites, and laboratories remain full of access barriers. This structural ableism makes many disabled archaeologists uncomfortable disclosing their access needs, which makes those needs even more difficult to meet. Yet, with a spirit of openness, creativity, and collaboration, we can make our archaeology projects, educational programs, and workplaces more accessible to all. In this lightning round, a diverse panel of archaeologists will share concrete examples of access barriers and how to overcome them. In the second half of the session, we will have an open conversation in which discussants and audience members can brainstorm together about how to build accessibility in archaeology. This session is sponsored by the Disabled Archaeologists Network.

[65] Symposium • Advances in Urbanism and State Formation: Perspectives from Archaeology of Early China

This session presents new archaeological perspectives on the rise of cities and states in early China, highlighting recent advances in research on urban planning, political authority, migration, and subsistence economies. Together, the papers offer a comprehensive view of how the foundations of dynastic polities took shape in the Central Plains during the second millennium BCE. Case studies trace the emergence of kingship-centered governance at Taosi, where demographic growth, social stratification, and monumental architecture signal the consolidation of political power. At Erlitou, the multi-grid layout of the capital and its spatial hierarchies illustrate centralized authority and administrative innovation, while evidence of large-scale migration underscores the role of population movement and relocation policies in early urbanization. Complementary studies on subsistence economies, drawing on isotopic analysis and archaeobotanical/archaeozoological data, reveal how agricultural intensification, animal husbandry, and resource circulation sustained political integration and elite control. By synthesizing new discoveries and methods, the session reconsiders the trajectory of urbanism and state formation in early China and situates these developments within wider anthropological debates on the diverse pathways through which early complex societies emerged worldwide.

[70] Symposium • Further Studies in Fire-Cracked Rock

Fire-cracked rock (FCR), ubiquitous worldwide, continues to be an underappreciated artifact; however, recent publications on FCR and FCR features indicate that its importance is becoming more recognized in both academia and cultural resource management. FCR, sometimes called thermally modified rock or thermally altered stone, can be used in hot-rock cooking and as the heating element in noncooking contexts such as sweat lodges. These processes result in a variety of FCR features, including earth ovens and burned rock middens, among others. With increasing research, the types of analyses and breadths of perspectives on FCR are multiplying. There are calls to standardize the analysis of FCR and FCR features so its use can be compared across regions. There is increasing use of ethnographic and experimental approaches to understanding FCR and associated features. There is also increased focus on the social aspects in addition to subsistence and economic aspects of FCR use. Building on previous work, this symposium seeks to present the recent research in this growing field.

[71] General Poster Session • Geoarchaeology and Geomorphology**[72] General Poster Session • Hunters and Gatherers and Foragers, Oh My!****[73] General Session • *CA Special Analysis in California****[74] Poster Symposium • Adaptive Planning and Management for Long-Term Historic Preservation**

The United States military manages 27 million acres of land containing vast numbers of significant archaeological sites, historic buildings, cultural landscapes, and traditional cultural places. Long-term preservation of these places and landscapes is challenging, particularly as lands managed by the military face cumulative and intensifying impacts from natural hazards, encroachment, and changing regulatory frameworks. This poster session asks participants to address the following questions. What can land-managing agencies and cultural resource management (CRM) programs be doing now and in the near future to facilitate the long-term preservation, resilience, and enjoyment of the cultural places and landscapes they manage? What steps, perspectives, tools, or resources are needed to proactively anticipate and mitigate vulnerabilities and risks to long-term historic preservation? Presentations that actively incorporate Indigenous concerns and knowledge, landscape perspectives, policy considerations, and/or the leveraging of tools and methods from other disciplines are strongly encouraged. Presentations that provide perspective from management contexts outside those administered by the US military are also welcomed.

[75] Poster Symposium • Recent Research into the Hispano Archaeology of the American Southwest

Beginning in the late sixteenth century, Hispanic settlers occupied New Mexico's upper Rio Grande Valley, establishing farms and the village of Santa Fe, and engaging the region's Indigenous people. Due in part to colonists' dependence on Indigenous peoples, their relationships were fraught, and less than a century later, Pueblo and Plains peoples rebelled and forced the settlers from the region. The settlers returned in the late seventeenth century, establishing a permanent presence in the region. Over a decade of archaeological work at three nearby Hispano ranch sites, one occupied during the seventeenth century and two during the eighteenth and nineteenth centuries, has yielded a wealth of information about the colonists' economies and sometimes fraught intercultural relationships. The posters in this session highlight the material culture, faunal, and botanical analyses undertaken at these ranches, revealing the domestic and economic activities that underlay the continuities and changes in Hispano practices and their relationships to the Pueblos.

[76] Symposium • Learning by Doing: Training Experiences and Outcomes in Ceramic Petrography

While archaeologists routinely classify artifacts by material type, periods, and styles, detailed analytical methods like ceramic petrography can offer deeper insights. Using ceramic petrography, archaeologists can effectively group materials with similar technological signatures based on composition, production, and provenance. Yet despite its valuable insights into past pottery production, ceramic petrography requires

specialized training and an extensive time commitment. Additionally, researchers may often lack access to comprehensive training resources, creating significant barriers to the broader application of ceramic petrography in archaeological research. Given these challenges, some researchers rely on self-directed study through online resources and literature, others participate in formal courses or intensive programs, while some benefit from mentorship with experts. Each approach presents unique obstacles and opportunities. This session invites participants to reflect on their diverse training experiences in ceramic petrography and the challenges they faced as either novices or instructors. Contributors are encouraged to share their research outcomes, demonstrating the diverse application of ceramic petrography across different archaeological contexts. The session aims to create a supportive space for discussing both the obstacles encountered in learning ceramic petrography and the breakthroughs made while training in and teaching this methodology, ultimately highlighting the pathways for democratizing this valuable technique.

[77] Poster Symposium • By All Means: DPAA and Past-Conflict Casualty Resolution in the Field

Unresolved casualty loss incidents present unique archaeological challenges to DPAA staff and associated partner entities. Each and every site reflects an individualized event that occurred within the framework of the larger battlescape context, representing losses that occurred on the ground, in the air, and on and over water. Agency efforts are international in scope and primarily focused on twentieth-century conflict losses from World War II through the end of the Vietnam War. The goal of this SAA poster session is to highlight some of the recent case examples of the different site types that the agency and partner entities have conducted work on, while also illustrating the different approaches and methods used for case advancement in the field, from the initial steps of site identification and definition through the final end point of site closure, which can represent an iterative process with multidisciplinary contributions. While there are significant overlaps between the fieldwork conducted by DPAA and more traditional approaches to field archaeology, the overarching objective of all agency field efforts is the recovery of incident-associated remains for formal casualty identification and case resolution.

[78] Forum • Breaking Silos, Building Audiences: Archaeology, Science Communication, and Public Engagement in the Age of Misinformation

The rules for science communication and public engagement are changing. In the age of misinformation, scientists and researchers, including archaeologists, must be prepared to address pseudoscience, conspiracy, sensationalism, distorted narratives, and counterproductive policy. How can students and professionals (with a lot on their plates) effectively challenge public perception or enlighten decision-makers? This forum brings together researchers, media experts, and content creators who have successfully engaged diverse audiences through multiple forms of digital or traditional media. Key takeaways from the discussion will include (1) why we have a professional and ethical responsibility to share sound science, (2) how to counter false narratives with evidence-based communication, and (3) what to envision for the future of science communication in archaeology. This conversation is hosted by the Committee for Media Outreach as a companion to the 2025 session on best practices for engaging the media. The forum highlights not only the risks of leaving public discourse to fringe or uninformed voices but also the opportunities for building trust, increasing relevance, and broadening participation in fact-focused archaeological research.

[79] General Poster Session • Archaeometry and Materials Analysis Part I: XRF/pXRF

[81] General Poster Session • What's on the Menu? Part I: Botanical Analysis and Agriculture

[82] Symposium • Syncretic Religious Phenomena in Colonial Contexts

The papers in this session, honoring the late John D. Douglass, explore and interrogate the phenomena of blended religious practices and beliefs that often develop in contexts of colonialism and/or periods of contact of two or more cultures. Presenters seek to better understand the complex dynamics of how and why religions and rituals change in such contexts. Indeed, because ritual and religion are often venues for negotiations of, and transformations in, power and identity in colonial entanglements, we expect that studying these contexts will provide insight into religious and cultural change and the roles of economics, power,

agency, and other sociocultural factors in colonial contexts. Additionally, participants in this symposium will explore how useful the term “syncretic” is to contemporary archaeology and highlight different methodological and theoretical approaches to examining “syncretic” religious phenomena.

[83] General Session • Bovids, Bugs, and Beyond: Human-Nonhuman Interaction

[84] Symposium • Marine Resource Exploitation in the Preindustrial Americas: Interdisciplinary Approaches to Fisheries Baselines

Marine resources have always been central to the subsistence, economy, and cultural traditions of societies throughout the Americas. Harvesting these resources shaped preindustrial ways of life and fostered lasting, adaptive connections with coastal and estuarine ecosystems, as reflected in the zooarchaeological record. This symposium invites contributions that explore the diverse ways marine animals—both vertebrate and invertebrate—were exploited in the preindustrial Americas, with an emphasis on building historical baselines for understanding long-term human–marine interactions. We aim to showcase research that integrates zooarchaeology, historical ecology, and ethnohistory to reconstruct past fisheries, assess their ecological and social impacts, and examine their cultural and ecological legacies for present and future marine management. We also welcome contributions that combine traditional zooarchaeological approaches with methodologies such as geochemistry, geometric morphometrics, ZooMS, paleoproteomics, ancient DNA, and related techniques. This session brings together scholars from diverse temporal, geographic, and disciplinary perspectives to deepen our understanding of how past human use of marine resources can inform sustainable practices and conservation today, through the lens of fisheries, historical baselines, and zooarchaeological evidence in the preindustrial Americas.

[85] General Session • Analytical Insights from Databases and Digital Modeling

[86] Symposium • El Tajín in Context: Political Interactions and Regional Reach in Eastern Mesoamerica

El Tajín, one of the principal centers of the Gulf Coast during the first millennium, has long been recognized as a key capital of the Classic Veracruz tradition. Yet questions remain about the timing and true extent of its influence within broader Mesoamerican histories. Its position in the Classic Veracruz sequence is once again under debate, and the evidence for its connections with other regions of eastern Mesoamerica remains limited and in need of critical reassessment. Further, there is the matter of the city’s afterlife in the Postclassic. This session invites new data and perspectives on Eastern Mesoamerica that clarify the place of Tajín in the larger regional context. We are especially interested in comparative developments outside of the Tajín realm that may provide a fuller account of Eastern Mesoamerican contexts and relationships in the two centuries on either side of 1000 CE.

[87] Symposium • Ancient Pasts, Collaborative Futures: Celebrating the Transformative Career of Patricia A. McAnany Part 2

Patricia A. McAnany is an anthropological archaeologist whose intellect has shaped Maya archaeology and anthropological inquiry more broadly. She is an accomplished field director, brilliant writer, and beloved teaching professor, as well as a leader and advocate within the profession. After field experience elsewhere, her long career in Maya archaeology started with the Pulltrouser Swamp Project and included sites in northern and southern Belize and the Sibun Valley. She also conducted research in Yucatán, first at Sayil and more recently at Tahcabo. Dr. McAnany’s fundamental insight that Preclassic period mortuary patterns reflected ancestral ties to specific landscapes reverberated throughout the Maya world. This and other theoretical insights related to ritual economies, collaborative methods, and archaeology’s wider impacts for descendant communities extended to other arenas of anthropology and cultural heritage. Her distinguished career is characterized by an ability to illuminate emerging ideas, from bioarchaeological analysis of ancestral remains to increasing participation of Maya people in archaeology as a practice. This session reflects those impacts that she has had on our field, with contributions from scholars working around the world to understand different times in human history. Invited participants include graduate school mentors, colleagues and friends, students and advisees, and nonprofit collaborators.

[88] Symposium • Advances in the Study of the Archaic Archaeological Record of Mexico, the US Southwest, and Neighboring Regions

The transnational cultural region of Northwest Mexico and the US Southwest has produced a wealth of information on the foraging and early agricultural societies of western North America. This record of Terminal Pleistocene and Early to Late Holocene human occupations includes thousands of isolated stone artifacts and multiple archaeological sites containing surface and buried contexts associated with Paleoindian, Archaic, and Early Agricultural period components. However, most research in the area has focused on the terminal Pleistocene and early agricultural occupations, while the Archaic (~10,000 yr BP–~4,500 yr BP), despite its length, remains the least studied cultural period in the region, which is particularly true for Mexico. Over the last 20 years, new research programs, CRM projects, and the reevaluation of old collections have produced new information that documents the significance of Archaic adaptations in the area. This symposium will highlight recent research that advances our understanding of the Archaic period of Northwest Mexico, the US Southwest, and neighboring regions and its broader implications for the study of the foraging societies that gave way to the better-known agricultural societies of southwestern North America.

[89] Symposium • Everyday Lives Unearthed: Bioarchaeology of Daily Life in Medieval and Early Modern Europe

This session examines bioarchaeological perspectives on daily life in medieval and early modern Europe (tenth–eighteenth centuries), with attention to key socio-spatial contexts: the village, the town, the noble manor, and the monastery. Through the study of human remains, material culture, and environmental evidence, we seek to reconstruct lived experiences and social dynamics. Such research requires close collaboration across disciplines, and this session encourages dialogue among archaeologists, bioarchaeologists, anthropologists, historians, and others using interdisciplinary approaches to explore everyday life across diverse landscapes and social systems. We invite contributions engaging with themes including health, disease, and physiological stress; diet, nutrition, and foodways; mobility, migration, and population structure; burial practices and mortuary behavior; social identities, inequalities, and labor; and human-environment interactions. By highlighting these aspects, we aim to showcase both methodological successes and challenges in interpreting data from this period. Comparative perspectives will help identify similarities and differences in lived experiences across geographic and temporal boundaries, contributing to a fuller understanding of life in medieval and early modern Europe.

[90] Symposium • The Scent of Discovery: The Intersection of Archaeology and Canine Detection

We will explore how trained Historic Human Remains Detection (HHRD) dogs are transforming archaeological practice by locating historic and precontact burials that might otherwise go undetected. With extraordinary scenting abilities, these dogs complement archaeological fieldwork by improving search efficiency, reducing invasive excavation, and preserving site integrity. Case studies and real-world applications will highlight successful HHRD deployments and their role in uncovering burial sites, providing landowners, developers, and Native/Indigenous communities with valuable information to guide respectful and informed preservation decisions. We will also discuss the training and certification of HHRD dogs, the importance of interdisciplinary collaboration, and the role of canine detection in documenting marginalized histories—particularly those of underrepresented communities whose contributions have often been overlooked. By combining archaeological science with the unique capabilities of detection dogs, we can recover lost histories and safeguard them with dignity for future generations to study, honor, and remember.

[91] General Session • Knowledge Creation with Communities, Stakeholders, and Archaeologists**[92] Symposium • Designing Maya Glyphs: Studies in Honor of David Stuart**

The decipherment of Maya writing has drawn in large part on the insights of David Stuart, a singular talent in scholarship over the last 40 years. By wide agreement, Stuart commands a unique ability to wrest voice, meaning, and guiding intent from Maya glyphs and their accompanying imagery, rippling out into all aspects of

the peoples who created them. That contribution will be felt into the future, beyond the scope of a single symposium. This session focuses on one feature of Maya writing, its creation as a deliberative design process. Relevant themes include the graphic or visual principles and protocols of layout and grid, relation to imagery, captioning, orientation, information hierarchies, materials and manner of execution, blocking and sign selection, nature and quality of incision or carving, quarrying out, collaborative inputs, color, setting, and even the desired play of light or disposition of viewer and reader. Such principles modulate by time and place, according to local and far-flung precedents available to skilled scribes and carvers.

[93] Symposium • From Raw Material to Territory: The Contribution of Petroarchaeology to the Interpretation of Geographical Space in Prehistoric Archaeology

Objects, considered as raw materials, serve as markers of the places used by past populations. In addition to their nearly imperishable nature, lithic materials found on prehistoric sites have the property of recording the mechanisms behind their formation and aging, just as they bear the physical traces of the actions of the flintknappers. The study of these objects thus represents an invaluable source of information about past societies: direct witnesses of past mobility, circulation of goods, and interactions between humans and their environment. Over the past 15 years, “petroarchaeological analysis” has seen major methodological advancements in understanding the mechanisms of formation and evolution of siliceous rocks that allow the localization of sources exploited by prehistoric groups. Whether based on petrographic or geochemical analyses, these advancements have revolutionized our understanding of material transfers. They not only allow the identification of long-distance transfers but also reveal the existence of exchanges during prehistory, shedding light on the social networks. The aim of this session is to present the latest methodological developments in the study of prehistoric materials, with a focus on the transformations they bring to our perception of the spatial organization of past populations and the paleontological reconstructions that follow from it.

[94] Symposium • Checking the Pulse: Turning Tides of Research in Oaxaca

For this symposium, we welcome presentations at various stages of development whether it be ongoing research, upcoming projects, or persisting research questions and curiosities on Oaxaca. Since 2021, the “Diálogos por Oaxaca” collective has gathered scholars to challenge the division that has plagued scholars working in Oaxaca for decades. This symposium is a continuation of that. It has become increasingly apparent that there is a continuous need for spaces that foster and facilitate communication and collaboration among researchers in Oaxaca archaeology and related disciplines. The goal of this symposium is to maintain such a space, one that unites fresh faces, rising scholars, and seasoned experts. We aim to create and sustain an inclusive environment and encourage presentations on research from different regions, time periods, and academic interests in Oaxaca.

[95] Symposium • Behavioral Ecology and Agriculture

Subsistence agriculture emerged as a major economic strategy in the early Holocene and remains the primary mode of production for over a quarter of the Earth’s population. Behavioral ecology is primed to help explain why people would adopt agriculture, explore the timing of when it emerges, and examine where it thrives and when it fails. This session is designed to continue conversations started 20 years ago with the publication of Doug Kennett and Bruce Winterhalder’s *Behavioral Ecology and the Transition to Agriculture*. Participants will share recent and ongoing work that advances our understanding of this mode of production in the past and present to help guide future research.

[96] Lightning Round • Weird Stuff: Archaeological Objects That Transgress Anthropological Categories

Categorizing elements of material culture into discrete sorts of “stuff”—by time periods, by places, and, at its most elemental basis, by materials—is one of the foundational practices of modern archaeology. This process, however, leaves plenty of material that “falls through the cracks” and that, failing to represent any standard category, often remains uninterpreted and, in many cases, simply unreported. This session takes this “weird stuff” as its point of departure. In practice, at the trowel’s edge, such materials often appear as anomalous, surprising, or odd. At times, they are greeted by our research teams with humor, affection, or even

reverence; too often, they are interpreted as “ritual” items, a category that ultimately provides little meaningful insight on a given social and cultural context. In this session, participants return to the weird objects they have encountered with the aim of considering how they problematize standard archaeological and anthropological categories of recording, of analysis, or of interpretation. How might recentring studies on the anomalous, rather than the normative, help to recuperate alternative, and perhaps culturally specific, categories of “stuff”?

[97] Symposium • Spinning, Sewing, Weaving, Wearing: Mesoamerican Textiles in Interdisciplinary Perspective from the Postclassic to Colonial Periods and Beyond

Textiles have long been understood as playing a profoundly important role in Mesoamerican societies. Often composed of valuable materials and painstakingly crafted, objects made of cloth were vital to Mesoamerican life, ranging from individual identities to interregional economies. Because they are so infrequently preserved, however, archaeologists in Mesoamerica are often limited to studying textiles indirectly, largely through artifacts associated with their production. For the Postclassic and colonial periods, there is a greater range of ethnohistorical and iconographic evidence available to shed light on the crafting, composition, use, and exchange of textiles, opening exciting opportunities for more interdisciplinary approaches. This session aims to shed light on the materiality of textiles in broad perspective, considering questions surrounding their economic, sociopolitical, and cosmological values and meanings. We engage ontological issues related to the raising of their raw materials, their fabrication, composition, and connections to humans and other objects. We welcome approaches not only from archaeology, but art history, ethnohistory, and cultural anthropology. We also welcome approaches involving ethnographic engagement with modern textile-producing communities and studies of historical ethnographic collections of materials.

[99] Symposium • The UCF El Mirador Lidar Project: 2022–2025

El Mirador, located in the northern Petén region of Guatemala, is one of the largest and most significant Preclassic Maya sites, offering insights into the emergence of complex society in Mesoamerica. Its monumental architecture, including triadic complexes, E-groups, defensive walls, causeways, quarries, *aguadas*, and agricultural features reflect a high degree of organization and planning during the Middle and Late Preclassic periods. While the site and region are critical for understanding cultural development and change among the Maya, they are challenging to study owing to their isolation in the Maya Biosphere reserve. This session will detail results of the University of Central Florida’s lidar analyses and excavation from 2022 to 2025. The research was funded by Fundación Patrimonio Cultural y Natural Maya (Pacunam) and began with digitization of lidar data from 512 km² of the region surrounding the site of El Mirador with subsequent ground truthing in 2022 and 2023. Excavation began in summer 2025 with a focus on ritual structures and plazas in the epicenter of El Mirador, including the Leon E-group complex. Using mapping and excavation data, participants address issues related to geomorphology and geography, settlement patterns, lidar ground truthing, monumentality and phenomenology, early ritual, ceramics, lithics, paleoethnobotany, and looting.

[100] Symposium • Tracking Ancient Casmeños: Investigating the Multiple Histories of an Archaeological Culture

Since the 1930s archaeologists have noted the presence of the Casma culture, pertaining to the late Middle Horizon and the Late Intermediate period (ca. AD 1000–1450). Identified by the pervasive presence of incised circle and dot redwares, diverse molded and painted wares, and the plaza-platform architectural unit, leading scholars have identified the culture as congealing into a state at some point in its history. Recent research from the central coast of Peru to Piura suggests that Casma material and visual culture were employed by diverse people in diverse sociopolitical contexts. Thus, the contours of the ancient Casmeños require careful tracing across time and space to understand the relationship between this iconic archaeological culture and the societies and cultures of the people who used it. This session explores the nature of the Casma culture in peripheral settlements, inter- and intra-group sociopolitical relations, how organization changed over time, and the chronology of Casma settlements in different valleys.

[101] General Session • Case Studies in Lithic Analysis

[102] Symposium • Collective Action and Governance in Asian Complex Societies

This session aims to explore how the theoretical lenses of collective action, leadership, and governance can be applied to archaeological case studies across Asia. Widely used in global scholarship, the collective action framework provides a means to understand how and why groups cooperate or fail to cooperate when managing shared services or resources and engaging in social practices. This approach has been used to explain sociopolitical transformation of past complex societies and the top-down/bottom-up power dynamics, shaped by interactions among diverse social actors, from centralized authorities to commoners (or taxpayers). As the approach foregrounds the role and agency of social actors operating at nested level, it offers perspective to understand intricate nature of organization of past complex societies. The session provides cross-cultural and comparative perspectives on applying this emerging framework on Asian contexts. This will further bring together a range of methodological approaches—including radiocarbon dating, ceramic analysis, and built-environment studies—to investigate collective action and governance in the past. These studies address themes such as state formation, political reorganization, collapse, and resilience. Through this comparative lens, the session will contribute to broadening archaeological discourse on leadership, collective action, community dynamics, and complex societies.

[103] Symposium • Atlantic Crossings: Tastes, Practices, and Cultural Transformation from West Africa to the Americas in the Atlantic Era

From the seventeenth through nineteenth centuries, powerful West African states such as Dahomey, Allada, Hueda, Oyo, Asante, and others along the Gulf of Guinea and beyond were deeply enmeshed in regional and Atlantic trade networks. These polities not only shaped the political and economic landscapes of West Africa but also profoundly influenced the cultural worlds that emerged across the Americas. Through the forced migration of millions of Africans—drawn from diverse kingdoms, ethnic groups, and coastal as well as interior regions—enduring tastes, skills, and expressive practices crossed the Atlantic and took root in new settings. This session explores the archaeological evidence for these connections, tracing how material culture, foodways, ritual forms, aesthetic values, and technologies were carried, reinterpreted, and transformed in diasporic contexts from the American Southeast to the Caribbean and Latin America. By situating African Diasporic communities within the broader tapestry of West African cultural traditions, we investigate how shared practices persisted, adapted, and merged with local conditions to create distinctive Black Atlantic lifeways. Drawing on research both in West Africa and throughout the African diaspora, contributors illuminate the resilience and creativity of communities that forged new worlds while sustaining vital links to their African pasts.

[104] General Session • Applied Ceramic Analysis**[105] Symposium • Under the Streets and over the Sidewalks: Archaeology and Urban Renewal**

Urban renewal policies implemented in the United States after World War II represented a historical watershed in imaginings of public and space government intervention, as well as new vertices of power and inequality. This also presented a series of new technical and ideological frontiers for American archaeology. This is a call for papers that touch on the stories of archaeologists and related professionals who engaged with these policies. Topics can include incidental discoveries associated with urban development, the evolution of CRM in urban spaces, the development of the subfield of urban archaeology, and the history of related fields of architectural restoration and heritage preservation. Though this panel is inspired by the impact of urban renewal in the postwar United States, topically relevant submissions from other regions and periods are welcome.

[106] Symposium • Interwoven Histories: Unraveling Cultural Exchange Networks in Early China through Material Pathways

This session aims to collaboratively explore the dynamics of early Chinese culture, employing diverse methodologies to reveal the intricate networks of exchange, interactive relationships, and pathways of technological dissemination that shaped both regional and transregional histories. Our collective research integrates cutting-edge methodologies to delve deeply into the multifaceted dimensions of cultural contact.

Core research directions include employing traditional analysis and complex network methods to deconstruct material cultural remains, revealing patterns of material cultural evolution, influence, and cross-stratum, cross-regional connections; exploring early societies' adaptive regulation of resources and environments through settlement archaeology; reconstructing potential transport routes and networks via statistical quantification and GIS spatial analysis to elucidate socio-spatial patterns and their evolution across historical periods; employing interdisciplinary approaches to decipher the origins, technological choices, functional adaptations, and cultural interactions embodied in metal artifacts. By synthesizing these complementary perspectives—focusing on the flows of artifacts, ideas, people, and technologies along material pathways—this forum aims to present a more nuanced and interconnected picture of early China. We emphasize the innovative integration of computational modeling, spatial science, and laboratory science to profoundly illuminate the mechanisms and impacts of cultural exchange in early China.

[107] Symposium • Places of Afro-Indigenous Liberation: Genealogies, Arts, and Ancestral Practices

This symposium brings together research on multiple modes of resistance, re-existence, and liberation led by Afro-Indigenous peoples in different historical and contemporary contexts. Drawing on the intersections between archaeology, memory, genealogies, art, and spiritualities, we seek to understand how territories, ancestral practices, and collective actions have been fundamental for the strengthening of ways of life and for envisioning the future. The aim is to foster an interdisciplinary space of dialogue that values experiences of kinship and solidarity networks, food sovereignty, artistic expressions, worldviews, and forms of knowledge transmission that connect past and present.

[111] General Poster Session • Digital Archaeology Part I: GIS, Spatial Analysis, and Simulation

[112] General Poster Session • Ethics and Responsible Research

[114] General Poster Session • It's Not All Ancient History Part I: Museums and Repatriation

[115] General Poster Session • Let's Rock! Lithic Analysis

[123] General Poster Session • The Archaeology of Conflicts and Their Aftermath

[124] General Poster Session • *CA Let's Hear from the Locals: California Archaeology

[127] Poster Symposium • Modeling the Past: Reimagining Ancestral Lifeways in North America through the Lens of Digital Archaeology

Digital archaeology has transformed how anthropologists record, analyze, and preserve the human past. Close-range photogrammetry generates high-resolution datasets that exceed traditional methods in precision, efficiency, and accessibility. Digital collections allow replicable data to be shared across disciplines, while preserving cultural resources. In anthropology, such datasets create detailed analyses strengthening our ability to reconstruct human activity across time and space. This symposium explores how integrating photogrammetry with traditional recording methods produces a more comprehensive tool kit in anthropological survey, curation, and public outreach and advocacy. Case studies from two Paleoindian National Historic Landmarks (NHL) exemplify how photogrammetry enhances traditional methodologies. At Hell Gap NHL in Wyoming, photogrammetry has been integrated into the excavation process to document stages of material deposition, providing researchers with a new perspective on the archaeological record. At Blackwater Draw NHL (New Mexico), digital excavation and stratigraphic cross-section models were integrated into ArcGIS to provide accurate, replicable datasets that map artifact distribution, clarify depositional contexts, and link site findings to regional stratigraphy, advancing interpretations of Paleoindian activity in the Southern High Plains. These projects demonstrate how photogrammetry enhances archaeological documentation and ensures that ephemeral archaeological records are preserved and made meaningful for future study.

[148] Symposium • Pushing the Boundaries in the Northeastern Archaeological Record

Boundaries and the communities that they bound are central concerns in the historic and ethnohistoric record of northeastern North America. Ethnic, religious, political, tribal, and colonial boundaries and how they shifted through time and across space constitute a central locus of study for historians. Yet boundary and community have been commonly deemphasized and understudied in regional archaeological studies. In this session, we highlight studies that explore how boundaries were conceived and constituted in the past and how they may be recognized archaeologically. Similarly, we explore how communities, in a broad sense, were constituted, signaled, and maintained through time. We consider a broad range of topics under this rubric from all periods that regional archaeologists study.

[149] General Session • Next Gen Archaeology: Training and Pedagogy Insights**[150] General Session • Adventures in Experimental Archaeology****[152] Lightning Round • Datum? I hardly know 'em! Hot Takes on Big Data**

One of us appreciates the potential of Big Data approaches. The other . . . not so much. Knowing we're not alone in this divide, we've decided to put our differences on a podium—and invite you to join us in a fast-paced, *change-my-mind*-style lightning round at the 91st Annual Meeting of the Society for American Archaeology in San Francisco. Archaeology has long emphasized small-scale, context-rich analyses focused on excavations, regional surveys, and individual materials. In recent decades, collaborative databases, AI, machine learning, and online publishing have expanded our capacity to compile and analyze large datasets. Will this trend transform archaeology into a statistically rigorous field capable of providing quantitative answers to the big questions of anthropology? Or are Big Data an unwieldy tool, obscuring the contexts and processes that are key to understanding the human past?

[153] Forum • *Mi lado de la montaña*: Stories, Traditions, and Relationships across a Shared Mountain World in the Cordillera Negra y Blanca

This forum brings together archaeologists and anthropologists working in communities across the Cordillera Blanca and Cordillera Negra—places such as Cosma, Pamparomas, Huaylas, Hualcayán, and surrounding areas—to explore how local perspectives shape understandings of shared landscapes. While these communities often view the same peaks, lakes, and archaeological sites, they may name them differently, attach distinct legends or histories, or prioritize particular *apus*, or sacred places, over others. Through an ethnographic lens, participants will consider questions of overlapping and divergent traditions, how neighboring communities perceive each other, and how local histories influence relationships with archaeological sites and sacred spaces. By sharing case studies and community narratives, this session aims to highlight the cultural, historical, and spiritual dimensions of the highland landscapes we study. Our goal is to better understand how the past and present intertwine in shaping these places—not only as archaeological resources but as living landscapes with layered meanings for the people who inhabit them. In doing so, the forum fosters a regional dialogue among researchers, offering comparative insights while strengthening collaborative approaches with descendant communities.

[154] Forum • Growing Reference Collections and Connections in Archaeobotany

Robust reference collections are essential and foundational to paleoethnobotanical and paleoecological work. However, their construction, comparability, and accessibility vary widely across all subfields. This forum brings together scholars across paleoethnobotanical subdisciplines to discuss and examine the current state of reference collections, address common challenges, and explore potential opportunities for cross-discipline collaboration. Both macrobotanical (seeds, roots, fruits, charcoal, fibers) and microbotanical (starch, phytoliths, pollen) datasets will be represented. Discussion will focus on the current state of reference collections, methodological and taxonomic consistency, the potential for further digital and open-access initiatives, and strategies for long-term stewardship of collections.

[155] General Session • Recent Studies in North American Archaeology

[156] General Session • Research in Historical Archaeology**[157] Symposium • Invertebrates in Global Archaeological Perspectives**

Complex human-animal relationships involving invertebrates are a global phenomenon, with long-standing traditions and histories developing between cultures and particular invertebrates within shared environmental niches. Invertebrates have been broadly understudied in zooarchaeology, despite their integral roles in human societies as food, medicine, or adornment. Concerns regarding preservation, taphonomy, identification, analysis, and data integration have historically deterred archaeologists from in-depth studies of archaeological invertebrates. However, invertebrate zooarchaeology continues to incorporate critical influences from malacology, carcinology and entomology, which are reshaping our understanding of how ancient people engaged with the invertebrates in their landscapes. Emerging methods and theories are significantly enhancing our comprehension of archaeological invertebrates, and the range of research questions that can be asked and answered. This session aims to highlight diverse perspectives on archaeological invertebrate studies, including but not limited to mollusks, crustaceans, and insects, and celebrates the important contributions of invertebrate zooarchaeology to the broader discipline, showcasing interdisciplinary and multimodal approaches to the study of invertebrate species.

[158] Symposium • Celebrating the Archaeological Mentorship of R. Lee Lyman

In archaeology, there are people who consistently serve their colleagues with no expectation of collaboration or accolades. Simply the manner in which they provide career advice, prepare reviews, and advocate for students and peers alike has great impact. Over the course of Lee Lyman's career, he has accomplished many important academic achievements as a zooarchaeologist, evolutionary archaeologist, and historian of archaeology, but it is his role as a mentor that we wish to celebrate. In addition to the graduate and undergraduate students mentored directly by Lyman, there are a considerable number of students who unofficially adopted Lyman as their advisor and mentor during and after their graduate studies. In addition, many colleagues and peers comment that Lyman's reviews, although often challenging for their directness, are exceptionally thoughtful, detailed, and helped to improve their manuscripts. Lyman takes the time to help others and to serve the discipline in a manner that is honest and compassionate. His positive impacts to archaeology are generational as many colleagues now model his approaches with their students and colleagues. The papers in this session are by former students and colleagues who have benefited from his archaeological mentorship.

[159] Symposium • Modeling Maritime Societies: Mobility and Social Organization

Maritime societies throughout the world have faced similar challenges and opportunities that shaped their developmental trajectories. Logistical possibilities afforded by waterborne transport allow for longer and more frequent trips that transport larger and heavier loads, leading to increased capacity for traveling, trading, and raiding. Social, technological, and geographic bottlenecks connected to watercraft construction and sea-routes promote the concentration of wealth and the development of entrepreneurial leaders. At the same time, increased mobility and the ability of people to "vote with their paddles" and act as centrifugal forces encouraging dispersed and heterarchical social formations. Modeling the mobility and organization of maritime societies is therefore critical for understanding ancient and historic cultures from around the world. This session takes a broad and comparative approach to understanding prehistoric and Indigenous societies in island and coastal environments. Papers include approaches to modeling both the routes taken by seafarers and the impacts that seafaring had on social formations. Case studies include both contemporary and historical Indigenous communities as well as prehistoric societies. Through a comparison of different ethnographic and archaeological examples, methods, and theoretical approaches, we aim to develop a better understanding of the unique processes that shape the histories of maritime societies.

[160] Symposium • Archaeology as a Science of Complexity

Complexity science is a dynamic new field that seeks to understand how networks of interaction within and across social and biophysical systems create common structures and processes in seemingly very different phenomena. The recognition that these complex systems inherently process information, adapt to their environmental contexts, and evolve in time-vectored histories is highly relevant to archaeological goals,

theory, and practice. Much of modern archaeology is focused on themes like explaining social and cultural change, understanding social networks, resilience, human ecology and adaptation, and how cultural knowledge creates and maintains social organizations. Complexity science offers a unifying framework with a potential to integrate these different lines of archaeological research. Moreover, archaeologists are increasingly employing complexity science methods like agent- based modeling, network science, systems dynamics, and machine learning to better understand the long-term dynamics of human social and ecological systems. This symposium invites critical reflections on the application and potential of complexity science concepts and methods that can not only enhance interpretations of the archaeological record but also clarify and contribute to a deeper and more comprehensive understanding of the human career.

[161] Symposium • Exploring the Archaeological Diversity of Chiapas: Current Research in Chiapas, Mexico

A wide range of scholars and interdisciplinary research projects have been actively engaged in studying the rich cultural and ecological diversity found throughout the southern Mexican state of Chiapas. These efforts span numerous fields—including archaeology, iconography, ecology, and ethnohistory—and are focused on understanding the complex interactions among the region's Indigenous communities, environmental landscapes, and historical processes. In this session, participants will share and discuss the findings from their recent investigations conducted across diverse regions of Chiapas. It facilitates cross-site comparison and synthesis, fostering a more holistic view of the archaeological diversity of Chiapas. Participants will deliver their papers in either English or Spanish.

[162] Symposium • Beads in Africa: Technologies, Meanings, and Connections Across Time

Beads are among the earliest objects used for personal adornment, and the African continent holds some of the world's oldest known examples. Across time and space, beads have functioned not only as decorative items but also as powerful cultural and social signifiers. Their materials, colors, forms, and patterns often encoded meanings related to identity, status, age, gender, and affiliation. At archaeological sites, shifts in bead types and distributions reflect broader transformations in technology, trade, mobility, and social organization. This session foregrounds beads as anthropological artifacts, offering insights into both local technological practices and the broader networks that linked African communities to each other and to global spheres of interaction. From early forager societies to complex polities and colonial contexts, beads provide a durable record of changing lifeways and value systems. Our aim is to center Africa as an interconnected archaeological landscape, moving beyond regionally fragmented narratives. We welcome papers that explore bead assemblages across all materials, time periods, and analytical methods, including technological, typological, compositional, and contextual approaches. Through this session, we hope to foster collaborative, critical, and contextually grounded research that contributes to a more integrated understanding of Africa's archaeological past.

[163] Symposium • Growth at the Margins: Diversity, Challenge, and Innovation in Ancient Agroecosystems

Landscape degradation, climate change, and politico-socioeconomic challenges to the maintenance of productive agroecosystems form central objects of concern within modern agricultural research. The scale of these contemporary issues is significant but in many ways far from novel. Ancient societies across the globe contended with similar dynamics for millennia, developing diverse strategies that allowed agricultural exploitation of a range of productively “marginal” biophysical environments (e.g., high altitudes, deserts, sensitive island ecosystems) while navigating nuanced and at times equally precarious social, ritual, and political systems. This session highlights research into a set of related topics, including case studies of agroecosystems at the ecological or sociopolitical margins; innovations in ancient agricultural management; plant food production among groups historically conceived of as marginal to such developments (e.g., “hunter-gatherers,” “mobile pastoralists”); alternative regional agricultural histories; and “lost” or underutilized crops—i.e., “orphan” crops—that often fall at the margins of modern agriculture and archaeobotanical research agendas. Contextualized examination of the successes and failures of diverse management regimes and cultivar selections in the past can provide valuable anthropological and paleoenvironmental insights to archaeologists, in addition to those interested in the development of sustainable resource use, improved food production strategies, and agrobiodiversity now and into the future.

[164] Symposium • Multiethnicity in Teotihuacan through the Organization of Neighborhood Centers: The Teopancazco Case

The interdisciplinary project based in Teopancazco, a multiethnic neighborhood center of the southeastern district of Teotihuacan, directed by Linda R. Manzanilla, unveiled how foreign laborers were attached to the neighborhood coordination center as specialized workers. The caravan system organized by the intermediate elite brought to Teopancazco foreign raw materials, allochthonous sumptuary goods, and immigrants. Through 13 field seasons (1997–2005), the extensive excavations and activity area analyses provided an impressive amount of data regarding how a multiethnic neighborhood center of Teotihuacan functioned. This neighborhood center had economic, social, and symbolic relations to the Gulf Coast of Mexico, particularly centered in the Nautla region of Veracruz.

[165] Symposium • Tree Stories: Recent Advances in the Past Selection, Exploitation, and Transformation of Wood and Related Materials

Archaeological understanding of past technologies is primarily based on the analysis of durable materials such as stone, pottery, and metal. Nevertheless, a significant portion of historical material culture comprised perishable organic substances that are now largely absent from the archaeological record. The occasional preservation of organic materials influences our interpretation of past human-environment relationships, particularly given the fundamental role of wood as fuel, timber, tools, and for various crafts. Woodworking represents a crucial skill set, demanding comprehensive knowledge of plant resources, the mechanical characteristics of different species, and the use of specialized tools for sourcing and processing the materials. As such, the examination of wooden artifacts and woodworking implements offers important insights into traditional technological practices and ecological understanding. This session seeks to convene experts in the analysis of archaeological wood and other related materials, such as bark or resin, through approaches like archaeobotany, experimental archaeology, tool-mark and use-wear analysis, dendrology, and ethnoarchaeology. Contributions are expected to cover a wide range of geographical and chronological backgrounds.

[166] Symposium • Current Ceramic Research in the Greater Southwest-Northwest

Ceramic research has long been at the heart of Southwest archaeology. From the Pecos Classification to Anna Shepard's discovery of "sanidine basalt" in Chaco pottery through to today, ceramics have been indicators of time, place, and human behavior. Whether resolving (or questioning) issues of exchange, learning, and interaction, ceramic researchers have helped shape our understanding of the ancient Southwest. Decorative design analyses, morphometrics, type identification, geochemical provenancing, and petrography are just some of the methods ceramic researchers employ to parse past human choices. Durable, abundant, and beautiful, Southwest pottery both inspires research questions and answers them. This session invites ceramicists to share recent (or recently revisited) conclusions made based on material from the greater US Southwest-Mexican Northwest.

[167] Symposium • *CA Contemporary Issues in California Archaeology Part I: Ecology, Environment, and Sustainability

More than a decade after the publication of *Contemporary Issues in California Archaeology* (2012), two sessions bring together generations of scholars, practitioners, and community collaborators to examine how the field is being reshaped amid ongoing social, political, and environmental changes. Organized around two central themes, (1) Ecology, Environmental Change, and Sustainability and (2) Critical Heritage and Community-Centered Practices, these sessions feature contributions that address climate change, sustainability, collaborative methods, Indigenous sovereignty, equity-focused reform, and decolonial frameworks. These contributions examine how archaeologists are negotiating a moment of disciplinary transition by confronting both environmental and structural challenges, while simultaneously identifying opportunities to broaden archaeology's relevance beyond traditional academic and compliance-oriented contexts. Although centered on California, the themes and questions discussed are relevant to broader national conversations about the future directions and ethical responsibilities of archaeology. In this session, we focus on the theme of Ecology, Environmental Change, and Sustainability.

[168] Symposium • Embodying Social Archaeology Narratives: Celebrating Rosemary Joyce on Her Retirement Part I

This session celebrates Rosemary Joyce on her retirement from teaching by bringing together former students and scholars who engage with her research to highlight the innumerable contributions she has made to archaeological scholarship. Her longtime research in Honduras has shaped how Mesoamerican scholars think about communities on the periphery and the importance of shared cultural practices. She has brought new materialisms perspectives to the intimate relationship that people have with objects and how their museum practices shape these relationships in the present. This same attention is brought to understanding ourselves as embodied subjects with entangled aspects of identity that influence our perspectives and relationships with others in community. This includes her extensive scholarship on sex and gender and how these categories are socially and culturally performed and actively negotiated. Rosemary Joyce has been a leading voice in the development of the field of social archaeology and has pushed us to engage with broader theoretical literature and reimagine how we create and distribute archaeological knowledge within and beyond academia.

[169] Symposium • Collaborative and Community-Based Archaeology

Collaborative and Community-Engaged Scholarship (CES) is an important topic in our profession, encompassing a growing diversity of activities. We continue eight years discussing issues and best CES practices in archaeology. This session displays a commitment to conducting research and historic preservation in effective partnership with multiple stakeholders as a matter of fairness, ethics, and as a way to create and co-create robust and useful final products. Archaeological projects affect Indigenous peoples, local residents, and descendant communities in many ways. These groups often have relatively little input into what “others” say about, or do with, their heritage. We advance inclusive, community-engaged scholarship that is co-created with relevant communities. The goal of this session and many of the projects discussed is to use community involvement and participation as a way not only to give a voice to groups that have been essentially voiceless but to empower all stakeholders—especially on projects that involve “multiple pasts.” We discuss the various types of CES as defined by Doberneck, Glass, and Schweitzer (2010) including Research and Creative Activities, Teaching and Learning, Service and Practice, and Commercialized Activities. We also discuss trajectories of developing relationships and projects that can become respectful, useful, and productive CES.

[170] Symposium • Fantastic Beasts and How to Resolve Them: Navigating Difficult Assemblages and Other Challenges in Zooarchaeological Practice

While “fantastic beasts” belong to myth and legend, zooarchaeologists still encounter very real, often “beastly” challenges in the course of their research. Common obstacles include difficulties with assemblage size and condition (e.g., small sample sizes, poor preservation), working with heritage collections (e.g., documentation, methodological standardization), accessing materials and expertise, obtaining funding, dealing with negative results, and more broadly, balancing the interests of diverse stakeholders. This solution-oriented symposium invites zooarchaeologists to share the challenges they have faced in their own work and discuss approaches they found successful. By fostering an open, communal discussion, we aim to identify common obstacles and exchange potential solutions to taming these “beasts” in zooarchaeological work.

[173] General Session • Archaeometry in the Americas

[174] Symposium • Archaeology and Popular Music: Investigating Soundscapes of History

This session explores the varied and often under-studied connections between archaeology and popular music over the last century. Arcing across diverse musical genres, participants bring critical archaeological, ethnographic, and materiality lenses to (1) the ways that popular music can work as heritage practice as it draws on archaeological, cultural, and historical information (for better or for worse), (2) the role of popular music in archaeological pedagogy and decolonizing practice, and (3) the materialities, performativities, and spatialities of popular music’s creation, use, and discard. The session blends perspectives from archaeologists working on urban archaeology, archaeologies of the contemporary, material culture studies, historical archaeology, colonialism, Native American and Indigenous Studies, and the ancient circum-Mediterranean world.

[177] General Session • Warfare and Conflict**[178] General Session • Applications of Lidar and Remote Sensing****[179] General Poster Session • Archaeometry and Materials Analysis Part 2****[180] Poster Symposium • New Research by the Center for the Study of the First Americans**

The late Pleistocene peopling and settlement of the Western Hemisphere remains a contentious and highly debated topic in archaeology to this day. The mission of the Center for the Study of the First Americans is to pursue research, train students, promote scientific dialogue, and stimulate public interest in the first people to enter and settle the Americas at the end of the last Ice Age. This symposium highlights recent research from our students and faculty regarding investigations into the First Americans.

[181] Poster Symposium • The Tzaman Acropolis Research Project at La Milpa, Belize: Year One

The 2025 field season marks Year One of the long-term Tzaman Acropolis Research Project (TARP) at La Milpa, in northwestern Belize. TARP is imagined as a (minimum) six-year research project investigating the Tzaman Acropolis at the south end of La Milpa and the adjacent Plaza C. The Tzaman Acropolis is a large, elevated complex of courtyards and rooms. It likely had numerous functions, including administrative center, royal court, elite residence, and was the location for sacred and religious ceremonies. Plaza C is large and has restricted access, primarily limited to the southeast corner, off an alleyway. The west, north, and east sides consist of large, tall, range structures, Structures 29, 30 and 31. Given its proximity to the acropolis and the limited access into it, Plaza C is likely the location of elite-related activities, such as performance, ceremonial, or ritual space. This session will present preliminary results on the excavations and other activities of the inaugural year of TARP.

[182] General Poster Session • CRM and Heritage Management**[183] General Poster Session • Digital Archaeology Part 2: Photogrammetry and 3D Modeling****[184] Poster Symposium • Expanding Repatriation Part I: Recent Efforts, Education, and Community in NAGPRA Implementation**

Thirty-five years after its passing, the Native American Graves Protection and Repatriation Act (NAGPRA) remains an important legislative act that has had significant implications for archaeological and museum practices today. The recent update to the legislation has led to stronger relationships between institutions and descendant communities as well as the creation of institution-level NAGPRA policies and procedures developed through consultation and collaboration. As part of the SAA's third annual "NAGPRA DAY," this poster symposium brings together NAGPRA practitioners from a range of institutions to highlight current efforts, challenges, and innovations in the implementation of NAGPRA. Presentations in this session examine a diverse array of topics including updated institutional compliance strategies, the role of Indigenous leadership in consultation and decision-making, the impact of recent regulatory changes, the benefits of regional communities of practice, and ethical and culturally informed collection care and research. Collectively, these posters underscore the importance of centering Native voices and values in repatriation efforts as well as how education and communities of practices can build lasting connections and support sustained, respectful engagement between institutions and Native Nations.

[185] General Poster Session • Pedagogy, Curricula, and Public Education**[186] General Session • States and Urbanism****[187] Forum • The FAIR and CARE Principles in American Archaeology: Reports from the FAIR+CARE Cultural Heritage Network**

The FAIR+CARE Cultural Heritage Network emerged from a three-year Institute for Museum and Library

Services (IMLS) leadership grant and consists of over 40 participants from Tribal Historic Preservation Offices; CRM; federal and state agencies; museum, library, and archives professionals; university researchers; and data publishers and repositories. Since 2023, the Network has been working online and through in-person workshops to develop, disseminate, and promote ethical good practice guidance and digital data governance models to reconcile the apparent social and technical contradictions in the data life cycle. In this forum, network participants will report on their work in the Network, what they have learned, share examples on the implementation of the FAIR and CARE principles in American archaeology, and propose next steps to expand and support this work.

[188] Forum • Queer Archaeology Part I: Refusing Erasure of Intersectional Queer Pasts

This is the first of two linked sessions that explore intersectional queer archaeology in the present moment. This forum specifically invites panelists and attendees to discuss current challenges and successes in researching and teaching about queer pasts in the face of an ever-expanding suite of executive orders, laws, policies, and other initiatives that seek to obscure the diversity of humanity's gender and sexual heritage. How can archaeologists continue to study the full range of gender expressions, sexual practices, and social identities that are represented in the archaeological record? How are archaeologists using queer theory to trace the workings of power in the past through and beyond gender and sexuality, and how can these insights inform our resistance to queer erasure in the present day? How can we effectively counter the removal of queer content from heritage sites, museum exhibits, textbooks, academic publications, and other media? What strategies enable us to continue to represent queer pasts in our classrooms, conferences, historic sites, museums, and other heritage and community spaces?

[189] Forum • From Residue to Recipe? Organic Residue Analysis for Archaeologists

Organic residue analysis has significantly improved our understanding of foodways and culinary practices worldwide, contributing to the identification of utensils used for wine, dairy, animal, and plant products, among other ingredients. Lipids, proteins, and smaller molecules, such as alkaloids, have contributed to understanding the ingredients once processed and prepared. Expectations are often that residues can get us closer to understanding recipes. However, there are many parameters at play when undertaking organic residue analysis that can influence our results and hence potential interpretations. We invite short contributions to this forum, encouraging discussions about the scope, limitations, and potential of organic residue analysis in addressing foodways. The forum aims to provide attendees with a nuanced picture of how to integrate organic residue analysis in their research.

[193] General Session • Water Management

[194] General Poster Session • Colonialism in the Americas

[195] Poster Symposium • Early Alaskan Archaeology Updates on Shég' Xdaltth'í', Holzman, and Dry Creek

This poster symposium brings together recent archaeological work from western Beringia and provides updated findings from at least three key archaeological sites in Interior Alaska. Particularly, the early sites of Shég' Xdaltth'í' and Holzman in the Tanana River Valley and Dry Creek in the Nenana River Valley will be the focus, but other sites in the region that have undergone recent analysis to expand existing knowledge may be presented as well. Posters will focus on reporting stratigraphy, dating, raw material procurement, and technological and subsistence strategies, as well as other proxies of human behavior.

[196] Poster Symposium • Life and Death in the Industrial-Era United States: Interweaving Historical and Bioarchaeology Approaches

This poster session brings together the work of historical archaeologists and bioarchaeologists, from undergraduates to faculty members, to explore what life and death looked like in the nineteenth- and early twentieth-century United States. Regionally, work in this session spans from Upstate New York to the Mountain West to investigate the changes that occurred in communities across the United States during and immediately following the Industrial Era. Major shifts occurred in agricultural practices, settlement and land

use, immigration patterns, and social ideologies over the course of the nineteenth century, which had long-ranging impacts on American health, mortality, and lived experience ranging into the twentieth century and beyond. Blending approaches from bioarchaeology and historical archaeology, posters in this session make use of diverse data sources to explore questions of life and death in the past through interdisciplinary, holistic means.

[197] Forum • Queer Archaeology Part 2: Pride and Persistence in Archaeological Practice

This is the second of two linked sessions that explore intersectional queer archaeology in the present moment. This forum opens a space for queer archaeologists and allies—both panelists and attendees—to share their experiences and insights during a time when LGBTQIA+ civil rights are rapidly eroding. We especially note the direct attacks on trans and gender-non-conforming people and communities, not only through increased barriers to public facilities and identity-affirming medical care but also rhetoric that encourages harassment and violence. How are queer archaeologists navigating these legal and social challenges? How can we especially meet the growing needs of queer archaeology students and other early-career queer archaeologists? What actions can CRM firms, government agencies, universities, and other organizations take to ensure that queer archaeologists, their families, and their communities persist and thrive?

[198] Poster Symposium • Archaeology and Cultural Resources Research within the US National Laboratory System

The Department of Energy's 17 National Laboratories work to solve some of the world's greatest scientific challenges and support scientists and engineers from academia, government, and industry by providing access to world-class research facilities and skilled technical staff. In this context, archaeology and cultural resources research is primarily undertaken through compliance with sections 106 and 110 of the National Historic Preservation Act (NHPA). This session highlights some of the projects coming out of the National Laboratory system and demonstrates the impact of the NHPA in serving the DOE's core mission and supporting innovative research, facilitating stakeholder engagement, and effectively managing cultural heritage.

[199] General Poster Session • Ceramics Analysis: Pottery from Various Angles

[200] General Poster Session • Human-Environment Interaction and Changing Climates

[201] General Poster Session • Navigating Trade Networks

[202] General Poster Session • Religion, Ritual, and Symbolism

[204] General Session • Subsistence Studies

[205] General Session • Embodying Identity: Adornment and Ritual

[206] Symposium • Advances in the Exploration of the Mesoamerica Subterranean Realm: Recent Discoveries and New Interpretations

Our understanding of the importance of the subterranean in ancient Mesoamerican religion and cosmology has expanded greatly over the last decade. The expansion of the discipline's field of vision to focus more on constructed features is in its infancy so it is expected the types of subterranean features encountered will continue to multiply in the future. Archaeological discoveries have stimulated studies in ethnoarchaeology, ethnohistory, and iconography that support and amplify our appreciation of the multifaceted role of subterranean features. Subterranean spaces tend to be dark and humid, which limits their utility for mundane activities, but for that reason makes these spaces some of the best venues for investigating the archaeology of ritual. This session presents the most recent discoveries and interpretations.

[207] General Session • Opening the Archive: Curatorial Strategies and Archaeological Research

[208] Symposium • A Fryxell Retrospective: Tracing the Interdisciplinary Footprints of Cheryl Claassen

This symposium honors Dr. Cheryl Claassen, recipient of the 2026 Fryxell Award for Interdisciplinary Research in Zoological Sciences. Dr. Claassen's distinguished career exemplifies the spirit of the Fryxell Award through transformative research that advances our understanding of human–environment interactions and the central role of animals in ancient and historic cultures. Her groundbreaking scholarship bridges environmental resources, zoological data, and cultural practices across time and space. Early research on shell-bearing sites and freshwater mussels, along with her detailed analyses of faunal assemblages, revolutionized interpretations of subsistence strategies and ritual behaviors in precontact North America. Dr. Claassen's methods and insights have reshaped the study of bones, shells, and related artifacts, demonstrating both their symbolic and practical significance. By integrating rigorous quantitative approaches with nuanced qualitative interpretations, Dr. Claassen has set new standards for interdisciplinary faunal analysis. Her work highlights how archaeological science can illuminate complex human behaviors, past and present, and continues to inspire archaeologists to reflect on their own practices. Together, this symposium celebrates Dr. Claassen's enduring legacy of innovation, mentorship, and intellectual leadership, and recognizes her profound contributions to the field of zooarchaeology and beyond.

[209] General Session • Archaeometry in Africa, Asia, and Europe**[210] Symposium • Long-Distance Interaction and Exchange Networks in West Mexico AD 900–1350**

West Mexico comprises a mosaic of environments and cultures, whose interactions linked their societies in shared historical processes. Toward the end of the first millennium AD, Mesoamerica experienced an intensification of interregional exchange, which favored the integration of West Mexico with other regions through networks at different scales. This symposium will explore various mechanisms and motivations of the social dynamics of this period—and their archaeological correlates—as well as the connection of West Mexico to the Mesoamerican world.

[211] Symposium • From Interactions to Management: Mutualistic Human–Animal Relationships in the Archaeological Record of the Americas

This session explores long-term human–animal relationships in the Americas that were shaped by repeated, patterned interactions influencing animal behavior, distribution, and availability within managed socioecological systems. Archaeological models of animal use have often emphasized strategies such as herding and agropastoralism while focusing on indicators such as reproductive control, foddering, and confinement. Consequently, low-intensity but intentional forms of animal engagement such as selective harvesting and habitat modification are often overlooked. To better understand the widespread human–animal relationships in the Americas, contributors in this session draw on faunal analysis, stable isotope data, spatial patterning, and paleoenvironmental reconstruction to reveal a broader spectrum of interaction. Their research highlights practices such as the use of aggregation sites, strategic hunting, ecological niche construction, and the translocation of species beyond their native ranges. Emphasizing both theoretical and methodological innovation, this session expands how archaeologists recognize and interpret animal management practices that fall outside traditional herding frameworks.

[212] Symposium • The Concept of the “Frontier” in Archaeology

The concept of the “frontier” in archaeology refers to zones of transition, interaction, and contestation or cooperation between distinct cultural or social groups. These frontier areas are not necessarily delineated by fixed boundaries or physical markers; rather, they are dynamic, fluid spaces where communities interact—through trade, migration, conflict and cooperation, or cultural exchange—and shape one another over time. The presenters in this session aim to explore and reconstruct the complex interactions that occur within these frontier zones. Methodologically, each presentation emphasizes the agency of individuals and/or objects, as well as the adaptations of all groups involved in the frontier dynamic. The session's key message is to recognize the multifaceted influences that shape these unique regions across the world.

[213] Symposium • From the Sierra to the Sea: Recent Research in the Arequipa Region

The Arequipa Region has a long history of prehispanic cultural development in the Andes spanning back thousands of years, but it has often been portrayed as peripheral to many other areas in Peru where major monumental centers and cities developed. Recent research, however, is slowly changing this view as new findings have demonstrated Arequipa was a place of major social interaction that brought together various groups of people from inside and outside of the region to build large construction projects and communities, which range from monumental ritual centers to networks of agricultural terraces. From the sierra to the sea, and from the Late Formative period through the colonial period, this session highlights recent archaeological research in the Arequipa region, which will demonstrate the cultural connectivity that ensued and shed new light on our understanding of this region's history.

[214] Symposium • International Cultural Heritage Restitution: From Provenance Research to Collaborative Return

This symposium examines the intertwined processes of provenance research, restitution negotiation, and collaborative engagement with nations and communities of origin, with a focus on both the challenges and the possibilities that shape this global endeavor. Case studies and critical reflections highlight diverse strategies employed to advance ethical returns of international cultural heritage and foster sustainable partnerships. Presenters will discuss methodologies and obstacles in tracing the transactional histories of objects and their origin; the legal, ethical, and diplomatic dimensions of restitution; and institutional approaches to establishing standards and policies for the return of international cultural objects. The symposium foregrounds collaborative models that prioritize relationship-building, shared stewardship, and community-led initiatives. Multilateral frameworks and cross-institutional partnerships expand the scope of restitution, while framing returns as acts of reparation highlights their potential to challenge current notions of ownership and address historic power imbalances. By bringing together examples from across disciplines and contexts, this session highlights the complexities of returning international cultural heritage while showcasing innovative pathways toward more equitable and collaborative futures.

[215] Symposium • Embodying Social Archaeology Narratives: Celebrating Rosemary Joyce on Her Retirement Part 2

This session celebrates Rosemary Joyce on her retirement from teaching by bringing together former students and scholars who engage with her research to highlight the innumerable contributions she has made to archaeological scholarship. Her longtime research in Honduras has shaped how Mesoamerican scholars think about communities on the periphery and the importance of shared cultural practices. She has brought new materialisms perspectives to the intimate relationship that people have with objects and how their museum practices shape these relationships in the present. This same attention is brought to understanding ourselves as embodied subjects with entangled aspects of identity that influence our perspectives and relationships with others in community. This includes her extensive scholarship on sex and gender and how these categories are socially and culturally performed and actively negotiated. Rosemary Joyce has been a leading voice in the development of the field of social archaeology and has pushed us to engage with broader theoretical literature and reimagine how we create and distribute archaeological knowledge within and beyond academia.

[216] Symposium • Digging into the Archives: Non-osteological Approaches to Bioarchaeological Questions

Over a decade ago, bioarchaeologists were called to recognize their obligations to ethical clients (Blakey 2008) and to be engaged researchers (Martin et al. 2013). Since then, a growing contingency of practitioners recognize that the study of human remains is at a critical juncture. Concerns about the ethics of research and teaching with human skeletal remains without explicit consent from the decedents themselves, their descendants, or relevant communities is prompting a growing call for major changes in how bioarchaeologists collect, analyze, and interpret data, and whether data is even the appropriate term to use. In dialogue with recent perspectives on “paper bodies” (Warner-Smith and Hosek 2023) and an “osteology without bones” (Martin and Stone 2024; Stone and Martin 2024), this session examines how mortuary archaeology, historical and archival analyses, geophysical testing, and other techniques provide direct insight into demography,

health, and lived experiences of past populations—all major objectives of traditional bioarchaeological research—that do not require the excavation or analysis of human remains. Presenters explore frameworks, methodologies, and case studies that highlight the effectiveness of centering multiple complementary methodologies to study past lives, rather than assuming bones as the starting place.

[217] Symposium • Current Archaeology in Southeast Asia

Southeast Asia contains a vast and diverse group of environments, peoples, and cultures. This is evident in the expanding range of research topics and methods being employed by archaeologists specializing in the region. Recent studies, some of which will be presented here, have continued to contribute to this growing body of academic work through advancements in methodology and the incorporation of novel theoretical approaches. In this session, we aim to showcase the work of developing and established scholars conducting archaeological research in Southeast Asia. These scholars will discuss the ever-changing research landscape of Southeast Asian archaeology in their respective areas of focus by sharing their datasets and interpretations.

[218] Symposium • Expanding Repatriation Part 2: Lessons from Global and Institutional Collaborations

This session explores the evolving landscape of repatriation and international returns, highlighting how many have been inspired by NAGPRA to create processes for returning cultural heritage, ancestral remains, and sacred objects. The first portion of the session will focus on how international repatriation has become a powerful mechanism for addressing colonial legacies and rebuilding relationships with source communities. The second portion of this session will explore how taking a broader view of collections overall can assist in the repatriation process. Participants will present case studies from museums, universities, and government agencies that illustrate successful (and ongoing) repatriation processes. Participants will discuss best practices, policy development, and the role of domestic and international partnerships in fostering ethical returns.

[219] Symposium • *CA Contemporary Issues in California Archaeology Part 2: Critical Heritage and Community-Centered Practices

More than a decade after the publication of *Contemporary Issues in California Archaeology* (2012), two sessions bring together generations of scholars, practitioners, and community collaborators to examine how the field is being reshaped amid ongoing social, political, and environmental changes. Organized around two central themes, (1) Ecology, Environmental Change, and Sustainability and (2) Critical Heritage and Community-Centered Practices, these sessions feature contributions that address climate change, sustainability, collaborative methods, Indigenous sovereignty, equity-focused reform, and decolonial frameworks. These contributions examine how archaeologists are negotiating a moment of disciplinary transition by confronting both environmental and structural challenges, while simultaneously identifying opportunities to broaden archaeology's relevance beyond traditional academic and compliance-oriented contexts. Although centered on California, the themes and questions discussed are relevant to broader national conversations about the future directions and ethical responsibilities of archaeology. In this session, we focus on the theme of Critical Heritage and Community-Centered Practices.

[220] Symposium • Food for Thought: Foodways, Pottery, and Community

The goal of this session is to link analyses of pottery vessels to communities of practice with respect to foodways in different regions of early East Asia. We seek presentations that consider the social implications of different kinds of ceramics from residential contexts or mortuary contexts that were used for the preparation, storage, and consumption of foods for daily meals, special events, or for rituals. For example, how did efforts to prepare different kinds of foods impact ceramic technology? What is the social significance of variation in food storage practices within settlements? How should the consumption patterns for specific kinds of serving vessels be interpreted with respect to degree of social inequality, gender, or other components of social identities? What are the distinguishing aspects of vessels used for rituals involving foods? What is the social significance of food vessels used in funerals or for rituals in honor of ancestors?

[221] Symposium • Innovations in Isotope Analysis: Emerging Voices and Evolving Approaches

This session presents innovative and interdisciplinary research by early-career scholars (those within eight

years of receiving their PhD or currently enrolled in doctoral programs) who are advancing isotopic analysis in archaeology. Papers apply “traditional” stable or radiogenic isotopes (C, N, O, Sr) and emerging isotopic systems (Cu, Fe, Pb, S) to investigate questions and refine methodologies of paleodiet, paleoclimate, and mobility/provenancing. Studies in this session span four continents (North America, South America, Europe, and Africa) and time periods ranging from Stone Age Africa to nineteenth-century San Francisco. They emphasize the expansion of isotopic applications across diverse materials and scales—from the construction of new regional isoscapes, to innovations in sequential and serial enamel sampling for seasonality, to multi-isotope and inverse modeling approaches that enhance analytical resolution and interpretations. The session also highlights the value of integrating isotopic data with GIS, climate proxies, and biomolecular evidence to generate more robust reconstructions of past human lifeways. Together, these emerging voices and evolving approaches demonstrate how the next generation of researchers is driving archaeological isotope research forward.

[222] Forum • SAA Fundraising Forum: A Conversation on Investing in the Future of Archaeology

Why is fundraising important to archaeology as a discipline? This forum, sponsored by the SAA Fundraising Committee, brings together archaeologists with a variety of roles and perspectives on fundraising, from giving grants to managing funds. The conversation will focus on the benefits, successes, and challenges of fundraising for archaeology and for the SAA. Discussants will explore different perspectives and benefits of fundraising and the ways it can enrich the discipline and make archaeology and the SAA stronger. We will discuss ways in which communication can be improved to help more future archaeologists and share concrete ideas on increasing contributions in support of our members and future members.

[223] General Session • Case Studies in Mesoamerican Archaeology

[224] Symposium • Interdisciplinary Approaches in History and Archaeology of North America: A New Look at the Consequences of the Development of New Spain

Historical archaeology has the power to gather information related both to the archaeological field and to the historical field. In New Spain, North American and Mesoamerican societies and their environments have been heavily impacted by European colonization, with the introduction of new animals and crops, land clearance for agriculture and livestock grazing, and other impacts. Evidence for these changes are available in the archaeological record, in historical sources, and through ethnographic observations, and the combination of these fields allows us to deepen our understanding of the processes in place and their consequences. In this session, we propose to engage on the interdisciplinary approach to environmental and cultural changes as studied through the lens of archaeology, anthropology, and history. We invite participants with an archaeology and/or history background to reflect on the way we navigate the different sources we can analyze and how to strengthen the dialogue between the disciplines.

[225] Lightning Round • Queer Archaeology Part 3: Queer Lightning

Like a bolt of lightning across the night sky, queer approaches to archaeology can illuminate a universe of possibilities for new research questions, methodologies, and approaches to the material world. Queer archaeology can encompass many things: a study of gender and sexuality in the past, the incorporation of queer or gender theory to archaeological analysis, or archaeological work done by LGBTQ+ archaeologists. Thinking expansively along all of these types of projects, this lightning round session will showcase recent research in queer archaeology, broadly conceived. Short presentations will be followed by Q&A and discussion about the possibilities and challenges of queer archaeology research today, centered on the participants' featured research projects.

[226] General Session • On the Move: Settlement and Mobility

[227] General Session • Archaeologies of Resistance and Survivance

[228] General Session • Geoarchaeology Applications

[229] Symposium • Typology of Hafted Bifaces, Also Known as Points

Typology, also known as classification, is the foundation of archaeology. Typology helps establish a relative dating sequence for archaeological sites. It provides insights into the technological abilities, hunting practices, migrations, and cultural affiliations of earth's past populations. It allows archaeologists to identify artifacts, even when they are fragmented or incomplete. Papers in the symposium cover any aspect of lithic or metal point typology, including historical, methodological, instrumental, et cetera, and may include its application to the understanding of human behavioral patterns of the past such as the evolution of tool diversification, the sexual division of labor, hafting techniques, the shift from stone to metal tools, using typology to expose fakes and forgeries, et cetera. Presentations covering any geographic area and any temporal period are welcome.

[247] General Session • Asking the Big Questions: Case Studies in Archaeological Ethics**[248] General Session • Small Finds in the Interpretation of Identity****[249] General Session • Heritage Frameworks for Preservation and Engagement****[250] Forum • COSWA Mentoring Forum on Gender Equity**

Since its founding, the Committee on the Status of Women in Archaeology (COSWA) has routinely sponsored networking and mentorship events to assist women within the SAA. COSWA is concerned with barriers that lead to underrepresentation across sectors of archaeology. Women and non-binary individuals are underrepresented in prestigious leadership and academic positions, in journals, and as PIs of high-value grants. As representation decreases, so too does compensation, exacerbating salary compression. Sexism continues to be the root cause of many issues, instances of which must continue to be called out and addressed. Identifying challenges and confronting barriers through collaboration, mentorship, and networking to foster community can combat such inequity. In this forum, we will (1) dialogue about factors impacting inadequate representation in archaeology leadership and discuss how to move contemporary archaeology forward, (2) address the mentorship needs of women and nonbinary aspiring / early-career archaeologists by the organization and membership, and (3) continue our discussion of parenting in archaeology due to the continued prejudice against working parents—in particular, working mothers—both in professional settings and at conferences. While the SAA has recently begun offering childcare, we will discuss how to continue to support similar initiatives to ensure we stay on track.

[251] Symposium • Punishment and Production: Archaeological Approaches to Incarceration and Forced Labor

For centuries, (settler)colonial governments and private entities in the Americas have used labor to facilitate control, enact punishment, and extract economic value from incarcerated populations. Although prisons, jails, and their directly associated labor camps are an understudied area of historical archaeology, many ongoing projects engage with a broad understanding of carcerality. Archaeologists have examined carceral systems through investigations of colonial labor regimes, prisoner-of-war and ethnic concentration camps, and state institutions. In this session, we invite participants to think broadly about the diverse manifestations of carceral systems and what purposes they have served, interrogate the relationships between different forms of forced labor, and explore how archaeology can address themes of punishment, control, and exploitation by examining textual, material, and spatial evidence.

[252] General Session • Settlement Patterns and Landscape Analysis**[253] Forum • Healing as Part of the Work of Community-Accountable Archaeological Research**

Although archaeology is experiencing a paradigm shift to become more inclusive of underrepresented groups and by implementing decolonizing methodologies, research of the past may yet cause unforeseen trauma in archaeological research. Healing work in archaeological research can be seen in many forms and examples including projects such as locating unmarked graves of Native American children who attended early

twentieth-century federal Indian boarding schools, working with repatriating human remains in museums, identifying missing servicemembers in conflict crash sites, and researching Japanese American incarceration camps during World War II. How and in what ways are institutions, departments, or nonprofits supporting healing, for whom, and should they be? What were some of the roadblocks encountered in programs of healing and how were they overcome? How can we as archaeologists better prepare ourselves, our students and the communities we work with to face trauma and heal from past atrocities, whether it be caused by the discipline of archaeology or the subject of our research? Because healing is something that requires deep forms of intention and communication, the style of this forum will leave time for dialogue between all attending.

[254] Lightning Round • Remembering Jim Skibo

This session brings together a wide range of scholars to honor the memory and many accomplishments of Dr. James Skibo. Dr. Skibo was a behavioral archaeologist with theoretical foundations in ethnoarchaeology and experimental archaeology. He was well-known for his pioneering work in pottery use-alteration and his long-term research projects in the American Southwest and Michigan. Jim was a prolific author and was dedicated to helping young scholars publish their work. He was the series editor for the University of Utah Press's *Foundations of Archaeological Inquiry (FAI)* series and coeditor of the *Journal of Archaeological Method and Theory*. After a long career as a Distinguished Professor at Illinois State University, he became the Wisconsin State Archaeologist and made national news for the discovery of ancient dugout canoes. In 2023, he died in a diving accident while searching for these unique craft. This session explores the many aspects of Jim Skibo's eminent career.

[255] General Session • Community on Stone: Rock Art and Inscriptions of Belonging

[256] Symposium • In the Sticks but Not in the Weeds: Reality, Remembrance, and the Forging of the Rural American West

Social complexity has long been a facet of life in the American West but is commonly understood to be a phenomenon largely confined to urban areas. This session brings together papers that challenge that narrative or question the framing of rural spaces as perpetually homogenous, bucolic, and out-of-the-way places where only a narrowly defined set of actors played any meaningful role. By examining the unique dynamics of rural communities, these presentations highlight how various groups navigated the opportunities, constraints, and pluralistic social worlds of small-town life. Together we will explore the various ways that popular Western narratives have romanticized, whitewashed, and winnowed away the complexity of rural spaces. Highlighting work both in and with rural communities, we also consider how these historical erasures continue to haunt contemporary populations by disconnecting them from their social and cultural pasts and paving the way for modern reimaginings of rural America.

[257] Symposium • The Many Dimensions of Color in the Ancient Americas

Color is central to human experience, yet it is also one of the most elusive aspects of the archaeological record. From the fleeting brilliance of perishable fibers to the symbolic weight of pigments, the study of color opens windows onto technology, trade, symbolism, identity, and meaning. For this session, we welcome contributions that address the full spectrum of approaches to color in archaeology, with a particular focus on fiber perishables and related materials. Topics may include, but are not limited to, scientific analysis of natural and dyed colors (textiles, basketry, cordage, feathers, etc.); methods in color identification, reconstruction, and conservation; color in iconography, semiography, and cultural symbolism; experimental and ethnographic approaches to dyeing and color production; intersections of color with identity, status, gender, ritual, and exchange; and case studies exploring the role of color in ancient American societies. We especially encourage papers that bridge scientific analysis with cultural interpretation or that highlight the challenges and possibilities of working with color in perishable media.

[258] Symposium • Plant Use beyond Food: Methods, Theories, and Materiality in Archaeological Practice

Plants are essential to all aspects of human life. Beyond food, they provide materials for medicine, textiles,

writing, baskets, construction, decoration, and ritual. Their cultivation and management—such as field preparation, harvesting, processing, and use—also reflect ecological knowledge and cultural practice. Case studies from deep human history to present-day societies show that plant use has shaped technologies, economies, and cultural practices. Yet plant use beyond food remains relatively underexplored in archaeological discourse, despite its significance for understanding domestication, technological choices, and social development. This session highlights the integration of diverse and emerging analytical approaches—including macrobotanical and microbotanical studies, use-wear and residue analysis, isotope analysis, fiber and perishable material studies, and research on museum collections. We welcome contributions that engage with theoretical perspectives on plant use, materiality, human-plant entanglements, and multispecies relationships. We encourage papers that push methodological boundaries—for example, through experimental archaeology, digital imaging, biomolecular techniques, or cross-regional comparative frameworks. By bringing together archaeological science, material studies, and ethnographic insights, this session seeks to foster dialogue across regions, periods, and disciplines. We aim to advance understanding of the diverse roles plants have played in human history and explore how these practices connect to broader questions of identity, innovation, environment, and heritage.

[260] Symposium • From Artifacts to Art, from Provenance to Provenience: Archaeological Practice, Archival Research, and the Biographies of Orphaned Objects—A Session in Honor of Mary Miller Part I

This session will explore how archaeological investigation, museum and archival research, and art historical inquiry converge to reconstruct object biographies, recover lost data, and resituate objects within social, cultural, and colonial histories and legal protocols. Presenters will critically examine disciplinary practices and assumptions that have facilitated object displacement and documentary silences, while highlighting emerging frameworks for collaboration, community engagement, restitution, and repatriation. Questions that might be explored include the following: How did historical practices of looting and forgery develop in the Americas? What has been the nature of the global market for looted prehispanic objects through time? How are emerging methods and techniques employed for determining authenticity of objects lacking provenience information? How can archival work and archaeological practice address missing provenance and provenience information—and how might the study of such objects help identify lacunae in the archival record? What are ethical implications of studying orphaned objects and their contested role in museum collections, iconographic studies, and archaeological interpretations? How can the study of orphaned authentic objects in museum collections complement Indigenous oral histories and claims of historical territoriality? This session celebrates Mary Miller and her pioneering work on provenance studies as they relate to cultural regions across the Americas.

[261] Symposium • A Multicentric View of Bronze Age China and Beyond: Networks and Cross-Regional Interactions

This symposium explores the intertwined movement of materials, technologies, customs, and beliefs in Bronze Age China, situating local developments within wider Eurasian interaction spheres. While earlier scholarship has often emphasized the diffusion of bronzes, weaponry, and other material goods, the papers in this panel collectively push beyond simple models of core-periphery transmission. By examining provenance studies, craft techniques, mortuary practices, and hybrid assemblages, the contributors reveal that artifacts did not merely travel as passive commodities but carried ideas about identity, social organization, ritual, and power. Together, these studies demonstrate that interregional encounters shaped the very foundations of early Chinese states. The circulation of ores and metals linked distant landscapes into shared extractive economies; the adoption of novel technologies, from soldering to chariotry, reshaped both symbolic display and social hierarchy; and the reinterpretation of foreign styles or practices in local contexts reveals active negotiation rather than passive assimilation. The symposium thus highlights Bronze Age China as a dynamic nexus of innovation and cultural translation, where movement and encounter generated new forms of meaning. By foregrounding this multiscale and cross-disciplinary perspective, the panel underscores the need to rethink state formation and cultural identity in Early China through the lens of connectivity.

[262] Symposium • The Olmecs: Current Research and Future Directions

Over the last century, the Olmec have risen to one of the most relevant cultural phenomena of early Mesoamerica. At this point, we consider it pertinent to pause to reflect and assess our current understanding of the Olmec and the state of research on Mexico's the southern Gulf Coast during the Preclassic or Formative period (1800–100 BC). This symposium brings together specialists on the Olmec who discuss archaeological, iconographic, and linguistic topics. Participants will also discuss activities related to protection and conservation of Olmec archaeological heritage, the dissemination of knowledge, and community engagement, thereby fostering communication, dialogue, feedback, and collaboration.

[263] Symposium • Ecodynamics and Paleodemography over Cultural Horizons (EPOCH)

Recent public discourse on the future of human population growth borders on panic. Economists and sociologists warn of dire economic consequences if policy efforts do not change the balance between fertility and mortality. Yet advances in archaeological data synthesis reveal that large population recessions are nothing new. Rather than panic, through the careful synthesis of data, archaeologists can approach the problem of population growth and decline rationally. The archaeological record displays cases of massive population decline, small population declines, and abrupt population recovery. What social-ecological processes generate these diverse patterns and explain the severity of population loss or cycles of growth and decline in human societies? To answer this question, the EPOCH symposium brings together researchers who study the interaction between cultural evolution, population, and ecosystem change. In particular, papers will attempt to explain how innovation, competition, and cultural evolution interact across ecosystem and climate contexts to impact demographic transitions and population decline. The case studies, models, and comparative papers collected in this symposium will contribute to a more rational foundation for policy discussion related to contemporary population decline.

[264] Symposium • Beyond Compliance: Innovation and Impact in CRM Archaeology

This session will highlight diverse projects and innovations within cultural resource management (CRM) archaeology. It is designed to engage a broad audience—including undergraduate and graduate students, early-career professionals, and seasoned practitioners—by illustrating the dynamic and impactful nature of CRM work today. CRM has been mischaracterized as compliance-driven archaeology, focused solely on regulatory requirements and resource protection. While these responsibilities remain important, this narrow view overlooks the critical, research-driven, and community-engaged approaches that now define much of CRM practice. Despite progress, outdated perceptions still influence how CRM is viewed within the broader archaeological community. By showcasing diverse and innovative projects, this session aims to challenge those perceptions and demonstrate the field's evolving role in shaping archaeological knowledge, practice, and stewardship.

[266] Symposium • Fourth Annual Ceramics and Archaeological Sciences Symposium

Now in its fourth year at the SAA meeting, the “Ceramics and Archaeological Sciences Symposium” fosters interdisciplinary and international dialogue to expand what we can learn about ceramics, the people who make and use them, and the material, ecological, social, aesthetic, cosmological, and political worlds they embody. Contributions in this session highlight practical and innovative approaches—archaeological sciences, experimental, art historical, ethnographic, statistical, and spatial—for analyzing ceramics and data. These methods, applied in diverse contexts worldwide, engage us with exchange, provenance, production and consumption, communities of practice, landscape perceptions and use, identity, ritual, and sociopolitical organization. Equally important, contributions grounded in diverse theoretical perspectives address key questions about the practice and interpretation of ceramic analysis. Together, these insights highlight the enduring power of ceramics to illuminate human experience across time and space.

[267] Symposium • Maritime Foundations for Andean Civilization at 50: Whither the Tides?

Fifty years ago, Michael E. Moseley published a book entitled *Maritime Foundations for Andean Civilization* (MFAC). He proposed that marine resources were key to developing later, large-scale agricultural irrigation systems that gave power to emergent political organizations on the Andean coast. Under MFAC, “early” power (when marine resources were predominant) was manifested in various contexts, particularly in the

development of monumental architecture and a prestigious “textile industry.” Although the MFAC received many criticisms and was reshaped over the years by Moseley, the discussion was mostly centered on marine productivity, paleoclimate, and a long-lasting debate between terrestrial/inland versus marine/coastal dynamics. More interesting, the MFAC never had a broader impact beyond the Andean region despite its straightforward utility in the global understanding of coastal adaptation. In this session, we will discuss, from multidisciplinary perspectives, how the MFAC is still shaping archaeological research on the Andean coast. Similarly, to what degree can the MFAC be used as a practical framework to study coastal adaptations beyond the central Andean region as a proxy to get a better sense of the social trajectory of maritime communities on the west coast of South America?

[268] Symposium • *CA Before the Bay: Reconstructing Pleistocene-Holocene Lifeways at Mánni Húyyú Muwékma Yatiš Túnnešte-tka

Mánni Húyyú Muwékma Yatiš Túnnešte-tka (CA-SCL-1070/H) is a Pleistocene-Holocene Transition (PHT) mortuary site in the San Francisco Bay area that includes several thermal features and human burials representing 41 ancestors. AMS dating of ancestral remains and associated features yields median calibrated dates ranging from 14,078 cal BP to 7334 cal BP, suggesting this is among the oldest known mortuary sites in North America, and of those, contains the largest number of individual burials from this time period. Mánni Húyyú Muwékma Yatiš Túnnešte-tka has the potential to address major questions about the lives and adaptive strategies of the PHT residents of California specifically, and western North American more generally. This symposium presents the collaborative efforts of the descendant community, the Muwekma Ohlone Indian Tribe of the San Francisco Bay Area, and a team of researchers to reconstruct the lifeways of their ancestors. In addition to establishing a site chronology, our efforts seek to address geoarchaeological context, bioarchaeology and funerary treatment, health, paleodemography, diet, mobility, reproductive and parental investment strategies, and paleogenomics of the Muwekma Ohlone ancestors interred at this Late Pleistocene / Early Holocene site located in Santa Clara County, California.

[269] Symposium • The Archaeology of Ancient Upper Macedonia: Lynkestia and the Iron Gates

Upper Macedonia of antiquity is a relatively under-studied region. Partnerships between Museum Bitola, Institute Prilip, and Cal Poly Humboldt are producing research in two distinct regions of the republic of North Macedonia, Lynkestia and Demir Kapija. This research, now a field school, produces results significant to our understanding of the Hellenistic era and the role of Upper Macedonia in shaping our shared history. Specifically, we look at Demir Kapija from the perspective of a Hellenistic military fortress at a key strategic location, its architectural design; the archaeological evidence for establishment, operation, and destruction; and the social, political, and environmental context within which it existed. From Crnobuki, we present an analysis of a large cache of coins: geoarchaeological, environmental, textile, remote sensing, and ceramic analyses. The site is a significant location within the seat of power in Upper Macedonia, Lynkestia, providing a view of social and political change from the Eneolithic through the Roman Empire from a perspective outside of Pella but inextricably tied to Macedonian power. We present our combined research in the context of political and social organization from regional and global perspectives. This research represents a key tessera in the mosaic of European history.

[271] Symposium • Coastal Archaeology and Historical Ecology: Papers in Honor of Jon Erlandson

For nearly 50 years, Jon Erlandson has explored the archaeology of islands and coastal regions, seeking to understand the complex role humans have played in shaping Earth's ecosystems, past, present, and future. This session brings together coastal archaeologists from around the world to share research in coastal archaeology and historical ecology. Each paper highlights recent work that transcends disciplinary boundaries and deepens our understanding of past human-environment interactions. Featuring Jon's former students, longtime collaborators, and other leading voices in the field, this session honors his enduring legacy while showcasing innovative research along the world's seacoasts.

[272] Symposium • Past Luxuries and Commodities: Views from Afar

Ever since the inception of archaeology as a scientific endeavor researchers have focused, sometimes to an abusive degree, on certain kind of artifacts (so-called *prestige objects*) that either by their aesthetic value, careful/complex manufacture, or distinctive raw material were considered as luxury items belonging to individuals (often identified as men) with an elevated status. While not so popular in the mainstream archaeology, commodities as such have attracted the scholars' attention too: raw materials both inorganic (flint, obsidian, jade, metals) and organic (shells, certain seeds, or vegetal fibers) played a paramount role in ancient societies and their exchange and handling often constituted a source of prestige/power for certain individuals or sections within early societies. The main aim of this symposium is bringing in the research currently made on these topics in different regions of Europe, Asia, and America, contrasting the approaches to the social value—covering aspects such as production, distribution or symbolic use—of reputedly valuable objects and materials among early societies widely distant in space and/or time.

[273] Symposium • Looking at the Big Picture: Long-Distance Connections in the Eastern Woodlands

This symposium centers precontact connections between Indigenous communities across the Eastern Woodlands as a means of understanding social and cultural dynamics. Too often explanations for archaeological phenomena are rooted in the hyperlocal, as products of small-scale histories and ecologies. While there is no denying the importance of both, their foregrounding has come at the expense of macroscale phenomena. Consequently, archaeologists have too often not taken seriously, considered, or evaluated how sites, traditions, and materialities are connected to the “big picture.” Case studies presented in this symposium include the sustained contact between Late Archaic mound-building communities in Florida and the lower Mississippi Valley and the midcontinent and the lower southeast. We bring together a diversity of datasets and methods to investigate evidence of contact between these areas as the result of reciprocal trade, migrations, and other processes.

[274] Symposium • Renewing Worlds: Archaeology and Heritage against Empires Part 2

Our shared pasts, particularly in Western and colonial retellings, are dominated by empires. The Assyrian Empire, the Inca Tawantinsuyu, the Aztec Ēxcān Tlahtōlōyān, and the Roman Empire, among many others, are all commonly reanimated within popular and academic history. For many, empires are considered inevitable in global history; linear developments of powers that grow and aspire to global domination. The cultural imprint of empires is also central to archaeology and heritage. Palaces, temples, and lavish burials have been sought from the misty mornings of our discipline up to the present. National identities are built on grandiose imperial pasts as palaces-come-museums display artifacts justifying the tidy fiction of linear progress from the distant uncivilized past to the present day. This session grows from an EAA 2024 session organized by the Black Trowel Collective and colleagues titled “And So Falls the World: Archaeology and Heritage Against Empires.” We build on their exploration and scrutiny of imperial narratives, asking what futures are being imagined and grown when members of a society tear down empires, or even just allow them to fall? How can those societies' pasts create resurgent practices that contest “empire-mentality”? What can we learn about surviving empire and thriving in its shadow?

[275] General Session • Assembling Community: Materiality and Identity**[276] Symposium • The Value of Rock Art: Interdisciplinary Approaches to Current Rock Art Documentation, Research, and Analysis**

Rock art is enigmatic and iconic, its visual aesthetic being used across academia to promote everything from book covers to merchandise, but beyond this, rock art is undervalued for the contributions it can make and the knowledge it can provide. Current rock art research is interdisciplinary, drawing methods from various fields and knowledge from multiple lines of evidence. These approaches augment and enhance rock art documentation, offer new strategies for evidence site management, and facilitate new interpretive insights for rock art provinces around the world. With continuing, innovative, and progressive methods of analysis, documentation, and study, rock art is moving into a new era of research, enabling it to not just support archaeological endeavors but lead in them. The Rock Art Interest Group-sponsored session provides a

forum to share recent rock art research and pedagogy from a wide range of topics that help us to better understand and contextualize rock art, highlighting and showcasing current research to promote the value of rock art to the wider academic community.

[277] General Poster Session • Power, Social Organization, and Inequality

[278] General Poster Session • Home Sweet Home: Household Archaeology

[279] General Poster Session • What's on the Menu? Part 2: Faunal Analysis and Animal Products

[280] General Poster Session • It's Not All Ancient History Part 2: Historical Archaeology

[281] General Poster Session • Digital Archaeology Part 3: Remote Sensing

[282] General Poster Session • Mortuary Analysis and Paleopathology in the Americas

[283] Poster Symposium • Breaking New Ground: Results of Recent Projects Conducted by Chronicle Heritage

The archaeologists of Chronicle Heritage, North America's largest and most innovative CRM firm, are dedicated to providing our stakeholders with the highest quality heritage management and cultural resources consultancy. The posters in this session highlight some of the most recent work the Chronicle team has conducted in North America. Many of our projects move beyond compliance focused investigations as we seek to contribute to our stakeholders and communities in a multitude of ways. Posters in this session represents case studies of how CRM investigations can make significant contributions to addressing questions in applied and academic research, advance the applications of emerging technologies to understanding the past, and work to better understand and communicate complex historical narratives to our stakeholders and the public. Posters in the session will cover projects conducted in the American Southwest, Southeast, and Mid-Atlantic.

[284] General Session • Networks, Exchange, and Regional Interaction

[285] General Session • Spatial Analysis and the Built Environment

[286] Forum • How's It Going? Checking in on Archaeological Synthesis with Project Leaders

This forum highlights the Coalition for Archaeological Synthesis (CfAS) as a platform for collaborative, cross-disciplinary research that addresses pressing questions in archaeology and beyond. Leaders from a range of CfAS-supported working groups will provide brief overviews of their research themes, participating teams, key findings, and lessons learned through the synthesis process. These presentations will showcase the diversity of topics and approaches supported by CfAS, as well as the value of synthesis in generating broadly relevant insights from archaeological data. Following the presentations, the session will open to audience discussion focused on identifying opportunities for new synthesis initiatives, strengthening ongoing collaborations, and refining the CfAS model to support inclusive, impactful research. All participants are encouraged to contribute ideas for future directions and to share their experiences with collaborative research.

[287] Forum • Teaching the Trowel: Mentorship, Pedagogy, and Preparing to Lead an Archaeological Field School

Field schools remain a cornerstone of archaeological training, yet the context in which we teach them is shifting dramatically. This forum invites all archaeologists who are considering offering a field school to join an open conversation about the opportunities and challenges of experiential education in the field. Drawing on the wisdom of a panel of seasoned teacher-scholars who have directed field schools, we will reflect on lessons learned, pitfalls to avoid, and strategies for fostering inclusive, collaborative, and safe learning

environments. Our discussion will focus on five intersecting themes: (1) preparing emergent teacher-scholars for the complex logistics and responsibilities of leading a field school; (2) cultivating mentorship practices that support undergraduates' intellectual growth and professional development; (3) grappling with the realities of higher education today, including tighter funding models and risk-averse university administrations; (4) adapting pedagogy to generational changes in learning styles, expectations, and needs; and (5) advancing community-engaged research, teaching, and learning in which the priorities of Indigenous and other descendant communities are centered. Participants—panelists and attendees alike—will be encouraged to share experiences, ask questions, and build connections.

[288] Forum • The Archaeology of Food and Foodways: Emerging Trends and New Perspectives

This forum presents a cross-section of emerging trends and new perspectives on the archaeology of food and foodways. Ancient food studies comprise a field of inquiry that touches on all specializations in archaeology, including artifacts, biochemical and microbotanical residue analysis, archaeobotany, zooarchaeology, isotope analysis, studies of features and activity areas, experimental archaeology, and ethnographic research. Significant advances in environmental archaeology and archaeological science have enabled us to view and study human relationships with food in more depth and detail than ever before. Meanwhile, novel interpretive approaches have rendered new foodways visible, and changed our understandings of food, a substance deeply imbued with cultural, economic, spiritual, and political significance. Scaffolding from this work, scholars and culinary specialists alike have applied archaeological findings to such domains as public policy (e.g., agricultural sustainability), culinary arts (e.g., the revitalization of food traditions), and dietary regimes (e.g., the decolonization of diets). In this forum, we explore diverse perspectives on ancient foodways, from a number of geographical regions, material analyses, and interpretive approaches.

[292] General Session • The Bioarchaeology of Childhood

[293] General Session • Craft Production Part I

[294] General Session • Built Landscapes of Belonging

[295] General Poster Session • Caves and Rockshelters

[296] General Poster Session • Experimental Archaeology

[297] General Poster Session • Mortuary Analysis and Paleopathology in Europe and Asia

[298] General Poster Session • Where We All Started: Childhood

[299] General Session • The Materiality of Mobility

[300] General Poster Session • Ethnohistory, Oral History, and Ethnoarchaeology

[301] General Poster Session • Mobility, Migration, and Settlement Patterns

[302] General Session • Health and Diet

[303] Forum • Parents in the Field: The Good, Bad, and Ugly . . .

In recent years there has been a keen interest in discussing issues surrounding children and parenting in archaeology. Much of the discourse has taken place in blogs, newsletters, and outlets that lie outside of formal literature within the field. In doing so, this topic is moved to the sidelines of academic inquiry, hindering real conversations about parenting in the field and keeping us from making any meaningful change. This forum seeks to give parents and caregivers a platform to communicate and connect with one another to share stories, tips, experiences of resilience, happiness, criticisms, and survival both inside and outside of the

field. Participation from members of all identities and backgrounds, especially those from marginalized sectors within the field, is encouraged and welcomed.

[304] General Poster Session • Production, Processing, and Communities of Practice

[305] General Poster Session • What's on the Menu? Part 3: Isotopic and Biomolecular Analysis of Foodways and Diet

[306] Symposium • Reconstructing Domestication and Early Agricultural Lifeways in the Titicaca Basin: Recent Archaeological Research in Taraco, Bolivia

The Taraco Peninsula, Bolivia, on the southeastern shore of Lake Titicaca, witnessed the development of some of the earliest agropastoral societies in the Andes of South America. To investigate the onset of domestication and early food production here the Taraco Archaeological Project conducted excavations at the sites of Chiripa and Chiaramaya between 2022 and 2023. The National Science Foundation–sponsored project prioritized the recovery of multiple datasets that would answer questions about Early Formative period (1500–800 BCE) plant, animal, and landscape management. In this session, Bolivian and North American researchers will present the results of this work that shed light on early agricultural lifeways in the region.

[307] Symposium • Hidden Gems Part 2: New Research on Lapidary, Lapidarists, and Polished Stone and Shell in the Americas

Lapidary—the art of cutting, machining, grinding, and polishing hard materials such as stone and shell—is an artform widely practiced throughout the ancient Americas. Lapidarists from the Eastern Woodlands, the American Southwest, Mesoamerica, the Isthmo-Colombian area, the Antilles, Amazonia, and the Andes all made and exchanged a variety of objects of hard stone and shell, including beadwork, mosaics, small sculptures, and carved adornments. While considerable study has been conducted on specific types of lapidary objects and on important materials including jadeite, magnetite, ilmenite, hematite, and *Spondylus* shell, many other lapidary objects and materials exist and merit consideration. This session explores new research on lapidary, lapidarists, and the purposes and meanings of lapidary objects produced by precolonial artisans. Examinations of new archaeological finds and explorations of little-studied materials, artifacts, and techniques are welcome, as are new hypotheses, reexaminations, and reinterpretations of well-known objects, significant materials, and previous research.

[308] Symposium • The Space Between: Current Research in the Northwestern Isthmo-Colombian Area

The northwestern Isthmo-Columbian Area, encompassing present-day Honduras and extending into parts of Nicaragua and Costa Rica, has long been underrepresented in archaeological research compared to neighboring regions, particularly the cultural spheres of Mesoamerica and South America, as well as parts of Costa Rica and Panama. Traditionally regarded as a peripheral zone or a transit corridor, the region was seen as passively absorbing goods, styles, and ideas from more dominant cultural centers. However, recent archaeological discoveries and reinterpretations of earlier data present this area as a dynamic cultural sphere in its own right, characterized by settlement networks with complex, inter- and intraregional economic and cultural interactions. Despite these promising new perspectives, comparative archaeological data for the region remain limited. To advance our understanding, it is essential to introduce new datasets and interpretive models that critically assess the northwestern Isthmo-Columbian Area's role within broader cultural frameworks. This session seeks to bring together case studies, theoretical approaches, and diachronic analyses from past and ongoing research projects. Our aim is to explore the region's significance as a nexus of interaction and to highlight its cultural agency within Central America.

[309] Symposium • Imperial Dynamics and Local Landscapes: Interaction and Diversity during the Tawantinsuyu

During their expansion, the Incas encountered a diverse spatial, social, and political landscape. This symposium sheds light on new research from distant provincial regions, aiming to understand how imperial

institutions and practices were modified in these spaces, the variability of imperial power, and the agency of local populations. Through diverse approaches at various local, regional, and imperial scales, we will reevaluate provincial variability and modes of integration, highlighting adaptations and expressions of Inca power in heterogeneous contexts.

[310] Symposium • The Plaza of the Columns Complex Project: Ten Years of Investigation at Teotihuacan's Civic-Administrative Core

The Plaza of the Columns Complex Project was founded a decade ago to investigate the operations of Teotihuacan's governing elite. Our interdisciplinary team has uncovered extensive evidence of state-level ritual activities, including feasting and dedicatory caches, and diplomacy, especially interregional ties with Maya neighbors. Crucially, early evidence of Maya elites, possible royal aristocrats, regularly visiting and possibly residing in a structure with Maya murals and architecture, is revolutionizing our understanding of Maya-Teotihuacan relationships, adding significant temporal depth and revealing diachronic changes. Our research also benefits from a long chronological sequence, spanning from pre-monumental periods to the city's collapse. This session brings together specialists to explore advancements in a diverse array of questions, layering multidisciplinary approaches. We'll examine questions of interregional ties, feast diplomacy, the entanglement of social identity with craft and cuisine, and the timing and causes of Teotihuacan's collapse as seen at the Plaza of the Columns Complex. We will also examine project-wide preliminary questions and future research pursuits.

[311] Symposium • An Elusive Mosaic: Understanding Social Change and Population Dynamics in the Isthmo-Colombian Area

The Isthmo-Colombian Area, comprising southern Central America and parts of northern and southwest Colombia, has long been the subject of anthropological investigation. After decades of research into iconography, subsistence strategies, and adaptive technologies—all of which provided a useful foundation on which subsequent research could productively be built—focus has more recently turned to questions of human population dynamics. These dynamics have been examined from a diverse range of perspectives, including settlement demography, migration and biological relations, diet and health, group identity, and more, but all of it aimed at understanding the lifeways of different groups and communities and how they changed through time. Approaching these topics is challenging in a socially diverse region lacking written records like the Isthmo-Colombian Area, but recent and ongoing investigations have incorporated new methodological approaches toward examining the complex nature of populations across this varied sociocultural landscape. These include statistical modeling, molecular genetics, isotopic and other chemical analyses, morphometric techniques, and more. The goals of this session are to present new insights into ancient population dynamics in the Isthmo-Colombian Area using these advancements, and to encourage greater discussion among researchers working across this region.

[312] Symposium • Preclassic Spatial Plans, Interactions, and Social Change on the Gulf Coast of Mexico

The Gulf Coast of Mexico is a key region for understanding the development of complex societies. This session brings together international scholars to present recent research from the region. New data, including from lidar surveys, pose important questions about sociopolitical developments and intercultural interactions that took place during the Early and Middle Preclassic (Formative) periods (ca. 2000–400 BCE). What were the nature and chronology of formal, rectangular site plans at Aguada Fénix and other early centers recognized via lidar? How were these sites connected across the Gulf Coast region and, specifically, to the first Olmec “capital” of San Lorenzo? Do sites that lack these rectangular plans, such as Tres Zapotes, represent different cultural traditions? When and how did the “E-group” style of ceremonial complex and associated ritual caching practices spread? Are there different forms of social organization and different spheres of material culture that crosscut the spatial layouts? How do the early ceremonial centers relate to the transition to sedentary life and reliance on agriculture? Through this symposium, we hope to foster collaborations and exchange ideas about early Mesoamerican society, including the relationship between the Olmec and the Maya.

[313] Symposium • Reconstructing Human-Environment Relationships in Subarctic Alaska

For thousands of years, Alaska Natives have maintained a subsistence lifestyle, and despite centuries of colonization, they continue to uphold the same cultural traditions today. This highlights the importance and value of cultural identity in land use and subsistence practices. However, the complexities of relationships between people and the paleoenvironment have been overlooked by twentieth-century archaeologists, many of whom attributed cultural changes to shifts in environmental conditions and resource distribution. While it is true that these factors could have influenced resource availability and prompted people to adapt their land-use strategies, the extent of this influence remains uncertain due to limited datasets. Recent advances in screening and data collection techniques provide an opportunity to move beyond traditional theories in human behavioral ecology. The papers presented in this session feature new data from various sites in the interior collected using archaeological science methods, including spatial, paleoethnobotanical, zooarchaeological, isotopic, and chemical analyses, to explore the intricacies of past people's relationships with a dynamic environment during the Late Pleistocene to the Late Holocene.

[314] Symposium • Reintegrating Zooarchaeology and Paleoethnobotany: New Collaborations, Questions, Methods, and Paradigms

Over 15 years ago, two landmark contributions helped foreground the importance of integrating zooarchaeological and paleoethnobotanical data. A *Current Anthropology* special issue edited by Alexia Smith and Naomi F. Miller and the volume *Integrating Zooarchaeology and Paleoethnobotany* edited by Amber VanDerwarker and Tanya M. Peres. Each contribution outlined the interpretive promise and methodological challenges of bringing faunal and floral datasets into closer dialogue. While such integrative work remains essential, it continues to be uncommon and has not been comprehensively revisited. Meanwhile, each subfield has transformed—with advances in biomolecular techniques, recovery strategies, computational tools, and collaborative frameworks among others. A renewed conversation is overdue. This symposium brings together researchers who are rethinking integration across faunal and floral datasets to clear methodological hurdles and confront broader questions about socioenvironmental dynamics, foodways, and multispecies relationships beyond plant and animal binaries. In doing so, we aim to chart new directions for archaeological practice and offer a broad suite of case studies that will help inform future work.

[315] Symposium • Human-Environment Interactions in Central and Inner Asia, from the Early Holocene to the Present

This session will showcase recent advances in Central and Inner Asian archaeology with an emphasis on human-environment interactions. This region is particularly well suited to landscape archaeology, with its deep history of pastoralist and hunter-gatherer communities traversing and contending with enormous geographies. Within these geographies are manifold environments and ecological zones, many of which have undergone significant transformations since the Early Holocene and continue to face both climatic and anthropogenic pressures. Central and Inner Asia also witnessed the large-scale movement of people, technological exchange, and major changes to subsistence. Decades of archaeological research show that these social phenomena and ecological landscapes are deeply intertwined. Therefore, we welcome papers addressing paleoenvironment, landscape archaeology, trade and technology, regional surveys, spatial analysis, and theoretical inquiries within Central and Inner Asia from the beginning of the Holocene to the present day. Our session aims to situate this region's archaeology at the methodological and theoretical forefront of global landscape archaeology. By including a wide geographical and temporal scope, this session will also facilitate a comprehensive research-community-wide update for new and ongoing field projects.

[316] Symposium • Who Were the Olmeca-Xicallanca? Lowland/Highland Interaction during the Epiclassic and Early Postclassic Periods

The Epiclassic period has been a challenge in the archaeology of Mexico: following the decline of Teotihuacan but before the rise of the Toltecs, the Basin of Mexico has often been characterized as a time of “balkanization” as small city-states sprang up in competitive relations. A similar trend is occurring on the Gulf Coast, with the decline of large Classic centers and the transition to the Postclassic. But what was the situation in the Puebla/Tlaxcala valley, where Cholula continued unabated? What is the role of Gulf Coast migrations to the valley, and vice versa? Who were the Olmeca-Xicallanca, and what was their footprint in

Mesoamerica? This symposium considers developments in Puebla/Tlaxcala with emphasis on its relations with the Gulf Coast. We discuss the polychrome murals of Cacaxtla and the architectural program at Cholula, which suggest influences from the Gulf Coast and Mayalandia. Presentations consider the documentary record in light of recent discoveries in Puebla/Tlaxcala and the Gulf Coast to tease out interactions visible in the material culture. Preliminary results suggest that population movement and communities of practice associated with the ethnohistorically documented Olmeca-Xicallanca contributed to the emergence of new hybrid cultural patterns that ultimately formed the so-called Mixteca-Puebla tradition.

[317] Symposium • From Artifacts to Art, from Provenance to Provenience: Archaeological Practice, Archival Research, and the Biographies of Orphaned Objects—A Session in Honor of Mary Miller Part 2

This session will explore how archaeological investigation, museum and archival research, and art historical inquiry converge to reconstruct object biographies, recover lost data, and resituate objects within social, cultural, and colonial histories and legal protocols. Presenters will critically examine disciplinary practices and assumptions that have facilitated object displacement and documentary silences, while highlighting emerging frameworks for collaboration, community engagement, restitution, and repatriation. Questions that might be explored include the following: How did historical practices of looting and forgery develop in the Americas? What has been the nature of the global market for looted prehispanic objects through time? How are emerging methods and techniques employed for determining authenticity of objects lacking provenience information? How can archival work and archaeological practice address missing provenance and provenience information—and how might the study of such objects help identify lacunae in the archival record? What are ethical implications of studying orphaned objects and their contested role in museum collections, iconographic studies, and archaeological interpretations? How can the study of orphaned authentic objects in museum collections complement Indigenous oral histories and claims of historical territoriality? This session celebrates Mary Miller and her pioneering work on provenance studies as they relate to cultural regions across the Americas.

[318] Symposium • Building Connections: Advancing Archaeological Research, Preservation, and Practice through Archaeologist-Artifact Collector Relationships

This session showcases advancements in archaeological research made possible through collaborations between archaeologists and “responsible and responsive” artifact collectors, a term introduced in SAA’s 2018 “Statement on Collaboration with Responsible and Responsive Stewards of the Past.” The symposium’s case studies demonstrate the depth of information and knowledge held by artifact collectors and highlight the vulnerability of the privately held component of the archaeological record. In addition, presenters discuss personal relationships, processes, and ethical considerations inherent in research that involves partnering with artifact collectors. Case studies span the Paleoindian through historic eras and include all regions of the United States, as well as Uruguay and northern Mexico. Collectively, the research presented in the symposium builds on two 2022 special issues of *Advances in Archaeological Practice*, both of which focused on archaeologist-collector collaboration that took place across the globe.

[319] Symposium • Advances in Projectile Point Typology

The purpose of the proposed symposium on archaeological typology is to highlight recent exemplary work and to stimulate similar new research efforts in parts of North America where interest in projectile points has faded in recent decades. That trend has accompanied the shift to independent means to establish chronology, particularly AMS ¹⁴C dating. Recent research reveals new opportunities to explore a much broader range of research problems based on projectile point typology and analysis. However, some lingering past practices impede these new research approaches. To facilitate more new research of this kind, attention must be paid to the repurposing of fundamental practices in point typology. Symposium participants have been invited with that in mind.

[320] Forum • Archaeology: Building a Career on the Autism Spectrum

Archaeology, as a discipline, benefits from practitioners with attention to detail, sustained hyper-focus on specific research topics, and the ability to think outside the box. These traits are also often considered

“symptoms” of autism, as well as other forms of neurodivergence. Thus, it should be no surprise that some archaeologists are autistic. However, sometimes, the very traits that make successful archaeologists can have negative consequences in the social and professional worlds. This forum brings together a panel of autistic archaeologists to discuss how autism has impacted their careers, from professional pitfalls to soaring successes. Panelists represent both CRM and academia and multiple career stages. We will discuss our own strategies for building fulfilling careers as well as how archaeology can help to better accommodate autistic folks.

[321] Symposium • Archaeologies of Alterity: Rethinking the Other in the Past and Present

This session interrogates societies built on the conceptualization of radical alterity, demonstrating how othering structures the past, present, and future as a sociopolitical and cultural phenomenon. By using archaeological data and broad approaches to materiality to critically engage the cross-cultural, multi-temporal, and (un)geographic frameworks that underpin alterity, this volume brings into conversation societies where fundamental differences between people were foundational to political action. Integral to this process is how one group’s humanity or beyond-the-human status is intrinsically linked to another’s less-than-human or differently-human classification. Foregrounding this premise creates the space to more deeply explore the ways in which these categorizations are in a constant state of negotiation and, by default, renegotiation. In highlighting the lived experiences of othering, contributions to this volume range from the Black experience in the Americas (be it enslavement or its afterlives) to caste systems to divine rulership. The goal is not to equate these occurrences but rather explore how alterity can unfold in profoundly different ways. In essence, we aim to show how othering comes into being, is systemically reinforced, and is altered across time and space. A better understanding of past alterities can help us make tangible improvements to governance in today’s increasingly globalized world.

[322] Symposium • The Storyteller: The Legacy of Brian Fagan for Archaeology and the Public

Brian M. Fagan (August 1, 1936–July 1, 2025) was arguably the best-known public advocate for archaeology over the past half century. His eight major textbooks, some now over 50 years old and in 15 or more editions, likely introduced archaeology to more college students than anyone else in the field. His 50 popular books on archaeological topics ranging from the splendors of Ancient Egypt to the perils of climate change were both authoritative and accessible and were devoured by hundreds of thousands of non-archaeological readers. Fagan wrote columns for popular archaeology magazines and articles for scholarly journals alike. He also spoke widely, and to diverse audiences—whether on TV, radio, or in packed lecture halls—receiving numerous awards for his work including several major honors from the SAA. Participants in this symposium have been asked to elaborate on Fagan’s many accomplishments in communicating archaeology as widely as possible. How did he do it? What influence did he have on the field? And how is he best remembered by his publishers, coauthors, and fellow archaeologists? This session is a must-see for anyone concerned with communicating archaeology, and for anyone who has enjoyed Fagan’s work.

[323] Symposium • Climate Change and Slow Science: Searching for Interdisciplinary Solutions to Complex Challenges to Heritage and Society

Archaeological responses to current and predicted impacts of climate change are forcing a reset in practice. In addition to greater collaboration with communities whose cultural heritage is threatened, archaeologists have developed new approaches to methodology, modeling, interdisciplinary studies, and teaching. Lessons learned during the past decades demonstrate that climate change is not a stand-alone cause, and deliberate coordination between disciplines is necessary to bring awareness to the intrinsic value of cultural heritage as a nonrenewable resource at risk. In this session, we draw from the concept of “slow science,” which favors research agendas that prioritize actual global challenges. Integrating “slow science” into climate-change research means deliberately shifting from the fast-paced, output-driven academic model to one that values depth, reflection, and community engagement. It aligns well with complex and uncertain climate-change challenges that are deeply tied to socioecological systems. Different kinds of knowledge, be it academic or locally embedded, are recognized as crucial components to understanding. Solutions to multiscale problems like climate change look to broad partnerships where the interconnection of heritage with other research dimensions creates a sustainable, relevant practice that speaks to the next generation of archaeologists who will confront a future we can hardly imagine.

[324] General Session • Burial Practices**[325] Forum • The SAA and the Policy Challenges Facing Archaeology**

The year 2025 has brought enormous challenges to archaeology and the archaeological community. We are confronted with an unprecedented assault of policy and budgetary actions that are impacting the science and practice of archaeology at every level, including grants, archaeological positions, and potential cuts to SHPO and THPO programs along with the recent withdraw of the United States from UNESCO. The Society's Government Affairs Committee has responded with decisive action. This forum, sponsored by the Government Affairs and International Government Affairs Committees, is the first part of a public meeting among our members to outline how the SAA has acted on these issues and much more. We welcome the SAA communities' input and feedback on future actions and topics.

[326] General Session • Craft Production Part 2**[327] General Session • The Stories Bodies Tell****[328] Forum • Establishing and Maintaining Archaeological Mentorship Programs: Best Practices for Success**

Mentorship facilitates the development of students and professionals in various stages of their career through guidance and patronage provided by a (typically experienced) mentor to a (typically inexperienced) mentee. Increasingly within archaeology, mentorship is recognized for its potential to be structurally transformative, as it provides support for and teaches advocacy to those who typically hold the least amount of power in hierarchal organizations. However, we must also recognize that mentorship can serve to reinforce and reproduce problematic systems or be ineffective at challenging and changing them. We have convened this panel to discuss the potential of successful mentorship, as well as discuss the practicalities and challenges of establishing and maintaining effective and successful mentorship programs. We will identify and discuss best practices for mentorship programs within academic, institutional, and corporate contexts.

[331] Symposium • Avances recientes en la arqueología de Morelos, México

El estado mexicano de Morelos constituye el extremo sur del altiplano central de México y contiene centros político-religiosos de gran importancia mesoamericana, como Chalcatzingo y Xochicalco. Si bien Morelos ha sido el foco de varios proyectos arqueológicos fundamentales desde mediados del siglo XX, en los últimos años la arqueología morelense ha estado poco o nada representada en congresos académicos, en comparación con otras zonas del centro de México. Esto a pesar de la gran cantidad de proyectos arqueológicos y trabajo de campo que han acrecentado nuestra comprensión de la región en las últimas dos décadas y media. Este simposio reúne a investigadores que han trabajado diversos sitios y periodos cronológicos de Morelos, para dar a conocer nuevos datos y resultados obtenidos por medio de la excavación, el rescate arqueológico, el análisis de materiales arqueológicos, y la conservación de zonas arqueológicas. El objetivo de esta sesión es divulgar hallazgos claves a un público más amplio y fomentar un diálogo entre los participantes, que indique importantes direcciones para futura investigación arqueológica en Morelos en los próximos años. ***This session will include images of human remains.

[332] Forum • Study of Human Skeletal Remains in the Maya Area

This forum provides an opportunity for researchers to present and engage in discussion about the various ways in which they study human skeletal remains in the Maya area, focusing on the information gained, laws and regulations, and practices for care and ethical research. The format of the forum includes up to five minutes for each participant to present ideas, followed by discussion moderated by members of the SAA Ethics Committee.

[333] Symposium • Living Landscapes: Botanical Legacies and Their Significance to Archaeology and Indigenous Communities

Botanical land-use legacies serve as rich archives for archaeological research and hold deep significance to descendant and Indigenous communities. Examples of these legacies include culturally modified trees,

conspicuous clustering of culturally significant plants, practices of arboriculture, feral cultigens, and archaeobotanical remains such as seeds, fibers, starch grains, phytoliths, and palynomorphs. Archaeologists have long used botanical legacies to locate archaeological sites and to interpret the human behaviors that shaped their placement and use across the landscape. Botanical evidence not only informs reconstructions of past environments and land use but also contributes to establishing site chronologies and understanding cultural practices—from broad subsistence strategies to specific tool use. In this session we invite papers that explore methods and analytical approaches for identifying, interpreting, and contextualizing botanical land-use legacies.

[334] Symposium • *CA California High-Speed Rail Cultural Resources Investigations

The California High-Speed Rail Authority is responsible for planning, designing, building, and operating of the nation's first high-speed rail system. Long-term, compliance-based cultural resources monitoring has uncovered multiple historical period sites and deposits, refined methods and chronologies in the San Joaquin Valley, and protected cultural resources through parts of rural San Joaquin Valley and downtown Fresno. This symposium will highlight cultural resources work that is a result of the construction of the high-speed rail. The research in this symposium includes a case study of a cat burial from a turn-of-the-century Chinese and Japanese habitation site, the analysis of a Volga German site in downtown Fresno, an exploration of 1880s boardwalks in downtown Fresno, a geoarchaeological analysis within and nearby the historic Lake Tulare lake bed, a cross-disciplinary review of archaeology and the built environment at Forestiere Underground Gardens, and a cross-site comparison of multiple immigrant sites across downtown Fresno. These six presentations are a small portion of the work that has been completed. Environmental clearance to build the 171-mile Merced to Bakersfield line connecting the Central Valley is complete and construction remains ongoing, thus creating an opportunity for more cultural resources work, sites, and research.

[335] Symposium • Archaeology and Indigenous Data Sovereignty

Throughout the Americas, archaeologists use Indigenous Data, whether they recognize it as such or not. It is important for archaeologists to consider the relationship between our work and Indigenous Data Sovereignty and Data Governance, especially given the increasing availability of big datasets in the field. This symposium invites presenters to discuss what Indigenous Data Sovereignty and Data Governance are, how those concepts intersect with archaeological practice, what archaeological support of Data Governance might require, and what changes are on the horizon given technological and methodological innovations and trends toward open access data in the discipline. Broadening disciplinary understandings of how to engage with data sovereignty, data governance, and collaborative research is imperative.

[336] Symposium • Toward an Integration of Quantitative Approaches in Lithic Analysis

Lithic analysts have for decades been interested in moving beyond typological and qualitative approaches to the study of stone tools, developing a range of quantitative approaches since at least the 1960s. Such quantitative approaches to lithic analysis are currently as varied as ever, used to answer questions from cultural transmission to technological organization to tool use and design, in many cases moving beyond the univariate analysis of lithic attributes to take advantage of the technological capabilities researchers have access to. These approaches include multivariate analyses of continuous and categorical technological attributes, 2D and 3D geometric morphometrics, core reduction and retouch intensity indices, and experimental analyses of lithic production and learning, in addition to and alongside traditional approaches to lithic analysis. Additionally, the production of these datasets and their statistical exploration has led to advances in the reproducibility of lithic analysis using programming environments such as R and Python, the production and distribution of open and FAIR datasets, and increasing discussions regarding the need for both. This symposium is open to lithic analysts interested in the advancement of these methods and the discussions around them, including those working in any geographic and temporal context.

[337] Symposium • Emerging Trends and Future Directions in the Bioarchaeology of the Andes

Research in the Andes was foundational to the field of bioarchaeology, and the region remains the site of a prolific and influential tradition. Despite—or perhaps due to—its expansive nature, there have been relatively few attempts to define Andean bioarchaeology as a cohesive discipline with common themes and

conversations. With an eye toward developing a more cohesive set of shared goals, we invite bioarchaeologists working on a wide range of themes, methods, and geographic locations in the Andean region to share findings from their current research programs and reflect on recent and emerging developments in the field. We identify these themes in recent research: Human societies' responses to climate change, ancient infectious diseases, foodways, migration and mobility, ethnicity and group identity, life histories, mortuary practices, and the rise of sociopolitical complexity. In the practice of bioarchaeology, close collaborations with local and descendant communities are increasingly becoming the norm, as is critical reevaluation of legacy collections, and the use of laboratory techniques adapted from the natural sciences. Researchers are increasingly pursuing projects in regions of the Andes beyond the present-day borders of Peru, thereby shedding light on ancient lifeways in locations that the field may previously have considered peripheral.

[338] Symposium • Imaging and Imagining the Ancient Maya: Papers in Honor of Bill Ringle

This session honors the life and work of Dr. William Ringle (1949–2024), a distinguished scholar, archaeologist, and friend whose work has shaped our understanding of the ancient Maya in the Yucatán Peninsula. For over four decades, Bill brought exceptional insight and rigor to studying settlement patterns, sociopolitical organization, environmental management strategies, and iconography at dozens of sites in the northern Maya lowlands and the Puuc Region, most notably Komchen, Ek' Balam, Huntichmul, Yaxhom, Muluchtzekel, Chichen Itza, and Uxmal. With his frequent Tulane colleagues, collaborators, and friends, Tomás Gallareta Negrón and George Bey, Bill's most recent endeavors focused on collecting, ground truthing, and interpreting one of the largest samples of lidar data from Mexico, specifically in the Bolonchén region. In this session, colleagues, collaborators, friends, and former students reflect on Bill's countless contributions to Maya archaeology and his influence on the field's direction. Together, they reveal the scope and depth of his impact—not only as a scholar but as a person who inspired those around him. Truly a giant in the field, this session is both a scholarly tribute and a heartfelt remembrance of a beloved colleague whose legacy will continue to guide and enrich the discipline for years to come.

[339] Symposium • For the Love of Teaching Archaeology

In archaeology the landscape of teaching is broad, occurring in museums, blogs, podcasts, classrooms, fairs, in CRM, in private consulting firms, on the web, in daily casual interactions, and essentially everywhere archaeologists can be found. All ages are incorporated from preschooler on to reach as vast an audience as possible. The *Journal of Archaeology and Education* (JAE) promotes the sharing of practices in education from early childhood to graduate level, the dissemination of research, and public outreach. As a peer-reviewed, open-access journal through Digital Commons, the content is freely available to all, a fact that embodies the value of equity in archaeology. The JAE understands the importance of teaching as a part of every archaeologist's calling. This symposium is organized by the JAE and brings together practitioners with broad experience who have taught in numerous different contexts. They share practical tips, new approaches, and ideas for pedagogy and andragogy in the widest sense. Co-teaching with community partners, curation, incorporating the arts, finding empathy, other novel perspectives, and cutting-edge approaches are presented with concrete examples and tales of successes and challenges.

[340] Symposium • Geoglyphs in the Americas: New Discoveries and Future Directions

Geoglyphs are large-scale ground designs, created by removing surface materials (to form lines, cleared areas, or shallow depressions) or by accumulating stones or earth to form mounds and embankments. While the geoglyphs of Nasca and Palpa in southern Peru are widely known, recent research has identified numerous other geoglyph complexes across the Americas, dated to various time periods and cultural contexts. These include sites on Peru's central and northern coasts, extensive concentrations in northern Chile, and diverse examples from Venezuela, Colombia, Brazil, Bolivia, and several regions of North America. The growing body of data has expanded the geographic and chronological scope of geoglyph research and invites broader comparative studies. This session brings together current and recent research on geoglyphs across the Americas. It welcomes contributions focused on documentation methods, dating techniques, interpretations of function and symbolism, connections to oral traditions, and issues of conservation and site management. The session aims to provide an overview of recent discoveries and to outline future directions for research.

By integrating data from different regions, the discussion will contribute to a more comprehensive understanding of the role of geoglyphs in precolumbian cultural landscapes.

[341] Symposium • The Prehispanic Maya Marketplace: New and Ongoing Investigations

There have been significant advances in marketplace research in Maya archaeology. Most scholars now accept that prehispanic society was reliant on market exchange as a critical factor for provisioning food and other goods for both elite and non-elite households. This session presents new investigations of prehispanic Maya marketplaces. Using lidar and other remote sensing techniques, participants in this session show how geospatial analyses inform a configurational approach for examining the spatial organization of a marketplace (plaza layout, accessways, stalls, and other features), activities taking place within and around these spaces, and how households and neighborhoods were connected to such central nodes in the landscape. Analyses of household production and consumption is utilized in distributional studies to examine the presence of certain artifact classes and degree of homogeneity across elite and non-elite contexts as a means of identifying market-sourced goods. Contextual approaches are also used to examine artifact assemblages indicative of crafting and specialized production at the household-level or as cottage industries, sometimes occurring in and around the marketplace itself. Participants are encouraged to take a conjunctive approach, which allows for a more robust holistic perspective and more nuanced questions to be asked about Maya marketing in the prehispanic past.

[342] General Session • Marine Resource Utilization

[343] General Session • Community-Engaged Archaeology

[344] General Session • Landscape Analysis of Ritual, Environment, and Conflict

[345] General Session • Insights from CRM Practice

[346] Symposium • The Archaeology of Plastics

As the archetypal substance of twenty-first-century material culture, synthetic plastic polymers are ubiquitous and globally widespread. Mounting scientific evidence and artistic renderings demonstrate their catastrophic impact on ecosystems, nonhuman organisms, and human health. Often this work—conducted by marine biologists, geologists, geographers, pedologists, artists, etc.—draws on ideas and methods rooted in archaeology. Yet archaeologists' contributions are seldom or not explicitly acknowledged. This session aims to reiterate the utility of an archaeological approach to studying plastics. Presenters can extend conversations about typology and taphonomy by outlining instructive and contextualized case studies. They are encouraged to deliberate about the human condition and situate the current Plastics Age within a longer (pre)historical trajectory. Through the lens of humans' everyday waste, archaeologists of plastics can also connect the discipline to ongoing conversations about sustainability, heritage, waste management policy, legislation, and/or environmental justice. In a bigger picture way, this session positions archaeology as an essential voice in debates surrounding the evolving archaeogeological and biophysical legacy of the Anthropocene.

[347] Symposium • Provisioning Who? Rethinking Archaeological Models for Animal Procurement and Management

Traditional models of food procurement and animal management in archaeology often rely on rigid dichotomies, such as domestic versus wild, pastoralist versus agriculturalist, producer versus consumer, and rural versus urban. While once useful for organizing broad patterns, these frameworks oversimplify the complex relationships between humans, animals, and landscapes. Emerging evidence from diverse contexts challenges these binaries, revealing flexible, hybrid, and context-specific strategies for managing herds and provisioning communities. This session invites papers that critically reexamine long-standing models of animal procurement, herd management, and provisioning. We encourage archaeological and interdisciplinary approaches that foreground variation, mobility, and decision-making in past food economies. Rather than focusing solely on the presence or absence of production, we seek contributions that explore how animal management was shaped by local ecologies, social identities, political economies, and symbolic needs. We

particularly welcome papers that center the agency of animals and human producers, examine the social dimensions of production, and consider how environmental change structured management strategies. Contributions engaging legacy data or applying new analytical techniques are encouraged. By unsettling static narratives, this session aims to advance more inclusive, relational, and context-sensitive models that better reflect the complexity of past animal management, and its relevance to the present.

[348] Symposium • Folsom on the Edge: Exploring Interaction, Adaptation, and Biogeography in North America's Late Pleistocene

The Folsom complex is well known in the Great Plains, the Rocky Mountains, and the Southwest of North America. Over the past century, archaeologists in this core area have excavated and dated many bison kills and camps. While smaller quantities of Folsom tools have been documented on the edges of this core, these peripheral areas have received limited discussion. This symposium explores whether this spatial pattern is related to the Folsom culture itself, with tool distribution linked to exploration, migration, or trade across territorial boundaries. Another possibility is that the marginal pattern is related to biogeography, where Folsom technology is a functional adaptation for hunting bison, thus determining the distribution of Folsom tools. Finally, the spatial pattern might be a result of sampling bias, where some areas have been more extensively investigated than others, especially in places where Late Pleistocene deposits are exposed near the surface. Exploring this variation is essential to better understanding what the Folsom record represents from cultural, behavioral, and sampling perspectives.

[349] Symposium • Fishing and Feasting: Ecodynamics of the Selin Farm Site and Guaimoreto Lagoon, Northeastern Honduras

Since Paul Healy's first intensive research in the 1970s, the archaeological site of Selin Farm has formed the foundation for understanding past cultures and lifeways in northeastern Honduras. Further research between 2014 and 2019 refined the site's chronology and expanded our knowledge of the sociopolitics of its inhabitants. More recently, however, a new picture of the region's cultural and ecological past has emerged from a larger interdisciplinary project, providing insight into the role of nearby Guaimoreto Lagoon's rich resources in supporting social and political experimentation at Selin Farm. Cores from Guaimoreto Lagoon reveal the region's first environmental record. At the site itself, massive shell deposits reach up to 5 m high, providing exceptional preservation for faunal and botanical remains while also creating significant sampling challenges. This session explores this interdisciplinary approach to the site, bringing together the geologists, paleobotanists, zooarchaeologists, ceramicists, and other specialists to better understand Guaimoreto Lagoon and the people who depended on it from AD 300 to 1000.

[350] General Session • Settlement and Environment

[351] Forum • Aligning Archaeology with Environmental Justice Movements

This forum gathers archaeologists to creatively and critically reimagine how archaeology can engage with contemporary environmental justice movements in our current moment. Archaeology has the unique capacity to document long-term social dynamics of conflicts, resistance, resilience, and flourishing over centuries and millennia, even when these dynamics might be imperceptible in day-to-day life. Current environmental justice issues have been centuries in the making. As archaeologists committed to grounding our work in the practices of community-engaged, anti-colonial, and Indigenous archaeologies, we are interested in what the deep past can reveal about modern dynamics of land and food sovereignty. We are curious about how archaeology and heritage practices can be leveraged in solidarity with the ongoing work of contemporary culture bearers and descendant communities. This forum invites archaeologists engaging in this kind of work to participate in an honest conversation about our entanglements with contemporary politics and positionality, and to explore together how archaeology might become a catalyst for deeper understanding of the paths that lead to current environmental justice movements.

[352] General Session • New Tools for Old Spaces: Digital Archaeology and Media for Expanding Access and Research

[353] General Session • Human Responses to Climate Change**[354] General Session • Evaluating Crop Utilization from Archaeological Contexts****[355] General Session • Mesoamerican Landscapes****[356] Symposium • Standardization in Zooarchaeology**

Until the 1970s, there was very little standardization in the ways zooarchaeological collections were recorded and published. Standardization in recording started in the 1970s with the publication of Von den Driesch's measurement guide and Grant's and Payne's methods for recording dental eruption and wear on domestic sheep, goats, cattle, and pigs. However, other aspects of zooarchaeological recording are less standardized. They include recording of the degree of bone fragmentation on archaeological bones, the use of bone counts and/or weights, the assigning of individual numbers to specimens, and the ways in which bones from different archaeological contexts are combined, along with other issues involving the recording of the condition of the bones and worked bone objects. This session will address these issues in an attempt to develop recommendations for standardization of zooarchaeological recording in the future.

[357] Symposium • Mobility, Trade, and Exchange in Sub-Saharan Africa

Archaeologists in Africa have long been interested in artifacts that provide evidence of trade and exchange; whether as luxury items, or to build chronologies, or to demonstrate long-distance connections. More recently the kinds of questions such objects can address has been reimagined, drawing on theories of mobility to pose questions about how, and why, people, animals, and goods moved across space. The papers in this session, drawn from across the African continent, participate in this more nuanced approach, asking how the material correlates of trade, exchange, and movement might relate to women's roles and power, trajectories of urban development, nonhierarchical social structure, and more.

[358] Forum • Community-Centered Returns and Collaborative Practice at the Smithsonian

The Smithsonian continues to adapt its approach to stewardship, repatriation, and community engagement. The Institution has embraced community-centered returns—an evolving practice that prioritizes collaboration, transparency, and shared decision-making with descendant communities. This forum explores the dynamic changes in practice that have fostered deeper partnerships both across the National Museum of Natural History and the National Museum of the American Indian with communities, particularly in the context of returning cultural heritage and ancestral remains under the NMAI Act of 1989. The forum will highlight specific practices that illustrate how the Smithsonian has changed its approach over time, reshaping museum policies and protocols, strategies, and ethical frameworks. These examples will demonstrate how collaborative methodologies—such as shared stewardship, community loans, joint research initiatives, and sustained dialogue—are not only enriching the return process but also redefining the role of museums in healing and accountability. Crucially, this forum offers firsthand perspectives on how these changes are being experienced and evaluated. Participants will reflect on the successes, challenges, and ongoing needs of communities engaged in repatriation and return processes, emphasizing the importance of transparency, growth, and long-term relationship-building in Native and Indigenous partnerships in the expanding field of international repatriation and domestic returns.

Individual Abstracts of the 2026 SAA 91st Annual Meeting, San Francisco, California

The ANNUAL MEETING of the Society for American Archaeology provides a forum for the dissemination of knowledge and discussion. The views expressed at the sessions are solely those of the speakers and the Society does not endorse, approve, or censor them. Descriptions of events and titles are those of the organizers, not the Society.

Participants—Individual Abstracts

Abad Lezama, Tatiana [60] see Alva Nuñez, Jose
Abad Lezama, Tatiana [342] see Lopez Ramos, Angelica
Abad Lezama, Tatiana [285] see Vallejos Martínez, Luis

Abate, Nicodemo [340] see Masini, Nicola

Abdolahzadeh, Aylar (Institute of Human Origins), Li Li (ICArEHB-Interdisciplinary Center for Archaeology and the Evolution of Human Behavior Universidade do Algarve, Campus de Gambelas Faro, Portugal), Tamara Dogandžic (MONREPOS Archaeological Research Centre and Museum for Human Behavioral Evolution), Leticia Correa (University of São Paulo), and C. Michael Barton (Arizona State University)

[85] *Understanding Formation Processes of Fire Proxy Evidence in the Archaeological Record of Neanderthals: A Computational-Modeling Approach*

Previous studies show variability in the frequency of fire proxy evidence in Late Pleistocene Europe and Southwest Asia, shaped by climatic conditions, environmental factors, and site-related variables. To better understand Neanderthals' use and possible control of fire, it is essential to examine the factors driving this variability. One key site-related factor is artifact density. Some studies suggest a positive correlation between artifact density and the frequency of burned lithics, while others find no relationship or even inverse trends. Although denser artifact layers are often assumed to increase the likelihood of thermal alteration, the degree to which artifact density contributes relative to other fire-related parameters remains unresolved. This question becomes particularly significant when comparing artifact density and fire proxy frequencies across different climatic contexts (e.g., cold vs. warm periods), given climate fluctuations play a crucial role in the Late Pleistocene occupation history of Europe. To address this question, our paper presents a computer-based model developed in a Digital Experimental Archaeology Laboratory (DEAL) environment in RStudio to simulate and evaluate how much a role artifact density plays, alongside variables such as number of fires, heating temperature, and duration, influencing the proportion of fire proxy evidence, such as burned lithics at archaeological sites.

Abell, Jordan [71] see Semanko, Amanda

Abplanalp, Jennifer (Argonne National Laboratory), Anna Doyle (Argonne National Laboratory), Jamie Lewis (Argonne National Laboratory), Catherine Smith (Argonne National Laboratory), and Alison Rubio (Department of the Air Force)

[74] *NAGPRA Data Management and Repatriation within the US Department of the Air Force*

[WITHDRAWN]

Abrams, Georgia [218] see Krupa, Krystiana

Acabado, Stephen (Cotsen Institute of Archaeology, UCLA), and Piphal Heng (Yale University)

[217] *Reframing Archaeological Time in Southeast Asia: Rethinking the Three-Age Legacy*

Archaeological practice in Southeast Asia has long been constrained by Eurocentric categories, particularly the use of “prehistory” and the three-age system. These chronological frames, while deeply entrenched in the discipline, obscure the complexity of Southeast Asian histories and reinforce narratives that place the region at the margins of “world civilization.” Our work contributes to ongoing conversations about how to construct a Southeast Asian chronology that is locally meaningful yet globally comparable. Drawing on research in the Ifugao and Bicol, Philippines and collaborative projects in Taiwan and Cambodia, I argue that locally grounded periodizations—emerging from Indigenous categories, agricultural transitions, and community memory—offer a more productive framework than imported typologies. This theoretical

Presentations and posters that were officially withdrawn by March 30, 2026, have been marked as [WITHDRAWN] in the Individual Abstracts; however, these presentation/poster placeholders will still appear in the Final Program. Updated information regarding withdrawals will be provided in Daily Digest email/app updates during the meeting.

reorientation has wider implications: it decenters Europe as the reference point for world archaeology, foregrounds Southeast Asia's role in global processes of trade, colonization, and climate adaptation, and affirms the intellectual sovereignty of descendant communities. By integrating archaeological data with oral traditions, paleoenvironmental evidence, and Indigenous place-based knowledge, we can build chronologies that reflect local temporalities while remaining legible to comparative archaeology. Such an approach underscores Southeast Asia not as peripheral but as central to rethinking how archaeologists conceptualize time, history, and human adaptation.

Acabado, Stephen [350] see Wang, Yen Chun

Acebo, Nathan (University of Connecticut)

[219] *Archaeologies of Indigenous Self-Determination*

This paper examines the ongoing tensions between archaeological practice and tribal self-determination in California, arguing that the field continues to insufficiently recognize Indigenous governance as both a legal and cultural framework. While critiques of archaeological disengagement with sovereignty were foreshadowed in Martinez's (2013) reflections on institutional power in California archaeology, they have since been sharpened by scholars (Nelson 2020). Despite recent momentum around collaborative and community-engaged research—spurred in part by changes to federal NAGPRA and California's CalNAGPRA—many archaeologists still default to referential partnerships rather than entering into formal agreements that respect tribal authority. This paper traces the genealogy of archaeological research on governance in Indigenous California, highlighting a persistent reluctance to defer to tribal nations as sovereign governments. It also calls attention to an underdeveloped area of scholarship: how Indigenous governance is materially expressed and legible in the archaeological record itself. In doing so, the paper critiques prevailing approaches and identifies new pathways for engaging tribal governance not only as a present-tense political reality, but as a historical and archaeological one—central to building a practice accountable to sovereignty and Indigenous self-determination.

Aceituno, Francisco (University of Antioquia)

[41] *Projectile Points and Human Expansion in Northwestern South America during the Younger Dryas*

During the Younger Dryas in northwestern South America (Colombia), a diverse array of bifacial projectile points emerged. This presentation discusses and analyses the relationship between typological diversity and migratory movements that occurred on a continental level at the end of the Pleistocene. It has been hypothesized that people arrived from the north (Central America) and the south-west (South America). These migratory movements are associated with significant human expansion and population growth in northwestern South America, as well as the emergence of different archaeological cultures.

Acero-Shapiama, Erick, Sadie Weber (Universidade De São Paulo), Liseth Rojas-Pelayo

(University of Florida), John Rick (Stanford University; Programa de Investigación

Arqueológica Chavín de Huántar), and Rosa Rick (Programa de Investigación Arqueológica Chavín de Huántar)

[179] *La Galería del Cóndor: Innovación arquitectónica y dinámicas sociales en los orígenes de Chavín de Huántar*

El descubrimiento y estudio de la Galería del Cóndor en el Monumento Arqueológico Chavín de Huántar constituye un aporte fundamental para comprender las fases iniciales de la tradición Chavín. Este espacio corresponde a un momento temprano del proceso de “galerización”, entendido como la transformación de recintos en galerías subterráneas rituales, que alcanzarían posteriormente mayor complejidad. La evidencia revela que la Galería del Cóndor fue construida en un contexto de experimentación tecnológica vinculada a la ritualidad, como lo indica la limpieza casi absoluta de sus pisos y un diseño aún incipiente en contraste con las galerías más elaboradas de los edificios principales. Entre los hallazgos más relevantes destacan dos cuencos líticos depositados en un contexto de clausura ceremonial: uno liso y otro con la representación de un cóndor, símbolo central de la cosmovisión andina. Asimismo, los análisis de microrestos de almidón demostraron la presencia de maíz, lo que sugiere la incorporación de productos cotidianos en prácticas rituales de clausura. En conjunto, la Galería del Cóndor representa una fase temprana de innovación arquitectónica y ritual, cuya comparación con galerías posteriores comprueban la evolución de una tradición clave que permitió la construcción de la memoria cultural e identidades locales en Chavín de Huántar.

Acero-Shapiama, Erick [111] see Rojas-Pelayo, Lisseth

Acosta, Daryll (WWQ), Christine Solis, Angel Miller (CSULB), and Varenka Lorenzi

[54] *How Does Evidence of Human Impacts on the Local Environment Relate to the Occupational History of Lechaio, Greece?*

The site of Lechaio functioned as the primary port of ancient Corinth, establishing itself as an integral nexus for economic trade in the Mediterranean for over a millennium. This study presents data on local vegetation change and sedimentary heavy metals and charcoal to investigate lasting impacts to the local environment after numerous sequences of occupation, abandonment, and reoccupation. Our preliminary results show pulses of activity, such as a heavy concentration of charcoal at approximately 50 cm below the surface, but also cumulative impacts, like a nonnative vegetation regime, that have produced a heavily disturbed site. We attempt to link changes to the environment to specific occupational periods through further analysis that improves our understanding of landscape manipulation at Lechaio.

Acosta-Ochoa, Guillermo [310] see Ge, Yun

Acosta Ramírez, Karla (Escuela Nacional de Antropología e Historia), and María Maldonado Vite (INAH Centro Veracruz)

[302] *Aspectos de salud y alimentación en la población prehispánica de la huasteca en el posclásico*

Derivado del rescate arqueológico en el 2023 como consecuencia del hallazgo fortuito de la escultura de “La Joven Gobernante de Amajac II”, que se llevó a cabo en Hidalgo Amajac, del municipio de Álamo Temapache, al norte del estado de Veracruz, México, a cargo de la Dra. María Eugenia Maldonado Vite, se encontraron seis entierros. El análisis antropofísico de los seis individuos permitió cotejar las condiciones de salud en la población prehispánica de la huasteca, partiendo de la premisa de que en las sociedades estratificadas, existe un acceso diferenciado a los recursos y condiciones de vida desiguales entre la población, lo cual, es observable en los restos óseos humanos. En esta presentación se comentan los resultados de este estudio y su comparación con estudios previos sobre patrones de alimentación en población prehispánica de la huasteca. Para esta presentación se mostrarán imágenes explícitas de restos óseo humanos prehispánicos

Adam, Manda [279] see Casillas, Sanjuana

Adamczyk, Michał [89] see Paige, Megan

Adamczyk, Michał [89] see Ramsier, Marissa

Adams, Jaimie (Eastern New Mexico University)

[255] *Ancient Whispers: A Descriptive and Technological Analysis of the Rock Imagery at Trinchera Cave, a Borderland Site in Southeastern Colorado*

Trinchera Cave (5LA1057), a precontact rockshelter in the Chaquaqua Plateau of southeastern Colorado, preserves an extensive and largely undocumented assemblage of rock imagery spanning the Late Archaic (3000–1850 BP) to Late Prehistoric (1850–225 BP) periods. Despite decades of archaeological research, these petroglyphs and pictographs have remained a significant gap in the site’s cultural history. This project presents the first comprehensive descriptive analysis of the imagery, integrating close-range photogrammetry (CRP), manual recording, GIS mapping, and D-Stretch enhancement. Through motif classification, seriation, and spatial analysis, I examine stylistic variation to assess cultural affiliations within this Plains–Southwest borderland contact zone. Preliminary results suggest that the imagery reflects multiple cultural influences, possibly indicating the site’s role as a ceremonial gathering place, seasonal habitation, and waypoint in regional migration and exchange networks. By combining technological recording methods with Indigenous consultation and contextual landscape interpretation, this research not only reconstructs the visual narrative of Trinchera Cave but also demonstrates the potential of digital documentation to inform rock imagery studies across North America.

Adamson, Gus [74] see McKinney, Taylor

Adler, Daniel [336] see Gill, Jayson

Adler, Daniel [336] see Kovach, Tanner

Adler, Michael (Southern Methodist University), and Thomaz Pinotti (Globe Institute for Geogenetics)

[282] *Environmental DNA Research at Picuris Pueblo, New Mexico*

Recent research at Picuris Pueblo focuses on the application of environmental DNA (eDNA) techniques to a sample of kiva floor provided by Picuris Pueblo to the Globe Institute for Geogenetics in Copenhagen, Denmark. The federally recognized Picuris Tribal Nation is interested in ascertaining whether DNA from faunal and floral species could be identified in the floor sample that was taken when the kiva, still in use at Picuris Pueblo, was provided with a new floor as part of the renovation of this community ritual facility. Preliminary results have identified a range of DNA identified to various species of flora and fauna. Results are discussed with respect to community expectations regarding what should be expected to be present in the inventory, as well as what should be absent in the sediments of the kiva floor.

Adnson, Isabelle

[34] *Archaeozoological Research that Emanates from Community Knowledge*

Community-engaged field schools lead to community-informed research that would not otherwise happen. In this paper I present an especially clear example. In 2025 I participated in the community-engaged field school codirected by the University of Colorado Boulder and Northern Arizona University in northern New Mexico, near the village of Estaca, where we conducted test excavations in collaboration with multicultural residents who live there today. I am examining the animal bones to improve understanding of relationships between humans and animals in a colonial-era Indio-Hispano community. In addition to working in the main village of Estaca, we are also excavating at the Rancho de los Lopez, a family hacienda established in the early eighteenth century. Working with the current landowner, we discovered that the Lopez family ran a large sheepherding business at the hacienda, and that nineteenth- and early twentieth-century records of that business have been stored in a piano bench inside the Victorian era house since that time. So, being led by community knowledge, we discovered a rare opportunity to connect sheep bones from a specific residence with documentary information on the activities that produced those remains. Initial results, presented here, have value well beyond the local context.

Adovasio, J. M. (Senator John Heinz History Center)

[155] *The Archaeology of Meadowcroft Rockshelter and the Antiquity of Humans in the New World*

Meadowcroft Rockshelter is a deeply stratified, multicomponent, closed site in Washington County, Pennsylvania. Excavations there in 1973–1978 constituted the first serious challenge to the hoary Clovis-first model which said that the first humans were in North America ca. 13,000 BP and were focused, rapidly moving, big-game hunters and the ancestors of peoples who produced the iconographic Clovis fluted projectile points. It appears, however, that if humans are in the Upper Ohio Valley by 16,000 BP at the latest, the original occupation of the New World occurred sometime pre-LGM, which is also consistent with available genetic data. This paper summarizes the work at Meadowcroft Rockshelter conducted between 1973 and 1978 with new dates that support the original chronology.

Adriano-Morán, Carmen [310] see Ge, Yun

Adriano-Morán, Carmen [164] see Martínez-Yrizar, Diana

Agbelusi, Oluseyi (George Washington University)

[321] *Otherness and Order: Identity Politics and Governance in Colonial and Postcolonial Sierra Leone*

This paper conceptualizes alterity—the perception and construction of cultural difference—as a dynamic, relational construct shaped by specific historical and political contexts. It examines how notions of difference were produced, mobilized, and contested through both historical records and archaeological evidence. The analysis identifies three key domains through which alterity has been mediated in colonial and postcolonial Sierra Leone: identity politics, systems of governance, and liberatory practices. The paper asks: who has the authority to define difference, how has that power shifted over time, and what do they reveal about power,

belonging, and exclusion across time? Grounded in archaeological fieldwork, oral histories, and archival research, the paper traces how diverse communities have interacted, shared space, and shaped their identities over time, often in the face of external control and influence. It reveals changes in the physical landscape, house structures, the appropriation of locally made and imported goods, the acceptance of Western education and Christianity, and the evolution of a new ethnic identity known as *Krio*, as an enduring negotiation of belonging and exclusion on the peninsula. Ultimately, it calls for reimagining the future of the nation-state through inclusive frameworks that recognize diverse cultural identities and political forms as foundational rather than oppositional.

Aghapishvili, Tamar [93] see Mgeladze, Ana

Agnew, Amanda [89] see Hayden, Lauren

Agnew, Amanda [89] see Slusarska, Katarzyna

Agresti, Guido, and Elsa Lucila Tomasto Cagigao (Pontificia Universidad Católica del Perú-Grupo GIBAF-PUCP [Grupo de Investigación en Bioarqueología y Antropología Forense])

[337] *Talking Heads: Are Nasca's Trophy Heads Real Trophies? The Preliminary Study of the Deposit at the Montículo Y23 of Cahuachi, Nazca (Peru)*

Nasca Culture, more than other cultures of Peru, developed the tradition of severing and preparing heads. As evident from both the iconography and the human remains, prepared heads became a central element in their belief system. The heads' function has long been a subject of debate, with two main lines of interpretation, one related to trophies and one to the cult of ancestors. The aim of the present study is to contribute to the debate from the analysis of a deposit of 12 altered heads discovered in 2013 at the ceremonial center of Cahuachi (Nazca, Peru). The project consists of a preliminary bioarchaeological investigation of these heads and of a control group constituted by a selection of "elite" and "common" burials. The distinction was based on the style of the burial and on the typology of grave goods, with the aim to assess if and how, at least in Cahuachi, the regular population and the individuals whose heads were transformed differed. The study of these three groups will provide a better understanding of whether the heads of Nasca were truly trophies or have to be considered evidence of a religious practice. *****This presentation will include images of human remains.**

Aguilar, Jesicka [115] see Burke, Ryan

Aguilar, Maria (Universidad Veracruzana), and Hirokazu Kotegawa (Universidad Nacional Autónoma de Honduras)

[262] *Manejo y retos para la protección del patrimonio arqueológico en San Isidro, Veracruz*

La presente ponencia es un recorrido a través de más de una década en el sitio arqueológico Estero Rabón, ubicado en el ejido de San Isidro del municipio de Sayula de Alemán, en el sur de Veracruz. Dicho sitio es de gran relevancia debido a que es considerado un centro secundario de la sociedad olmeca y de la cual hay evidencias por sus monumentos escultóricos que hasta la actualidad algunos de ellos se encuentran en el ejido San Isidro. Mediante las investigaciones arqueológicas llevadas a cabo desde el año 2012, surgió el Proyecto arqueológico Estero Rabón (PAER); al tener interacción con los pobladores observamos que desconocían sobre su patrimonio a su alrededor y aunado a ello no lo sentían como suyo porque son migrantes de otras ciudades, por ello se consideró necesario a través de la arqueología pública plantear metas y diferentes actividades que permitieran que la comunidad valorara y protegiera su patrimonio arqueológico. Sin embargo, el PAER tuvo que enfrentarse al reto ¿Cómo puede la comunidad proteger su patrimonio arqueológico?, así que se planearon diferentes actividades con las cuales hemos visto cambios significativos que nos permiten tener esperanza de que la comunidad en el futuro cuidara de su patrimonio.

Aguilar Tarqui, Tania [306] see Capriles, José

Aguraiuja-Lätti, Ülle [221] see Suni, Raivo

Ahamed, Basheer (Tamil University)

[284] *An Archaeological Perspective on the Importance of Pottery in Understanding the Cultural Practices of Kolli Hills Tamil Nadu India*

The Kolli Hills, which are part of Tamil Nadu's Eastern Ghats, are situated in Namakkal district on the north bank of the Kaveri River. Their coordinates are 11°24'85" E and 78°33'87" N. Sites spanning the prehistoric to historical eras have been discovered by the author through field research. In addition to Iron Age megalithic burials and habitation sites, the area is scattered with microlithic sites. Pottery shards discovered in the plains of the Kolli hills provide important data about prehistoric communities, their economic activity, and their contacts with other areas. Understanding manufacturing processes, trade networks, and cultural practices can be understood by analyzing the pottery itself. Furthermore, the discovery of pottery at archaeological sites helps to the dating and contextualization of other artifacts, so advancing our understanding of the region's past. The impact of early historic and medieval ceramics is the primary subject of this research from an archaeological aspect.

Ahdoot, Gabrielle, Brandon Lewis (Santa Monica College), Rui Mataloto, and Aidan Jameson Snead

[62] *Nossa Senhora do Freixo, Portugal: A Late Antiquity Roman Basilica and the Continued Reuse of Sacred Space*
Excavations at the Late Antiquity Roman Basilica of Nossa Senhora do Freixo, Portugal, reveal architectural components and compositional trappings associated with a center of regional significance. Imported utilitarian items, associated wealth goods, and the exquisite architectural elements of the basilica suggest critical involvement within the overarching socioeconomic and ideological landscape of the Iberian Peninsula. Furthermore, detailed examination of the eastern transept has provided uncommon insight into the maintenance of Christianity following the collapse of the Roman Empire. Current excavations suggest a short-lived period of Basilica fluorescence, followed by an extended period of symbolic and ideological reuse of its sacred burial space. ¹⁴C results identify Christian inhumation throughout the entirety of Visigoth rule and possibly post-dating the Muslim conquest of the Iberian Peninsula. Pending ¹⁴C samples may even allow us to identify a qualitative shift from a restricted Basilica cemetery to a nonrestricted, community-oriented burial ground. *****This presentation will include images of human remains.**

Ahdoot, Gabrielle [223] see Snead, Aidan

Ahlrichs, Robert (Jacobs Engineering Group)

[299] *The Intersection of Natural and Cultural Distributions of Toolstone in Path Valley, Pennsylvania*

The archaeological resources of Path Valley in Pennsylvania contain a limited number of toolstone types. The primary toolstone is chert, native in the valley bedrock and readily accessible from both primary and secondary geologic contexts throughout the valley. Crystal quartz was used less often but is also locally available in the valley. Other toolstones found on sites in the valley include a regionally prominent rhyolite and Pennsylvania Jasper. Path Valley is a small, geographically isolated setting that served as both a physical and cultural corridor for Native Americans during both precontact and postcontact times. This area has largely escaped professional archaeological attention until recently and so little is known about the archaeological resources of this potential connection between major river valleys of the mid-Atlantic region. This paper examines the distribution of toolstones within Path Valley's geographic, geologic, and cultural contexts. These contexts form a baseline of data for discussion of precontact economy, mobility, settlement location, and social network development in south-central Pennsylvania.

Ahn, Sohyeon (Gyeongju Nat'l Research Institute of Cultural Heritage)

[220] *A Preliminary Study on Silla Elite Foodways from Archaeobotanical Evidence*

Archaeobotanical evidence from Gyeongju in southeastern Korea, the capital of Silla, sheds light on elite foodways and ritual plant use. Beneath the Wolseong fortress walls, rice (*Oryza sativa*) remains dating to the third century AD suggest that the area already functioned as a core political and economic hub where rice was accumulated from peripheral regions before the construction of the fortress. Monumental earthworks such as the Wolseong fortress and gigantic tomb mounds mark the onset of a fully developed ancient state. From the fifth-century moat deposits, fox nut (*Euryale ferox*) remains indicate the possible cultivation of

aquatic plants, potentially linked to state rituals. In elite burials, rice and peach were the most common offerings, while other fruits and plants, including Korean pepper (*Zanthoxylum piperitum*), reveal symbolic, ritual, and medicinal dimensions of plant use. By also considering archaeobotanical data from the Gaya cultural sphere in southern Korea, this study explores both the regional diversity and broader patterns of ancient foodways on the peninsula.

Aimers, Jim (SUNY Geneseo), and Laura Kosakowsky (University of Arizona)

[104] *A Type by Many Other Names: Using Ceramic Systems in Northern Belize*

Precolumbian northern Belize was a region of abundance with connections to the Mexican Yucatán Peninsula, the Caribbean Coast, Central Belize, and the Petén region of Guatemala. This interregional interaction is evident in the pottery of Lamanai and Nohmul, and it creates challenges in naming pottery types at these sites. In standard type-variety procedure, collections at major sites should be given site-specific names. While this has been followed at some sites, type-variety names from other regions have also been used. This has resulted in proliferation of type names in northern Belize, many of which refer to stylistically similar types. In this paper, we demonstrate the utility of the ceramics systems approach—which groups stylistically similar types—in the classification of pottery at Lamanai and Nohmul. We focus on the latest periods of occupation at both sites (the Terminal Classic into the Postclassic) and discuss the cultural implications of this stylistic sharing in northern Belize.

Ainis, Amira (California State University, Los Angeles), Rene Vellanoweth (California State University, Los Angeles), and Antonio Porcayo-Michelini (Centro INAH Baja California)

[271] *Environmental Forcing, Habitat Change, and Shellfish Harvesting at the Conchero-4 (CON-4) Site, Upper Gulf of California, Baja California, Mexico*

Archaeological evidence along the Upper Gulf coast of Baja California revealed ~6,000 years of Indigenous subsistence and settlement focused on nearshore fisheries and intertidal shellfish beds. The hyper-abundance of estuary and marine habitats complemented the adjacent desert and mountain environments, resulting in a complex annual round that utilized a variety of terrestrial and marine resources. Radiocarbon dates of stratified components at the Conchero 4 (CON-4) site suggest this coastal dune was visited repeatedly over the past ~2,000 years. Detailed analysis of shellfish remains examined size trends and species composition through time showing subsistence adaptations to changing nearshore habitats likely associated with rainfall/storm variation, plant harvesting, and sedimentation of littoral environments as they shifted between sandy bottom and rocky boulder habitats. Subsequent stable isotope studies on marine shells and fish otoliths will provide information on season of harvest and nearshore paleoenvironmental conditions in the site vicinity. Our study is a direct result of the influence Jon Erlandson has had on our careers as coastal archaeologists working under the framework of historical ecology. His impact is evident in this study and much of our work, compelling us to become better researchers and advocates for understanding the role of aquatic environments in human history.

Ainis, Amira [50] see Buratti, Heidi

Ainis, Amira [258] see Calistri, Hannah

Ainis, Amira [276] see Leiva, Jennifer

Airola, Danielle (University of Montana), Joanna Wysocka (Polish Academy of Sciences), Maciej Gembicki, Tina Czaplińska, and Meradeth Snow (University of Montana)

[327] *Pestilent Air: Infectious Disease in Early Modern Poland*

The individuals buried in the cemetery of Czysty Square and the population of the vanished village of Gać lived and died during the early modern period in what is now modern-day Poland. Epidemics broke out repeatedly during this time, and the skeletal remains of several individuals buried in Czysty Square's cemetery display pathological changes suggestive of infectious disease. These nonspecific morphological changes created a need for DNA testing to search for pathogens associated with these lesions. In contrast, Gać's population declined over time until the village's abandonment. This has led to a hypothesis of an epidemic having contributed to the decline. This paper presents the results of aDNA testing of individuals excavated from these two cemeteries. The aDNA testing for pathogens focused on bacteria that caused epidemics during this time period and, for Czysty Square, bacteria that cause meningitis: *Y. pestis*, *M. tuberculosis*, *N. meningitidis*, *H.*

influenzae, *S. pneumoniae*, and *L. monocytogenes*. The high sequence counts of *M. tuberculosis* among the samples from Czasty Square prompted deeper investigation into the lineage and strain to which these sequences belong and their place within the spread of tuberculosis through Europe at this time. *****This presentation will include images of human remains.**

Aitchison, Kenneth (Headland Archaeology)

[105] *Why Archaeology Needed the Big Bang and Actors Weeping into Handkerchiefs: The 1980s Transformation of Archaeological Practice in the UK Was Driven by the Economics of the City of London*

Before World War II, there was low-level awareness that The City of London—the financial district of the UK’s capital—had once been Roman *Londinium*, but this was permanently sealed beneath The City’s streets. The devastation brought by the aerial bombing of 1940–1941 meant that, following war’s end, there would be opportunities to archaeologically investigate the hidden metropolis. But economic development and archaeological practice did not advance at the same pace—until two key events of the late 1980s. Firstly, London’s stock markets were deregulated in 1986 in a process nicknamed “The Big Bang,” resulting in a long construction boom in The City, over and through the deeply stratified remains of *Londinium* beneath. And this was accompanied by persistent, high-quality archaeological investigation—after the “rules” changed to shift responsibility away from publicly funded government agencies to professional companies answering to commercial developers as private clients. This was triggered by the (overly dramatic?) discovery of and development threat to the site of the Rose Theatre in 1989, a sixteenth-century London theater where William Shakespeare had both acted and seen some of his plays first performed. The result was effective public protest led by renowned thespians “weeping into handkerchiefs.”

Aiuvalasit, Michael [301] see Roos, Christopher

Ajayi, Boluwaji

[103] *On the Margins of Empire: Autonomy and Adaptation in the Rural Lower Akinyele between the Eighteenth and Twentieth Centuries*

Traditional narratives of precolonial West Africa often focus on the political and economic dominance of powerful states. This paper shifts the lens to the hinterlands, examining how communities on the peripheries of empires navigated their own social and economic realities between the eighteenth and twentieth centuries. Drawing on research from the Lower Akinyele region, this study examines the everyday lives of settlements situated at the margins of the Oyo Empire’s influence, as well as those of the military states of Ijaye and Ibadan during this period. Examining the materiality of everyday life through the lenses of agency and practice theory, this paper argues that distance from imperial cores fostered not deprivation but a resilient form of autonomy. This autonomy was enshrined in a robust, locally oriented economy grounded in household-based production and intra-regional exchange networks. Our analysis demonstrates how the strategic practices of daily life enabled communities on the margins to assert economic independence and craft a distinctive social identity. This offers a critical reevaluation of power and complexity in precolonial West Africa.

Akimoff, Anya (University of British Columbia), Aleksa Alaica (University of British Columbia), and Luis Manuel Gonzalez-La Rosa (University of British Columbia)

[221] *Charting Isoscapes: Integrating Stable Isotopes and GIS in the Tierras Blancas Valley, Peru*

The Nasca culture of southern coastal Peru (100–650 CE) is renowned for its depictions of local flora and fauna in ceramic iconography. While stable isotope studies have previously focused on staple crops like maize and sweet potato—plants frequently represented in Nasca ceramics—many native species to the Tierras Blancas Valley remain understudied despite their prominence in Nasca art and ritual. This project integrates stable isotope analysis (C and N) with Geographic Information Systems (GIS) to model isotopic variation across the Tierras Blancas Valley, a region central to Nasca occupation. We analyzed 51 tissue samples from native plant species collected at Cocahuisho, a Late Nasca domestic settlement (450–600 CE), to generate a localized isotopic baseline. This data was integrated into GIS to produce an isoscape of the region, offering insights into environmental conditions, plant ecology, and potential resource use by past populations. By integrating spatial analysis with isotopic data, we contribute to meaningfully revealing patterns that stand-alone isotope results might overlook, enabling a deeper understanding of how landscapes were inhabited,

perceived, and utilized. This approach also challenges traditional distinctions between “charismatic” and “uncharismatic” plants in archaeological research, emphasizing the interpretive value of combining isotopic and spatial datasets in Andean studies.

Akimoff, Anya [305] see Curran-Morton, Willow

Alaica, Aleksa (University of British Columbia)

[31] *Deer-Self: Moche Iconographic and Zooarchaeological Evidence for Cervid Value in Ancient Peru*

Cross-culturally, the deer hunt has been depicted in art and iconography of past cultures revealing the types of weapons used to hunt, other animals that accompany humans, such as dogs and horses, and also the scale of violence that is associated with these practices. In Peru, during the Moche cultural phase (CE 200–950), the deer hunt scene was depicted on well-crafted ceramic vessels and anthropomorphized deer warriors were depicted as prisoners. Zooarchaeological evidence of deer in daily and ceremonial practices provides important insights into the ways that deer were used as food resources but also as symbols of elite prestige. This paper examines the zooarchaeological patterns in deer acquisition from the site of Huaca Colorada in the Jequetepeque Valley in northern Peru. Deer could have been hunted directly adjacent to Huaca Colorada, where a large mesquite forest provided deer populations with fodder and canopy. Zooarchaeological evidence attests to the use of deer most frequently among domestic household groups with some use in elite spaces. I argue that the role of deer as both an elite symbol but as supplemental subsistence resources among non-elite communities created a complex and competitive political landscape for the management and exploitation of deer.

Alaica, Aleksa [221] see Akimoff, Anya

Alaica, Aleksa [83] see Baker, Lilian

Alaica, Aleksa [60] see Colpitts, Sydney

Alaica, Aleksa [305] see Curran-Morton, Willow

Alaica, Aleksa [279] see Divinagracia, Anna Kristina

Alaica, Aleksa [211] see Gonzalez-La Rosa, Luis Manuel

Alaica, Aleksa [356] see Munro, Magdalen

Alaica, Aleksa [31] see Ren, Kara

Alam, Aftab [102] see Green, Adam

Alam, Daniyal [279] see Divinagracia, Anna Kristina

Alapisco, Dawn Marie [184] see Domeischel, Jenna

Alarcón Ledesma, Carmela [314] see Erauw, Céline

Alcaina, Jonàs [93] see Sánchez de la Torre, Marta

Alcantar, Curtis [184] see Doyle, Anna

Alconini, Sonia (University of Virginia)

[309] *In the Elbow of the Andes: The Asiento Real de Samaipata in the Southeastern Inka Frontier*

It is often assumed that the expansion of the Tawantinsuyu was swift and facilitated through a series of military conquests during the imperial era. This presentation explores the case of the Inka center of Samaipata in the Elbow of the Andes, the easternmost Andean inflection before entering the tropical savannas of Santa Cruz and Chiquitos. Part of the expanding eastern frontier, this territory was annexed by two relatives of the ruler in Cuzco through strategic alliances and diplomatic relations with local tribes in the east. The goal of this presentation is to explore the role that royal *panacas* played in territorial annexation, the strategies employed by these entrepreneurs, their motivations, and how state institutions and practices were tailored to meet localized needs.

Alday, Camila [267] see Serra, Margot

Aldenderfer, Mark [343] see Haas, Randy

Aldenderfer, Mark [211] see Noe, Sarah

Aldenderfer, Mark [277] see Snyder, Tom

Alders, Wolfgang (University of California, Los Angeles), Ioana Dumitru (University of Sydney), and Elinaza Mjema (University of Dar es Salaam)

[357] *Mobility, Adaptation, and Resilience at the River-Ocean Nexus: Recent Research from Pangani, Tanzania*

Major rivers connect the eastern African interior to the Indian Ocean basin, but their influence on Swahili settlement trajectories are undertheorized. Riverine landscapes may have created unique constraints and opportunities for long-term settlement growth, influencing shifts between sedentism and mobility. In northern Tanzania, the Dynamic Coasts and Landscapes of Resilience (CALOR) project is using geospatial methods and archaeological field surveys to understand how communities contended with new resource environments, cycles of flooding and drought, and natural catastrophes like tsunamis, centered on the river-ocean nexus of Pangani Bay. This paper explores models for settlement mobility over the last 1,500 years in this region in relation to topographic and environmental features, incorporating drone lidar, land-use classification of satellite imagery, and archaeological field surveys up the Pangani River. Flooding may have not only disrupted settlement patterns but also agricultural potential, depositing brackish water from the river-ocean interface on fields upstream. Vulnerability would have been shaped by proximity to tidal channels, mangroves, and topography. We theorize about flood avoidance on hills, riverine resource use, and water-borne transport along rivers as factors in long-term urban and rural Swahili settlement trajectories. These perspectives inform anthropological debates around rivers and the development of “social complexity.”

Alexander, Michelle [163] see Slucky, Alexandra

Alexander, Taylor [60] see Wai, Stefanie

Allen, Laura [22] see Boutte, Kerry

Allen, Mark (Cal Poly Pomona)

[159] *Applying the Maritime Mode of Production to the Māori of Aotearoa / New Zealand*

The pre-European Māori well illustrate the nature of the corporate mode of production in chiefly societies where leaders mobilize resources and labor to organize the defense of gardens, stored food supplies, and other resources in a rugged environment of mostly temperate rainforest. This resulted in the construction of over 7,000 *pā* (hill forts), mostly in limited areas warm enough to support horticulture. This paper will examine how the maritime mode of production model developed originally for Bronze Age Scandinavian societies by Ling, Earle, and Kristiansen (2018) might provide another useful perspective to this unique Polynesian case. The second largest corporate economic investment for the Māori after fortifications was the construction of large *waka taua* (war canoes) and smaller sailing vessels for trading expeditions, especially to obtain limited lithic resources such as nephrite (greenstone/pounamu), argillite, basalt, and obsidian. Like fortifications, boats were organized, funded, and often controlled by chiefs. It is argued that the New Zealand case conforms to many tenets of the maritime mode of production, but with subtle differences such as less emphasis on maritime raids for slaves as a source of labor for chiefs and their followers, as well as more inconspicuous monopolization of wealth finance goods.

Allen, Mitchell (Scholarly Roadside Service)

[322] *Seeing the Big Picture with Brian*

Archaeological scholarship typically highlights the deep understanding of a focused subject limited by time, space, material, and context. Brian Fagan broke the rules for that version of archaeology by focusing on the broad scope of human history illuminated through archaeology. He demonstrated the big picture to colleagues, students, and the public through his textbooks, educational innovations, popular writing, and media work. In this presentation, I will show how this played out in his interactions with me as one of his

publishers as well as through brief video segments from several colleagues and friends.

Allen, Myriah (Texas State University), Matthew Boulanger (Southern Methodist University), and Britt Bousman (Texas State University)

[279] *A Complex Array of Fauna: A Comparison of the Faunal Assemblages of the Pete Creek and Mott Creek Sites*
The Garza Complex people in the Southern Plains were pedestrian nomadic bison hunters by 1450, who transversed the region and traded bison products with their eastern and western agricultural neighbors for corn, ceramics, obsidian, and other goods. Most archaeologists believe that the Teyas groups of Coronado's narratives represent the Garza Complex that vanished by 1700. This complex also saw the rise and utilization of Spanish livestock, especially horses, by the Indigenous Plains societies. We compare the faunal assemblages of two contemporary Garza Complex campsites: Pete Creek (41CB63) and Mott Creek (41MY29). These sites are 50 km apart on the eastern edge of the Llano Estacado escarpment at the mouths of canyons. Both sites provide easy access to creeks and springs below the escarpment and to bison herds on the High Plains above the escarpment. This zooarchaeological study assesses whether the occupants of these sites utilized the same or different food-acquisition and mobility strategies. Fauna count, element frequency, and butchery strategies are evaluated to assess possible effects on hunting brought on by the introduction of horses. This research aids in expanding our knowledge of the development of the Plains Indigenous Horse Cultures on the Southern High Plains.

Allen, Myriah [182] see Moore, Elizabeth

Allen, Susan (University of Cincinnati)

[248] *Fueling the Interpretive Fire: Posthumanist Perspectives on Charcoal Remains*

The potential for applying posthumanist theoretical perspectives to enrich understandings of past human-plant relationships has been underexplored in paleoethnobotanical research. For example, while the approach of new materialism has been productively applied—though not without critique—to ceramics and other kinds of archaeological assemblages, it is rarely considered as a framework for exploring the potential meanings of plant remains. Challenges to new materialism include its conflation with symmetrical archaeology and overemphasis on object-oriented ontologies that elide human experience, but these can be overcome through critical approaches. Drawing on rich charcoal assemblages from two prehistoric hillfort sites in northern Albania, Gajtani and Zagorë, and a contemporary lakeside settlement in southern Albania (Sovjan), this paper presents a case study that illustrates the strong potential for a critically applied new materialist perspective to enhance and enliven the reconstruction of fuel collection practices in the past.

Alley, Magdalynne [266] see Rutkoski, Ashley

Allison, Kimberly [199] see Pawlowicz, Leszek

Alonso, Alejandra [352] see Traxler, Loa

Alonso, Natalia [72] see Borrero, Luis

Alonso-Fernández, Elvira [272] see Mosquera Castro, Tania

Alperstein, Jonathan (Dartmouth College)

[46] *Geophysics beyond Prospection: Finding New England Villages*

The widespread absence of Woodland village sites in New England's archaeological record has sparked significant debate and multiple interpretations of the region's Indigenous history. While some experts attribute this absence to preservation bias, other scholars believe it stems from methodological shortcomings. Geophysics can serve as an intervention, not just a prospective tool, to clarify substantial debates surrounding the settlement patterns of precolonial New England. In northern New England, research suggests that hunter-gatherers primarily inhabited this region until the arrival of Europeans. Recent applications of ground-penetrating radar and magnetometry have uncovered evidence suggesting a more

sedentary precolonial landscape. This effort goes beyond just resolving long-standing academic debates about Indigenous settlement strategies by challenging harmful myths of a pristine wilderness and disappearing Indigenous peoples.

Altamirano Sierra, Alí [84] see Chew, Zi-Qi

Altamirano Sierra, Alí [45] see Garvin Suero, Arianna

Alva Nuñez, Jose (Zona Arqueológica Caral-Unidad Ejecutora 003- MC), Miguel Valqui Güimack (Zona Arqueológica Caral-Unidad Ejecutora 003 Del Ministerio de Cultura del Perú), Tatiana Abad Lezama (Zona Arqueológica Caral 003/ Ministerio de Cultura), Angelica Lopez Ramos (Zona Arqueológica Caral 003/ Ministerio De Cultura), and Luis Vallejos Martínez Sr. (Zona Arqueológica Caral-Unidad Ejecutora 003/Ministerio de Cultura del Perú)

[60] *Resultados de investigación en el sitio arqueológico de Bahía Seca, litoral del Valle de Casma, Perú*
El periodo Formativo (1800 al 1200 aC) en el Valle de Casma se caracterizó por el surgimiento de un complejo sistema de asentamientos con arquitectura monumental de diversas escalas y magnitudes, que ocuparon tanto las zonas del litoral como del valle y que se interrelacionaron entre si tanto de manera económica como política. Dentro de esta dinámica, se identifica al sitio de Bahía Seca, ubicado cerca al litoral y con acceso a los recursos marinos también hallados en los asentamientos del interior del valle; un sitio conformado por una construcción monumental descrita como un “edificio de tamaño intermedio”, y rodeado de ocupación de carácter doméstica. En la presente ponencia, se expondrán los resultados de excavación de la “Temporada 2024” del “Proyecto Arqueológico Bahía Seca”, resaltando las características de la arquitectura doméstica encontrada y realizando una comparación de los recursos a los que accedía el asentamiento con los que se encuentran en sitios de mayor tamaño en la zona. Como objetivo, se busca aportar por medio de los datos obtenidos a la discusión acerca de las dinámicas del valle ya mencionadas.

Alva Nuñez, Jose [342] see Lopez Ramos, Angelica

Alva Nuñez, Jose [285] see Vallejos Martínez, Luis

Alvarado, Claudia (El Colegio de Morelos), and Genevieve Lucet (Universidad Nacional Autónoma de México)

[331] *Standardizing the Built Environment: Dual Measurement Systems at Xochicalco and its Epiclassic Context*
The analysis of the built environment at Xochicalco reveals the consistent use of two complementary measurement systems that shaped architectural planning during the Epiclassic period. Their application demonstrates deliberate standardization, linking construction techniques with broader symbolic and cosmological dimensions. Comparative evidence from Cacaxtla suggests that such metrological practices were not unique but formed part of a wider Mesoamerican concern with modular systems and proportional design. By examining Xochicalco within this broader context, the study highlights how measurement systems served both technical and cultural functions, providing insight into interaction, shared traditions, and the construction of social identities in Epiclassic Mesoamerica.

Alvarado, Jazmin [49] see Fafin, Manon

Alvarez, Carlos [205] see Lowe, Lynne

Alvarez, Natalia [311] see Fajardo, Sebastian

Alves Borges, Ayla [49] see Williams, Makayla

Amarillas, Samantha, and Ken Seligson (California State University Dominguez Hills)

[282] *What's in a Burial? Understanding Changes in Puuc Maya Mortuary Practices through Ceramics*
Burial practices in the Puuc region of the northern Maya lowlands remain relatively understudied due to poor preservation. During the 2025 field season, four burials were uncovered at the small site of Xanab Chak. Cultural objects associated with the burials indicated the earliest was likely associated with the construction

of a Middle Preclassic (ca. 700–500 BCE) plaza, while the latter three were interred during the construction of an Early to Middle Classic (ca. 400–600 CE) residential platform. Through careful morphological and contextual analyses of the ceramic vessels buried with the individuals and comparisons with a Middle Preclassic burial uncovered at the nearby site of Paso del Macho, this poster demonstrates changes in Puuc Maya mortuary practices by identifying shifting patterns in the region's cultural material over centuries. The burials and ritual goods of these early farming communities vary in location, orientation, and contents, allowing for a deeper understanding of local residents.

Amarillas, Samantha [214] see Rodriguez, Elizabeth

Amend, Tessa (Idaho Army National Guard), and Jake Fruhlinger (Idaho Army National Guard)

[74] *Archaeological Site Location Modeling and Post-fire Survey Design on the Orchard Combat Training Center*
In August 2025 the Range fire burned 27,000 acres on the Orchard Combat Training Center (OCTC), south of Boise, Idaho. The fire impacted intact shrub steppe habitat and prescribed rehabilitation treatments were to begin in the fall. Funding and timing made surveying the entire treatment area for cultural resources unfeasible. To identify an appropriate survey strategy, the Idaho Army National Guard (IDARNG) utilized a predictive model to identify archaeologically sensitive areas. The model was designed in 2015 using a regression-based approach. The model consists of three geospatial variables that have significant relationships with the locations of archaeological sites on the OCTC: distance to hydrology, angle to hydrology and elevation. A 5,000-acre survey area was established based on the predicted areas. The results of the survey were then used to test the model's predictive power and compare it to another model based on a Maximum Entropy (MaxEnt) approach.

Amerman, Roger [72] see Blong, John

Ames, Christopher (University of Victoria), Andrew Garrard (University College London), James Pokines (Boston University), Bo Li (University of Wollongong), and Ahmad Thaher
[228] *C-Spring Revisited: Insights from the 2025 Field Season and New Chronometric Data of Late Lower Paleolithic Occupation in Eastern Jordan*

C-Spring, situated in the Azraq Basin of eastern Jordan, is a key site for understanding Lower Paleolithic occupation in the eastern Levant. First identified in the 1950s during hydrogeological investigations, the site yielded a biface-dominated artifact assemblage embedded in a deeply buried green gravel deposit. Based on artifact typology and the presence of extinct Pleistocene fauna, C-Spring was interpreted as an Acheulean occupation within a savannah-like paleoenvironment. Increased construction disturbance in the early 1980s, including excavation of a fishpond that overlapped the original C-Spring find location, prompted an archaeological excavation by Andrew Garrard in 1985. Placed approximately 30 m to the east of the original C-Spring site, Garrard's excavation recovered nearly 3,000 stone artifacts overlying a green gravel matching the 1950s descriptions and was interpreted as an in situ Acheulean knapping floor and an extension of the original C-Spring open-air site. In 2025, the Azraq Marshes Archaeological and Palaeoecological Project attempted to relocate Garrard's 1985 excavation in hopes of dating the Acheulean occupation by single-grain optically stimulated luminescence. This presentation details the findings of this investigation, encompassing new stratigraphic, technological, and chronometric data, contributing to a deeper understanding of the late Lower Paleolithic period in eastern Jordan.

Amezcu, Verenis (Harvard University)

[255] *Paint Rock, a Place of Mist: Emergence, Birth, and Corn*

Personification of metaphors are common in the early phases of the development of the Uto-Aztecan language in the American Southwest. Frequently, ritual ceremonies and chromatic symbols demonstrated exceptional understanding of the developmental cycles of plants, animals and of humans and used corn as a metaphor to express the symbiotic and complementary relationship that existed to describe themes of emergence and birth. Scholars have stated that during winter, ancient storytellers performed recitations of creation stories in which the orators and spectators partook in collective rituals and ascension practices.

These rituals left remnants of those symbols through rock art. Hence, in this presentation, I will be comparing three panels of rock art found at Paint Rock, Texas, that contain themes of birth, emergence and corn that give segway to origin stories of Pueblo people. I will analyze artistic techniques utilized in rock art to showcase intentionality when deciphering ancient panels, and I hope to prove that symbols and patterned relationships in rock art have mnemonic function and that they can provide symbolic meaning by connecting them to Third Mesa ethnographic records (converted from First Mesa) that were recorded back in 1893.

Amgalantugs, Tsend [226] see Ciolek-Torello, Richard

Ammerman, Steven, Sydney Hunter (Ohio State University), Ashleigh Haruda (University of Oxford), Lynne Rouse (Eurasia Department, German Archaeological Institute), and Sören Stark (Institute for the Study of the Ancient World, New York University)

[314] Zooarchaeology and Archaeobotany at Kimirek-kum I Reveals Environmental Manipulation and an Integrated Agropastoral Economy

Agropastoralists utilize a diverse set of strategies to support mixed economies that minimize risk by investing in multiple different production paradigms. In Central Asia, agropastoralists living within or adjacent to arid deserts accomplished this by exploiting and developing wetland biomes through intentional manipulation of surface water and plant ecologies, while continuing to actively engage with the desert as both a resource and a connection to distant lands. Using niche construction theory, we explore how agropastoralists embedded within marginal landscapes optimize them for particular subsistence and production practices while buffering themselves against those landscapes' inherent risks. The late second millennium BCE site of Kimirek-kum I (KKI), located at the interface of the Bukhara Oasis and the arid Kyzyl-kum Desert in Uzbekistan, provides a well-studied example of a site associated with agropastoral communities. Archaeozoological and archaeobotanical analyses at KKI show evidence of wild plant management and agricultural production aimed to support domestic animal exploitation and, in particular, the exploitation of adult cattle for secondary products. Through the combination of these datasets, we investigate how the inhabitants of KKI actively shaped and engaged with the landscape to live in a marginal zone defined by volatile river flows and rapid ecotonal shifts.

Amon, Ayla (Greensboro History Museum), and Roxanne Cortes

[218] Longing for Home: Displaced Objects, Voluntary Repatriations, and Lessons from a Museum

Founded in 1924, the Greensboro History Museum's core mission is to work with diverse communities to collect objects and stories, connect generations, and challenge people to explore the city's past, present, and future. A crucial part of this mission lays in decolonizing our collections through voluntary repatriations. Beginning in 2023, staff started examining the collections in new ways: we completed a review of all Indigenous items and submitted the museum's first NAGPRA Summary, and we also started examining collections for other items that fell outside of NAGPRA, but did not belong at the museum. This ongoing evaluation has turned up effigies, funerary items, looted antiquities, war souvenirs, human remains, and biofacts made of endangered species; the items represent at least 12 modern countries, a few thousand years, and have varying levels of documentation. Highlighting objects from Palestine, Mexico, and Egypt as case studies, we will discuss how we are using NAGPRA as a roadmap for voluntary repatriation and where we have had to innovate new practices to navigate challenges. Ultimately, we suggest a process and flowchart for evaluating potential and current collections objects and language that can be incorporated into museum policies.

Anaya Hernández, Armando (Universidad Autónoma de Campeche), Kathryn Reese-Taylor (University of Calgary), and Felix Kupprat

[35] Landscape, Water, Urbanization, and Sustainability: Nicholas P. Dunning's Contribution to the Bajo El Laberinto Archaeological Project

Contemporary archaeological research in the Maya Lowlands increasingly relies on interdisciplinary approaches integrating environmental studies, ancient urbanism, and socioecological resilience. Within this context, the work of Nick Dunning has been pivotal to the Bajo El Laberinto Archaeological Project (PABEL), particularly in advancing a landscape-centered understanding of the ancient Maya. As a physical geographer

and geoarchaeologist, Dunning has led efforts to integrate geomorphological, paleoenvironmental, archaeological, and ethnobotanical analyses to reconstruct the transformation of the karstic Elevated Interior Region (EIR) of the Maya Lowlands. This presentation explores Dunning's contributions along three key axes: (1) the geoenvironmental characterization of the interior uplands, which has helped contextualize patterns of settlement, land use, and soil development; (2) the analysis of ancient water management systems—especially *aguadas* and rainwater harvesting technologies—as sustainable adaptations to highly seasonal and water-scarce environments; and (3) the identification of water management as a driving force in the urbanization process itself. His research contributes valuable empirical knowledge and offers conceptual and methodological frameworks relevant to current debates on sustainability, water security, and landscape conservation in tropical environments. Dunning's integrative vision positions him as a central figure in studying ancient Maya cities and their ecological foundations.

Anaya Hernández, Armando [55] see Farquharson, Kyle
 Anaya Hernández, Armando [44] see Horseman, Grace
 Anaya Hernández, Armando [355] see Kupprat, Felix
 Anaya Hernández, Armando [35] see Lentz, David
 Anaya Hernández, Armando [277] see Lockett-Harris, Joshua
 Anaya Hernández, Armando [341] see Longstaffe, Matthew
 Anaya Hernández, Armando [223] see Montgomery, Shane

Anderson, Derek [319] see Strawn, James
 Anderson, Derek [170] see Wu, Nikki

Anderson, Henry (University of Colorado, Denver)

[183] *Reconstructing Experience: A Study on the Representation of Space in Precolumbian West Mexico*

This project aims to address a disconnect that exists between the archaeological record of precolumbian West Mexican structures and the ancient models that were created to depict them. While excavation and site mapping has allowed for a deeper understanding of some of the structural aspects of these buildings, the models themselves present different levels of stylization that are not equally reflected in the archaeological record. The diversity of architectural stylization that exists among the models appears dependent on the figures and scenes that are being displayed within them. Some showcase detailed architectural forms while others simplify buildings, in effect, emphasizing the figures and their actions. This research will argue how the variation in these stylized architectural forms and human activities are deliberately utilized to convey a phenomenological experience of space as opposed to a purely structural one. That is to say, how were these models representational of the experiences and emotions embodied by those participating in the actions depicted. The study will not seek to identify or impose any form of universal human experience or objective phenomena but instead will examine how these culturally specific artifacts provide a window into how a society represents and experientially engages with architecture.

Anderson, Kathryn [77] see Sibilía, Ella

Anderson, Kirk [71] see Schachner, Gregson

Anderson, Kolbe [269] see Durant, Phoebe

Anderson, Michelle [334] see Losco, Ashley

Anderson, Shelby (Portland State University), Dennis Davis (Native Village of Shishmaref), Justin Junge (National Park Service), Jason Rogers (National Park Service), and Monty Rogers (Cultural Alaska)

[182] *Minimally Invasive Data Collection from Threatened Coastal Sites: Arctic Case Study*

Bering Land Bridge National Monument is extensive, remote, and largely uninvestigated by archaeologists. Arctic ancestral sites are particularly vulnerable to climate change. Prior research found that wind erosion

has already damaged 96% of investigated coastal sites and continued wind, thaw, and water erosion threaten 100% of sites. Prioritizing ancestral sites for climate impact assessment and mitigation is difficult due to the large number of sites, logistical challenges, and concerns about damaging sites with traditional archaeological field approaches. To address these issues, we established a collaborative working group that included Tribal government and Native corporation representatives alongside members of the research team. The working group prioritized sites and places to investigate. Together we developed and tested minimally invasive sampling and rapid condition assessment methods over two field seasons. We found that a one-inch geoprobe causes less site and environmental damage than shovel testing and unit excavations and is as effective for retrieving stratigraphic information and radiocarbon samples. Other advantages of our approach include optimized field time, improved data recovery when processing probes in the lab versus the field, increased opportunities to work with the local descendant community on project design and implementation, and greater incorporation of Iñupiaq knowledge in project outcomes.

Andoni, Eda [209] see Murphy, Hanna

Andrade, Pedro (Universidad de Concepcion), Daniela Nova-Baza (Universidad de Concepcion), Luis Bustamante-Salazar (Universidad de Concepcion), Diego Salazar, and Alicia Marticorena (Universidad de Concepción)

[302] *Relief, Ritual, and Smoke: Expanding the Human-Plant Histories of Tobacco on the Desert Coast of Northern Chile (ca. 4000 BC–AD 1400)*

Tobacco (*Nicotiana* spp.) is among the most powerful plants shaping prehispanic lifeways in the Americas, yet direct evidence of its consumption in human remains is still scarce. Our ongoing research combines previous studies with new datasets to expand the temporal and analytical scope of tobacco bioarchaeology on the hyperarid coast of Antofagasta, northern Chile. Using gas chromatography–mass spectrometry (GC–MS/MS), we now analyze a larger corpus of dental calculus samples spanning more than six millennia—from the Archaic to the Late Intermediate period—alongside the first chemical tests of native Chilean *Nicotiana* species. Cotinine, a metabolite of nicotine, has been consistently detected across sexes and time periods, making this region home to the earliest bioarchaeological evidence of tobacco use in South America. Crucially, Archaic period detections point to alternative modes of intake—such as chewing—likely linked to medicinal practices, predating the widespread adoption of smoking and inhalation during the Formative period. By integrating biomolecular data from humans with chemical profiles of endemic plants, this study reframes the cultural trajectories of tobacco as a long-term human–plant relationship. The results underscore the multifunctional roles of *Nicotiana*—ritual, therapeutic, and social—while opening a new frontier for understanding psychoactive consumption in South America.

Andrews, E. Wyllys, V (Tulane University)

[338] *Bill Ringle: Early Years and Settlement-Pattern Research*

Bill Ringle is one of the outstanding Mesoamerican archaeologists of his generation. His contributions in a range of fields will provide foundations and directions for many who follow. His best-known contributions may be to our understanding of Chichen Itza, site surveys in the Bolonchén region of the Puuc Hills, and extensive interpretations of lidar imagery of the Puuc region, but his work in the northern lowlands includes earlier projects. His work with settlement patterns at Komchen was crucial to interpreting this early town. Shortly thereafter he joined Bruce Dahlin's project at El Mirador, Guatemala, directing a settlement survey in the peripheries of the site. In 1984, Bill and George Bey started an eight-year program of survey and excavation at Ek Balam, training many students who have become Maya archaeologists. Bill's work with Maya hieroglyphic writing goes back to these early years and continued through his career.

Andrieu, Chloé [307] see Melendez, Juan

Andrieu, Chloé [307] see Menager, Matthieu

Angell, Emma (Binghamton University), Lauren Kohut (Winthrop University), Manuel Mamani (Independent Researcher), Matthew Velasco (Cornell University), and BrieAnna Langlie (Binghamton University)

[204] *Paleo and Plant-Based: An Examination of Archaic Paleoethnobotanical Samples from Puno, Peru, 9.5–6.5 ka*
Early hunter-gatherers in the south-central Peruvian Andes were nomadic. Scholars often assume that such nomadism was driven by the wild herds on which they depended. However, stable isotope research shows a plant-dominant human cuisine, making up about 84% of total dietary intake. This finding raises the question, What plants were these people consuming? While some paleoethnobotanical research has been carried out on the origins of agriculture and much more during later time periods in the south-central Andes, there is relatively little data from Archaic period contexts. This study presents the macrobotanical results recovered from 48 archaeological features from the site of Wilamaya Patjxa, which was occupied 9.5–6.5 cal ka. Specifically, we present the findings of carbonized wild plant remains used by hunter-gatherer groups occupying Wilamaya Patjxa thousands of years before quinoa and potatoes were domesticated in the region.

Angeloff, Nick (Cal Poly Humboldt), Engin Nasuh (NI Museum Bitola), and Slobodon Stojkoski (NI Museum Bitola)

[269] *Numismatic Stratigraphy at Crnobuki Gradishte and Beyond*

The Lyncesti, a warlike tribe in the seventh century BC, broke through Eordaya and settled the territory around Lerin and Bitola. Lynk is mentioned as the capital city. The archaeological site of Gradishte near village of Crnobuki could be that center, considering its strategic location and its assumed size. Excavations from 2021 to 2025 produced a total of 76 coins. Another 42 coins were found in 2011/2012 during reconnaissance survey and excavations by Viktor Lilčić. These coins range in date from 358 BC through the Roman Republic and into the Roman Empire. Additionally, a horde of 217 silver Roman Republican coins were discovered in 2022. We present a typologically and distribution analysis helping to refine the primary economic and trade routes in this region. The distribution of the coins within the stratigraphy of the site provides support for existing radiocarbon dates and further refines our understanding of the archaeological deposit, its prominence and place within the Macedonian Kingdom, Roman Republic and Empire. The stratigraphic data also provides evidence of building phases, destruction, reuse, and adaptation of space over time. Combining ^{14}C dates, numismatic analyses and stratigraphic analyses creates a dataset serving to further define Crnobuki Gradishte and the broader region.

Angeloff, Nick [269] see Carlson, Justin

Angeloff, Nick [269] see Montalvo, Lisa

Antinossi, Abigail [41] see Pagano, Victoria

Antolin, Ferran (German Archaeological Institute), Raul Soteras (German Archaeological Institute), Nina Matzek (German Archaeological Institute), Guillem Salvador-Baiges (Universitat Autònoma de Barcelona), and Ermengol Gassiot-Ballbé (Universitat Autònoma de Barcelona)

[163] *At the Edge of the Neolithic? Cultivating and Foraging at the High-Mountain Site of Coro Trasito (Central Pyrenees)*

Mountain environments are often conceived of as marginal landscapes, challenging for early farming and thus peripheral to processes of Neolithization. Archaeobotanical research at the high-mountain site of Coro Trasito (Central Pyrenees, Spain) challenges this view. Situated in an unexpected upland location (1,550 m asl), the site presents evidence for a diversified plant economy combining cereal cultivation—particularly naked wheat and naked barley—with a major reliance on wild plant gathering. Rather than indicating a delayed or attenuated Neolithic, these findings suggest that early farming communities in mountain areas participated fully in the broader dynamics of Neolithization, developing subsistence strategies not far removed from those in adjacent lowlands. This case contributes to the idea that so-called “marginal” regions are crucial for understanding the Neolithic as a whole: highland groups engaged with similar economic repertoires at the outset, with later diversification and specialization emerging over time. By situating Coro Trasito within these wider processes, this paper underscores the value of mountain contexts for rethinking both the margins and the core of Neolithic transformation.

Antonelli, Lillian [268] see Bartelink, Eric

Antoniou, Anna (University of Massachusetts, Amherst)

[84] *Braiding Past and Present: Community-Based Zooarchaeology and Traditional Foodway Revitalization in Willapa Bay, Washington*

Indigenous communities worldwide face disproportionate climate change impacts, including food insecurity, habitat loss, and cultural disruption. These challenges stem from environmental and social injustices of settler colonialism, which have disrupted traditional food systems and environmental relationships. Indigenous scholars emphasize that addressing these challenges requires supporting Indigenous self-determination and recognizing Indigenous knowledge systems, which offer vital insights for developing resilient, localized food security solutions. Many Indigenous communities are responding through participation in the food sovereignty and environmental justice movements and the revitalization of traditional foodways. This paper explores how braiding zooarchaeological science and Indigenous knowledge can support these efforts. In it, I present a case study of community-based participatory research conducted with, for and by the Shoalwater Bay Indian Tribe in Willapa Bay, Washington. This research examines past marine resource exploitation to inform traditional foodway revitalization and shell-bed restoration efforts. This paper introduces community-driven initiatives incorporating this research into their food sovereignty campaigns and explores how a braided methodology can increase contemporary impact. This work demonstrates zooarchaeology's capacity to not only reflect the resilience of past communities but also amplify the regenerative efforts of their descendants today.

Antonosyan, Mariya [195] see Hockett, Bryan

Antorcha Pedemonte, Ricardo [285] see Fargher-Navarro, Lane

Anvari, Jana [209] see Murphy, Hanna

Aparecida da Rosa, Lucia [107] see Sallum, Marianne

Apodaca, Alec, Mike Grone (California State Parks), and Gabriel Sanchez (University of Oregon)

[47] *Lessons from Collaborative Archaeology on the Central Coast of California*

Eco-archaeology is uniquely positioned to contribute to local restoration and conservation efforts. Within the context of landscape stewardship, reading the archaeological record can be one of the best ways to envision the biotic structure of a locality. Furthermore, archaeology also centers people and their cultural practices as keystone species and important considerations for future land management plans. In this presentation, we provide three examples of collaborative eco-archaeology that have supported Tribal-led restoration and conservation focusing on cultural landscapes. We also discuss the benefits and challenges in weaving low-impact sampling, landscape-level studies, and archaeobiological analysis that aims to balance interpretation of plants, fish, shells, bone, lithics, and other datasets.

Appert, Rebecca, and E. Cory Sills (University of Texas at Tyler)

[201] *Revisiting Maya Maritime Trade Routes: pXRF Analysis of Obsidian from Belize's Outer Cays*

Portable X-ray fluorescence analysis of obsidian artifacts collected from eight of Belize's outer cays offers new insights into Postclassic (AD 1250–1550) Maya maritime trade. Building on Jeff MacKinnon's model, which proposed a shift from nearshore to outer cay use in the Late Postclassic, this study evaluates the role of Cary Cay, Funk Cay, Gladden Cay, Ranguana Cay, Sapodilla Cay, South Water Cay, Tobacco Range, and Wee Wee Cay in regional exchange. Through geochemical sourcing of over 90 obsidian artifacts, 90% were sourced to Ixtepeque, with the remainder sourced to El Chayal. These results support the hypothesis of direct trade between the Guatemalan highlands and the northern lowlands. The transition from coastal to outer cay use during the Postclassic period coincides with the rise of Mayapan's economic influence. The presence of obsidian from multiple highland sources on the cays that lack evidence of permanent settlement suggests these locations were not just stopovers. Instead, the outer cays were integrated into long-distance exchange, serving as resting and provisioning locations. The distribution pattern suggests that obsidian was likely imported into the Yucatán through these outer cays and others along the coast, such as Cozumel, highlighting the importance of maritime trade in Postclassic economic systems.

Aracena, Kodiak [309] see Jaimes Betancourt, Carla

Arakawa, Fumi (Indiana University, Bloomington), and Aimee Oliver-Bozeman (New Mexico State University)

[212] *The Concept of “Frontier”: A Case Study from the Mimbres-Mogollon Region of the American Southwest*
The concept of the “frontier” in archaeology is not simply a geographic boundary but rather a dynamic zone of transition, interaction, and negotiation between cultural and social groups. Frontiers can function as places of contestation, where groups assert authority and distinction, or as spaces of cooperation, where ideas, practices, and materials are exchanged and blended. In this paper, I will investigate the distribution of early great kivas (communal structure) in the American Southwest as a way to explore how such frontiers operated in the past and to trace the development of regional communities. By focusing on two early great kivas recovered from the Gila Forks subregion of the Mimbres-Mogollon area, I will analyze architectural features, construction techniques, and associated artifact assemblages to identify patterns that reflect broader social processes. These case studies provide a means to consider how communities in this transitional zone negotiated cultural affiliation and interaction with neighboring groups. Ultimately, this analysis will contribute to the broader question of whether explicit social and cultural boundaries existed in the American Southwest during this period, or whether the archaeological record instead reflects more fluid and permeable frontiers shaped by interaction, movement, and shared practices.

Aramburu Venegas, Danna [83] see Baker, Lilian

Aranibar Bazan, Adolfo (Universidad Nacional Mayor de San Marcos)

[62] *Entre la iglesia y los Ancestros: La transformación ritual de Ñaupahuasi (Yauyos, Lima)*
Recent excavations at Ñaupahuasi (Yauyos, Lima highlands) reveal new findings related to the early colonial occupation, post-1532, centered around the church. This structure emerges not only as a ritual space and burial site but also as a construction of power and symbol of the new Catholic ideology, understood as a transitional process involving various forms of negotiation between the Spanish and the inhabitants of the central Andes. Spanish colonization represented a colonial process distinct from the Inca, grounded in a civilizing mission aiming to impose new philosophical and religious structures, generating profound sociocultural transformations, with local dynamics of resistance, adaptation, and negotiation. These transformations are archaeologically visible in hybrid burials, where Catholic ritual elements converge with indigenous funerary practices. The construction of churches, the arrival of religious orders, and the encomienda system played a central role not only in resource control but also in imposing new spiritual structures. These findings provide a renewed understanding of how architecture, ritual, and landscape intertwined to articulate power, sacredness, and memory between the Late Inca Horizon and the early colonial period. ***This presentation will include images of human remains.

Araujo, Astolfo [160] see Correa, Letícia

Arbaugh, Kaylee [124] see Kaspura, Molly

Archier, Emilie (Université Libre De Bruxelles)

[248] *The Transition between Late Formative to the Regional Development Period: The Case of Chorrera-Bahía and Chorrera-Tolita-Tumaco Figurines*

The Late Formative (1000–500 BC), also called the “Chorrera Horizon,” was a key period in the development of ancient societies on the Ecuadorian Pacific Coast. Many changes occurred during this late period, such as the specialization of various craft activities, the stratification of society, the spread of ideologies and belief systems, and the increase of exchange. These dynamics laid the foundation for the “Regional Development” period that followed (ca. 500 BC–AD 500), during which various complex societies developed. These new cultures had unique identities materialized on clay figurines, but also have some shared attributes. At the same time, these new traditions also are marked by their legacies, inherited from the Late Formative period in the form of various types of representation and techniques. However, the transitional phase between these two periods still contains numerous gaps that require further consideration.

Anthropomorphic figurines constitute one of the best materials to analyze the sociocultural changes during this transition (ca. 400–200 BC). This paper aims to present a preliminary comparative study of the Chorrera-Bahía and Chorrera-Tolita-Tumaco figurines through an in-depth analysis of the attributes and iconographies of relevant anthropomorphic representations.

Ardren, Traci (University of Miami), Travis Stanton (University of California Riverside), and Scott Hutson (University of Kentucky)

[338] *New Perspectives on Coba: Using Lidar Data to Reveal Geopolitical Dynamics*

In honor of the pioneering contributions of William Ringle to the use of lidar imagery in the northern Maya lowlands, this paper will summarize recent analysis of lidar data from the urban capital of Coba. Bill Ringle was well known for his collaborative analysis of lidar data from the Puuc hills and was the preeminent analyst of spatial data for most of our careers, inspiring an entire generation of Mayanists working in the northern Maya lowlands in how to explore ancient settlement. Since 2014, the Proyecto de Interacción del Centro de Yucatán (PIPCY) and the Proyecto Sacbe Yaxuna-Coba (PSYC) have utilized lidar survey coupled with ground truthing to better understand the nature of Classic period geopolitical expansion and infrastructure in the central northern lowlands. Ongoing analyses of lidar imagery from more than 450 km² surrounding Yaxuna, Coba, and the ancient road that connects these two centers has profoundly enhanced our understanding of urban density, population history, natural resource management, and the role of political infrastructure in and around Coba. We review these analyses and offer new information about the expansion of urban settlement from Coba westward along the great road to Yaxuna.

Arellano, Monica [124] see Kaspura, Molly

Arguijo, Jennifer (UNAH)

[349] *Pottery, Pastes, and Practices: Revisiting Selin Farm Ceramics*

The Selin Farm site, located along the Guaimoreto Lagoon in northeastern Honduras, preserves one of the most massive and well-preserved ceramic assemblages in the region. Building on Paul Healy's foundational analyses in the 1970s and our project's excavations in 2024, this paper presents an updated overview of the Selin Farm ceramics based on the classification of more than one million sherds and an unusually high number of partial and complete vessels. We share basic metrics collected through field and laboratory documentation—including paste, form, and size—that capture the sheer scale of ceramic deposition across the site's extensive shell midden deposits. Preliminary type-variety assessments and early insights from ongoing compositional analyses (including neutron activation analysis) are also discussed. When paired with a refined chronological framework, these data begin to reveal patterns of production, use, and discard tied to daily activities, feasting, and broader social practices. This updated overview establishes a foundation for deeper technological and compositional studies, highlighting Selin Farm as a critical case study for understanding ceramic production, consumption, and interaction along the northeastern Honduran coast during the Late and Terminal Classic periods (AD 300–1000).

Arias Espinoza, Oscar (Tulane University)

[60] *Offerings in the Study of the Archaeological Record of Monumental Sites: A Long-Term Multiproxy Study of the Chavín de Huántar Ceremonial Center during the Andean Formative Period (1100–400 BCE)*

In Central Andes archaeology, the difficulty of studying the history of monumental sites has drawn attention due to stratigraphic superposition. Between 2009 and 2018, excavations on the North Esplanade of Building “C” at Chavín de Huántar in Peru exposed various structures from the Formative period and 30 depositional events associated with their construction. We propose that these offerings were part of ceremonial architectural renovation activities that took place over a long period (1000–400 BCE). Using multiproxy data, such as pottery analysis, radiocarbon dating, zooMS, isotopes, zooarchaeology, and archaeobotany, we aim to deepen our understanding of the formation of these archaeological contexts. We will also explain how we utilize this information to comprehend 600 years of history in this sector of the ceremonial center during the Formative period. We will demonstrate how traditions, which may predate the ceremonial center itself, were maintained, modified, or implemented.

Arieta Baizabal, Virginia (Instituto de Antropología, Universidad Veracruzana), and Gerardo Jiménez Delgado (UNAM)

[312] *San Lorenzo: Paisaje, planeación urbana y cambio social durante el Preclásico Inferior en la Costa del Golfo*
Esta ponencia examina la importancia de la planificación espacial en la formación de una de las primeras urbes de Mesoamérica: San Lorenzo, capital olmeca situada en la Costa del Golfo de México entre 1800 y 1000 a.C. Se analiza cómo la construcción de la gran meseta artificial, concebida como una “montaña sagrada” organizó la vida social, política tanto en sentido vertical como horizontal, reflejando una jerarquización del espacio acorde con las estructuras socioeconómicas y políticas de la época. A partir de datos recientes obtenidos mediante tecnología lidar y cartografía de alta resolución, así como Sistemas de Información Geográfica, se reconstruye la planeación arquitectónica y monumental en las distintas etapas constructivas del asentamiento, así como las estrategias de adaptación ambiental. Asimismo, se discute cómo estas configuraciones espaciales incorporaron principios cosmológicos y reforzaron mecanismos de diferenciación social y trabajo colectivo. El estudio del caso de San Lorenzo permite reflexionar sobre la relación entre el paisaje construido, interacciones regionales y procesos de cambio social en el Preclásico mesoamericano, y pone de relieve la pertinencia de enfoques interdisciplinarios que integran arqueología, tecnología espacial y teórica del paisaje.

Arkush, Elizabeth [202] see Cogan, Jesse

Arkush, Elizabeth [40] see Kennedy, Sarah

Armitage, Ruth Ann (Eastern Michigan University), Avi Dragun (Eastern Michigan University), Ann Peters (Penn Museum), John Southon (Keck Carbon Cycle AMS, University of California, Irvine), and James Moran (Michigan State University)

[257] *Comparing the Dye Composition and Radiocarbon Dates for Mantles and Clothing Objects from Paracas Funerary Bundle WK12-382*

The Paracas site in the coastal desert of south-central Peru is the site of the largest archaeologically excavated mortuary complex of the prehispanic Andes, the Necropolis of Wari Kayan. First excavated in 1927, the funerary bundles here exhibit exceptionally preserved textiles. The samples in this study are yarn fragments associated with textiles from Wari Kayan tomb 12 (bundle 382) collected by the late Dr. Anne Paul in 1985 at what is now the Museo Nacional de Arqueología, Antropología e Historia del Perú (MNAHP). This presentation will focus on tunics, skirts, and headcloths from inside the bundle that appear to be related to embroidered mantles on the outer layers. Sequential analysis of these small yarn fragments was undertaken for chemical identification of the dyes through screening with direct analysis in real-time mass spectrometry (DART-MS) followed by extraction and comprehensive analysis with HPLC. Remaining fiber material from this process was then prepared with minimally destructive plasma oxidation for AMS radiocarbon dating. Material remaining from the oxidation was further subjected to light stable isotope analysis. We report here on the comparison of the results from the Linear and Block Color style mantles with those of the inner textiles with similar coloration and iconography.

Armstrong, Ava [155] see Powis, Terry

Armstrong, Felipe [205] see Mansilla, Luis Felipe

Armstrong-Ingram, Angela (Far Western Anthropological Research Group), and Eric Wohlgemuth (Far Western Anthropological Research Group)

[268] *Charred Plant Remains from CA-SCL-1070/H*

Charred plant remains from Early Holocene SCL-1070/H bear striking resemblance to six Late Holocene plant assemblages from Santa Clara Valley. Similarities include use of multiple nut crops (including acorns, the most common), 14 genera of small seeds dominated by *Chenopodium*, manzanita berries, and nonfood plants bedstraw and wild cucumber. These suggest continuity in plant use in Santa Clara Valley throughout the Holocene. The well-rounded, multi-season plant assemblage contrasts with the few Early Holocene sites in the San Francisco Bay Area, and in the larger central California region that appear to represent more single-season occupations focused on particular taxa. This suggests use of SCL-1070/H for more extended seasons and over many centuries or millennia, consistent with the 41 burials exhumed there.

Arnauld, M. Charlotte (CNRS)**[168]** *Rhythm and Blues*

It is time to celebrate Dr. Rosemary Joyce on her retirement from teaching, and if necessary to encourage her continuing engagement in research. We are indebted to her consistent formulation of relationships linking human practices and materiality beyond conventional categories (object/subject, nature, gender, sex ...). More specifically, I address her work on social houses (*Beyond Kinship: Social and Material Reproduction in House Societies*, 2000, with S. Gillespie), on archaeological stratigraphy ("Archaeological Assemblages and Practices of Deposition," 2010, with J. Pollard), and on materiality of ritual time (*Materializing Ritual Practices*, 2020, with L. Johnson). For more than 10 years now, Dr. Joyce has markedly stimulated our transdisciplinary, "transatlantic," RITMO research group, and clearly much of the outcome depends on her ability to explore innovating approaches on issues of Mesoamerican temporality and social construction through repetition/innovation.

Arnold, Philip, and Nathan Wilson**[312]** *Early and Middle Formative Occupation in the Sierra de los Tuxtlas, Veracruz: An Overview*

The Sierra de los Tuxtlas, Veracruz contains a documented record of human occupation that rivals any region along Mexico's southern Gulf lowlands. Microbotanical evidence for domesticated corn dates to ca. 3000 cal BC, while macrobotanical evidence for corn horticulture dates to ca. 1500 cal BC. Artifactual evidence for human occupation similarly extends from the sixteenth century BC forward. Nonetheless, this cultural presence has been largely overlooked, and on occasion minimized, in favor of the more sculpture-laden occupations elsewhere throughout southern Veracruz and western Tabasco. In this paper we review the archaeological evidence for Early and Middle Formative (ca. 1600–400 cal BC) settlement within the Tuxtlas region. Despite a dearth of sculpted artwork, artifactual data show clear connections with, as well as departures from, the better-known Olmec expressions to the southeast, such as San Lorenzo and La Venta. Using data from independently dated contexts, we combine information from settlement patterns, artifact assemblages, and archaeofaunal/archaeofloral collections to review and discuss the Tuxtlas occupation during this important developmental period in Mesoamerican prehistory.

Arnzen, Jacob [229] see Surovell, Todd

Arthur, John [200] see Malerba, Amanda

Arthur, Kathryn [200] see Malerba, Amanda

Ascencio Falla, Jefrin [267] see Espinosa, Alicia

Ascencio Falla, Jefrin [224] see Figueroa Beltran, Carlos

Asher, Brendon (Eastern New Mexico University)**[348]** *Folsom at the Plains/Woodland Interface in Eastern Kansas and Nebraska*

Distributions of Folsom artifacts across Kansas and Nebraska are not even and unique patterns in lithic material selection and use are found in the eastern third of this region. This paper focuses on Folsom evidence from eastern Nebraska and Kansas and offers suggestions as to prehistoric land use and hunting patterns in this area that appear distinctive from the western portion of these states. Alternative explanations for observed patterning including artifact recognition and collection bias are also explored.

Aspengren, Signe (University of California, Santa Barbara), Emil Podrug (Šibenik City Museum), and Sarah McClure (University of California, Santa Barbara)**[279]** *Bone Fat Processing at Badanj – Grcići: Faunal Research into Subsistence in the Eastern Adriatic*

This research aims to better understand food processing and subsistence in the Eastern Adriatic by identifying animal bone fat exploitation through fracture patterns. The Croatian site of Badanj – Grcići, dating to the Early Copper Age (3500 BCE), has a highly fragmentary faunal assemblage that suggests people extracted calorically rich bone fats. The two main types of bone fats, marrow and grease, require different amounts of energy and resource investment to obtain. Marrow can easily be accessed through several blows

to a long bone diaphysis, whereas grease rendering requires extensive comminution of cancellous bone prior to boiling. Trade-offs between calorie maximization and labor minimization may occur depending on resource availability. As a result, the extent to which certain bones have been processed can be used as a proxy for subsistence stress. Breakage patterns at Badanj are used to identify patterns of fat exploitation and indicate greater marrow processing than grease rendering. This may be due to increased utilization of fats from secondary products such as milk or cheese, resulting in less reliance on tedious grease resources. This research allows for the interpretation of a fragmented faunal assemblage and provides greater insight into foodways and animal economies of the eastern Adriatic.

Aspengren, Signe [305] see Hausdorf, Cassie

Atherton, Heather (Environmental Science Associates), Mai Hopstone (Environmental Science Associates), Paul Zimmer (Environmental Science Associates), Andy Ramirez (Environmental Science Associates), and Amy MacKinnon (California High-Speed Rail Authority)

[334] *Exploring the Archaeology of Downtown Fresno, ca. 1880–1950*

Construction of the high-speed rail project has resulted in widespread ground disturbance in downtown Fresno, unearthing a range of historical period features that reflect this railroad town's history. The Central Pacific Railroad established the Fresno Station in 1872 with the intention of developing the surrounding area into a town and agricultural center. Incorporated as a city in 1885, agricultural innovations and the fertility of region spurred the growth of Fresno and drew successive waves of immigrants to the area with the hope of prosperity. Areas southwest of the tracks were settled by immigrant Chinese, Japanese, Italian, Greek, German Russian (or Volga German), Armenian, and African American populations beginning in the late nineteenth century and continuing through World War II. This paper explores the archaeological remains unearthed by the project, focusing on the railroad corridor in downtown Fresno as well as the German-, China-, and Armenian towns that surrounded it.

Atherton, Heather [334] see Carwin, Eleni

Atherton, Heather [334] see Harvey, Amanda

Atherton, Heather [334] see Newcomb, Alyssa

Atogu, Michael (University of South Florida), Robert Tykot (University of South Florida), Sibel Kusimba (University of South Florida), and Chapurukha Kusimba (University of South Florida)

[81] *pXRF Analysis of Ceramics from Chemai Rockshelter in Bungoma County, Kenya*

East Africa experienced significant cultural, technological, and subsistence transformations over the last two millennia. These changes were characterized by increased sedentism, migration, adoption of agropastoralism, and new subsistence strategies and food-getting habits. What factors precipitated these transformations? To investigate this, we conducted pXRF analyses of ceramics from Chemai I, a Pastoral Neolithic site in the Mount Elgon region, Western Kenya. In this poster, we present the results of the elemental composition as a proxy to understand the provenance of the ceramic materials. How does this provenance relate to the subsistence, food-getting, and preparation strategies employed by the inhabitants of Chemai? What relationships can we discern from the materials they consumed over time? Did they create their own pots or acquire them from other regions? Is there a strong correlation between increasing sedentism and the adoption of agricultural practices, particularly concerning the settlement of early food-producing and iron-using societies, as observed in lithic, ceramic assemblages, faunal and floral remains? Results from this study contribute to broader debates on the socioeconomic shifts in Iron Age societies through the lens of material culture and science.

Atudorei, Viorel [221] see Ray, Erin

Aubey, Madison (UCLA)

[103] *Constructing Connections: Africatown, Alabama, and Reracination*

Connections to West African identity, whether physical or ephemeral, are central to Africatown Alabama's communal identity. Founded by the captives of the last slave ship to reach US shores, Africatown residents

are constantly reaffirming connections to their West African heritage, particularly with a focus on the modern-day Republic of Benin, given that it was the launch point of the ship. These connections are reflected in clothing, architecture, curricula etc. What is less evident however, is whether or not these present-day connections have been a constant in the history of Africatown, or are a newly established practice spurred by the revitalization of Africatown's story. By looking at the archaeological record of Africatown households, particularly in comparison to analog communities in the hinterlands of Dahomey. We can begin to uncover what aesthetic tastes and sensibilities were carried over, sustaining through the Middle Passage, and which sensibilities are newly constructed material tastes, aimed to combat the deracination of their ancestors.

Auerbach, Claire (University of Georgia)

[184] *Animal Remains in NAGPRA: Perspectives of Museum and Tribal Nation Representatives from a 2025 Survey*

This poster presents findings from a 2025 survey of federally funded museum staff and Tribal Nation representatives on the treatment of nonhuman animal remains under the Native American Graves Protection and Repatriation Act (NAGPRA). While NAGPRA applies to Ancestors and cultural items, ambiguity remains regarding the treatment of animal remains recovered in special and unique archaeological contexts. To explore current practices and perspectives, a questionnaire was distributed through professional networks and via national and regional NAGPRA meetings. Sixty-four participants completed the survey. Responses indicate that institutions most consistently address animal remains in association with Ancestors or ritual contexts, while their treatment in other contexts remains uneven and uncertain. Respondents emphasized the importance of consultation in determining significance, while also noting barriers such as legacy collections, limited expertise, unclear policies, and insufficient funding. These findings underscore the need for clearer guidance and stronger partnerships to ensure the respectful treatment of animal remains in NAGPRA processes.

Auerbach, Claire [184] see Conger, Megan

Augustine, Jonah

[173] *Polychrome Ceramic Paste Recipes at Tiwanaku during the Early Middle Horizon (ca. AD 500–850): A Comparison of Petrographic and Neutron Activation Analysis Data*

This paper presents the results of an analysis of paste recipes used in the production of red-slipped, polychrome ceramics at the site of Tiwanaku, in western Bolivia, during the early Middle Horizon (ca. AD 500–850). Previous research (Alconini 1990; Augustine 2019) demonstrates that there were distinct “genres” of Tiwanaku style ceramics produced within the Tiwanaku Valley at this time. These genres are distinguishable based on their formal and iconographic characteristics. Furthermore, these ceramic genres were consumed in distinct social spaces, tied to the distinct political and affective relationships the assemblages mediated. I hypothesize that the forms of aesthetic power that Tiwanaku style ceramics manifested were grounded in the various ways they were produced, from elite crafting to mass production. To evaluate this hypothesis, I investigate the question: did distinct groups of potters, working at different scales of production, produce the different genres of Tiwanaku ceramics? To answer this question, I use a combination of petrography and neutron activation analysis in order to identify paste recipes and in turn identify distinct zones/communities of production at Tiwanaku.

Auld-Thomas, Luke [53] see Dedrick, Maia

Austin, Henry [79] see Sakai, Sachiko

Auzina, Dita (Leiden University)

[308] *Anchoring in the Unstable: Monumentality and Networks of Dependency in the Kukra Hill Region, Caribbean Nicaragua (Eighth Century BCE–Fifteenth Century CE)*

The Caribbean coast of Nicaragua has long been viewed as peripheral to major cultural spheres, yet recent research challenges this perception. Drawing on new archaeological and environmental data from the Kukra Hill region, this paper examines monumentality and long-term settlement dynamics through the lens of human and other-than-human dependencies. Using frameworks from environmental humanities and network theory, the study argues that Kukra Hill societies demonstrated resilience over two millennia by continuously

renegotiating networks of dependency in response to climatic variability—such as shifts between hurricane-active and calm periods, prolonged droughts, and irregular seasonality—as well as changing sociopolitical dynamics. Interregional ties gradually shifted from connections with western Nicaragua and Honduras (fourth–ninth centuries) to more Caribbean-oriented networks after the eleventh century. Five broad phases of ecological and social reconfiguration reveal micro-adaptations that sustained cultural continuity without abrupt transformations. Central to these strategies was the monumental site of El Cascal de Flor de Pino, occupied almost continuously from the eighth century BCE to the fifteenth century CE. Located in a resource-poor yet environmentally stable zone, it acted as an intergenerational anchor, reinforcing communal return and cohesion. This research reframes monumentality as a socially integrative and environmentally adaptive strategy, challenging assumptions of regional marginality.

Ávila, Claudia (Escuela Nacional de Antropología e Historia), and José Luis Punzo Díaz (Instituto Nacional de Antropología e Historia)

[88] *Into the Lion's Cave: First Approaches to Archaic Adaptations in Michoacán's Tierra Caliente*

The Archaic period in Western Mexico, particularly in Michoacán, has been scarcely studied by archaeologists; of the few existing data, the most notable are those recovered from caves scattered throughout the state. This presentation will focus on the results obtained at one of these caves: the site known as “Las Cuevas del León,” located at the entrance of Michoacán's Tierra Caliente, derived from preventive and rescue work during a highway expansion. In one of them, a huge amount of lithic material was found (including a large collection of projectile points from the Archaic period), as well as animal and human remains. *****This presentation may include images of human remains.**

Awe, Jaime [326] see Densel, Allison

Awe, Jaime [36] see Ellis, Olivia

Awe, Jaime [114] see Glover, Catherine

Awe, Jaime [263] see Hoggarth, Julie

Awe, Jaime [277] see Jensen, Matthew

Awe, Jaime [115] see Miller, Jake

Ayedoun, Affolabi Angelo (University of California, Santa Cruz)

[103] *Underwater Archaeology in the Republic of Benin: Revisiting the History of the Transatlantic Slave Trade*

The Republic of Benin holds a rich maritime history, profoundly shaped by the transatlantic slave trade, which left lasting imprints on societies from the coastal regions to the hinterland. While historical sources provide extensive accounts of this period, four decades of archaeological research have further illuminated the social and cultural transformations it engendered in West Africa. Over the past decade, growing attention has focused on submerged sites to investigate the material traces of the transatlantic trade. This session examines archaeological evidence in dialogue with archival sources and oral traditions to reconstruct key dimensions of the slave trade through artifacts preserved underwater. The paper offers an overview of current research on the underwater cultural heritage of southern Benin, highlighting its contribution to a renewed understanding of the transatlantic slave trade and its enduring legacies.

Ayers-Rigsby, Sara (Florida Public Archaeology Network), Natalie De La Torre Salas (Florida Public Archaeology Network), and Malachi Fenn (Florida Public Archaeology Network)

[323] *Slow Science and Fast Storms: A View from South Florida*

In this paper we provide a broad overview of the current state of resiliency efforts in Florida at the federal, state, and local level, and how interdisciplinary collaboration is key to evaluating and documenting site conditions after hurricanes and other disaster events. In the immediate aftermath of storms like Hurricane Ian, Hurricane Milton, Hurricane Helene, how can archaeologists work with biologists to assess site conditions? For long-term resiliency efforts in the 10 years after a storm, how can archaeologists work with others to implement new systems for the future and to work to stabilize resources?

Aylward, Charly [124] see Kaspura, Molly

Azevedo, Terry (State of California), Jana Nason (Esselen Tribe of Monterey County), and Adrian Whitaker (Far Western Anthropological Research Group)

[167] *Collaborative Partnerships in California Archaeology to Address Coastal Erosion in a Time of Climate Change*

Climate change in California is evident in increased fire frequency and severity, extreme precipitation events, and increased coastal erosion. This is accentuated by recent human modifications to the landscape. Nowhere is this more evident than the rugged Big Sur coastline of California. Rising sea levels erode the coastline from one direction while burned and denuded slopes slide into the ocean from the other. These events threaten and destroy archaeological resources that contain evidence of thousands of years of sophisticated human use of the coast and provide valuable data relevant to modern restoration and management. We summarize the findings of emergency data recovery at four sites excavated within the context of California Department of Transportation (Caltrans) road repair projects. These projects were carried out through a partnership between the Esselen Tribe of Monterey County, Caltrans, and Far Western Anthropological Research Group. Study findings have advanced our understanding of Central Coast archaeology, but equally important, these projects have provided a real-world classroom for Esselen Tribal citizens to learn archaeological techniques and dictate the direction of archaeological research, serving as a model for tribally driven and collaborative archaeology of the future as we face ongoing destruction of coastal sites.

Babalola, Abidemi (British Museum)

[162] *"Endangered but Significant": Ethnographic and Ethnohistorical Perspectives on the Making and Meaning of Glass Beads in Ile-Ife, Nigeria*

Glass beads have a long history in Ile-Ife, dating back to the classical era (eleventh century AD), with strong archaeological evidence supporting their local production from indigenous glass. Over time, the technology of glass making and early bead manufacturing was discontinued, and new techniques of bead production were adopted. The decline of glass bead making in Ile-Ife prompted Eluyemi to conduct documentation in the 1970s and early 1980s. However, while his work offered valuable ethnographic insights, it did little to establish a clear link between the archaeological past and the ethnographic present, leaving the broader story of the evolution of glass bead making incomplete. Building on my extensive archaeological research, this study engages with the descendants of glass bead makers in Ile-Ife to examine the changing techniques of production across time. Drawing on oral history and ethnographic encounters, it provides deeper insight into the making, remaking, and meaning of glass beads, with significant implications for understanding the archaeology of glass beads in early West African empires.

Babot, Pilar [30] see Comeca Ramirez, Gianina

Bacha, Henry (University of Chicago)

[211] *Toward a GIS and Remote Sensing Approach to Camelid Movement in the Andean Late Horizon*

Despite the historically and archaeologically documented significance of llama caravanning to Inka statecraft, political economy, and social life, scholars have seldom extended geospatial and remote sensing methodologies to the phenomenon of camelid movement along the Inka road network (Qhapaq Ñan). Foregrounding the role of nonhuman animals (in this case, caravan llamas) in facilitating mobility, sociopolitical integration, and economic exchange across the vast territories of Tawantinsuyu, this paper will assess the ecological and behavioral dynamics, affordances, and limitations of llama caravanning along archaeologically documented segments of the Qhapaq Ñan in the central and southern Andean sierra. In so doing, the paper discusses both the methodological possibilities and potential shortcomings of integrating data on camelid behavioral ecology and physiology into archaeological models of mobility (including those developed using cost-surface analyses, Circuitscape, and agent-based modeling approaches). By recentering camelids in the study of Andean archaeological landscapes, this paper also engages recent theoretical turns in anthropology (e.g., Ingold 1988; Haraway 2007; Govindrajana 2018), (zoo)archaeology (Chazin 2023; Boyd 2017), and Latin American history (Few and Tortorici 2013; Norton 2024), toward identifying nonhuman animals as agential and constitutive historical and social actors.

Backus, Ashley

[305] *Wari Imperial Heartland (ca. 600–1000 CE) in the South-Central Highlands of Peru: Stable Isotopes and Material Culture*

The Wari Empire's success in Middle Horizon Peru (ca. 600–1000 CE) is often attributed to irrigation, yet their crop management practices remain less understood. Prior research indicates camelid dung was used as fertilizer in the heartland, but whether this was standardized or crop-specific is unclear. To investigate, we conducted stable isotope analysis of archaeobotanicals—maize, quinoa, beans, etc.—from Huari, the imperial capital, and Quilcapampa, an outpost in the arid Arequipa *yunga*. Our sample set includes 26 maize, 16 beans, six *S. molle* peppercorns, six maize kernels, four maize parenchyma, two quinoa, one gourd, one tuber, and one maize cupule ($N = 63$), supporting maize's prominence in the highland diet. Samples were homogenized, 2 mg of powder was encapsulated in tin capsules, and they were analyzed via ThermoFisher Delta V Plus isotope ratio mass spectrometer. Preliminary results show distinct $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values between sites, possibly reflecting guano fertilizer imports or localized stress for *yunga* Quilcapampa. Complementary iconographic analysis of Wari vessels shows maize often paired with state emblems such as predatory birds and felines. Together, iconographic and isotopic lines of evidence corroborate that highly localized agricultural and political strategies were key to Wari success.

Bacon, James [178] see Gonzalez Esteban, Cristina

Bader, Alyssa, Lauren Hosek (University of Colorado Boulder), Roberto Goffredo (University of Foggia), and Darian Totten (McGill University)

[292] *Infant Mortuary Practices in Medieval Siponto, Italy*

Infant burials are severely underrepresented in the archaeological record, limiting our understanding of not only infant mortuary practices but also early life health and mortality. Here we report the discovery of infant burials at the medieval site of Siponto, Foggia, in southern Italy. During the 2024 and 2025 field seasons, a total of 15 infant burials were excavated. Three additional infants, whose burials were possibly disturbed and reburied in antiquity, were also recovered (total MNI = 18). The individuals were predominantly interred below house floors, along the inside walls of domestic spaces. The infant burials are an anomaly; no adult burials or remains have been encountered at the site. This paper presents the mortuary context of the infant burials at Siponto as well as preliminary skeletal analysis of a sample of the individuals. As several burials were found in consecutive floor levels, analyzing the within-room spatial relationships of individual burials and treatment of burials disturbed by domestic activity in antiquity provides insight into medieval Sipontians' mortuary practices and perceptions of infant loss. Additionally, preliminary paleopathological data suggest infection as possible cause of infant mortality at the site. Located on a lagoon, endemic malaria was likely present at Siponto. ***This presentation will include images of human remains.

Badillo, Alex (Indiana State University / Stantec), Jeffrey Wilson, Kate Randall (National Park Service), Ryan Peterson (Stantec), and Ellen Brady (Stantec)

[264] *Rapid, High-Accuracy Grave Marker Inventory and Assessment at Chalmette National Cemetery Using Geospatial Technologies*

To support the National Park Service's restoration efforts at Chalmette National Cemetery, our team conducted a comprehensive inventory and condition assessment of over 15,000 grave markers with unprecedented speed and precision. The project required accurate spatial and textual documentation to facilitate the in-kind replacement of deteriorated markers in compliance with Veterans Affairs National Cemetery Administration standards. Leveraging drone-based aerial mapping and a custom ArcGIS Survey123 form, we developed a streamlined workflow that enabled 10 field technicians to complete the work in just four weeks. Each grave marker was geolocated, photographed, and assessed for condition, style, iconography, and inscription accuracy. A user-friendly, interactive dashboard allowed real-time progress tracking and empowered NPS staff to filter and analyze the data without GIS expertise. This dashboard also laid the groundwork for future public engagement, as NPS plans to make the data accessible to cemetery visitors. Our approach not only saved significant time and resources—avoiding the need for survey-grade GPS equipment and extensive training—but also added long-term value by creating a scalable, replicable model for cemetery documentation. The project exemplifies how innovative geospatial solutions can meet heritage

management needs efficiently and transparently.

Badillo, Alex [264] see Peterson, Ryan

Badillo, Alex [216] see Wilson, Jeremy

Badu-Tawiah, Abraham [45] see Kirgesner, Samantha

Baham, Eva [216] see Seidemann, Ryan

Baide, A. Ja'net [268] see Greenwald, Alexandra

Bailey, Alva (California State University Northridge), Kaitlin Brown (California State University Northridge), and Eleanor Fishburn (Spirit in the Wind)

[219] *Excavating Archaeological Narratives: Centering Indigenous Priorities in Oral Histories of Archaeologists*

California archaeology is at a transformative moment as practitioners increasingly turn inward to reevaluate their methods using more inclusive and community-centered approaches. This presentation explores how ethnography, oral history, and collaborative research are contributing to this shift. Drawing on partnerships with the Barbareño/Ventureño Band of Mission Indians, we highlight efforts to reshape regional histories in ways that reflect community priorities and create new spaces for retelling the past. These collaborations not only challenge Western-dominant narratives by centering Indigenous voices but also revisit and reinterpret the past through perspectives and questions important to the community. By using methods such as community-based participatory research (CBPR) within the context of archaeological ethnographies, the project we share illustrates ways through which California archaeology can evolve into a practice that is more responsive and relevant to the communities whose histories it seeks to understand.

Bailey, Christine [196] see Bailey, Lydia

Bailey, Lydia, Christine Bailey (University of Tennessee, Knoxville), Amanda Wissler (McMaster University), and Molly Zuckerman (Mississippi State University; National Museum of Natural History, Smithsonian Institution)

[196] *Mapping Stress, Nutrition, and Disease: Childhood Health and Economic Inequality in Twentieth-Century Cleveland*

Children's health outcomes are profoundly shaped by economics, food security, and residential environment. In the early twentieth century, Cleveland, Ohio, neighborhoods (i.e., Wards) were stratified by income and segregated de facto between racial groups. The Great Depression (1929–1939) exacerbated these inequities, resulting in resource deprivation for low socioeconomic status children. Comparing children in the Hamann-Todd Osteological Collection (HTOC) ($n = 71$) who died pre- and post-Great Depression, we examine how residence influenced chronic physiological stress, nutrition, cause of death (CoD), and nonconsensual anatomization. Paleopathological evidence for rickets, scurvy, and porous cranial lesions were recorded, and death certificates provided addresses and CoD. We plotted addresses onto historic maps with QGIS, then tested associations between residential clusters, co-occurring skeletal lesions, and infectious or respiratory CoDs. Results show 54% of children died in Wards 11 and 12 (East Cleveland), with a higher proportion during the Great Depression (Fisher's exact, $p = 0.033$). No differences in lesion co-occurrence or CoD exist between Wards 11 and 12 and all other Wards (chi-square, $p = 0.58$; $p = .082$; $p = 0.43$). These findings highlight the intersection of socioeconomic factors, place, and health in twentieth-century Cleveland, underscoring how childhood health outcomes are shaped by structural inequities.

Bailey, Lydia [298] see Ballinger, Madeline

Bair, Andrew (Harvard University)

[46] *A "Geophysics-First" Approach to Archaeological Inquiry: Results from the GRASP Project on Settlement in Medieval Western Ireland*

This paper presents findings from the Geophysical Ringfort Archaeological Survey Project (GRASP), which

developed and tested a geophysically centered methodology for constructing regional settlement chronologies while minimizing archaeological disturbance. Focusing on the medieval landscape around Ballintober, Co. Roscommon, Ireland, the project combined extensive geophysical mapping with targeted soil coring to investigate the chronology of ringfort occupation, one of Ireland's most numerous but imprecisely understood archaeological site types. Ringforts present particular challenges due to their morphology (simple earthen banks and ditches that offer little to no surface diagnostic features or artifacts), making traditional survey approaches inadequate for dating these ubiquitous sites. GRASP hopes to both address unanswered questions about medieval settlement in Ireland and present a methodological example for the holistic study of buried landscapes in global contexts.

Baitzel, Sarah (Washington University in St. Louis), and Deborah Blom (University of Vermont)

[60] *Bioarchaeology of the Middle Horizon: Contributions, Challenges, and Promises*

Bioarchaeology has made quintessential contributions to the study of Middle Horizon societies in the ancient Andes. Middle Horizon case studies have been methodologically groundbreaking for the field of bioarchaeology broadly, as is the case for body modification, isotopic analysis, among other areas. Bioarchaeology has also been instrumental for understanding the social and biological dynamics of social complexity, inequality, and state expansion for Wari and Tiwanaku societies. Paleodiet, mobility, and biodistance analyses allow us to reevaluate archaeological models of trade, economy, and core-periphery relationships. At the same time, bioarchaeology has also become the dominant tool for reconstructing Middle Horizon personhood experienced through gender, age, and ethnicity. This presentation summarizes the state of affairs in Middle Horizon bioarchaeology, now in its fifth decade and fourth generation of scholarship. Here we compare bioarchaeological research centered on the Tiwanaku and Wari cultures and their spheres of influence. We highlight contributions and areas of strength that serve as models for case studies elsewhere and at other times in the Andes. We also consider challenges facing the field and highlight areas for growth and innovation, where bioarchaeological approaches are particularly well-positioned to provide critical insights into outstanding questions in Middle Horizon archaeology.

Baitzel, Sarah [304] see Shachar, Max

Baka, Abby (University of Utah), Adrian Bell (University of Utah), and Alexandra Greenwald (University of Utah)

[111] *An Evolutionary Ecological Model for Cultural Transmission and Technological Adaptation on the Colorado Plateau*

The understudied Pleistocene-Holocene Transition lithic record of the Colorado Plateau lies at the cultural and geographic interface of the Great Basin's Western Stemmed Tradition and the Great Plains and Rocky Mountains' lanceolate and fluted point tradition. To advance studies of cultural transmission, technological adaptation, and Colorado Plateau PHT archaeology, we present a formal evolutionary model that integrates behavioral ecology, cultural transmission theory, and evolutionary modeling to understand the interacting environmental and technological forces, as well as relative intensities of cultural influence from surrounding regions, that resulted in the Colorado Plateau's PHT lithic record. The model is based on George Price's (1970) equation for quantifying change in adaptive trait values between generations or populations. We include an additional variable, which we term *effective influence*, analogous to effective population, to explore relative cultural influence from surrounding regions on Colorado Plateau projectile point form. We focus this first iteration of the model on the attribute of projectile point thickness, which allows us to study the trade-offs of manufacturing success and hunting success in influencing point design. We apply the model to new and archival datasets and artifact collections. The model can be modified to accommodate different artifact classes, traits, or currencies of success.

Baker, Lilian (Vanderbilt University), Angelina Locker (Vanderbilt University), Aleska Alaica (University of British Columbia), Danna Aramburu Venegas, and Tiffany Tung (Vanderbilt University)

[83] *Animals, Maize, and Empire at Auquimarca: Isotopic Perspectives on Agropastoral Lifeways in the Wari Period (600–1000 CE) of Peru*

Camelids have long been recognized as being central to shaping Andean subsistence and social lifeways, yet their roles are often examined in isolation rather than in relation to other faunal species. In the central Peruvian highlands, this limits our understanding of broader human-animal interactions within agropastoral communities. To better understand these dynamics, we analyzed stable carbon and nitrogen isotopes ($\delta^{13}\text{C}$, $\delta^{15}\text{N}$) from camelids, guinea pigs, dogs, and deer recovered at the archaeological site of Auquimarca, in the Huancayo. By investigating the animal diets we can assess how humans interacted with them as part of the community and as integral to the political economy. Given archaeological evidence of Wari influence at Auquimarca, we further evaluated how imperial policies of the Wari Empire (600–1000 CE) may have influenced human-animal relationships. The isotopic results indicate substantial maize agriculture: the camelids, guinea pigs, and dogs have higher $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values than the deer, suggesting significant maize consumption and fertilized crop production. Overall, our findings highlight the intertwined dietary and social roles of domesticated animals in highland communities and underscore that those managed in this region were likely influenced by the maize agricultural priority of the Wari Empire.

Bakhshaliyev, Veli [314] see Lau, Hannah

Bakke, Townes [181] see Bielenberg, Henry

Bal-García, Hugo [272] see Mosquera Castro, Tania

Balanzategui, Daniela (University of Massachusetts, Boston)

[107] *Maroon Genealogies, Heritage, and Domestic Economies of Afro-Ecuadorian Women*

This manuscript analyzes the historical memories and politics of two eighteenth-century maroon women (*cimarronas*), Martina Carrillo and Sipriana Criván, under the context of slavery in the Northern Andean hacienda system of colonial Ecuador. A historical approach to Black women maroonage illustrates the complexity of their active role defying slavery toward demanding a dignified life for enslaved communities and achieving their human right to freedom. Approaches to the current situation of Afro-Ecuadorian women in this region, demonstrates the effect of colonial legacies in the form of socioeconomic and political inequality. The collective memory of Afro-Ecuadorian women, transmitted through oral tradition and daily actions, has generated strategies for land access and governance of the Afro-Ecuadorian Ancestral Territory of the Chota Valley. The revitalization of the eighteenth-century maroon women ancestors' projects historical memories to a sense of identity and spiritual empowerment as an act of healing the wound of Afro-Ecuadorian women. In this essay we recount and contextualize the history of maroon women, reflection on the historical documents, and how it is woven with daily political strategies and the generation of maroon knowledge

Balco, William (University of Wisconsin-Milwaukee), Katharine Napora (Florida Atlantic University), and Ryan Van Duzor (Pacific Crest Innovation Academy)

[157] *Carbonized Evidence of Xylophagous Insects from 9DW276 (Rice Farm): Contextualizing Paleoenvironment at a Middle Woodland Site in Georgia's Outer Piedmont*

Contextualizations of past environments seldom consider the role of invertebrates living alongside, and affecting, human settlements as few features preserve evidence of insects and very few archaeological projects consider archaeoentomological evidence. This paper presents the results of a study of large fragments of wood charcoal preserving insect galleries as well as insect remains from undisturbed features at 9DW276 (Rice Farm), a Middle Woodland occupation site in the outer Piedmont of north Georgia. Galleries formed by xylophagous insects, as well as insect parts, were preserved during wood carbonization. These galleries, insect remains, and wood charcoal, were identified to the lowest possible taxon. Results were coupled with microbotanical data from Rice Farm to better contextualize the Middle Woodland paleoenvironment at the site.

Balco, William [344] see Edwards, Richard

Balco, William [123] see Kirk, Scott

Balenquah, Lyle [335] see Renteria, Rebecca

Ball, Connor (UNR)**[347]** *Adaptation to Environmental Variation in the Pueblo World*

Holistic consideration of the cultural and environmental dimensions of subsistence strategies can produce more nuanced interpretations of past economies. A hallmark of Pueblo communities is the social and economic investment in maize agriculture. However, Pueblo oral history and ethnography also describe the importance of wild foods and animal procurement through hunting. In this paper, I systematically investigate subsistence adaptation to environmental variation across the Pueblo world with a focus on hunting. Legacy data, even without strict spatial or temporal controls, can contribute significantly to examining the rate at which artifacts accumulate in assemblages. I integrate legacy data to overall accumulations data of faunal remains and artifacts paired with paleoclimate reconstructions from PaleoCAR. The results indicate that instances of relatively high environmental productivity and relatively low human population density co-occur with increased rates of lagomorph and artiodactyl accumulation in the Puebloan world. This study demonstrates the value of accumulations and paleoclimate data for evaluating nuanced relationships between humans and broader ecosystems.

Ballester, Benjamin (Universidad de Tarapacá and Museo Chileno de Arte Precolombino)**[267]** *Maritime Technologies, Productive Intensification, and Exchange Networks in the Atacama Desert Coast in Northern Chile*

Although Michael Moseley's book *Maritime Foundations for Andean Civilization* refers mainly to the Central Andes, it also had a strong impact outside this area. This is the case of the Atacama Desert coast (northern Chile) due primarily to Llagostera's, Bittmann's, and others' research. In fact, collectives based on marine hunting, fishing, and gathering lived here from the first settlement until European contact and beyond, but unlike further north, they lacked monumental architecture, high population density, and political asymmetries. Nevertheless, their strong maritime orientation allowed these hunter-gatherers to achieve some social complexity marked by intensified production, sedentarism, surplus, and active participation in macro-regional exchange networks, thus achieving a leading position in the political economy of the Atacama. In this presentation, I discuss the role of fishing and marine hunting technologies in this process from a *longue durée* perspective, considering changes, innovations, and traditionalism over time. I hypothesize that some of these coastal technologies are a function of their relationships with inland groups, while others are a consequence of their own internal political and cultural dynamics. I discuss this proposal based on the principles outlined in Moseley's book, but with new background information and a perspective from the periphery of the Andes.

Ballinger, Madeline, Lydia Bailey, Alexis Cutshall (Mississippi State University), Anna Osterholtz, and Ivan Valent (City Museum of Koprivnica)**[298]** *A Biocultural Approach to Non-adult Health in Medieval Continental Croatia*

This study serves as an exploratory analysis of the non-adult individuals within a representative sample ($n = 3,783$) of commingled human remains excavated from the Church of St. George in Đurđevac-Sošice. Applying a feature-based methodology, we determined the minimum number of individuals present within the sample. We then separated the skeletal elements into discrete age categories, defined as infant/neonate (0–2 years), child (2–12 years), and adolescent (12–18 years). Using chi-square tests, we analyzed the distribution of pathological changes among each of these age categories, focusing on nutritional deficiencies and metabolic diseases that affect the health and growth of younger individuals. Specifically, we focused on porosity, new-bone formation, and bowing. Frequencies of porosity and new-bone formation differ significantly ($p = 0.011$), as do pathological observations across age categories ($p = 0.001$), likely driven by higher infant lesion rates. Overall, our results suggest a low frequency of skeletal pathology within this sample. Applying a biocultural lens to this context reveals mediating cultural factors that may have influenced the resilience and frailty of these individuals. This analysis has allowed for a better understanding of the biocultural factors impacting the health of the non-adults interred in the church at Đurđevac-Sošice. ***This presentation will include images of human remains.

Balme, Jane (University of Western Australia), Sue O'Connor (Australian National University), Brenda Garstone (Independent Researcher), and Angeline Bedford**[165]** *Trees as Material Culture: The Boab Example*

Almost all human societies have a history of using tree products. In this presentation we will discuss the use of the tree itself as material culture, particularly those trees that have been transformed by incising symbols and images into their bark. Standing above much of the surrounding vegetation, the boab trees of northwest Australia are of symbolic importance to First Nations groups in the region and are a source of shade, food, medicine, and fiber. Some are incised with geometric patterns, images of ancestral beings, animals and other markings. It is difficult to identify the age of these marks and the technology used to create them. Some images certainly predate European invasion, as the first Europeans in the area noted their presence. With the introduction of metal implements into the area, knives were used to incise the tree and that some images were painted in ochres and charcoal. We can speculate that sharp stone tools may have been used to mark on trees. Enduring oral traditions recount the significance of the trees with figures that represent, for example, ancestral beings that created the country. Such markings transform the tree, incorporating it into the material culture of that society.

Bandama, Foreman (Field Museum of Natural History), and Chiamaka Chukwuma (University of Illinois, Chicago)

[162] *Finding and Dating Isamu Pati, an Iron Age Site in Southwestern Zambia: The Growing Role of Glass Beads Chemistry in Southern Africa*

The oxymoronic view of tiny glass beads holding high value is not new but recent advances in glass beads chemistry have solidified the role of this proxy data in the culture-history of southern Africa. Local Africans were prepared to part away with their ivory and gold in exchange for Eurasians glass beads. Archaeologists now use glass beads typology and chemistry to index time- and region-specific scales at sites in southern Africa. For Isamu Pati, an Iron Age site in Zambia, glass beads chemistry has the potential to assist in relocating and redating the site. The site was first excavated and dated in the 1970s to the tenth–eleventh century CE, but without known geographic coordinates, it's not easy to locate it. Older ^{14}C dates from this site have large error margins and leave a four-centuries gap when compared with recent (2024) dates from a site that fits the locality. To plug this gap and reconcile the conflicting ^{14}C date results, we analyzed 13 (the total recovered) glass beads from the 2024 excavation. The analyses were done through the Field Museum's Elemental Analyses Facility, which has produced comparative data that locate our results within the regional context.

Bandama, Foreman [162] see Mtetwa, Ezekia

Banister, Craig [318] see Hauser, Neil

Banks, Kimball [104] see Snortland, J. Signe

Banowsky, Anna (University of California, Santa Barbara)

[284] *Herod between Rome and Judaea: Analyzing the Political Role of Client Kings in the Roman Empire*

As a client king, Herod the Great was tasked with keeping the peace between his people and the Roman Empire; this role included partaking in vast building projects from aqueducts to palaces and temples, leaving behind a complex archaeological legacy. Much scholarship has been devoted to the role of Herod as a client king of Rome, but relatively little attention has been drawn to the political implications of the role of client king, particularly as it relates to political identity. In this presentation, I look at Herod as a case study for Roman client kings and client kingdoms, applying theory from political science and sociology to understand the ways in which archaeology can help us understand the sociopolitical underpinnings of Roman society on the margins of empire.

Bar-Yosef, Daniella (Tel Aviv University)

[326] *Cardiidae Shells, Disk Beads, and Symbolism during Neolithic Expansion*

Cardiidae shells were of interest to human societies from the Middle Paleolithic onward. In the Levant they became raw material for disk beads during the Late Epipaleolithic / Early Neolithic. Their production process resembles that of ostrich eggshell beads known from East Africa much earlier, and entails shell breakage followed by perforation and filing. Simultaneously disk beads were executed on various stones and minerals.

The production of Cardiid disk beads spread along with agricultural practices from Southwest Asia eastward and westward, arriving in western Europe at the end of the seventh millennium BP. While Cardiid disk production stopped in the Levant shortly after it began, the interest in Cardiid valves continued. Specifically, their placement in graves suggests these shells may have had a symbolic meaning, possibly representing the sun as a source of life, as was proposed by Biggs in the 1960s.

Barajas Castro, Anuar, Víctor Uc Cetina (UADY), and Andrea Cucina (UADY)

[111] *Bridging Bioarchaeology and Data Science: Machine Learning on Dental Morphology from Colonial Campeche*

The colonial cemetery of Campeche, Mexico, is a multiethnic mortuary deposit that has been extensively studied through macroscopic osteological analysis, traditional dental morphology, strontium isotope studies, and ancient DNA. Recognizing the need to complement—or provide an alternative to—these costly and labor-intensive approaches, our study introduces an innovative computational framework grounded in machine learning for the analysis of dental morphology. Unlike conventional statistical methods, our approach employs dimensionality reduction and clustering algorithms to address the inherent complexity of biocultural processes. This allows us to detect latent structures in morphological data and to identify subtle, multidimensional patterns of biological affinity among prehispanic and colonial populations that might otherwise remain overlooked. Preliminary findings from Campeche confirm the expected biological heterogeneity and reveal notable biological distances when compared to coastal populations from northern Yucatán and the Petén. By integrating data science, archaeological theory, and computational techniques, this project advances what we define as “computational archaeology.” This emerging paradigm enhances interpretative potential, provides an efficient and accessible alternative to traditional bioarchaeological methods, and deepens our understanding of population trajectories and biocultural interactions across the Maya region.

Barba, Luis [164] see Butrón, Agustín

Barba, Luis [164] see Pecci, Alessandra

Barbanell, Rebecca (Arizona State University)

[111] *From Qualitative Reports to Quantitative Insights: Transforming DPAA Legacy Data for Mission Optimization*

The Defense POW/MIA Accounting Agency (DPAA) maintains historical mission reports that contain information related to operational planning, but this knowledge remains largely inaccessible due to manual processing and data curation challenges. To address this, ASU's Center for Digital Antiquity (CDA) partnered with DPAA to develop a novel method for quantitatively analyzing legacy data. We analyzed mission documents using natural language processing and physical data input to extract key quantitative data points (e.g., excavation volume, depth measurements, and mission duration). We then performed summary statistics and other machine-learning techniques to identify key operational factors that characterize successful missions. We also developed a unique corpus of standardized attribute tables that transforms this institutional knowledge into a scalable, accessible resource. This framework provides a clear method for implementing new measures for future excavations and enhancing mission planning by converting qualitative historical reports into actionable quantitative datasets for operational decision-making in finding missing personnel.

Barber, Lillian [195] see Wygal, Brian

Barber, Sarah [94] see Savateri, Sami

Barceló, Juan (Universitat Autònoma de Barcelona)

[160] *From Complicated Models to Complex Dynamics: The Computer Simulation of Prehistoric Social Worlds*

This paper examines the distinction between complicated social models and the meaningful representation of social complexity in computer-based simulations, with a focus on the emergence of agriculture in the Western Mediterranean. While complicated models often accumulate variables, parameters, and interactions, they frequently risk becoming opaque without necessarily capturing the underlying dynamics of social life. In contrast, modeling social complexity requires attention to nonlinearity, adaptive behavior, and emergent

patterns, emphasizing interpretability and theoretical grounding over sheer detail. By applying these principles to the transition to farming in the Western Mediterranean, we explore how shifts in subsistence strategies cannot be reduced to deterministic drivers but rather arose from contingent interactions among ecological constraints, cultural practices, and social institutions. The study highlights the use of probability graphs and Bayesian networks for the effective simulation of models with many different variables, and with nonlinear and non-monotonic relationships between them to faithfully represent past social transformations.

Bardolph-Carlsen, Dana (Northern Illinois University), Elvis Monzón, Patrick Mullins (Washington College), Sintia Santisteban, and Amedeo Sghinolfi

[163] *At the (Field) Edges of Empire: Insights into Agropastoral and Water Management Strategies on the Carabamba Plateau of Northern Highland Peru*

Located at the highland edge of coastal polities including the Moche, Virú, and Chimor, the Carabamba Plateau has a deep geopolitical history of highland-coastal interaction, migration, and colonization of resource-rich lower-elevation *chaupiyungas* (200–2000 m asl), entwined with diverse agropastoral and water management strategies in an ecologically constrained landscape. In this paper, we present our preliminary synthesis of survey and excavation data collected in the Carabamba Highlands during the 2024 and 2025 field seasons by the Proyecto Arqueológico de la Historia y Prehistoria de los Guacapongos y Llampas (PAguaL) team. Our drone and pedestrian survey revealed an ancient landscape of fortified and terraformed settlements, roads, corrals, and reservoir water management systems stretching from the Initial period (1800–900 BCE) all the way to the Late Horizon ca. 1450–1533 CE, when the Inca Empire expanded to control most of the Andean region. Our 2025 excavations at the fortified hilltop settlement of Cerro Sulcha expanded upon these findings, exposing a deep and likely continuous occupation for over three millennia. Through this case study, we open a window into agroecosystems at a unique ecological and sociopolitical margin and explore implications for sustainable agropastoralism and water management today.

Bardolph-Carlsen, Dana [30] see Bell, Emma

Bardolph-Carlsen, Dana [30] see DeeWaard, Abigail

Bardolph-Carlsen, Dana [177] see Dioneda, Justine

Bardolph-Carlsen, Dana [208] see Gutierrez, Angelina

Bardolph-Carlsen, Dana [247] see Moran, Alia

Bari, Dawn, Eric Guiry (Simon Fraser University), Stéphane Noël, Veronique Milette, and Paul Szpak (Trent University)

[282] *Reconstructing the Geographic Origins of Individuals Buried at Saint-Louis Cemetery (Québec) through Stable Isotope Analysis*

Stable isotope analysis offers an effective approach for identifying the geographic origins and life histories of individuals. Recent research has used carbon ($\delta^{13}\text{C}$) and nitrogen ($\delta^{15}\text{N}$) isotope data to assess dietary changes and stress in nineteenth-century Irish populations experiencing famine. The application of these isotopic analyses has primarily been applied to European skeletal material, excluding European individuals who migrated to Canada. The mid-nineteenth-century cholera epidemics in Québec caused a drastic increase in deaths leading cemeteries to bury locals alongside thousands of immigrants originating mostly from the British Isles. This research uses strontium ($^{87}\text{Sr}/^{86}\text{Sr}$) and sulfur ($\delta^{34}\text{S}$) isotope data to evaluate the probable geographic origins of a group of individuals, possibly Irish immigrants who died during the 1830s–1840s epidemics, buried at the Saint-Louis cemetery in Québec City. Using multiple bones from the same individual, with teeth for incremental $\delta^{34}\text{S}$ from dentine and $^{87}\text{Sr}/^{86}\text{Sr}$ from enamel, changes in place of residence can be identified using geospatial models that assign probabilities to different regions. This study enhances our understanding of the demographic of Irish and French-Canadian individuals while providing a framework for future studies that aim to use stable isotope analysis to make assessments of probable geographic origins in historic archaeological contexts.

Barker, Alex [52] see Childs, S. Terry

Barker, Alex [52] see Jones, Bradford

Barker, Alex [52] see Tomka, Marybeth

Barker, Kristin [111] see Burnett, Paul

Barkett, Theresa [150] see De Peña, Felicia

Barlow-Diemer, Aidan (HDR), and Tamara Holman (HDR)

[101] *Cultural Material of KEN-00215: Agate Stones and Mineral Pigment Processing within Archaeological and Ethnographic Contexts of the Sqilantnu District*

In 2023, during data recovery efforts for the Sterling Highway MP 45-60 project, HDR archaeologists and Kenaitze Indian Tribe Cultural Observers recovered evidence of possible mineral pigment processing at Feature M of site KEN-00215 of the Sqilantnu Archaeological District. The subsurface assemblage included agate stones ($n = 2$) found in association with a large grinding slab and worked pigments, flaked stones, and coarse sand. Radiocarbon dates completed thus far for KEN-00215 suggest a late prehistoric occupation with an overall date range of 1178–266 cal BP, and Feature M's is reported to be 554–501 cal BP. Thus, through these radiocarbon dates, ground stone analysis, and ethnographic historical research, this presentation explores prehistoric and possibly early historic practices of mineral pigment processing of the Dena'ina. By relating this site to ethnographic records, this study aims to expand on what we think we know of these cultural practices and apply it to our understanding of the late prehistoric and early historic cultural material of the Sqilantnu District.

Baron, Atlantis, and Meradeth Snow (University of Montana)

[282] *Digital Stature Estimation Using Radiographic Measurements of the Tibia*

This study evaluates the accuracy of stature estimation from tibial radiographs using digital measurement software compared to traditional regression formulas based on physical bone measurements. The hypothesis proposes that tibial lengths measured digitally can produce stature estimates with accuracy comparable to traditional osteometric methods. A sample of 59 tibiae from the Forensic Anthropology Skeletal Trauma (FAST) database was analyzed. Maximum tibial lengths were measured from radiographic images and applied to three regression models: the widely used formula by Trotter and Gleser, a recent model by Simon et al., and a new regression equation developed specifically for this dataset and digital method. To assess accuracy, the study calculated correlation coefficients, mean and median errors, and the standard error of estimation. A one-way ANOVA was conducted, followed by Tukey's post-hoc test to determine any statistically significant differences among the three formulas. The results revealed that there was no significant difference in accuracy between the three regression models. The new formula performed comparably to both the Trotter and Gleser and Simon et al. formulas. These findings support the hypothesis that digital measurements can serve as a reliable, and replicable alternative to traditional osteometric measurement methods when used for human stature estimation.

Baron, Joanne

[260] *Records of a Missing Maya Vase: The Case of U0186*

The academic journals published by the Society for American Archaeology, as well as several other archaeological journals, typically prohibit the first publication of material without archaeological provenience. The aim of this policy is to avoid inflating the commercial value of looted cultural patrimony, which might encourage additional looting. Yet circumstances have improved in recent years: museums, collectors, and the public are increasingly aware of the legal and ethical implications of buying and selling looted antiquities. Countries of origin are better equipped to bring repatriation claims and to care for objects that return to their custody. In this paper, I contend that in some cases, the publication of looted material that has not been previously published might in fact discourage commercial sale and facilitate repatriation. I present one such case: a Maya vase from Belize whose current location is unknown. Annotated photographs of the vessel now reside in the Image Collections and Fieldwork Archives at Dumbarton Oaks, allowing me to reconstruct its region of manufacture, date of removal, the first link in its provenance history, and even its likely sale price. Should the vessel ever reemerge, this information will assist in establishing a repatriation claim.

Barrat, Jean-Alix [93] see Sevin, Lucille

Barrera, Hector [33] see Muro Ynoñán, Luis

Barrientos, Tomas [173] see Sandoval Molina, Andrea

Barrientos, Tomas [327] see Yagi, Hiroaki

Bartelink, Eric (California State University, Chico), Lillian Antonelli (University of Nevada, Reno), Sadie Friend (Far Western Anthropological Research Group), Charlene Nijmeh (Muwekma Ohlone Tribe of the San Francisco Bay Area), and Alan Leventhal (Muwekma Ohlone Tribe of the San Francisco Bay Area)

[268] *Dietary Patterns at the Ancestral Heritage Site CA-SCL-1070/H: Regional and Temporal Perspectives on Ancient Diet in the San Francisco Bay Area*

Previous stable isotope research in the San Francisco Bay Area identified significant regional patterns in human paleodiet across the Middle to Late Holocene. In 2021, 41 burials were discovered at CA-SCL-1070/H (Mánni Húyyú Muwékma Yatiš Túnnešte), a Late Pleistocene / early Holocene ancestral Ohlone site, during monitoring and data recovery efforts for a construction project. All burials were excavated and made available for osteological and isotopic analyses with the support and collaboration of the Muwékma Ohlone Tribe. Collagen extracted from six of the burials met all sample quality indicators. However, bioapatite was extracted from all 41 individuals. Bone collagen stable carbon and nitrogen isotope data, in conjunction with carbon isotope data from bioapatite, reflect a diet dominated by C₃ plants and freshwater fish, with only small contributions from the meat of terrestrial animals. Given that the site spans a period marked by the early formation of the San Francisco Bay, human paleodiets at CA-SCL-1070/H indicate little emphasis on marine resources. Comparative data from Middle and Late Holocene sites indicate some continuity in dietary practices in the Santa Clara Valley through time, although sites along the more northern reaches of the estuary show a strong emphasis on marine resources, such as fish.

Bartelink, Eric [282] see Borrayo, Jazmin

Bartelink, Eric [268] see Canzonieri, Christopher

Bartelink, Eric [50] see Hill, Brittany

Bartelink, Eric [221] see Malarchik, Diana

Barton, Alison [327] see Moses, Victoria

Barton, C. Michael (Arizona State University)

[160] *Complexity Science and Archaeology*

Complexity science coalesced as a coherent field some four decades ago, and archaeologists played an important role in extending it from physical to social systems. Yet complexity science has had minimal impact on archaeological theory or practice, in spite of the fact that its underlying conceptual frameworks and the phenomena it studies are particularly relevant for archaeology. Archaeologists are concerned with the ways societies emerge from individual practices and interactions, how individuals self-organize to create social collectives, and how these individual practices are enabled and constrained through feedbacks from societal forms, how societies evolve through time and sometimes disintegrate or fragment. They study how social practices are mediated through an evolving body of shared information called culture and how societies adapt to changing natural and social environments—including ones their actions create. And they certainly recognize that these dynamic human systems are historically contingent. These and many other archaeological goals are concrete examples of the broader domain of phenomena on which complexity science focuses. I review some of these parallels in more detail and explore how our field might benefit from incorporating complexity science concepts into archaeological theory and practice.

Barton, C. Michael [85] see Abdolazadeh, Aylar

Barton, C. Michael [160] see Correa, Letícia

Barton, Christopher (Chronicle Heritage), and James Delle (Chronicle Heritage)

[283] *Interpreting the Challenging Landscapes of Emancipation: The Freedmans Park Project of the Maryland State Park System*

Enoch George Howard was born into slavery in 1814. He was held captive on Henry Griffith's estate in

Brookeville, Maryland. On March 1, 1851, Howard purchased his freedom from Sarah Griffith, daughter of Henry, and wife to Samuel R. Gaither. In 1853 Howard secured his wife Harriet's freedom from Samuel. The Howards toiled as tenant farmers and by 1860 were able to purchase their four children's freedom. In 1862 the Howards bought the Locust Villa house and the surrounding 289 acres for \$3,000. At the time of his passing, in 1895, Enoch had acquired nearly 500 acres on which the Howards created a vibrant community. In addition to dwellings and outbuildings the community included the Howard Chapel Church and the Unity African American Public School. In 2025 Chronicle Heritage prepared a Phase IA cultural resource study to support the development of the Freedman's State Historical Park Project. The project includes extensive archival research, public archaeology, and collaboration with descendants of the Howards. The goal of this poster presentation is to underscore the dynamic ways that cultural resource management archaeologists can adhere to local, state, and federal regulations while also providing services to historically marginalized communities.

Bartov, Gideon [209] see Zipkin, Andrew

Barvick, Kathleen (University of Arizona)

[166] *Communities of Practice of Salado Pottery Production in the American Southwest, 1275–1450 CE*
Salado Polychrome is a bold, distinctive pottery style that most strongly characterizes the Pueblo IV period in the US Southwest, becoming the most widespread decorated ceramic type of the fourteenth and fifteenth centuries. The development and adoption of Salado pottery coincides with a major migration out of northeastern Arizona that dramatically reorganized the southwestern social landscape. Many of the northern immigrants' diasporic and coalescent settlements across the central and southern Southwest show that they were creating and using this remarkably uniform new kind of pottery, but the dynamics of how these dispersed communities shared information and formed connections with each other to teach and adopt it remain obscure. I approach these long-standing topics of interest using the lens of communities of practice and a novel application of the shape analysis method Geometric Morphometrics (GMM). GMM allows me to precisely quantify subtle variations in the complex shapes of the ceramic vessels, using shape as a proxy for pottery construction methods. This allows me to identify production communities or their overlaps based on vessel shape similarities, and explore the dynamics of intercommunity interactions following a major migration event by determining how shapes differed—or stayed the same—across space and over time.

Basile, Mara [276] see Paya, Tomás

Bass, Angelyn, and Heather Hurst (Skidmore College)

[260] *Museums Are Where You Find Them: In Situ Artworks within the Future of Museum-Based Practice*
Among the outstanding material culture of the ancient Americas are immovable, in situ artworks including architecture, mural paintings, rock art, and monumental sculpture, which are physically bound to their natural, cultural, and social settings. They are, at once, place, landscape, and museum. On a practical level, curation of in situ artworks is akin to that of museum pieces—safeguarding objects and making them accessible for posterity, inspiration, and learning. At the ontological level, artworks that remain in their original landscape have authenticity that adds meaning to and deepens our understanding of material culture; that context is often lost in museum collections. The preservation of the Maya murals of San Bartolo, Guatemala, requires diligent condition reassessment, preventive conservation, and environmental monitoring typically associated with museum collections. In striving for best practices in public outreach, current dissemination of the murals explores new avenues of virtual content and are trajectories to broader engagement and co-creation with local and descendant communities. In our discussion, we pose questions for museum professionals regarding the innovative possibilities that arise if in situ artworks are remembered and reconsidered as “un-collected” pieces within the scope of museum curation.

Bassett, Hayden [347] see Gunter-Bassett, Madeleine

Bassi, Alexandre [43] see Vail, Gabrielle

Bastías, Fernando**[32]** *From Sea to Stone: Swordfish in the Prehispanic Coastal Landscape of Northern Chile*

Research on prehispanic contexts along the northern coast of Chile has grown steadily in order to understand the lifeways of hunter-gatherer-fisher populations. However, information on the capture of large pelagic fishes in Chile's Norte Grande remains limited. Several studies record the presence of *Xiphias gladius* (swordfish) in rock art (e.g., El Médano) and in archaeological contexts (e.g., Zapatero, Agua Dulce, Caleta Huelén-42). To contribute to this line of inquiry, this paper draws on recent results from the ANID-FONDECYT 1231444 project—specifically the rock art documentation at the Las Lizas site—and situates the motifs engraved there, especially those depicting swordfish, within a regional framework through a comparative review of published iconographic and ichthyological evidence. From this perspective, the aim is to deepen our understanding of the interconnections between coastal societies of northern Chile, the sea, and its resources, conceiving swordfish hunting as a practice of high technical complexity and social organization that involved specialized knowledge and material and symbolic ties between fishers, the sea, and their prey.

Bastola, Aadarsha [199] see Pawlowicz, Leszek

Batbayar, Tumurochir [226] see Ciolek-Torello, Richard

Bates, Jennifer**[247]** *The Complicated Relationship between Archaeobotanical Studies, Publishing, and Ethics*

Ethical oversight has been a matter of publishing (and research) practice since just after the Second World War. While there is no single moment when ethical oversight was fully established as it is an ongoing development, incremental implementation of guidelines in protecting the subjects of academic research as well as reporting conflicts of interest have been implemented and required in the publishing of results. In archaeology this is no different from any other field, and indeed has resulted in legal oversight in several subfields across the world. In archaeobotany, however, there seems to exist several gray areas specifically because of the nature of many of our subjects—plants. This has resulted in less than obvious needs to report ethical oversight, or the gaining of review board oversight before research is conducted. In this paper a systematic review of ethics reporting relating to archaeobotanical research in several major archaeological journals is presented, along with an exploration of areas we need to work on. Far from being an ethics-worry-free zone, archaeobotany needs to better engage with the principles of respect for participants, beneficence, and justice in both conducting studies and reporting them.

Batres, Kimberly**[99]** *Residue Analysis of Ceramic Vessels from Three E-Groups at the site of El Mirador, Guatemala*

The examination of plant remains in various archaeological contexts has provided insights into how past societies interacted with social and natural environments. The Maya lowlands are characterized by diverse ecological zones, ranging from lowland tropical forests to coastal plains. Understanding how the ancient Maya adapted to these environments has been a focus of paleoethnobotany as it offers insights not only to agricultural and dietary practices but also to socioeconomic and political dynamics. This paper presents preliminary data from the examination of ceramics excavated from three E-Group complexes at the site of El Mirador, in northern Petén, Guatemala. Starch and phytolith analysis, a method used to determine plant taxa on a microscopic level was used to analyze each vessel. The preliminary results gathered from this residue analysis will add to a larger archaeobotanical study focused on investigating how past foodways reflected sociocultural, economic, and political relationships within the site of El Mirador. Additionally, this research will support the development of a botanical and micro botanical reference collection to further contextualize plant use at the site.

Batt, Catherine [173] see Sandoval Molina, Andrea

Batun-Alpuche, Adolfo [87] see Clark, Dylan

Batun-Alpuche, Adolfo [53] see Dedrick, Maia

Batun-Alpuche, Adolfo [87] see Slocum, Diane

Bauer, Joshua [264] see Prendergast, Eric

Baustian, Kathryn (Skidmore College), Siobhan Hart (Skidmore College), Heather Hurst (Skidmore College), and Daniela Wolin (Skidmore College)

[48] *Creative Thought Matters in Archaeology at Skidmore College*

The motto “Creative Thought Matters” is embraced by all faculty and students at Skidmore College in upstate New York. This approach to liberal arts education promotes ingenuity in pedagogy that often means applied learning techniques. Within Skidmore’s Anthropology Department, archaeology is taught with the explicit intent of demonstrating the many ways in which cultural heritage can be studied and preserved. Our courses engage local history through on-campus excavations, artistic expression through documentation of artifacts and structures, and local cultural stakeholder values through public outreach projects and documentaries. The course activities are more than just assignments that lead to a final grade. Rather, they represent a pedagogical ethos of creative paths to learning about archaeological methods, interpretation, and ethics that shape students into well-rounded citizens and advocates for the protection of our shared past.

Bautista, Stefanie (University of Rochester), Willy Yopez Alvarez (PIAQ Quilcapampa), and Justin Jennings (Royal Ontario Museum)

[213] *Antimpampa: A Late Formative Period Monumental Center in Arequipa, Peru*

Antimpampa, located in Arequipa, Peru, is a prehispanic monumental center measuring ~40 ha and comprised of 13 platform-mounds and associated plazas, dwellings, and craft production areas with a relative absence of looting. Previous research reported surface scatters of ceramics that look similar to the Late Formative period Chavin pottery style known as Janabarriod. Additionally, other Central Andean material traditions have been found at Antimpampa, including Yaya-Mama/Pukara, and the Arequipa region’s painted slab tradition. This paper will present the results from our preliminary mapping and surface survey at Antimpampa. Our recent research suggests that Antimpampa was organized into architectural compounds composed of platform-mounds of various sizes that were interconnected by patios. Pottery analysis of the recovered diagnostic sherds revealed that ceramic styles from several geographic regions such as the Arequipa highlands, Lake Titicaca Basin, and Nazca Region were present, and that these pottery styles were associated with specific architectural compounds. This evidence suggests that Antimpampa was an important place where several religious and cultural traditions were brought into conversation together to form new local identities for the people living in this region.

Baxter, Ethan [314] see Meiggs, David

Bayle, Priscilla [337] see Holbrecht, Lucas

Bayles, Jenson (Edge of the Cedars)

[296] *Hand-Slab Scrapers in Southeast Utah: Their Distribution across Prehistoric Agricultural Fields and Use in Experimental Berm-Swale Construction*

High-resolution archaeological surveys near Blanding, Utah, have revealed a tool type not yet identified in the Northern Colorado Plateau. These sandstone slabs, unhafted and expediently fashioned, have previously been reported from parts of New Mexico, Arizona, and Southern Mexico in a variety of contexts, including canals, agricultural fields, and other earthen features. They have been interpreted as rudimentary hand tools used to scrape and mound sediments and are referred to as “stone hoes.” However, we propose a more fitting name, “hand-slab scrapers,” to avoid confusion with the more commonly known hafted stone hoe tool type. In southeast Utah, these hand-slab scrapers have been found among artificial berm-swale landscapes and along prehistoric Chaco roads, suggesting they have been utilized in the construction and maintenance of these features. This poster will provide a brief description of the San Juan version of these hand-slab scrapers, geospatial analysis regarding the distribution of these tools, report on our experiments using replica tools to create a small berm-swale feature, and estimate the person-hours required to construct the aforementioned features on the apparent scale. The results show that these hand-slab scrapers are commonly found near any prehistoric earthen feature and are efficient tools in creating berm-swale features.

Bazán, Augusto [267] see Contreras, Daniel

Bazarsky, Alexandra (University of California, San Diego), Charles Golden (Brandeis University), Andrew Scherer (Brown University), Grace Horseman, and Shanti Morell-Hart (Brown University)

[355] *A Maya Landscape Legacy: Analysis of Settlement Patterns of the Classic Period Maya in the Santo Domingo-Lacanja Valley*

This paper examines the intersection between settlement archaeology and remote sensing, illustrating how technological advancements can transform our understanding of ancient human-environment interactions. It focuses on key questions in settlement archaeology: how did ancient communities decide where to live, and what environmental or social factors influenced those choices? We use remote sensing methods to analyze the low Maya Classic period (250–900 AD) settlement density in the Santo Domingo-Lacanja Valley in the Upper Usumacinta River basin. By utilizing airborne lidar and satellite data, we examine settlement patterns between the kingdoms centered on the sites of La Mar and Lacanja Tzeltal. Employing a suite of GIS tools such as least-cost path and geomorphon landforms, we model environmental and spatial elements that affected ancient settlement patterns. Our findings reveal that both ecological and sociopolitical factors played critical roles in shaping settlement preferences, providing a clearer picture of Maya cultural landscapes. This research not only offers detailed insights into an under-examined region but also highlights the powerful role of remote sensing and GIS technology for archaeological studies. It establishes a strong framework for future research to explore the complex relationships between landscape, politics, and social organization in ancient societies.

Beach, Isabel (Boston University)

[47] *To Gather Is to Visit: Plants and Kinship in the Dena'ina World*

Among the Ancestral Dena'ina in south-central Alaska, archaeologists have ascribed plant foods little value, calorically or culturally. While medicinal plants are considered spiritually potent, the most common plant foods—namely, berries—tend to be thought of only as foodstuffs, and as marginal components of diet at that. Ethnographers have noted the mass collection and storage of berries, but this resource type is overshadowed by salmon harvests that overlap with peak berry yields. Considering Dena'ina plant taxonomy and traditional use, however, reveals that the designation of “berry” is much broader than the Western conception, encompassing edible pods from legumes and many underground storage organs. The staggered “ripening” of these different types of berries extends berry harvest season, foregrounding plants in the Dena'ina seasonal round. Dena'ina plant names often invoke animal species, and various underground berries are collected from animal caches, creating interspecies networks that fundamentally redefine what has been solely considered food harvest by archaeologists. Further, Dena'ina creation stories indicate that plants are kin, and these oral traditions thus encourage researchers to consider berry harvesting not only as resource procurement but also as visiting and maintaining relationships with nonhuman beings.

Beach, Timothy (University of Texas at Austin), and Sheryl Luzzadder-Beach (University of Texas at Austin)

[35] *“Mayasols” of the “Mayacene”: A Legacy of Nicholas Dunning*

Nicholas Dunning's career ascended from Karl Butzer's great tradition of geoarchaeology. Dunning's BA and MA were from the University of Chicago in geography and anthropology, including influences from Butzer's consilience of geoarchaeology from archaeology, history, geography, and geology. Dunning harnessed this rich background from Chicago as momentum through his geography PhD at Minnesota on Yucatán historical ecology, which resulted in his first book. Dunning's work from his PhD onward influenced many, including the authors, to integrate soils, sediments, and Maya historical ecologies, which weave through most of his work, now for half a century. Here we focus on paleosols and stratigraphy from our earliest to most recent work with Dunning, mostly with an ancient Maya focus (Mayacene) but elsewhere as well. Dunning was early in the work of Folk Taxonomies (Mayasols) from his dissertation to the present. This paper reflects on these influences through the meaning of soils and stratigraphy in Maya environmental history. We draw from these decades of collaborations on understanding Maya soil uses from our paper “Ancient Maya Terracing and Modern Conservation in the Petén Rain Forest of Guatemala” onward in cases from Mexico, Guatemala, Belize, and Türkiye.

Beach, Timothy [35] see Cook, Duncan
 Beach, Timothy [35] see Luzzadder-Beach, Sheryl
 Beach, Timothy [35] see Smith, Byron

Bean, Daniel [319] see Nyers, Alex

Beardall, Antonio (Texas State University)

[343] *Community Archaeology Belize: From Evolution to Inception*

The Community Archaeology Belize initiative has been in development for several years in Belize, resulting in the focus on young Belizeans participating in archaeological and academic research. Over the years, many young Belizeans have participated in this initiative, with the goal now being to understand how participating on an archaeological dig changes how they view themselves as stewards of Belize's archaeological past. This paper examines how this initiative came about, the current state of the project, including challenges and successes, and future directions for greater inclusion and enhanced evolution of the project.

Beardall, Antonio [114] see Glover, Catherine

Beardall, Antonio [169] see Oberdier, R. Obi

Beauchamp, Eleanor

[223] *Investigating Function in Maya Palace Ancillary Structures: A Case Study From Las Ruinas de Arenal*

In the archaeological record, understanding a structure's use-function is key in interpreting how societies organize themselves, reflecting divisions of people, power, and economy, and establishing boundaries between the public and private realms. This paper presents research on an ancillary palatial structure at Las Ruinas de Arenal, a Classic period [250 CE–700 CE] Maya Lowland center in Belize. Analysis of ceramic, lithic, and microartifact assemblages recovered from this structure helps to provide insights into its larger role within the palace complex. By utilizing ceramic modal and type-variety methodology, the data indicates a predominance of utilitarian storage vessels consistent with preparation and/or storage, while lithic materials showed a large percentage of cores consistent with some form of tool production and maintenance. These findings point to the function of the space as a locus of domestic activity associated with the connecting upper palace. By situating these results within broader spatial patterns observed at other Belize River Valley palaces, this paper intends to highlight how spatial differentiation reinforces elite and non-elite social distinction and contributes to the material expression of social order and authority in the Classic Maya world.

Beauvais, Pierre-Antoine, Mohamed Hamdam (University of Cairo), François Briois (EHESS, UMR 5608 TRACES), and Beatrix Midant-Reynes (CNRS, UMR 5608 TRACES)

[93] *Chert Acquisition and Production of Tools during the Third Millennium in Ancient Egypt: Insights from the Wadi Sannur Mining Complex (Northern Galala, Eastern Desert)*

Mining activities are central to understanding manufacturing technologies and production chains in ancient Egypt. Chert characterization from mining contexts offers essential insights into the selection and diversity of raw materials within these supply systems. During the third millennium BCE, the production of chert tools was organized through an industrial system centered on mining complexes and workshops along the desert margins, from which products—particularly bifacial knives and blades—were distributed to funerary and settlement contexts in the Nile Valley. Over the past decade, investigations at one of Egypt's largest mining complexes, Wadi Sannur in the Northern Galala (eastern Egypt), have revealed evidence of seasonally organized mining activities under royal control from the Early Dynastic to the Old Kingdom. Ongoing research integrating chert characterization, provenance analysis, and geological study of the surrounding environment provides new data on chert circulation and contributes to broader advances in raw-material studies in ancient Egypt.

Becerra, Gibrán [312] see Budar, Lourdes

Becker, Sara (University of California, Riverside), Noah Taylor (California Polytechnic State University, San Luis Obispo), Scott Hazelwood (California Polytechnic State University, San Luis Obispo), and Britta Berg-Johansen (California Polytechnic State University, San Luis Obispo)

[337] *Comparing Contemporary Traditional Indigenous Aymara Labor to Their Ancestral Tiwanaku (AD 500–1100) Skeletal Remains Using Motion Capture and OpenSim: An Experimental Bioarchaeology and Biomechanics Project*
The Tiwanaku (AD 500–1100) lived in the high, flat plains of the south-central Andes Mountains, as do their modern-day Indigenous Aymara descendants, who perform similar traditional, nonmechanized tasks (e.g., farming, *chuño* production, carrying goods, grinding grain, weaving, pottery production). This research uses the skeletal evidence of activity (i.e., osteoarthritis [OA] and enthesal changes [EC]) of over 1,200 Tiwanaku peoples along with computer-aided motion capture (mocap) of modern Aymara people performing traditional tasks to compare past and present labor. Ethnographic interviews with 21 individuals, along with 11 who were willing to be recorded using mocap (UCR IRB HS-18-113), were compared to the skeletal changes associated with OA and EC. Body movements were analyzed in the OpenSim software, which allowed for many of these tasks quantified to estimate which muscles were strongly and consistently activated for each task. The Upper Extremity Dynamic Model, which includes the shoulder, arms, and torso, was used to analyze and average muscle involvement and movement. These results were then compared to the previously collected OA and EC data, with different muscle groups showing grinding, *chuño* making, ceramics manufacture, and farming in this experimental archaeology, bioarchaeology, and biomechanics project.

Bedford, Angeline [165] see Balme, Jane

Beekman, Christopher (University of Colorado, Denver)

[317] *The Movement of Built Space: West Mexican Architectural Models and Dealer-Collector-Museum Networks*
Around 2,000 years ago, ceramic architectural models were made and used in communities in the West Mexican states of Jalisco, Nayarit, and Colima. Those that have survived into our era intact happen to be those that were ultimately deposited in protected environments such as tombs. Archaeologists neglected this region from the 1940s to the 1960s, during which the looting of tombs poured hundreds of the ceramic models onto the antiquities market and into the hands of dealers, collectors, and museums. The process and pathways by which the architectural models moved through the art market is therefore an important topic of research. Who were the key actors in this network? Did the models follow a unilineal pathway from looter to trafficker to dealer to collector to museum? How did the network grow over time? While each museum and individual has shaped the process in different ways, the large number of models allows for a more global analysis. This paper examines these ties through a network approach oriented toward the questions enumerated above. I identify several major networks associated with distinct regions, histories, and motivations.

Begay, Skylar [335] see Watts, Joshua

Beggen, Ian (University of Michigan)

[295] *Excavations at Hatun Machay: Documenting Mobile Forager Technological Adaptations at a High-Altitude Rockshelter in the North-Central Peruvian Andes*

The high-altitude puna of the Andes is a unique ecological region, historically considered “marginal” for human occupation on account of hypoxic conditions, intense solar radiation, difficult terrain, and relatively sparse resources (Aldenderfer 1998). Nonetheless, the region has yielded significant archaeological data that not only attest to a substantial human presence but also showcase remarkable human adaptability including surprisingly early occupation of high altitudes (Rademaker et al. 2014; Rademaker and Moore 2018). However, many of the models currently used to assess adaptive behaviors do not account for unique features of this region and how they would have exacerbated difficulties presented by fluctuating climatic conditions of the terminal Pleistocene and through the Holocene. To address this, the proposed work centers on excavations at Hatun Machay, a shelter located in the southern Callejón de Huaylas. This site presents a unique lens to understand human responses to dynamic environmental conditions, with ~12,000 years of occupation by humans from at least the Early Holocene into the present. This poster presents initial findings

from the 2024 and 2025 excavations of the site, linking material evidence to regional-scale environmental conditions during the Holocene.

Beggen, Ian [295] see Weinberger, Emma

Beier, Zachary [283] see Sain, Douglas

Beihl, Maddie [216] see Garcia-Putnam, Alex

Beisaw, April (Vassar College)

[170] *Bear Bones and Comparative Collections as Sites of Contemporary Zooarchaeology*

While working with a Neolithic collection from Austria, I encountered a bear mandible different from those in the comparative collection. This set into motion an assessment of bears held by several natural history museums. In general, complete skeletons were sourced from zoo bears. These tend to be old individuals with pathologies unique to captivity. Wild bears tend to be represented by skulls alone and these are often younger individuals, for which biological sex was rarely recorded. Bears are sexually dimorphic but significant size differences can also be correlated to subspecies or populations. As a result, bears in comparative collections have biological differences and collection biases that limit their usefulness for archaeological comparison. This beastly challenge may be tamable. If these comparative collections are considered sites in themselves, a systematic study of bears collected over the last 200 years can provide insights into how bear biology is shaped by captivity, predation, climate, and conservation. Understanding how relatively recent bears have changed over time and space can allow for deeper understandings of archaeological bear specimens.

Belardi, Juan [72] see Borrero, Luis

Belcher, Megan

[163] *Disrupted Landscapes, Persistent Seeds: The Case of Goosefoot (*Chenopodium berlandieri*) in Eastern North America*

Chenopodium species reflect millennia of interaction with human communities. Thriving in disturbed environments, they readily colonized landscapes as people moved, constructed, and settled in various environments around the world. This genus spans a spectrum: from the widespread, weedy Eurasian lambsquarter (*C. album*), often used as fodder or famine food, to quinoa (*C. quinoa*), a global “superfood” originating in the Andean highlands. Undeniably, chenopods are deeply tied to people and are nearly ubiquitous in archaeological sites worldwide. In eastern North America, goosefoot (*C. berlandieri*) was domesticated over 4,000 years ago as one of the region’s earliest seed crops. Its persistent occurrence in paleoethnobotanical assemblages has fueled decades of paleoethnobotanical research into its cultivation and significance. Archaeologists consider goosefoot as an “orphan” or “sleeping” crop since its domesticated form no longer exists post-colonization. This paper reviews goosefoot’s evolutionary history, its domestication, and unique traits, such as seed polymorphism and phenotypic plasticity, that complicate linear models of plant domestication. We present new findings from paleoethnobotanical analyses and carbonization and germination experiments using modern seeds. Finally, we consider how current plant science is leveraging goosefoot germplasm in quinoa breeding, with implications for expanding quinoa’s range under climate change and for broader agricultural research.

Bell, Adrian [111] see Baka, Abby

Bell, Emma (Northern Illinois University), Abigail DeeWaard, Dana Bardolph-Carlsen (Northern Illinois University), and Amanda Butler

[30] *Sowing Spirituality: Processing Paleoethnobotanical Samples from the Collins Site in East-Central Illinois*

This paper discusses the results of paleoethnobotanical analysis from the Collins Complex, a Late Woodland / Early Mississippian mound group dating from ca. AD 900 to 1200 in Vermillion County, Illinois. The goal of this study is to understand the roles plants played in the transition to Mississippian lifeways at Collins. Nuts,

weedy plants, native cultigens, and non-native cultigens were recovered from flotation samples at Collins. Their ethnobotanical uses are interpreted via a database developed for this project featuring native regional flora. As the Collins Complex has been interpreted as a missionary site associated with Cahokia, archaeobotanical data from the site can provide baseline evidence for the relationships between plants and the establishment and dissemination of Mississippian religious practices, particularly the wide-spread adoption of maize and the continuous use of native cultigens. These data can also be compared to other Late Woodland/Early Mississippian archaeobotanical datasets, including from domestic assemblages and other religious ceremonial centers from the American Bottom and the Illinois Valley.

Bello, Charles

[169] *Introduction to Symposium: Background History and Case Studies*

Introduction to the Symposium on Collaborative and Community Archaeology: Background, Thoughts, and Case Studies.

Bellomia, Valeria (Sapienza University of Rome), David Buti (CNR ISPC), Brenda Doherty, Francesca Sabatini, and Davide Domenici

[97] *Hybrid Threads: Uncovering Natural Dyes and Techniques in a Mesoamerican Feathered Textile from New Spain*

A colonial textile from Tlaxcala, Mexico (known as *tlahmachayatl*), housed at the Museo delle Civiltà in Rome is notable for its rarity and hybrid manufacturing techniques and aesthetic principles, which combine Indigenous and European elements. The textile comprises three dark purple panels stitched together, featuring ornamental motifs woven with a supplementary polychrome weft made of silk, wool, and cotton, intricately twisted with white down. This combination reflects a prehispanic tradition of fiber manipulation and natural dye use, reinterpreted within a colonial context. Through the support of the European Research Infrastructure for Heritage Science (E-RIHS.it), the object was examined in situ using the MOLAB mobile laboratory platform. A multimodal, noninvasive analytical strategy, integrating point-based (XRF, external reflection mid-FTIR, Raman, UV-Vis-NIR reflectance and fluorescence) with imaging techniques (visible and SWIR hyperspectral imaging), enabled the detailed mapping of materials and manufacturing processes. Micro-sampling allowed for advanced analyses, including surface-enhanced Raman spectroscopy (SERS), to further refine pigment and dye identification. Results revealed a sophisticated use of natural chromophores and provided comparative data linking this object to other prehispanic and early colonial textiles. These findings shed light on the versatility and creativity of colonial-era textile artisans and their strong aesthetic preference for natural dyes.

Bellorado, Benjamin (Arizona State Museum, University of Arizona), Jamie Merewether (Crow Canyon Archaeological Center), Lori Stephens Reed (National Park Service), Jonathan Dombrosky (Crow Canyon Archaeological Center), and Michelle Turner (Mystic Seaport Museum)

[166] *Reconnecting the Ancestral Pueblo World through Painted Pottery Design: Restyling Mancos Black-on-White Analysis Typologies across the Mesa Verde Region*

Black-on-white painted pottery is a hallmark of ancestral Pueblo culture in the Mesa Verde region and a cornerstone of archaeological research. For over a century, archaeologists have used varying combinations of technological and stylistic traits to define pottery types, leading to inconsistent interpretations of cultural connections across the northern Southwest. In Mesa Verde, early typologies emphasized technological attributes, while regions such as Chaco Canyon and northern Arizona focused more on painted designs. This methodological divide has contributed to interpretations of cultural boundaries that Pueblo descendants tell us never truly existed. To address this issue, a collaborative research initiative has restructured traditional Mesa Verde-centric typologies by integrating both technological and design-focused approaches. Our case study examines over 500 Mancos Black-on-white bowl-rim sherds from the Chaco-era Lakeview Community in southwestern Colorado, alongside a broader dataset from other Chacoan communities across the Mesa Verde region and beyond. We identified two dominant design styles—Dogoszhi and Sosi—commonly found throughout the northern Southwest between 1020 and 1120 CE, reflecting shared regional identities. Simultaneously, locally distinct styles at Lakeview reveal the persistence of community-specific signaling. This

approach offers a revised framework for understanding ancestral Pueblo connectivity—one that embraces both regional unity and local diversity.

Beloborodov, Nikita

[205] *Deity Impersonation on the Hieroglyphic Stairway at Sabana Piletas, Campeche, Mexico*

This paper revisits a ninth-century Maya inscription on the Hieroglyphic Stairway at Sabana Piletas, northeastern Campeche, Mexico, discovered in 2007–2008. The main emphasis is on its final section, which features three formulae of deity impersonation. The first two deities impersonated by the ruler are the Sun God and the Water Lily Serpent. Accompanying prepositional constructions associate them with warfare and lordship, respectively. The author argues that the previously suggested identification of the third divine figure was incorrect and proposes a new reading. The revisited interpretation is that the third impersonated deity is a particular aspect of Jun Ajaw, one of the so-called Hero Twins, and that the impersonation statement explicitly references the ceremonial ballgame. The tripartite impersonation passage therefore resonates remarkably with the stairway's general narrative focused on ballgame myths and war. Comparing this inscription with a Late Classic vase from Cuychen, Belize, and the murals of Xultun, Guatemala, the author considers the Sabana Piletas case as an equally important example of the instrumental role that impersonation played in conceptualizing major aspects of Classic Maya sacred rulership, among which the ballgame appeared to be as important as waging war or exercising lordship.

Beltran, Boris [35] see Griffin, Robert

Beltran, Kenya [124] see Mooney, Sean

Bender, Naya [124] see Blattner, Jessie

Benfer, Adam (Leiden University)

[308] *Decoding the Symbolism of Zoomorphic Effigy Metates from the Northern Zones of Southern Central America*

Prehispanic sculptors from southern Central America are renowned for having produced elaborately carved stone “ceremonial” metates, often featuring zoomorphic representations. Though termed metates due to their resemblance to corn-grinding platforms, the functions of these ornate tripod or tetrapod artifacts is less clear. Carved from volcanic stone, many display a single zoomorphic effigy head projecting from one edge of the grinding surface. Across Honduras, eastern El Salvador, and northern Nicaragua, the most common type post-AD 800 features an abstract reptilian effigy head extending from an otherwise unadorned grinding surface, supported by three angular legs. These stylized heads often include a long tongue curling upward to rest on the nose, forming a circular loop. Deciphering the meanings of these abstract zoomorphic forms may illuminate their roles among the polities that created and used them. This paper employs comparative semiotic and ontological analyses to interpret these objects within an Indigenous cosmology where humans and nonhumans interact.

Benfer, Adam [304] see Steinbrenner, Larry

Benites Segura, Jordi [123] see Choi, MinJoo

Bennett, Jeremy (Brigham Young University), James Hall (Brigham Young University), Scott Ure (Brigham Young University), and Richard Talbot

[299] *Mapping Mobility: Modeling Fremont Movement and Material Exchange*

To understand portions of the social landscape of the Fremont, our study reconstructs the pathways that once carried objects, ideas, and identity across the Intermountain West by mapping their exchange networks. Building on Joel Janetski's (2002) model of Fremont trade and the least-cost path analysis of Richens, Ure, and Talbot (2022), we developed a model of potential trade routes linking prominent Fremont village sites across the eastern Great Basin and the Colorado Plateau. Variables incorporated into the analysis include slope, proximity to water, locations of obsidian sources, and sites with large integrative structures. Using ArcGIS Pro, we generated least-cost paths estimating routes the Fremont may have traveled. Elevation and snowpack

data further allowed us to assess which routes were seasonally accessible, particularly in winter. Comparisons of these modeled routes reveal a significant divide between Fremont groups in the eastern Great Basin and those on the Colorado Plateau—a distinction also reflected in material culture. Analysis of obsidian source procurement and exchange among key sites reinforces the presence of regional variation within the broader Fremont identity. Our results highlight the value of GIS-based least-cost path analysis for understanding Fremont mobility, trade, and intergroup relationships.

Benning, Sydney (University of Illinois)

[182] *Dimensions of Access in Archaeological and Cultural Heritage Fields: A Modified Scoping Review*

Novel digital tools and information technologies provide new opportunities for disseminating and sharing cultural information with a wide range of stakeholders. As these tools continue to inundate the archaeological sciences and other cultural heritage fields, it is important to discuss issues of information access and data reuse within these disciplines to ensure the fair and equitable use of essential cultural information. Yet how these issues are defined and discussed vary across the different fields concerned with cultural data. To better understand the variable ways that archaeological and cultural heritage professionals talk about information access, a modified scoping review is adopted to characterize and define these dimensions of access. Dimensions of access identified in the scoping review, like digital literacy or physical barriers, are used to create a concept map that defines and relates the different ways archaeological and cultural heritage professionals discuss information access. The resulting concept map highlights several important areas of interest for future research on information access within these disciplines. Furthermore, the concept map presented here will serve as a starting point for assessing how different dimensions of access are perceived and experienced by nonprofessional stakeholders—an area of research that is still largely underdeveloped.

Bentley, Nicholas (Texas A&M University, Center for the Study of the First Americans)

[180] *Searching for the Younger Dryas: Excavations at Legend Cave, Florida*

The Younger Dryas remains enigmatic in the southeastern United States, especially within the state of Florida. There are many projectile point technologies attributed to this time period; however, none have yet been found in a reliable and datable context. To date, the geomorphic setting with the greatest potential to inform on the Younger Dryas culture history of Florida has been now-submerged archaeological sites within Florida's rivers and springs. Recent research, however, is beginning to demonstrate that during the Younger Dryas, many of these now-submerged sites would have been subaerially exposed, subsequently leading to the formation of Younger Dryas age soils. These soils cannot help to rectify the Younger Dryas culture history of Florida due to their nature as palimpsests of archaeological and datable material. Instead, we need to look for new locations that might contain consistent deposition and datable material dating to the Younger Dryas. Florida's dry caves have remained understudied and hold the potential to contain datable Younger Dryas sites. Here I present the results from recent excavations at Legend Cave in west-central Florida and evaluate its Younger Dryas preservation potential.

Bentley, Nicholas [180] see Williams, Lindsey

Beramendi-Orosco, Laura (UNAM), Ana Soler-Arechalde (UNAM), and Galia González-Hernández (UNAM)

[164] *Combining Radiocarbon and Archaeomagnetism in Teopancazco: The First High-Resolution Chronology for Teotihuacan*

The interdisciplinary work led by Dr. Linda R. Manzanilla at Teopancazco in the Valley of Teotihuacan was an ideal scenario for the application of a Bayesian approach to generate a high-resolution chronology, as a significant number of samples coming from well-defined contexts were dated either by radiocarbon or archaeomagnetism. In this contribution we will present the process of building the first high-resolution chronology for Teotihuacan by a Bayesian model integrating 38 radiocarbon dates, detailed archaeological information related to occupation stratigraphy and pottery associated, and 30 archaeomagnetic dates on lime-plasters taken from floors and walls. The obtained chronology made it possible to differentiate in time four constructing phases/occupations, placing the foundation of Teopancazco at 150–200 CE and dating the Big Fire and the moment of abandonment of the site by the Teotihuacanos to around 575 ± 25 CE. It is

concluded that by combining these two dating methods and understanding the moment that each sample type is dating, it is possible to obtain a solid and precise chronology that helps to understand the dynamics of this multiethnic neighborhood in particular and of the entire city of Teotihuacan.

Berenson, Sydney, Mary Kate Kelly (Mount Royal University), and Olivia Navarro-Farr (College of Wooster)

[183] *Preserving the Past: Conservation Strategies for the Stelae of El Perú-Waka'*

El Perú-Waka', an archaeological site in northwestern Petén, Guatemala, preserves a collection of ancient Maya sculpted stelae that are notable for their rich epigraphic and iconographic context, as well as their comparatively larger scale relative to those of surrounding Maya cities. This research examines the ongoing efforts to document, conserve, and protect these stelae in the face of severe environmental degradation—particularly the destructive impact of microflora such as moss and lichens, which accelerate limestone decay. Preservation initiatives, which began in the early 2000s, have included reassembly after looting, the installation of protective coverings, the construction of platforms, reburial, and, in select cases, relocation. A key case study is Stela 34, one of Waka's most significant monuments, which depicts the powerful queen Lady K'abel. The stela was first reassembled in the early 2000s, following looting and destruction. In 2025, it was relocated onto a built platform with a perishable roof to protect it from ongoing environmental threats. This recent intervention reflects a broader shift toward more proactive preservation strategies, including the use of photogrammetric data to monitor and compare the effectiveness of conservation techniques over time.

Beresford-Jones, David [267] see Serra, Margot

Berestyuk, Margaret, Fermin Lopez (Pueblo of Pojoaque), Kaitlyn Davis (Northern Arizona University; Chronicle Heritage), and Scott Ortman (University of Colorado Boulder)

[199] *An Ancestral Village in Profile: The POPI Site Near Pojoaque, New Mexico*

How and what can we learn about ancestral villages when habitation structures are no longer visible on the surface? Archaeological site POPI was first identified by the Pojoaque Tribal Historic Preservation Office in 2017, and through initial observations it was determined that this site could be of great importance to the Pueblo of Pojoaque. With over a thousand surface artifacts and 10 features, the lack of surface structures across almost 250 acres, in this setting, is surprising. With the help of the 2025 field school investigations, we tallied artifacts, recorded features, and collected environmental data to address questions relevant to the Pueblo and for this thesis project. Preliminary results demonstrate that POPI was a village that was subsequently buried by windblown sediment before being reexposed by recent erosion. We have established the period of occupation through radiocarbon data and ceramic typology, and the distribution of features and artifacts suggest how the village was organized. Finally, pollen and phytolith data bolster the interpretations of other lines of evidence and indicate the environmental conditions during site occupation.

Berestyuk, Margaret [34] see Davis, Kaitlyn

Berg, Julia [149] see Sterner, Katherine

Berg-Johansen, Britta [337] see Becker, Sara

Berger, Elizabeth (University of California, Riverside), Ye Wa, and Xiaoya Zhan (Fudan University)

[216] *Epitaphs as Sources of Bioarchaeological Data in China*

Carved stone epitaphs, or *muzhiming* (墓志铭), were in use in China for at least 1,700 years and have long been used by historians of China to answer social historical questions. This paper will present their use within bioarchaeology to answer demographic, paleoepidemiological, biographical, and other questions. *Muzhiming* recount the lives of the individuals with whom they are buried and therefore have great potential for anthropological archaeology research, especially in cases where skeletal remains are not available for study (due to poor preservation or lack of curation, or in cases of late historical research in which research on skeletal remains is not considered ethical). However, the inscriptions also have limitations, due to their

formulaic contents, limited length, and restriction to the upper classes. This paper will present several case studies in which *muzhiming* have been used in conjunction with skeletons, as well as in their absence, to answer archaeological questions, will discuss their potential for use within bioarchaeology, and will briefly review the state of ethics in Chinese bioarchaeology.

Berger, Martin

[317] *"From a Cave in Southern Guerrero?" Tracing the History of a Flint Knife in the Collections of the Wereldmuseum Leiden*

In 1963 the National Museum of Ethnology (now Wereldmuseum) in Leiden, the Netherlands, acquired several objects from the art dealer Robert Stolper. Among this small collection was an object described as an "Astec [sic] sacrificial knife," said to have been found in a cave in Guerrero in southern Mexico. However, like other pieces acquired on the art market, the knife lacked any precise information about its exact provenience and was not recovered from a documented context. Nonetheless, when the knife entered the collections, its authenticity was never called into question, partly due of the reputation of the dealer and his long standing in dealing with the NME. In this paper, I examine the knife's possible authenticity and its relation to other objects found in situ by archaeologists, as well as material acquired on the art market by museums. Finally, I also briefly examine the representation of the object in the NME's permanent galleries, focusing specifically on the object's presumed relationship to human sacrifice.

Berikashvili, David (University of Georgia)

[324] *Mortality in Archaeology: Studies of Late Bronze-Early Iron, Hellenistic, and Medieval Period Graves from Samshvilde (Georgia, South Caucasus)*

The paper presents the results of archaeological and multidisciplinary studies from Samshvilde Archaeological Complex (Georgia, South Caucasus) by researchers from archaeology, bioarchaeology and palynology fields. The primary object was reconstruction of paleoecology, paleodiseases, and the social-cultural hierarchy of the Late Bronze-Early Iron, Hellenistic, and Medieval communities, as well as violence in mortuary and medical practices, based on the analysis of graves. Using a range approaches, eight burials from different periods were analyzed. Investigations revealed that helminthic infections were widespread among the Samshvilde population, alongside gastrointestinal diseases. The population attempted to treat these conditions using traditional pharmacological methods, including remedies from deer antler and volcanic ash. Archaeological and bioarchaeological data suggest that prehistoric burials are primarily concentrated in the central part of the site, while medieval burials are mostly located on the frontiers. This shift in burial locations reflects demographic changes in the population size across different periods. Furthermore, data indicate that nearly all individuals interred in the medieval burials were victims of violent death. This finding corresponds with the destructive invasions by the Seljuk Turks, Mongols, and Iranians during the Middle Ages. The multidisciplinary results of the abovementioned studies will be presented along with some archaeological finds.

Bernard, Hayden (Indiana University Bloomington), Kristine Korzow (Texas A&M University), Eric Guiry (Simon Fraser University), Ryan Kennedy (Indiana University), and Paul Szpak (Trent University)

[84] *Exploring Historical Fisheries Through a Multi-method Analysis of Archaeological Freshwater Catfishes from the Chesapeake Bay Watershed*

Historical and archaeological data from the Chesapeake Bay Watershed reveal the many roles that fishes played in market economies and foodways. As fish markets in cities such as Baltimore and Alexandria grew over time their reliance on local fishes and other marine animals increased, necessitating commercialized harvesting strategies, which made species vulnerable to overharvesting. Freshwater catfishes, including native bullheads (*Ameiurus* spp.) and introduced channel catfish (*Ictalurus punctatus*), are especially common in assemblages from the region, reflecting their importance in past markets. Here, we leverage multiple methods, including size estimation, Zooarchaeology by Mass Spectrometry (ZooMS), and stable isotope analysis, to investigate the historical harvest of freshwater catfishes (Ictaluridae) using collections primarily from nineteenth-century sites in Maryland and Virginia. Beyond identifying previously undocumented trends in catfish harvest in a region and time frame marked by rapid demographic and technological change, this paper

highlights the power of biomolecular approaches such as stable isotope analysis and ZooMS to reveal nuances in past fisheries through more fine-grained taxonomic identifications and insight into the historical ecology of fishes. Ultimately, we argue that such multi-method approaches can more fully reveal how human activities have driven past ecological change and provide critical historical baselines for modern fisheries management.

Bernard, Henri (Universidad Veracruzana), Joshua Englehardt, and Michael Carrasco (Florida State University)

[262] *The Iconography of Los Soldados Monument 2: Reassessing the “Baby Jaguar”*

We analyze the iconography of Los Soldados Monument 2 by presenting and examining new details revealed through digital imaging technologies. This stone sculpture, dating to the Middle Formative period and reportedly originating in southern Veracruz, is currently housed in the Museo de Antropología de Xalapa. Despite the monument's formal resemblance to several artifacts within the Olmec corpus, it has received surprisingly little scholarly attention. We report findings derived from the application of photogrammetric. And structured light scanning. This imagery allows for a fuller appreciation of the monument's iconography and has aided in drafting a new drawing that clarifies details now difficult to observe due to significant surface erosion. Based on these, we situate Los Soldados Monument 2 within the broader iconographic context of Middle Formative period Olmec sculpture. Correspondence between these recently uncovered details and those evident in the known corpus of contemporaneous Middle Formative imagery supports the object's authenticity. Finally, we propose that this sculpture represents a different manifestation of the “jaguar baby.” We conclude with a discussion on how Los Soldados Monument 2 enhances our understanding of Olmec sculptural and iconographic elements, which were foundational to pan-Mesoamerican cosmologies and the evolution of regional artistic traditions

Bernard, Henri [307] see Ruvalcaba Sil, Jose Luis

Bernardini, Wesley (University of Redlands), Stewart Koyiyumptewa (Hopi Tribe), Joel Nicholas (Hopi Cultural Preservation Office), Julie Solometo (James Madison University), and Gregson Schachner (UCLA)

[277] *Before Awat'ovi: The 1935–1939 Peabody Museum Expedition and the Early History of Antelope Mesa*

From 1935 to 1939, the Harvard Peabody Museum conducted archaeological work on Antelope Mesa on the Hopi Reservation, focusing on the large Hopi village of Awat'ovi. Less well-known is the Peabody project's survey of Antelope Mesa and its excavation of 12 small sites dating between ca. AD 700 and 1300. Working with the Hopi Cultural Preservation Office and the Peabody Museum, we have analyzed the survey and small-site excavations in an effort to make this information accessible to Hopi people and the scholarly community. Here, we present our preliminary findings about life on Antelope Mesa before Hopi people gathered into large villages (like Awat'ovi) that would become the focus of Hopi society.

Berner, Jack (Washington University in St. Louis), Michael Frachetti (Washington University), Irina Shevnina (Kostanay State University), Andrei Logvin (Kostanay State University), and Paula Dupuy (Nazarbayev University)

[315] *Landscape Archaeology in the Bronze Age Transurals: Results from Remote Sensing, Survey, and Geochemistry*

The Sintashta archaeological horizon (ca. 2000–1700 BCE) of the Transural Steppe is well known for its dense, fortified settlements. Decades of excavations at these sites have revealed striking uniformity in their layout, subsistence patterns, copperworking activities, and ecological site selection preferences. Far less is known about the vast stretches of steppe between fortified centers, both in terms of unfortified settlements and ecological features such as mines or productive pasture zones. To address this, we present preliminary results of an ongoing project investigating the mesoscale and regional surroundings of two Sintashta period settlements: Kamysty and Bestamak. We have identified numerous habitation depressions and potential areas of intensive fuel burning using semiautomated prospection techniques on approximately 50,000 km² of high-resolution satellite imagery. Subsurface surveys and geochemistry have also delineated locales that are significantly enriched by copper metallurgy outside the walls of these fortified sites. Notably, these investigations reveal differences between our two study areas in terms of settlement geography, site selection preferences, and the degree of geochemical enrichment from copper metallurgy. Future research will help

determine whether these differences can be ascribed to undetected ecological factors (e.g., the uneven distribution of copper ore sources) or social decision-making.

Berquist, Stephen, Beth Scaffidi (University of California, Merced), Matthew Biver (Dickinson College), and Patricia Quiñonez

[213] *A Crossroads in Caravelí: Tracing Long-Distance Networks across Arequipa's Northern Valleys*

We present results of preliminary survey in the Caravelí Valley of northern Arequipa. Caravelí likely served as an important transit corridor and crossroads from the Formative period. Petroglyph sites include multiple examples of Chavinoid iconography, aligning with a series of similar sites marking ascents and descents into Arequipa's coastal valleys (Jennings et al. 2018; Berquist et al. 2021). Architecture at the site of Llollasca replicates that of sites pertaining to the Pukara tradition of the Late Formative Titicaca Basin. Located at the approximate midpoint of a least-cost path between the western Titicaca Basin and the Pisco Valley, the ceramics at Llollasca share characteristics with those of the Pukara and Paracas Cultures. Caravelí also marks a likely corridor for the passage of Wari caravans to the far south coast from Ayacucho. We identified a cemetery at the fortified site of Kukuli with Wari-style tombs and polychrome ceramics. Kukuli itself represents only one of several large, urbanizing sites lining the valley slopes. Although these sites share similar architecture and ceramics, we could not definitively periodize them. However, carved stone hydraulic models reveal deep concern with the management of water and link Caravelí with Nazca, a connection supported by ceramic evidence.

Berrey, Adam (California State University, Sacramento), Christian Peterson (University of Hawaii at Manoa), Andrea Cuellar (University of Lethbridge), and Víctor González Fernández (Instituto Colombiano de Antropología e Historia)

[311] *Population, Farming, and Social Complexity in Dispersed Settlement Systems of the Isthmo-Colombian Area*

Dispersed, agrarian settlement whereby households lived on or adjacent to the plots of land that they farmed was characteristic of early complex societies across the Isthmo-Colombian Area. This settlement pattern was particularly widespread in regions like the upper Tonosí, upper Magdalena, and Quijos valleys (Panama, Colombia, and Ecuador, respectively), where more compact local communities, such as villages, never emerged. While this dispersal by no means prevented social complexity from forming, it did structure human interaction in ways that strongly shaped the course of early complex society development. This urges questions of why households in these regions never aggregated into more compact village settlements, especially given the prevalence of villages among early complex societies around the world (including much of the Isthmo-Colombian Area). Drawing on ethnographic observations of smallholders and other contexts of dispersed, agrarian living, this paper explores the role of population pressure and intensive household agriculture in perpetuating settlement dispersal in the upper Tonosí, upper Magdalena, and Quijos valleys. It also considers the impact of these forces on the nature of early complex society development.

Berryman, Judy [212] see Walker, William

Bertin, Emily [293] see Marken, Damien

Bethke, Brandi (University of Oklahoma), and Sarah Trabert (University of Oklahoma)

[194] *Allotments as Resistance: Documenting Wichita Allotted Lands in Oklahoma*

In 1887, the US Congress passed the General Allotment Act, aiming to break up tribal communities by replacing communally owned land with individual allotments. For the Wichita, Caddo, and Delaware Nations in Oklahoma, this policy resulted in the loss of 80% of their shared reservation lands. Despite these assimilation efforts, the Wichita people resisted—continuing to build grass houses and arbors, living in multifamily groups, and maintaining dance grounds and gathering spaces on their allotments. These places were, and continue to be, significant to the community and are critical for understanding how Indigenous people circumvented federal policies to continue gathering, practicing ceremonies, and preserving culture. Since 2020, we have worked with the Wichita and Affiliated Tribes to develop minimally invasive research methods to document their allotment histories. This poster presents the results of that research. We invite others researching allotments to connect with us to plan future collaborative conference sessions.

Betts, Chelsea (University of Connecticut), Jonathan Dombrosky (Crow Canyon Archaeological Center), and Steve Wolverton

[279] *Detection of Harvest Pressure in the Archaeological Record through Body-Size Comparison of Mule Deer and White-Tailed Deer*

Resource depression is difficult to detect in the archaeological record. A considerable amount of work focuses on detecting the impact of harvest pressure on archaeological white-tailed deer (*Odocoileus virginianus*) populations using body-size analyses. This research relies on detailed location, sex, and management strategy data from modern individuals, but the same type of data has not been extensively collected for mule deer (*Odocoileus hemionus*). Mule deer, which are important to Indigenous groups throughout western North America, decrease in abundance from the Pueblo I through Pueblo III (750–1350 CE) time periods in the central Mesa Verde region. Overhunting has been hypothesized as a cause of mule deer decline, supported by multiple strong case studies. However, this interpretation warrants further evaluation. The lack of comparative body-size and harvest data for mule deer creates difficulty in contextualizing the meaning of body-size change in terms of harvest pressure without the confounding influence of other factors like differences between sexes or environmental changes. To remedy this, our study provides a body-size correction factor that leverages the extensive white-tailed deer record and aids the interpretation of harvest pressure in mule deer.

Bey, George (Millsaps College)

[338] *The Way Things Worked: Bill Ringle's Half Century of Ideas on Maya Society*

For almost half a century Bill Ringle studied ancient Maya society. Beginning at Komchen, Bill focused not just on Maya archaeology, settlements, iconography, and epigraphy but on what all of this meant regarding the nature of Maya society. This paper considers his ideas on its social and political organization and the way Maya society developed from the Preclassic to Postclassic periods. Although interested in the entire Maya world, he focused the majority of his attention on the northern Maya lowlands. His early work at Komchen led to a lifelong interest in the rise of social complexity. As codirector of the Ek Balam Project, Bill expanded on how settlement archaeology could be used to interpret the people who occupied this polity, particularly during the Late and Terminal Classic periods, when Ek Balam reached its apogee. He became particularly interested in Chichen Itza and Uxmal, and later with his work in the Puuc region, he turned his attention to trying to make sense of how the entire region operated through time. Bill's efforts shaped our understanding of the way things worked in the northern Maya lowlands and provide us with a legacy that will guide us as we continue our studies.

Bey, George [223] see Winters, William

Bhattacharyya, Tiyas (University of Oregon)

[217] *Further Fauna from Funan: The Continued Examination of Human-Animal Interactions and Associated Ecological Trends at Angkor Borei, Cambodia (500 BCE–500 CE)*

Large-scale societies have unique interactions with their environment due to the intensification of land-use strategies to sustain larger populations, which in turn lead to the modification of local environments. In this paper, I will utilize select zooarchaeological remains as proxies to investigate interactions between people and other agents within their ecological niche, examining temporal shifts at the Early Historic / Pre-Angkorian site of Angkor Borei, Cambodia, excavated as part of the Lower Mekong Archaeological Project (LOMAP). Angkor Borei is one of Southeast Asia's earliest urban centers, located in the Mekong Delta region of southern Cambodia. It was also a prominent trading center from the late first millennium BCE to the first millennium CE. Initial identification by previous scholars found both wild and domesticated fauna along with all major local taxa (e.g., water buffalo, pigs, cattle, chickens, crocodiles, various species of deer, rice rats, fresh and brackish water fish species, elephants, etc.). By examining trends in animal taxa and comparing these shifts between select contexts at Angkor Borei (e.g., burial, residential, craft production), I will discuss proposed shifts in human-animal-environment interactions and how these may coincide with diachronic changes in sociopolitical organization, the subsistence economy, and religious practices.

Bianchi, Rachele (University of Toronto)

[165] *Reconstructing the Production Process for Roman Wax Tablets (First–Second Century CE): An Ethnoarchaeological and Experimental Approach*

Although rarely preserved in the archaeological record, *tabulae ceratae* (wax tablets) were exceedingly common writing supports throughout the Roman Empire, as attested in both pictorial and literary work. Many studies have been published on these objects, focusing primarily on the type of texts they would have contained and their contexts of use, as well as the types of wood commonly used to fabricate them. None of those studies have attempted to reconstruct the tablets' manufacturing process. In this paper, I present the result of the ethnoarchaeological and experimental work I conducted to identify key stages of production of Roman wax tablets. This study was conducted through collaboration with a professional woodworker, using hand tools comparable to the ones described in Roman sources and attested in the archaeological record. This research and reconstructions resulted in the collection of important information about the steps of production, their sequence, and the nature of practitioner's choices revolving around not only technological or material constraints but also considerations on the role of consumers in shaping what is being produced, how, and why.

Bibo, Kelsey [124] see Mooney, Sean

Bicho, Nuno [336] see Falcucci, Armando

Bicho, Nuno [221] see Foley, Sarah

Bicho, Nuno [221] see Skosey-LaLonde, Elena

Biehl, Peter (University of California Santa Cruz)

[323] *"Protect the Past. Inform the Future": Integrating Slow Science into Climate-Change Research*

This paper explores the integration of slow science into climate-change archaeology as a means to protect the past and inform more just, resilient futures. Drawing on the West Mound Research Project at Çatalhöyük, Turkey, it highlights first steps toward a slow-science approach grounded in reflection, ethical responsibility, research sustainability, and sustained community collaboration. In the context of climate change, such practices foster deep engagement with local knowledge, enable long-term studies of environmental and sociocultural transformations, and promote genuine interdisciplinary integration across archaeology, anthropology, environmental sciences, and climate research. The case study demonstrates how slow science can embrace uncertainty and complexity, resisting oversimplified narratives and short-term solutions. It foregrounds reflexivity—from the trowel's edge to the living archive—while building trust with local and international communities as co-researchers rather than data sources. Ultimately, this paper argues for institutional and funding structures that support long-term, collaborative research as essential for inclusive, actionable, and impactful climate-change archaeology.

Bielenberg, Henry (University of Wisconsin, Madison), Kaeleen Stauffer (Western Colorado University), Townes Bakke (Western Colorado University), Ginger Hartman (Western Colorado University), and David Hyde (Western Colorado University)

[181] *Constructing Power: Monumental Architecture and Ritual at the La Milpa, Belize*

At the Maya site of La Milpa, Belize, the Tzaman Acropolis towers over the surrounding landscape as a striking example of monumental architecture. Extending approximately 190 m from north to south and measuring around 55 m in width, the Tzaman Acropolis is composed of an intricate series of structures and courtyards overlooking the southern civic core of La Milpa. Contiguous with Plaza C, a highly restricted plaza along the acropolis's northern face, this complex marks a center of elite Maya ceremonial activity and political power, especially during La Milpa's florescence during the Late Classic period. Multilayered phases of construction and evidence of abrupt interruptions and cessations of work along the complex's length demonstrate a dynamic and complex architectural history. These characteristics present a significant archaeological challenge to understanding the Tzaman Acropolis' composition and function. We aim to synthesize the history of previous archaeological work conducted at the acropolis alongside the results of excavation work and lidar analysis completed during the Tzaman Acropolis Research Project's inaugural 2025 field season in order to elucidate the construction sequence and cultural significance of the Tzaman Acropolis and its surrounding landscape.

Bieraugle, Megan (University of Alberta)**[170]** *Canids of the Canadian Plains: A “Tail” of Dusty Archival Boxes*

People and dogs share a long and varied history on the North American Great Plains, with remains of both dogs and wolves commonly recovered from archaeological sites, including on the Canadian prairies. Historically, some plains communities included several dogs per family. While more than 350 Canadian plains archaeological sites have yielded canid remains, dog remains are comparatively few, heavily fragmented, and in poor condition. Minimum number of individuals (MNI) values for canids are surprisingly low in Canadian sites, with one of the largest sites to contain canids, the Junction site (DkPi-2), yielding remains of just 23 individuals. Intact crania are even more infrequent, with fewer than 10 specimens having been excavated. Beyond that, many sites containing canid remains were excavated over 50 years ago, and their collections are disorganized and lack associated documentation, including provenience information. Many heritage collections have become a beast all their own, wrapped up in dusty archival boxes. My PhD thesis aims to untangle this “tail” of canids from the Canadian plains, with over 6,200 specimens recorded to date, spanning more than 9,000 years.

Biggs, Jack [341] see Kaeding, Adam

Billings, Marlena (Harvard University)**[296]** *Examining Upper Paleolithic Magdalenian Rondelles: Applying a Chaîne Opératoire Approach to Dimensions of Interaction and Morphological Attributes in Artistic Contexts*

Rondelles from the Magdalenian of Western and Central Europe are commonly categorized due to their circular appearance, central perforation, and frequent presence of engravings. Multiple hypotheses exist regarding their function, and a range of materials and styles are included within the rondelle category. However, studies have not yet addressed if there are shared or consistent ranges of dimensional attributes nor if there are shared technological sequences of production of objects that are currently identified as rondelles in intra- and interregional contexts. Testing for comparable suites of traits and methods of manufacture alongside analyses of artistic decoration provides an additional lens to identify regional trends of production and social relationships as demonstrated by paths of cultural transmission. This study presents a standardized examination of 175 complete and fragmented artifacts currently identified as rondelles from archaeological sites located in the southwest of France. Three phases of the production chain are proposed, accompanied by a broader discussion of rondelle features that may hold further clues as to their function. By and large, these analyses offer new perspectives on rondelle characterization and manufacture and call for the refining of a long-established category that merits further specification, especially in light of numerous hypothesized functions.

Biondi, Ella (College of Wooster), Olivia Navarro-Farr (College of Wooster), and Monica Florence (College of Wooster)**[304]** *Networking in the Cyclades: The Effects of the Ionian Migration and White Marble Production from the Archaic Period on the Island of Delos*

In this poster, I investigate marble effigies of Apollo on the island of Delos as well as other marbles from Naxos and Paros that were exported to Delos, employing archaeological data in tandem with primary texts, including Homer's Hymn to Apollo. I explore how the birth of the sun god Apollo created a network of diverse ethnic groups, including the Ionians, Naxians, and Parians. My study is focused on the Archaic period (800–500 BCE) when Apollo's fame and influence emerged. I interrogate the connection between the island of Delos and the Ionian Migration, and how this event had a profoundly impactful effect on other groups across the Cyclades. I will review excavations at Mycenae, the Dorian Invasion, and the “Sea Peoples” Theory. These existing theories have long influenced understandings about the Ionian Migration and what spurred their activity and interest in Delos. Furthermore, I review the evidence found from Delos's excavation reports and the Hymn to Apollo and how material evidence contributes to Delos's religious success.

Birch, Jennifer (University of Georgia), Seungyeon Hong (University of Georgia), Charles-Antoine Lesage (Wendat Nation), Brita Lorentzen (University of Georgia), and Thiéfaîne Terrier (Wendat Nation)**[49]** *Revisiting the St. Lawrence Iroquoians through Radiocarbon Dating and Wendat Knowledge*

Between Cartier journeying down the St. Lawrence Valley in 1535 and Champlain traveling the same route in

1604, the longhouse-dwelling peoples inhabiting those shores relocated elsewhere. The apparent disappearance of the St. Lawrence Iroquoians is both a touchstone in the Canadian historical imaginary and a very real question related to the identities and histories of contemporary Indigenous peoples. In this poster, we present the findings of the current phase of the Dating Iroquoia project, a collaborative effort between the Wendat Nation and archaeologists at US and Canadian institutions to develop refined radiocarbon chronologies for key Iroquoian sites in the St. Lawrence Valley. We highlight the methods being employed by the project to resolve issues with multiple intercepts in the radiocarbon calibration curve, present date estimates for the occupation of village sites, and develop interpretations of dates and data from a Wendat perspective. Additional coauthors include Christian Gates-St Pierre (University of Montreal) and Sturt Manning (Cornell University).

Bird, Darcy

[263] *Density-Dependent Population Growth in the American Southwest*

The agricultural demographic transition occurs when the adoption of domesticated plants in an archaeological region decouples fertility and mortality rates, leading to a period of dramatic population growth. Current debate often focuses on (1) the mechanisms that drive fertility and mortality out of equilibrium, thereby generating population growth, and (2) how to estimate changes in fertility and mortality from archaeological data. In this presentation, I will focus on the question: is the agricultural demographic transition simply a single event resulting from the adoption of agriculture or is it instead a series of smaller transitions resulting from Boserupian population increases from technological advances, the first of which may be agriculture? To answer this question, I compare radiocarbon composite kernel density estimates (cKDE), the timing of agricultural innovations, and other relevant proxies in various regions of the American Southwest.

Birge, Adam (University of Texas at San Antonio)

[212] *The Sajama Lines, Bolivia, as Frontier, Adaptation, and Local Control*

The Sajama lines in western Bolivia are one of the most extensive geoglyph landscapes in the world and contain thousands of kilometers of linear pathways covering over 20,000 km² of high-altitude puna. The lines are typically considered in terms of ritual pathways or roads, but they are also manifestations of frontier interactions with the Inca and Spanish. No one center emerged in this landscape and instead the Sajama lines served as spaces of contestation, adaptation, and shared understanding through centuries of decentralized interaction. Moreover, the lines demonstrate the persistence of Indigenous Andean groups. This paper explores frontiers in multiple senses through historical, archaeological, and spatial analysis with a focus on the Late Intermediate period (AD 1100–1450), Late Horizon (AD 1450–1532), and colonial (AD 1532–1825). At a regional scale, the Sajama lines served to connect ecological regions by connecting productive zones and even facilitating silver production at Potosi. Politically, the lines served to connect different communities to Inca and Spanish authorities but could also be challenged. Finally, the lines cosmologically connected communities to mountains and ancestors that changed over time. All in all, this massive network of geoglyphs worked as a productive space in producing and organizing local worlds.

Birkmann, Joseph (SWCA Environmental Consultants), and Christopher Merriman (Adams State University)

[88] *Mid-Holocene Hunter-Gatherer Archaeology and Land Use in the Northern Jornada del Muerto*

The northern Jornada del Muerto (NJM) is a large, intermontane basin in the Mexican Highlands section of the Southern Basin and Range just east of the Rio Grande Valley and west-northwest of the San Andres mountains. The modern basin contains little surface water and presents itself as a harsh and desolate landscape, befitting the name “Dead Man’s Journey.” It seems logical, then, that the Mid-Holocene Warm Period (MWP), a climatic interval of persistent aridity within the North American Southwest extending from ~7000 to 4500 cal BP would have resulted in a landscape unfavorable for occupation by Archaic hunter-gatherers. Yet the region displays significant evidence of occupation during this period. Here, we utilize typological, geochemical, and geospatial data on diagnostic points associated with the Middle Holocene from the Robert H. Weber Collection to understand the intensity, organization, and change over time in hunter-gatherer land use within the NJM. These data, alongside paleoenvironmental reconstructions of stream behavior and playa activity, suggest that local variation in the intensity of the MWP allowed for at least

episodic, if not continual, occupation of this landscape, with evidence for an increase in occupational density during the transition to the Late Holocene Wet Period around 4500 cal BP.

Birkmann, Joseph [194] see Brucker, Ryan

Bishop, Jack (Harvard University)

[279] *Identifying Barbary and Domestic Sheep with ZooMS: Using Proteomics to Differentiate Wild and Domestic Caprines*

Wild bovid species were of great importance to the Pre-Neolithic subsistence practices of Northwest Africa and accurate identification of their skeletal remains is critical to understanding these practices. This is especially true for the transition into the Neolithic that occurred ca. 7 kya because it was during this period that domesticated sheep and goat were introduced to the region by Mediterranean seafarers. Differentiating the remains of these species is essential to understanding the responses of existing communities to the arrival of Neolithic innovations, and this is a particular challenge for the anatomically similar but respectively wild and domesticated Barbary (*Ammotragus lervia*) and domestic sheep (*Ovis aries*). Paleoproteomics, specifically Zooarchaeology by Mass Spectrometry (ZooMS), allows taxonomic identification of fragmentary skeletal remains by mass fingerprinting the collagen they contain. This poster presents work developing reference ZooMS markers for Barbary sheep using two digestive enzymes, trypsin and chymotrypsin, with the goal of addressing the question: did Neolithic hunter-gatherers in Northwest Africa integrate domestic sheep, a species behaviorally and ecologically similar to the long-exploited Barbary sheep, into their broad-spectrum subsistence strategies?

Bishop, Katelyn (University of Illinois Urbana-Champaign), Jennifer Hall (KYK9 Search Dogs), Krystiana Krupa (University of Illinois Urbana-Champaign), Steven Concho (Pueblo of Acoma), and Octavius Seowtewa (Zuni Cultural Resource Advisor Team, ZCRAT Lead)

[218] *Partnering with Human Remains Detection (HRD) Dogs to Identify Ancestor Remains in Zooarchaeological Collections*

Human Remains Detection (HRD) dogs have long been used to find the remains of the recently deceased. Now, HRD dogs are being trained in archaeological field-based contexts to find Ancestral human remains. These dogs are referred to as *archaeological HRD dogs*, or *archHRD K9*. One looming challenge facing NAGPRA practitioners, museums, and repositories is that the remains of human Ancestors, misidentified as nonhuman animals, are frequently mixed into collections of archaeological animal bone. Sorting a zooarchaeological collection to identify and repatriate misidentified Ancestors is a time-intensive process that requires both human osteologists and zooarchaeologists. Magnified to the scale of all NAGPRA-eligible collections across the country, this poses a massive undertaking for most repositories and institutions. Yet this process is critical so that all Ancestors can be returned and reburied together, as well as cared for appropriately while held in institutional collections. This paper presents the results of our work to determine the efficacy and feasibility of using archHRD K9 to accurately and efficiently assess zooarchaeological collections for the presence of human remains. Our results suggest that archHRD K9 can assist greatly in locating human remains in faunal collections, facilitating and expediting the repatriation of Ancestors.

Bishop, Ronald [310] see Sugiyama, Nawa

Bishop, Ronald [266] see Takatsuchi, Ryohei

Biwer, Matthew (Dickinson College), Sydney Cooper (Dickinson College), Veronica Ortiz (Museo Nacional de Arqueología Antropología e Historia del Perú), and Kurt Rademaker (Center for the Study of the First Americans)

[180] *Recent Paleoethnobotanical Investigations at Uchcumachay, Junín, Peru*

This poster presents recent paleoethnobotanical research from the 2024 field season at Uchcumachay, a high-elevation rockshelter located in Junín, Peru. These recent excavations indicate Uchcumachay has a stratified sequence of human occupation beginning ~11,200 to 7400 cal BP, extending to within the past 4,000 years, based on ceramics evidence in the upper excavation layers. This incredible depth in cultural chronology allows us to investigate long-term human-environment adaptations as seen through plant subsistence data.

The data from these samples forms the basis our investigations into the subsistence practices of some of the earliest high-altitude residents of Junín. This represents the first step in our long-term investigations into the earliest paleoethnobotanical evidence of occupations of caves and rockshelters, building on earlier work in the region, in the region and has the ability to transform our understanding of the pivotal period in Andean archaeology.

Biwer, Matthew [213] see Berquist, Stephen

Black, Brandy [277] see Boyd, Douglas

Black, Rachel [22] see Herrin, Leigha

Blair, Christopher (Stantec), Tim Horsley (Horsley Archaeological Prospection), Isabel Ortt (Stantec), and John Flood (Stantec)

[264] *An Integrative Approach to Detecting a Remnant Mound in the Kentucky Bluegrass*

This presentation discusses unmanned aerial systems (UAS) and geophysical investigations at a Kentucky mound site that was destroyed in the mid-twentieth century and how the techniques (UAS, magnetometry, and GPR) were used together to detect the feature's near-surface and surface signatures. The Ohio valley, including much of the Kentucky Bluegrass, is home to Early to Middle Woodland-era (ca. 300 BC–AD 500) Adena and Hopewell mound-building traditions. While some earthworks remain in this area, many others have been destroyed leaving little to no trace on the landscape. Investigating these types of imperceptible surface features that may only be faintly detectable through geophysical methods and can benefit from UAS work providing a more complete 3D picture of the feature of interest. This paper provides an overview of this site's background, our approach, and the results of this effort. UAS work is presented as a viable stand-alone method for surface feature detection as well as a valuable companion to geophysics work in CRM.

Blair, Christopher [294] see Ortiz-Aguilu, Juan-Jose

Blair, Elliot [46] see Cajigas, Rachel

Blair, Elliot [123] see Yeahia, Sabrina

Blancas, Jorge [164] see Butrón, Agustín

Blastic, Anna, Tia Watkins, John Walden (Galen University), Julie Hoggarth (Baylor University), and Claire Ebert (University of Pittsburgh)

[58] *Understanding Maya Culture, Production, Economics, and Identity in the Upper Belize River Valley through Analysis of Jewelry and Adornments*

The Classic (AD 250–900) Maya communicated identity, status, community, and culture through jewelry and adornments. These materials provide archaeologists with insights into garment styles, hairstyles, and body modifications, while studies of raw materials reveal trade networks and social interaction. In the upper Belize River Valley, the Belize River was a critical trade route, facilitating access to local and nonlocal materials. Findings from the Belize Valley Archaeological Reconnaissance (BVAR) project demonstrate a wide range of resources were employed for personal adornments, including jade, slate, hematite, obsidian, and marine shell. This poster draws on BVAR data to assemble the first comprehensive dataset of jewelry and adornments in the region. By synthesizing this evidence, the study explores three questions: (1) What do jewelry and adornment assemblages reveal about Classic Maya production and consumption in the region? (2) What role did local culture play in shaping the forms, materials, and styles of adornment? (3) Do iconographic, hieroglyphic, or religious motifs reflect broader cultural themes found throughout Classic Maya society? While previous studies have examined adornments at the site level, this research develops a regional perspective on adornment consumption to better understand production practices, social trends, and individual expression in the upper Belize River Valley.

Blattner, Jessie (UCLA), Rowan Bolton, and Naya Bender**[124]** *Pa'ashi Archaeological Collaboration*

Pa'ashi was once a cornerstone of Indigenous life in California, until colonial transformations created an entirely different landscape defined by industrial agriculture. The drainage of Tulare Lake resulted in the displacement of Indigenous people and a disruption in their cultural practices. Under the direction of PhD candidate Robin Meyer-Lorey, we conducted fieldwork in the Tulare Lake basin in collaboration with members of the local Tachi Yokut tribe to explore the tangible cultural effects of the drainage of the lake. Our project relied on close collaboration to redefine the geography of Tulare Lake from an Indigenous, community-centered perspective. The fieldwork we conducted demonstrates how archaeological data can be collected without disturbing the land, people, or local ecosystems. Our goal was to focus on oral histories to add cultural context to archaeological and paleoclimate data. We surveyed sites using remote sensing via drone flights and interviewed tribe members to understand the lake's significance in their cultural history. Using these combined methods, we located a culturally significant site previously unknown to the tribe. This find is representative of the disruption caused by the draining of the lake and demonstrates how community-centered archaeology can improve scientific rigor and benefit people in the present day.

Blecha, Erika (University of Kansas), and Rolfe Mandel (Kansas Geological Survey)**[155]** *Understanding the Use of Space through Faunal Analysis at San Esteban Rockshelter in SW Texas*

The Sandal Shaft locality of the San Esteban Rockshelter in southwest Texas has yielded more than 20 perishable weapons dating to ca. 6500 cal BP and multiple superposed combustion features with ages ranging from ca. 11,000 to 15,500 cal BP. Based on the stratigraphy of the Sandal Shaft, there are at least two separate occupational events: one during the terminal Pleistocene and another during the mid-Holocene. Interspersed throughout the various site occupations are thousands of faunal remains as well as packrat (*Neotoma* sp.) middens. In this paper, we will present initial results as well as some problems encountered during our analysis of the faunal assemblage. The goal of our study is to gain a better understanding of how the use of space in San Esteban Rockshelter changed through time and what this can tell us about the human-environment relationships in the northern Chihuahuan Desert from the terminal Pleistocene through the Holocene.

Blehm, Samuel [181] see Trenkle, Logan

Blessing, Matthias**[336]** *Integrating Quantitative Lithic Studies and Assemblage Theory*

Despite repeated criticism, lithic-based cultural taxonomies remain a staple of archaeological work, especially in the Paleolithic. Mostly relying on typological classification systems, they often impose rigid boundaries on inherently fluid and context-dependent assemblages. Quantitative methods—such as geometric morphometrics, multivariate statistics, and machine learning—enable researchers to objectively measure and compare lithic variability across space and time, reducing observer bias and enhancing reproducibility. Yet all data have to be embedded in a sound theoretical framework or else be utterly useless. In redistributing agency from the individual to a socio-material network, assemblage theory offers a relational view that foregrounds the shifting interdependencies of human agency, material properties, and socioenvironmental contexts. Thus, it units several strands of inquiry in contemporary lithic studies and the combination of quantitative methods and assemblage theory may allow for a more holistic understanding of cultural taxonomies that captures both patterned regularities and the negotiated character of cultural expression. Such a combined framework can shift the focus from fixed cultural categories to processes of assemblage formation, transformation, and dissolution. By embracing both empirical rigor and theoretical nuance, this approach holds significant potential for advancing archaeological interpretations of cultural variability, exchange and transmission as reflected in lithic technologies.

Bleuze, Michele (California State University, Los Angeles)**[24]** *Standing on the Shoulders of Giants: The History and Development of Maya Subterranean Bioarchaeology*

This paper reviews the history and developmental milestones that laid the foundations for the emergence of subterranean bioarchaeology. The history of human remains being recovered from Maya subterranean contexts

dates to the late nineteenth century. It is not until relatively recently, however, that the data from these investigations have been critically examined within the archaeological and sociocultural framework of their subterranean context. Prior to the mid-twentieth century there was no actual analysis of skeletal material with the exception of Earnest Hooton's report in 1940 on the remains recovered from the Cenote of Sacrifice at Chichen Itza, but the cenote was not considered a subterranean feature at the time. Although J. Eric Thompson argued that cave use was related to ritual in 1975, he treated all skeletal material as related to funerary activity rather than any of the ritual activities that he proposes for the cave. It was not until the 1990s that archaeologists and bioarchaeologists began to seriously attempt a critical assessment of the practices in the various types of subterranean features. This presentation considers how we came to our current state of knowledge, the challenges we continue to face, and what new questions can be asked of the data.

Bleuze, Michele [206] see Gonzales, Eric

Bliege Bird, Rebecca [221] see Chen, Jennifer

Blom, Deborah (University of Vermont), Luis Callisaya, and Ruth Fontenla (Universidad Mayor de San Andres)

[91] *Sociopolitics, Archaeological Research, and Heritage at the UNESCO World Heritage Site of Tiwanaku, Bolivia*
As the discipline confronts its colonial legacy, archaeologists are increasingly engaging in reciprocal research that prioritizes the needs of local communities. Isolating those needs requires sensitivity to sociopolitical dynamics and history as illustrated by our work at Tiwanaku, Bolivia. Among the earliest sites of systematic archaeological investigation in the Andes, Tiwanaku has long been a locus of Aymara participation. Yet collaborations have shifted with sociopolitical and economic conditions, and more recently with the assertion of local authority over heritage management. The site's designation as UNESCO World Heritage and the subsequent 2011 creation of the Centro de Investigaciones Arqueológicas, Antropológicas y Administración de Tiwanaku (CIAAAT) formalized these changes. While CIAAAT falls under the jurisdiction of the Ministerio de Culturas, Descolonización, y Despatriarcalización, it operates as both an administrative unit and a decentralized institution incorporating representatives of governmental, residential, and descendant communities. Today, heritage politics and identity are closely intertwined with CIAAAT, particularly through the distribution of economic resources and employment. These dynamics complicate the alignment of diverse stakeholder interests with the agendas of tourism, archaeology, and site conservation, while also producing unintended consequences for belonging, identity, and ownership among individuals who have lived, worked, and worshipped at the site throughout their lives.

Blom, Deborah [60] see Baitzel, Sarah

Blomster, Jeffrey (George Washington University), and Victor Salazar Chávez (SWCA Environmental Consultants)

[94] *Crafting Iconography and Regional Entanglements: A Shell Quatrefoil from Etlatongo, Mexico*
The later Early Formative (1400–1000 cal BCE) in Mesoamerica evinces the establishment of sedentary and sociopolitically complex societies as well as more substantial interactions and entanglements between regions. At the Oaxaca highland site of Etlatongo, in the Mixteca Alta, excavations have explored these developments, documenting two Early Formative ballcourts; the termination of the second ballcourt involved a large assemblage of faunal, floral and human remains, ceramic vessels and figurines, as well as objects made from shell, the use and display of which appear to be restricted to this public space. Due to their fundamentally different sensorial nature, and in the case of marine shell, necessarily imported, the alterity of shell is deeply embedded in transformed ontologies and sociopolitical communities at Etlatongo. Interregional networks linked Etlatongo with source communities for the shell, with many objects produced on-site by specialists. One shell ornament, made from pearl oyster, embodies physical, ideological, and aesthetic interactions. This Pacific bivalve shell has been crafted as a quatrefoil, associated in subsequent Mesoamerican imagery with rulership and elite knowledge. Within the quatrefoil is a St. Andrew's cross, referencing Gulf Olmec cosmological tropes. We see this object and its impact on society as navigating emergent transformative entanglements.

Blong, John (Washington State University), Justin Holcomb (Kansas Geological Survey, University of Kansas), Roger Amerman (Whitman College), and Jordan Thompson (Washington State University)

[72] *The Stemmed Point Component at the Kelly Forks Work Center Site: Investigating the Initial Settlement of the Clearwater River Drainage in the Bitterroot Mountains, Idaho*

Archaeological research in the Pacific Northwest has established the importance of this region for understanding the initial settlement of North America. Archaeological sites and Indigenous oral histories provide evidence for human occupation in the Late Glacial period, suggesting this may have been an initial entryway into North America. However, we have relatively few well-documented archaeological sites in this region that we can use to understand this period of initial settlement. Our research is focused on geoarchaeological and ethnogeological investigation of the initial settlement of the Clearwater River drainage in the Bitterroot Mountains, Idaho. Our primary focus is on the Kelly Forks Work Center site on the North Fork of the Clearwater River, where our research has revealed deeply buried and stratified late Pleistocene to late Holocene archaeological deposits, including a Western Stemmed Tradition component. This poster presents the results of recent archaeological research of the early occupation at the Kelly Forks site. The Kelly Forks site is positioned in the traditional territory of the Nimípuu (Nez Perce) Tribe, providing insight into initial settlement and land use in this region and connections to traditional Nimípuu subsistence practices.

Blong, John [179] see Neunzig, Samuel

Blong, John [333] see Sobel, Sonya

Blong, John [71] see Thompson, Jordan

Blong, John [200] see Uldall, Tamara

Blumenfeld, Dean, Eunice Villasenor Iribé, and Christopher Morehart (Arizona State University)

[156] *Debt and Domestic Life at Hacienda del Rincón de Guadalupe*

This paper examines the material dimensions of debt regimes in colonial central Mexico through household excavations at Hacienda del Rincón de Guadalupe. Drawing on survey and excavation data, three distinct domestic contexts are analyzed: the servants' quarters, the *calpanerías* (attached workers' barracks), and peripheral domestic structures located in the immediate foothills. Variation in household assemblages elucidates how indebtedness and labor obligations shaped provisioning and everyday practices within the hacienda estate. By examining these domestic contexts within a framework of credit and dependency, this study seeks to understand how debt shaped the material conditions of everyday life in colonial Mexico. The results underscore the ways in which household-level evidence can reveal the lived experience of debt, offering insights into both local variation and the structural mechanisms of coerced labor in hacienda economies.

Boaretto, Elisabetta [353] see Ramrekha, Marc

Bocquel, Manon, Vincent Delvigne (CNRS), and Mathieu Langlais (CNRS, UMR 5199 PACEA)

[93] *Tracking Bergeracois Flint: Reconstructing Magdalenian Long Blade Production across Space*

During the twentieth century, in the French Pyrenees, several authors reported the discovery of long blades (over 18 cm in length) hidden in various locations, notably in painted caves. These objects, isolated both by prehistoric communities and by prehistorians, have rarely been integrated into a broader chrono-cultural framework, particularly from a techno-economic perspective. Around 17,000 cal BP, the life cycle of long blades was segmented in both time and space, with places of production and discard not necessarily coinciding. Petroarchaeological analyses make it possible to identify the raw materials and, consequently, the potential location of production sites of these artifacts. Combined with use-wear and technological analyses, the *chaîne opératoire* approach allows us to reconstruct the biography of the objects and to discuss their roles in past societies. The technical investment observed at blade production sites, combined with the transport of long blades over distances of up to 250 km, suggests that these objects were highly valued not only for economic reasons. This phenomenon of blade and blade core preforms circulation raises questions about

how Late Middle Magdalenian groups organized and managed their litho-space and invites discussion from a socioeconomic perspective.

Bodine, Christopher (Missouri State University)

[55] *Visibility and Authority: The Role of Intervisibility in Mississippian Landscape Design*

About 1,000 years ago, Cahokia, located in modern-day Illinois, was the center of a thriving urban and ceremonial landscape known as Greater Cahokia. New analyses of Cahokia and its surrounding site clusters reveal that mound placement, habitation areas, and ritual spaces were not only spatially clustered but also organized to maximize intervisibility. It has been demonstrated that Greater Cahokia's mounds and settlements were frequently constructed within view of major mound groups, suggesting that surveillance and visibility were integral to community planning. When compared to other fortified Mississippian centers, including Angel Mounds, the Kincaid site in southern Illinois, and Aztalan in Wisconsin, similar patterns emerge. These sites employed defensive palisades, platform mounds, and elevated positions that enhanced visual control over surrounding landscapes. This created controlled sightlines both inward and outward, reinforcing defensive and ceremonial functions. This research shows that intervisibility, surveillance, and the control of movement and sightlines were widespread strategies in Mississippian settlement planning. These practices linked defensive concerns with social and ritual authority, embedding power in the landscape itself. By integrating remote sensing analyses with comparative regional studies, this research highlights the role of visibility as a unifying principle in Mississippian site design.

Bodor, Thomas (Michael Baker International), Michael Whitehead (Michael Baker International), and Ryan Robinson (Michael Baker International)

[264] *Reconstructing the Historic Columbia Canal: Archaeological Investigations of a Landscape Transformed*

The historic Columbia Canal, located on the Congaree River in Columbia, South Carolina, was originally constructed in the 1820s during what has been referred to as the American Canal Age. Like other canals at this time, its purpose was water transportation across the fall line in Columbia, but with the advent of rail transportation the canal became obsolete in the 1840s. Later, in the 1880s and 1890s, the canal found a new purpose in the generation of hydroelectricity. The power stayed on for 119 years until Hurricane Joaquin slammed into the East Coast in 2015, dropping more than 20 inches of rain and causing a 1,000-year climatological flood event. The flooding Congaree River caused extensive damage to the historic canal, which was also a popular recreational area for residents and visitors. The city of Columbia applied for and received funding through the Federal Emergency Management Agency's Public Assistance Program, and cultural resources investigations are underway pursuant to a Section 106 Memorandum of Agreement. This paper discusses the ongoing archaeological studies to identify, evaluate, and mitigate impacts to significant archaeological resources associated with the canal as part of the reconstruction and restoration of this important historic and recreational resource.

Bogaard, Amy [258] see Wu, Rubi

Bogner, Rachael, Yuko Shiratori, and Brent Woodfill (Winthrop University)

[161] *Visualizing La Tortuga through Geographic Information Systems and Community Archaeology*

La Tortuga, located in the present-day municipality of Ixtapa, Chiapas, is a precolumbian archaeological site located associated with one of the only inland salt sources in the Maya world. In summer 2025, a group composed of archaeologists, students, and community members continued research there, excavating a ballcourt and a residential group while conducting land and aerial surveys of the surrounding area with the assistance of community members and landowners. This presentation examines the discoveries around site La Tortuga through the use of Geographic Information Systems and community archaeology in order to provide a better view of and understanding of La Tortuga now as well as avenues for future research.

Boileau, Arianne (Mount Royal University)

[211] *Beyond Hunting: Socioecological Animal Management in the Maya Lowlands*

Long viewed as minor in the ancient Maya diet, animals are now understood to have figured in complex relationships that extended beyond simple hunting and fishing. Drawing on zooarchaeology and a multi-

isotope approach, this paper examines how Maya socioecological strategies integrated habitat engineering and targeted management of both wild and domestic species. Agricultural mosaics, such as milpas, orchards, managed forests, and water features like *aguadas* and drained fields, likely attracted deer, peccary, and other game to fields and settlement margins. These landscape modifications facilitated “garden hunting” and reshaped animal behavior and availability, creating feedbacks among cultivation, habitat structure, and faunal movement. Alongside hunting, the Maya practiced dog and turkey husbandry; carbon and nitrogen isotopic values document routine maize provisioning, especially for ritual purposes. Evidence for the semi-management of other animals, such as deer and freshwater turtles, is more tentative. Some deer show maize consumption, plausibly from field browsing, but direct evidence of husbandry remains elusive. Together, these lines of evidence reveal resilient, place-based systems of animal use in the Maya lowlands, coupling landscape maintenance with selective husbandry to provision households and sustain ceremony across time.

Bolte, Christina [112] see Quigley, Gabrielle

Bolton, Rowan [124] see Blattner, Jessie

Bond-Freeman, Tara [338] see Smith, J. Gregory

Bonner, James [258] see Greenwood, Kate

Boone, James (University of New Mexico)

[263] *Why Do Humans Use So Much Energy (and Why Do Humans Use So Much Energy to Produce So Few Children)?*

Houses are humanity's way of making more humans: social humans who will make more houses. Social humans expend a great deal of energy on *social reproduction*, above and beyond what is normally considered individual somatic and reproductive effort. Social reproductive effort reflects or emulates the apparent material and spiritual well-being and “intergenerational staying power” of others in the community. Thus, intracommunity emulation of the form and content of costly ritual practices and displays, prestige goods and maintenance of a general standard of living results in “synchronization of energy consumption” across polities and entire interaction spheres or regions. One of many implications of this is that completed household size and composition may be driven by factors that affect differential social survival of individual household units and that population growth or decline is driven by the ability to establish new households rather than TFR per se. It also implies that what is called “cultural elaboration” is an integral, structural component of the material and ideological social fabric.

Boone, Kofi [323] see Millhauser, John

Borck, Lewis (OU)

[274] *The Past Is a Radical Archive: So What?*

As archaeologists we regularly communicate the necessity for incorporating our voices in ongoing educational and policy conversations. When we aren't included, we pout. We roll our eyes. We shake our fists at the sky and scream, “Why oh why Graham Hancock, do they love you so much?!?” But what would happen if we were included? What would we really change? Is archaeology as a discipline so different from the imperial and capitalist structures of our contemporary society that we would change things? That's talk.

Borges-Eckert, Samantha [336] see Murray, John

Borgstede, Gregory

[355] *Acropolis Sites and the Postclassic Period in the Maya Highlands*

One of the most enduring questions in the preconquest history of the southern Maya highlands is whether population in-migration determined the social, cultural, economic, and other changes during the Postclassic period (~AD 1000–1540). Archaeologists and ethnohistorians have long used settlement patterns, architecture, and other forms of material culture to develop models supporting or refuting migration of

lowland peoples (alternatively labeled “epi-Toltecs,” “Putun,” or “Chontal Maya”) into the highlands as ancestors of the K’iche’ and Kaqchikel Maya. This paper examines one material component of these models—acropolis sites. Acropolis sites are settlements with a regularized main plaza significantly elevated above other structures/areas of the settlement. The presence and distribution of acropolis sites in highland Guatemala has been used as a marker of a new population and tied to shifting cultural practices, including religious (e.g., Quetzalcoatl-related “cult”) and calendric (katun-based observances). In addition to reexamining interpretations of acropolis sites across the Maya highlands, this paper presents test-pitting and mapping data from the site of Tilajion, an acropolis site in the Cuchumatán highlands of western Guatemala. Tilajion provides additional context and material for understanding Postclassic period cultural change in the Maya highlands.

Borie, Cesar [93] see Parish, Ryan

Borlas, Christopher (AnthroTRAC Inc.)

[124] *Landscape Transformations in the Lower Sacramento River Valley*

Multiyear, collaborative archaeological monitoring conducted under Section 106 compliance provided opportunities to work closely with tribal partners to help prevent the inadvertent destruction of unrecorded, culturally sensitive areas. Through cooperation with our construction partners and the US Army Corps of Engineers (USACE), we addressed several unanticipated cultural deposits and established strong relationships and effective methodologies for conducting these tasks. These projects offer rare access to high-resolution subsurface (stratigraphic) data that document large-scale anthropogenic landscape transformations across several kilometers. They also enable multidisciplinary collaboration, fostering cross-fertilization of methods and interpretations that have applied value in broader archaeological and environmental contexts. This poster invites brief discussions and descriptions of (1) Indigenous use and stewardship of these river confluence landscapes, to be considered along with (2) the effects of mining sedimentation, and (3) nineteenth- and twentieth-century shifts to intensive agriculture production, which are likely illustrated in two or more rapid landscape modifications, in relatively short time frames, in order to support the evolution of California as primary food producer prior to and during the war efforts of the twentieth century.

Borrayo, Jazmin (California State University, Chico), Samantha Robinson (California State University, Chico), Casey Hegel, Eric Bartelink (California State University, Chico), and Colleen Milligan (California State University, Chico)

[282] *Prevalence of Dental Disease among Late Nineteenth- to Early Twentieth-Century Individuals from the Santa Clara Valley Medical Center Pauper Cemetery*

To accommodate the needs of the rapidly expanding population of Santa Clara County, CA, during the nineteenth and twentieth centuries, land was purchased for an infirmary to care for health needs of the poor. The infirmary, then known as the Santa Clara County Infirmary, later became the Santa Clara Valley Medical Center (SCVMC). Few records remain of the Infirmary cemetery, which was used to bury the county’s poor from the 1870s to the 1930s. The recent rediscovery of the cemetery during hospital construction resulted in the exhumation of over 1,000 graves. For this study, we examine evidence of oral health in a subsample of the cemetery, consisting of 113 adults. To be included in the sample, the individual needed to have at least three post-canine teeth present. Each dentition was inventoried and scored for dental caries, antemortem tooth loss, abscesses, calculus, and dental care. The results indicate that 72 of the 113 individuals showed evidence of dental caries, a prevalence of 63.7%. Antemortem tooth loss, calculus, and abscesses were also common. Evidence of dental care were rare. The high rate of dental disease is comparable to other pauper cemeteries and reflect poor oral health conditions common during this time frame.

Borrero, Luis (CONICET & Universidad de Buenos Aires), Agustina Massigoge, Cristian Kaufmann (INCUAPA-CONICET-UNCPBA), Natalia Alonso (Agencia I+D+I-UNPA-UARG), and Juan Bautista Belardi (Univ Nac De La Patagonia Austral)

[72] *Regional Archaeology, Regional Taphonomy, and Hunter-Gatherers in the Northern Sector of the Pali Aike Volcanic Field (PAVF), Southern Patagonia, Argentina*

This paper presents an analysis of the variability of archaeological and taphonomic contexts in the northern

sector of the Pali Aike Volcanic Field, using a distributional perspective and the same regional scale. The various contexts are ranked and comparatively analyzed based on their geomorphological location (high plains, canyons, lagoons), characteristics of artifacts and skeletal assemblages. This strategy provides further information on the intensity, forms of landscape use, and mobility of hunter-gatherer populations in the PAVF, particularly during the Late Holocene. Likewise, information on current deaths of guanaco (*Lama guanicoe*), the main prey of hunter-gatherers, allows for the generation of ecological and taphonomic implications regarding accumulation processes, differential preservation, and potential mixing of skeletal remains and artifacts, contributing to the modeling of past hunting and scavenging scenarios.

Borrero, Luis [279] see Martin, Fabiana María

Borrero, Luis [58] see Morello Repetto, Flavia

Borrero, Mario (Fort Lewis College)

[355] *Resources and Networks on the Maya Frontier: An Example from Southern Belize*

Southern Belize offers a compelling example of how frontier zones in the Maya world were not passive margins but actively shaped by larger political and economic forces. During the Classic period, this region experienced rapid growth as its location and resources—ranging from fertile valleys to access to trade routes and valued materials—were incorporated into the networks of more powerful kingdoms to the north and west. Far from being peripheral, southern Belize became a resource frontier, its communities drawn into broader exchange systems that stimulated demographic expansion and sociopolitical complexity. Yet, as these networks unraveled during the Terminal Classic, the region underwent dramatic depopulation, illustrating how frontier landscapes were deeply tied to the fortunes of distant centers. By situating the southern Belize evidence within comparative cases across the Maya Lowlands, this paper argues that frontier zones functioned simultaneously as engines of integration and spaces of vulnerability. In doing so, it highlights the value of frontier theory for understanding shifting dynamics of population, resource use, and political negotiation in ancient Maya society.

Bossio, Laura (Central Michigan University)

[353] *Thirteenth-Century Upper Mississippian Coalescence in Myaamionki: A View from Taawaawa Siipiiwi (Maumee River, Ohio)*

It has long been debated how and why the Upper Mississippian cultural transition in western Ciinkwhtanwi Kihcikami (Lake Erie) developed. Explanations presented in the literature had not sufficiently been supported by the archaeological record. This dissertation research project, a collaboration with members of the Miami Tribe of Oklahoma, presented the core question: How did Western Basin peoples of western Ciinkwhtanwi Kihcikami respond to the changing sociopolitical environment and climate during the late precontact period? This research project facilitated new fieldwork, radiocarbon dating, ceramic analysis, and incorporated abandoned legacy petrographic data to interrogate three hypotheses—those of coalescence, local adaptation, and displacement. The results support the first hypothesis, that of coalescence of Upper Mississippian communities from southern Kihcikami (Lake Michigan) with local peoples. These results are presented and discussed in this paper, along with possible next steps for the expansion of this research project.

Bossler, Natalie, Sophia Eberts, and Briana Doering (University of Wyoming)

[114] *Rehoming the Repository: Updating Faunal Collections for Future Research Use*

The collection and storage of faunal remains for the purpose of comparing archaeological material is one that requires constant upkeep. Over the last year at the University of Wyoming, energy and resources have been allocated to updating the housing of faunal remains in the comparative collection. The goal of this project includes creating an inventory and condition report of collection as well as rehoming the remains into new acid-free and archival-safe boxes and bags. Remains are now housed individually as well as completely covered for the protection of all. Throughout the course of this project, updated storage of these faunal remains has given faculty and staff members a better understanding of the conditions of the collection as well as updating the housing of these remains in a decolonial fashion. Even with a modest budget, large zooarchaeological collections can still be maintained and upkeep for decades of future research needs.

Boswell, Alicia (UC Santa Barbara)**[317]** *Art Market and Intellectual Interests in the 1960s: Object Biographies from Piura, Peru*

Despite political tensions between Peru and the United States in the 1960s, ancient Andean art was in great demand. The popularity of ancient American art was at an all-time high at a time when the art market was under increased criticism and scrutiny, resulting in the UNESCO convention on cultural property in the early 1970s among other measures intended to protect illicit trafficking. In the early 1960s, a new archaeological style, named Vicús, from the Piura region in far northern Peru, captivated both the art market and archaeologists. Moche-style material culture was also identified as a result of looting in the area, leading to even greater intrigue. In this paper I draw on archival research to reconstruct several Vicús and Moche works' object biographies that are now in public collections. These case studies offer new insight into interactions between the international art market and intellectual community at a time of increased tensions. Reconstructing the histories of these objects offers valuable information about their original biographies as well as the trajectory of collecting and research in the Americas.

Botica, Jennifer**[318]** *Beyond Looting: Fort Apache and the Spectrum of Heritage Collaboration*

This paper draws on my Arizona case study at Fort Apache and the Theodore Roosevelt School National Historic Landmark, where an unauthorized collector removed thousands of artifacts over more than two decades, to examine the broader implications of archaeologist–collector relationships. Such activities are often framed exclusively as looting, yet my research shows that they must be understood both in terms of the harms they inflict on descendant communities and sites and the wider historical and cultural contexts that shape how heritage is valued. Fieldwork and interviews at Fort Apache revealed that collecting practices, even when unauthorized, are often rooted in complex motivations, which can complicate but do not erase their damaging consequences. These complexities suggest that archaeologist–collector interactions are not easily reduced to simple categories of “ethical” or “illicit.” Instead, I propose that thinking of collaboration along a spectrum can serve as an analytical tool for recognizing the range of possible relationships, from destructive to constructive, while prioritizing stewardship, relationship-building, and the perspectives of descendant communities. In doing so, this study opens discussion of how more inclusive and pragmatic approaches might support long-term heritage care.

Boudreaux, Tony [208] see Riggs, Brett

Boudreaux, Tony [81] see VanDerwarker, Amber

Boulanger, Matthew (Southern Methodist University)**[158]** *All-Knowing, Savvy and Sharp, Honest and Outspoken, Level-headed, and Entertaining; A Tribute to R. Lee Lyman*

From humble beginnings in eastern Washington to receiving the Roald Fryxell Award for Interdisciplinary research, Lee Lyman's professional career and achievements need no introduction or discussion. His high bar for professionalism, academic quality, and honesty have shaped the lives and career paths of countless students. Drawing on personal experiences over the course of graduate school and beyond, I discuss a set of personality characteristics that distinguish Lee as a prime example of the kind of mentor that all students of archaeology can benefit from. Lee's embodiments of these traits has led to long-lasting personal and professional relationships spanning a host of different disciplines and generations of students.

Boulanger, Matthew [279] see Allen, Myriah

Bousman, Britt (Texas State University)**[156]** *Coronado's Weather Report*

The Coronado 1540–1542 expedition routes from Mexico to Quivira and through Arizona, New Mexico, and Texas have been debated for over 150 years, and the entrada is laced with high drama, death, and destruction. In the Southern Plains a Native American guide, the Turk, hatched a scheme with the Pecos Indians to abandon the Spanish in the Staked Plains and let them die. The plan failed, and the Turk was executed. Tree-ring evidence indicates the Southern Plains were relatively wet and mild in the summer of

1541 and previous years. In the Texas portion of Coronado's route, debate still exists as to the location and order of occupation of the two large canyons (barrancas) where Coronado camped near Teyas pedestrian bison hunter-gatherers. Even though Blanco Canyon clearly was one of the barrancas, the other is unknown. In this paper a QGIS least-cost path analysis is used to help determine the most efficient routes that could have been taken using known and assumed landmarks. The routes were programmed to minimize topographic slope changes. As an experiment the same landmarks were used on my iPhone's Google Maps router with surprising results. In conclusion, an explanation for the expedition's failure is offered.

Bousman, Britt [279] see Allen, Myriah

Boutin, Alexis (Sonoma State University)

[216] *Uniting a Bioarchaeological Ethos, Critical Disability Theory, and Community-Based Archaeology to Commemorate Past Lives from the Sonoma Developmental Center's "Home Cemetery"*

Located in Eldridge, California, the Sonoma Developmental Center (SDC) operated from 1891–2018, serving thousands of residents who would today be described as disabled, mentally ill, and/or behaving outside of social norms. Between 1892 and 1960, its "Home Cemetery" received the remains of over 1920 residents, although grave markers were later removed. This research project works with stakeholders to document and preserve the cemetery as a site of historical memory and cultural heritage. Ninety-four burials belong to victims of the "Spanish" influenza pandemic and subsequent seasonal epidemics between 1918 and 1922. We are using historical and noninvasive archaeological methods to reconstruct their biographies, which are then shared on an ArcGIS StoryMap. These biographies, which are informed by life course and life history theories, reveal that despite living and dying in a structurally ableist society, SDC residents experienced instances of disabled resistance, persistence, and joy.

Boutte, Kerry, Laura Allen (Mississippi State University), Ryan Seidemann (Water Institute), Alex Garcia-Putnam (University of New Hampshire), and Christine Halling (University of New Orleans)

[22] *Elemental Study of Mortuary Material Culture: Portable X-Ray Fluorescence Analysis at Historic Cypress Grove Cemetery No. 1, New Orleans, Louisiana*

During the course of cemetery repairs, over 200 burial contexts were removed from wall vaults at Cypress Grove Cemetery No. 1 in New Orleans, Louisiana. The cemetery operators temporarily removed the human remains and material culture during the construction of a new, stable burial monument. This effort provided a unique opportunity to analyze material culture recovered from this historic site. Preliminary archival reviews suggest that these individuals represent part of New Orleans's low to middle socioeconomic population. Despite the existence of some archival materials, specific names and death dates remain elusive. As part of this analysis, portable X-ray fluorescence (pXRF) was applied to a representative selection of material culture associated with the disinterred individuals. This nondestructive analytical method provided information regarding the composition of the materials with which (and in which) the individuals were buried, in an effort to obtain additional insight into the deceased's socioeconomic status. Another benefit of this analysis was the opportunity to better understand the materials used in the mid-nineteenth- to early twentieth-century New Orleans burial processes. This additional analysis allows for the identification of potential environmental contaminants that can inform future materials handling and appropriate safety precautions on similar projects.

Bowen, Rianna [124] see McDermott, Michael

Bowers, Mozelle (Wayne State University)

[298] *Children and Childhood at Yachay: A Preliminary Bioarchaeological Analysis of Subadult Skeletal Remains in Northern Highland Ecuador*

From a bioarchaeological perspective, the physical remains of children found in archaeological contexts can offer unique insights into the past. Children are demographically variable and are highly sensitive to social and environmental changes. At Yachay, an Integration period (500–1460 CE) archaeological site located in northern highland Ecuador, subadult and young adult remains show signs of labor related degenerative

diseases (such as osteoarthritis and Schmorl's nodes), infection (such as osteomyelitis), and abnormal bone formation (such as Paget's disease). In this poster, I will discuss the potential impact of degenerative disease, infection, and abnormal bone growth on the children and young adult skeletal remains that make up this collection and what this could indicate about their lived experiences and interaction with the environment.

*** This poster will contain images of human skeletal remains.

Bowser, Ronda (Institute for Canine Forensics)

[90] *Extending Archaeology's Reach: HHRD Dogs as Biosensors in Burial Detection*

Historic Human Remains Detection (HHRD) dogs function as highly sensitive living biosensors, providing archaeologists with a noninvasive method to identify potential burials; including precontact and historic graves, unmarked graves, and other mortuary items; that may be invisible to the eye or archival record. What makes a dog a biosensor? The innate complexity of the canine olfactory system gives the dog the ability to detect volatile organic compounds (VOCs) at trace levels. This ability, along with careful selection, certification and ongoing structured training enables the dog to translate scent into reliable archaeological data. By managing training variables such as scent thresholds, age, and environmental factors, handlers develop canine partners that are diverse, adaptable, and consistent. In practice, HHRD dogs are powerful complements for archaeology. Working in conjunction with ground-penetrating radar (GPR), lidar, geophysical survey, and archival research, canine alerts refine search areas, confirm or deny possible sites, and help protect site integrity. Cultural sensitivity and community collaboration remain central to this work, particularly when safeguarding Indigenous and marginalized histories. By integrating biosensor science with archaeological methods, HHRD dogs extend the reach of archaeology, recovering hidden histories with precision, efficiency, and respect.

Boyd, Carolyn (Texas State University), James Dering (Texas State University), and Karen Steelman (Shumla Archaeological Center)

[38] *Mapping an Ancient Cosmivision: 4,000 Years of Continuity in Pecos River–Style Mural Painting and Symbolism*

Forager societies living in southwest Texas and northern Mexico painted symbolically rich Pecos River–style (PRS) murals in rockshelters containing well-preserved archaeological assemblages. To access its full interpretive potential, we obtained 57 radiocarbon dates from paint samples across 12 sites. Bayesian modeling estimates the earliest murals were produced at 5760–5385 cal BP and the youngest at 1370–1035 cal BP (68.3%). PRS remained in production for a duration of 4095–4780 years (68.3%). Stratigraphic and iconographic analyses revealed that eight of the murals were created as compositions adhering to a set of rules and an established iconographic vocabulary. These results suggest consistent messaging throughout a period marked by changes in material culture, land use, and climate. Continuity in style, motifs, color, the mural-making process, and most importantly, the ontological character of images ensured fidelity in the transmission of cultural knowledge through millennia. We propose that PRS, embedded in a cultural keystone landscape, faithfully transmitted a sophisticated metaphysics that later informed the beliefs and symbolic expression of Mesoamerican agriculturalists and persists today within Indigenous Native America.

Boyd, Douglas (Stantec), Alexander Menaker, Maria Franklin (University of Texas at Austin), Brandy Black (Stantec), and Howard Clark (Stantec, Descendant Community Member, Bolivar Archaeological Project)

[277] *The Bolivar Archaeological Project: A Road Project Connects Descendants with Their Freedman Blacksmith Ancestor*

The Bolivar Archaeological Project is a collaborative, multidisciplinary archaeological investigation of two historic sites in a late nineteenth-century frontier town along the famous Chisholm Trail in north Texas. Sponsored by the Texas Department of Transportation, this project involved excavations at the Sartin Hotel site and a blacksmith shop owned and operated by a freedman named Tom Cook. Cook was the principal blacksmith in Bolivar from ca. 1872 until his death in 1898. Cook was a respected leader whose influence traversed the Black and White communities, despite living in a predominately White town in the Jim Crow South. He was a Methodist minister, a Prince Hall Freemason, and an elected political delegate. Tom and his wife, Lethia, raised several children and owned farmland nearby. This study also involved extensive outreach and collaboration with the local Black community, including oral history interviews with numerous

informants. This led to identifying and connecting with Tom Cook descendants still living in Denton County, and they became active participants in the investigations. This poster will be presented by Bolivar team members, including Howard Clark, who has a unique perspective as the great-great-grandson of the blacksmith, Tom Cook.

Boyd, Douglas [264] see Menaker, Alexander

Boyd, Matthew [350] see Kooiman, Susan

Boyle, Ace (Cal Poly Humboldt), Marissa Ramsier (Cal Poly Humboldt), and Katarzyna Slusarska (University of Szczecin, Poland)

[89] *An Investigation into the Weaning Practices of the Medieval Cemetery Population at Żelewo, Poland, Using Stable Isotope Analysis and Dental Microwear Analysis*

Understanding the age at which children in a population are weaned from breastfeeding can be an important indicator of parental investment, reproduction trends, and population health patterns. While bioarchaeological investigations of medieval European sites have demonstrated that nutritional stress is common, little is currently known about the relationship between stress and weaning practices. To better understand the lifeways of the late medieval population interred at the cemetery designated Żelewo 1-3, located in what is now northwest Poland, serial sampling of permanent first molars was used to create a detailed timeline of isotope signatures corresponding with the early years of life. The presence and morphology of microwear on the deciduous incisors and molars of children at or around the suspected age of weaning provides complementary evidence on when children began consuming solid foods in conjunction with or in replacement of breast milk. Further, the presence of pathologies including cribra orbitalia, cribra femoralis, and linear enamel hypoplasia, provide evidence of nutritional stress around the age of weaning. This research contributes to a broader understanding of the important social and biological aspects of weaning practices in medieval Pomerania. ***This presentation will include images of human remains.

Brabson, Bristol

[200] *Exploring the Influence of Faulting on Hominin Ecology at Olduvai Gorge, Tanzania*

Olduvai Gorge is a paleoanthropological site in Tanzania where the early hominin *Zinjanthropus* was discovered, as well as Oldowan and Acheulian stone tool industries. Several studies have outlined the evolution of the local environment across time; however, less work has emphasized spatial variance of ecology within the paleolake environment. Previous studies have used stone tool analyses to infer the distribution of hominin land use and found that hominins were likely concentrated near upthrown footwalls of faults, where trees may have been concentrated. However, this approach is lacking in a direct analysis of ecological evidence. This study attempts to better understand how faulting might have influenced the environmental distribution of Olduvai Gorge during Lower Bed II times using geological characteristics, biomarkers, and the fossil record. We used a multidimensional regression analysis to correlate stratigraphic characteristics with stone tool density; we used functional morphology of bovid postcrania to differentiate between open and closed habitat types; and we used biomarker lipid indicators to examine the spatial variability of various flora. The results of this study will help us better understand the relationship between faulting in the East African Rift System and direct and local effects on ecology and hominin land use.

Bracamonte Lévano, Edgar [293] see Sharp, Kayeleigh

bradford, juniper [181] see Godhardt, Ava

Bradford, Lillian (Northern Arizona University)

[111] *Back to Square One: A Grid-Based Analysis of Land Use at Lowland Maya Sites*

Much work has been done across the Maya Lowlands examining settlement systems, evaluating human-environmental relationships, and characterizing how the ancient Maya used their resources and organized their settlements. Building on this foundation, this project considers patterns in land use for multiple sites across the lowlands through a grid-based analysis of site maps and landscape characterization with the goal of

simplifying and summarizing past land-use research and facilitating pan-regional site comparisons. In addition to the development of the analytical method, three major research questions are addressed: (1) What land-use patterns are visible in the data at different scales (site-level, subregional, and pan-regional)? (2) Which of these patterns can be explained by environmental factors? and (3) Is this method useful for analyzing ancient Maya land-use practices, and does it generate new insights?

Brady, Ellen [264] see Badillo, Alex

Brady, Ellen [264] see O'Sullivan, Rebecca

Brady, James (California State University, Los Angeles)

[24] *How Often Were Human Sacrificial Rituals Conducted? A Trial Formulation at Midnight Terror Cave, Belize*

The investigation of Midnight Terror Cave carried out between 2008 and 2010 as part of the Belize Valley Archaeological Reconnaissance directed by Jaime Awe was significant for the recovery of over 10,000 human skeletal elements, which represents less than 100% recovery of skeletal material. The assemblage in the hands of bioarchaeologists looks very different with an MNI of only 118. Linda Klepinger (2006:24) argues, "(I)n massive accumulations . . . MNI estimates are all that are practical, even though such numbers may grossly underestimate the true representation in the death assemblage." How then do we reconcile the archaeological data of 10,000 bones with an MNI of 118 over three centuries? The context in Operation V may allow for a rough estimation by determining what is referred to in forensic anthropology as the postmortem interval (PMI). PMI in this case refers to the period between the death of the individual and the redeposition of the bone, which may provide a rough estimate of the time that elapsed between ceremonies. The data suggest that sacrificial rites may have been no more than annual events.

Brady, James [206] see Gonzales, Eric

Brady, James [24] see Verdugo, Cristina

Braekmans, Dennis [79] see García De León, Arturo

Braje, Todd [271] see Rick, Torben

Branson, Hannah [313] see Campos-Hernandez, Cinthia

Branson, Hannah [313] see Purifoy, Haley

Braswell, Geoffrey (UC San Diego)

[36] *From Molehills to Mountains: Household Industries to Small-Scale Workshop Production at the San Martín Jilotepeque, Guatemala, Obsidian Source Area*

The municipio of San Martín Jilotepeque, in the Kaqchikel Highlands northwest of Guatemala City, was the location of the third most important obsidian source in the Maya area. Over a period of more than 2,000 years, vast amounts of debitage accumulated at the quarry workshops of Choatalum and Pachay. Nonetheless, the scale of production that resulted in these mountains may never have been large. The largest habitation sites in the region are removed from the outcrops themselves, and during the Classic period, specialized production occurred at small mound sites at an intermediate level on the regional site hierarchy. Such production may have been organized as a household industry or perhaps as a small, family-run workshop industry. Most interesting, specialized production seems to have provided a level of elevated status to the commoners who manufactured bifaces and prismatic blade cores for export.

Bravo, Bradymir (Universidad Nacional Mayor de San Marcos, La Pontificia Universidad Católica del Perú)

[337] *Adoptando a los abuelos: Encarnando la vitalidad de identidades ancestrales en la provincia de Huarochirí, Lima-Perú*

Desde tiempos prehispánicos los huarochiranos han manipulado, transformado y exhibido a sus muertos para explicar y normar sus creencias, reforzar su identidad, y dar continuidad a sus tradiciones comunitarias. Desde el siglo XII, los huarochiranos transformaban la cara de sus antepasados o enemigos importantes de la

historia de sus comunidades en *huayo* (mascaras). La narrativa del *huayo* tiene por contexto una relación binaria entre los rituales de los pueblos invasores (*llacuas*) hermanados e intercalados con las festividades de los pueblos locales (*yuncas*) invadidos. Mediante la fabricación y uso de los *huayos*, los invasores adquieren la vitalidad reciclada de los antepasados para abogar en tierras ajenas por agua para su vida agro-pastoril. Aun en el siglo XXI, en algunos pueblos de Huarochirí, las comunidades campesinas conviven con los *abuelos* (cuerpos y restos humanos prehispánicos) como ancestros colectivos vivos, a los que convocan como los dueños del agua y la tierra en las ceremonias festivas del agua (*champeria*) para solicitar sus bondades para la vida agrícola comunitaria. Como los prehispánicos, los modernos huarochiranos también convocan a los *abuelos* para encarnar la vitalidad de identidades ausentes o primigenias, legitimando su derecho de habitar un paisaje hostil, ajeno y antiguo.

Bray, Tamara (Wayne State University), and M. Elizabeth Grávalos

[33] *Session Introduction: Developing Tool Kits for Exploring Relational Worlds in the Andes*

For many Indigenous peoples, reality comprises the relationships that compose it. Within a relational world, beings—human, animal, atmospheric, and ancestral—do not preexist their interactions; rather, they emerge from them. Such an ontological orientation challenges foundational assumptions of modern Western knowledge systems, including those that underlie much of archaeological practice. Session participants consider what it would mean to make relational thinking central to archaeological investigations rather than assuming a universal understanding of things as discrete, immutable, and autonomous. What would an archaeology that begins from a native Andean metaphysical position look like? What might be evidenced of local ontologies by focusing, for instance, on contextually specific relations among elements of assemblages found in different settings? Or on trans-temporal / trans-local objects, substances, or phenomena? How does Andean relational thinking compel researchers to modify their methodological tool kit? The aim of the papers in this session is to think outside of conventional archaeological classification schemes that treat artifacts and objects as isolated and essentialized entities and look instead at what new kinds of relational taxonomies might bring into view about ancient/non-Western worlds.

Breedon, Nicole (Rural Development Institute)

[343] *Paddling through History: Water-Based Survey Methods and Cut Bank Analyses of the Gainsborough Creek, Melita, Canada*

What is now Melita, Manitoba—located in central Canada—is Treaty 2 Territory, the original home to the Anishinaabe, Oceti Sakowin, Cree, Oji-Cree, Dakota, Dene, and Michif Piyii. Given the deep histories of the Original Peoples, Gainsborough Creek has been a location of interest for archaeologists since the first excavation of the area, taking place in 1972. This presentation reviews the processes of an innovative archaeological survey method conducted via kayak along the Gainsborough Creek by the Manitoba Archaeological Society (MAS). The survey focused on assessing cut banks exposed by natural erosion to identify evidence of paleosol (a stratum of soil created through natural plant life and/or human processes). By combining water-based mobility with careful shoreline observation, this approach allowed for the analysis of potential sites of human occupation, in otherwise difficult-to-reach locations, while minimizing ecological disruption. This project not only contributes to the growing body of knowledge of human-landscape interaction, but provides an opportunity for knowledge mobilization and translation for local paddlers. As well, this project demonstrates how water-based survey methods—combined with regional historical research, and public engagement—can broaden archaeological perspectives and simultaneously deepening local understandings of the area through community collaborations.

Breitkreutz, David, and Victoria Harvey (Department of the Air Force)

[50] *Kilroy Was Not Here: World War II-Era Graffiti from American GIs Training at Muroc Army Airfield*

Lying along the western shore of Rogers Dry Lake is Feature I-D, a target butt within a former World War II-era military rifle range on Edwards Air Force Base, California. The back side of the target butt is a large concrete wall that contains 74 graffiti series across 13 panels. Despite being beaten by the Mojave Desert sun for 80 years, the durable southeast facing concrete wall has preserved a large inventory of World War II-era graffiti. While the famous meme “Kilroy Was Here” is absent, the graffiti at this site offers a unique and raw glimpse into the lives of the American GIs that trained at Muroc Army Airfield prior to being sent to the

conflict. The GIs left behind an array of information including names, hometowns, military ranks, service numbers, games, and messages etched into wet concrete during construction or scrawled via pencils or charcoal during training. The etchings and drawings were avenues for GIs to pass the time, boost morale, improve camaraderie, and represent hope, fear, and boredom while training for World War II at an isolated Army post in the western Mojave Desert. Notably, the graffiti conveys a sense of presence, making it known that American GIs have passed through Muroc.

Brennan, Tamira [218] see Krupa, Krystiana

Brewer, Jeffrey (University of Cincinnati)

[35] *Looking Back, Moving Forward: Reviewing 25 Years of Ancient Maya Water Management Studies*

A multitude of studies over the past few decades have examined various aspects of water management features and functions among the ancient Maya. This review, focusing on research published since the year 2000, identifies and discusses four themes as central to recent studies: (1) geospatial analyses; (2) geoarchaeological investigations; (3) paleoenvironmental and sustainability studies; and (4) water management as a component of broader urban, landscape, and settlement studies. Although other research foci, such as the role of water in ritual and political contexts, have also contributed much to this field, these themes, in particular, and the complex interrelationships among them that continue to emerge, are significantly aiding our understanding of these systems, their nature, and their role in ancient Maya lifeways.

Brewer, Simon [95] see Codding, Brian

Brewer, Simon [95] see Wilson, Kurt

Bria, Rebecca (University of Texas at San Antonio), and Erick Casanova Vasquez (PIARA Peru)

[16] *Finding Common Ground: Archaeology, Community Development, and Co-creating the Past in Hualcayán, Peru*

The PIARA Peru project was established with a mission to resist extractivist approaches in archaeological research by maintaining a sustained presence in the places we study and by designing our research and heritage-focused initiatives in collaboration with local communities. Within these aims, PIARA has sought to broaden the relevance of local prehistory in ways that supports the existing priorities of its community partners, especially within a village of Andean farmers called Hualcayán. Our ultimate goal has been to stimulate a collective reimagining of Hualcayán's past and leverage it to the benefit of the community while also not losing sight of the many needs local people encounter in the face of poverty, climate change, and marginalization within Peru. Here we recount the past 15 years of research initiatives and outreach projects to share the challenges and successes in realizing our goals in Hualcayán. A fundamental insight from our work is that archaeology in the twenty-first century must foreground a mutual relationship of care between archaeologists and community partners, yet the actions that establish care must be continually reassessed as community needs evolve and partnerships mature over time.

Brielle, Esther [223] see Prufer, Keith

Briggs, Emily [221] see Pacheco-Forés, Sofía

Briggs, Rachel (University of North Carolina Chapel Hill), and John Henshaw (William & Mary)

[353] *Gendered Responses to Climate Volatility in the Native Eastern Woodlands*

Major climatic processes, such as megadroughts and the onset of the Little Ice Age, profoundly reshaped the Native Eastern Woodlands, prompting warfare, disrupting subsistence, driving migration, and altering settlement. Yet the gendered dimensions of these responses remain underexplored. This paper argues that within the region, Native women's central responsibilities in agriculture and food production were essential to how communities navigated climatic volatility, shaping responses that prioritized the future expression of these feminine identities. Drawing on two case studies (the mid-twelfth-century megadrought in the American Bottom and the sixteenth-century megadrought of the Virginia and Carolina coastal plain), we demonstrate how women's labor in agricultural and culinary realms directed community responses to climatic volatility. More specifically, we demonstrate how the need to find the spaces and resources for the

enactment of Indigenous feminine tasks, such as cultivation and cooking, constituted a gendered strategy of community resilience. In doing so, this paper positions gender not as peripheral but as central to cultural adaptations to climate change.

Brinkmann, Aiden [200] see Ritchison, Brandon

Brinn, Andrew, Gabriel Prieto (University of Florida), and John Krigbaum (University of Florida)

[298] *Far from Home: An Isotopic Study of Provenience and Identity among Victims of Chimú Human Sacrifice at Pampa La Cruz, Huanchaco, North Coast of Peru*

Over the past two decades, considerable bioarchaeological research in the Andes has focused on studying provenience and concepts of locality among individuals who had migrated, fled, or otherwise traveled throughout the region. Recent excavations of sacrificial contexts in Huanchaco offer new insights in these investigations. Near the former capital city of the Chimú Empire, Chan Chan, multiple sacrificial events across multiple locales occurred over the duration of the state's existence. These sacrifices involved the ritual killing of hundreds of children and juvenile camelids, often in large groups, followed by burial. Based on previous analyses of diet and cranial modification, it has been proposed that many of the individuals killed at these sites were of nonlocal origins. In order to further investigate this and assess possible relationships between these diverse origins and the motives behind the violence perpetrated, this work analyzes stable isotope ratios, the presence or absence of cranial modification, and previous results of similar studies in order to assess their diets, geographic origins, and genetic relationships. By analyzing these various proxies together, this work seeks to offer new insights into the intersection between violence, locality, and childhood in the ancient Andes. ***This presentation will include images of human remains.

Briois, François [93] see Beauvais, Pierre-Antoine

Brite, Elizabeth (Purdue University)

[48] *Archaeology Is a Vital Pedagogical Practice for the Anthropocene*

The conditions of the Anthropocene are distinct from the past and call for a new approach to education. The power of planetary forces to act back on humanity through processes of our own making, and the densely networked, relational ontologies of being that define the age, require undergraduate students in university settings to make new observations, engage new forms of dialogue, and generate new understandings that can lead to a different kind of ethics than has come before. But this call for pedagogical reform faces a limiting contradiction—by its very nature, education commits to the development of students as subjects (*Bildung*), while teaching the Anthropocene requires destabilizing their subjectivity. Archaeology can be a vital practice to resolve this contradiction in the classroom. Here, I report on a yearslong effort to develop an Anthropocene pedagogy in honors courses at a STEM-intensive university, where student learning about contemporary material culture is potentially critical to our collective existence. Resources and practical exercises that can be used in other classroom settings are provided.

Britt, Reagan (Towson University), and Katherine Sterner (Towson University)

[350] *Subsistence, Seasonality, and Settlement Patterns in the Late Woodland Chesapeake: Insights from a Shell Midden Site outside Baltimore*

It is a commonly held archaeological premise that throughout the Eastern Woodlands during the Late Woodland period, Native American peoples became increasingly sedentary, settling in semipermanent villages where they produced pottery and practiced horticulture. However, past studies of seasonally occupied Late Woodland shell midden sites along the Chesapeake Bay suggest a more variable settlement/subsistence pattern. Previous shell midden research has focused primarily on sites along the Potomac River and the southern Chesapeake, with previously examined sites stretching as far north as southern Anne Arundel County. The current study examines one of two extensive shell midden sites approximately 30 miles further north, outside of Baltimore. Using multimodal paleoenvironmental reconstruction and a combination of shell metrics and stable oxygen isotopes, we situate a Late Woodland site from the northern Chesapeake within the larger body of literature on seasonality, settlement patterns, and subsistence strategies in the Middle Atlantic.

Brittenham, Claudia (University of Chicago)**[92] *Building with Words: Texts and Architecture in the Classic Maya World***

In the ancient Maya world, texts and architecture intertwined in multiple ways. Building on David Stuart's foundational studies, this presentation considers two such intersections: the ways in which texts were laid out to resemble architectural features, providing a spatial context for the painted or sculpted figures within a scene; and the ways that Maya buildings were frequently adorned with texts that defined space and structured movement. At both scales, deliberate design choices enlivened the placement of texts in both playful and serious ways, providing a metacommentary on the power of writing to shape the space around us.

Brock Morales, Amanda (University of North Carolina, Charlotte), and Cinthya Cuadrao Mallqui**[212] *Reimagining Frontiers: Temporalities of Landscape and Identity in the North Central Andean Highlands of Peru***

Archaeological frontiers are often imagined as spatial boundaries separating groups. Research at the monumental site of Chupacoto in the Callejón de Huaylas, Peru (3500 BCE to the present), shows instead that frontiers are contingent processes, continually remade through shifting landscapes, practices, and relationships. Chupacoto demonstrates that the Huaylas River Basin was not a fixed divide between highlands and coast, but a corridor of interaction and negotiation in constant flux. These frontiers cannot be contained within archaeological chronological "blocks." They unfold across intersecting temporalities: seasonal cycles of agriculture and water, the enduring presence of monumental architecture, the routines of everyday life, and the *longue durée* of geological and climatic shifts. Each of these rhythms interacts with the others, creating moments when frontiers emerge, collapse, or are reimagined. By situating frontiers within these multiscalar temporal processes, this paper reframes them as fluid and relational rather than bounded and static. At Chupacoto, layered temporalities reveal how human and environmental change are contingent on one another, shaping cultural boundaries over time. Recognizing temporal as well as spatial frontiers illuminates how past Andean communities adapted to landscapes in flux and how contemporary residents continue to navigate displacement, disaster, and environmental uncertainty in these same spaces.

Broihahn, John (Retired Wisconsin State Archaeologist)**[165] *Pine Pitch and Fire: The Archaeology of Indigenous Technology at the Head of Lake Superior***

The Wisconsin Point site (47 DG-24) is a layered cultural landscape that occupies a baymouth bar at the western end of Lake Superior in northwestern Wisconsin. Five clusters of in-the-ground features are interpreted as representing the Fond du Lac Band of Ojibwa occupation of the Point. These features are located in an old-growth red pine and white pine forest containing a large number of culturally modified trees (CMTs). Scars from pine pitch collection and deliberately set fires were documented. The fires were set in part to maintain a red pine dominated forest, ca. 1756 and 1863. Pitch collected from red pines was a critical element in the building and in the maintenance of birch bark canoes. Ojibwe band leader Chief Osaugie and his descendants were renowned birch bark canoe builders, and Ojibwe technology and labor played a critical role in the local and regional economy in the late eighteenth and early nineteenth centuries. This example of sustainable land management reflects the Traditional Ecological Knowledge carried by Indigenous communities across the area and reveals the challenges associated with understanding the complexity of Indigenous Cultural Landscapes.

Brosowske, Scott, and David Maki (Archaeo-Physics LLC)**[16] *Challenges and Rewards of Community Archaeology in a Modern Era: Investigating Indian Wars Period Sites on the Southern Plains***

For nearly 25 years, the first author has been planning, organizing, and implementing archaeological projects that involve local community members as well as other archaeologists to one degree or another. In this presentation, the authors share what has worked, what has not, and why they believe involving multiple community members and stakeholders in projects is essential for success, both academically and from a community perspective. As an example, they discuss a recent project studying Indian War period battlefields and related sites on the Southern Plains of the United States. Our project involves Indigenous Peoples, the Lyman's Red River War Foundation, Archaeo-Physics LLC, local landowners and county museums, professional and avocational archaeologists, and others. To respectfully involve all stakeholders on a subject

that can be viewed from opposing perspectives has been challenging. This project is ongoing. We are still learning new lessons every day and endeavoring to strengthen relationships with our partners. Some things that do not change are the importance of maintaining mutual relationships that are beneficial to all, respecting those who we partner and interact with, and continually assessing the needs of others.

Broughton, Jack [268] see Kievman, Hayley

Broughton, Laura (NTM Engineering Inc.)

[156] *Pittsburgh's Chinatown: A Study of Chinese Diaspora Archaeology in Pittsburgh, Pennsylvania*

During the nineteenth century, there was an increase in emigration from southern China, with many moving to the United States. The influx of Chinese immigration to the United States led to anti-Chinese sentiments quickly followed by anti-Chinese legislation. Due to this, Chinese immigrants began to form communities across the country called Chinatowns. At the end of the Gold Rush and the transcontinental railroad, as anti-Chinese tensions grew in the western United States, Chinese diaspora communities began to move east. In the 1870s, a small Chinatown began to form in Pittsburgh, Pennsylvania. This Chinatown became the center of the Chinese diaspora community in western Pennsylvania, as well as Ohio and West Virginia. This research maps the size and layout of Pittsburgh's Chinatown based on census data, evaluates the physical effects of the Boulevard of the Allies through ground-penetrating radar and historic maps, and discusses the population that lived in Pittsburgh's Chinatown through graphs and maps. This analysis helps gain an understanding of the true extent of Pittsburgh's Chinatown and how the expansion of Second Avenue and Grant Street led to its decline.

Broussard, Alex (LSU), Heather McKillop (LSU), and E. Cory Sills (University of Texas at Tyler)

[278] *Excavating Open Spaces and Buildings to Discover Ancient Activities at the Ancient Maya Salt Works Chok Ayin, Belize*

Chok Ayin is part of over 100 known ancient Maya salt works surveyed and mapped in Paynes Creek National Park, Belize. The salt works are associated with wooden architecture preserved below the sea floor and submerged due to sea-level rise. The purpose of the excavations Chok Ayin Building C and Plaza A was to determine the function of the space based on recovered material remains. An 11 m transect was placed in Building C to extend inside and outside of the building to capture activity areas associated with the building. A 2 × 2 m excavation was placed north of Building C, located between Buildings A and B, in order to investigate "open areas." The results of excavations indicate different functions between Building C and Plaza A. Building C is likely a salt kitchen dedicated to boiling brine over fires. Comparatively, Plaza A had more diversity of artifacts. The spatial distribution of artifacts reveals a variety of activities took place at this ancient Maya household group, both for family subsistence and for participating in the broader Classic Maya economy by supplying salt cakes to the inland Maya.

Brouwer Burg, Marieka (University of Vermont), Fiona Haverland (University of Vermont), and Melvin Quilter

[341] *Investigating Specialized Surplus Production of Lithic Tools at Chan Colha, Belize*

Much of what is known about chert extraction, production, and exchange in northern Belize centers on archaeological studies conducted at Colha in the 1980s and 1990s. The site is located in the Northern Belize Chert-Bearing Zone (NBCZ), where high-quality chert outcrops are abundant but heterogeneously distributed across the landscape. Many other archaeological sites are located near or within the NBCZ, yet no other site has received the same degree of research scrutiny regarding lithic organization, nor has much comparative analysis with the Colha assemblages been undertaken. Here, we describe recent excavations at Chan Colha, a lithic production site on the outskirts of Altun Ha, ~20 km south of Colha. We analyze a large assemblage of nonsymbolic chipped stone artifacts containing a high proportion of tranchet-bit adzes and blade tools. This analysis broadens understandings of the regional organization of local production of specialized chert tools and provides critical new data for cross-examining Hirth's (1998) "spatial approach." It also explores how Altun Ha's strategic location proximate to the NBCZ and consequent surplus of a key resource—chert—may have been a driver in the development of a centralized marketplace at the site.

Brouwer Burg, Marieka [79] see Burr, Vivian
 Brouwer Burg, Marieka [35] see Krause, Samantha
 Brouwer Burg, Marieka [341] see Murata, Satoru

Brown, Gloria (HDR)

[73] *Exceeding Expectations: Results of a Five-Year Storage Experiment with Gray Pine Nuts (Pinus sabiniana)*

Long-term food storage is a concern of all but the most mobile cultural groups. In California, the timing of the turn toward food storage is a subject of debate, but it is universally accepted that acorn intensification is associated with food storage economies in most of the state. Early and Middle Holocene archaeobotanical assemblages indicate that prior to the shift to storage economies, pine nuts were also an important resource. The shift away from pine nuts to acorns is commonly attributed to the high fat content of pine nuts and the assumption that they would become rancid within approximately one year, limiting their appeal as a stored resource. This presentation documents the results of a five-year experiment on the storability of gray pine nuts. Results indicate that this resource will store adequately for more than two years, exceeding the threshold for long-term storage needs.

Brown, Kaitlin (California State University Northridge), Jennifer Perry (CSU Channel Islands), and Terry Jones (Cal Poly San Luis Obispo)

[167] *The Current State of the Field in California Archaeology*

This paper revisits the state of archaeology in California, more than a decade after the publication of *Contemporary Issues in California Archaeology* (2012). In the years since, the field has undergone significant changes driven by increased collaboration, new models for accountability, and challenges posed by climate change. While obstacles remain, new frameworks and practices have expanded the approaches to archaeological research and CRM in the region. This introductory paper reflects on the past and the present through a series of interconnected themes, including communication, collaboration, climate change, community, capacity, conservation, curation, curriculum, and continuity. These “C” themes highlight the complexity and possibility embedded in today’s practices across the state. We ask, How are archaeologists rethinking their roles, responsibilities, and relationships? What defines cutting-edge work in an era shaped by new ethical and environmental imperatives? And how might archaeology contribute to more just and sustainable futures, in California and beyond? By weaving together a diverse range of voices, this paper sets the stage for a broader session that aims not only to assess our current state but also to envision and actively shape the future of California archaeology.

Brown, Kaitlin [219] see Bailey, Alva
 Brown, Kaitlin [219] see Scher, Naomi

Brown, M. Kathryn [341] see Cap, Bernadette
 Brown, M. Kathryn [223] see Nowakowski, Lauren

Brown, Mary (University of Tennessee, Knoxville)

[354] *Fertilizer Use on Subsistence Crops Grown at a Nineteenth-Century Enslaved African and African American House Site in West Tennessee*

Historical documentation affirms that fertilizer use was common in the nineteenth century, but we know that this practice was highly variable, given the accessibility of fertilizers, the range of crop-specific needs, and conflicting opinions about the necessity and application of fertilizers. Additionally, most documentation about fertilization practices on antebellum plantations solely focuses on the fertilization of commodity crops. Many other types of plants were cultivated on plantations, and investigating crops grown as food sources for the people who lived and were enslaved on these plantations broadens our knowledge of historic foodways. Here, I use macrobotanical analysis to identify crops that enslaved people cultivated for their own use at the Fanny Dickins Enslaved African and African American House site (40FY303) in Fayette County, Tennessee. Additionally, I use stable isotope analysis to demonstrate that people enslaved at this site fertilized these crops to benefit their own food security. I also examine the botanical remains from two nearby sites, Cedar Grove (40FY325, an enslaved domestic site) and Widow Dickins (40FY462, a manor house site), to augment

our knowledge of plant use and cultivation practices on plantations in West Tennessee.

Brown, Matthew A. (Farmingdale State College, SUNY), Cory Look (Farmingdale State College, SUNY), Reg Murphy (Museum of Antigua and Barbuda), Genevieve Godbout (Archaeologist for Minster of Culture, Quebec), and Tamara Varney (Lakehead University)

[324] *Carved into Caliche: Mortuary Practices and Crisis Mortality at Galleon Beach, Antigua, West Indies*

Excavations Galleon Beach, adjacent to Nelson's Dockyard in Antigua, have uncovered a series of expedient burials, some carved into caliche bedrock, containing exclusively male individuals from adolescence to adulthood. Grave goods, including coffin nails and buttons, together with burial stratigraphy, indicate single and multiple clustered that correspond to periods of elevated mortality documented at English Harbor during the late eighteenth century. The demographic profile and archaeological context suggest these individuals were tied to the naval complex whether as Royal Navy sailors, civilian ship passengers, enslaved or free laborers, or dockyard personnel and likely died during one or more epidemic events. This paper situates the Galleon Beach burials within archaeological frameworks of crisis and mortuary practice, comparing them with Royal Navy epidemic burial sites in Canada and West Africa. We integrate bioarchaeological profiles, soil chemistry data, and archival records to examine institutional responses to mortality within a major naval hub. By focusing on burial expediency, grave construction, and site formation processes, we argue that Galleon Beach offers key insight into the management of death, disease, and labor in Britain's Caribbean naval infrastructure.

Brown, Matthew A. [324] see Look, Cory

Brown, Matthew Tyler (University of Michigan), Emily Orlikoff (University of Michigan), Gabrielle Marsh (University of California San Diego), and Hubert Quispe-Bustamante (Zuayer Consultores & Ejecutores S. A. C.)

[337] *Boxes for the Dead: Domestic Mortuary Practice in Cusco, Peru*

In the Andes, the dead have long been active among the living, but when and how such practices began in Cusco remain unclear. While much has been written on Central Andean ancestor veneration and later Inka practices, little is known about the antiquity of these traditions within the Inka heartland or how their character changed over time. This paper presents evidence for early ancestor veneration in the Cusco region, with the earliest examples dating to the Late Formative (600 BCE–200 CE). We examine a widespread feature found within or adjacent to domestic structures: stone boxes interpreted either as offering receptacles or everyday hearths. Given their consistent association with burials located just below or beside them, we argue these features were components of household mortuary ritual. Drawing on new excavation and bioarchaeological evidence from the Late Formative site of Muyumoqo, alongside earlier excavations across Cusco, we reinterpret these "offering boxes" as material expressions of ancestor veneration that persisted for centuries. Our findings demonstrate the deep antiquity of ancestor veneration in Cusco and highlight how these practices were materially embedded in everyday domestic life. ***This presentation contains images of human remains.

Brown, Matthew Tyler [79] see Phang Del Pozo, Patrick

Brown, Samantha [180] see Milton, Emily

Brown, Shelby [56] see Malik, Mustafa

Brown, Troy, Owen Yeatts, Noah Turner, and David Hyde (Western Colorado University)

[181] *On the North Side of Exclusivity: Structure 30 in La Milpa's Plaza C*

Structure 30 is located on the north side of Plaza C, which itself is to the north of the Tzaman Acropolis, which dominates the southern end of La Milpa, the third-largest Maya site in Belize. As you walk from Plaza A at the north end of the site, a very large and open plaza, through numerous architectural complexes and plaza groups, access to both Plaza C and the acropolis becomes increasingly restricted. All three buildings that surround Plaza C are monumental range structures. Off its northeastern corner, Structure 30 articulates with

Structure 22, the western structure in Plaza B. The north face of Structure 30 and the eastern face of Structure 22 together frame a large reservoir. Its size, proximity to the acropolis, and the limited accessibility suggest this is an important elite space with ceremonial significance. This poster provides a description of Structure 30, an overview of the architecture exposed in 2025, and preliminary thoughts on how it functioned.

Browne Ribeiro, Anna

[215] *Rosemary Joyce's Anthropological Archaeology: A Praxis for the Future*

The work of Rosemary Joyce in archaeology and anthropology has reached far beyond Mesoamerica and the lives and legacies of the Ulua Polychromes that first captured her attention. The corpus of her work, from her innumerable publications to her transformative contributions in public and educational arenas, especially in the area of mentorship, demonstrates that anthropology, to her, is a praxis. Rosemary enacted the outcomes of her work, forming communities of practice across oceans and continents, interweaving her intellectual curiosity and enthusiasm with a commitment to collaborative work, always with a view toward producing more embracing and nuanced knowledge. For me, as I began my graduate studies, this attitude translated into keen enthusiasm for my particular interests and often surprising opportunities to grow as an independent thinker and scholar and to nurture cooperative networks. This relationship and these productive exchanges have continued into the present, as I continue to explore meaningful engagements with archaeology and heritage in this changing world. Rosemary's potent understanding of the myriad and complex ways archaeology actively makes our world has changed, and continues to change, the way her students and interlocutors understand the discipline and how we practice it for the public and for the future.

Brucker, Ryan (SWCA Environmental Consultants), Robin Cordero (SWCA Environmental Consultants), and Joseph Birkmann (SWCA Environmental Consultants)

[194] *The Seventeenth-Century Santa Fe Presidio: Evidence from a Recent Excavation in Downtown Santa Fe, New Mexico*

Founded in 1609, the Villa de Santa Fe became the seat of the province of New Spain in 1610, and in 1621, the Viceroy of Spain ordered the construction of a fort with four towers in a squared location for defense. Although the Presidio de Santa Fe was eventually constructed in the mid-1700s, there is no further evidence from archival records aside from this 1621 edict or from 50 years of archaeological excavations in downtown Santa Fe of a pre-1680 Pueblo Revolt fort. Funded by the Georgia O'Keeffe Museum and a grant from the National Endowment for the Humanities, SWCA excavated the footprint of a new museum building on the site of the 1700s Presidio de Santa Fe and subsequent US Territorial Fort Marcy. To the excavator's surprise, below the remains of the Fort Marcy soldiers' quarters they discovered a defensive fortification trench likely attributable to this initial 1600s Spanish presidio. This poster provides data on the context of discovery, methods of construction, dating of the structure, and associated artifacts.

Brumbaugh, Laura (Washington State University)

[30] *Modern Recipes and Ancestral Ingredients: Inside the Mesa Verde Pantry*

Changes in the non-staple foods used by a community reflect changes in cultural practices, preferences, and circumstances. Identifying these changes necessitates identifying the ingredients in the "pantry" of a community. To do this, I will use a database of archaeobotanical samples to identify non-staple plants used in Ancestral Pueblo cuisine in the Mesa Verde area of the northern US Southwest. I will use data from ethnographic works and modern Pueblo cookbooks to help determine which plants found in archaeological samples could have been used for dietary purposes. As cookbooks are specific to their temporal, spatial, and cultural contexts, I will also examine the cookbooks themselves as a dataset. I will collect data on the use of plant ingredients from over 300 Pueblo recipes and examine patterns in the uses of plant ingredients. Such patterns include the frequency of use of each ingredient, common co-occurrences of ingredients, and changes in plant use over time. This cookbook analysis will help to frame future analyses of the archaeobotanical dataset, in order to identify a culinary community of practice in the Mesa Verde region and examine how the community changed their food over time.

Brunelle, Andrea [200] see Hart, Isaac

Bruno, Maria (University of Nevada, Reno), José Capriles (Pennsylvania State University), and Christine Hastorf (University of California, Berkeley)

[306] *An Introduction to the Taraco Archaeological Project: Reconstructing Domestication and Early Agricultural Lifeways in the Lake Titicaca Basin*

The Taraco Peninsula, Bolivia, on the southeastern shore of Lake Titicaca, witnessed the development of some of the earliest agropastoral societies in the Andes of South America, yet our knowledge of the processes of domestication and the commitment to agriculture lags behind other regions. Beginning in 2022, the Taraco Archaeological Project set out to clarify the earliest stages of the commitment to domesticated plant and species in the Early Formative period (1500–800 BCE) through excavations at two sites, Chiripa and Chiaramaya, and analyses of materials that provide insights into this transition. To contextualize the forthcoming presentations on the results of the excavations and analyses, we present the broader environmental and cultural context of the Taraco Peninsula during the Formative period, as well as the models that consider how climate and human actions interacted to influence the timing and nature of plant, animal, and landscape domestication on the peninsula.

Bruno, Maria [44] see Domic, Alejandra

Bruno, Maria [306] see Hastorf, Christine

Brush, Nigel [101] see Kardulias, Paul Nick

Bryce, William (Logan Simpson), and Jay Franklin (Logan Simpson)

[345] *Tailoring Methodologies to Lithic Landscapes: Case Studies from Two Recent Cultural Resource Management Projects*

Logan Simpson recently completed two projects within lithic landscapes on the southwestern Colorado Plateau of northern Arizona. Both projects required tailoring methodologies to the character of the landscape, project requirements, and data collection. One Class III cultural resource inventory (CRI) included roughly 5,300 acres of Kaibab National Forest (KNF) land that encompasses the “Red Butte lithic quarries,” a sprawling area of discontinuous Kaibab chert outcroppings targeted as toolstone. Logan Simpson and KNF archaeologists developed alternative site standards for defining lithic artifact scatters specific to Kaibab chert within this area. A latter, adjacent CRI confirmed that the alternative site standards identified the boundaries of the lithic landscape. Logan Simpson also completed data recovery investigations on private land within a lithic landscape of the middle Little Colorado River Valley. Roughly 30,000 pieces of flaked stone were recovered, requiring alternative methods in artifact processing and sampling strategies. We present these tailored methods to lithic landscapes and our findings and advocate for tailored methodologies within lithic landscapes.

Brzezinski, Jeffrey (University of Central Florida), Scott Macrae (University of Central Florida), Rodrigo Guzman (University of Central Florida), Daniel Pierce (Missouri State University), and George Micheletti (University of Central Florida)

[99] *Shared Sights, Sounds, and Spaces: GIS Modeling of Ritual Landscapes at El Mirador, Guatemala*

Theatrical performances held profound significance for the ancient Maya, serving as a vital medium for cultural expression, spiritual connection, and communal cohesion. Performances likely took place in a wide range of spatial contexts, but mass spectacles involving large audiences were probably held in plazas—large, open spaces surrounded by temples and other symbolically charged buildings. Despite their prominence in Maya cities, open spaces have not been described or analyzed in nearly as much detail as their built peripheries. In this paper, we take a phenomenological approach to the analysis of plazas that draws attention to the ancient Maya’s intense invocation of the senses, particularly sight and hearing. We focus on open spaces within the built environments of El Mirador, Guatemala. We employ analytical tools such as viewshed analysis and predictive acoustic modeling (e.g., SPreAD-GIS) to estimate audience capacities based on physical parameters—visibility and auditory coherence. By incorporating sensory data and qualitative information alongside traditional spatial data, GIS can be used to explore how the material world actively shaped the lived experiences of the Maya.

Brzezinski, Jeffrey [99] see Guzman, Rodrigo
 Brzezinski, Jeffrey [99] see Macrae, Scott
 Brzezinski, Jeffrey [99] see Micheletti, George

Bubel, Shawn [193] see Porter, Benjamin
 Bubel, Shawn [193] see Weitzel, Jordan

Bubp, Rebecca (VHB)

[345] *From Survey to Stewardship: Reframing the Role of Phase I Data*
 [WITHDRAWN]

Buchanan, Briggs [229] see Surovell, Todd

Buchanan, Courtney (Metcalf Archaeological Consultants)

[219] *Islands of Change and Continuity: Upheaval, Persistence, and Resilience on the Northern Channel Islands during the Ranching Era*

The forcible removal of the Chumash and subsequent sale of the northern Channel Islands in the first half of the nineteenth century was undoubtedly one of the single largest changes in the history of a region with over 10,000 years of continuous human habitation in California. Seemingly overnight, the islands were transformed from the homelands of the highly complex hunter-gatherer-fisher Chumash into ranches and fisheries for Euro-American settler colonists as part of the supposed “civilizing” of the American West. The ecological degradation of the islands under these ranches has been well-documented, and it has been assumed that the more than 10,000-year archaeological record suffered a similar rupture with the advent of the Ranching Era in the 1840s. However, recent archaeological investigations into the historic period of Santa Rosa and Santa Cruz Islands have revealed a very different story: one of change and upheaval by those Euro-American Island owners, but with underlying elements of continuity from those who worked the ranches and fisheries. This paper analyzes and deconstructs previously held ideas of radical destruction and pieces together the fragments into a narrative of persistence and resilience of community, practices, and identities of those who lived and worked on the Islands.

Buckley, Gina (ICArEHB, Universidade Do Algarve), María Fernanda García Hurtado (Universidad Nacional Autónoma de México), Gabriela Solis-Pichardo (Universidad Nacional Autónoma de México), George Kamenov (University of Florida), and Virginie Renson (University of Missouri Research Reactor)

[221] *Lead Isotope Baselines and Human Enamel Analysis at Teotihuacan: Assessing Feasibility for Paleomobility Studies*

Lead (Pb) isotope analysis has increasingly become an important tool in archaeology for investigating artifact provenance and, more recently, human mobility. While this approach has been applied in regions where preservation is favorable and modern contamination is relatively low, such as Europe, comparable studies in the Americas remain limited. In many parts of the Americas, extensive anthropogenic lead and poor skeletal preservation have constrained the development of archaeological Pb-isotope baselines and their application to human remains. This study explores the potential of Pb-isotopes for paleomobility research at Teotihuacan, a major urban center in central Mexico (AD 1–550). Pb-isotope baseline data were established for the Basin of Mexico and surrounding regions using geological and soil samples, including analyses of labile soil fractions to evaluate the influence of modern contamination on natural isotopic signatures. Preliminary Pb-isotope results from human dental enamel are also presented, providing an initial assessment of the feasibility of this method in Mesoamerican contexts.

Buckley, Gina [221] see Foley, Sarah

Buckner, Paul [263] see Gilmore, Kevin

Budar, Lourdes (Universidad Veracruzana), and Gibrán Becerra (COLMICH)**[312]** *Las tramas del Formativo: Dinámicas de la interacción social en la Costa de Los Tuxtlas*

El Proyecto Arqueológico Piedra Labrada-Sierra de Santa Marta-Volcán San Martín Pajapan cubre un área de 391 km² en la región de Los Tuxtlas, desde la cuenca de la Laguna del Ostión, pasando por la zona costera del volcán Santa Marta hasta la cuenca lacustre de Sontecomapan y Catemaco. A partir de diferentes estrategias de investigación en esta área (recorrido de superficie, análisis de modelos de relieve derivados de lidar, excavaciones sistemáticas, mapeo topográfico, muestreo de suelos y otros) se ha documentado un extenso asentamiento arqueológico cuya temporalidad abarca desde el Formativo (1400 aC) hasta el Posclásico temprano (1200 dC). A partir de los resultados de investigación, se discuten la cronología y las características de la ocupación del Formativo (1400 aC-100 dC) en esta área. Se abordan los datos relacionados a las transformaciones en sitios con arquitectura monumental, así como de las ofrendas constructivas documentadas y su asociación con las pautas de organización espacial, la exhibición de escultura pétrea y la reutilización de los espacios públicos. En resumen, se proporciona un panorama actualizado del periodo Formativo en la costa y cuencas lacustres de Los Tuxtlas y de su relación con los cambios y fluctuaciones en el Sur de Veracruz.

Buikstra, Jane [297] see Hannigan, Elizabeth

Bullard, Adrianna [81] see Carmody, Stephen

Bupp, Susan [101] see Celia, Claudia

Buratti, Heidi (CSU, Los Angeles), Amira Ainis (California State University, Los Angeles), and Amy Gusick (Natural History Museum Los Angeles County)**[50]** *Comparing and Understanding Rural and Urban Food Habits and Culinary Practices in 1880s–1940s Southern California, USA*

Historical zooarchaeology uses an integrative approach to analyze faunal remains and reconstruct historic culinary practices, food habits, waste disposal, and broader human-animal interactions. This project seeks to contextualize the lived experiences of historical communities through faunal analysis and compare the foodways of rural and urban households at an historic neighborhood in Los Angeles (CA-LAN-LUCAS) and a coastal agricultural site (CA-ORA-685H) in Orange County. The CA-LAN-LUCAS faunal assemblage contains materials from an urban Los Angeles neighborhood that was inhabited from the late nineteenth to the mid-twentieth century while the CA-ORA-685H faunal assemblage mostly represents occupations from the early to mid-twentieth century. More than 600 faunal specimens were identified, quantified, and evaluated for taphonomic signatures including cut marks associated with butchery-styles commonly found in California historic archaeological sites and thermal alteration, which was quantified with a burned bone scale. Additionally, statistical analyses were used to compare the distribution of faunal bone and the meat-yield economic index for both locations. Archival records, historical food preparation books, and excavation reports provided context for trace diachronic changes in meat consumption and waste practices observed. Combined these data suggest shifting population dynamics, historical events, and landscape alterations influenced long and short-term culinary behaviors in Southern California.

Burger, Richard [301] see Sacco, Samuel

Burhenn, Madison (Syracuse University), and Paige Emerson (Syracuse University)**[22]** *Institutional Inheritance: The Legacy of a Medical Teaching Collection at Syracuse University*

The use and display of skeletal collections has been a subject of charged discourse within anthropology in recent years, but less public attention has been focused on the management of smaller teaching collections. In 2023, as part of a group of graduate and undergraduate researchers, we began efforts to create an inventory of a skeletal teaching collection currently housed by the Syracuse University Anthropology Department. This collection was inherited from the former Syracuse University College of Medicine upon the college's acquisition by SUNY Upstate Medical University in 1950, and all associated provenance was lost in the institutional transfer. By documenting taphonomic and pathological features of the commingled remains, we were able to establish biological profiles for some individuals formerly represented by disarticulated elements

throughout the collection. This paper reflects on our experience as part of this research team and discusses best practices when working with an unprovenanced legacy collection, particularly in an instructional setting. In doing so, we engage with the history of the acquisition of skeletal remains and grapple with the ethical uncertainties that are inherited alongside the resulting collections. *****This presentation will include images of human remains.**

Burke, Adam (Texas A&M University)

[93] *Scoping out the Landscape: Petrographic Approaches to Chert Provenance in Florida, USA*

For over 40 years, petrographic characterization has served as the main approach to toolstone provenance studies in Florida. Petrographic approaches to chert characterization are particularly suited to the southeastern United States, as a number of different and fossiliferous toolstone-bearing formations exist. As more comparative geological samples are collected and more archaeological studies are conducted, this methodological approach becomes increasingly more robust. This paper presents a summary of current methods and research focused on chert provenance studies from northern Florida and southern Georgia. Particular attention is paid to specific methodological approaches, best practices for conducting geologic sampling in the field, and applying petrographic data to archaeological questions. A summary of recent archaeometric findings is also presented, with a focus on reconstructing late Pleistocene and early Holocene toolstone catchments and human mobility through the use of chert provenance studies. The successful implementation of petrographic chert provenance studies in Florida can serve as a case study and model for the application of microscopic approaches to toolstone sourcing in other, chert-rich regions.

Burke, Adam [180] see O'Connell, Ellen

Burke, Adam [319] see Thulman, David

Burke, June

[72] *Observing a Landscape of Value in Late Archaic Arizona: Using Shells to Visualize Ancient Regional Exchange*
Spanning over two millennia, the Late Archaic in the southwestern United States and northwest Mexico was a period defined by diversity. As new early agricultural communities emerged, they were integrated into networks of exchange that allowed access to large quantities of nonlocal material, including marine shells. Evidence from prior work on the shell assemblage of the Tucson Basin suggests that these items held special value in the day-to-day lives of Late Archaic agriculturalists. This regime of value likely created preferred deposition patterns for shell jewelry based on its material properties, including source location. Current attitudes toward exchange during the Late Archaic would suggest that trade was relatively passive and clinal. However, an increasing amount of research argues for a more active role of trade connections in migration and community formation during this period. Using the low number of shell sourcing regions as a diagnostic, I summarize extant literature on the subject to visualize how the early farming communities of Late Archaic Arizona deposited shell material within a site based on source location. Comparing and contrasting these patterns between the Colorado Plateau and Sonoran Desert provides novel insights into how networks of exchange effected the value of objects regionally and locally.

Burke, Kyle [268] see Eerkens, Jelmer

Burke, Kyle [45] see Parker, Glendon

Burke, Ryan, Ismael Sánchez-Morales (Arizona Museum of Natural History), Eden Churi, Megan Raimbault, and Jesicka Aguilar

[115] *What's the Point? Lithics without Context: The Arizona Museum of Natural History Projectile Points Project*

The Anthropology Department of the Arizona Museum of Natural History (AZMNH), located in Mesa, Arizona, holds a collection of nearly 1,000 lithic projectile points from multiple regions and time periods. Most of these artifacts came to the museum during the 1980s and 1990s as donations from private collectors, lacking detailed provenience information. However, many of them are complete, exceptionally well-preserved specimens from the Southwest and neighboring regions. These materials have potential to serve as a comparative collection for typological identifications of archaeological materials from recent academic and CRM projects. This poster presents an update on the "AZMNH Projectile Points Project," which entails (1)

the creation of a database containing the typological, metric, and other qualitative data from the AZMNH projectile points; (2) high-definition photographs of each artifact; and (3) the 3D scanning of the best-preserved specimens representing the identified types in the collection. This information will be available as free online resources through the new AZMNH eMuseum. This project highlights the value of archaeological legacy collections with limited contextual information as a resource for new research projects.

Burkett, Justin [306] see Capriles, José

Burks, Jarrod (Ohio Valley Archaeology Inc.), and Albert Pecora (Ohio Valley Archaeology Inc.)

[77] *Crash Sites versus Graves: Varying Approaches to Maximize Field Time and Recovery Outcomes*

Two of the more challenging aspects to recovery missions are the (1) varied physical settings and (2) distinct scenarios leading up to the final disposition of the missing soldiers' remains. In this poster we compare the methods we have used as partners working with DPAA in two very different settings: plane crash sites versus individual graves. In both settings we use geophysical survey, but in different ways, to help guide excavation unit placement to maximize our time in the field. Covering large areas and with multiple instruments is an important component of the geophysical surveys. Oftentimes, when only one instrument is effective at detecting possible targets of interest, the data from others are helpful in better understanding the archaeological context. This is especially important when trying to locate small target features, such as graves.

Burnett, Ian [34] see Davis, Kaitlyn

Burnett, Paul (SWCA Environmental Consultants), Kristin Barker (Beyond Yellowstone Program), and Lawrence Todd (GRSLE Inc.)

[111] *Archaeological and Ungulate Modeling in the Shoshone National Forest, Wyoming*

We extend our comparison of archaeological probability models and wildlife movement in the Shoshone National Forest by adding mule deer GPS collar data to earlier elk and bighorn sheep results. Using a shared set of environmental covariates (elevation, slope, relative elevation, solar radiation, proximity to water, travel cost, aspect), we build species-specific movement models and archaeology probability models and evaluate fit with complementary techniques. Elk corridors show strong spatial overlap with elevated archaeological probabilities, consistent with repeated human use along broad, traversable terrain. In contrast, bighorn sheep concentrate in rugged, cliff-adjacent settings that diverge from high archaeological probability, implying different land-use logics and procurement strategies. Although bison were likely important in regional diets, comparable movement data are not available for this analysis, so they are not modeled here. Together these patterns support an interpretation of mountain communities in which communal bighorn hunts in predictable winter terrain fostered social organization and identity, while elk and deer were more often taken by encounter hunting in shared landscapes. We use this framework to clarify past behavior by identifying where people moved, hunted, and organized across these mountain landscapes.

Burns, Gregory (University of Utah), Hayley Kievman (University of Utah), Alexandra Greenwald (University of Utah), Alan Leventhal (Muwekma Ohlone Tribe of the San Francisco Bay Area), and Charlene Nijmeh (Muwekma Ohlone Tribe of the San Francisco Bay Area)

[268] *Stable Isotope Analysis of Human Third Molars Reveals Sustained Broad-Spectrum Foraging Behavior in Late Pleistocene / Early Holocene California*

This paper examines inter- and intra-individual dietary variation revealed through stable isotope analysis of human third molars recovered at the oldest and largest burial sites (CA-SCL-1070; Mánni Húyyú Muwékma Yatiš Túnnešte-tka) in California. Calibrated AMS dates from human skeletal remains and charcoal samples recovered from the site place it in use from ~14,000 to ~7,000 cal BP. Third molar stable isotope signatures suggest that early peoples buried in Mánni Húyyú Muwékma Yatiš Túnnešte-tka were broad spectrum foragers, mostly subsisting on C₃ plants and freshwater fish. Very few individuals exhibit intra-individual variation, reflecting a relatively stable diet over many individuals' lives. Earlier burials at this site show enriched carbon and nitrogen, potentially signifying a greater inclusion of terrestrial protein in the diet alongside continued reliance on C₃ plants and freshwater fish.

Burns, William (Dudek), Nicholas Hanten, Adam Giacinto (Dudek), and Amy MacKinnon (California High-Speed Rail Authority)

[334] *Precontact Archaeological Patterns and Findings along the California High-Speed Rail: Fresno to Bakersfield*
Archaeological investigations in support of California High-Speed Rail Construction Package 2-3, Fresno to Bakersfield, have been underway for well over a decade. This presentation provides an overview of archaeological findings since the initiation of construction in 2015. Archaeological surveys, excavations, and monitoring have allowed for direct observation of subsurface conditions, as well as testing of preconstruction geoarchaeological models. In addition, a broad range of precontact archaeological materials have been documented along this section of the CHSR alignment, with cultural materials spanning the Late Prehistoric period into the Archaic. Precontact patterns are described based on the documented assemblage of recovered archaeological material, set in the context of important precontact landscape features such as the shorelines of ancient Lake Tulare.

Burr, Vivian (University of Vermont), Rose Pool, Marieka Brouwer Burg (University of Vermont), Jorge Garcia, and Nicolas Perdrial

[79] *Methodological Recommendations for Accurate and Precise Sourcing of Obsidian Using pXRF*
Rapid and relatively inexpensive, portable X-ray fluorescence (pXRF) has various field-related advantages over lab-based analytical methods. However, despite being accurate, individual instruments remain idiosyncratic and until readings are compared with lab-analyzed source collections, results are generally considered qualitative rather than quantitative. To probe instrument-dependent differences, we analyzed two obsidian source collections (MURR and PYRO) and two obsidian archaeological assemblages, corresponding to ~150 samples, with two pXRF instruments: an Hitachi XMET 8000 and an Olympus Vanta C. Three Compton-based manufacturer-designed calibration modes with variable beam and parameter settings were employed to determine the composition in trace and major elements of the obsidian samples. We present the results of our statistical analyses of these different methods, focusing on the technical limitations impacting accuracy and precision across collections. Based on these results, we describe a set of recommended analytical protocols including beam characteristics, number of shots, and measurement time, along with consideration of optimal sample factors such as sample thickness, rugosity, clarity, and color. The methodological recommendations generated by this work outline strategies for optimizing sampling efficiency and efficacy across multiple collections and instruments and should be useful for a variety of archaeological practitioners working to source obsidian using pXRF.

Burt, Patrick (University of Nevada, Reno)

[335] *From Songs to Sites: Indigenous Data Sovereignty in the Washoe Digital Archive*
As a Washoe tribal member and PhD student in anthropology, I explore the Washoe Digital Archive housed in the Tribal Historic Preservation Office (THPO), a vital instrument of cultural resilience and sovereignty. Housing Washoe language-learning materials, traditional songs, oral histories, and archaeological documentation, the archive embodies our efforts to preserve and revitalize Washoe heritage. This presentation examines how Indigenous data sovereignty can guide equitable digital governance in tribal archives. I emphasize the necessity of Washoe-specific policies that define ownership, control, access, and possession of our cultural data, thereby resisting colonial extractive research paradigms. Key strategies include forming a governance council of elders, language and cultural revitalization efforts, and policy development. Producing tiered access processes aligned with Washoe cultural protocols has cultivated archival capacity within the Tribe. Methodological reflections highlight the insider-outsider positionality intrinsic to my dual roles, blending academic tools with a commitment to Washoe self-determination. Ultimately, this research argues that tribal-led digital governance in the Washoe Digital Archive is not only a technical infrastructure but a cultural lifeline affirming Washoe sovereignty in digital spaces.

Busquets-Vass, Geraldine [221] see Neff, Nadia

Bustamante, Andrés (University of Oxford)

[260] *Tracing the Tonalamatl Aubin's Lost Pages*
The *Tonalamatl Aubin*, a sixteenth-century central Mexican divinatory manuscript, is incomplete. Since its

earliest extant record in the juridical inventory of Lorenzo Boturini in 1743, scholars and collectors have noted that it is missing the first two of its original 20 pages. Admittedly, this absence is not entirely unique since most Mesoamerican manuscripts have suffered some degree of damage or loss. Yet, across three centuries, the *Tonalamatl Aubin* emerged as a focal point for broader debates about the recovery of missing content in codices. Following the excavation of the Aztec Calendar Stone in 1790, antiquarians produced reconstructions of the *Tonalamatl*'s lost pages as part of their studies of Indigenous calendar systems. Moreover, after the *Tonalamatl*'s illicit export from Mexico to France in 1840, these reproductions became entangled with a new politics of loss. This paper traces the efforts of archaeologists, artists, diplomats, and looters alike who grappled with the *Tonalamatl*'s missing pages—each motivated by their own scholarly, political, and theological concerns about time and absence—to examine the limits and possibilities of archival reconstructions.

Bustamante-Salazar, Luis [302] see Andrade, Pedro

Bustos, David, Edward Jolie (University of Arizona), Thomas Urban (Cornell University), and Daniel Oddes

[353] *Playas as Ice Age Archives for Early People from the American Southwest*

Recent discoveries at White Sands National Park have deepened our understanding of fossil track preservation in desert playas. These findings show that the exceptional preservation at White Sands is not unique but results from environmental conditions common to Ice Age pluvial lake systems. These systems experienced repeated wet and dry cycles that were essential to forming, burying, and preserving ancient tracks. This research has broad implications for archaeological and paleontological work across the western USA, where many dry basins once held similar lakes. These areas may still contain undiscovered fossil trackways, offering new insights into Ice Age human and animal activity. Footprint preservation in playas is driven by alternating wet and dry climates. Wet periods deposited fine sediments—ideal for capturing tracks—while attracting animals and people to water-rich environments. As conditions dried, organic-rich layers and later carbonate or salt crusts sealed and protected the tracks. These cycles formed a sedimentary “layer cake” that can preserve delicate prints for tens of thousands of years. This process suggests that fossil footprints could be far more common in ancient lakebeds than previously recognized.

Buti, David (CNR ISPC), Davide Domenici, Elodie Dupey (Universidad Nacional Autónoma de México), and Sara Mattana (CNR, Perugia, Italy)

[257] *The Colors of Codex Magliabechiano: An Analytical Approach*

As part of a larger project devoted to the multidisciplinary study of the *Codex Magliabechiano* (Biblioteca Nazionale Centrale di Firenze, Banco Rari 232), the MOLAB mobile laboratory of the European Research Infrastructure for Heritage Science (E-RIHS) recently conducted a campaign of noninvasive scientific analyses. Using the same multi-technique approach previously applied to other Mesoamerican codices, the team employed external reflection infrared spectroscopy, Raman spectroscopy, UV-VIS-NIR reflectance, and fluorescence spectroscopy, as well as hyperspectral imaging and digital microscopy, to investigate the composition of the colors used in the famous colonial manuscript. At the same time, they integrated this data with spatial information to map the distribution of materials across the manuscript's pages and sections. In this preliminary presentation of results, we describe the color palette used by the Indigenous artists and offer insights into their painting practices. We then compare these findings with those from other colonial manuscripts—among them the cognate *Codex Tudela*—to situate the *Codex Magliabechiano* within broader trends of technological change in early colonial central Mesoamerica.

Buti, David [97] see Bellomia, Valeria

Butler, Amanda [30] see Bell, Emma

Butler, Raelynn [184] see Garland, Carey

Butler, Virginia (Portland State University), Briece Edwards (Confederated Tribes of Grand Ronde), Lyssia Merrifield (The Archaeology Roadshow), Virginia Parks, and John Pouley (Oregon SHPO)

[318] *Building Relationships with Collectors through Oregon's Archaeology Roadshow*

The Archaeology Roadshow is a free, annual public outreach event that takes place in four communities across Oregon and is designed to promote stewardship of regional heritage and educate citizens of all ages about the nonmonetary value of archaeology. The Roadshow helps build relationships with collectors in two main ways. First indirectly, visitors to the Roadshow, including collectors are invited to engage with hands-on exhibits and activities created by representatives from Tribes, agencies, private companies, avocational organizations, museums, and universities to learn about local archaeology/history projects, the range of entities caring for cultural resources, and why the past matters to us all. More directly, the Roadshow fosters relationships with collectors through an Expert Panel, where collectors bring their artifacts to learn more about their age, function, including how we determine these things, and larger cultural importance. During these respectful, nonjudgemental interactions, the two parties discuss legal and ethical issues surrounding collecting. Over our 10-plus-year project, collectors have shared knowledge about multiple archaeological sites, which have subsequently been recorded in state records. This presentation will review our successes, challenges and plans to expand and improve in the future.

Butler, Virginia [158] see Lubinski, Patrick

Butler, Virginia [158] see Wolverton, Steve

Butrón, Agustín (Instituto de Investigaciones Antropológicas, UNAM), Luis Barba (UNAM), and Jorge Blancas (IIA-Universidad Nacional Autónoma de México)

[164] *Geophysical Studies in Teopancazco and Adjacent Streets: Defining Limits and Configuration of a Neighborhood Center in Teotihuacan*

The interdisciplinary project “Teotihuacan: Elite and Government,” directed by Linda Manzanilla, was conducted at Teopancazco, a neighborhood center in San Sebastián Xolalpan, over 13 field seasons between 1997 and 2005. Earlier research in this area had been undertaken by Leopoldo Batres in the late nineteenth century, and later by Paula Krotser and Evelyn Ratray in 1980. Building on archaeometric methodologies successfully applied at Ozttoyahualco, one of the primary goals at Teopancazco was to define the limits of the neighborhood center. Before excavation, aerial photographs taken with a tethered balloon and a series of geophysical surveys—including magnetic gradient, electrical resistivity, and ground-penetrating radar (GPR)—were carried out to identify subsurface architectural features. During excavation, low-altitude images were obtained with a custom pneumatic tower, while GPR was applied directly to exposed floors to detect underlying structures. Additional GPR surveys in the adjacent streets aimed to confirm whether the center extended beyond the excavation area, as earlier maps by Millon suggested. This contribution reviews the role of the Laboratory of Archaeological Prospection in the project, highlighting the application of geophysical methods nearly 30 years ago and their importance for understanding the spatial organization and boundaries of one of Teotihuacan's most significant neighborhood centers.

Butrón, Agustín [310] see Estrada, Victoria

Bvocho, Godhi [162] see Mtetwa, Ezekia

Byram, Jennifer (University of Arizona)

[258] *Returning to the Fabric of Collections-Based Research: Systematic Documentation of Ethnographic Perishables*

For students of perishable material culture, the lack of preserved material and the fragmentary nature of extant materials make for a challenging field of research; further, perishables research has long been overlooked within understandings of the human past. However, one significant area of research lays relatively understudied by archaeologists: ethnographic collections. While previous generations of museum curators and material researchers focused their efforts on documenting ethnographic collections, this research practice has rarely been approached in a systematic way beyond sparse comparative use for study of archaeological materials. This paper presents the results of a systematic technical study of US Southeast

Native American ethnographic collections of textiles and basketry in over 40 museums in the United States and Europe. Through a discussion of technical style analysis and review of available provenance records, this paper draws attention to the need to reassess ethnographic collections which have long been neglected and hold importance for holistic understandings of perishable traditions that continue through the present day. Such a study can serve to facilitate increased access to collections for Tribal members and specifically artists, increase knowledge of collections to be made available for NAGPRA consultations, and improve object interpretation for the broader public.

Byram, Scott (Byram Archaeological)

[271] *Geophysical Survey in Coastal Settings of California and Oregon*

Low impact survey methods are of increasing importance in North American archaeology. This paper discusses nondestructive geophysical techniques used to document archaeological sites in a variety of settings on the west coast of North America. Ground-penetrating radar (GPR) is often the most informative subsurface scanning technique, providing 3D datasets that guide interpretation of site stratigraphy and feature composition and distribution. No one GPR system is suitable for all settings, and surveys using higher and lower frequency antennae as well as single and multichannel systems are considered. Given the extent of residential, commercial and industrial development in much of coastal California and Oregon, GPR survey is often the only technique available for nondestructive archaeological site assessment. This paper discusses site types ranging from Native American shell mounds and house floors in stratified dunes, to historic cemeteries and shipwreck debris. These include sites that have been identified based on archival maps and other records predating development.

Byrd, Brian [273] see Pollack, David

Cabanes, Dan [353] see Ramrekha, Marc

Cabello, Gloria (Estudios Aplicados Antropología UC), and Francisco Gallardo (Universidad Católica de Chile)

[32] *Rock Art on the Atacama Desert Coast (Northern Chile): Itinerancies and Prehistory / Arte rupestre en la costa desértica de Atacama (norte de Chile): Itinerancias y prehistoria*

The rock art of the Atacama Desert coast (northern Chile) has not been thoroughly investigated. Only a few reports have illustrated the presence of this archaeological evidence on the coast. Because of this, very little progress has been made regarding its spatial distribution, formal variability, and chronology. In this paper, we offer a summary of our research, which contributes to a first general picture of coastal rock art. Through this, we can begin to offer social and cultural propositions regarding the movement of ideas, objects, and people in a marine hunter-gatherer environment that remained active from the early Holocene to the colonial period.

Cabello, Gloria [32] see Correa Gurrulat, Itaci

Cabello, Gloria [32] see Pestle, William

Cabello, Gloria [32] see Sabo, Allison

Cabrera, Kevin, and Nicole Smith-Guzmán (Smithsonian Tropical Research Institute)

[311] *Dental Wear and Cultural Practices: Biocultural Insights from Precolumbian Panama*

The isthmus of Panama, a land bridge linking North and South America that was at the center of the Isthmo-Colombian Area in precolumbian times, contains diverse archaeological sites that reflect the cultural development and interactions of its inhabitants over tens of thousands of years. Despite its importance and long-standing role in forming major archaeological understandings over the past century, the isthmian region remains relatively underexplored in bioarchaeology. This study presents a preliminary analysis of dental wear patterns present among 51 human individuals buried at three precolumbian archaeological sites in central Pacific and western Caribbean areas of the isthmus of Panama, focusing on habitual dental utilization, tool-assisted behaviors, and social roles. Patterns of lateral anterior and buccal wear reveal practices tied to craft specialization and daily activities, while early evidence of possible medicinal dental treatment suggests the first

known attempt at dentistry in the Isthmo-Colombian Area. Teeth, as durable indices of biocultural lifeways, illuminate subsistence, technology, and identity. Comparisons with modern Panamanian populations highlight cultural continuity and transformation, contributing to broader discussions of adaptation and resilience in precolumbian societies.

Cagnato, Clarissa (Archéologie des Amériques)

[310] *Bitter, Weedy, Sweet, and Spicy Plants in a Fourth-Century Feast at Teotihuacan: Reimagining the Scents, Flavors, Tastes, and Colors of a Cultural Melting Pot*

Excavations at the Plaza of the Columns Complex in the heart of Teotihuacan's ceremonial precinct have revealed that Maya elites probably inhabited the site during the Early Classic period (third–fourth centuries CE) and played a role in the development of the city and its associated rituals of rulership. This paper focuses on a fourth-century monumental feasting deposit known as Offering D1, which yielded thousands of ceramic sherds, as well as animal and plant remains. Systematic paleoethnobotanical investigations of this context have revealed a rich and varied botanical assemblage composed of both macro- and microremains, the latter recovered from a range of ceramic vessels. Analysis and subsequent results suggest the presence of both local and foreign plant resources, with the latter possibly imported from lowland areas beyond the Teotihuacan Valley. Food is known to be a powerful means of structuring and maintaining identities, and these ingredients were probably used to prepare meaningful and symbolic dishes that reflected the cultural affiliation of those involved. Notably, incorporating foreign plant foods such as cacao and manioc may have been another way for Maya dignitaries to establish their position in a changing social and political landscape.

Cail, Cheryl [169] see James, Sydney

Cajigas, Rachel (University of Alabama), Anna Semon (American Museum of Natural History), Elliot Blair (University of Alabama), Alain Plattner (University of Alabama), and Matthew Sanger

[46] *Geophysical Evidence for Planned Construction at the Musgrove Shell Ring, St. Catherines Island, Georgia*
Methods of shallow geophysical prospection are powerful, noninvasive tools that can be used for guiding archaeological excavations, documenting sites before they are destroyed by high impact activities, such as excavation, and providing additional site data that can help archaeologists make interpretations. Our recent research on Musgrove Shell Ring (9Li2169), a Late Archaic shell ring on St. Catherines Island, Georgia (USA), is presented here to illustrate how various shallow geophysical prospection methods can be incorporated into the research design at several different stages for a comprehensive understanding of site formation processes. Five geophysical surveys were conducted prior to excavations: magnetic gradiometry, electrical resistance, ground-penetrating radar, electrical resistivity tomography, and time domain induced polarization. These geophysical methods revealed that the C-shaped shell ring had linear anomalies in the shell free areas and subsequent archaeological excavations identified evidence of ground surface modification prior to construction of the shell ring. Together these data suggest that the shell ring was originally planned as a complete, closed ring of shell. A smaller, planned ring may have also been identified in the geophysical data. These results suggest that archaeological geophysics can be used to address questions about intent and community planning of such Late Archaic structures.

Cajigas, Rachel [123] see Yeahia, Sabrina

Cakirlar, Canan (Groningen University)

[31] *Why Did Fallow Deer Become (Almost) Extinct in Its Original Homeland?*

Fallow deer are now found across the globe, and recent research confirms that the vast majority of populations originate from the coastal regions of present-day Türkiye. Within Türkiye, however, their natural range has contracted to a single national park. This stands in sharp contrast to their substantial representation in the archaeological record west of Çatalhöyük in Central Anatolia, from the Neolithic to the Roman period (ca. 7000 BCE–600 CE). This paper examines the zooarchaeological and stable isotopic evidence for fallow deer habitat and diet from a range of sites and periods, including, but not limited to, Neolithic Ulucak, Istanbul, and Late Bronze Age Troy. It addresses the central question: What explains the

rise and subsequent decline of fallow deer in Anatolia? In doing so, it engages with several existing hypotheses concerning the species' (pre-)history, including ranching, adaptation to agricultural landscapes, ritual use, overhunting, and habitat loss. It also considers the role and history of wildlife management by early territorial polities, as well as the impacts of intensive agriculture on mammalian populations, and what this all means for current environmental policies.

Calero, Juan Pablo [40] see Salame, María

Calistri, Hannah (California State University, Los Angeles), Amira Ainis (California State University, Los Angeles), and Tamara Serrao-Leiva (San Bernardino County Museum)

[258] *Preliminary Results of Exploratory pXRF Analysis on Basketry at San Bernardino County Museum, California*
 Portable X-ray fluorescence (pXRF) is a widely applicable method of nondestructive elemental analysis that is advantageous for use on sensitive objects such as anthropological collections undergoing repatriation. However, pXRF analysis of woven plant fibers is under explored due to the inherent heterogeneity and complexity of plant materials. While woven fibers and plant materials are suboptimal for quantitative pXRF analysis, qualitative elemental analysis can suffice for identifying contaminants and pigments on these objects. Our research focuses on examining Native Southern California basketry housed at the San Bernardino County Museum for presence of heavy metal pesticides, which were commonly used to treat museum collections until the mid-twentieth century. In Frahm and Doonan's article on pXRF in archaeology, they argue that the technological "revolution" of pXRF in the field has outpaced methodological frameworks (2013). Our approach considers the limitations of pXRF analysis in anthropological research as we compare its efficiency and accuracy to swipe test methods. This presentation will illustrate our approach to examining woven materials, the limitations and successes of using pXRF as a nondestructive tool for identifying heavy metal pesticides, and future possibilities for responsible and respectful elemental analysis of curated objects.

Calla Maldonado, Sergio [40] see Salame, María

Callaghan, Michael (University of Central Florida), Brigitte Kovacevich (University of Central Florida), Karla Cardona (University of Central Florida), Rodrigo Guzman (University of Central Florida), and Scott Macrae (University of Central Florida)

[99] *The UCF El Mirador Lidar Project: Advancing Archaeological Research in Northern Petén*

The UCF El Mirador Lidar Project marks the first new archaeological initiative in the El Mirador region in nearly four decades, reviving research at one of the most important Preclassic Maya sites in Mesoamerica. Located within the Maya Biosphere Reserve of northern Petén, Guatemala, El Mirador is known for its monumental architecture and early urban planning, yet its remote location has hindered sustained investigation. This new project, led by the University of Central Florida and funded by Fundación Patrimonio Cultural y Natural Maya (Pacunam), integrates lidar analysis with field excavation to reassess the site's development and regional significance. Beginning in 2022, researchers digitized and analyzed lidar data covering 512 km² of terrain surrounding El Mirador, followed by ground verification and targeted excavations in 2025. This paper introduces the session by outlining the site's historical background, new project research goals, and methodological advances. It also previews the session's contributions to understanding landscape morphology, settlement distribution, monumentality, ritual practice, and environmental adaptation. The project represents a step forward in reconstructing the social and ecological dynamics of the Preclassic Maya Lowlands.

Callaghan, Michael [99] see Cardona, Karla

Callaghan, Michael [99] see Clark, Jessica

Callaghan, Michael [99] see Gonzalez, Jesus

Callaghan, Michael [99] see Guzman, Rodrigo

Callaghan, Michael [99] see Sherwood, Chloe

Callis, Marc

[58] *T-Doors and Mayan Glyphs in the North American Southwest*

Traditionally, the North American Southwest has not been seen as part of Mesoamerica; however, the two

areas interacted frequently and extensively in ancient times. I propose that the T- or Tau-shaped doors emblematic of so much of the Southwest's architecture post-AD 1000 are one result of that contact. T-shapes like those in the North American Southwest can be found as wall perforations at the late Classic—and highly unique—Maya city of Palenque in Chiapas state, Mexico. Additionally, the doorways of many Terminal Classic Maya religious buildings also incorporate T-shapes. Also, T-shapes can be found as components of other architectural elements, such as friezes, throughout Mesoamerica. The T-shape is a representation of the Mayan glyph IK'—a glyph that signifies both wind and breath and, by extension, life or spirit; this is widely accepted by scholars within the Mesoamerican cultural context. This poster demonstrates through comparison with Mesoamerican architecture (especially Maya), that these Mayan T-shapes, the most basic form of the Mayan glyph IK', inspired the T-shaped doors of the Southwest. Furthermore, the poster will illustrate that T-doors were constructed as part of a broader diffusion of Maya glyphs to the Southwest as iconography not restricted to the IK' alone.

Callisaya, Luis, Mirtha Gomez-Saavedra (Pennsylvania State University), and José Capriles (Pennsylvania State University)

[306] *Recent Archaeological Investigations at the Chiaramaya Site, Taraco Peninsula, Bolivia*

Evidence from sites surrounding Chiripa contributes to demonstrating the complexity associated with early communities and their dynamic role in the earliest social formation in the southern basin of Lake Titicaca. Chiaramaya is a settlement located a mile west of Chiripa that, to date, had not been the focus of any systematic archaeological investigation. In 2023, the Taraco Archaeological Project conducted the first investigations at the site. An area occupying 8 m² allowed the identification of a complex sequence of activities, including significant material remains, including several features such as pits and occupation surfaces. The excavation did not reach culturally sterile levels and radiocarbon dating allows us to organize the site's stratigraphy and propose an initial sequence of use and occupation primarily concentrated between the Early and Middle Formative periods. The burial of an infant was documented among the deepest strata. The artifact remains associated with this burial, dedicated to the veneration of ancestors, contributes to our understanding of the individual identity formed from the relationships and social memory that underpin community building. Comparing Chiaramaya and Chiripa suggests that these village sites proliferated on the Taraco Peninsula and potentially competed for resources and dominance.

Callisaya, Luis [91] see Blom, Deborah

Calongos Curotto, Manuel (University of Pittsburgh)

[309] *The Inca Imperial Landscape in the Cañete Chaupiyunga, Peru*

According to ethnohistorical research, the Cañete Valley, located 150 km south of Lima, was inhabited by two political entities, or *señoríos*: the Guarco in the lower portion of the valley and the Lunahuaná in the middle section of the valley, or *chaupiyunga*. While the Guarcos resisted the Inca conquest for some time, the Lunahuaná surrendered peacefully. The Incas built a major site of Incahuasi in the *chaupiyunga* that served as a military garrison to conquer the Guarco. After the conquest, it was converted into a massive provincial administrative center. The *chaupiyunga* has perfect climate and soil conditions for growing essential crops, such as maize, pepper, cotton, and coca leaves, among others. The Incas established a complex network of facilities that included not only small administrative centers but also storage complexes, road stations, shrines, and cemeteries. At the same time, they sponsored the expansion of local elite households, and local leaders were introduced as imperial agents to consolidate Inca power in the region. This presentation examines the processes of annexation and consolidation of the Cañete Valley *chaupiyunga*, resulting in the creation of an imperial Inca landscape. We include data from settlement patterns and spatial analysis, as well as surface collections.

Cameron, Asa (Penn State University), Christina Carolus (Pennsylvania State University), Sergei Ivanov (Kyrgyz National University), and Malike Primidova (Kazan Federal University)

[314] *Disentangling Long-Term Agropastoral Dynamics of the Inner Tian Shan: A Preliminary Case Study from Kyzyl Unkur I (Juuku Valley, Kyrgyzstan)*

Zooarchaeology and paleoethnobotany represent underdeveloped and underemployed subfields within

Central Asian archaeology. This lacuna is especially stark in Kyrgyzstan, where the application of each set of methods is only in its infancy. Their successful integration nevertheless holds singular potential to address long-standing anthropological questions in this understudied region at the heart of Central Asia. Here we present a preliminary overview of floral and faunal datasets derived from ongoing excavations at Kyzyl Unkur I, a stratified cave site located in the Juuku Valley of eastern Kyrgyzstan (Issyk-Kul region) with evidence of long-term human and livestock occupation. Subject to an extensive AMS dating regimen, this developing case study provides a sequence of temporal anchors to better understand late Holocene trends throughout the Juuku Valley, the greater Inner Tian Shan region, and Central Asia more broadly. These trends include the development of agricultural and pastoral systems in ecologically variable and challenging environments, evolving landscape uses and modifications, and the changing roles of montane Central Asian societies in the movement of goods, biota, ideas, and people throughout Eurasia prior to and during the Silk Road phenomenon.

Cameron, Asa [163] see Carolus, Christina

Cameron, Asa [315] see Dashzeveg, Bukhchuluun

Cameron, Asa [315] see Holland-Lulewicz, Isabelle

Cameron, Asa [315] see Holland-Lulewicz, Jacob

Cameron, Catherine (University of Colorado)

[321] *Captives and Slaves: Internal Alterity in Small-Scale Societies*

I use ethnohistoric, historic, and some archaeological data from small-scale societies in Europe, Africa, the Americas, and Southeast Asia to explore “others” in small-scale societies of the past (groups called tribes, chiefdoms, bands, etc.), how “others” were conceived, and how their presence affected the nature of social interactions in these societies. Small-scale societies were not the homogeneous, “egalitarian” social formations that archaeologists tend to imagine. Many, in multiple parts of the world, kept enslaved war captives, creating a lower social strata that raised the status of others in the society. Captives were most frequently women and children, and some might be adopted or married into their captor’s group, while others became slaves. Slaves were almost invariably considered less than human because kinship was the basis of all social relations in small-scale societies, and slaves had no kin in their captor’s group. One of the effects of incorporating “others” into small-scale societies was their role as “opposites”; their different practices stressed the “correct” practices of their captors and therefore reinforced the identity and values of the captor group. Slaves increased their masters’ wealth and status through both their presence and their labor.

Camp, Stacey (Michigan State University)

[251] *Digitizing and Disseminating the Archaeology of the Incarcerated: The Internment Archaeology Digital Archive*

How does one present and digitally curate the stories of those incarcerated and interned during World War II? This presentation will explore this question by sharing a new digital platform—the Internment Archaeology Digital Archive (IADA; <https://internmentarchaeology.org/>)—designed to curate the materiality of Japanese Americans incarcerated at two World War II prisons in Idaho: Minidoka War Relocation Center and the Kooskia Internment Camp. The presentation will discuss the ethics and decision-making processes that went into the project’s conception and completion as well as the implications of researching individuals unjustly incarcerated in the past.

Campbell, Renae (Asian American Comparative Collection, University of Idaho, Moscow)

[256] *Chinese Miners, Women, and Gold Rush Relationships in the Rural American West*

Southern Idaho’s Boise Basin was the site of a late nineteenth-century mineral rush that attracted gold seekers from around the globe to the western slope of the Rocky Mountains. For more than 50 years, this pluralistic population established homes in small towns throughout the Basin and pursued livelihoods in its placer mining industry. Over the last decade, the Boise National Forest and the University of Idaho have been involved in a collaborative project to address a variety of legacy collections related to this once-thriving gold rush community. This paper presents some of the results of that project, which reveal an array of working relationships between Chinese miners and women landowners that run counter to popular perceptions of rural gold mining as a predominantly male, white, and ruggedly individualistic but unskilled enterprise.

Illustrating how larger social and political forces manifested within the unique occupational landscape of the Boise Basin, these relationships also demonstrate ways that women and Chinese miners each defied attempts at exclusion to establish themselves among the diverse members of their rural mining industry.

Campbell, Rod (Institute for the Study of the Ancient World, NYU)

[321] *Violence and Alterity in Early China*

Identity and community are always to some degree defined in terms of alterity. Who or what is Other defines Us. Historically, this contested ground of community has been as much produced through practices and institutions of exclusion, expulsion, domination, and extermination as cooperation, consensus-building, and harmony. If identity has a relational shadow in alterity, so too does order. Violence, whether instrumental-physical, structural, or symbolic, has haunted political organizations throughout human history. Differing regimes of symbolic, physical, and structural violence have defined sociopolitical orders as much as their more positive institutions. These institutions are key to the production and reproduction of hierarchies beyond the merely political. Whether celebrated or denied, societies from ancient polities to contemporary states have founded their orders on inegalitarian organizations of worth and care. A key variable in these fundamental hierarchies of being is identity/alterity. This paper will track the changing nature of alterity in Early China from the Bronze Age to the rise of empire along with concomitant social, political, and economic developments. *****This presentation will include images of human remains.**

Campbell, Wade (Boston University), and Christopher Guiterman (CIRES, University of Colorado Boulder; NOAA's National Centers for Environmental Information)

[165] *Bark Peeled Trees and Dendroarchaeological Insights into the Place-Based Histories of the Navajo Nation Forest*

Some trees in the Navajo Nation's pine forests display oval-shaped wounds on their trunks that offer a window into histories of Diné (Navajo) land use, ingenuity, perseverance, and traditional knowledge in the US Southwest. Indigenous communities throughout the Northern Hemisphere engaged in bark peeling of pine trees because there are a myriad uses for this resource, including as a food source. Such culturally modified trees (CMTs) are relatively common in the Chuska Mountains and elsewhere, yet many questions remain regarding their history. Notably, the stories these trees might tell of Diné connections to the landscape are rapidly disappearing, because the old-growth trees are dying from drought, insect attacks, and fire. In collaboration with the Navajo Heritage and Historic Preservation Department, we have been engaged in locating, recording, and sampling the trees for their tree rings so that we may determine the exact dates for peeling. This presentation shares the results of collections made since 2017 and our intentions for further research.

Campbell, Wade [335] see Watts, Joshua

Campiani, Arianna (Sapienza University of Rome), Esteban Miron Marvan, and Lisa Johnson (University of Nevada Las Vegas)

[168] *Beyond the "Big Man" Politics of Maya Archaeology: A Social Archaeology of Daily Life*

Throughout her academic career, Rosemary Joyce has crossed theoretical boundaries beyond the confines of a descriptive archaeology, instead looking to archaeological traces for what they can tell us about the dynamics of social and material life. While many archaeologists remain fixated on politics, and the "cult of personality" forming around individual rulers, much of her work explores the daily life of those that do not often appear in monumental art or historical records. In this presentation, we follow her lead to pursue a social archaeology of daily life at a place where "big man" politics has overwhelmingly dominated the archaeological narrative, Palenque, Mexico. The political history detailed in the hieroglyphic text and artwork adorning its monumental architecture provide a larger backdrop to political and ritual events in Palenque, but what was life like for the men, women, and children that lived outside of the palace? To what degree did those larger events impact their daily lives? Through an analysis of residential architecture and use of space in conjunction with the archaeological data revealing the residues of daily activities, we consider the "everyday citational practices" of Palenque's urban communities.

Campos-Hernandez, Cinthia (University of Wyoming), Briana Doering (University of Wyoming), Haley Purifoy, and Hannah Branson

[313] *Distinguishing between Cultural and Natural Depositions: A Comparative Analysis of Macrobotanical Data from Archaeological Contexts to Pollen and sedDNA from Quartz Lake, Alaska*

Due to misconceptions about the role of plants in Subarctic peoples' daily lives and the preservation of archaeobotanical remains, researchers have relied on the pollen record and, more recently, sedimentary DNA to gain insights into paleoenvironments and resource availability, using this data to indirectly interpret people's plant-use practices. While sedDNA and pollen data can inform us about past environments, resource availability, and distribution, we cannot assume these data directly reflect past peoples' plant use. However, until recently, we lacked on-the-ground data to test this assumption. Macrobotanical data can offer direct insights into past peoples' plant-use practices, subsistence, identity, and trade. This study compares data collected from cooking features from sites dated to the Late Pleistocene to Late Holocene to evaluate how macrobotanical data align with pollen and sedDNA records from Quartz Lake. By incorporating traditional ecological knowledge and ethnographic accounts into our interpretations, this study explores whether paleoenvironmental shifts significantly influenced past peoples' decisions related to plant use or if maintaining cultural identity and social networks outweighed the challenges posed by a changing environment.

Campos-Hernandez, Cinthia [313] see Fouche, Jodi

Campos-Hernandez, Cinthia [313] see Purifoy, Haley

Canale, Lauren [221] see Chen, Jennifer

Cancho Ruiz, Christian (University of Virginia)

[60] *Unveiling San Jacinto: The Most Monumental U-Shaped Ritual Complex of Peru's Central Coast (Second–First Millennium BC)*

San Jacinto, located in the Chancay Valley, is the largest monument of the U-shaped ritual complex tradition that flourished along Peru's central coast between the second and first millennia BC. Recent excavations, grounded in photogrammetric and GIS studies, have revealed the central stairways leading to the main atrium of the temple at the heart of the complex. Ongoing research has documented a complex construction history, characterized by a vertical succession of superimposed buildings that reproduce earlier ideas, suggesting cycles of architectural renewal within intricate ritual practices. These findings highlight San Jacinto not only as the most monumental example of this architectural tradition but also as a key site for understanding construction practices and sociopolitical organization during the Andean Formative period

Cannon, Carrie (Hualapai Tribe)

[335] *Exploring Tribal Perspectives on Data Sovereignty*

This presentation examines two case studies regarding tribal data sovereignty from a tribal perspective. The first is a Hualapai Tribal Cultural Atlas and Ethnobotanical GIS Geodatabase. The second is a pilot study initiated to consider expanding a portion of this work to include five affiliate Pai Tribes in a shared ethnobotanical linguistic database. The Hualapai Indian Reservation located in northwestern Arizona is a member of the Yuman language family. The Pai languages represent a subset of the family more closely affiliated through language and culture, geographically spanning the Colorado River, from the Grand Canyon to the Gulf of California, Mexico. The Hualapai Cultural Atlas Project was created using ESRI ArcView geospatial software, technology permitting narrative text, photographs, and audio and video files to be linked spatially via geospatial data stored in Microsoft Access files. The project has resulted in mapping over 800 place-names on and off the reservation, including trails, travel routes, springs, petroglyphs, pictographs, and archaeological sites. The Hualapai Tribe utilizes the Cultural Atlas in a preservation framework. The presentation examines what access safeguards exist and also addresses concerns that arose for protecting sensitive information in the larger Pai-wide pilot project spanning six Tribes and two countries.

Canuto, Marcello [327] see Yagi, Hiroaki

Canzonieri, Christopher (Archaeological/Historical Consultants), Eric Bartelink (California State University, Chico), Alan Leventhal (Muwekma Ohlone Tribe of the San Francisco Bay Area), and Charlene Nijmeh (Muwekma Ohlone Tribe of the San Francisco Bay Area)

[268] *Bioarchaeology and Funerary Treatment at CA-SCL-1070/H, an Early Holocene Site in Santa Clara, California*
In 2021, 41 in situ burials were recovered from CA-SCL-1070/H, or Mánni Húyyú Muwékma Yatiš Túnneštē-tka (Place Where the Ancient People Are Buried Site), approximately four miles south of modern San Francisco Bay. AMS dates and stratigraphy indicate a Late Pleistocene to early Holocene age (14,078 cal BP to 7334 cal BP). We present a comprehensive bioarchaeological analysis of the skeletal remains, including a discussion of stress markers and pathological conditions, taphonomic conditions, and the spatial distribution of the cemetery. Funerary treatment and limited associated grave goods are examined to gain insight into mortuary practices. Skeletal health assessments are based on several skeletal features, including joint disease, trauma, dental disease, and dental wear. Skeletal disease prevalence was low, with three individuals exhibiting vertebral osteophytosis and one with skeletal osteoarthritis. Trauma was limited to four antemortem fractures. Statistically significant differences were found in the amount of dental calculus and periodontal disease between males and females. These findings are contextualized through a comparison of Middle and Late Holocene sites within the South San Francisco Bay Area.

Cap, Bernadette (San Antonio College), Rachel Horowitz (Washington State University), Jason Yaeger (UTSA), and M. Kathryn Brown (UTSA)

[341] *From Core to Blade . . . or Eccentric: Marketplaces and Obsidian Crafting and Circulation at Buenavista del Cayo, Belize*

Obsidian has been a focus of Classic Maya marketplace exchange studies because as a nonlocal resource in the Maya lowlands, there were higher costs involved in moving the raw material across diverse natural and sociopolitical landscapes. In marketplaces and households, most obsidian is found as prismatic blades, suggesting these materials circulated through market exchange. However, less is known about how other obsidian goods circulated. Was obsidian used to make non-blade objects also obtained through marketplace exchange? How would we be able to tell? Here we puzzle out the potential for a hierarchy of crafting rooted in a marketplace exchange network by comparing obsidian goods from different contexts across Buenavista del Cayo, Belize. The site's marketplace was a location where obsidian blades were made and exchanged, as evidenced by a high percentage of small-sized production debris. In contrast, we have found large blade-core fragments reused to make eccentrics and deposited in ritual and burial contexts. We examine the implications of these finds for understanding the complex ways marketplace exchange was entangled in multiple facets of the Classic social, political, and religious realms.

Capriles, José (Pennsylvania State University), Luis Rodríguez Ascaño (Universidad Mayor de San Andrés), Sarah Paterno (Tulane University), Tania Aguilar Tarqui (Universidad Mayor de San Andrés), and Justin Burkett (University of Missouri)

[306] *Stratigraphic and Occupational Complexity: Highlights of the 2022 and 2023 Excavations at Chiripa, Bolivia*
Chiripa is one of the most well-known sites of the southeastern Lake Titicaca basin. The first excavations at the site were conducted nearly a century ago, and since then many scholars have explored this multicomponent site from different perspectives. The Taraco Archaeological Project's 2022 and 2023 excavations emphasized documenting Early Formative period (1500–800 BCE) contexts deposited underneath the significant Middle Formative period and subsequent occupations around the central Chiripa mound. In this paper, we describe the various Early Formative period contexts encountered as well as offer some interpretations about the use and function of these spaces. We also go over various features from subsequent periods including burials, structures, and others. For instance, the remains of an orthogonal rectangular building to the northeast of the mound and likely built sometime during the Middle Formative in addition to Late Formative and Tiwanaku remodeling episodes, emphasize the significance of the site's persistence over time. Together, the evidence of the recent excavations underscores the complexity stratigraphic and taphonomic history of this iconic site and provides a background for making sense of the fine-grained analysis presented in other papers of this session.

Capriles, José [306] see Bruno, Maria

Capriles, José [306] see Callisaya, Luis
 Capriles, José [44] see Domic, Alejandra
 Capriles, José [306] see Fontenla, Ruth
 Capriles, José [218] see Lovis, William
 Capriles, José [40] see Salame, María
 Capriles, José [306] see Velasco, Daniela

Caraballo-Santiago, Angelica (University of California, Santa Barbara), and Mario Novak (Institute for Anthropological Research, Zagreb, Croatia)

[297] *The Osteobiography of 51-K: A Case of Neoplastic Disease from a Migration Period Avar Cemetery in Beli Manastir, Croatia (Sixth–Ninth Century CE)*

This poster presents a case study and osteobiography of an individual from a recently excavated cemetery near Beli Manastir, Croatia. Based on the cultural items and locality of the cemetery, this site is dated to the Migration period and belongs to the Avars, also known as the Pannonian Avars, a seminomadic group that established their khaganate in Central and Eastern Europe, including modern-day Hungary, Croatia, Serbia, and Slovenia. The site, discovered during highway construction between the borders of Croatia and Hungary, contains approximately 200 graves. This study provides an osteobiography of Grave 51-K, with a focus on the pathological condition of the individual through morphological and radiographic analysis. Osteolytic lesions are observed throughout the skeleton, with periosteal reaction throughout, and osteoblastic growth on the skull. These lesions are characteristic of many types of neoplastic disease, and in 51-K's osteobiography we provide a potential differential diagnosis. This osteobiography will add to continuing analysis of the Beli Manastir assemblage to increase our understanding of the health and lifestyles seen at this specific site and within the period as a whole. ***This presentation will include images of human remains.

Carballo, David (Boston University)

[310] *Temple Housing and Ritual Activities in the Southern Sector of Teotihuacan's Plaza of the Columns*

As one of the city's larger civic-ceremonial complexes, the Plaza of the Columns at Teotihuacan served a range of religious, political, and diplomatic functions. Investigations in the southern sector of the complex were designated Front E, and over two field seasons they explored parts of four structures and two plazas. Of the structures, one was the southern temple of the triadic groups at the center of the complex, two appear to have primarily served as residences, and uses of the fourth are less clear but appear to have been nonresidential. In contrast to certain structures in northern sectors of the complex, the residences to the south appear to represent temple housing for individuals of an intermediate status. The occupants lived on an elevated platform decorated with stone roof adornments yet also engaged in food production and crafting activities. I consider the role of these individuals in the functioning of the broader complex along with construction sequences in the area and evidence of ritual activities involving calendrical notation and the Storm God.

Card, Nick [356] see Clark, Jackson

Cárdenas Párraga, Juan [272] see Rodríguez-Rellán, Carlos

Cardona, Karla (University of Central Florida), and Michael Callaghan (University of Central Florida)

[99] *Ceramic Analysis from Three E-Groups at El Mirador, Guatemala*

During the 2025 field season of the UCF El Mirador Lidar Project, excavations at three E-Group complexes, located in the Leon, Monos, and Ux Kuy Nah groups, yielded a considerable number of ceramic artifacts spanning the Middle Preclassic through the Late Classic periods. This paper presents preliminary results from the analysis of these ceramics using type: variety-mode classification, with the goal of refining occupation chronologies and identifying cultural transitions across the groups. Ceramic materials were recovered from stratified contexts in central plazas and eastern structures, including deep test pits in all three groups. All sherds were classified according to established site and regional typologies, allowing for the identification of temporal markers and shifts in ceramic production and use. Preliminary findings suggest a strong Late

Preclassic occupation across all three groups, with evidence of architectural renovation and reoccupation during the Late Classic. The presence of Middle Preclassic materials, including a carved figurine near bedrock in the Ux Kuy Nah group, further supports early ceremonial activity. These results contribute to broader interpretations of site continuity, ritual practice, and the role of E-Groups at the site.

Cardona, Karla [99] see Callaghan, Michael

Cardona, Karla [99] see Macrae, Scott

Cardona, Karla [99] see Micheletti, George

Carić, Mario [123] see Osterholtz, Anna

Carino Anaya, Tanya, and Ashuni Romero Butrón (Instituto Nacional de Antropología e Historia)

[183] *Virtual Visit of El Meco Archaeological Site in Quintana Roo*

After archaeological research made in 2023, named “El Proyecto de Investigación y Conservación Arqueológica ‘El Meco,’ in Quintana Roo,” we obtained an enormous amount of digital data that is still processing. Nevertheless, regarding the results of those interventions and research, we would like to present some of the preliminary results of it. As part of one of the main objectives of the project and as a personal purpose of the archaeologists, we would like to present a more interactive archaeological site, by applying new technologies, such as Gaussian Splatting and the digital reconstruction of one of the 14 structures of the site, like some VR and AR scenarios that show some excavations that were done during the project. To present those scenarios, we are going to use VRG that will help the audience to control and interact with the archaeological site. *****This presentation will include images of human remains.**

Carino Anaya, Tanya [352] see Romero Butrón, Ashuni

Carlson, Justin (Cal Poly Humboldt), Ordance Petrov (Institute Prilip Old Slavic Culture), and Nick Angeloff (Cal Poly Humboldt)

[269] *Markova Kula: A Hellenistic Fortress from Demir Kapija*

We present the results of 2016 and 2025 excavations at Markova Kula, a Hellenistic fortress overlooking the Demir Kapija Gorge. Markova Kula lies along a major trans-Balkan Road route connecting continental Europe with the Mediterranean basin. Demir Kapija Gorge is the last and most formidable obstacle on this route before reaching the Aegean basin. The fortress is one of the best-preserved and northernmost examples of Hellenistic architecture on the Balkan mainland. The excavation goals were to determine the building plan, chronology, and construction methods for the fortress. The fortress was built using ashlar masonry techniques and has symmetrical measurements, rectangular layout, and sharply defined wall edges. These findings suggest it was built following an original architectural plan fully executed during a single phase of construction. During the fieldwork, the building plan was documented with scale drawings and drone imagery. Coins and ceramics from the site indicate the fortress was erected during the reign of the Macedonian king Cassander (317/305–297 BC) and likely abandoned following the Celtic raids in the Balkans in 279 BC. Markova Kula is significant for our understanding of Hellenistic military strategies and architecture during late fourth century–early third century BC.

Carlson, Karen [269] see Hawkins, Nyah

Carlston, Kelsey [95] see Vernon, Kenneth

Carmody, Stephen (Troy University), Silvia Marini (University of Pisa), Gabrielle Purcell (South Carolina Institute for Archaeology and Anthropology), Adrianna Bullard (Troy University), and Miles Hundley (Troy University)

[81] *New Interpretations from the Roman Harbor Vada Volaterrana*

In this poster presentation, we update botanical analysis and interpretation based on these findings, combined with other artifacts from the site. The paleobotanical data originate from two complexes within the

hinterland district, located in San Gaetano di Vada (Livorno, Italy), excavated by the University of Pisa and Troy University between 2019 and 2025. The district, in use from the beginning of the first century AD to the beginning of the seventh century AD, was part of the Vada Volaterrana port system, the sea outlet of the city of Volterra. The ancient landscape consisted of a series of now-extinct lagoons along which the port facilities were located. Complex M is a structure that combines functional aspects with high-level reception rooms. Building N is a structure intended for the storage and processing of goods, located in the southern sector of the archaeological area. Both complexes underwent profound changes in their intended use, starting in the fourth century, and were partially converted into residential areas. Paired with other data collected from the site, our findings help uncover shifts in both subsistence and cultural patterns at the site.

Carolus, Christina (Pennsylvania State University), and Asa Cameron (Penn State University)

[163] *"In Search of Grass and Water"? Myths and Ground-Truths in the Origins of Agropastoral Systems on the Mongolian Steppe*

Research into agricultural adoptions and dispersals of major domesticated plant taxa by mobile agropastoralists across the ancient Inner Asian steppe zone has gained significant momentum in the past decade. Archaeobotanical data have clarified the antiquity and breadth of these processes in many regions, revealing the contours of agricultural developments throughout the Bronze and Iron Ages and linking them to a broader trans-Eurasian system of dynamic long-term social, economic, and biogeographic interactions. Archaeologists and historians have nevertheless tended to exclude early Mongolian steppe societies as significant participants, assuming fundamental social and climatic incompatibilities with the development of local agricultural economies. This paper draws on new interdisciplinary data and emerging evidence for early agricultural settlements to reassess the origins of agriculture on the Mongolian steppe, placing findings into dialogue with long-standing archaeo-historical narratives centering the development of hyperspecialized herding economies. Rather than "marginal" to Eurasian agricultural histories and conforming to pastoralism alone across the highly variable environment of the eastern steppe, recent case studies instead suggest that ancient Mongolian communities practiced diverse locally situated multi-resource modes of landscape exploitation. These were contingent on deep long-term knowledge of ecological affordances, flexible practice, and mastery of both plant and animal management strategies.

Carolus, Christina [314] see Cameron, Asa

Carolus, Christina [315] see Dashzeveg, Bukhchuluun

Carolus, Christina [315] see Holland-Lulewicz, Isabelle

Carolus, Christina [315] see Holland-Lulewicz, Jacob

Carpenter, Lacey [94] see Shenkman, Allyson

Carpenter, Michelle (University of Texas at San Antonio), and Robert Hard (University of Texas at San Antonio)

[282] *Investigations at La Playa, Sonora, Mexico*

The transition to agriculture resulted in many changes, including diet, gender roles, and agricultural dependence. The site of La Playa is in Sonora, Mexico, spans the Early Agricultural period (3650–1800 BP). This poster presents recent findings of radiocarbon dates and stable isotope analysis of an additional 21 individuals. To identify these changes, the analysis of isotopes $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ from bone collagen from human and faunal remains at the site of La Playa will provide the first examination of mobility and consumed resources at the site. These recent findings offer further insight into the behavior of the La Playa population, particularly in response to increased site investment and agricultural dependence.

Carpenter, Tim [170] see Mendoza-Blajos, Olivia

Carpentier, Gabrielle [214] see Serrao-Leiva, Tamara

Carr, Kurt [285] see Gingerich, Joseph

Carra, Bernadette [37] see Krizek, David
 Carra, Bernadette [37] see Shingoitewa, LeRoy

Carranza, Fernando

[202] *Excavations at Chacán, Cusco: An Archaeobotanical Study of a Ritual Context*

Botanical findings from the excavations undertaken inside an architectural unit at the site of Chacán in Cusco are presented. Chacán was one of the main *wakas* from the Cusco *Ceque* system; consequently, it is mentioned on the foundational myths of Cusco, also as the origin of the city's irrigation water. The key archaeological context I discuss here contains predominantly burned archaeobotanical remains. Therefore, according to our research, I postulate that those botanical remains, together with some other diverse artifacts, were left and intentionally burned during a ritual event related to the closure of this space. This claim is supported by the detailed description of the botanical residues identified by different archaeobotanical techniques, including the analysis of macrobotanical remains and microscopic analysis of soil samples. Taxonomical identification of the archaeological plant remains will be provided. Discussion on the final disposition of the artifacts and the stratigraphic arrangement of the elements found in the archaeological context, plus the arrangement and provenience of the burned remains, indicates an evident selection of the plant species that were left at the site. The implications for this kind of ritual abandonment will be outlined supported by the available evidence.

Carrasco, Michael [262] see Bernard, Henri
 Carrasco, Michael [91] see Spencer, Kaylee

Carroll, Jon (Oakland University)

[345] *Combining Aerial and Terrestrial Remote Sensing Data for Archaeological Prospection*

Established terrestrial remote sensing tools like magnetometry, ground-penetrating radar (GPR), and electrical resistivity and conductivity are used with great success for nondestructive archaeological prospection. Similarly, technological advancements make remotely sensed data collected from airborne and space platforms both affordable and accessible to archaeologists. How well these datasets complement each other at a variety of spatial and temporal scales remains uncertain, and the physical environment where they are used matters in terms of sensitivity. This discussion recounts the benefits and challenges of synthesizing multiscalar datasets for cultural resource management (CRM) on public lands located in south-central Michigan. A summary of lessons learned is presented.

Carruthers, Suzanne [343] see Marshall, Amanda

Cartales, Jerielle [179] see McKinney, Madelyn

Carter, Alison (University of Oregon), Miriam Stark (University of Hawai'i), Phoebe France, Ben Marwick (University of Washington), and Li-Ying Wang (Academia Sinica)

[217] *The Historical Ecology of Prasat Baset, Battambang Province, Cambodia*

Archaeological empires transform ecosystems, as the ninth–fifteenth-century CE Angkorian Empire (Southeast Asia) clearly illustrates. This study examines the temple community of Prasat Baset, which was established by the fifth century CE. In the eleventh century CE, the region underwent a political shift as it became incorporated into the expanding Angkor state through the construction of the sandstone Baset temple by King Suryavarman I. Our paper reports findings from the analysis of phytoliths, pollen, soil chemistry, and geoarchaeological data from the Pteah Cambodia project. Collectively, these offer insights on the political economy of land use and provide evidence for ecological change at Prasat Baset before, during, and after its incorporation into the Angkor Empire.

Carter, Alison [217] see Howell, Marly
 Carter, Alison [102] see Klassen, Sarah
 Carter, Alison [217] see Sarjeant, Carmen

Carvajal Contreras, Diana, Ilean Isaza Aizpurua (Estación Científica COIBA-AIP Smithsonian Tropical Research Institute), and Ana Gonzalez (Universidad de Panamá)

[311] *Social Complexity and the Exchange of Marine Products in the Coiba Archipelago*

Social complexity is closely tied to the exchange of marine products, especially in small-scale fisheries. These exchanges go beyond simple economic transactions and are embedded within complex social networks that influence livelihoods, food security, and cultural traditions. This presentation will examine evidence related to the exchange of tuna on the Coiba Archipelago, based on archaeological, ethnohistorical, and experimental data. These exchanges were shaped by ecological availability and ritual practices, suggesting that the structure and dynamics of fish and shell products distribution reflect underlying social organization. The long-standing practice of fish product exchange may have facilitated the transfer of knowledge, technology, and cultural values, contributing to the resilience and adaptability of local societies.

Carvey, Andrea (DrumFire)

[150] *Circular Fishhooks: An Exploratory Experimental Archaeology Project*

A report on an experimental archaeology investigation of the effectiveness of circular fishhooks, the final project for the online Experimental Archaeology & Material Culture Graduate Certificate Program from the University College of Dublin, Ireland.

Carwin, Eleni (Environmental Science Associates), Heather Atherton (Environmental Science Associates), Amanda Harvey (Rincon Consultants), and Amy MacKinnon (California High-Speed Rail Authority)

[334] *West of the Tracks: Revealing Domestic Deposits from Fresno's "Germantown"*

The occupation and development of Fresno's Germantown began in the late 1800s following the construction of the Central Pacific Railroad. A community of working-class, immigrant families settled between G Street and the railroad corridor. In the 1760s, Germans were invited by Russia to settle along the Volga River. Yet by the 1870s, they found their way of life threatened by Russification policies and migrated to the United States. They were drawn to Fresno by fertile lands and work opportunities in the packing industry. Finding home in what was known as Armenian Town at the time, Volga German immigrants from Russia steadily repopulated the neighborhood causing a population shift in 1914 and the established Germantown. Development and reorganization of downtown Fresno impacted the community, and by the 1950s, Germantown no longer resembled the homogenous community it once was. This presentation explores data from the artifact collection of nine in situ domestic trash deposits, dating to approximately 1910s to 1950s. The artifact assemblages suggest a socioeconomic status consistent with working-class households that also include imported goods such as ceramics manufactured in Germany, China, and Japan for foreign markets. These data provide insight into the families who occupied these homes.

Casadei, Oliver [77] see Sibilila, Ella

Casana, Jesse (Dartmouth College), and Carolin Ferwerda (Dartmouth College)

[46] *Archaeological Prospection Using Drone-Acquired Hyperspectral Short-Wave Infrared (SWIR) Imagery: A Case Study at Hell Gap, Wyoming*

Many rocks, minerals, and soil types reflect short-wave infrared (SWIR) imagery (900–2500 nm) in distinct ways, and while geologists have long relied on this property to map surface lithologies, the low spatial resolution and high acquisition costs of SWIR imagery have limited archaeological applications. However, surface archaeological features including structural remains, anthrosols, or even individual artifacts also reflect SWIR light in unique ways, and we should therefore be able to resolve and classify them using SWIR imagery. This paper presents results of experimentation with a new generation of compact, drone-deployable SWIR sensors that enable collection of ultra-high-resolution (<10 cm), hyperspectral (>100 bands) SWIR imagery using a consumer-grade drone, while analysis of these complex datasets is now facilitated by powerful imagery processing software packages. In a survey at the large Paleoindian and Archaic site of Hell Gap, Wyoming, we use SWIR imagery to automatically locate surface artifacts and features, and to classify them according to the material type. Our results illustrate the potential of this novel approach to archaeological remote sensing and exploration of ancient landscapes, while also highlighting ongoing challenges in successful

data collection and analysis related to current limitations in sensor and drone technology.

Casana, Jesse [46] see Paulsen, Paige

Casanova, Edgar [307] see Ruvalcaba Sil, Jose Luis

Casanova Vasquez, Erick [16] see Bria, Rebecca

Caseldine, Christopher (School of Human Evolution and Social Change, Arizona State University)

[193] *Irrigation Infrastructure as Artifacts: The Ancestral O'odham of the Lower Salt River Valley, Arizona, USA*
The Ancestral O'odham (formerly Hohokam) in the lower Salt River valley of southern Arizona, USA, constructed one of the most extensive preindustrial canal networks in the world. Integrating historic aerial photography, cultural resource management excavation data, previous river flow reconstruction, and institutional theory, it is shown that Ancestral O'odham irrigation persisted for a millennium in the absence of a central state bureaucracy. Instead, nested social institutions structured the construction and management of irrigation infrastructure and water allocation. This presentation advances the study of ancient irrigation agriculture by explicitly linking archaeologically identifiable irrigation features with the social organization of water users.

Caseldine, Christopher [79] see Powers, Kayla

Casillas, Sanjuana (University of Colorado, Denver), Manda Adam (University of Texas at Austin), and Jamie Hodgkins (University of Colorado, Denver)

[279] *Faunal Analysis of a Postclassic Midden at Colha, an Ancient Maya Site in Northern Belize*
In the summer of 2023, a Postclassic midden dating 1000–1500 CE was uncovered in the ancient Maya site of Colha in northern Belize. The intention of the initial excavation was to identify and excavate the midden located in the southern part of the monumental center, designated Operation 2224. The midden produced a variety of cultural materials and helped to investigate transformations from the Terminal Classic to Postclassic at Colha. Animal bone was found throughout the midden, consisting of five suboperations. This poster presents the results of the faunal analysis, where a total of 2,642 specimens were analyzed. Standard zooarchaeological methods were applied to examine taphonomy, preservation, and bone modification. Preliminary faunal analysis suggests that the Maya were transporting a diverse range of species, primarily utilizing the animals for consumption with some cases of bone modification of deer (Cervidae). Over 10% of the total fish bones display heat altering while over 27% of the total turtle shell bones display heat altering. Other representative taxa include sharks (Chondrichthyes), crocodilians (Crocodilia), paca (*Cuniculus paca*), tapirs (*Tapirus*), and peccary (Tayassuidae). Furthermore, the analysis aims to investigate changes and continuities in the ancient Maya diet from the Classic to the Postclassic period at Colha.

Castellano, Lorenzo [315] see Ho, Joyce Wing In

Castellano-Rotger, Lucía [170] see Égüez, Natalia

Castillo, Alexandra (Far Western)

[278] *A Technical Analysis of Ground Stone in a Classic Period Neighborhood of Palenque, Mexico*
Research in Maya archaeology has overwhelmingly focused on flaked stone and elite goods, while ground stone tools have received considerably less attention. This neglect stems from a historical research bias that often devalues artifacts associated with domestic labor, which is frequently assumed to be female and considered less relevant than elite activities. This poster directly confronts that bias, arguing that these seemingly unimportant objects are crucial for a bottom-up understanding of Maya society at Palenque. Through a feminist theory perspective and ultimately a household archaeology lens, this study reframes ground stone not as passive domestic tools but as active components central to production, social identity, and community life. A technical analysis of the ground stone assemblage of a Classic period neighborhood,

from the Proyecto Regional de Palenque (PREP) excavations, provides a new perspective on typically ignored artifacts. Preliminary results challenge simplistic functional assumptions, revealing complex patterns in material selection, tool use-life, and discard practices that speak to the specific choices made within the community. Ultimately, by tracing the object itineraries of these objects, this research offers a more holistic and nuanced perspective on the entanglement of people and things in shaping the everyday lives of the ancient Maya.

Castillo, Karime (Bowdoin College), and Nida Cuevas (National Museum of the Philippines)

[293] *Glass Working in the Philippines? Study of a Glass Collection from Santa Ana, Manila*

Archaeological investigations conducted at the Franciscan Missionary of Mary site in Lamayan, Santa Ana, Manila, recovered glass in association with iron slags and charcoal. Historical records indicate the establishment by 1508 of a forging foundry engaged primarily in casting cannons for the Spaniards, on the northern bank of the Pasig River by Panday Pira, a blacksmith from Pampanga. His death in 1570 was considered by the Spaniards a major setback to local arms production. While glass is often a by-product of iron smelting, the glass remains from Santa Ana show characteristics commonly found in waste produced during glass-working. This is significant considering the absence of evidence for Indo-Pacific glass bead production within the Philippine archaeological record, which has led to the assumption that all glass artifacts recovered from sites in the archipelago were acquired through trade. A petition to the Spanish Crown from 1609 requested the deployment of skilled artisans, specifically a glassmaker, to address the high costs of importing glass from New Spain. This paper presents preliminary results in the analysis of the glass collection from Santa Ana and evaluates whether this material represents an attempt to establish glass-working in the Philippines under Spanish rule.

Castro, Adrian (Centro INAH Jalisco)

[317] *Beyond Repatriation: Trajectories, Memories, and Values of the Precolumbian Object in Western Mexico*

Between the 1950s and 1970s, the global market for precolumbian art surged, transforming the value systems attributed to these objects and often detaching them from their original cultural meanings. In Western Mexico, diverse local engagements with archaeological sites have shaped complex relationships among communities, heritage, and the art market since the late nineteenth century. This paper presents ongoing research that, employing ethnographic, archival, and curatorial methods, explores the layered values constructed around prehispanic material culture from Western Mexico throughout the twentieth century. It also provides a framework to analyze contemporary and historical processes of repatriation of precolumbian objects. The study focuses on three case studies: the 2023 repatriation of a female “Ixtlán del Río”-type sculpture from France, local memories linked to the “Proctor Stafford” collection at LACMA in Teuchitlán and the central valleys of Jalisco, and a Tláloc-type effigy vessel from El Chanal located at the Kimbell Art Museum in Texas. Through a methodology that combines workshops, ethnographic interviews, photo-elicitation, and collaborative curatorial work conducted in 2025, this paper critically examines cultural restitution beyond institutional and national boundaries, offering a contemporary perspective on the value systems surrounding precolumbian objects in Western Mexico.

Cathcart, Wali

[16] *Connecting Community with Academia at Historic Brattonsville, South Carolina*

Oral histories have always been an important part of African American communities; however, recovering the stories and contributions of those historically enslaved can be as challenging as it is rewarding. Our descendant community programs at Historic Brattonsville, educational outreach to schools and the public, and social news stories all help to open hearts and minds to the history and contributions of the enslaved. Likewise, the research of historians, anthropologists, and archaeologists benefit the descendant community and public in many ways. At Historic Brattonsville, recent archaeological research revealed the locations of houses of the enslaved that fit directly the oral history of our community. In standing brick structures, actual fingerprints of enslaved brick makers have been discovered that give one a powerful sense of connection to our ancestors. Most recently, the mapping of unmarked burials, improved access, and reconsecration of our ancestral cemetery has benefited both the descendant community and the public. Connecting our knowledge of the past to the discoveries of our academic friends is enabling a more complete story to be told. As our

cooperation has grown, so too has our reach with other descendant communities throughout the Southeast, highlighting the importance of connecting communities and academic research.

Ceballos, Xanti (University of Arizona)

[285] *Community Building and Ritual at Aguada Fénix, Mexico: Archaeological Investigations in the Northwest Plaza Group*

This paper will examine the role of ritual and public gatherings in early community building of Middle Preclassic Maya society (1000–700 BC). While scholars have recognized the importance of these events in Classic Maya society, more research is needed to understand their development in earlier periods. The ceremonial center of Aguada Fénix, Mexico, built around 1000 BC by a semi-mobile population, presents a unique case with which to explore the role of ritual and public gatherings in the transition to sedentism and incipient social stratification. Aguada Fénix features a large artificial plateau (1,400 m long, 400 m wide, and 15 m high), surrounded by 20 edge mounds and connected by causeways to smaller plaza groups on its western side. To evaluate community building and ritual practices at the site, my research focuses on the Northwest Plaza Group, a smaller replica of the Main Plateau. The questions my research addresses are (1) when was the Northwest Plaza Group built in relation to the Main Plateau? (2) Were similar rituals conducted there, and how many people congregated for them? (3) How were the edge mounds used, were they ritual buildings or residences? The research combines excavation, ceramic analysis, and refined radiocarbon chronology.

Ceballos, Xanti [312] see Triadan, Daniela

Celia, Claudia (University of Wyoming), Randy Haas, and Susan Bupp (Parsons)

[101] *Projectile Points at Communal Hunting Site Suggest Multigroup Cooperation*

Large-mammal communal hunting strategies were prevalent on the High Plains from the Middle Archaic (5.7–3.2 ka) through the Late Prehistoric (1.5–0.2 ka) periods. The prevalence of bison trapping sites in the highlands indicates the cooperation of large labor forces for the construction and operation of communal hunts. Despite the potential of these sites for evaluating hypotheses of cooperative behavior, the cultural dynamics remain unclear. The Willow Springs Bison Pound is a multicomponent communal hunting site in the Laramie Basin, Wyoming. High-density projectile-point and bone assemblages indicate sporadic use spanning a millennium from 3.2 to 0.2 ka. This study evaluates whether variation in the projectile point assemblage represents one or more cultural groups. In identifying the number of cultural groups, we furthermore seek to identify their territorial origins and the extent to which cooperation networks extended. We identify the presence of both atlatl and archery technology. However, the analysis reveals two culturally distinct point forms that cross-cut the two projectile technologies. Raw material analysis reveals a strong presence of materials east and north of the Laramie Basin. These results are consistent with a multigroup hunting hypothesis and inform our understanding of cooperative dynamics among Late Prehistoric bison hunters on the High Plains.

Cera, Katherine [201] see McKee, Brian

Cerezo-Román, Jessica (University of Oklahoma), and Elisa Villalpando (Instituto Nacional de Antropología e Historia)

[25] *Reconstructing Health and Disease from Inhumed and Cremated Individuals from the Prehispanic Cerro de Trincheras, Northern Mexico*

In this comprehensive study, we explore health and disease among inhabitants of Cerro de Trincheras, Sonora, Mexico. The site, part of the Trincheras Tradition, was most densely occupied between AD 1300 and 1450. While cremation was the predominant burial practice, inhumation also was observed. We pose two research questions: (1) What are the skeletal manifestations of pathological conditions present at the site? and (2) What are their causes? To address these questions, we analyzed biological data derived from osteological examination of human remains, alongside archaeological evidence—including zooarchaeological, botanical, and other relevant data—to contextualize our findings. We also consider how the osteological paradox and thermal destruction may influence our results. Our analysis reveals pathological skeletal indicators of disease, such as cribra orbitalia, dental caries and abscesses, degenerative joint conditions, and

nonspecific stress markers. Additionally, we identify embodied cultural practices, such as cranial modification, in some individuals. These findings suggest that health and disease at Cerro de Trincheras were shaped by a combination of biological, social, and environmental factors. Moreover, certain conditions and practices observed in the remains shed light on broader aspects of social life, including expressions of identity and social inequality. This presentation will include images of human remains.

Cerezo-Román, Jessica [301] see Gehling, Emily

Cerrito, Paola [42] see Chamorro, Clara

Chacon, Richard [16] see Gillam, J. Christopher

Chadwick, William (Indiana University of Pennsylvania), Matthew Valenti (Indiana University of Pennsylvania), and Abdul Jones (Indiana University of Pennsylvania)

[280] *Value of Geophysical Survey before Standard Discovery Archaeological Shovel Test Survey on Historic Landscapes*

Archaeological survey for site discovery uses methodologies that are clearly codified by State Historic Preservation Office guidelines for unit and grid/interval sizes. Most State Historic Preservation Offices do not identify geophysical surveys as a method of site discovery, and those that do many times have ambiguous guidance for geophysical systems and survey methods. This paper will present the process of discovery using two case studies of known historic landscapes using ground-penetrating radar (GPR) and standard shovel testing within a set grid. In each case, a GPR survey was conducted first, followed directly by shovel testing as each geophysical grid was completed. Each GPR survey identified numerous potential historic features while the shovel test surveys, although finding historic and precontact artifacts, identified no associated historic features. When the shovel tests are overlain on the results of the GPR survey, the tests completely missed the interpreted historic features from the GPR survey. These case studies clearly show that conducting a geophysical survey on a historic landscape provides a dataset that can be used to target archaeological survey to assess the presence of historic features on a historic landscape more effectively than a standard archaeological survey for site discovery.

Chadwick, William [77] see Sibilis, Ella

Chagelishvili, Rusudan [93] see Mgeladze, Ana

Chamorro, Clara (University of California, Berkeley), and Paola Cerrito (University of Zurich)

[42] *Random Forest Algorithm Classifies the Nature of Life Course Events Using Concentrations of Major and Elements in the Dental Cementum of Rhesus Macaques*

Histological investigations of markers of physiological stress in dental tissues have increased since the life course approach was initially described. This research tests the utility of random forest classification algorithms in providing informed inferences of the nature and timing of life history events, which are recorded as changes in the elemental composition of dental cementum. Models were constructed using concentrations of major and minor elements in the dental cementum of rhesus macaques (*Macaca mulatta*) with documented life histories analyzed via scanning electron microscopy and energy dispersive X-ray spectroscopy (SEM-EDS). The best-fit model used percent concentrations of O, Na, P, Ca, and Mg as predictors of life history categories (breastfeeding, reproduction, illness, and no known event). Its classification accuracy was 73%. Variable importance measures indicated Na and Mg were significant predictors. Previous studies report fluctuations of Na and Mg levels in serum during gestation and lactation (Edward et al. 2021; Pathak et al. 2003). We evaluated the time between seasonal and life history transitions and false negatives in breastfeeding and reproduction. 26% of misclassified cases coincided directly with a transition. These results suggest the potential for similar models to identify the type and timing of life history events in archaeological populations.

Champi, Edith [40] see Flores-Blanco, Luis

Chan, Nathan [54] see Martel, Aiyana

Chapman, Senna (Louisiana Division of Archaeology)

[227] *Rooted in Resilience: Investigating the Botanical Heritage and Legacy of Enslaved Africans in Louisiana*
Archaeobotanical research in Louisiana remains limited, despite the region's potential to shed light on the complex histories of plant use, knowledge, and exchange. This study explores the botanical knowledge that enslaved Africans brought to Louisiana, considering both the familiar plantation cash crops and a broader range of plants that shaped foodways, healing practices, and landscapes of resilience. By integrating archaeobotanical approaches with historical sources, this research investigates multiple lines of evidence, including excavated midden deposits, as well as archival records on the design and planting of gardens—kitchen, quarters, and ornamental. Together, these perspectives highlight how enslaved communities maintained, adapted, and expanded botanical traditions in the face of displacement and oppression. More broadly, the project addresses gaps in Louisiana archaeology while contributing to discussions of cultural memory, plant knowledge, and the role of archaeobotany in understanding African diasporic histories.

Charles, Mona [55] see Copeland, Steve

Charlton, Michael (UCL Institute of Archaeology)

[158] *Systematics in Archaeomaterials Chemistry*

Archaeological systematics framed important debates within the academic discourse of culture history and evolutionary archaeology. While certainly impacting the understanding of artifact form and manifestations of a larger scale, these discussions had arguably less impact on understanding archaeology at its smallest scale. Chemical characterization of artifacts has a rich history dating from the late eighteenth century. The basic units used in this developing specialization included elements, simple compounds, and with advances in spectrometry, isotopes. As analyses became increasingly common throughout the latter half of the twentieth century so did an awareness of clustered distributions of object compositions. This observation led to the creation of derived units—groups—that could be used to explore provenance and technological variance and helped stimulated a desire to situate compositional data within emerging theoretical discourses. Compositional groups work quite well for hypothesizing origins and characterizing technologies, both grounded in empirical reality and relatively unchanging properties. Their effectiveness fades, however, for the investigation of social learning and cultural transmission processes. This paper explores the problem of unit construction in archaeomaterials chemistry through a brief history of metallurgical and glass compositional groups, highlighting the challenges involved in developing robust chemical systematics.

Chase, Adrian (Tulane University), Diane Chase (University of Houston), and Arlen Chase (University of Houston)

[36] *The Plazuelas of Caracol, Belize: Findings from 40 Years of Household Archaeology*

Archaeological investigations at Caracol, Belize, have excavated in over 160 residential groups. Some of these *plazuela* units were founded in the Preclassic (the earliest around 600 BCE) and occupied until the Terminal Classic (around 900 CE), but most date to the Late Classic (500–800 CE). Each residential *plazuela* group—a central, raised, plastered patio group surrounded by 1 to 18 structures—would have housed an extended family of 8 to 20 people along with other buildings. Architecture of these residences includes ritual structures, stone buildings, range structures, multilevel and single-level structures, kitchens, sweatbaths, and other architectural features. Many households were associated with residential reservoirs outside of the *plazuela* group and approximately 2.2 ha of land including agricultural terraces. Excavations have demonstrated household-level craft production of various materials (e.g., shell, bone, chert), with neighborhoods exhibiting a mix of crafting specialties among constituent households. Additionally, nearby residences also exhibit heterogeneity in *plazuela*-size (area in m²), tomb volumes (m³), and ritual deposits (in both counts and types). Exploring these datasets provides new insights into the social organization and distributions of material wealth among households in a large Maya city.

Chase, Adrian [266] see Chase, Arlen

Chase, Arlen (University of Houston), Diane Chase (University of Houston), and Adrian Chase (Tulane University)

[266] *Maya Ceramic Analysis in the Twenty-First Century: Contextual Distributions and Social Meaning*

Ceramic analysts working in the Maya area generally use the type-variety-mode (t-v-m) system to assign names to the pottery that has been collected from any one site. The goal is to use a common system of nomenclature that fosters inter-site comparisons. This analytical framework was implemented in the 1960s and formalized in the Maya area with the publication of Gifford's Barton Ramie ceramics in 1976. The use of t-v-m was appropriate when little archaeological work had been carried out throughout a largely unknown Maya Lowlands and analysts needed a mechanism to compare and contrast the ceramic variability in the region. However, given the technological advances since the initial formulation of t-v-m, it is now appropriate to analyze pottery within a different framework that looks at ceramic distributions in archaeological context using lidar and GIS-derived frameworks. Pottery from archaeological investigations undertaken over the last 40 years at Caracol, Belize, provides examples of how the distributions of ceramic materials can be used to reconstruct economic and social systems as well as to shed light on differences and linkages between diverse regions in Mesoamerica.

Chase, Arlen [36] see Chase, Adrian

Chase, Brian [170] see Wong, Gillian

Chase, Diane [36] see Chase, Adrian

Chase, Diane [266] see Chase, Arlen

Châu, Lý Văn [217] see Suter, Kai Anne

Chauca Iparraguirre, George [267] see Serra, Margot

Chavez, Andrea (University of Massachusetts Boston), and Kristen Delatour (University of Massachusetts Boston)

[107] *Nurturing Afro-Descendant Epistemologies: Black Women in Heritage Preservation*

The community structure of Afro-descendant territories in the Americas and the Caribbean has been built and strengthened over time by Black women. Various grassroots organizations with a Black feminist focus are the result of a flourishing of matriarchal knowledge that has been passed down, with a strong connection to cultural heritage. Efforts to protect tangible and intangible heritage are reflected in projects, the creation of organizations, and the maintenance of the territory as a living entity. Archaeological sites are a key component of ancestral territories, being continually reinhabited, rethought, and cared for as a key component of ancestral heritage. Liberation practices encompass the sustenance of alternative economies, the maintenance of support networks within and between communities, the restoration of traditional practices, and, above all, responsible land management. This includes strategies for care and preservation that encompass a series of mechanisms for the permanence of being in the territory throughout history. The intentionality of how archaeological sites are restored and used in the contemporary period is equally imperative to how we conceive the past. As anthropologists, one aspect of our role is to support the sociopolitical initiatives of multigenerational cultural resource management and heritage stewardship among the communities we work with.

Chávez Herrerías, Alejandra [355] see Kupprat, Felix

Chavez Irusta, Wendy [40] see Housse, Romuald

Chávez Justo, Cecilia [343] see Haas, Randy

Chea, Socheat [344] see Morrow, Giles

Chen, Hong [258] see Xue, Liping

Chen, Jennifer (Rochester Institute of Technology), Lauren Canale, Jelmer Eerkens (University of California, Davis), Rebecca Bliege Bird, and Randy Haas

[221] *Stable Nitrogen Isotopes Analysis of Weaning Ages in Archaic Period Foragers on the Andean Altiplano (6.5–9.5 cal ka)*

Previous research identifies delayed weaning as a behavioral adaptation to life at high altitude in the Andean and Tibetan highlands. When this behavior began is unknown. This research examines the stable isotope chemistry of dental serial sections in Archaic period forager populations of the high Andes to estimate weaning ages and the potential onset of delayed weaning practices on the Andean Altiplano. Preliminary results suggest that Archaic foragers of the Altiplano, 9.5–6.5 cal ka, commonly delayed completion of the infant weaning process until 4–6 years of age. This estimate is later than both modern lowland weaning ages of 1–2 years and modern highland weaning ages of 3–4 years. Results suggest that delayed weaning was an early behavioral adaptation to high-altitude lifeways, which may have served to mitigate high infant-mortality rates in a cold, hypoxic, resource-limited landscape.

Chen, Peiyu (Institute of History and Philology, Academia Sinica)

[267] *Shellfish Eaters and Clay Users in the Late Preceramic Guañape Area: A Comparative Study from the Virú Valley and Its Insights into the MFAC*

This paper examines two Late Preceramic sites in the Guañape area north of the Virú Valley—Huaca Herrera de Guañape and Huaca Negra (3250–1300 BC). The two sites preserve evidence of both household consumption and the construction and use of monumental architecture. At these sites, shellfish, rather than fish, dominate the edible marine resources and are closely associated with activities of monumental construction. Recent excavations further reveal that, although these sites are located far from the Virú Valley floodplain, clay was extensively employed as the principal construction material. This tradition reflects a distinctive set of lifeways and architectural preferences among prehistoric communities in the Guañape Area. By presenting the patterns as a comparative case study, this research underscores the potential of the Guañape Area to expand and refine discussions of coastal adaptation and sociopolitical development within the Maritime Foundations of Andean Civilization framework.

Chen, Ran (Stanford University)

[258] *What Are the Advantages of Ground Stone Tools? Experimental and Archaeological Study on Harvesting Fibrous Plants*

The development of agriculture is central to understanding the transition from the Upper Paleolithic to the Early Neolithic. Cutting tools such as blades and sickles are often discussed in relation to food harvesting, but their role in acquiring nonfood resources—particularly fibrous plants for material culture—remains underexplored. While hand-based fiber harvesting is difficult to trace archaeologically, cutting tools can leave clearer evidence. This research investigates early bast fiber use and its implications for technological development. I conducted an experiment comparing the efficiency of harvesting wild foxtail and velvet leaf using chert flakes and polished sickles. Results show little difference between tool types for grass harvesting, but sickles proved far more efficient and durable for bast fiber collection. These findings correlate with archaeological patterns at the Peiligang site: in the Upper Paleolithic, flaked tools were multifunctional, used for obtaining starchy foods and fibers. In the Early Neolithic, flakes retained food-related functions but no longer served for fiber processing, while ground sickles were employed for both grasses and fibrous plants. This study highlights the overlooked role of nonfood plant use and argues for broader models of technological development that encompass both subsistence and material culture in prehistory.

Chen, Xianglong

[65] *The Subsistence Economy Formed the Foundation for the Great Polities of the Legendary Xia and Shang during the Second Millennium BC in the Central Plains of China*

The era of the Xia and Shang Dynasties marked a pivotal transition in Chinese civilization from pluralism to integration. This paper employs stable carbon and nitrogen isotope analysis of human and animal remains from Henan sites to reconstruct paleodiets and livestock management, offering new insights into the

subsistence economy of the Central Plains. The results, combined with archaeological evidence, demonstrate how agricultural intensification, animal husbandry, and bronze production underpinned major social transformations. Building on the late Longshan economy, sustained agricultural prosperity provided the foundation for the emergence of expansive state-level polities. The advancement of productive forces was further stimulated by cultural exchanges, as exotic domesticates, technologies, and knowledge were adapted within local traditions. Political elites monopolized bronze, livestock, and other high-value resources to reinforce ritual norms, consolidate authority, and redistribute wealth. Cattle and horse husbandry, along with traction technologies, facilitated wealth circulation and regional integration. In sum, the flourishing subsistence economy and technological innovation supported the rapid development of Xia and Shang polities, laying the groundwork for early Chinese state formation.

Chen, Xuexiang (Shandong University), Xu Liu (Shandong University), and Wenxi Shen (Institute of Archaeology of Anyang City)

[220] *Foodways of Early Settlements in Northern China: Residue Remains from the Balizhuang Site (8000–7000 BP), Anyang, Henan Province, China*

This study analyzes plant remains, pottery, and stone tools residues from the Balizhuang site (8000–7000 BP) in the middle Yellow River Valley to explore how early sedentary communities acquired, processed, stored, and consumed food during the process of sedentism. The results indicate that the Balizhuang people employed a mixed subsistence strategy combining millet cultivation with the diversified and targeted exploitation of wild plants. Starch grain analysis of grinding stones reveals their primary use in acorn processing, highlighting the continued reliance on wild resources during the transition to agriculture. Notably, the analysis of pottery assemblages and residues reveals a clear functional differentiation between vessels used for cooking and storage. Wide, bowl-shaped vessels, such as tripods and straight-mouthed jars, were primarily used for cooking grains, oily seeds, and meat, while amphorae with small-mouthed and elongated necks were typically used for storing liquid foods made from seeds and/or meat. These micro-residue analyses reveal the close relationship between ceramic technology and food preparation, further suggesting that early residents particularly emphasized the consumption of oil-rich plant seeds and animal products in addition to grains. These findings underscore the important social role that pottery played in food preparation, storage, and consumption of early sedentary communities.

Chen, Xuexiang [258] see Wu, Rubi

Chen, Yi-lin (University of Otago)

[204] *Plant Foods in Neolithic Taiwan: New Insights from a Reevaluation of Archaeobotanical Assemblages*

This paper offers a comprehensive review of plant foods in Neolithic Taiwan, focusing on crops such as cereals, fruits, and legumes. The study reexamines earlier research conducted before the widespread adoption of flotation methods in archaeology. It reviews archaeobotanical remains from over 42 archaeological sites, incorporating new finds from flotation and phytolith analyses. The paper concludes by identifying patterns of plant-based subsistence across different periods and regions in Taiwan. As the first in-depth review of its kind in Taiwanese archaeology, this research provides a crucial foundation for future studies in the field.

Chenault, Mark (WestLand Resources), and Ron Ryden (Independent Researcher)

[202] *Prehistoric Palette Production in the West Valley, Phoenix, Arizona*

One of the most defining artifacts of the Hohokam culture was the carved stone palette. Hohokam palettes typically were thin, tabular stone objects that had flat to slightly concave use surfaces and usually had raised decorative borders. The Hohokam produced thousands of stone palettes, and they are found by archaeologists at many sites with Preclassic period components. Archaeologists from WestLand Resources recovered 86 carved stone palettes, partial palettes, and palette preforms (blanks) from a village site in the west valley, Phoenix, Arizona. The palettes were found in various contexts, including within structures, pits, caches, and mortuary features. Palettes were commonly found as funerary objects in secondary cremation burials. Also, numerous palette preforms and pieces in the process of being produced indicated that palettes had been manufactured at the site. We describe the assemblage of palettes and examine the production and use of palettes at the village and the function of palettes within Hohokam society.

Cheng, Jing (Yale University)

[220] *Pottery and Foodways among Early Coastal Communities: A Case Study on Xiajiaoshan, Pearl River Delta, China (7000–5000 BP)*

Archaeological investigations at Xiajiaoshan in the Pearl River Delta (7000–5000 BP) have uncovered large quantities of pottery sherds, indicating that vessels were repeatedly used and abandoned by mobile coastal communities. This paper examines the diversity of vessel forms, styles, and sizes within these assemblages to explore their roles in food preparation, storage, and consumption. Evidence from the activity floor at Xiajiaoshan further reveals the placement of different vessel types, offering insights into how coastal groups organized and related various vessel functions in daily practice. Preliminary residue analyses provide additional evidence for the range of resources processed and consumed. Bringing together typological, contextual, and residue data, this study discusses the broader significance of pottery in food consumption, resource management, and communal activities, shedding light on the social practices of early mobile coastal communities in southern China.

Chenoweth, John (University of Michigan-Dearborn)

[178] *Relocating the 1780s–1813 River Raisin Settlement and War of 1812 Battlefield, Monroe, Michigan: Geophysical Surveys and Excavations 2019–2024*

The River Raisin settlement existed at the nexus of national, religious, and colonial contacts and conflicts. On the traditional lands of the Anishinaabe-speaking Native Nations, settled by largely French-descended Detroiters in the 1780s, and controlled by the British until 1796, it was an important point of interaction during a pivotal period in the “Old Northwest.” The site of key battles in the War of 1812, the events at this location also influenced the course of US-Native relations for a century, providing an excuse for the so-called “removal” process. Over the past five years, the River Raisin Archaeological Project has worked to relocate features related to the battles and the settlement that existed there for a generation. Students from the University of Michigan-Dearborn and the University of Michigan-Ann Arbor have excavated the site as part of a field school taught during the semester, one day per week. This paper reports on new excavations as well as a substantial new ground-penetrating radar and magnetometry survey of the site aimed at compensating for 200 years of site occupation since the period of focus.

Cheung, Simona [114] see Fowles, Severin

Chevalier, Alexandre [30] see Comeca Ramirez, Gianina

Chew, Zi-Qi (University of California-San Diego), Chien-Hsiang Lin (Academia Sinica, Taipei), Alí Altamirano Sierra (Áreas Costeras y Recursos Marinos, Pisco, Peru), Arianna Garvin Suero (University of California, San Diego), and Jen-Chieh Shiao (National Taiwan University, Taipei)
[84] *Otolith Sclerochronology as a Tool for Reconstructing Preindustrial Virú Fisheries in Coastal Peru (ca. 200 BC–AD 650)*

Age composition is a key metric in fisheries science, essential for assessing stock health, exploitation intensity, and long-term sustainability. This study applies otolith sclerochronology to archaeological otoliths to reconstruct the age composition and evaluate the seasonality of fish catch, in order to understand past human–fish interactions. Focusing on the newly excavated Virú archaeological site (ca. 200 BC–AD 650) in Puerto Malabrigo, northern Peru, we analyze approximately 200 otolith specimens to investigate prehistoric fish catch composition and growth dynamics. Located along the highly productive Peruvian coast—one of the world’s most biologically rich upwelling systems—the site provides a valuable context for understanding how prehistoric inhabitants engaged with marine ecosystems that remain key fishing grounds today. By reconstructing age-at-capture and harvest seasonality through otolith sclerochronology, this study contributes to long-term ecological baselines for local fish populations. Stable isotope analysis provides high-resolution insights into season of capture, sea surface temperature, and potential climate-related variability. Together, these data help to elucidate prehistoric fishing subsistence strategies and establish robust preindustrial baselines for assessing long-term changes in marine ecosystems and informing sustainable resource management today.

Chiang, Chihhua (National Taiwan Uni.)**[217]** *Reexamining Neolithic Burial Practices at the Wansan Site, Taiwan*

The Wansan site, situated in Yilan County in northeast Taiwan, is a significant Neolithic site. The 1998 rescue excavation uncovered evidence of two distinct burial practices: jar burials and stone coffins. A total of 55 stone coffins and 14 jar burials were documented during the excavation. Unfortunately, due to poor preservation conditions, no skeletal remains were recovered, and initial identifications lacked systematic analysis. My study aims to reexamine the jar burials through in-depth analysis of stratigraphy, jar typology, and associated artifacts. Recent excavation in nearby Hualien County have revealed similar burial practices, notable the co-presence of jar and stone coffins. Unlike Wansan, some of these sites contained well-preserved human remains with distinctive grave goods, offering insight into funeral rituals. This presentation will provide, first, an overview of the Wansan site and its archaeological significance. Second, I will detail the analysis of jars identified as burials. Then a comparative study of jar burials from other late Neolithic sites will be conducted. These analyses not only enhance our understanding of Neolithic burial practices but also contribute to broader discussions on the cultural dynamics of Taiwanese early societies.

Chicoine, David (Louisiana State University)**[100]** *(Re)evaluating Casma in the Nepeña Valley*

Despite the paucity of Casma oriented research projects in Nepeña, the valley has been a staple of meta-narratives about the formation, expansion, and political nature of a Casma state-level polity centered at the capital of El Purgatorio located some 40 km to the south. This paper gathers and synthesizes archaeological data on Casma in Nepeña and offers a reevaluation of its timing, nature, and anthropological implications. Combining material, architectural, stratigraphic, and radiometric data from recent excavation projects at several different sites in the middle and lower portions of the valley, I contextualize the Casma evidence in Nepeña regionally and discuss its value to move beyond traditional neo-evolutionary models of cultural development. The initiative aligns with recent efforts on the north coast of Peru to revisit the concept of archaeological culture and critically reassess models of state formation.

Chilcote-Fricker, Celise (University of Kentucky)**[42]** *Churning through Theories and Polishing Paradigms: A Bioarchaeological Approach to Discerning Social Identities in a Historic Dairy Farming Community*

Insights drawn from theories of the body suggest cultural knowledge, experience, practice and perception are part of an individual's lived reality and identity(s). The biocultural approach views the human body as both biological and inherently cultural, as the daily navigation of social norms and cultural customs become embodied in the skeleton over the life course. Bioarchaeological analyses can elucidate past lives, and historic documentation can contextualize this data. Historic records, however, are notoriously biased—a static reflection of normative cultural discourse and the narrator's intentions/prejudices. The result is the daily lives of people in the past, especially marginalized groups, are absent/biased. The application of a critically reflexive framework that recognizes multi-vocality, the intersubjectivity of identities, and biases in the historic record allows for nuanced interpretations of past lives/identities and a means of examining normative discourse versus lived reality. A bioarchaeological analysis of activity of the historic community of Middenbeemster was undertaken to examine social identity over the life course. A review of available documentation provides an explanatory structure for identified activities and corroborates inferred divisions of labor, but also suggests age-related social transitions and a more active role for women in the economic success of the dairy farms than historically recorded.

Childs, S. Terry (Retired, DOI Museum Program), Angela Neller (Wanapum Heritage Center), Marybeth Tomka (Argyle Archaeological Services), Alex Barker (Arkansas Archeological Survey), and Joshua Wells (Indiana University South Bend & Digital Index of North American Archaeology (DIN))

[52] *The Prototype National Collections Locator Project: Other Considerations and Next Steps*

This project seeks to show the potential of data on archaeological collections from a few states as a prototype for national level use. However, there are several key considerations and next steps to moving forward. These include how to entice repositories to participate in this effort; careful and widespread vetting

of the prototype, including the data fields, among curators, archaeologists, tribes, and descendant communities; consistency and equivalence of field content; and how to incorporate paper-based or otherwise inaccessible data. Project expansion requires collaboration with repository leaders and a larger workforce to help with data collection. Alliance with archaeological and curatorial organizations is also crucial to project success. Avocationalists, retired curators, and experienced museum and repository staff may also prove crucial partners for data collection. The current group of experienced database and collections staff working on the prototype would review the data before uploading it to DINAA's interface. All of this requires finding resources to support the effort, which is another critical next step.

Chinchilla, Oswaldo (Yale University)

[260] *Relics or Commodities? Early Archaeological Collections in Guatemala*

The practice of collecting archaeological objects began in Guatemala during the second half of the nineteenth century. There is little documentation on the contents of early collections or the collectors' motivations and thoughts about the objects. In this paper, I trace the formation and contents of several early collections assembled by private individuals in the country, and explore the interactions among private collectors, the Guatemalan state, foreign travelers, and foreign governments and institutions, which led to the eventual dispersion and exportation of many collections. The history of early collecting is relevant for understanding the later history of private collecting in the country during the twentieth and twenty-first centuries.

Chiou, Katherine (University of Alabama), Di Hu (James Madison University), Jordi Rivera Prince (Brown University), and Kylie Quave (George Washington University)

[309] *The Inka and Zeacentrism: Complicating Categories, Taxonomies, and Scientism in Archaeology's Methodological Habitus*

Archaeological methods are partly shaped by logics of hierarchy, rigid taxonomies, and single-axis distinctions. Such practices and protocols are insufficiently critiqued and questioned, resulting not only in important issues with equifinality but also with erasure and ignorance of nondominant narratives in the archaeological record. Much of archaeology is characterized by a "methodological habitus" that works to unintentionally and uncritically standardize and bias interpretations and is bounded by an adherence to scientism. We challenge the assumption that hypothesis- and data-driven archaeological inquiry is ontologically incompatible with intersectional ambiguity and complexity. To illustrate the interpretive constraints this habitus can produce, we turn primarily to the domain of food and foodways and demonstrate how intersectional and critical feminist science can offer pathways for resisting deterministic taxonomies and overly confident reconstructions. Drawing on the case of zeacentrism in Andean archaeology, we explore how even quantitative and "objectively" categorical archaeological analyses can flatten past social experience. We illustrate our argument with a discussion of zeacentrism in archaeological research related to Inka imperialism.

Chiquito, Sofia, Rafael Cruz (INAH), and Alberto Peña (INAH)

[88] *Late Archaic Occupations in Villa Ahumada, Chihuahua: A Comparative Analysis of Four Archaeological Sites*

The Villa Ahumada region in northern Chihuahua, Mexico, contains numerous open-air sites associated with the Late Archaic period (~1200 BCE–200 CE). This study focuses on four representative sites—La Concha, La Tolvanera, E-23, and El Pintor—to characterize material culture, technological organization, and cultural patterns. The research followed a two-phase approach: an initial descriptive analysis of lithic artifacts, funerary contexts, and other archaeological materials (including ground stone, basalt pipes, cruciforms, and shell beads), followed by a comparative analysis using ANOVA to identify similarities and differences between sites. Findings indicate a predominance of stemmed and corner-notched projectile points, diverse lithic production strategies, and evidence of cremation practices, suggesting complex mortuary behaviors. Material distribution patterns also point to potential long-distance interactions, particularly involving marine shell. This research contributes to understanding the variability of Late Archaic lifeways in northern Chihuahua and highlights regional differences in subsistence strategies, technological organization, and social interaction among contemporaneous foraging communities. ***This presentation will include images of human remains.

Chocktoot, Perry [333] see Kennedy, Jaime

Choi, MinJoo (Tulane University), Jason Nesbitt (Tulane University), Jordi Benites Segura (UNMSM), and Bebel Ibarra Asencios (PUCP)

[123] *Aynijirca, a Huarás Settlement in Conchucos, Ancash, Peru*

The period between 400 BCE and 100 CE (or late Early Horizon / Final Formative) was a time of significant reorganization following the disintegration of the Chavín network. In the Chavín heartland region of Conchucos, the late Early Horizon is characterized by Huarás, an archaeological culture defined by white-on-red pottery styles. Despite its significance, limited research has been conducted on the Huarás's occupation of Conchucos. As a result, we lack empirical data to discuss the major cultural transformations that occurred at the end of the first millennium BCE. To address this lacuna, we recently conducted preliminary archaeological investigations at Aynijirca, a settlement with concentric circular walls, which may have functioned as a fortification during Huarás times. In this poster, we present the preliminary findings of a 2025 mapping and test excavation project at the site. Specifically, we focus on the site's chronology, as well as evaluating its function as a defensive site.

Chorek, Sophie (University at Buffalo), and Colin Quinn (University at Buffalo)

[324] *Exploring Inequality through Mortuary Practices in Bronze Age Transylvania*

Archaeologists have long considered variability in mortuary practices to be an important line of evidence in the presence of social difference and inequality in the past. The introduction and spread of cremation in late prehistoric Europe is seen as part of a complex process in which status, identity, and the body are transformed. In Middle Bronze Age Transylvania (2000–1500 BCE), there were numerous pathways of the body from death to burial, including both cremation and inhumation. In this paper, we present a comprehensive analysis of variability and intracultural comparison in mortuary practices across Transylvania. We document variations in the presence and quantity of grave goods, body treatment, grave architecture, and spatial placements of remains across multiple scales. We argue that not all signs of differentiation are evidence of inequality. Our broader framework for exploring how inequality and equality is mediated through treatment of the dead has applicability in other global contexts.

Christie, Jessica (East Carolina University)

[212] *Ramses II at the Southern Border with Nubia*

While much research has focused on Ramses II's long reign, family, and activities in the northern part of the empire, I will explore his border negotiations with the Nubians in the south. Trade with Nubia was important due to its precious metal resources. Ramses's most unique and ideologically empowered construction was the temple of Abu Simbel south of Aswan dedicated to himself as a living god. Inside the sanctuary, Ramses placed himself alongside the three state gods Ra-Harakhti, Amun-Ra, and Ptah. The well-researched sunrise solar alignment highlighted him on two days of the year. The other three gods were linked with regions in Lower and central Egypt; Ramses added himself as fourth god over Nubia, taking on the title Lord of Nubia. He built six more smaller, rock-cut temples with architectural similarities to Abu Simbel further south along the Nile, all dedicated to himself and the other state gods. These cult temples were most likely the economic and administrative centers of the Egyptian occupation in Nubia. Thus, Ramses appears to have claimed Nubia as his political and ideological domain in a fashion similar to Amun's domain in Karnak/Thebes and Ptah's domain in Memphis.

Chrzanowski, Stanely [229] see McCormick Alcorta, David Rafael

Chu, Wei (Leiden University)

[169] *Archaeology at Home: Building Collaborative Frameworks beyond in the Field*

Collaborative and community-based archaeology is commonly understood as working with local stakeholders, descendant groups, or the general public. Yet archaeologists also operate within broader communities of practice that shape how knowledge of the past is produced and how it is sustained. Using the ERC HOME project as a case study of transnational collaboration, this paper considers how archaeological communities in Europe extend beyond geographic and cultural boundaries to include international research

teams, institutions, and students. Challenges such as conducting fieldwork in challenging areas, securing excavation permits, ensuring safe participation, and negotiating equitable data-sharing agreements require us to rethink what “community” means in practice. I argue that communities of practice are not peripheral but central to archaeology: they structure our research questions, methods, and outcomes. Framing collaboration as such highlights the ethics and the practical benefits of constructing durable, reciprocal relationships, while also providing a lens for integrating pedagogy, international cooperation, and public engagement.

Chu Barrera, Alejandro (Universidad Nacional Mayor de San Marcos), Jacqueline Hernandez Mejia (Museo de Historia Natural Universidad Nacional Mayor de San Marcos), Jose Eduardo Vasquez Marin (Universidad Nacional Mayor de San Marcos), Letty Salinas (Museo de Historia Natural Universidad Nacional Mayor de San Marcos), and Yazmin Gomez (Universidad Nacional Mayor de San Marcos)

[309] *The Feathers Speak: Ornithological Resource Use in the Tawantinsuyu from the Cañete Valley*

Studies on feathers from Inca domestic contexts are almost nonexistent. This paper analyzes a set of feathers recovered from the archaeological site of Incahuasi, located in the *chaupiyunga* region of the Cañete Valley. The main objective of the study was the taxonomic identification of feathers found in refuse deposits associated with domestic structures that would have corresponded to the local elite. In addition, a small group of specimens was identified from the central platform of Qolcawasi, allowing us to suggest possible differentiated uses. Digital microscopy techniques were employed to identify diagnostic microstructures and thus establish the taxonomic affiliation of the samples. The results of this analysis open a discussion on the practices of exploitation and management of ornithological resources in prehispanic societies, particularly regarding the use of feathers from specific bird species. These findings provide key elements for understanding the symbolic, economic, and social interactions that the inhabitants of this Inca administrative center established with their natural environment.

Chukwuma, Chiamaka [162] see Bandama, Foreman

Churba-Pyzer, Jules [114] see Lara Maldonado, Isabel

Church, Gloria (University of Florida), and Marcela Demyan (University of Georgia)

[76] *Building Petrographic Skills: Learning Ceramic Petrography through Collaborative Networks in the Southeastern United States*

Ceramic petrography is used to study crafting techniques, clay processing, and added material in archaeological pottery at a microscopic level. By using this method, we can better understand different processes involved in ceramic production, enhancing our knowledge of the groups we currently study. This paper discusses our experience with learning the basics of ceramic petrography through the Summer Intensive Course in Ceramic Petrography held by the Center for Materials Research in Archaeology and Ethnology (CMRAE). Upon returning to our home institutions, we are given an opportunity to help create a collaborative learning community with the guidance from experts at the Ceramic Technology Lab (CTL) in the Florida Museum, welcoming scholars from other institutions to participate in discussions about methodological approaches to archaeological ceramics. We advocate for the creation of a system of formal training that follows a more one-on-one extended learning that will strengthen our skills as ceramic petrographers and guide our research to reach well-rounded conclusions based on microscopic evidence of ceramic production.

Church, Minette (University of Colorado, Colorado Springs)

[174] *John Barleycorn Must Die: Teaching Music as Material Culture and Archaeology with Music*

One of the most groundbreaking arguments James Deetz made in his 1977 seminal book *In Small Things Forgotten* was that the music of seventeenth-century British settlers, the structure of melody and introduction of harmony and solos, was subject to the same overarching early American cognitive shifts as other material culture, moving from local vernacular, organic, and communal modes to the symmetrical, individualistic patterned reasoning of the later eighteenth-century Enlightenment. An accomplished banjo player himself, he placed his chapter on changes to popular music's sound and chord structures alongside chapters on parallel (he

argued) changes in house layout, grave markers, and the move toward individualized place settings, presenting all as shifts in deeply culturally embedded patterns of thought. I will present here on the ways I have used this conception of music, and particularly popular music with lyrics, as material culture and oral tradition—means of cultural reproduction—in my undergraduate instruction. I have found this approach to be useful and engaging when teaching everything from the origins of agriculture in the Lavant to “Deep Listening and Human Pasts,” a team-taught Humanities class with a flutist and Deep Listening © facilitator in our music program.

Churi, Eden [115] see Burke, Ryan

Ciccone, Gabriele [340] see Masini, Nicola

Ciolek-Torello, Richard (Statistical Research), Tumurochir Batbayar (Mongolian Academy of Sciences, Institute of Archaeology), Tsend Amgalantugs (Mongolian Academy of Sciences, Institute of Archaeology), and Estevan Ramirez (Statistical Research Inc.)

[226] *The Uyghur Cultural Heritage Project: 2025 Investigations of Developing Urbanism in an Ancient Nomadic Landscape in Mongolia*

Most studies of urban development focus on sedentary agricultural populations. The nomadic empires of Mongolia provide an alternative perspective on urbanism. In 2025, archaeologists from Statistical Research Inc. and the Mongolian Academy of Sciences, Institute of Archaeology, continued a multiyear study of urban centers built by the Uyghur Empire in the eighth century. This year our research focused on the walled town of Tsagaan Sumiin Balgas. Working with the American Center for Mongolian Studies, we conducted a field school with student volunteers carrying out excavations that yielded information about the construction and use of the site. We also updated the drone map of the site and collected wood samples for tree-ring dating. An important aspect of our work is historic preservation; we have created a digital record of this and other sites that can be used as a baseline for monitoring their preservation. The data we have collected also can be used to date the construction and occupation of Uyghur towns, and to identify exchange patterns and relationships to other contemporaneous settlements and towns as we try to understand the role urban centers played in this nomadic landscape.

Ciomek, Katarzyna, Radoslaw Palonka (Jagiellonian University in Kraków), and Vincent Macmillan (Bureau of Land Management)

[335] *Rock Art, Settlement, and Landscape from the Canyons of the Ancients National Monument, Colorado: Digital Documentation, Analysis, and Indigenous Perspectives*

This paper presents the application of digital methods for detailed documentation and subsequent publication and visualization of Ancestral Pueblo rock art and settlements and historic Ute petroglyphs from two areas investigated in the Canyons of the Ancients National Monument, southwestern Colorado, USA. Various digital methods were applied: terrestrial laser scanning (TLS), close-range photogrammetry and other advanced digital photography techniques including RTI/Reflectance Transformation Imaging; the latter one used especially for detailed documentation and interpretation of details of poorly preserved rock art panels. The interpretation and analysis were supported with consultations with the members of the Hopi tribe and separately with the Ute Mountain Ute tribal members. The extensive data and state-of-the-art models are also used to facilitate dialogue in groundbreaking collaboration with tribal and cultural leaders from descendant Indigenous communities. This collaboration will thus combine traditional archaeological methods with recent technological innovations, along with Indigenous oral and historical traditions and knowledge, to illuminate the dynamic interactions between these disparate and yet simultaneously similar human adaptations to this unique desert environment. All together serve as a real help for the heritage management and future protection of the sites, as well as ways of access, governance, and presentation of Indigenous data.

Ciomek, Katarzyna [276] see Palonka, Radoslaw

Claassen, Cheryl (Appalachian State University)

[157] *Shell Objects, New Sourcing*

I revisit three prior chemical sourcing projects (1993, 2011, 2016, AAS, ICP, pXRF) and one new (2025) ICP

shell sourcing project to investigate questions about comparability of assay values, chemical element choice, and the concept of control and subject shells. Of more interest will be the assessment of a sizable population of subject samples from the Cahokia neighborhood and from sites in Arkansas, Texas, and Tennessee. Data suggest multiple sources of shells (or shell artifacts) at single sites, the lack of manufactured necklaces or bracelets of beads but rather pieced together collections, and in some cases the possible use of nonlocal shells even when a site is near the Gulf.

Clark, Andrew (State Historical Society of North Dakota), Tamara St. John (Sisseton-Wahpeton Oyate), Robert Hanna (State Historical Society of North Dakota), and Volney Fasthorse (Standing Rock Sioux Tribe)

[169] *From Battle to Massacre: Community Driven Re-storying at Whitestone Hill State Historic Site, Dickey County, North Dakota*

On September 3, 1863, troops commanded by General Alfred Sully attacked a camp of Yanktonai, Hunkpapa Lakota, and Sihasapa Lakota as part of a punishment campaign resulting from the 1862 US–Dakota War. For decades, site narratives have described the event as a Civil War–era battlefield, but “battlefield” interpretation does not tell the entire story of the conflict at Whitestone Hill, let alone the long and sacred history of the location, or the experiences of the Dakota and Lakota in the attack on the domestic camp. Over the last 15 years, Sisseton Wahpeton Oyate, Standing Rock Sioux Tribe, and the State Historical Society of North Dakota partnered to update the National Register of Historic Places form, updating the interpretive panels on-site, organizing an honor ride, and designing a monument to honor the victims of the massacre that took place. The guiding principles of education, remembrance, healing, and reconciliation have fostered stronger partnerships across multiple communities, providing a more comprehensive history of Whitestone Hill that spans time immemorial.

Clark, Bonnie [34] see Kamp-Whittaker, April

Clark, Dylan (North Carolina Office of State Archaeology), Gabrielle Vail, Khristin Montes (Regis University), and Adolfo Batun-Alpuche (Universidad de Oriente)

[87] *Empowering Indigenous Voices: Community-Engaged Archaeology, Cultural Heritage Practices, and the Legacy of Patricia McNany in Yucatán, Mexico*

This presentation focuses on our work with InHerit, a nonprofit founded by Patricia McNany in 2006 to build grassroots collaborations between archaeologists and local communities that contribute to reshaping cultural narratives and effecting positive social change. While initially focused on community archaeology, InHerit’s engagement with Indigenous groups has increasingly emphasized community-based participatory research methods and conservation through cultural heritage education, with archaeology playing one part among a variety of methodologies and thematic approaches interwoven to address local needs. Growing out of partnerships with Maya towns and villages, experiential education and traditional knowledge sharing became primary means to overcome heritage distancing—a term McNany (2020) describes as systemically codified “estrangement from deep heritage as a strategy of settler colonialism.” Under Tricia’s mentorship, we each played key roles in implementing two of InHerit’s recent collaborations in Yucatán, Mexico—*Maya from the Margins* and the *Cultural Heritage, Ecology, and Conservation of Yucatec Cenotes Project*. These examples of community-engaged, participatory projects utilized place-based experiential learning and bidirectional knowledge exchange to foster intergenerational dialogue and build projects around local Indigenous interests, thereby serving to illustrate how facilitating deeper and more inclusive memory- and meaning-making contributes to both cultural preservation and empowerment.

Clark, Dylan [112] see Marengo Camacho, Nelda Issa

Clark, Howard [277] see Boyd, Douglas

Clark, Howard [264] see Menaker, Alexander

Clark, Jackson (UNC Chapel Hill), Ingrid Mainland (University of the Highlands and Islands), and Nick Card (University of the Highlands and Islands)

[356] *Better Off Burnt: Standardizing Burnt Bone Recording Procedures at the Ness of Brodgar in Neolithic Orkney*
The Ness of Brodgar, a Late Neolithic site situated on the Orkney Islands in Scotland, has an estimated 200,000 faunal remains collected over 20 years of excavation that detail a pattern of extensive and intensive burning of postcranial elements. This paper samples the collected faunal remains from one of the Ness of Brodgar's more than 30 monumental stone buildings: Structure 8. Zooarchaeological identification and analysis was undertaken in the fall of 2023 with dedicated attention paid to element and species identification of highly burnt fragments. Descriptions of certain macroscopic characteristics linked to fire-related transformation showed to be easily repeatable on a large scale, providing a roadmap for better inclusion of burnt bone in future zooarchaeological studies at the Ness. Results of this in-depth analysis have also highlighted what types of data can be pulled from close, intentional study of stereotypically under-investigated burnt bone assemblages. Specifically, burnt bone figures enhanced aspects of depositional patterns and site formation, as well as the consumption habits of Late Neolithic Orcadians.

Clark, Jeffery [34] see Smith, Jaye

Clark, Jessica, Scott Macrae (University of Central Florida), Brigitte Kovacevich (University of Central Florida), and Michael Callaghan (University of Central Florida)

[99] *Quarrying at El Mirador: GIS Analysis of Lidar Data*

This paper will discuss the results of analysis of selected quarries in El Mirador. Using GIS, lidar data has been analyzed to map features, such as residential buildings and quarries, that other technologies like satellite imagery have missed. Through analysis of quarry and residential structure volumes in outlying areas of El Mirador at various distances from the city center, this research seeks to understand more about the nature of socioeconomic and political coordination at the site through the lens of limestone production.

Clark, Jessica [99] see Gonzalez, Jesus

Clark, Jessica [99] see Kovacevich, Brigitte

Clark, Loren (UC San Diego), Dominique Rissolo (UC San Diego), Eric Rodríguez-Delgado (UC San Diego), Fred Devos (CINDAQ), and Silvina Vigliani (INAH)

[178] *Visualizing Access beneath the Surface: The Application of Ground-Penetrating Radar for Reconstructing Human and Faunal Access to the Submerged Cave Systems of Quintana Roo, Mexico*

The application of ground-penetrating radar (GPR) in archaeology has been overwhelmingly restricted to terrestrial environments, but archaeologists often work between these environments in the areas too shallow for efficient marine geophysical survey, but too wet for traditional terrestrial methods. The now-submerged cave entrances in Quintana Roo offer an ideal environment for testing the use of GPR in shallow water settings as there is little water movement and low sediment transport across the peninsula. Despite the low-energy environment, there is clear evidence of infilling in many of the cave entrances associated with extensive archaeological and paleontological evidence. Understanding the sedimentation timeline of these entrances is crucial to reconstructing how humans and megafauna accessed the caves when they were dry during the Late Pleistocene / Early Holocene. In this paper we present the preliminary results of the use of GPR in the shallow cave entrances and how this data can shed light on the larger questions regarding human and faunal interaction with these dynamic cave environments during a time of environmental and climatic change.

Clark, Morgan (Brown University)

[255] *Showing Speaking in Ancient Maya Art and Writing*

In addition to speech scrolls, Maya scribes used verbal strategies to introduce quoted speech. In such cases, quotations are followed with the words *yalajiy* ("his or her statement") or *cheheen* ("he or she says"), then the speaker's name, and sometimes the name of the person being addressed. This paper focuses on the way these two expressions interact with imagery as well as the ways they do not. In the 50 or so texts that contain examples of *yalajiy* and *cheheen*, *yalajiy* almost exclusively follows the utterances of supernatural

beings and is usually linked to accompanying imagery, which often adds to the humor or occasional irony of certain scenes. In contrast, *cheheen* primarily involves speech in the natural world and is often not linked to imagery. *Cheheen* is used to attribute speech to scribes who are responsible for producing a given text; it also attributes speech to the inscribed objects themselves. It is argued here that the difference in the relation of these two words to imagery could have to do with semantic distinctions between *yalajiy* and *cheheen*.

Clark, Reilly (University of California, Santa Barbara)

[214] *Knowing Sovereignty: Resistance, Reclamation, and the Ghost Dance*

This paper follows a Ghost Dance shirt from Wounded Knee, South Dakota, to its current, contested place at the Kelvingrove Art Gallery and Museum in Glasgow, Scotland. It analyzes the ongoing negotiations around the Ghost Dance shirt's return, including conditions that the museum, the United Kingdom, and the United States apply that threaten to undermine the act of repatriation itself. The negotiations involve international and intertribal politics, issues of precedent-setting, and underlying assumptions about the function of cultural objects. The repatriation of the shirt, then, represents more than the literal return of an object. It represents the reclamation of interpretive control and meaning itself.

Clarkson, Persis [340] see Valenzuela, Daniela

Claypatch, Hunter (Pima Community College), and Zithlaly Vega

[166] *Recentering the Periphery: Using Plain Ware Manufacturing Techniques to Reconstruct Potter Communities along the Arizona-Sonora Borderlands*

Arizona and Sonora's Upper Santa Cruz valley has traditionally been interpreted as a "contact zone" or "frontier" between the precolonial Trincheras and Hohokam traditions. These models draw heavily on Wallerstein's "World Systems" and position the region as "peripheral" to better-studied cultural "cores." A recent study of locally produced plain wares from over 20 sites has aimed to better understand the region's precolonial communities. This research demonstrates considerable diversity in local manufacturing techniques, including coil-and-scrape, paddle-and-anvil, "hybrid," and hand-built constructions. Importantly, manufacturing techniques vary by temporality and appear independent from direct proximity to either Trincheras or Hohokam heartlands. This research repositions the Upper Santa Cruz as neither "peripheral" nor a precolonial "frontier" but as a region rich in its own dynamic cultural expressions and regional agency.

Cleary, Celia (Baylor University), and Jacob Freeman (Utah State University)

[282] *Malthusian Frameworks May Provide Insight into the Impact of Infectious Disease Load on Patterns of Demographic Change in Ancient Maya Polities*

Infectious diseases shape demographic trajectories globally, yet their interaction with environmental carrying capacity remains underexplored. Malthusian models describe population cycles governed by ecological and technological limits. Because many infectious diseases are density-dependent, they may act as regulatory mechanisms that also follow these patterns. Ancient Maya urban centers rank among the largest in antiquity, with city populations ranging from tens of thousands to over a million inhabitants. Their intensive inter-polity interaction and well-documented demographic fluctuations make ancient Maya polities an ideal context for studying how epidemic dynamics operate within Malthusian frameworks. This project presents a theoretical model that integrates density-dependent disease dynamics into a Malthus-Boserup model of population growth. It proposes that time-series of host-associated metagenomic sampling within and across these polities could aid in identifying the nature of this relationship between pathogen pressure and demographic change. The framework generates testable predictions for disease-mediated demographic shifts and draws parallels to contemporary issues like COVID-19 and anthropogenic ecological stress. Exploring how past urban systems responded to epidemic pressure extends our understanding of societal resilience, vulnerability, and environmental limits today.

Cleary Moungey, Megan (Cochise College), and Erica Reed (Cochise College)

[48] *Maintaining Rigor in the Online Classroom in the Age of AI*

Asynchronous courses are often perceived as less rigorous and easier compared to their in-person counterparts. The rise of artificial intelligence (AI) intensifies this concern. The question has now become not

if students will use AI but how the presence of AI reshapes what rigor is in asynchronous learning environments. This paper examines practical approaches for sustaining and redefining rigor in asynchronous classrooms, drawing on examples from the archaeology and anthropology classroom setting.

Clements, Joshua, and Kyle Freund

[198] *Refining the Projectile Point Chronology of Eastern Idaho*

Projectile points are among the most widely used and reliable temporal markers for precontact sites in eastern Idaho, yet their typology and chronology have become increasingly fragmented and ambiguous. To begin to address this problem this poster presents (1) a critical review of past regional typologies and chronologies, (2) a synthesis of regional datasets linking 770 individual projectile points with 110 radiocarbon dates, and (3) a proposed revision to the current projectile point chronology. This updated typology and chronology not only refines our understanding of the precontact period in eastern Idaho but also identifies key data gaps and priorities for future research.

Clements, Joshua [211] see Frandson, Kristina

Cleveland, Katherine [334] see Losco, Ashley

Clingenpeel, Kaitlyn

[53] *Slipped and Scored: Network Analysis of Changing Ceramic Practice Centered on K'axob, Belize*

Embedded within any piece of pottery is the knowledge of the hands that made it and the knowledge of those who came before. This intergenerational exchange of knowledge, as manifested in the remains of pottery, can be tracked through the changes in slip, form, paste, and other identifying attributes over time using social network and correspondence analyses of ceramic typology data. Centering focus on K'axob, Belize, and radiating out to include ceramic data from sites across the Maya region, this project explores changes in ceramic practice across the transition from the Preclassic to Early Classic periods. The previous study on this same topic explored the transition from the Late Classic to the Postclassic periods. Changes in ceramic style, technology, and participation in communities related to pottery can be representative of aspects of life in the face of periods of change, crisis, and resilience. These changes are tracked within the site of K'axob, across local sites, and regionally to chronologically map the geographic distribution of the exchange of ceramic knowledge and traditions.

Coats, Waylon [123] see Gaskell, Sandra

Coats, Waylon [124] see Pryor, John

Cobos, Rafael [354] see Zimmermann, Mario

Coburn, James (Colorado Mesa University), and Christina Horn

[327] *Development of the Modern Japanese: Cranial Metric Data Analysis from the Jomon Period through Kofun Period*

The modern Japanese people are distinctive as they have had biological influences from both the native Jomon people and immigrants from the Asian continent. These influences have been demonstrated in various ways; this article will specifically focus on the cranial and mandibular metric data analyzed from the Initial Jomon period to the Final Kofun period. The goal of this research is to show a very distinctive inheritance in both the Yayoi and Kofun periods of both the native and immigrant morphology. We believe this will give more credence to the population integration theory and push for a larger understanding of more ways of showcasing the importance of multiple waves of migrations affecting the development of the modern Japanese. ***This presentation will include images of human remains.

Coburn, James [327] see Horn, Christina

Codding, Brian (University of Utah), Simon Brewer (University of Utah), Ishmael Medina (University of Utah), and Eric Smith (University of Washington)

[95] *Foraging and Farming Represent Different Adaptive Responses to Local Climatic, Ecological, and Social Conditions*

The continuum between foraging and farming represents a constellation of adaptive subsistence decisions made in specific local environmental and social contexts. Hypotheses for why individuals would shift along this continuum vary from climate determinism to social constructivism. Here, we quantitatively evaluate three hypotheses that focus on climatic constraints, ecological trade-offs, and social institutions as primary drivers of subsistence stasis and change using evidence from Indigenous societies across western North America. Results illustrate the relative support for each hypothesis and help explain why foraging strategies persist in some locations, while farming may be adopted in others.

Codding, Brian [211] see Cole, Kasey

Codding, Brian [95] see McCool, Weston

Codding, Brian [95] see Medina, Ishmael

Codding, Brian [95] see Vernon, Kenneth

Codding, Brian [95] see Wilson, Kurt

Coffey, Emma

[30] *Unearthing the Bones: A ZooMS Analysis of Historic Sandusky's Subfloor Pit*

An average of 10–15 enslaved individuals worked and lived at Historic Sandusky, a nineteenth-century plantation in Lynchburg, Virginia. According to an 1813 insurance map, the property consisted of the main house and several exterior buildings including a 32 × 16 ft. detached kitchen. In spring 2021, archaeologists excavated a 20 × 20 ft. open-area block to determine the kitchen's location based on past excavations. They discovered a subfloor pit and proceeded to excavate it and take flotation samples in search of small artifacts and faunal remains. Faunal remains from the fine screening were taken for ZooMS (Zooarchaeology by Mass Spectrometry) analysis. Fifty samples were chosen due to the fragmentary nature of the zooarchaeological assemblage within the subfloor pit, 25 from the south bisect and 25 from the north bisect. Using the results of the ZooMS analysis, this paper will focus on discussing the use of animal remains related to food consumption within the exterior kitchen. This presentation will also focus on exploring the relation between these remains and the artifacts found in the pit.

Coffey, Grant (Crow Canyon Archaeological Center), Stewart Koyiyumptewa (Hopi Tribe), Paul Ermigiotti (Crow Canyon Archaeological Center), Mark Varien (Crow Canyon Archaeological Center), and R. J. Sinensky (Crow Canyon Archaeological Center)

[335] *The Pueblo Farming Project: A Long-Term, Collaborative Project of the Hopi Tribe and the Crow Canyon Archaeological Center*

The Pueblo Farming Project is a long-term collaborative project between the Hopi Cultural Preservation Office and the Crow Canyon Archaeological Center. The Hopi are located in northeastern Arizona and have lived on, and have grown maize around, the Hopi mesas for millennia. They also have ancestral ties to many areas in present-day Colorado, Utah, New Mexico, and beyond. The Crow Canyon Archaeological Center is a nonprofit research and education organization near Cortez, Colorado, with a mission to empower present and future generations by making the human past accessible and relevant through archaeological research, experiential education, and American Indian knowledge. Working together, the Hopi and the Crow Canyon Archaeological Center collaborated on this important project to benefit descendant communities, archaeologists, and the general public. The Pueblo Farming Project provides a durable example of a productive collaboration between a descendant community and the archaeological community that incorporates important aspects of Indigenous Data Sovereignty while also producing data important to researchers and the public.

Coffey, Grant [55] see De Leon, Abigail

Cogan, Jesse, Henry Paret, Elizabeth Arkush (University of Pittsburgh Center for Comparative Archaeology), and Sarah Kennedy

[202] *Carved Landscapes: Rock Art and Inca Imperial Expansion in the Lake Titicaca Basin*

Recent research at Machu Asillo, a Late Intermediate period (LIP) hillfort in Peru's northern Lake Titicaca Basin, investigates Inca imperial expansion in the region, and potential resistance from local Colla populations. Machu Asillo was mentioned in Inca-derived colonial narratives as a Colla stronghold during a rebellion. Inca architecture at the site suggests potential commemoration of the Inca's victory over the Colla. This poster examines four petroglyphs at Machu Asillo. While a portion of the panels' motifs can be identified as camelids and anthropomorphs, further research is required to determine the petroglyphs' date range, symbolism, and social function. Preliminary results suggest the rock art dates to the Late Horizon (LH), due to an associated offering deposit and the construction of Inca structures overlooking two panels. It is also possible that the rock art dates to the LIP, but retained significance for the Inca postconquest. Potential superposition of engravings and the presence of similar camelid motifs may indicate a shared artistic tradition between the LIP and LH periods, suggesting a continuation of Colla practices in spite of Inca imperialism. This research contributes to the field of petroglyph archaeology and understandings of Inca ceremonial practices and commemorative acts in the Lake Titicaca Basin.

Cohen, Anna (Florida State University), and Juan Carlos Fernandez-Diaz (NCALM, University of Houston)

[308] *Tropical Settlement Patterns in the Wampu River System, Eastern Honduras*

In our era of remote sensing archaeology and legacy datasets, multiple lines of evidence should be integrated to establish a large-scale view of threatened Indigenous landscapes. This study brings together several datasets derived from airborne lidar, satellite imagery, and pedestrian survey to present a large-scale (>650 km²) synthesis of the archaeology of the Wampu River system, a part of eastern Honduras with a long but inconsistent history of research. Goals of this study are to (1) connect pedestrian and airborne lidar surveys within the Wampu River system, (2) identify patterns in archaeological sites and architecture, (3) characterize the anthropogenic landscape of the region, (4) and to suggest areas for future work in this understudied part of the Americas. Results include the identification of previously unreported archaeological sites and a basic classificatory scheme for site organization. Other findings are the preliminary observations that seasonality likely structured settlement organization and that there are emerging patterns in site orientation. We argue that data from eastern Honduras should be a part of broader discussions about tropical settlement patterns, thus contributing toward a more complex understanding of the extent and diversity of Indigenous lifeways in the Americas and elsewhere.

Colaninno, Carol (Washington University in St. Louis), and Maureen Meyers (New South Associates)

[208] *Gender Inequality in Archaeology: Claassen's Contributions and Sustained Impacts*

Since its beginning, gender inequality has been a component of archaeology encompassing all aspects of archaeological knowledge production from the distribution of tasks in the field to authorship attributions. Cheryl Claassen was one of the first women in archaeology to not only call out this rampant inequality but also undertake detailed studies documenting it, in areas of publication and presentations specifically. The significance of her work goes beyond calling out gender inequalities that have become inherent to our discipline, as she also identified how its presence hindered the archaeological understanding and reconstruction of the past. Her work laid the foundation for studies of sexual harassment in the field, which has paved the way for research on how our discipline can begin to combat that harassment. As a result, her work has contributed to a discipline that is more inclusive for archaeologists and the interpretations they make about the past. This paper discusses Claassen's work on gender inequality and the ways in which this work continues to have a positive impact for women and LGBTQ+ archaeologists in the field through these recent studies.

Colclasure, Cayla (University of North Carolina, Chapel Hill)

[251] *Life on the Rails: Archaeology at the Cowee Tunnel Prison Labor Camp, Jackson County, NC*

During the 1880s, the Western North Carolina Railroad Company confined hundreds of incarcerated

workers at the Cowee Tunnel Prison Labor Camp in Jackson County, North Carolina. The state of North Carolina rented its prisoners to the company under the state's convict leasing system. In one incident, known as the Cowee Tunnel Disaster, 19 men and boys drowned while crossing the Tuckasegee River on a flat boat. Like most of the railroad workers, every one of the "Cowee 19" were Black. Over the past five years, local storytellers, activists, and scholars have worked to raise awareness about the history behind the Cowee Tunnel Disaster. In this paper, I present the results of two years of archaeological survey and excavations at the Cowee Tunnel Prison Labor Camp. I discuss the project's community engagement, the challenges associated with the site, and what archival and archaeological evidence can tell us about life in the camp for incarcerated railroad workers.

Cole, Kasey, Ethan Reid, Jane Damstedt (University of Utah), Zack Rhoades (University of Utah), and Brian Coddington (University of Utah)

[211] *Examining the Relationships between Bison Exploitation and Grassland Habitats in the Bear River Basin in Western North America*

Long-term interactions between climatic variation and human resource use and landscape modification collectively create integrated socioenvironmental systems (SES) that influence the distribution of plant and animal species. Ongoing work in the Bear River Basin is reconstructing Holocene SES dynamics to understand the impacts of both climate and people on plant and animal communities. Preliminary research highlights the importance of Shoshone land-use practices in influencing the presence of bison species in the region over the past 1,000 years. Shoshone land-use practices, such as controlled burning, may have benefited bison populations by removing woody vegetation and stimulating the successional growth of nutrient-dense regrowth, thereby creating mosaic grassland habitats for grazing. In addition to serving as a food resource, bison grazing behavior also likely helped to fertilize the landscape, aerate soil, and remove grass species that can crowd out other plants, creating more diverse plant communities. Here, we explore this mutually beneficial relationship by examining the relationship between bison occurrence and relative abundance and the occurrence and diversity of grassland species in the region. Findings from this work will not only aid in further understanding long-term SES dynamics in the region but will also inform Tribally led restoration efforts in the area today.

Coll, Luis [276] see Paya, Tomás

Collazzi, Charlene (Center for Digital Antiquity [tDAR])

[112] *SAA and tDAR: A Decade of Digital Data Partnership*

Every year, the Society for American Archaeology (SAA) brings together archaeologists from around the world at their annual meeting. Archaeologists at all stages of their careers are invited to share their work and foster collaboration in this ever-advancing field. As archaeology's technological landscape increasingly shifted from paper records to digital data, the SAA recognized the importance of ensuring the long-term digital preservation of and access to presenter materials from their annual meetings' various general sessions, symposia, forums, poster sessions, and workshops. To address this, in 2015, the SAA and the Center for Digital Antiquity (CDA) began a partnership to promote and support proper curation of this digital archaeological data by offering SAA members no-charge deposits of their SAA annual meeting presentation materials into the Digital Archaeological Record (tDAR), CDA's CoreTrustSeal certified digital repository. Starting in 2025, the SAA began archiving their Board of Directors meeting books in tDAR, providing access to the materials the SAA Board use for decision-making at each meeting from 1997 to (currently) 2012. Now, after a decade of partnership, this poster highlights the successes and challenges of this program, focusing on engagement, processes, and reuse statistics to demonstrate its value and guide improvements into the next decade and beyond.

Colley, Madeline (University of Arizona)

[34] *Clues of a Past Camp Naco: Tales from an Archaeology Internship*

Undergraduate training opportunities in archaeology are often limited to field schools, which can be competitive, costly, and inaccessible for many students. During the 2024–2025 academic year, three Cochise College students participated in a year-long internship at Camp Naco, a historic US Army post on the

Arizona–Mexico border once manned by the Buffalo Soldiers. Working alongside archaeologists, preservation specialists, and the Naco Heritage Alliance, interns received hands-on training in GIS, lidar, archaeological monitoring, artifact curation, and adobe preservation. They produced building assessments, artifact analysis reports, and instructional documents that directly contributed toward preservation planning and interpretation of the site's rich history. Beyond technical training, the internship emphasized professional composition, nonprofit research, and community engagement, illustrating the value of integrating students into active cultural resource management projects. This case study demonstrates how undergraduate internships can both prepare students for careers in archaeology and contribute meaningful labor, research, and outreach to under-resourced heritage sites. As cultural repositories and historic landscapes face growing preservation challenges, models like the Camp Naco internship highlight the potential of collaborative, locally based training to address both workforce development and long-term stewardship of the archaeological record.

Collins, Lori [198] see Gonzalez Garcia, Jorge

Collins, Matthew [195] see Hockett, Bryan

Collins, Ryan (Millsaps College), and Ken Seligson (California State University Dominguez Hills)

[62] *Public Funerary Contexts of the Early Puuc: Case Studies and Curiosities from Xanab Chak and Paso del Macho, Yucatán, Mexico*

During the 2025 field season, investigations by the Proyecto Arqueológico de Sitios Pequeños en el Puuc Oriental (PASPEPO) uncovered four burials across three distinct contexts at Xanab Chak, a Preclassic site in the Puuc region of the northern Maya lowlands. Each burial exhibited unique characteristics and was accompanied by specific funerary arrangements. For example, Entierro 01 and 02 were isolated and linked to large caches with vessels associated with different time periods. The ages of the burials varied widely. Entierro 01 was estimated to be 12–17 years old, Entierro 02 about 2–4 years old, Entierro 03 over 55, and Entierro 04 between 25–40. A common feature among all the burials is their placement in public rather than private settings. Interestingly, the patterns of offerings found with Entierro 01 and 02 closely resemble the earliest offerings and burial patterns seen at nearby Paso del Macho. This paper offers a preliminary attempt to describe and classify public funerary practices in early Puuc, aiming to understand shifting ritual patterns and funerary customs, while also exploring questions about long-distance exchange and material value.

***This presentation will include images of human remains.

Colpitts, Sydney (University of British Columbia), and Aleska Alaica (University of British Columbia)

[60] *Impacts of Wari Imperialism on the North Coast of Peru: The “Bottom-Up” Approach*

Archaeological studies on the north coast of Peru concerning Wari state formation in the Middle Horizon (600–1000 CE) have often favored large settlements, outposts, and administrative and religious centers, tracing the life histories of the elite, artisans, and administrators, while smaller settlements on the outskirts of these urban centers have remained understudied (Bélsile 2015:183). Research in the Huarney Valley concerning Wari contact, for example, has been largely restricted to Castillo de Huarney, an elite Wari structure and tomb (Druc et. al. 2020; Kałaska et. al. 2022; Knudson et. al. 2017; Prümers et. al. 2000; Więckowski 2019). Bélsile (2015) advocates for a complementary “bottom up” approach to this framework in his work on the Wari in the highlands, which importantly explores the local response to colonization. Individuals are likely to experience colonization differently, depending on their social status, gender, or physical proximity to the imposing group, and thus in order to provide an accurate and full picture of a history, all sides must be considered (Bélsile 2015:181). This presentation will propose a multi-method approach to elucidating the impact of Wari imperialism on local communities on the north coast of Peru.

Coltrain, Joan [211] see Schollmeyer, Karen

Colvill, Kylie [127] see Crockett, Cenetria

Combs, Evelyn**[313] *From Fragments to Framework: Investigating Dene Engravings***

The decorated materials from the Shepperd Collection and the Dixthada site represent a rare record of Dene artistic expression, where bone served as a functional and abundant medium. Despite their fragmentary and calcined condition, these artifacts preserve engraved lines, hatching, and chevron designs that echo ethnographic accounts of traditional Dene art. By systematically documenting, illustrating, and analyzing these decorated artifacts, this study seeks to establish a baseline framework for recognizing and interpreting Dene art. This foundation will support both archaeological approaches to artistic traditions and community-led efforts in knowledge revitalization and cultural continuity.

Comeau, Brad [281] see Owen, Ross

Comeca Ramirez, Gianina (Universidad Nacional Mayor de San Marcos), Alexandre Chevalier (Royal Belgian Institute of Natural Sciences), Pilar Babot (University of Tucuman), Anna Guengerich, and James Crandall (California State University, Sacramento)

[30] *Approaching Plant Consumption in Ancient Societies of the Pre-Inka and Inka Period from the Tropical Montane Forests of the Eastern Andes at the Site of La Joya (Amazonas, Peru)*

Different disciplines such as palynology, anthracology, microarchaeobotany, and seed analysis have contributed to the knowledge of past interactions of humans and their physical environment. Studies of starch grains allows very precise identification of plants used by past human societies as well as plant transformation processes, and studies of phytoliths allows for the identification of plants in contexts where other botanical remains are not preserved. This project focuses on the identification of the anthropogenic use of plant resources in ancient societies located in the tropical montane forests of the Eastern Andes. It considers, as a case study, the Inka and pre-Inka period contexts of the archaeological site La Joya (Dept. of Amazonas, Peru). Here, a microfossil approach is of utmost value due to the poor preservation of botanical remains in moist tropical settings. The results obtained contribute to the reconstruction of the social practices associated with the social use of plants and allow for a better understanding of the changes that occurred in the consumption of botanical resources during the Inka and pre-Inka periods, as well as a greater understanding of their social and political importance during these periods.

Comeca Ramirez, Gianina [58] see Crandall, James

Con, María José [112] see Marengo Camacho, Nelda Issa

Concho, Steven [218] see Bishop, Katelyn

Conesa, Francesc (Spanish National Research Council), Natalia Égüez (IPNA-CSIC Spanish National Research Council), Oula Seitsonen (University of Oulu), Bayarsaikhan Jamsranjav (Mongolian Academy of Sciences), and Jean-Luc Houle (Western Kentucky University)

[315] *Traces of the Nomads: Using Multi-temporal and Multi-source Satellite Imagery to Map Vegetation Dynamics and Past Pastoral Campsites in Mongolia*

Much of what we know about ancient Mongolia comes primarily from studying visible and well-preserved stone burials. In contrast, virtually no visible markers indicate the location of an ancient campsite. Pastoralists move seasonally and settle in the same favorable spots year after year. They prefer valley draws to seek protection from the hazardous winter wind, and in summer, they move to the open grasslands as they did in the past. Over millennia, the repeated use of such locations has left a specific sediment signature made of enriched organic soil and scattered archaeological materials. Detecting ancient campsites with accuracy is a key challenge, yet it is crucial for advancing our understanding of nomadic pastoralists' land use, mobility, and resilience over time. In this study, we map multi-temporal seasonal vegetation dynamics and anthropic soil signatures to link those with automatically predicted location preferences for past seminomadic settlements. We draw on extensive datasets from satellite constellations and nano-satellite imagery in cloud-computing platforms such as Google Earth Engine. Preliminary results in northwestern Mongolia showcase the capabilities and limitations of multispectral and radar sensors in the steppe grasslands, and provide a starting

baseline for sharing reproducible remote sensing-based methodological workflows.

Cong-thi, Diep [217] see Suter, Kai Anne

Conger, Megan (Center for Applied Isotope Studies), Carey Garland (University of Georgia), Mary Hill, Kristine Schenk (University of Georgia), and Claire Auerbach (University of Georgia)

[184] *NAGPRA Implementation at the University of Georgia Center for Applied Isotope Studies: Progress, Procedure, and Policy Impacts across Units*

The Center for Applied Isotope Studies (CAIS) at the University of Georgia (UGA) is an analytical chemistry center that operates, among other services, a radiocarbon dating laboratory. CAIS houses a legacy collection of sample remnants that were submitted for radiocarbon dating as early as 1972. The Native American Graves Protection and Repatriation Act (NAGPRA) applies to these radiocarbon sample remnants in CAIS's custody. Since 2022, CAIS has collaborated with other UGA units to identify and return approximately 1,800 samples that are known or likely to be eligible for protection under NAGPRA to institutions with legal control and Federally Recognized Tribes. Within the university, this work has facilitated communication, coordination, and relationship-building among CAIS, the Laboratory of Archaeology, and the Office of Research Integrity and Safety. This poster presents the institutional process by which NAGPRA-eligible samples at CAIS are identified, transferred, and returned. Developing and implementing this process has strengthened inter-unit ties within UGA. Centralizing external communication and transfers under UGA's institutional NAGPRA program has been key to streamlining the process, which often involves multiple external institutions and Federally Recognized Tribes, and varies significantly on a case-by-case basis. Additional authors: Sam Olvey, Leonardo Umberger, Amanda Roberts Thompson, and Carla Hadden.

Conlee, Christina [324] see Kellner, Corina

Conlogue, Emily (Harvard University)

[285] *Theorizing Catholic Landscapes in the US Southwest*

This presentation outlines considerations for archaeological research on Catholic landscapes in the southwestern United States. Drawing on how archaeologists have studied precolonial spirituality, this paper seeks to address local iterations of so-called world religions. How do place-based manifestations of organized religion impact their analysis and interpretation by archaeologists? What does the study of colonial religion have to gain from rooting interpretation in variability, not homogeneity and uniformity? Further, in this presentation, I explore what recent anthropological studies of Catholicism stand to add to studies of Catholic material culture in archaeological contexts. Archaeological sites associated with Catholic communities and their spiritual practices can shed light on the negotiations made between practitioners of localized iterations of large-scale religions and various authorities in colonial settings, be they spiritual or secular.

Connell, Mary (Tetra Tech Inc.), Artemis King (Tetra Tech Inc.), Seven Hake, Alexander Smith (University of Colorado, Denver), and Maddison Pfeifer (TetraTech)

[115] *A Bone Percussion Punch? Analysis of a Recent Surface Find in South Park, Park County, Colorado*

During a 2025 pedestrian survey in Park County, Colorado, we documented an open campsite containing a lithic flake concentration feature alongside a small bone artifact. While bone tools are relatively rare discoveries in surface contexts within Colorado, and their identification and interpretation in archaeological contexts is somewhat contentious, we aim to explore how the documentation of the bone artifact alongside a dense lithic scatter informs our interpretation of the tool as a bone punch. In doing so, we aim to contribute to the data regarding osseous knapping technologies in the South Park Basin. In addition, by comparing this find to similar tools, both those made from bone, stone, and antler in the South Park Basin and greater region, we hope to place this site within the larger framework of bone tool industries in the precontact period.

Connell, Samuel (Foothill College), and Michael Wilcox (Stanford University)

[149] *Practicing Indigenous Archaeology in Hawaii and Ecuador: Aloha Aina and Sumak Kawsana*

This presentation reflects on Indigenous archaeology field school programs as a pedagogical tool in lieu of the

traditional field school formats. For the past five years, we have been running accelerated three-week Indigenous archaeology field programs. On all the projects, 25–30 students enrolled at Foothill College learn about restorative justice, land-back, and the transformative work of Indigenous archaeology put into practice through hands-on service projects. We work with Native community groups (*hui*) tied to *ahupua'a* on the Big Island in Hawaii and Andean communities in the region of Pambamarca, Ecuador. The practice of helping community members on the ground with daily life tasks in these environments has proven successful. Through this land-based and community-centered education, students transform their theoretical understandings of Indigeneity—Aloha Aina and Sumak Kawsana—through lived experiences.

Connolly, Michael [23] see Leonard, Daniel

Connolly, Tom (University of Oregon Museum of Natural & Cultural History)

[271] *The Challenging Cultural Record of the Oregon Coast*

Entry to the Americas from northeast Asia to the North American Pacific Coast by a coastal route is a view championed by Jon Erlandson. Evidence for early human presence along the Pacific coasts of the Americas has been reported from southeast Alaska and British Columbia, and from southern California and coastal South America, but relatively little evidence has been reported along the intervening zone, including the Oregon coast. Many natural factors account for this, but Oregon's archaeological record has also been dramatically diminished by postcontact human activities, and its Native history continues to emerge from what one Native scholar referred to as a cultural "black hole" due to relatively poor ethnographic and historical representation compared to neighboring areas. The current status of Oregon's coastal archaeological record, its contributions to ecological history, and challenges for future research are evaluated.

Connolly, Tom [333] see Derr, Kelly

Conrad, Grace (Ohio State University), and Robert Cook (Ohio State University)

[207] *In a Small Site Forgotten: Relocating and Re-excavating the Peach Orchard Site, Hamilton Co., Ohio*

Fieldnotes, hand-drawn maps, personal communication, and some door knocking: these are what allowed us to relocate a Fort Ancient site located near Cincinnati, Ohio. The Peach Orchard site sits atop a prominent hill, overlooking the floodplain of the Little Miami River. It was first professionally excavated in the late 1880s by archaeologists affiliated with Harvard University. The assemblage collected from Peach Orchard, as well as the fieldnotes and maps made during its excavation, are currently housed at the Peabody Museum of Archaeology and Ethnology at Harvard University. By piecing together these primary documents and the knowledge of local residents, we have recently been able to relocate this site. Here, we present a preliminary analysis of Peach Orchard. This is based on the results of a magnetic survey conducted in the winter of 2023, a shovel test survey conducted during the summer of 2024, and unit excavation during the summer of 2025. We highlight potential areas for future exploration and discuss the important role that legacy collections and primary documents can and should play in the development of research projects.

Consola, Katherine (UCSB)

[186] *Impressions of the State: A Study of Late Middle Kingdom Sealing Practices at Elephantine Island*

Sealing practices in ancient Egypt were used in a variety of administrative and religious contexts. Though evidence for the use of seals can be found at all periods in ancient Egyptian history, seal impressions found at Middle Kingdom sites indicate a significant expansion of the administrative sealing system during the early second millennium BCE. Studies of Egyptian sealing practices have historically focused on iconography, including my previous analysis of the material, though an integration of quantitative analysis is necessary for a more comprehensive understanding of the available data. This paper presents an exploratory quantitative analysis of the physical and spatial properties of seal impressions from the Egyptian colonial site of Elephantine during the late Middle Kingdom (ca. 1850–1630 BCE) to gain further insight into sealing practices on Elephantine to investigate the status of individuals, administrative activities of site, and distribution of import versus locally produced goods. This data provides key insights into aspects of daily life on Elephantine and about material discard practices there. Due to Elephantine's strategic location on the southern border of the Egyptian Empire, this study seeks to analyze regional trends both inside of and outside of the Egyptian heartland.

Conte, Matthew (Seoul National University)

[220] *Before the Meal: New Insights on Millet Cultivation and Social Organization in the Chulmun Pottery Period of Korea from Ceramic Seed Impression Remains*

It has been nearly three decades since the cultivation of domesticated millet in the Chulmun Pottery period (ca. 8000–1500 BCE) of prehistoric Korea was first archaeobotanically confirmed. More data has been amassed since then, but interpretations of the beginnings of millet cultivation, its importance and intensity throughout the period, and whether millet cultivation even persisted until the end of the Chulmun Pottery period are often contradictory. While much of the disagreement arises from theoretical perspectives, collection of sediment samples for archaeobotanical remains continues to be extremely rare in Korea, and this has resulted in temporal and spatial gaps that make it difficult to reconcile opposing viewpoints. In this paper, legacy data in the form of ceramic seed impressions are utilized to attempt to fill in some of the evidential gaps to reevaluate models of millet cultivation in the Chulmun Pottery period. It is argued that millet cultivation became an increasingly important activity throughout the period despite being only one component of a decidedly mixed foraging and cultivating economy. Nonetheless, millet cultivation may have contributed to major changes in the social organization of the Chulmun inhabitants of the Korean peninsula in unique ways.

Conti, Alberto (University of Nevada, Reno)

[73] *Lithic Technological Organization at Lava Beds National Monument, Northern California*

A pedestrian survey of Lava Beds National Monument in Northern California has yielded an abundance of data pertaining to lithic technology. Within the park, previous lithic studies are absent. The debitage consists predominantly of obsidians with small frequencies of basalt and cryptocrystalline. Whereas ground stone artifacts are composed of local basalts. I hypothesize that the debitage in the park is associated with the reduction of prepared cores and bifaces transported into the lowlands from raw material sources within the uplands. Reduction of raw materials at the source location in the form of prepared cores and bifaces substantially reduces transportation cost while simultaneously maximizing the use life of the raw material. This is especially relevant given that there are no known obsidian sources within the park boundaries. If the aforementioned behaviors are occurring, then the debitage and other chipped stone materials within the park should consist of bifacial thinning flakes, primary stage flakes lacking cortex, exhausted cores, and early stage bifaces. This study assumes that lithic technological organization can provide insight into site function and therefore can be used to infer broader patterns of landscape use. The purpose of this study is to provide a preliminary baseline for future research in the region.

Contreras, Daniel, Benjamin Vining (University of Arkansas, Fayetteville), and Augusto Bazán (Pontificia Universidad Católica del Perú / Fundación Wiese)

[267] *What Are Radiocarbon Dates Proxies For? Dates-as-Data and Monumental Construction in the Chicama Valley, Peru*

Dates-as-data approaches, pioneered in the Central Andes, treat archaeological radiocarbon dates as proxies for population, reasoning that larger populations produce more datable material and that date frequencies will reflect this greater abundance. Here we explore the potential dividends of using the archaeological radiocarbon record as another sort of proxy: for monumental construction. By selecting radiocarbon dates that can be directly linked to monumental construction, and explicitly considering the various biases affecting their relative frequencies over time, we use the Chicama Valley archaeological radiocarbon record to examine the timing and tempo of monumental construction. Precisely locating monumental construction on a calendar timescale enables us to juxtapose construction activity, paleoclimate proxies, and multiproxy ENSO reconstructions. These relationships are at the core of Moseley's MFAC hypothesis—that stability in marine resources enabled population growth and increasingly complex social organization—and detailing them allows evaluating MFAC in the Chicama Valley. We find evidence for pulses of monumental construction at approximately 4000, 1400, and 500 BP, with surprisingly little activity between these periods, and evaluate this pattern for potential links between monumental construction and marine productivity.

Contreras, Daniel [111] see Rojas-Pelayo, Lisseth

Conyers, Lawrence [281] see Fennessey, Brenna

Cook, Duncan (Australian Catholic University), Timothy Beach (University of Texas at Austin), Sheryl Luzzadder-Beach (University of Texas at Austin), Gary Feinman (Field Museum of Natural History), and Laure Dussubieux (Field Museum of Natural History)

[35] *Cinnabar in Ancient Maya Landscapes: Understanding Origins and Legacies through Geochemical Sourcing*
Cinnabar, the most common mineral form of mercury, was a highly valued (and geologically uncommon) resource in ancient Mesoamerica. The archaeological record of Maya mercury use includes objects painted with mercury-based paint, cinnabar powder and ore fragments, and rarely, deposits of elemental mercury (liquid mercury). Two decades of research on mercury in soils and sediments at Maya settlements has also shaped our understanding of the chronology and scale of premodern cinnabar use. However, our understanding of the origins of Maya cinnabar, and how it was mined, processed, transported, and traded across the region, remains incomplete. In this presentation, we discuss preliminary findings from the multidisciplinary Maya Mercury Project (MMP) on the origins of Maya cinnabar, including possible source regions and implications for trade. This project focuses, to begin with, on the detailed mineralogical and geochemical characterization of (1) cinnabar excavated from Classic period Maya contexts in Belize and (2) specimens of cinnabar and mercury from potential source regions held in historic museum collections. We discuss the first quantitative comparisons of Maya cinnabar and potential sources and begin to trace the origins of archaeological cinnabar unearthed at Maya settlements.

Cook, Robert (Ohio State University), and Lane Fargher-Navarro (PAST Foundation / Ohio State University)

[277] *Moving from Me to We: Considering Key Shifts toward Greater Collectivity*

The cultural sequences of complex societies often display cycling between extremes of autocracy and collectivity. Extant research has largely overlooked the circumstances that initiate more collective cycles, specifically the conditions under which selfish, reactionary autocrats can be successfully subdued and replaced by more collective institutions. Here we consider evidence indicating that such shifts may be set off by a key individual/event occurring at a critical historical junction. Using cases like Cahokia, Teotihuacan, and Classical Athens, we look for evidence of polemic autocrats that appear to have angered the population so much that they collectively rejected autocracy and initiated change. Conversely, we look at the subsequent emergence of more democratic thinkers that marshaled broad support that drove the emergence of more collective systems.

Cook, Robert [207] see Conrad, Grace

Cook, Robert [285] see Fargher-Navarro, Lane

Cook Hale, Jessica (Submerged Landscapes Research Centre, University of Bradford), Simon Fitch (Submerged Landscapes Research Centre, University of Bradford), and Lizz Zieschang (Submerged Landscapes Research Centre, University of Bradford)

[228] *Just Right: Searching for the Goldilocks Zone in the Gulf: A Landscape Assessment of the Shallow Continental Shelf for Archaeological Potentials*

Here we share preliminary results of a Bureau of Ocean Energy Management-funded environmental study across the Gulf of Mexico designed to refine archaeological potential on the continental shelf. These vary considerably in nature from the south Texas coast to the Florida Keys. Successful submerged landscape archaeological prospection requires that three conditions hold: that the submerged landscape was occupied when subaerial; that archaeological deposits left behind are still preserved after marine transgression; and that these deposits are accessible via coring, dredging, or excavation. Not all continental shelves meet these conditions, referred to as the “Goldilocks Zone.” However, it is critical to assess submerged areas of interest to determine whether they fall into this Goldilocks Zone. This study assesses coastal geomorphology, marine energies, modern shelf sediments, and sub-seabed conditions derived from legacy seismic data to determine where the Goldilocks Zones might be located.

Cooper, Sydney [180] see Biwer, Matthew

Cootsona, Melanie (UC Berkeley)**[47]** *Aves and Maize: The Fields, Beings, and Becomings of Picuris Pueblo*

The co-created landscapes of agricultural field systems in the American Southwest draw in beings of all kinds: wild plants, birds, rabbits, water, and people, among others. Environmental archaeologists have sought to describe how these co-created landscapes shape human-avian relationships in the southwestern Pueblos from a traditional biological view; however, oral traditions, histories, and Indigenous values demonstrate how entangled and specific these relationships can be. Drawing on reanalyzed faunal data from Picuris Pueblo, oral historical research, and archival stories, this paper explores how plants can become hunters, crows farmers, and humans shapers of a living landscape.

Copeland, Steve (Crow Canyon Archaeological Center), and Mona Charles (Powderhorn Research LLC)**[55]** *Finding Middle Ground: Electrical Resistance Surveys at a Chacoan Great House in Southwest Colorado*

It is speculated that subsurface architectural elements specifically Pueblo I arching room blocks and early Pueblo II room blocks exist within the central area of the Haynie site, a multicomponent Chacoan Great House located in the northern San Juan region of southwest Colorado. Recent excavations at the Haynie site revealed that a sizable Pueblo I and early Pueblo II community existed before the late Pueblo II Great Houses. Heavy surface disturbance in the site's middle area limits our ability to detect subsurface architecture. To better identify and interpret the potential for subsurface Pueblo I arcs and early Pueblo II surface rooms and subsurface pit structures, we conducted a series of noninvasive electrical resistance surveys across the central portion of the site. Our results will add to the current body of data from the Haynie site specifically on population size and community organization while reducing the need for additional subsurface excavations.

Coppock, Rachel (Mississippi State University), and Lauren Hosek (University of Colorado Boulder)**[196]** *Find(ing) a Grave: Situating Burial Disposition within and Outside of the Nineteenth-Century Colorado State Hospital*

Rapid social, economic, and demographic change alongside the emergence of state-supported institutions in the late nineteenth century altered the lives, death-ways, and mortuary processes of Coloradoans in the first decades of statehood. An example of these transformations can be found in the Colorado State Hospital, an asylum operating in Pueblo, Colorado, in which a number of unknown individuals were buried on the property. This project attempts to situate the composition of individuals associated with Cemetery No. 2 of the Colorado State Hospital by using archival and online resources to locate the final burial disposition of 505 individuals who died while institutionalized between the years 1879 and 1898. Determining who is represented in historic cemeteries elsewhere helps to contextualize the factors contributing to burial disposition and also to recover the potential identity of individuals associated with Cemetery No. 2. To explore these mechanisms further, we analyze the demographic composition of patients found to be buried in historic cemeteries from the counties most referenced in the hospital's admission records. Considering the unique political-economic contexts of these counties, ranging from urban to rural communities, sheds light on the social and economic factors that converged to shape mortuary treatment for institutionalized individuals in nineteenth-century Colorado.

Corbin, Clay [205] see Sedlmayr, Jayc

Cordero, Robin [194] see Brucker, Ryan

Cordova, James (University of Colorado Boulder)**[82]** *The Power of Flowers in Nahua Visual and Material Productions*

This paper examines the acculturative power of flowers in colonial Mexican religious images and portraiture, situating floral imagery at the intersection of Euro-Christian symbolism and Nahua cosmologies. While Jack Goody's *The Culture of Flowers* omits the Americas, he acknowledges the ingenuity of ancient Mexican flower workers whose practices infused sacred ceremonies with complex floral devices. After European contact, these traditions merged with Christian devotional art, producing forms that preserved Indigenous

understandings while privileging Euro-Christian interpretations for colonial and modern audiences. This paper traces how flowers signified across cultures in visual and olfactory terms. Drawing on both Euro-Christian symbolism and Mesoamerican “flower worlds,” it highlights how floral imagery functioned as a shared visual language that mediated colonial power and belief. Ultimately, flowers in colonial Mexican art reveal a creative dialogue between Indigenous and European worlds, embodying a multivalent symbolism that spoke to diverse audiences while generating new devotional and aesthetic forms.

Córdova, Mario [331] see Helmke, Christophe

Córdova, Mario [331] see Meza, Carolina

Corona Andrade, Marisol [316] see Gómez García, Yajaira

Coronado, Anabella (Universidad de Sonora), and Cristian Figueroa (University of Colorado Boulder)

[91] *Archaeological Collections, Institutional Policies, and Community Self-representations in Indigenous Museums of Sonora, Mexico*

The Indigenous communities in Sonora, including those who have migrated there recently, connect with museum collections and archaeological sites in different ways. One example is the treatment of tools, figurines, and ritual objects in museums, which differs from the self-representation of Indigenous peoples through dolls, traditional clothing, jewelry in exhibitions, and intercultural events. Earlier interactions with museums were often guided by institutional policies that controlled how these materials were presented. More recently, these relationships have shifted toward participatory and autonomous collaborations with communities such as the Comcaac, Yaqui, and Mayo. These collaborations involve shared work on exhibitions, policies, and cultural programming. This presentation reviews several recent cases where communities, academics, and government institutions in Sonora have worked together to shape museum practices. These examples show how collections and heritage places can become part of broader conversations about justice, well-being, and Indigenous rights.

Corr, Molly [161] see Palka, Joel

Corrales, Jillyan, Graham Mullen (University of Washington), Jade d’Alpoim Guedes (University of Washington), Ben Fitzhugh (University of Washington), et al.

[313] *Archaeobotanical Analysis of Materials from the Tanginak Spring Site, Kodiak, Alaska*

The Kodiak Archipelago in southern Alaska has a rich archaeological heritage explored over the past half century by an ongoing series of archaeological research projects, and yet few archaeobotanical analyses have been carried out on sites from the region. This is especially true for the older components of settlements. For decades, Kodiak archaeologists have seen little reason to focus on archaeobotanical analyses, considering preservation too poor in the wet climate and focusing instead on fauna from shell midden sites, lithics, and—in the case of the uniquely preserved wet site of Karluk I (Kal’unek)—wooden artifacts. The Tanginak Spring site, excavated between 1994 and 2003 by University of Washington field schools, is nominally the oldest site on the archipelago and dates to between 7500 and 6000 cal BP. Sediment samples during excavations were retrieved, floated, sorted, and identified in fall 2024 by the archaeobotany class at the University of Washington. This paper presents the initial results of the analysis of wood charcoal, seeds, and other preserved plant remains from the site, providing evidence to develop new insights into plant use by Kodiak’s earliest settlers.

Corrales-Ulloa, Francisco (Museo Nacional de Costa Rica), and Amanda Suárez Calderón

[311] *A Case Study of Social Change and Population Dynamics in the Diquis Delta, Southern Costa Rica*

An intensive test pit survey was recently conducted in the northeast sector of the Diquis Delta, southern Costa Rica, as part of the Environmental Impact Assessment of an international airport. In addition to the evaluation of archaeological impact, this survey contributed to the accumulated knowledge of several decades of research in the delta. The systematic approach used during the survey allowed us to build a database of ceramic densities across the area that is used to elucidate population dynamics in this lower altitude alluvial

plain. The settlements included some population centers and dispersed hamlets. Our aim is also to integrate the data produced by this survey with the information generated by various types of surveys in the area over the last couple of decades. First, we were able to make relative population estimates for the periods represented in the ceramic assemblage. A total of 10 radiocarbon dates allowed us to refine the sequence of occupation of this area. Then, we applied the area density index, widely used in the region and elsewhere to make absolute population estimates. The results show a demographic pattern of population expansion through time, with a reduction or retraction at the end of the sequence.

Correa, Letícia (University of São Paulo), Camilo Neto (University of São Paulo), Astolfo Araujo (University of São Paulo), and C. Michael Barton (Arizona State University)

[160] *Exploring Cultural Dynamics in Hunter-Gatherer Societies*

The study of hunter-gatherer societies using complex systems approaches allows us to explore how cultural and technological patterns emerge from local interactions between groups and their environment, avoiding linear or deterministic explanations. In order to test how territorial dispersion and social interaction of hunter-gatherer bands, each with distinct cultural traditions and technologies can influence the formation of the archaeological record in a spatially structured environment, we created a model based on empirical archaeological data obtained for the southeastern portion of Brazil (São Paulo State). By simulating group movement and cultural transmission across distinct landscapes, the model demonstrates that the dispersion pattern of artifacts observed can result from simple behavioral rules, rather than solely from environmental constraints. The discussion highlights the role of mobility and interaction in shaping the diversity of assemblages, enabling a framework to test hypotheses and theories about the interplay between culture, ecology, and stone tools in prehistoric societies.

Correa, Letícia [85] see Abdolazadeh, Aylar

Correa Gurrulat, Itaci, Fernanda Erazo Gutiérrez, and Gloria Andrea Cabello (Estudios Aplicados Antropología UC)

[32] *Expanding the Circulation Networks of Pottery from the Burial Mounds of the Atacama Desert Coast, Chile*
Beginning 2500 years BP, coastal/interior exchange studies for the Atacama Desert indicate that the inhabitants of the littoral zone amplified their production of dried fish and shellfish into an exchange product to obtain other goods, as evidenced by the offerings recorded in their mound cemeteries. The spatial distribution of these funerary sites ranges from the mouth of the Loa River in the north to the coast of Taltal in the south (Gallardo 2016). Our previous studies of pottery from mound cemeteries between the Loa River mouth and the Mejillones Peninsula demonstrate that this pottery was produced by inland populations from Tarapacá and Atacama (LCA, Quillagua-Tarapacá, Séquiton, and SNP industries). At an initial stage (2500–2000 BP), circulation was established between Tarapacá ravines and coastal Tocopilla-Hornitos sites. During the Late Formative and Middle periods, circulation connected mound cemeteries from the Loa River mouth with residential and burial sites from the Quillagua Oasis (Correa 2017, 2019). New analyses carried out within the recent Fondecyt project 1231444 identify this tumular pattern further south, on the Caldera coast and at the Copiapó River mouth, showing the same offering-like pottery assemblage intermixed with local pottery (Molle industry), defining broader networks and social interactions.

Cortell-Nicolau, Alfredo

[319] *Types as Analytical Tools: To Discretize or Not to Discretize*

Since the inception of the discipline, typological classifications have been at the core of archaeological research. While these classifications have undoubtedly provided a research framework that has allowed archaeologists to move forward, they also come with shortcomings. How archaeologists understand and classify their findings has a significant impact on hypothesis building, since archaeological types become the basic data unit and the foundation upon which everything else relies. Over time, different classification approaches have been attempted, from simple heuristics to more sophisticated methods, such as Laplace' analytical typologies or paradigmatic classifications. However, because all of these methods rely on the classifier's decision-making process, they are not immune to biases and differences stemming from archaeological training, school or even expertise. In this paper we propose to take another small step

forward and, while recognizing the significant advances of the past, explore a continuous classificatory approach in which each lithic artifact is classified by itself without requiring decisions from the classifier. We discuss potential implementations of this approach and invite debate regarding its possible limitations.

Cortes, Roxanne [218] see Amon, Ayla

Cortes-Rincon, Marisol [124] see McDermott, Michael

Costin, Cathy (California State University, Northridge)

[258] *The Cupisnique Healer's Pharmacopeia*

The use of plants to achieve altered states of consciousness (ASCs) for sacramental or ritual purposes in the ancient Americas has started to receive significant attention. While scholars acknowledge that these ASCs often have diagnostic and healing objectives, much less attention has been paid to the non-neuroactive medicinal potential of many of the plants used to achieve ASCs, including *Erythroxylum coca*, *Trichocereus pachanoi*, *Anadenathera* spp., *Brugmansia* spp., *Psychotria* spp., *Mimosa* spp., *Banisteriopsis* sp., and *Uncaria tomentosa*. Yet there is ample ethnographic and ethnohistoric evidence for their therapeutic use to cure a wide variety of physical ailments. Importantly, medical researchers today are starting to investigate the use of many of the chemical elements in these plants to treat physical, mental, and emotional conditions. In this paper, I present iconographic evidence for the use of these plants generally during the Middle Formative period on the north coast of Peru, consider how they were prepared and administered, and discuss their non-neuroactive therapeutic uses.

Cottle Peacock, Clélie (New South Associates Inc.), and Andrew Wyatt (Middle Tennessee State University)

[105] *Looking Past Disturbance: The Archaeology of Urban Renewal at Nashville's Bass Street Community*

For nearly a century a thriving community lived on Bass Street at the base of St. Cloud Hill in Nashville, just below the Civil War-era Union fortification Fort Negley. In 1862, conscripted free, enslaved, and self-emancipated Black/African Americans and US Colored Troops soldiers were forced to live in the harsh conditions of a "contraband" refugee camp while constructing and defending Fort Negley. After emancipation, some Black Nashvillians reclaimed Bass Street and built residences, started families, founded a church, and established a shared community identity. Bass Street represents one of several post-emancipation South Nashville Black communities that formed the Edgehill neighborhood. By 1970, the government sanctioned demolition of Black American neighborhoods branded as "Urban Renewal" erased much of Edgehill's landscape, including the Bass Street Community. This paper highlights how Middle Tennessee State University's Bass Street Community Archaeology Project combined urban archaeology, education, descendant collaboration, and community engagement to explore the portion of Bass Street that survived the Edgehill Urban Renewal Project. MTSU's project has revealed an abundance of material culture remains intact below the surface despite decades of disturbance. The ongoing work provides insight into the community members' lives and demonstrates how Nashville's complex past continues to impact the present.

Couch, Garet [335] see Williams, Katharine

Coughlan, Michael (University of Oregon), James Johnston (University of Oregon), Kelly Derr (Historical Research Associates Inc.), Jaime Kennedy (University of Oregon Museum of Natural and Cultural History), and David Lewis (Oregon State University)

[333] *Dating and Interpretation of Scar Morphology on Culturally Modified Trees in Western Oregon*

This paper presents methods and considerations for the identification, analysis, and interpretation of Indigenous bark-peeled culturally modified trees (CMTs) from a landscape in the western Cascades of Oregon. CMTs often present an annually resolvable archive of past human behaviors that can span hundreds of years. However, CMTs are often overlooked in archaeological inventories, in part because they can be difficult to recognize and positively identify. Further, recordation and analysis methods are not broadly standardized or well known within cultural resource management. In our study landscape, Indigenous peoples removed bark from ponderosa pines to harvest cambium (inner bark) as food. But many trees were also

modified by secondary excavations and (presumably unintentionally) by cultural burning which can damage bark and cambium to leave a mark within a tree's annual growth rings. Although fire scars share characteristics with bark peeling scars, they are not identical. Collectively, bark peel- and fire-created scars form a rich, multi-century cultural archive that can be used to document Indigenous forest stewardship. We describe methods for inventorying and documenting these features, dendrochronological dating and interpretation of features, and digital archiving procedures.

Coughlan, Michael [333] see Kennedy, Jaime

Coverdale, Julia

[49] *Tracking the Trachyte at Kin Ya'a: Investigating the Extent of Chuska Trade Ware on the Chaco Slope*

The trade connection between Chaco Canyon and the Chuska Mountains has been an important topic of archaeological research since Anna O'Shepard described trachyte tempered pottery from the Great Houses in Chaco in 1939. An aspect of this research has been the extent of trade between Chacoan Great Houses outside of the canyon and communities in the Chuska Mountains. Shepard indicated that more than half of the gray ware ceramics in Chaco during the Classic Bonito phase (CE 1020–1100) were imported Chuskan vessels. As part of a CSEU agreement, Binghamton University has re-surveyed the National Park Service parcel of the Kin Ya'a Great House community, which is 45 km southwest of Chaco Canyon in New Mexico. This project conducted in-field ceramics research, and this poster will discuss a portion of the trade relationships at Kin Ya'a community sites. This poster will explore the presence, or lack thereof, of trachyte tempered pottery at Kin Ya'a community sites as well as the context of trachyte tempered pottery in the community. Additionally, this poster will analyze the mean ceramic dates of sites where trachyte tempered pottery was found, answering the question of if these sites temporally align with the Classic Bonito phase.

Coverdale, Julia [277] see Van Dyke, Ruth

Cowan, Jacqueline (Indiana University)

[212] *Expressions of Belief: Faunal Depositions in Pit Houses and Kivas of the Mimbres-Mogollon Region in the American Southwest*

The creation of borders and regional boundaries define what is accepted to be the extent of a culture's influence. The Mimbres-Mogollon cultural region spans across the modern American Southwest and northern Mexico. This highly variable landscape of mountains, plateaus, and forest is home to a diverse array of native fauna and natural resources for cultural exploitation and use. Whereas the concept of a frontier carries a connotation of extending a boundary, this work examines the processing of animals in a ceremonial context as the manifestation of shared beliefs diffused across landscapes beyond the notion of a modern defined border. The analysis of faunal evidence from multiple sites in the Gila Wilderness of New Mexico across the Late Pithouse (AD 550–1000) to the Classic Mimbres phase (AD 1000–1130) is placed within a greater regional context to compare trends in animal management practices. The interment of faunal remains in pit houses and kivas of the Mimbres region sheds light on ontologies and the use of fauna as symbols and otherworldly interlocutors.

Crabtree, Stefani

[160] *Thinking Through Archaeological Complexity*

Complex adaptive systems science and archaeology have been in dialogue for more than four decades, yet only recently has complexity science become a broadly recognized and widely applied framework within the archaeologist's tool kit. This paper provides an overview of how complexity approaches (particularly agent-based modeling, ecological network analysis, and social network analysis) can deepen our understanding of the dynamics that shape human societies. Drawing from case studies in the Ancestral Pueblo Southwest, I show how these methods illuminate emergent patterns that would otherwise remain obscured in traditional archaeological interpretation. Agent-based models allow us to explore the consequences of individual decision-making and environmental constraints, while network analyses reveal the structures of interaction that underpin resilience, vulnerability, and transformation in past societies. Together, these approaches highlight how small-scale processes aggregate into large-scale outcomes, underscoring the fundamentally

nonlinear nature of cultural change. By situating archaeological knowledge within broader scientific conversations about complexity, resilience, and adaptation, complex adaptive system science provides not only a powerful lens for reimagining the past but also a framework for addressing contemporary challenges. Archaeology thus emerges as a critical partner in complexity science, offering long-term perspectives on how human-environment systems evolve across space and through time.

Cradic, Melissa [335] see Kansa, Eric

Craig, Stephanie [333] see Kallenbach, Elizabeth

Cramer, Collen

[274] *Identifying the Subaltern in Ancient Amarna: A Case Study of the Workmen's and Stone Village*

While analyses involving social theory have increased in Egyptology, discussions making use of subalternity and aspects of inequality remain rare. Through analyzing the archaeological evidence from the Amarna Workmen's Village and Stone Village, this paper intends to discern differences in socioeconomic status and signs of marginalization among some of Amarna's non-elites. Both settlements present distinct differences in their material assemblages and mortuary evidence, reflecting their social status, agency, and relationships with the Egyptian state. By exploring these differences, this paper will discuss how factors of space, material, and state control intersect to create marginal communities among Egypt's non-elite.

Crandall, James (California State University, Sacramento), Gianina Comeca Ramirez (Universidad Nacional Mayor de San Marcos), and Anna Guengerich

[58] *Heads of the Household: Coming Face to Face to Face with Utcubamba's Stone traditions*

One of the most conspicuous practices of northern Peru lies in the stone carving traditions of Ancash and Cajamarca. Further to the east, in the Utcubamba Basin, the practice of carving large stone objects exists in conjunction with the production of the notable stone masonry and friezes of the regions' households. Unfortunately, most carved stone objects from the Early Intermediate period to Late Horizon have been looted or are found in private collections, removed from their original contexts. In this poster we present recent excavation results, including the recovery of three stone tenon heads within households at Tambillo. We discuss the place of these carved stone objects within a broader practice of stone carving in the Utcubamba Basin and the upper Marañon.

Crandall, James [30] see Comeca Ramirez, Gianina

Crass, Barbara [195] see Wygal, Brian

Creamer, Petra (Emory University)

[46] *Geophysics in the Driver's Seat: Building Projects around Magnetic Gradiometry Investigations in Northern Iraq*
Geophysical methods have long been a part of archaeological investigations in southwestern Asia. However, the characterization of the landscape and site-level features have often primarily relied upon remote sensing utilizing aerial and satellite imagery. This paper will present several case studies of current fieldwork since 2021 in northern Iraq using magnetic gradiometry as the main tool to identify and analyze anthropogenic and natural features. These investigations do not serve as a supplementary dataset to concurrent excavations, but rather as the main driver behind shaping testable theories of urbanism and rural sustainability during the Assyrian Empire of the Iron Age (ca. 950–612 BCE). Characterizing both on-site and off-site features via magnetic gradiometry has led to a greater understanding of not only imperial interventions in the landscape (such as animal penning at the site of Qach Rresh) but also the degradation of subsurface archaeological features due to bioturbation and intensive modern agricultural practices.

Creese, John (Royal Ontario Museum)

[335] *Implementing CARE Principles for Indigenous Data Governance in the Context of Complex Legacy Collections*
When it comes to the management and use of archaeological data held in settler-colonial institutions, First Nations and Tribal Historic Preservation professionals continue to face barriers to access and exercise of

informed consent. Canada's endorsement of UNDRIP and the Canadian Museum Association's *Moved to Action* document (2022) are inspiring holding institutions to examine how they can better implement data sovereignty principles in their collections management practices. Barriers are particularly acute in the case of complex legacy collections, which often lack adequate cataloguing and documentation and may be organized in ways that are not relevant—either epistemically or pragmatically—from the standpoint of Indigenous heritage professionals. This paper will discuss the challenges and opportunities associated with implementing CARE principles (Collective Benefit, Authority to Control, Responsibility, Ethics [Carroll et al. 2020]) for Indigenous Data Governance in the case of complex legacy collections.

Crespo, Marta [340] see Valenzuela, Daniela

Crisci, Gino [164] see Pecci, Alessandra

Critz, Tuesday (University of Missouri Columbia), Alexander Kurota (Office of Contract Archeology, University of New Mexico), and Jeffrey Ferguson (University of Missouri)

[212] *The Final Frontier: Using Neutron Activation Analysis (NAA) to Understand Frontier Processes in Southern New Mexico*

Frontier processes within the American Southwest are dynamic, multiscalar, and during the thirteenth and fourteenth centuries, oftentimes impacted by migration. The Sierra Blanca region of southern New Mexico encompasses Sierra Blanca Peak as well as the Sacramento, Capitan, and Jicarilla Mountains and extends into the Roswell Oasis. It represents the northeastern most portion of the Jornada Mogollon culture region. The boundaries of these culture regions change through time, not only shaped by the cultures themselves but later by scholars as more research morphs our understanding of those boundaries. In this paper we will reevaluate frontier processes and boundaries of the Sierra Blanca and neighboring Salinas region using patterns of ceramic exchange. Although neutron activation analysis (NAA) has been used historically to tease apart trade networks and implied social relationships, here we will utilize these data to delineate social boundaries that are less visible through material culture. We use the reconstructed exchange networks of Three Rivers Red Ware and Chupadero Black-on-white to clarify social boundaries through exchange practices.

Critz, Tuesday [212] see Walker, William

Crock, John (University of Vermont)

[148] *Community before the Border: Continuity of Indigenous Interaction between the Lake Champlain Basin and the St. Lawrence River from Peopling to Contact*

From the time of the late Pleistocene-early Holocene Champlain Sea 13,000–10,000 BP, to the arrival of the first Europeans, archaeological evidence points to continuous interaction and community across a region now bisected by the US-Canadian border. Settlement patterns, lithic technology, and the distribution of lithic raw materials and ceramic styles all provide support for the enduring quality of social connections across this region. This paper reviews evidence from the Vermont side of the Lake Champlain Valley that demonstrates the resilience of Indigenous networks linked to communities farther north and illustrates a pattern of interaction and regional community that continued from the Paleoindian periods to the contact period.

Crock, John [182] see Haverland, Fiona

Crockett, Cenetria, Saphira Laughter (Eastern New Mexico University), Kyle Montgomery, and Kylie Colvill (Blackwater Draw National Historic Landmark and Museum)

[127] *Photogrammetry and Museums: Enhancing Exhibits with 3D Models*

The technological age has given rise to digital archaeology, introducing advanced tools like photogrammetry to create detailed 3D models. As its use expands, museums are finding innovative ways to integrate these models for immersive exhibitions, increasing both artifact preservation and public access. This poster presents a case study from the Blackwater Draw National Historic Landmark and Museum. During the 2025 field school, photogrammetry was used to create 3D models of the excavation units and select artifacts. This

project demonstrates how such models can enhance exhibits by bringing the excavation experience directly to visitors and offering new ways to engage with digital archaeology.

Crowe, Alice

[272] *Mycenaean Pottery in the Northern Levant: Situating Social Value in Export Economies*

This paper considers the export of pattern-painted Mycenaean pottery from the Aegean to the Levant in the latter part of the Late Bronze Age (fourteenth–thirteenth centuries BCE, LH IIIA–B), evaluating especially the role of pottery in supply-side *and* demand-side prestige economies. The quantity of Aegean objects recovered from Levantine sites increases sharply in the mid-fourteenth century BCE, even as the range of form of these imports narrows to mass-produced, pattern-painted fineware ceramics. These Aegean products were distributed overseas through a system of directed trade: particular pot shapes and decorative schemes were produced almost exclusively for Levantine markets. Pictorial pottery, especially, was sent in high quantities to the Levant, while, simultaneously, its circulation was restricted in the Aegean. Using a contextually attuned approach, this paper appraises the social value of these painted pots for both Levantine consumers and Aegean producers. Analysis focuses especially on the Argolid, where the Mycenaean export market was likely centered, and the Northern Levant, a region with a long history of contact with the Aegean and one that received thousands of Aegean ceramics in the fourteenth and thirteenth centuries.

Crowley, Suanna (SWCA Environmental Consultants), Shannon Nelson-Maney (SWCA Environmental Consultants), and Kelly O'Connor (SWCA Environmental Consultants)

[182] *Unearthing Community: Reflections on the 250th Anniversary of the Battle of Chelsea Creek with the City of Chelsea, Massachusetts*

Chelsea, Massachusetts—a high-density, urban community of Latino immigrants and legacy Irish and Italian residents near Boston—undertook a city-wide celebration of the 250th anniversary of the Battle of Chelsea Creek. This engagement, on May 27 and 28, 1775, marked the first strategic naval battle of the Revolutionary War and a military defeat for the British. For the modern city of Chelsea, where the majority are Spanish-speaking and under the age of 35, the anniversary became an opportunity to introduce a diverse population to a hidden, but important, moment in the American Revolution. As civic descendants, the community was tied to this history by a geographic, social, and political legacy, rather than a biological one. To enhance the community's understanding and support May 2025 city-wide commemorations, archaeologists from SWCA Environmental Consultants provided support on educational curricula, public outreach, and digital media. This work offered Chelsea residents access to high-quality scientific and historical data about the sunken wreck of the *HMS Diana*, and the actions of the American militiamen who secured victory. This poster summarizes the research, content creation, and public outreach processes that supported local preservation and education efforts under the aegis of ongoing America 250 celebrations.

Crowley-Champoux, Erin (McDaniel College)

[347] *From "Provisioning" to Cattle Wealth: Agricultural Economies of the First Millennium CE in Ireland*

In archaeological literature of the late Iron Age and early medieval period in Ireland, zooarchaeological analyses of agricultural practices (cattle husbandry, specifically) discuss assemblages in terms of either "dairy" herds or "beef" herds. In archaeological reports, however, a third category is also noted beginning in the sixth–seventh centuries CE, these are described as "provisioned" sites, focusing on the division between producer and consumer sites. "Provisioned" site faunal assemblages don't neatly fit either expected model for beef or dairy production but more closely resemble assemblages from later urban sites, for which cattle have been brought in from hinterland areas. This comparison, however, is at odds with settlement patterns and site architecture, with early medieval sites being dispersed and rural in character, instead of agglomerated or urbanized. Rather than representing provisioning, these sites represent the role of animal wealth in late Iron Age and early medieval Ireland. This research explores diversity in cattle husbandry practices in the late Iron Age and early medieval periods and demonstrates a more complex system of cattle wealth and exchange as the foundation of the dairying economy in the later part of the early medieval period.

Cruz, Leslie [115] see Torres Porras, Alicia

Cruz, Rafael [88] see Chiquito, Sofia

Cruz-Gil, Rafael (Cornell University), and Julio RuizDiaz (Cornell University)

[247] *Toward a Panamerican SAA*

The SAA is one of the few US-based organizations that has for a long time used the term “American” in a continental sense. In the current context that makes politically engaged archaeology a risky business, it is time for it to embrace its purported internationalism and meaningfully engage with its membership beyond US borders. At a time when even travel to the United States has become dangerous or impossible for an ever-growing number of archaeologists, relocating annual meetings to a more visa-friendly and accessible location would be a meaningful way to live up to the SAA’s vision of championing archaeologists and to build a more ethical, just, and equitable future of the profession. This is imperative to facilitate participation for more vulnerable members who also contribute dues and offer the opportunity for the SAA to broaden its scope of perspectives by meeting on more neutral ground. We propose a vision for the near future in which the SAA engages with a wider scholarly community through holding annual meetings outside Northern America. Ideally, this would also encourage researchers from the Global South who have stayed away from the meetings to present their research and perspectives, allowing for more thorough and horizontal intellectual cross-pollination.

Cuadrao Mallqui, Cinthya [212] see Brock Morales, Amanda

Cucina, Andrea (UADY), and Allan Ortega-Muñoz (INAH)

[179] *Long-Term Local or Diagenetic? Strontium Isotope Analysis in Bone in Postclassic Maya*

Strontium ratio ($^{87}\text{Sr}/^{86}\text{Sr}$) in dental enamel provides information of the place of origin of skeletal individuals. In bone, which has a turnover rate of 15 years, $^{87}\text{Sr}/^{86}\text{Sr}$ ratio is informative on the length of time the individuals had lived at the place where they died. Bone is much more prone to diagenesis, produced by the contact with the soil in empty spaces, potentially overestimating long-term residence of immigrants. We discuss $^{87}\text{Sr}/^{86}\text{Sr}$ ratios in five Postclassic Maya sites in the Yucatán east coast to assess whether diagenesis has affected bony remains, so to better understand time of residential mobility of nonlocals based on enamel $^{87}\text{Sr}/^{86}\text{Sr}$ ratios. Seven out of 20 individuals with $^{87}\text{Sr}/^{86}\text{Sr}$ ratios measured in both dental enamel and bone were considered nonlocals based on the enamel. They were all measured following the same procedures at the same laboratory, ruling out methodological biases. Five individuals show bone $^{87}\text{Sr}/^{86}\text{Sr}$ in the range of locals, suggesting long-term residence or diagenesis; two individuals, who had originated in different localities in the northern Maya region, present $^{87}\text{Sr}/^{86}\text{Sr}$ values above the local range, ruling out diagenesis and suggesting that both had spent time away from the site during the last decade of their lives.

Cucina, Andrea [111] see Barajas Castro, Anuar

Cuellar, Andrea [311] see Berrey, Adam

Cuevas, Mauricio (INAH), and Gabriela Montero (University of Kentucky)

[316] *La población multiétnica del Valle de Tehuacán y sus posibles conexiones con lo Olmeca Xicalanca*

Los periodos Epiclásico y Posclásico Temprano se caracterizan por los asentamientos pluriétnicos, las alianzas militares entre unidades políticas, y los estilos artísticos que subrayan dichas relaciones. En el Valle de Tehuacán, desde tiempos muy antiguos, popolocas, chochos, mixtecos, ixcatecos y mazatecos conformaron un paisaje pluriétnico con orígenes y tradiciones diversas. Sobre dicho valle se levanta La Mesa, territorio desde el cual gobierna la ahora Zona Arqueológica de Tehuacán-Ndachjian. Las investigaciones en el sitio lo atribuyen al Posclásico Tardío. Sin embargo, su construcción es anterior, durante el apogeo de los popolocas desde finales del Clásico. Una sala hipóstila, realizada durante alguna de las dos etapas constructivas anteriores a la conquista mexicana propuestas por Castillo (2021), contiene unos murales de tipo códice, con escudos militares que representan una posible alianza entre los diferentes señoríos que conformaban la provincia de Tehuacán. Aunque la presencia de los Olmeca Xicalanca no ha sido argumentada para el sitio formalmente, en esta ponencia se exploran las ideas étnicas sobre su origen, el papel que posiblemente jugaron en la región del sur de Puebla, y las similitudes entre los murales de Tehuacán-Ndachjian y los de

sitios donde sí han sido documentados, como Cacaxtla y Cholula.

Cuevas, Mauricio [316] see Montero, Gabriela

Cuevas, Nida [293] see Castillo, Karime

Cui, Jianfeng (Peking University)

[261] *Bronze Resource Management in Early China: Insights from Lead Isotope Analysis*

By synthesizing recent research on the application of lead isotope analysis in provenance studies of early Chinese bronzes, this study examines how the central dynasties of the Xia, Shang, and Zhou managed bronze—one of the most crucial resources of early states—and what these provenance patterns reveal about the underlying political and economic mechanisms of early state formation.

Cullison, Jennifer (University of Missouri)

[296] *Only Sew Strong: An Experiment in Paleoindian Bone Needle Strength*

In an effort to better understand the limitations of Paleoindian bone needles, replicas were created and tested through use on varying leather thicknesses and types. Bone needles are one of the lesser studied items in the tool kit of Paleoindian North Americans. It has been previously proposed that only a needle would be required to puncture thinner leather and that an awl would be needed to pre-puncture thicker leather. The aim of this study was to determine the threshold for which one would need to pre-puncture leather with an awl. This means testing what thickness of leather that bone needles could not pass through without breaking. Near identical needles were created (2 mm in diameter, 6 cm long) from a cow femur and pushed through varying thicknesses of two types of leather. The results show that there are leathers that the bone needles can pass through without any damage but that the thickness at which they break varies depending on the leather type. The resulting data thus shows there are thresholds for which the effort of pre-puncturing the leather is outweighed by the number of needles breakages.

Culquichicón-Venegas, María José [60] see Wai, Stefanie

Cummins, Thomas [214] see Pardo Grau, Cecilia

Cunningham, Andreana (Boston University)

[216] *Skeletal Iterations: Adapting Facial Approximation Techniques toward Generative Reflections in St Helena*

This paper describes the theoretical and methodological insights emerging from a collaborative facial approximation project with St Helenian artists to artistically interpret three people buried at the “Liberated African” burial ground in Rupert’s Valley, St Helena. Portrait creation was iterative: rather than attempting to triangulate a single facial reconstruction, artists instead used a common foundation of digitized and measured images of these ancestors’ cranial remains to create multiple imagined possibilities of them. Thus, the process of portrait creation, and what the bones represent within it, were just as important as the completed portraits themselves. The artists’ reflections on this process stimulated dialogue around skeletal materiality and the legacies of Rupert’s Valley. These reflections gained new meaning when they intersected with the public sphere, in which a community-led curation of the artwork resituated the bones as both in the foreground and inextricably embedded in the artwork, and no longer as concealed data. Bones that began as digitized images and measurements were transformed, reformed, and echoed as vectors for commemoration in the resulting portraits. This project demonstrates an avenue for how our intentional collaborative work can decenter bioanthropological questions. *****This presentation will include images of human remains.**

Cupka Head, Kevin [149] see Worman, F. Scott

Curlee, Aaron

[183] *Creating a Digital (GIS) Site Map for Chalcatzingo, a Formative Period Archaeological Site in Morelos, Mexico, from Archival Records*

Chalcatzingo was an early regional center in Morelos, central Mexico, during the Formative period (1500–500

BC). The most extensive excavations at the site took place in 1972–1974 and 1976 by the Chalcatzingo Archaeological Project (CAP) led by Dr. David C. Grove, with later investigations also directed by Grove in 1995 and 1998. Much of the data collected during the CAP field seasons was published in a comprehensive report, *Ancient Chalcatzingo*, edited by Grove, in 1987. Remaining unpublished materials have been conserved in both physical and digital format in the David C. Grove Faculty Papers Collection at the University of Florida. Because of modern development and acid rain, the integrity of Chalcatzingo has been permanently and substantially damaged. The records from the excavations are now the only way to access the site information before so much of its integrity was lost. However, due to constraints of mapping technology at the time of excavation, much of the spatial information about Chalcatzingo is difficult to visualize and analyze. The goal of this project was, for the first time, to incorporate all the maps of Chalcatzingo using current computer-assisted techniques to create a singular GIS, using both archival and published records.

Curran, Joseph (SRI)

[219] *Contested Spaces: Spectrums of Indigenous Resistance in the Southern California Borderlands*

This paper applies a postcolonial framework to investigate how Indigenous communities in the inland Southern California borderlands navigated, negotiated, and resisted colonial military systems between the late eighteenth and mid-nineteenth centuries. Focusing on contested spaces surrounding Spanish towns, ranchos, and mission satellites (estancias), the research examines a wide spectrum of Indigenous responses—from diplomatic engagement to armed resistance—before and after secularization in 1833–1834. Spanning the period from 1780 to 1857, this case study highlights how Indigenous communities in inland Southern California selectively adapted, hybridized, or rejected colonial weapon systems. Through archival meta-analysis and minimally invasive archaeological methods, the study explores how traditional Indigenous weapons were produced, deployed, and symbolically maintained in opposition to Spanish and Anglo-American cavalry and firearms. These practices were not merely tactical but represented deliberate assertions of political sovereignty, cultural identity, and territorial legitimacy within contested colonial landscapes. This research contributes to broader scholarly conversations on Indigenous agency, technological persistence, and postcolonial resistance, while also informing an ongoing Indigenous-centered, community-based archaeology project that seeks to better understand how Native groups endured and redefined their relationships to colonial structures at mission peripheries.

Curran-Morton, Willow, Magdalen Munro, Anya Akimoff (University of British Columbia), Carito Tavera-Medina (University of Barcelona), and Aleska Alaica (University of British Columbia)

[305] *Plants at Punta Pejerrey, Peru: Isotopic Insights into Botanical Remains*

The site of Punta Pejerrey, located on the northernmost tip of the Paracas Ecological Reserve in Peru, offers a unique opportunity to explore the relationship between people and plants in both past and present contexts. Initial occupation of the site took place in the early first millennium BCE, with later reoccupations during the first centuries CE. In this poster, we share how we contributed to the understanding of ancient plant use from Punta Pejerrey through the stable isotope analysis of 17 samples—including maize and gourd—establishing a beginning dataset for interpreting botanical use in the region. Additionally, while plants are often treated as passive indicators in archaeological research—used primarily to infer environmental conditions or subsistence practices—we argue that they can offer us insights into cultural identities, social practices, and adaptations. By integrating isotopic data with archaeological and ethnobotanical perspectives from the region, we explore the dynamic roles plants have played over time, including how they were consumed or processed. Our research highlights the need to move beyond viewing plants as static data points and toward recognizing them as active participants in dynamic life histories—tools, symbols, and resources that continue to shape and reflect human-environmental relationships.

Curran-Morton, Willow [356] see Munro, Magdalen

Curry, Kathleen [318] see Powell, Noah

Cusack, Joseph**[155]** *An Ethnohistory of Archaeology: Barbara Kadish and the Wawayanda Sites in New Jersey*

The Ring Quarry Mining Complex in northwestern New Jersey is a precontact Native American mining and habitation complex. The Ring Quarry (28-SX-332) was a primary source of chert in northern New Jersey for thousands of years. The complex consists of adjacent archaeological sites, including early stage and late-stage lithic reduction workshops, hunting camps, and habitation sites, as well as the Black Creek site (28-SX-297), which is on the National Register of Historic Places. Evidence of human occupation within the study area extends from the Paleoindian through the contact period. Within the complex are the Wawayanda sites, focused around Wawayanda Creek, originating from a glacial moraine watershed. The Wawayanda sites were first recorded by archaeologist Barbara Kadish of New York University in the 1960s. Her preliminary work laid the foundation for archaeological research within the Valley of the Black Creek. This presentation focuses an ethnohistorical perspective, chronicling Kadish's life and work, with a brief introduction to the preliminary archaeology of the Wawayanda sites.

Cusman Vega, Myrna [294] see Ortiz-Aguilu, Juan-Jose

Cutshall, Alexis [298] see Ballinger, Madeline

Cuyan, Marielos [293] see Marken, Damien

Cyphers, Ann [262] see Hernández Lara, Luis

Cyr, Howard [46] see Lowry, Sarah

Czaplinska, Tina**[324]** *Family, Community, and Death: Paleogenomic Perspectives on Kinship and Burial Practices in Gać, Poland*

Gać, a village in Greater Poland near Poznań, represents an archaeological site dating to the sixteenth–nineteenth centuries. The community experienced demographic decline, culminating in the village's abandonment. Ancient DNA analyses have been conducted on individuals excavated from Gać's cemetery to investigate research objectives centered on kinship, the genetic relationships among individuals buried together, and associated burial practices. Whole-genome sequencing and bioinformatic approaches were employed to examine population structure, demographic history, and relatedness among the interred. Runs of homozygosity were used to assess kinship relationships between individuals, particularly investigating the spatial organization of those within shared graves. These lines of evidence make it possible to evaluate how kinship ties influenced burial practices and to consider broader aspects of community structure and social organization. The results contribute new genomic data from Poland, a region that remains underrepresented in paleogenomic research, and offer comparative insights into the historical demography of Central Europe. More broadly, this study underscores the value of integrating genetic, archaeological, and cultural evidence in reconstructing past lifeways and understanding the interplay between biology and mortuary practice. *****This presentation may contain images of human remains.**

Czaplinska, Tina [327] see Airola, Danielle

Dacus, Chelsea (Museum of Fine Arts, Houston)**[207]** *Metallic Mixology: Hybrid Tiwanaku/Wari Metalworks in the Glassell Collection at the Museum of Fine Arts, Houston*

The precise relationship between the Wari and Tiwanaku states of the Middle Horizon Andes has long been a topic of discussion and debate. While obvious differences have been noted in the way that the Tiwanaku and the Wari planned their cities, fashioned and used stone, or spread their dominion and ideologies, their iconography and artistic styles are remarkably similar. Scholars like William Isbell have tried to distinguish the two art styles with a degree of clarity, but absolute categorization for many artworks remains elusive. The Glassell Collection of Indigenous Art of the Americas, primarily focused on metalworks, offers the opportunity to study the differences and similarities that can also be seen in the metalworking techniques and

forms of these two cultures. This paper will look at how these distinctive features reveal themselves through manufacture and type, while iconography remains mostly similar. Additionally, two artworks in the Glassell Collection exhibit what I argue are hybrid characteristics of technique, form, and iconography, similar to the hybrid status of ceramics proposed by Donna Nash in 2015 within the Moquegua region of interaction. These two works have previously been identified in many ways, but their identity is elucidated by discussion as hybrid metalworks.

Dalal, Anya

[73] *Prehistoric Bay Area Settlement Patterns: The Last 2,000 Years*

This presentation will examine Native American population dynamics and climatic events in the California Bay Area. The impact of major climatic events, such as the Medieval Climatic Anomaly (MCA), is explored. The data comes from the p3k14c radiocarbon database and climate proxy data such as tree-ring data, salinity-related tree-ring data, and the Palmer Drought Severity Index (PDSI). The radiocarbon dates were calibrated, binned, and summed into summed probability distributions (SPDs) using rcarbon. Uniform and exponential population growth models were tested. SPDs reveal that population level fluctuations were associated with major climatic events. During the MCA, the human population initially increased but ultimately declined. During the Late Antique Little Ice Age and the Little Ice Age, SPD declines were associated with drops in PDSI, signaling drier periods. When salinity was evaluated, high salinity aligned with drought periods and lower PDSI levels. The overall SPD exhibits exponential population growth. These findings suggest that prehistoric Bay Area settlement patterns were sensitive to climate stress, with drought and estuarine changes influencing population patterns. Given the demonstrated exponential population growth up to 500 BP, Native Americans in the Bay Area adapted to changing climatic stresses, likely through subsistence strategies.

Dale, Emily (Northern Arizona University), and Rachael O'Hara

[34] "A pile of old cans can have a much deeper story": Lessons from Public Tours of a 1930s Northern Arizona Logging Camp

The Apex, Arizona Archaeology Project, a collaboration between Northern Arizona University and the Kaibab National Forest, centers on public archaeology. Through funding from Arizona Humanities, we have hosted over 300 people on tours of the Depression-era logging camp since 2022. Visitors get to see archaeology in action, and field school students learn key skills in engagement and education. This paper discusses the pros and cons of the tour program, the changes we have made due to visitor feedback, future directions of the project, and how much archaeologists might underestimate the public's love of rusty cans.

Dalitesi, Wendel [107] see Sallum, Marianne

Dalmas, Daniel (University of Utah)

[211] *Environmental Change, Human Predation, and the Evolution of Holocene Bison*

Explanations for body size diminution of *Bison bison* during the Holocene highlight both ecological and anthropogenic factors. Paleoenvironmental reconstructions suggest that grasslands across North America shifted from mixed C₃-C₄ communities to C₄-dominated systems. Because C₃ grasses contain higher proportions of digestible carbohydrates and protein, their decline likely reduced forage quality and foraging efficiency, imposing selective pressure for smaller body size. This pattern parallels broader trends observed in megafauna, where hypermorphic traits diminished or disappeared into the Holocene. An alternative hypothesis emphasizes the role of human predation. Communal hunting strategies, particularly mass kills, may have selected for behavioral adaptations leading to morphological change in bison. Increased predation pressure could have promoted the transition from smaller groups to large, cohesive herds, alongside traits that facilitate close intraspecific interaction, such as docility, reduced horn size, and diminutive body size. This paper evaluates these ecological and anthropogenic hypotheses, considering whether bison diminution reflects primarily environmental change, human hunting pressures, or the interplay of both within Holocene ecosystems.

Dalmas, Daniel [115] see Hamada, Riley

Dalmas, Daniel [72] see Orngard, Charles

Dalmas, Daniel [305] see Phillips, Amy
 Dalmas, Daniel [182] see Todd, Lawrence
 Dalmas, Daniel [201] see Wagemann, Jackson

d'Alpoim Guedes, Jade (University of Washington), and Jun Li (Sichuan Provincial Institute of Archaeology)

[163] *A Deep History of Human Activity in the Jiuzhaigou National Nature Reserve, Eastern Tibetan Plateau*
 China's "Returning Farmland to Forest" program has been widely praised as the world's largest and most successful payment for ecosystem services program. Located on the eastern Tibetan plateau, the Jiuzhaigou National Nature Reserve (Tibetan: gzi-rtsa sde-dgu) is home to over 1,950 species of plants along with many animals—at least 50 of them rare or endangered. In order to preserve the biodiversity and the scenic lakes found in the JNNR and believing that the history of human impact inside the park was relatively short, authorities decided to remove or minimize human impact, resettling nine villages of Tibetans who originally occupied the area. For the people that call gzi-rtsa sde-dgu home, however, these narratives are at odds with their own oral histories of occupation of the region and traditional management practices. Recent archaeological, archaeobotanical, and zooarchaeological evidence from a community archaeology project is now challenging assumptions about the shallow time depth of human occupation in the region and shows that rather than harming local biodiversity, intermediate levels of disturbance created by small-scale farming, pastoralism, and tree cutting have contributed to the biodiversity of this region and have done so over the course of the past 5,000 years.

d'Alpoim Guedes, Jade [313] see Corrales, Jillyan
 d'Alpoim Guedes, Jade [45] see James, Nathaniel

Dalton, Jordan (SUNY Oswego), James Davenport (University of Missouri), and Alexis Rodríguez Yábar (Arizona State University)

[173] *NAA and Ceramic Analyses from a Late Horizon Occupation at Las Huacas, Chincha Valley (AD 1400–1532)*
 Inca imperial expansion had diverse implications for local elites throughout the empire. In some regions, they were given Inca ceramics to build relationships, and in other areas, they emulated Inca designs and ceramic styles to build their own authority. Previous studies of ceramics in the Chincha Valley have found that ceramic assemblages from elite residence within the valley's two largest sites (La Centinela and Las Huacas) showed distinct traces of Inca influence, but our understanding of the organization of craft production and the types of clay sources used is lacking. In this paper we unite data from neutron activation analysis (NAA) with analyses of ceramic sherds from the site of Las Huacas to understand pottery production and distribution in the Chincha Valley. The sample comes from a context associated with the early Inca period (approx. AD 1400–1450) and includes ceramic sherds with diverse designs, inclusion textures, and firing practices. NAA will help illuminate if the observed differences in the ceramic sherds are associated with distinct clay sources, and thus likely produced across different production centers, or, if the differences do not coincide with distinct clay sources, and might have been produced within the same workshop.

Damlund, Camilla [251] see McNutt, Ryan

Damour, Melanie [180] see Pietraszek, Alyssa

Damstedt, Jane [211] see Cole, Kasey

Daneels, Annick (Inst. Invest. Antropológicas UNAM)

[86] *The North-Central / South-Central Veracruz Divide Seen from Ritual Practice in the Classic Period*
 While in the Preclassic period north-central and south-central Veracruz, on the Gulf Coast of Mexico, appear to belong to different cultural traditions, during the Classic, they coalesce about 2,000 years ago into what is known as the Central Veracruz Classic Culture. The binding force seems to be ideological, with a dialogue between elite and commoners expressed through the intertwined participation of state (ballgame ritual, ancestor cult) and popular religion (ceramic figurines in construction offerings, chthonic cults), set against a

backdrop of a densely settled environment rich in subsistence and commercial crops, with a wealthy population actively engaged in interregional trade. This delicate balance holds the society together for a surprising millennium, falling apart through combined factors of internal dissidence and external pressure, leaving north and south-central Veracruz divided again sometime after 1000 CE.

Dani, János [305] see Hausdorf, Cassie

Daniels, James (Helix Environmental Planning)

[350] *Mangroves and Mounds: Human Niche Construction and Early Formative Settlement in the Soconusco Estuary*

This paper presents the results of archaeological and geoarchaeological research in the eastern Soconusco mangrove zone of Chiapas, Mexico, where Archaic foragers and Early Formative villagers transformed their environment between roughly 3000 and 1000 cal BC. Excavations at mound sites RS-19 and RS-31, along with sediment coring of nearby beaches and wetlands, reveal that inland deforestation and early horticulture increased sediment delivery to the coast. This process promoted the growth of barrier beaches and the expansion of mangrove estuaries. These human-induced changes created new ecological niches, enabling intensified use of estuarine resources, reduced mobility, and the rise of the region's earliest sedentary villages. Artifacts such as ceramics, faunal remains, fired clay basins, concrete floors, and dense shell deposits demonstrate technological innovations and communal activities associated with food processing, salt production, and increasing social complexity. Obsidian analysis reveals connections to highland exchange networks. Bayesian modeling of radiocarbon dates indicates that mound construction and occupation occurred between 1600 and 1400 cal BC, suggesting rapid accumulation and year-round habitation. Using niche construction theory and human behavioral ecology, the study argues that early environmental modifications inadvertently set the stage for permanent settlement and cultural innovation.

Daniels-Hill, Larissa (University of South Carolina)

[216] *A "Tenacious Social Problem": Housing Inequality in Early Twentieth-Century Cleveland, Ohio*

Housing segregation and hiring bias impacted the urban landscape of early twentieth-century Cleveland, Ohio. Black southern migrants were primarily shown properties in older districts, including Cedar-Central Avenues. Several dwellings possessed unsafe structural, sanitary, and ventilation conditions, contributing to greater exposure to infectious diseases. Middle-class Black Clevelanders also faced discrimination through housing covenants that excluded potential residents by ethnicity, race, and religion. Racist hiring practices further impacted job mobility of Black southern migrants, leading several Black men and women to work in primarily "unskilled," "domestic," and service roles. Historical literature posits that migration status limited the ability for southern Black migrants to obtain higher-paid positions compared to native-born Black Clevelanders, which directly influenced housing access and furthered class distinctions. Community organizations buffered against these conditions. This presentation compares adult patterns of disease with attention to job type, proximity to care facilities and social organizations, and morbidity among a sample of "Black" individuals in the Hamann-Todd Human Osteological Collection ($n = 305$). Last known address, job type, age, place of death, and cause of death obtained from death certificates will be graphed using ArcGIS to interpret patterns for income, migration, birth era, and disease proliferation.

Danis, Annie (Cal Poly Pomona)

[215] *Archaeology without Borders*

Archaeology is not just for archaeologists; archaeology can happen anywhere. Rosemary Joyce's scholarship is characterized by the inclusion of multiple disciplinary perspectives on materiality and the social conditions of archaeological work in the past and present in traditional and unexpected places. From Mesoamerica to nuclear storage facilities, this encompasses not only theoretical perspectives from across the social sciences but also multidisciplinary perspectives from art, craft, and social activism. In this paper, I outline how Joyce's far-reaching scholarship, inclusive teaching, and public dialogues have shaped the contemporary practice of archaeology as an ethical orientation to materiality, rather than a prescribed set of methods and time periods. To illustrate this point, I analyze how her contributions shape my research and practice in community-based archaeology and art.

Danis, Annie [346] see Epps, Radhika

Danis, Annie [34] see Kamp-Whittaker, April

Darby, Melissa (Lower Columbia Research & Archaeology)

[156] *Two Archaeological Hoaxes: The Drake Plate of Brass and the Chowan River Dare Stone*

In 1937, two Elizabethan artifacts came to light that made headline news across America. The first artifact was the Plate of Brass, found on a hillside overlooking San Francisco Bay. This was Drake's purported land claim plaque written in an old English text of crude block letters stamped into the brass. A few months later a stone slab was allegedly found on the Chowan River in North Carolina. The old English text inscribed on the stone seemed to describe the fate of the 117 settlers of the Lost Colony of Roanoke. This presentation will demonstrate that these hoaxes were related and that historian Herbert E. Bolton was the ringleader of the Plate of Brass hoax, and he assisted other historians, George Hammond and Haywood Pearce Jr., with the planning and implementation of the Dare Stone fraud. An underlying motive of these men was the desire to uplift a White and English national identity for America. However, one of Bolton's motives for the Plate of Brass hoax, and perhaps his main motive, was his desire to shut down the theory that Drake landed further north on either the Oregon or Washington coasts

Darling, J Andrew [71] see Fertelmes, Craig

Darwent, Christyann (University of California, Davis)

[158] *Marine Mammals and Taphonomic Processes at Cape Espenberg, Alaska*

R. Lee Lyman's book *Vertebrate Taphonomy* was published when I was working on my master's in zooarchaeology studying marine mammals from a site in Arctic Canada. I had already been strongly influenced by his approach to studying pinnipeds (e.g., *Prehistory of the Oregon Coast*), but it was this Cambridge Manuals in Archaeology publication that changed the trajectory of my life. I left western Canada to pursue a PhD at the University of Missouri. Lyman encouraged me to continue my research interests in the High Arctic but with a more rigorous taphonomic and quantitative approach. Here, I present the results of a long-term study of coastal arctic zooarchaeological remains from Cape Espenberg, Alaska. Faunal remains from five Inupiat houses (AD 1100–1800) reveal changes in subsistence strategies: a shift from pinnipeds to caribou and back again and an increase in fishing and shellfish gathering. Analysis of within-house spatial patterning of taxa, butchering marks, bone as fuel, and osseous tool production debris reveal differences in Inupiat social organization. Twenty-five years after completing my PhD, I still ask myself, "What would Lyman do?" His zooarchaeological teachings are ever present in my research and that of my students.

Darwent, Christyann [56] see Malik, Mustafa

Darwent, Christyann [170] see Mendoza-Blajos, Olivia

Darwent, Christyann [158] see Wolverton, Steve

Darwent, Christyann [170] see Wu, Nikki

Darwent, John (University of California, Davis)

[158] *The Role of R. Lee Lyman in the Development of Evolutionary Archaeology in the Late 1990s: A Student's Perspective*

While R. Lee Lyman will be undoubtedly remembered foremost for his contributions to zooarchaeology, he also had a profound impact on the development of Evolutionary Archaeology in the late 1990s and early 2000s. The tenets of EA are rooted in Robert Dunnell's interpretation of theoretical biology's use of Darwinian evolutionary theory in archaeological contexts in the late 1970s and 1980s. Notably, EA held that natural selection arbitrated which functional aspects of human material culture were perpetuated through time. This emphasis on natural selection led some to brand it as "Selectionist Archaeology." By the mid-1990s, it could be argued that the development of EA had entered a standstill. In 1997, I started the doctoral program at the University of Missouri, and I had the privilege of watching a period of innovation unfold, as a synergy between Lyman and Michael O'Brien led to a more comprehensive approach to archaeology as a historical science. Even at the time, I realized I was witnessing a watershed moment in intellectual advancement unfold. Lyman was instrumental in bringing perspectives borne of his work in paleobiology and

zooarchaeology to EA. Here, I reflect on Lyman's influence on my own research, which included cladistic analysis and seriation.

Dashzeveg, Bukhchuluun (National University of Mongolia, Yale University, Pax Environmental), Asa Cameron (Penn State), Christina Carolus (Penn State), Isabelle Holland-Lulewicz (Penn State), and Jacob Holland-Lulewicz (Penn State)

[315] *Preliminary Perspectives and Future Prospects for Khairt Suurnyn, a Large Xiongnu Settlement in the Eastern Mongolian Steppe*

Identified from an eroding terrace overlooking the expansive floodplain of the Kherlen River in eastern Mongolia, Khairt Suurnyn represents a new addition to a small corpus of Xiongnu-era settlements known to archaeologists. Recent work at the site has included geophysical investigations, pedestrian surveys, and excavations of over 20 exposed features. These include pits, subterranean houses, and other structural remains that reveal new information about the extent and character of this important site. Preliminary paleoethnobotanical and zooarchaeological analyses, along with tentative evidence for large-scale metal and ceramic production, suggest that the habitation site played a significant role in the complex economic processes that integrated mobile agropastoral communities into the Xiongnu Empire. In this presentation, we review some of these preliminary datasets, theorize the broader human-ecosystem dynamics and political ecologies within which sedentary Xiongnu settlements are situated, and explore the potential of Khairt Suurnyn for advancing narratives of mobile statecraft across Central Asia and the world's first nomadic empire.

Dashzeveg, Bukhchuluun [315] see Holland-Lulewicz, Isabelle

Dashzeveg, Bukhchuluun [315] see Holland-Lulewicz, Jacob

Dastrup, Neil (Utah State University), Jacob Freeman (Utah State University), and Paul Roscoe (University of Maine)

[263] *The Role of Technology in Population Recessions*

Archaeologists observe long-term trends in population growth and decline in human societies. In this project, we propose that many large-scale declines in population are driven by a positive feedback between technology and population that leads to a recession of an area's saturation point. Ethnographic data from New Guinea provides insights into the role that social organization, technology, and environment play in determining a human population's limit. Combining ethnographic observations from New Guinea and applying the insights to archaeological data from the Colorado Plateau, central Texas, and the southern Levant, we observe that the declining productivity of technology is one pathway that results in the recession of human economies and populations.

Dave, Rhode [165] see Liard, Aurelie

Davenport, James (University of Missouri), and Jeffrey Ferguson (University of Missouri)

[26] *Evaluating Clay Procurement, Processing, and Potters' Practices at Mata Ortiz through Neutron Activation Analysis*

Archaeologists use compositional analyses like neutron activation analysis to characterize archaeological materials like pottery to make inferences about past societies. Inquiries using compositional data frequently focus on understanding the organization of production, identifying past communities of practice and the boundaries between them, and describing patterns of exchange and circulation of objects. These projects often necessarily include assumptions about past potters and their production practices and interpret compositional data through a theoretical lens that is based on data from historic, ethnographic, and archaeological research. In this study, we apply neutron activation analysis to unprocessed and processed, unfired and fired clays collected by Juan Quezada to better understand the effect these production steps have on compositional data. We also analyze a broader assemblage of pottery made by other potters currently working in Mata Ortiz. We interpret the compositional data and evaluate these interpretations against the ethnographic information about the clay sources used and the processing of these clays that the potters undertook. We then discuss the implications of these results for the interpretation of compositional data for archaeological ceramics.

Davenport, James [173] see Dalton, Jordan
 Davenport, James [26] see Ferguson, Jeffrey
 Davenport, James [304] see Shachar, Max
 Davenport, James [201] see Suarez, Nicholas

Davidson, Jaron (University of Oklahoma), and Bobi Deere (University of Oklahoma)

[295] *Beyond Styles: A New Look at Casas Grandes Rock Art*

Besides the occasional description of well-known sites, there have been few formal analyses or systematic reports of rock art in the Casas Grandes region of northwest Chihuahua, Mexico. Yet rock art is abundant in the valleys and mountains of this region. Beyond simple descriptions of “styles” and a handful of famous images, many questions remain regarding the practice of rock art creation and the semiotic interpretation of known panels. In this study, we present documentation of more than a dozen recorded and previously undocumented rock art panels from the Casas Grandes Valley. We then ask: Where are petroglyphs and pictographs typically located on the landscape and in relation to other archaeological sites? What symbolic motifs, both unique and recurring, are represented within these panels? And finally, what might the resulting spatial and symbolic patterns suggest about Casas Grandes iconography? Our preliminary findings indicate that rock art was placed in specific locations on the landscape, particularly in proximity to water sources, and there are several motifs unique to Casas Grandes rock art. This research expands on our understanding of symbolism and landscape use in Casas Grandes society.

Davis, Dennis [182] see Anderson, Shelby

Davis, Julia

[112] *Mesoamerica's Living Legacy: Preserving a Collection for the Future*

Ancient people from Central Mexico developed extraordinary art, colossal architecture, and animated sculptures. This research project focuses on eight artifacts from the CSUSB Vester collection that are associated with religious art and architecture, sacrificial ceremonies, and burial offerings. My research methods include (1) geological analysis of the eight artifacts, (2) identifying artifacts by referencing artifact record characteristics, (3) Digital Microscope analysis of tool markings, and (4) removal of glue and paper with established conservation techniques. In developing photogrammetry 3D models, I will address three main questions: (1) Can I restore blemished artifacts through photogrammetry and 3D modeling? (2) Can D-stretch and 3D model reconstructions bring out characteristics not easily seen by the naked eye? (3) What details and characteristics tell us more about each artifact's context? Answering these questions will contribute to the preservation of the collection by retrieving more contextual data on these eight artifacts.

Davis, Kaitlyn (Northern Arizona University; Chronicle Heritage), Scott Ortman (University of Colorado Boulder), Nicholas Puente (University of Colorado Boulder), Margaret Berestyuk, and Ian Burnett (Northern Arizona University)

[34] *Community-Engaged Field Schools: Insights from Estaca, New Mexico*

Community-engaged field schools provide students a unique opportunity to learn from ancestors and descendants and thus understand the material culture they are encountering more deeply than without those perspectives. Since 2024, the University of Colorado and Northern Arizona University faculty and students have participated in a field school with descendants of Tewa, Genízaro, Spanish, and Anglo settlers living in the village of Estaca, New Mexico. In this presentation, we discuss the logistics of running a community-engaged field school and how the research on the excavated and archival materials has been deepened by community knowledge. The three research themes we touch on are the acequia system, village layout, and material culture change and variation at a cultural crossroads. Additionally, we discuss the impact of community engagement during archaeological field schools on students. Centering community collaboration, knowledge, and questions helps normalize community practices for students and re-centers the importance of connecting archaeological data to the contemporary concerns and needs of both descendant communities and other stakeholders.

Davis, Kaitlyn [199] see Berestyuk, Margaret
 Davis, Kaitlyn [57] see Underwood, Kaylee

Davis, Loren (Oregon State University)**[319]** *Defining Early Projectile Point Morphospace at Cooper's Ferry (~16,000–13,000 cal BP)*

The morphospace concept provides a new framework for repurposing projectile point typology in ways that align with evolutionary theory. At the Cooper's Ferry/Nipéhe site in Idaho, projectile points from radiocarbon-dated features and stratigraphic contexts (~16,000–13,000 cal BP) are used to define synchronic morphospaces: empirical distributions of artifact form variation measured across multidimensional character sets derived from digital 3D geometric morphometric (3DGM) analysis. High-resolution digital scans generate XYZ point clouds that can be programmatically queried to extract discrete and continuous variables, including bounding box, cross-sectional, reentrant, and curve-fit measures, which together capture the realized range of point forms within each dated assemblage. This range reflects both the production of technological knowledge and the material consequences of use and repair—processes that can be further modeled through experimental knapping and 3DGM analysis of experimental specimens. By measuring morphospace dimensions for successive dated contexts at Cooper's Ferry/Nipéhe, it becomes possible to evaluate how technological patterns are replicated or vary in relation to evolutionary mechanisms. In this way, the morphospace concept redefines typology not as a static set of types used for chronological ordering, but as the mapping of artifact lineages within an evolutionary framework.

Davis, Loren [155] see Henry, Jason

Davis, Loren [104] see Iizuka, Fumie

Davis, Loren [319] see Nyers, Alex

Davis, Loren [85] see Recklies, Laura

Davis-King, Shelly [167] see Tushingham, Shannon

Dawson, Emily (Denver Museum of Nature and Science)**[75]** *Understanding Environmental Risk in Eighteenth-Century New Mexico: A Case Study from the Las Golondrinas Living History Museum*

The US Southwest is considered a marginal environment for agriculture, one that is likely to become even more difficult to live in as global climate change raises temperatures, alters seasonal rainfall patterns, and increases the risk of explosive wild fires. Responses to risk and vulnerability to environmental conditions have long been a focus of research on the precolonial American Southwest. This poster examines responses to environmental risk and vulnerability at LA 127375, an eighteenth-century household, located within the core of the Las Golondrinas Living History Museum, La Cienega, New Mexico. Using phytolith data collected from LA 127375 and sediment cores taken from nearby wetlands, this poster reconstructs the paleoenvironment (AD 1450 to present) around Las Golondrinas Living History Museum in order to understand the local climatic and environmental conditions. On-site data provides insights into the way subsistence strategies that the colonists were using, and the ways in which they managed environmental risk and vulnerability.

Dawson, Tom [323] see Mitchell, Juliette

Daza Riquelme, Richard [32] see Sabo, Allison

de Barros, Philip (Palomar College), and Laure Dussubieux (Field Museum of Natural History)**[162]** *Discovery of 400–100 BC Carnelian-Agate Beads in Burial Context: Links to Early West African / Saharan Trade Routes*

In 2022, 254 carnelian-agate-chalcedony beads dating from 385 to 104 cal BC were found in burial contexts at the 28 ha ironworking/habitation site of Dekpassanware (Togo) at 9.4° north. Their presence suggests the potential for links with first millennium BC trade routes about which little is known. Since 2004, carnelian analyses using LA-ICP-MS have been made to determine the chemical fingerprint of carnelian beads from major trading centers in West and Saharan Africa (e.g., Timbuktu, Gao, and Igbo Ukwu) whose geological sources are currently unknown. However, carnelian bead workshops (400 BC–AD 400) near the Garamantes capital (Jarma) in western Libya might serve as a proxy for their likely source in the Tibesti Mountains. The beads from Togo have been described using int/ext diameters, length, type (flat circular, very short to short

barrel, and one bicone), color, banding, diaphaneity, and production technique. A 44.5% sample was analyzed using LA-ICP-MS producing 113 compositions that seem to suggest a single source.

de Brer, Christian

[317] *From the Grave to LA: Provenance of Ancient West Mexican Ceramics in Southern California*

Ancient West Mexican ceramic figures were so heavily looted in the 1930s through 1970s that significantly more figures are in museums and private collections than from controlled excavations. Many looted figures passed through Los Angeles and were sold in a series of art galleries including the popular Stendahl Galleries. Owner Earl Stendahl peddled a whopping 6,343 West Mexican figures between the 1940s and 1960s, with most either directly sold or eventually donated to museums. Because of elaborate paths to acquisition, these figures are completely decontextualized with little to no provenance information within museum records. This presentation discusses several avenues of provenance research to recontextualize West Mexican figures to sites and areas of origin. These include archival review of the Stendahl Galleries archives at the Getty Research Institute, a more recent evaluation of excavated figures in Nayarit and Western Jalisco, and examination and analysis to compare museum collected figures with well provenanced figures from excavations. Researching provenance and reconnecting artifacts to sites and communities of origin is ethically necessary for museums with archaeological collections to remain relevant.

de Flamingh, Alida [268] see Malhi, Ripan

De Gregori, Mara (University of California Riverside)

[79] *Evaluating In Situ Portable X-Ray Fluorescence (pXRF) as a Field Method for Measuring Phosphorus and Elemental Distributions in Archaeological Soils: A Case Study from a Maya Ballcourt in Belize*

Soil analyses in archaeology are most often conducted through laboratory methods such as Mehlich II and DTPA, while field-based pXRF applications typically involve drying and sieving samples in a field lab, with phosphorus (P) often omitted. This study evaluated the effectiveness of using pXRF to measure phosphorus and other elements in situ at a Maya ballcourt in Belize. Soil samples were analyzed under three conditions: (1) in situ measurements, (2) dried and sieved samples in a field lab, and (3) wetted samples simulating heavy rainfall, since moisture has been reported to distort results. Results indicate that wet soils produced the lowest elemental concentrations, in situ samples yielded moderate values, and dried samples consistently showed higher results. Despite these differences in absolute values, spatial patterns of phosphorus and other elements remained consistent across sample treatments. This indicates that while preparation affects absolute concentrations, the relative distribution trends are stable. These findings suggest that in situ pXRF can reliably capture spatial patterns of key elements, reducing the need for extensive sample processing and saving valuable time and resources in the field.

De Gregori, Mara [341] see Murphy, Kaitlin

De Haas, Sabine [33] see Muro Ynoñán, Luis

De La Torre Salas, Natalie [323] see Ayers-Rigsby, Sara

De Leon, Abigail, Wyatt Linggi, Connor Malinger, and Grant Coffey (Crow Canyon Archaeological Center)

[55] *Survey of the Knuckles Preserve, Cahone, Colorado*

In 2024, the Archaeological Conservancy acquired a largely undocumented 40-acre parcel in Cahone, Colorado. Using a pedestrian survey and handheld GIS, we recorded a large Pueblo I (AD 750–900) village. This poster presents results from the archaeological survey conducted as part of the 2025 Crow Canyon Archaeological Field School in which we documented six sites determined by architecture and artifact distribution. Pueblo I (PI) was a time of demographic, cultural, and architectural changes within the Mesa Verde Region, and these findings contribute to our understanding of social integration and perhaps social differentiation. Pottery, lithics, and community architecture indicate primarily PI construction and use, yet the presence of U-shaped north-facing room blocks, circular structures, and wall alignments deviate from this

narrative and that of Mesa Verde archaeological record. This nonconformity to PI regional building patterns in conjunction with oversized pit structures and a possible great kiva may indicate differences in the social narrative of domestic partitioning and community spaces in the region as well.

De Leon, Jason (UCLA Cotsen Institute of Archaeology)

[174] *Don't Stomp on Me: Politics, Economics, and Resistance in the World of Guitar Pedal Building*

An effects pedal is an electronic device that alters the sound of a musical instrument (usually a guitar or bass) or audio source through signal processing. For decades, these pedals have played a major role in the creation and evolution of popular music sounds (especially rock guitar). Their production is also now part of a multimillion dollar industry that includes both multi-national corporations and small boutique builders. Using seriation and stylistic, linguistic, technological, and acoustic analyses, I highlight some of the complex anthropological meanings embedded in these seemingly innocuous stomp boxes. I couple these analyses with interviews with builders to argue that an anthropological study of these tiny metal enclosures can tell us a great deal about recent cultural and economic trends, as well as growing global political movements.

de los Angeles Cuyan, Maria [36] see Eppich, Keith

De Lucia, Kristin [304] see Rodríguez-Alegría, Enrique

de Luna, Kathryn [357] see Pawlowicz, Matthew

de Luna, Kathryn [357] see Stone, Abigail

de Parthenay, Morgane [93] see Delvigne, Vincent

De Peña, Felicia (California State Polytechnic University Pomona), and Theresa Barkett (California State University, Los Angeles)

[150] *A Pregnant Pause: Effects of Pregnancy on Stone Tool Production Capabilities*

Archaeological literature has long focused on men as stone tool producers, or it depicts the producer as a neutral person lacking gender or sex. Even in the latter case, the pervasive emphasis on males as flintknappers leads to an imagined male body and experience. Even when women are explicitly considered, their experience is assumed to be comparable to that of a male flintknapper. Women, however, have fundamental differences in joint flexibility, hormonal fluctuations, and notably, reproductive roles. Very little research has examined these issues in the context of flintknapping capability. Thus, in this paper we explore the experience of pregnancy on flintknapping by examining how aspects of pregnancy impact the lithic production process. We discuss how pregnant flintknapping persons in the past may have had to adjust their roles both social and/or physical to accommodate their changing bodies. Our approach involves a comparison between one pregnant flintknapper who produced 21 concave-base projectile points over 38 weeks (three prior to pregnancy) and a second female flintknapper, who was not pregnant, produced 20 similar points over the same duration to act as a control. All projectile points and debitage were collected for comparison to examine how pregnancy affects flintknapping skill and capability.

De Schiffart, Sophia (University of Connecticut), and Alexia Smith (University of Connecticut)

[45] *Hidden in Plain Sight? Examining the Potential for Meat Preservation in the Archaeological Record*

Dried meat is hypothesized to have played a crucial role in the subsistence strategies of mobile foraging societies based on ethnographic sources and secondary product analyses including that of osseous material. Given the susceptibility of organic materials to decay, primary evidence for meat preservation in the archaeological record is extremely limited. Charring is known to preserve organic remains archaeologically, particularly plants and amorphous food remains such as bread, which are routinely recovered via flotation. This study examines the potential of meat to preserve under varying charring conditions and, using scanning electron microscopy, establishes a baseline for identifying charred meat remains within floated material. *Odocoileus virginianus* (white-tailed deer) meat was dehydrated and subjected to heating at a range of temperatures to document the effects of charring. Numerous qualities of meat change after drying including, but not limited to, form, texture, and density. Under certain charring conditions, jerky preserves its dried

shape and texture enabling long-term preservation. When exposed to temperatures consistent with botanical charring, some samples maintained an identifiable form. Applying this information to the study of archaeological material recovered from flotation samples has the potential to change our perceptions of food storage and consumption habits throughout time.

De Tomassi, Mirko (LMU Munich)

[112] *Exploring the Ethical Challenges of Creating a Digital Repository of Maya Funerary Materials for Scholarship and Outreach*

Burials and human remains hold profound cultural significance across societies, and their treatment demands particular sensitivity. While dissemination is central to academic practice, the uncritical presentation or mismanagement of biographical data from past individuals raises ethical concerns. The increasing use of digital technologies in bioarchaeology has therefore stimulated debates on the appropriate ways of curating and sharing virtual representations of human remains, burials, and associated artifacts. In this poster, I introduce *och bih – Entró al camino*, a web-based platform created to foster the ethical dissemination of 3D models of funerary materials from the Maya site Palenque, Mexico. The work is informed by key scholarship in bioarchaeological, mortuary, and digital ethics, but I also grounded our approach in local perspectives on heritage, death, and the body. Beyond reviewing the extensive Mexican literature on these issues, I engaged in dialogue with stakeholders in the region. The poster outlines the theoretical principles that guided our decisions, details the technical development of the collection, and reflects on the ethical considerations shaping the methodology. I suggest that this collaborative and context-aware strategy offers a valuable contribution to ongoing conversations on ethics within and beyond digital bioarchaeology. *****This presentation will include images of human remains.**

Dean, Rebecca (Michigan State University)

[48] *Assessing the Impact of Creative Pedagogy in Archaeology*

Innovative teaching strategies—especially those incorporating High Impact Practices (HIPs)—are widely recognized for enhancing student engagement and learning outcomes. Yet these approaches often demand more time, energy, and resources than traditional lecture-based methods. To justify their continued use and expansion, educators must demonstrate their effectiveness through meaningful assessment. This poster presents practical, accessible tools for evaluating student learning in creative pedagogical contexts. It highlights methods such as structured observation, peer assessment, reflection, and case study analysis. These tools offer ways to capture the competencies taught through experiential and student-centered learning.

DeAntoni, GeorgeAnn

[219] *Engaging Critically with Sites of Colonialism: A Collaborative Paleoethnobotanical Approach at Mission San Juan Bautista*

The California missions have long been a subject of study for archaeologists working in the state. Historically, discussions of perceived cultural loss by Native peoples in colonial centers were commonplace. But the work of contemporary researchers has critically pushed back on these narratives, providing more nuanced analyses for understandings of Indigenous persistence and agency in places of colonial violence. This paper will summarize an ongoing, collaborative archaeological partnership centered on Mission San Juan Bautista where our research team, comprised of tribal partners, California State Parks staff, and archaeologists from UC Santa Cruz, have been working to highlight how Native peoples at this mission location connected with the broader landscape around them despite colonial regimentation. Specifically, this paper will interpret a paleoethnobotanical assemblage from the village location where Native families lived at the Mission between 1797 and 1835, examining how Native peoples continued to gather and incorporate a diverse assortment of plants into their lives at Mission San Juan Bautista. This presentation will explore how the material assemblages associated with the remains of a traditional-style house speak to Native persistence within the Spanish mission system and how the fine-grained lens that paleoethnobotany offers can be an innovative, forward-looking approach for understanding the colonial period.

Deardeuff, Chris [74] see Nicholson, Christopher

Decaix, Alexia [45] see James, Nathaniel

Declet Perez, Mariela (University of California San Diego)

[84] *Expanding Traditional Fishing Knowledge in the Caribbean: A Case from Manatuabón Valley, Puerto Rico*

In the Caribbean, changes in the diet of precolumbian societies have traditionally been seen as signs of resource overexploitation. However, new research, especially in the Lesser Antilles, has shown that Indigenous peoples practiced sustainable methods rather than overexploitation, maintaining a stable and continuous presence of species over time. This study is the first zooarchaeological investigation on the island of Puerto Rico to explore the long-term use of marine ecosystems along the north coast. We examined the Angosturas and Tierras Nuevas sites in the Manatuabón Valley. These locations provide insight into deep and prolonged human-environment interactions from 4010 BCE until the contact period. Changes in the paleolandscape and climate have impacted the availability of marine resources in the area. Despite these changes, key species persisted over time, and the Tierras Nuevas sample size suggests a consistent fishing size through the centuries. This consistency is linked to the continued use of similar fishing tools, which indicates the transmission of fishing knowledge and traditions across generations. These results deepen our understanding of past human societies and ecosystems, challenging the traditional view of resource overexploitation and highlighting the role of sustainable practices.

DeCorse, Christopher (Syracuse University)

[82] *Entangled Frontiers: Islam at the Margins of the Mande World, Northern Sierra Leone*

This paper examines the complex, intertwined nature of religious belief and the archaeological expression of Islamic and pre-Islamic religious practices among Mande groups of northern Sierra Leone during the second millennium CE. The Mande are a large ethnolinguistic group that extends across much of the West African savanna. While encompassing diverse ethnic groups, Mande speakers share many aspects of technology, social structure and cosmology. The Mande have been associated with the spread of a variety of sociocultural features including iron smelting technology, secret societies, the structuring of sociopolitical complexity, and ethnoreligious practices, including Islam. The advent of Islam in West Africa has been viewed in varying ways, the majority of which underscore syncretic aspects of West African religion and the perceived impact of Islam on indigenous belief systems, art, dress, and architecture. To varying degrees these interpretations have often viewed Islam from an external hegemonic perspective, as an outside influence that shaped and transformed indigenous beliefs. Here change and continuity in religious beliefs are examined in light of the local contexts in which Islam was both accepted and transformed. The challenges tracing the archaeological expression of intersection of pan-regional and global systems and local cultural practices are considered.

DeCorse, Christopher [162] see Okanlawon, David

Dedrick, Maia (Santa Clara University), Adolfo Batun-Alpuche (Universidad de Oriente), and Luke Auld-Thomas (Northern Arizona University)

[53] *Holistic Perspectives on Rural Life and Agriculture in Eastern Yucatán as Inspired by the Work of Patricia A. McAnany*

Patricia McAnany is a founding codirector of the Proyecto Arqueológico Colaborativo del Oriente de Yucatán (PACOY) and continues to contribute to and inspire archaeological investigations undertaken by the project. In this paper, we describe next steps for the project, based in Tahcabo. Thanks to McAnany's conviction that lidar can transform regional analyses, we now have a dataset that requires further study. Eastern Yucatán has been known as a fertile agricultural area and likely was an important producer of food for large regional cities through time. As our research has shown, abundant sinkholes may have attracted the earliest populations to Tahcabo by 1500 BC. Now, we seek to evaluate characteristics of rural social organization, multispecies interactions, and agricultural strategies, and the extent to which they facilitated socioeconomic integration elsewhere. Through this work, we seek to further explore McAnany's vision of land as the place of ancestors and trade as the work of actors within regional networks who continually express religious beliefs and cosmological orientations. In addition, we continue her commitment to the study of diachronic change up to and including recent periods and seek to produce results useful for land retention and management within the ejidos of Yucatán today.

Dedrick, Maia [219] see Panich, Lee

Deegala, Sathira [83] see Korzow, Kristine

Deere, Bobi [295] see Davidson, Jaron

DeeWaard, Abigail, and Dana Bardolph-Carlsen (Northern Illinois University)

[30] *Investigating Plant Foodways at the Heart of Hopewell: Paleoethnobotanical Analysis of the Overly Site in Ross County, Ohio*

Paleoethnobotanical analyses of Ohio Hopewell habitation sites in past decades have shed light onto the subsistence practices and settlement patterns of Indigenous peoples engaged in the Hopewell phenomenon (1–400 CE). However, much less is known about foodways—the social contexts of food production, preparation, and consumption—at habitation sites in the heart of the Scioto Hopewell region. Here, I present the results of an analysis of carbonized macrobotanical remains from Overly (33RO110), a habitation site located less than a kilometer away from Hopeton earthworks. I integrate paleoethnobotanical data and functional feature analysis to provide insight into site organization, plant foodways, and daily life by exploring the types of foodways labor visible in the archaeological record, including seasonality and gendered elements of the food quest. Additionally, I endeavor to incorporate Indigenous perspectives on the experiential and social side of foodways to paint a more vivid picture of daily life at Overly. Through comparison with other paleoethnobotanical datasets from ritual and special use sites, this research can open a window into the potential interaction between the ritual and the mundane for the ancient peoples who lived near the center of a continent-spanning ceremonial phenomenon.

DeeWaard, Abigail [30] see Bell, Emma

DeGeorgey, Alex (Alta Archaeological Consulting), Jan Hasil (University of Prague), Bylina Paweł (University of Warsaw), and Maciej Trzciński (University of Wrocławski)

[177] *Hitler's Forgotten Camps: Arbeitslager Riese (Lower Silesia, SW Poland)*

Despite the passage of more than 80 years since the end of World War II, many elements of the history of the Holocaust remain unknown. One of them is a network of forced labor camps called Arbeitslager Riese, operating in the Sowie Mountains (Lower Silesia, southwestern Poland), where Jewish prisoners from the KZ Gross-Rosen and KZ Auschwitz-Birkenau concentration camps were exploited. The names and roles of individual subcamps are known from numerous witness testimonies and prisoners' memoirs, but their exact locations have been forgotten. Analysis of available documents, historical aerial photographs from 1944–1945 and 1953–1956, and ALS data (ISOK) has enabled the identification of most locations. Preliminary archaeological reconnaissance of the AL Saufwasser subcamp site (Sierpnica, Lower Silesia, southwestern Poland) confirmed the indicated location. Analysis of current land use yields pessimistic conclusions. Currently, the subcamp sites are being developed with modern buildings, lacking any archaeological work or commemoration of the site, and the structures that were previously preserved are being demolished to make way for new developments. Except for a few places, the traces of the Holocaust in Sowie Mountains will soon be erased.

Degnan, Bridgette (University of California, Santa Barbara)

[341] *Supplying the Marketplace: Household Economies at Altun Ha*

Household archaeology offers an ideal context in which to examine surplus production and the degree of economic integration within prehispanic Maya marketplaces. The Altun Ha Household Archaeology (AHHA) project was initiated in 2025, dedicated to understanding how household members participated in and shaped their city's economy. Altun Ha residents lived within a range of resource-rich microenvironments that would have sustained a thriving local economy and fueled long-distance trade between the Caribbean and inland centers. AHHA's first excavations of a plaza group beside a large wetland lagoon recovered a Terminal Classic (ca. 750–950 CE) midden with dense concentrations of cooking wares, water jars, and *Pomacea* shell. A network of raised pathways (*callejuelas*) link this and other household groups to the city's marketplace in Plaza C. This pilot study offers evidence of specialized production of wetland resources for surplus food that

may have been exchanged in the marketplace for other goods and nonlocal resources, like obsidian, found in abundance at this group. To further cross-examine market participation, future excavations will target multiple residences, enabling both contextual and distributional studies to evaluate the degree of specialized production and the homogeneity of market-sourced goods across a range of Altun Ha's households.

Degnan, Bridgette [341] see Kaeding, Adam

DeGraffenried, Jennifer [200] see Hart, Isaac

DeGraffenried, Matthew

[302] *Dietary Differences in the Maya Lowlands: Using Isotopic Analysis to Understand Differences in Ancient Maya Diet*

The purpose of this study was to test for patterns of food consumption among the Classic period Maya synthesizing isotopic studies from five different sites across the southern Maya Lowlands. This project explores three different factors that may have influenced differences in observable Maya diet, specifically space, time, and social status. To address questions on how each factor might have shaped diet, isotopic data from five different sites was compiled and analyzed. This research focused on studies that published complete collagen data from all factors described and chose sites that represented a broad area across the southern Maya Lowlands. To account for the differences in how social status is assigned, this project created multiple datasets with different classifications to compare each one statistically. To compare the different datasets, statistics were run using R. Linear regression fit models were run on each of the different datasets. The results showed that the factor that most influenced diet was the sites where the individuals were found. While all factors had a significant impact, the differences between sites were much greater than other signatures. Overall, this project demonstrated that there are definite differences in the diets people ate at different sites.

DeGruson, Emily, Mason Whitehead (University of Kansas), and Ted Goebel

[295] *Raw Material Procurement at Bonneville Estates Rockshelter, Western Bonneville Basin, Nevada*
Bonneville Estates Rockshelter, located in northeast Nevada, has yielded an extensive flaked-stone assemblage, with raw materials consisting of a variety of cryptocrystalline silicates, fine-grained volcanics, and obsidian. Human occupation of the rockshelter started about 13,000 years ago and continued through the late Holocene, with cultural stratigraphy being organized into seven cultural components. Previous studies of raw-material procurement focused on bifacial and unifacial tools; in this poster we incorporate the results of a new analysis of debitage. For each component's debitage assemblage, we present the types of raw materials present, their relative proportions, and the minimum distances early Indigenous foragers traveled to obtain them. We then consider raw-material procurement through time, making comparisons between components to assess changes in transport distances and technological provisioning strategies, interpreting what they might mean in terms of durations of occupations. We conclude by considering these data in the contexts of other paleoecological and technological analyses of materials from Bonneville Estates and elsewhere in the eastern Great Basin.

DeGruson, Emily [115] see Whitehead, Mason

Delaere, Christophe (Universite Libre de Bruxelles)

[40] *Tracing Cultural Influences in Eastern Titicaca Basin Settlements during the Formative and Tiwanaku Periods*
Within the framework of the ALTI-Plano Project, aimed at establishing a comprehensive archaeological map of the Puerto Acosta region (Lake Titicaca, Bolivia), surface studies and a series of test-pit excavations conducted at two archaeological sites yield new insights into the Formative and Tiwanaku periods. The first site (PA_0145), excavated in 2024, revealed a ceramic assemblage attributed to the Tiwanaku period, but displaying an atypical stylistic pattern. The second site (PA_0043), excavated in 2025, revealed the remains of dismantled monumental architecture associated with the Formative period, as well as an abundant ceramic assemblage dating to both the Formative and Tiwanaku periods. An integrated analysis of ceramic technology and stylistic attributes—correlated with stratigraphic sequences and the various taphonomic processes

contributing to the present-day formation of the sites—highlights two key observations to discuss: (1) the presence of archaeological sites associated with the Pucará culture (1500–100 BC) may be attested much farther southeast than previously reported in the literature, and (2) the Tiwanaku influence (600–1000 CE) appears weaker in this part of the lake basin than traditionally assumed. These results call for a reassessment of cultural interconnections on the eastern slopes of the Lake Titicaca Basin for these periods.

Delaere, Christophe [40] see Salame, María

Delagnes, Anne [93] see Spinelli Sanchez, Océane

Delaney, Dennis [229] see McCormick Alcorta, David Rafael

Delatour, Kristen [107] see Chavez, Andrea

Delgado, Annmarie (Sonoma State University)

[292] *From Neglect to Memory: Using GPR to Identify Children's Unmarked Graves at Rose Hill Cemetery in Northern California*

Rose Hill Cemetery, established in 1865 located within the Black Diamond Mines Regional Preserve in the San Francisco Bay Area, reflects both the resilience and hardships of immigrant coalfield families in nineteenth-century California. Of approximately 235 burials, nearly 40% are children, yet only 80 replica markers remain after vandalism destroyed the originals. This loss has obscured many graves, particularly those of the juveniles whose deaths from smallpox, diphtheria, and scarlet fever profoundly shaped their community. Preliminary pedestrian survey revealed evidence such as coffin wood fragments, rodent disturbance, and erosion, suggesting intact subsurface contexts while also indicating ongoing threats to preservation. These findings highlight the urgency of continued investigation and provide the foundation for this study's focus on children's burials within the broader context of immigrant family life, mortality, and structural violence. To address this erasure, I will employ ground-penetrating radar (GPR) and other noninvasive methods to locate unmarked graves and reconstruct burial patterns. By centering children as cultural and social actors, this study reframes Rose Hill within debates on the archaeology of childhood and heritage management. The findings emphasize how noninvasive methods, combined with community collaboration, can restore visibility to those silenced in both life and memory.

Delgado-Espinoza, Florencio (Universidad San Francisco de Quito)

[267] *Beyond the Maritime Foundation: The Agriculture-Mangrove Dichotomy of Social Complexity on the Ecuadorian Coast*

Moseley's Maritime Foundation Hypothesis posits that the rich marine biomass of Peru's Humboldt Current sustained the rise of sociopolitical complexity on the Peruvian coast, creating a classic dichotomy between maritime and agricultural economies. This model, however, remains largely unexamined within the distinct ecological context of the Northern Andes. In coastal Ecuador, the El Niño Current warms the ocean waters and supports prolific mangrove ecosystems, conditions that also facilitated the early development of agriculture. Consequently, focus has historically emphasized on agricultural surplus as the basis of emerging complexity, a perspective reinforced by past archaeological debates that marginalized the role of marine resources. This study reevaluates the economic structures of Formative and Regional Development period societies. It argues that the fundamental economic division shaping the emergence of complexity on the Ecuadorian coast is not between open-ocean fishing and agriculture but is uniquely characterized by a specialization in either inland agriculture or the intensive exploitation of the mangrove estuary. This mangrove-agriculture dichotomy represents a distinct northern Andean pathway to power, demonstrating that the processes of the emergence of social complexity were very diverse across the Pacific coast.

Delgado-Espinoza, Florencio [309] see Velasquez-Muela, Melany

Delle, James [283] see Barton, Christopher

Delsescaux, Jeffrey (California Office of Historic Preservation), and Tricia Dodds (Southern California Gas Company)

[167] *Brother Jonathan Revisited: Shipwreck Sovereignty, Salvage, and the Contemporary Challenges of Maritime Archaeology in California*

The 1865 wreck of *Brother Jonathan*, controversially salvaged in the 1990s, marked a turning point in California's assertion of sovereignty over underwater cultural heritage. The case exposed enduring structural deficiencies in the state's ability to manage and conserve submerged sites because California had never developed a formal capacity for maritime archaeology. These deficiencies persist today and remain unaddressed more than 25 years later. *Brother Jonathan* is a case study in the persistent disconnect between legal authority and practical stewardship, a challenge faced not only in California but also across federal and state governments nationwide. Despite having more than 840 miles of coastline, one of the longest in the contiguous United States, California remains without a formal maritime archaeology program or a full-time maritime archaeologist. In contrast, other coastal states, many with far shorter coastlines, have invested in professional infrastructure to manage their underwater cultural heritage. This paper is a contemporary reassessment of California's approach to maritime cultural resource management and argues that, without renewed investment and structural reform, claims to sovereignty over underwater heritage risk remaining symbolic rather than substantive.

Delsol, Nicolas (Université Laval)

[224] *Cattle, Primitive Accumulation, and the Emergence of Capitalism in New Spain*

This paper examines cattle ranching in New Spain as a central mechanism of primitive accumulation, the process by which land, labor, and resources were reorganized to create the foundations of capitalist production. Drawing on zooarchaeological and environmental archaeological evidence, as well as archival sources, I argue that the introduction of cattle played a key role in this process dispossession and commodification that transformed landscapes and social relations. The rapid expansion of herds in the sixteenth century required the occupation and clearing of Indigenous lands, subordinating subsistence practices and reshaping ecosystems. At the same time, cattle bodies themselves were commodified, their disarticulation and processing optimized to maximize extractable value in meat, hides, and grease. This transformation directly confronted Indigenous ontologies in which land and animals were embedded in reciprocal networks. By reducing them to alienable commodities, colonial authorities imposed new regimes of value, embedding capitalist logics into daily practice. Archaeology, and particularly zooarchaeology, offers a unique perspective on these processes, illuminating how the commodification of cattle and land in New Spain illustrates an early episode of merchant capitalism in the Americas.

Delvigne, Vincent (CNRS), Paul Fernandes (Paléotime; CNRS, UMR 8068 TEMPS), Mathieu Langlais (CNRS, UMR 5199 PACEA), Morgane de Parthenay (CNRS, UMR 8068 TEMPS), and Jean-Paul Raynal (CNRS, UMR 5199 PACEA)

[93] *From Stone to Space: Contribution of Silicite Petrography to Paleogeography*

Applied to prehistoric archaeology, the methodological renewal of silicite petrography, initiated in the mid-2000s, has transformed our understanding of the occupation of spaces. Developed first for Middle and Lower Paleolithic assemblages in contrasting environments with uneven mineral potential (French Massif Central, Morocco), these methods have gradually been applied to more recent periods as well as to other geographical contexts across the world. Facilitated by the development of harmonized approaches to both archaeological and geological materials using reference collections, the accumulation of data has led to three main results: (1) the recognition of the multiplicity of exploited sources; (2) the identification of long-distance transfers as a recurrent feature of raw materials sets of archaeological assemblages; and (3) the mismatch between source distance, quantity of material, and economy of raw materials. By multiplying observations on archaeological sites belonging to the same *chrononyme* (e.g., Early Magdalenian, Middle and Late Gravettian), it appears that the litho-space is organized as a network, which can be studied through network analyses. Through selected examples, this presentation seeks to show how material studies, incorporating recent concepts, have profoundly changed our way of conceiving "prehistoric territories," thereby questioning the notion of prehistoric "cultures."

Delvigne, Vincent [93] see Bocquel, Manon

Delvigne, Vincent [93] see Fernandes, Paul

Delvigne, Vincent [93] see Mgeladze, Ana

Demetradze-Renz, Irina (Ilia State University)

[177] *Flavius Arrian and Roman Forts of Coastal Colchis*

Flavius Arrian's "Periplus of the Euxine Sea" is a primary literary source for the study of Roman Imperial forts on the Black Sea littoral. Arrian provided first-hand observations about the Colchian forts and proved Rome's military presence there. Most of those forts no longer exist. This fact elevates the significance of Arrian's work for the study of the lost Colchian fortifications. Comparing Arrian's periplus with archaeological sources and satellite maps, this paper intends to answer the following research questions: (1) Did Colchian forts respond to local needs or serve the bigger Roman maritime world? (2) Did the Colchian forts serve as bases for Roman provincial or praetorian fleets? (3) Did the Colchian forts fit into the broader Roman defensive network and facilitate empire's trade beyond the Caucasus? A comparative analysis will reveal that Colchian forts supported Rome's frontier policy by stabilizing the eastern Black Sea, fostering relations with local tribes, and enabling commercial exchange with areas beyond the Caucasus. There is no conclusive evidence that Colchian forts housed provincial or praetorian fleets, but they were more than isolated garrisons. In the second-century AD Colchian forts were active nodes in Rome's interconnected system of coastal defense and economic networks.

Dempsey, Lily, and Jessi Halligan (Center for the Study of the First Americans, Texas A&M University)

[180] *Un-chert-ed Territory: Analysis of Three Terrestrial Sites from the Aucilla River Lithic Landscape*

The Aucilla River Basin of northwestern Florida is best known for its submerged sites dating to the late Pleistocene and early Holocene, a period throughout which people continuously returned to this region. However, little attention has been paid to the hundreds of sites on the terrestrial side of the waterline that have been recorded by land managers in the Aucilla River Wildlife Management Area. These sites, though lacking the organic preservation of submerged localities, are necessary for providing a more holistic understanding of Indigenous Floridians and their use of the landscape. In summer 2024, we systematically tested three of these terrestrial upland sites, discovering that each one contained a buried component with late Pleistocene / early Holocene diagnostic artifacts underneath a mid-late Holocene component (ca. 12,000–2000 BP). All three sites are located on relatively high uplands composed of sandy soils. They are each at least a kilometer in distance from any known chert quarry and near but not immediately adjacent to freshwater sources, giving us an opportunity to study the ways that precontact Indigenous people were using different portions of this landscape. We present lithic analyses of these three sites.

Dempsey, Sarah Beth [339] see Van Gilder, Cynthia

Demyan, Marcela (University of Georgia), Amanda Roberts Thompson (University of Georgia, Laboratory of Archaeology), and Victor Thompson (University of Georgia)

[300] *Interacciones coloniales en el Fuerte de San Antón en Mound Key, Florida*

Durante la colonización europea, la Corona española patrocinó expediciones, colonias, misiones y bases militares en lo que hoy es el sureste estadounidense. La reciente identificación de San Antón de Carlos (1566-1569) en Mound Key, Florida, brinda la oportunidad de explorar la diversidad de estas dinámicas coloniales y los desafíos metodológicos que estas presentan. Esta es una evaluación preliminar de una casa española dentro del fuerte de San Antón. Analizamos las dificultades de evaluar este conjunto de viviendas en el contexto de la posterior reocupación por el pueblo Calusa, así como de un breve segundo intento misionario por parte de los franciscanos a finales del siglo XVII. Utilizamos los conocimientos de nuestro estudio de caso para analizar la naturaleza de las interacciones entre españoles y Calusa y su potencial para comprender la vida en la frontera española dentro del territorio Calusa.

Demyan, Marcela [76] see Church, Gloria

Deng, Zining [296] see Ru, Huiwen

Dennett, Carrie [168] see Salgado, Silvia

Dennett, Carrie [304] see Steinbrenner, Larry

Densel, Allison, Brett Meyer (University of Michigan), Jaime Awe (Northern Arizona University), Claire Ebert (University of Pittsburgh), and Julie Hoggarth (Baylor University)
[326] *The Lithic Workshop at Pik Tok, Belize: A Case Study*

During the 2025 field season of the Belize Valley Archaeological Reconnaissance (BVAR) Project, settlement excavations were conducted at the intermediate elite Maya site of Ek Tzul in the upper Belize River Valley of western Belize. These excavations expanded the work conducted in 2024, which sought to investigate the growth of the settlement and the influence of the site core on the surrounding population. Generally, the excavations produced typical domestic refuse, though one of the six mound groups excavated was unique. The Pik Tok group (EKT-224) contained evidence of a Terminal Preclassic to Early Classic (300 BC–AD 550) lithic workshop located at the group's western structure. In addition to several incomplete bifaces, over 2,800 pieces of chert debitage were collected, allowing for a large-scale analysis of lithic production techniques at the site. Here, Pik Tok is presented as a case study of a chert-tool production household, a subject under-researched in the Belize River Valley.

Depret-Guillaume, Patrick (University of Utah)

[274] *Anthropocene Archaeology: How the Past Can Inform the Present*

To paraphrase a familiar aphorism dubiously attributed to George Santayana, those who cannot remember the past are doomed to repeat it. Never has this been truer than at this moment, with climate change, biodiversity collapse, and escalating imperial conflict from Palestine to the Paracels threatening to topple a globally interconnected, hegemonic world-system that must now support a population of over eight billion, to say nothing of its hyper-consumerist elite caste. Consequently, it is no surprise that the temptation to traffic in didactic generalizations about supposed climate-driven “collapses” over the past several millennia is ubiquitous. However, the variability of past responses to environmental change confounds most attempts to establish a simple causal relationship between climatic shifts and the unraveling of social systems. This paper will explore that variability, though, and draw archaeological comparisons with humanity's current socioecological trajectories in what is, perhaps, a vain attempt to glean helpful lessons from them. Evidence that world leaders will voluntarily opt to halt global ecocide is not forthcoming, and this is unlikely to change on the timescale necessary to avert catastrophe; whereas past societies could, with sufficient flexibility and organization, adapt to massive environmental changes, today's global capitalist imperium transparently lacks resilience and redundancies.

Dering, James [38] see Boyd, Carolyn

Derr, Kelly (Historical Research Associates Inc.), Katelyn McDonough (University of Oregon), Jaime Kennedy (University of Oregon Museum of Natural and Cultural History), Tom Connolly (University of Oregon Museum of Natural & Cultural History), and Pamela Endzweig
[333] *Stepping through the Past: Paleobotanical Analysis of the Fort Rock Sandals*

Paleoenvironmental reconstructions from lake sediment cores provide regional views of changing plant communities while perishable materials such as basketry, clothing, and tools such as ground stone can provide more localized perspectives on past environments and human-plant interactions. This paper presents preliminary results from fossil pollen analysis of six Fort Rock Cave (35LK1) sagebrush bark sandals in the collections of the UO Museum of Natural and Cultural History. Analysis of sediment sampled from these nearly 10,000-year-old sandals—the oldest known footwear in the world—offers an unprecedented opportunity to investigate the paleoenvironmental conditions of the northern Great Basin as well as specific environments experienced by the wearer.

Derr, Kelly [333] see Coughlan, Michael

Derr, Kelly [333] see Kennedy, Jaime

Derry, Emma (Jamestown Rediscovery [Preservation VA]), Sean Romo (Jamestown Rediscovery [Preservation VA]), Ashley McKeown (Texas State University), Jamie May (Jamestown Rediscovery [Preservation VA]), and Michael Lavin (Jamestown Rediscovery [Preservation VA])

[22] *Can Space Tell Us Time? Burial Alignments and Dating at Jamestown*

A large, unmarked, seventeenth-century burial ground sits to the northwest of the original James Fort site, centered on an east-west ridge. Past excavations have suggested that the burial ground was in use as early as 1610 and into at least the 1640s, and interments ceased before the construction of Jamestown's last statehouse began atop the ridge in 1663. Most of the settlement's population whose status did not warrant interment within a church or churchyard were likely buried here. Current excavations hope to locate the southern boundary of the burial ground and assess the accelerating deterioration of remains caused by increasingly frequent flooding. Spatial analysis of identified graves has revealed that they fall into two main categories: a significant number follow the east-west orientation of the ridge, but just as many are aligned with a short stretch of palisade oriented 17° east of north. Analyzing these groups in conjunction with stratigraphy and artifacts may provide insight on relative chronology and the expansion of the burial ground over time. *****This presentation will contain illustrations of human remains rather than photographs.**

Des Lauriers, Matthew (Cal State San Bernardino)

[159] *"Rapture on the Lonely Shore": Social Consequences of Varying Degrees of Isolation among Maritime Hunting and Gathering Societies of the Pacific Rim*

The sea itself creates a kind of isolation for any human that travels upon its surface. It requires people to exist in a liminal space at the edges of two great elemental realms, and harvesting its resources requires either physically crossing that boundary or using human ingenuity to conjure riches from the depths. Humans have encountered the world's oceans and heard the "music in its roar" for as long as we can reasonably consider our ancestors to be "like us." Some of these people reached and settled remote landscapes—social and economic islands, if not literal geographic ones. By comparing the social consequences of relative degrees of isolation of groups such as the Seri of Sonora, the first nations of Baja California, pre-Lapita islanders of the Western Pacific, Torres Strait Islanders, and the coastal peoples of British Columbia, we may begin to build an image of what it means for communities committed to the sea as a way of life to be deeply integrated and networked with other societies or operating largely independently from external social, political, and economic forces. Data from archaeology, historical documents and ethnography are used in conjunction with each other to aid in this examination.

Detisch, Michael [79] see Mink, Philip

Devos, Fred [178] see Clark, Loren

DeWitte, Sharon (University of Colorado Boulder), Eric Jones (University of Colorado Boulder), and Emily Jean Reardon (University of Colorado Boulder)

[216] *Migrant Health in Nineteenth-Century New York State*

Research in present-day contexts has found evidence of a "healthy migrant effect" among international and within-country migrants; i.e., people who successfully migrate at least temporarily exhibit better health and lower risks of death on average than individuals in both their sending and receiving populations. Studies of this have, to date, been limited primarily to living populations. However, migration is not a phenomenon unique to the modern world, and many of the mechanisms suggested to underly the healthy migrant effect today could have been at play in the past. Migrants have been an important part of upstate New York communities from the time of the initial "Yankee flood" in the late eighteenth century. To examine health outcomes for migrants in historical populations in New York State, as part of a larger community-engaged project, we examine data from mortality schedules from federal and state census records ca. 1850–1880 for the primarily rural, agriculturally based Madison County and the nearby city of Syracuse (Onondaga County). We use survival and hazards analysis to assess broad, population-level variation in health by migrant status, and we compare proportionate mortality (the fraction of deaths attributable to a particular cause-of-death category) between migrants and nonmigrants to these communities.

Diaz, Alexander (University of Wyoming)

[279] *Fishing in the Arctic: Testing Zooarchaeology by Mass Spectrometry's (ZooMS) Ability to Make Subfamily Identifications of Salmonidae Species from the Northwest Alaskan Coast*

The importance of fish has often been overlooked in the archaeological record, with fish frequently being seen as a secondary or backup resource compared to larger terrestrial animals. Because fish are so similar, morphological species-level identification of fish remains from archaeological sites can be difficult. However, for sites located on the Northwest coast of Alaska, where fish were and still are a primary resource, much can be learned by having a greater species resolution of the fish remains recovered from archaeological sites in the region. The family Salmonidae includes several anadromous fish species commonly exploited by Inupiat groups in northwest Alaska, including sheefish, which are part of the subfamily Coregoninae and the more widely known subfamily of Salmoninae. Because these two subfamilies have a close evolutionary relationship, as well as both sheefish and salmon being anadromous and occupying the same environment, it can be difficult for zooarchaeologists to morphologically differentiate between these species when both are present in an assemblage. One cost-effective way to accomplish this is through Zooarchaeology by Mass Spectrometry (ZooMS). This preliminary study will examine the ability of ZooMS to make subfamily identifications of fish commonly exploited on the Northwest Alaskan coast.

Diaz, Francisco

[21] *Slotting the Carnegie Maya: Institutional Collaboration, the Coloniality of Power, and How "A Kindly White Race" Placed the Maya within Early Twentieth-Century Scientific Racism*

In 1928, a clinic was set up at Chichen Itza by the Carnegie Institution of Washington, later expanded to medical and anthropometric studies of living Maya people of the surrounding *pueblos*. This research demonstrates how Chichen became a site of reiteration of the "colonial difference" through the collaborations and networks of the Carnegie Institution of Washington and Harvard University and also later published by the Smithsonian Institution. What is often treated as a footnote of the CIW's larger study of the Maya is instead the node through which the coloniality of Mayanist research can be studied in depth. The respective studies of Maya past and living Maya people were undertaken in pursuit of an understanding of "who and what the Maya are" (Kidder 1930:109). These studies were made according to codification of the particular intersubjective constructions of racial and anthropological categories *en vogue* at the time—the biological determinism and scientific racism that informed the Eugenics movement. Studying the archival documents and publications of this research reveals how the Maya were slotted into these constructs of race-thinking in accordance to the coloniality of power, while implicating their legacy and the responsibilities of contemporary Mayanist archaeology in the present day.

Diaz, Joshua (UIUC), and Ripan Malhi

[335] *Application of Indigenous Data Sovereignty Frameworks in Genomics: A Pathway for Archaeology?*

Western science has long relied on the creation of "data," organized into systems of knowledge that often become the dominant narrative structuring academic and institutional frameworks. The fields of archaeology and genomics share legacies and continued practices of extractive research in which data creation about Indigenous peoples, Ancestors, and lands is often collected, analyzed and disseminated without community authority or benefit. Given the academic push in the era of big data, open access, and digital repositories, both fields share responsibility to address questions about how their practices must shift and incorporate Indigenous data sovereignties (IDS). IDS in genomics is beginning to be put into practice through frameworks like the CARE principles. Genomic fields are also incorporating Indigenous-led infrastructures, highlighting how communities can direct and govern their own data without institutional oversight. For both genomics and archaeological researchers, understanding that data is not neutral but relational means recognizing its ties to kinship, place, and culture, and honoring Indigenous authority and governance. Here, we draw on lessons applied to genomics and suggest pathways for archaeology to develop relational frameworks that follow principles of Indigenous data sovereignty and be in a position to change practices toward repairing historical harms and uplifting Indigenous-led archaeology.

Diaz, Nina Marie

[185] *Digging Deeper: How to Increase Public Engagement in Public Archaeology*

Public archaeology first emerged in the 1970s to critically examine the public's role in archaeology. However, the position of the public came into question as many people inside and outside of the profession viewed the public as passive recipients, not active participants. How did this divide appear? How do we encourage the general public to become involved in archaeology? Is the general public aware of its intended role in archaeology? To answer the research questions, I reviewed responses from a questionnaire by the Texas Historical Commission (THC), opinion polls conducted by Ipsos on behalf of the Society for American Archaeology (SAA), and conducted an anonymous survey of the public, all aiming to elicit various opinions on public archaeology. These results reveal that the public believes they are limited in archaeology by a lack of communication with professional archaeologists, and their lack of knowledge of what archaeology entails. An analysis was conducted to provide reasons as to how everyone can benefit from the public's exposure to archaeology, which empowers communities, expands knowledge bases, and raises the general awareness of the importance of cultural resources.

Diaz Arriola, Luisa (UNMSM)

[309] *Understanding Inca Domination in Armatambo, Ychsma Urban Center, Lima*

The research focuses on the forms of domination exercised by the Incas over the Ychsma territory. This political unit administered the lower Rimac basin before the arrival of the Tawantinsuyu in the Lima region. Armatambo, the port closest to Pachacamac, underwent major transformations in social practices, as well as in terms of the built environment. We propose that there was direct Inca domination, evidenced in the material expressions of the elites, giving rise to the incorporation of new cultural elements. However, continuity can be observed in local materialities such as pottery manufacturing and the funerary practices of the inhabitants of Armatambo.

Diaz Arriola, Luisa [309] see Gomez, Yazmin

Diaz-Longo, Martha (Far Western Anthropological Research Group Inc.)

[42] *El curso de la vida: Understanding the Lived Experiences of Those Crossing the United States / Mexico Border*
Issues regarding Undocumented Border Crossers continues to remain an area of engagement and research among anthropologists, forensic anthropologists, and various humanitarian organizations in the border states of Arizona, Texas, and California. Work has typically focused on the identification and repatriation of these individuals, however, the lives that these individuals have endured do not culminate with the single event of their crossing. The trajectory of their lives, their experiences and hardships are all worthy of understanding and contextualizing. Their lives and hardships do not end or even begin after their crossing; it can be argued here that this crossing just serves as continuation of their hardships and overall resilience to survive. It is through looking at this over their life course and understanding the history of their home counties, their childhoods, their crossings, and life after crossing that is able to give us more realistic insight on the various facets of their lives. They are more than Undocumented Border Crossers; they are multidimensional human beings who can in their own words extrapolate on their experiences. This study offers a unique perspective on these individuals and allows them to speak on their own behalf rather than a researcher making their own assumptions and interpretation.

Diaz Perez, Claudia [311] see Sharpe, Ashley

Diaz Ruiz, Rosio [337] see Toyne, Jennifer Marla

Dierks, Zachary (University of Oregon)

[217] *Provincial Plants: Further Archaeobotanical Analysis from the Baset Village Angkorian Site*

Human-plant entanglements are an important aspect of human-environmental relationships and are an especially vibrant area of archaeological study. Within Southeast Asia, plants are important partners, with traditional uses in foods, crafts, medicines, fuel, and rituals. Archaeobotanical analysis plays an important role in the study of these past partnerships. Baset Village is a provincial Angkorian site in Battambang, Cambodia, that has substantial Pre-Angkorian and Angkorian contexts and thus provides us with an excellent opportunity to begin to bridge the Pre-Angkorian and Angkorian periods as well as to examine the changing

human-plant entanglements that accompanied this transition. This paper contains preliminary results from the ongoing analysis of the archaeobotanical material excavated from occupational contexts within Baset Village. The results detailed can help us better understand the changes in human-plant relationships, including agricultural intensification and ritual plant use, occurring during this period.

Diez Barroso Repizo, Alberto (INAH)

[86] *Pre-Totonac Manifestations in the Sierra Norte de Puebla: Hiatus at the End of the Preclassic and Return to the Ancestors in Teteles de Avila Castillo*

Located in the northeastern region of the Sierra Norte of Puebla, the site of Teteles de Avila Castillo is a settlement with an occupation dating from the Late Preclassic (600–200 BC) to the early Classic (AD 100–650). Its architectural features and urban layout point to styles from the Huasteca, the Gulf Coast, and even the Mayan area. Recent research has detected later intrusions with cultural elements from the Totonac tradition, such as the palm-axe complex, which are found in contexts that may allude to ancestor worship. Teteles was also linked to Cantona in its earliest stages, and this city possibly contributed to the abandonment of Teteles in the Classic period. This work seeks to contribute to the study of supraregional relationships between Sierra Norte of Puebla with other areas and how certain phenomena, such as mobility or long-distance migration, can be explained with archaeological data.

Dillian, Carolyn [169] see James, Sydney

Dillinger, Michael (Oklahoma Public Archaeology Network)

[299] *The Transition from a Mobile Hunter-Gatherer Lifeway to a More Sedentary Early Farming Lifeway at Las Chachalacas in Sonora, Mexico*

Las Chachalacas is a site located in the foothills of the Sierra Madre Occidental. This research examines the site's occupation from the Paleoindian period to the Early Agricultural period, contextualizing its utilization within the broader environmental and cultural framework of the adjacent Sonora Desert. Through a combination of lithic analysis and regional comparison, the study explores shifts in mobility patterns and subsistence strategies. The finding suggests that Las Chachalacas was intermittently occupied by people utilizing a residential mobility pattern who later adopted a more logistical mobility pattern and who gradually incorporated cultivation into established foraging subsistence strategies. This research contributes to ongoing debates about the timing and nature of the transition to farming in northern Mexico.

Dillon, R. [148] see Donta, Jaime

Dine, Harper (University of Exeter), and Stephen Houston (Brown University)

[35] *Seasonality in Ancestral Maya Art and Writing*

Ancestral Maya text and images reveal much about ecological ontology, especially between the years of AD 250 and 900. Evidence from glyphs and pictorial scenes depict interactions between people, plants, animals, and animate elements of their environmental surroundings. Nick Dunning has been at the forefront of understanding such matters through fieldwork of the highest quality. This paper honors him by targeting seasonality, an understudied cyclic rhythm detectable in available evidence. Seasonal cyclicity becomes apparent in the timing of significant events and cultural practices arising from close observation of plants, animals, insects, and celestial bodies. This texture of ecological observation suffused the passing of time in daily life, and is present in the pictorial and textual history that survives today.

Dine, Harper [161] see Herrera-Parra, E. Moisés

Dine, Harper [161] see Scherer, Andrew

Ding, Weiming [221] see Pacheco-Forés, Sofía

Dioneda, Justine (Northern Illinois University), Dana Bardolph-Carsen (Northern Illinois University), and Gregory Wilson (University of California)

[177] *Evaluating the Impacts of Warfare and Climate Variability on Plant Foodways at the Late Mississippian Ten*

Mile Creek Site in the Illinois Valley

The goal of this paper is to evaluate how instances of climate variability and intergroup violence such as warfare impact foodways through the lens of paleoethnobotany. This project will focus on the Ten Mile Creek site, a Late Mississippian palisaded village occupied ca. AD 1200–1300a in the northern portion of the Central Illinois River Valley (CIRV). We present patterns in paleoethnobotanical data, including indicators of agricultural production, foraging for wild plants, and nut collection, to consider the nature of the food quest for the site's Indigenous inhabitants during this tumultuous time in precolonial North America. We draw on patterns documented by Gregory Wilson, Amber VanDerwarker, and colleagues at other warfare-engaged sites in the CIRV, where site residents spent relatively less time away from the protection of villages and consumed more agricultural products than foraged plants or wild game compared to peace times. Comparisons to previously excavated datasets in the CIRV and neighboring regions will serve as a baseline for interpreting the Ten Mile Creek data.

DiPietro, Lyndsay [195] see Graf, Kelly

Disque, Candice (Statistical Research Inc.), and Danielle Soza

[247] *Altering Course: Rethinking Conventional Archaeological Terminologies in North America*

Over the last few decades, archaeological theory and practice in North America has shifted to reflect the ongoing collaboration efforts between archaeologists and Indigenous communities. While these efforts have proven to be a crucial shift for the relationships between archaeologists and Indigenous communities and the way archaeological research questions are thought about and presented on, the archaeological terminologies, such as the terms used to define the cultural entanglement brought about by the encroachment of Europeans into the Americas, have been slower to change. Generalized terms such as “prehistoric” and “historic” persist in both academic and compliance contexts regardless of the regional and subregional culture histories that have been adopted to reflect localized social shifts. While North American archaeologists have, broadly speaking, reached a consensus that Indigenous perspectives and involvement in archaeological research has been a necessary shift, the use of these broad terminologies persist and undermines Indigenous modes of memorializing and remembering their past, perpetuating Eurocentric notions of record keeping practices. This paper seeks to implore archaeologists to further collaborate with Indigenous partners to rethink these terminologies and examine how Indigenous collaboration must play a vital role in determining the vocabulary used when discussing histories of living communities.

Divinagracia, Anna Kristina, Saranggan Thavakumaran, Daniyal Alam (University of British Columbia), Aleska Alaica (University of British Columbia), and Lauren Pratt (UCLA)

[279] *Adapting to Andean Altitudes: Faunal Insights into Human-Animal-Environment Interactions in Peru's Ceja de Selva*

Situated within the eastern Andean highlands (or *ceja de selva*) of northern Peru, the Amazonas region's topography and ecology facilitated a complex past cultural development with respect to the environmental and societal adaptations employed by thriving communities. Recent excavations, lithic, and organic analyses suggest that communities from at least the Middle Holocene (ca. 5500 cal BP) occupied cave and rockshelter sites while exploiting diverse species, accounting for variable altitude and paleoclimatic factors. Yet understanding animal life histories and intersecting human-animal interactions in the region needs to be more fully explored through biomolecular lines of inquiry. To address this, we present the $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values from the stable isotope analyses conducted on 332 faunal remains collected from six sites in the valleys of Leymebamba (Amazonas Province) and Uchucmarca (La Libertad Province). We employ GIS mapping techniques to more closely examine spatial relationships between these sites. This poster seeks to address acquisition strategies and foodways of the early communities of the eastern cloud forest to elucidate a more comprehensive picture of human-environment dynamics.

Dixon, Mary (Chronicle Heritage)

[49] *Henry Long: Site Reanalysis and Carbon Dating*

The Henry Long site, located in western New York, is considered unique based on its size, its features, and its location. Originally excavated by Marine E White in the 1970s, Henry Long was thought not to have been

occupied for an extended amount of time, based in large part on the presence of a single longhouse. However, Henry Long has a palisade encompassing the entire site, a feature generally not found at smaller sites, as there would be no need for extensive protection for a short-term occupied site. Based on 14C dates, it can be inferred this site was occupied for brief amounts of time during two discrete periods. This is an unusual attribute since short-term occupied sites are not reused. Henry Long's location near larger sites suggests that it was used as an in-between camp to move from one large village to the next. Using carbon dating, core analysis, and survey work, new inferences are made about the occupation and significance of the Henry Long site.

Dixon-Hundredmark, Chris (Bellevue College), and Cynthia Van Gilder (St. Mary's College of California)

[48] *Invitations to Archaeological Thinking: Introductory Discussions and Activities to Foster Curiosity and Scientific Literacy*

Introductory archaeology classes offer distinct opportunities to dispel misconceptions about the field and engage students in the scientific study of the past. Opening course discussions and activities set the tone for the term and provide accessible entry points into archaeological thinking, research processes, and the importance of evidence-based interpretation. Thoughtfully designed introductory assignments scaffold conceptual frameworks of topics such as middle-range theory, typological sequencing, ethical guidelines, seriation, and more. This poster presents selected examples of introductory activities designed to pique students' curiosity and engagement with the class material, regardless of course modality. Ultimately, initial exercises are not only about learning archaeology—they are also about creatively inspiring informed, critical thinking about the processes and relevance of archaeology.

Dixon-Hundredmark, Chris [339] see Van Gilder, Cynthia

Dixon-Renoe, Susan [158] see Wolverton, Steve

Dodd, Walter (California State University, Fresno)

[300] *Indigenous Utilization of Timber in the Sierra Madre: Modern Analogs to Past Tree-Harvesting Behaviors in the Greater Southwest*

In the early 1980s, I recorded several episodes of wood procurement by Wari'hó farmers in the steep forest terrain of western Chihuahua, Mexico. These entailed the felling, processing, transport, and piecing together of gathered components into built structures. Quantitative data are presented on the time-motion sequence of activity, distance to source materials, tree taxa selected, size and weight of logs carried back to the residence, and areal extent of refuse scatters left behind. Insights are provided about the strategic planning and contingent thought that guided each harvest event. The research raises interesting comparative questions about the organization of timbering in general.

Dodds, Tricia [167] see Delsescaux, Jeffrey

Doering, Briana (University of Wyoming), Olivia Pendas (University of Wyoming), and Jamie McFarlin (University of Wyoming)

[313] *Good Old Dirt: Recovering Fatty Acid Methyl Esters from Curated Central Alaskan Hearth Sediments*

Central Alaskan archaeologists have long recognized the research value of cooking feature fills and hearth sediments. The University of Alaska Museum of the North has curated gallons of sediments for over 50 years so that future researchers could apply new techniques in their analysis. Here, we discuss the potential to extract and analyze fatty acid methyl esters from sediments that have been stored in a variety of materials (plastic, tin foil, glass) for varying lengths of time (months to decades). We demonstrate that even sediments stored for long periods of time in less than optimal containers can yield FAMES suitable for isotopic analysis and dietary reconstruction, suggesting that researchers in other areas should consider FAMES in legacy sediments from museums.

Doering, Briana [114] see Bossler, Natalie

Doering, Briana [313] see Campos-Hernandez, Cinthia

Doering, Briana [313] see Fouche, Jodi
 Doering, Briana [313] see Purifoy, Haley

Doershuk, John [52] see Jones, Bradford

Dogandžic, Tamara [85] see Abdolazadeh, Aylar

Doherty, Brenda [97] see Bellomia, Valeria

Doherty, Caitlin (Center for the Study of the First Americans, Texas A&M University), Jon Lohse (Terracon Consultants, and Gault School of Archaeological Research), and Ellen O'Connell

[41] *Assessing Terminal Pleistocene Fishtail Biface Variability from the Perspective of Belize, Central America*
 Fishtail bifaces, sometimes also called Fell points, are emblematic of the Terminal Pleistocene in South America, and are believed to represent much of the peopling process during the Younger Dryas. However, evidence exists for the production of these forms as far north as Belize, Central America, indicating a far greater range for what might be considered a Fishtail culture area. Enormous variability exists across Fishtail assemblages, not only in terms of blade morphology but also in the stem and shoulders; this is especially true in Central America where it can be challenging to discern Fishtail bifaces from the so-called Waisted Fluted forms that are present here. This study examines previously unreported specimens from Belize and compares them morphologically and technologically to previously published Fishtail specimens from South America. Our goal is to identify meaningful variation within the Fishtail “type” that can help archaeologists better understanding the peopling process, especially where Fishtail and Clovis technocomplexes may have merged, overlapped, and/or interacted along the Central American land bridge.

Doherty, Caitlin [180] see Grote, Willow
 Doherty, Caitlin [41] see Lohse, Jon
 Doherty, Caitlin [180] see O'Connell, Ellen
 Doherty, Caitlin [180] see Williams, Lindsey

Dolmas, Lewis (University of Oklahoma)

[318] *More than the Collection: A Case Study on the Benefits of Archaeologist/Collector Collaboration beyond Just the Artifacts*

In this paper, I argue that the titles we as archaeologists place on our avocational partners shape the way we view our collaborations and have the potential to constrain or to broaden what can come of them. Throughout the long process of constructing my master's thesis, I worked closely with a man by the name of Roger Hamilton. Though Roger does have a collection, he prefers not to be called a *collector*. Roger views himself as a *researcher*. The Society for American Archaeology might see him as *responsible and responsive Steward (RRS)*. Hobby clubs like the Oklahoma Anthropological Society might label him as an *avocational archaeologist*. All these titles have different connotations and suggest different things that Roger brings to the table as a collaborator on archaeological projects. Using my geoarchaeological research in the Arbuckle Mountains of Oklahoma as a case study, I examine all the different kinds of knowledge, skills, and resources Roger brought to the project and the ways titles like “collector,” “researcher,” “steward,” or “avocationalist” reflect, or fall short of reflecting, his invaluable contributions.

Dombrosky, Jonathan (Crow Canyon Archaeological Center), and Weronika Tomczyk (Dartmouth College)

[158] *The Reach of Applied Zooarchaeology: A Citation-Based Tribute to Lee Lyman*

Lee Lyman's approach to research—rigorous, critical, and reflexive—serves as a model of mentorship for many zooarchaeologists, including those who never worked with him directly. His scholarship has also helped define applied zooarchaeology as a field of study, highlighting the relevance of zooarchaeology for ecology, conservation biology, and wildlife management. Inspired by this legacy, we draw from Lyman's “research playbook” to assess how applied zooarchaeological research has been used and understood by its intended

interdisciplinary audience. Using citation analysis, we trace the reach of this literature across ecological and conservation-focused journals. We then apply computational text analysis to the most-cited case studies to identify recurring themes, strategies, and barriers to uptake. In doing so, we hope to offer a practical guide for emerging scholars in applied zooarchaeology—one that builds on Lyman's legacy of mentorship through clarity, usefulness, and intellectual generosity.

Dombrosky, Jonathan [166] see Bellorado, Benjamin

Dombrosky, Jonathan [279] see Betts, Chelsea

Dombrosky, Jonathan [314] see Evans, Lydia

Dombrosky, Jonathan [314] see Sinensky, R. J.

Domeischel, Jenna (US Army Corps of Engineers), and Dawn Marie Alapisco (Oregon State University Office of Institutional Diversity)

[184] *Can 36 CFR Part 79 Play a Role in Repatriation? An Analysis of Potential Opportunities and Limitations*

The revised regulations have now been in effect for two years, guiding the repatriation of Native American Ancestors and their belongings and ensuring that museums and federal agencies make progress in their compliance work. In recent years, extra-NAGPRA repatriation efforts, such as international repatriation, have also been underway, returning individuals and cultural heritage from all over the world to their connected communities. In the United States, a process has not yet been established to return non-Native individuals to their communities, a process that has been intermittently discussed by both scholars and legislators (such as a proposed AAGPRA); however, a regulation was promulgated in 2022 with unforeseen and long-reaching effects that may prevent this from taking place for any individuals located in federal collections. The disposition update to 36 CFR Part 79, which created the long-awaited process for removing items from federal collections, excludes human remains, leaving open the question of whether there is another return path available at this time. Through the lens of a non-federal museum, Oregon State University, this question is explored. The authors also provide a textual analysis of the relevant areas of the regulations and a discussion of their long-term implications in the broader repatriation milieu.

Domenici, Davide

[260] *The Face of Venus as Morningstar: Provenance and Provenience of a Late Postclassic Nahua Mosaic at the National Museum of Denmark*

Archival research identified a group of artifacts—primarily mosaic-encrusted wooden sculptures and painted manuscripts—brought to Italy by the Dominican friar Domingo de Betanzos in 1531–1533. Stylistic and iconographic analyses of the mosaics revealed strong affinities with the Borgia Group manuscripts, suggesting not only a common provenance, or collection history, but also a shared provenience. To date, the attribution of their ultimate origin to the Valley of Puebla-Tlaxcala has rested largely on the presumed creation of the Borgia Group manuscripts in that area. This paper examines the collection history, style, and iconography of a rarely discussed mosaic-encrusted sculpture in the National Museum of Denmark, bought from an Italian collection in the nineteenth century, which depicts a human face emerging from the jaws of a serpentine creature. Despite its poor state of preservation, certain diagnostic traits identify the sculpture as a representation of Tlahuizcalpantecuhtli—Venus as Morningstar—whose style closely parallels both codex imagery and the deity's depiction on the altar of Ocotelulco (Tlaxcala, Mexico). In this way, the polychrome mosaics brought to Italy by Domingo de Betanzos can be directly linked to the Eastern Nahua territory, offering new insights into the religious practices associated with the local cult of Quetzalcoatl.

Domenici, Davide [97] see Bellomia, Valeria

Domenici, Davide [257] see Buti, David

Domic, Alejandra (Pennsylvania State University), Maria Bruno (University of Nevada, Reno), José Capriles (Pennsylvania State University), and Christine Hastorf (University of California, Berkeley)

[44] *New Microbotanical Evidence of Plant Use in the Taraco Peninsula, Southern Basin of Lake Titicaca, during the Early Formative*

The Andes are a major center for domestication, but we still know very little about the origins of early farming in the region. The Taraco Peninsula, located in the southern basin of Lake Titicaca of Bolivia, has revealed evidence of early agriculture and domestication of quinoa in the region, dating around 1500 BCE. Previous research indicates that the inhabitants practiced low-intensity quinoa farming, but our understanding of cultivation of other crops is limited due to poor preservation. Here, we conducted a microbotanical analysis (starch grains, phytoliths, and pollen grains) on artifacts, including ground stones, lithics, and ceramics, and soil samples recovered from the Taraco Peninsula. The analysis provides evidence for the early use of potato (*Solanum*) and quinoa (*Chenopodium*) in this region. Maize (*Zea mays* ssp. *mays*) and a legume-type (Fabaceae) microremains were also found. These findings show the value of microbotanical analysis as a tool for investigating the domestication of cultigens. Finally, the evidence suggests that early farmers in the region utilized a broad range of wild and domesticated plants, including geophytes, pseudocereals, maize, and legumes.

Domic, Alejandra [306] see Hastorf, Christine

Donahue, John (Harford Community College), Jennifer Zovar (Whatcom Community College), Isabel Scarborough (Parkland College), and Ian Ray (University of Denver)

[149] *Tracing the Development of a New Archaeology OER Textbook*

Traces: An Open Invitation to Archaeology is the third completely peer-reviewed and copy-edited OER introductory textbook produced by the Society for Anthropology in Community Colleges, a subsection of the American Anthropological Association. In this presentation, we explore the process and challenges involved in editing this text. This presentation examines the project from its early planning stages, including what chapters and subject matter to include, as well as the hurdles introduced during the COVID pandemic, searches for funding, and other unforeseen circumstances. The presentation concludes with a discussion of what the editorial team has included in the text and steps going forward for the second edition.

Dong, Yu [258] see Wu, Rubi

Donta, Jaime (POWER Engineers), and R. Dillon (VT Division of Historic Preservation)

[148] *Seeking Significance and Finding Communities among Vermont's Historic Farmsteads*

The current tone in NHPA Section 106 review allows for a narrower determination of site significance than has been employed previously. Deeming a historic farmstead site significant in the Northeast can be hindered additionally by the sheer number of such sites, as well as the perception that the history connected to them is well understood. There are over 1,200 recorded sites classified as farmsteads in the Vermont Division for Historic Preservation database. Spatial analysis of these data with the aim of seeking communities—communities of practice, topographically isolated clusters, ethnically connected localities, etc.—can be employed to delve into questions of significance of farmstead sites, which are relatively common and generally presumed to have similar levels of integrity and research potential. Methodological considerations for gaining the most information from these sites within a cultural resource management framework will also be explored.

Doperalski, Mark [216] see Garcia-Putnam, Alex

Doppke, Ella (Fort St. Joseph Archaeological Project), and Erika Hartley (Western Michigan University)

[280] *Wooden Posts and Structural Stones: Interpreting the Architectural Remains of Structure 6*

Archaeological excavation at Fort St. Joseph, an eighteenth-century mission, garrison, and trading post, continues to offer insights into the daily life of those living in the western Great Lakes Region, specifically in regard to adornment and dress, architecture, foodways, religion, and trade. This research has resulted in the projected layout of four buildings at the site where fur traders and their families resided in addition to a domestic and workshop complex for the resident blacksmith. Further excavation at the most recently identified building, Structure 6, has provided new insights on its construction and layout, prompting a reexamination of the architectural remains found near the building's associated stone fireplace feature. As no

detailed map of the fort is known to exist, each new discovery, such as the recently recovered wooden posts and associated structural stones, allows us to learn more about the construction styles, designs, and functions of buildings at the site as well as the people who once lived there.

Dore, Christopher (Heritage Business International)

[16] *Introduction*

Introduction.

Dorison, Antoine (Newcastle University), Sam Turner (Newcastle University), Tim Kinnaird (University of St Andrews), Gregory Pereira (CNRS), and José Luis Punzo Díaz (Instituto Nacional de Antropología e Historia)

[178] *Using Lidar and OSL Profiling-and-Dating to Address the Evolution of Anthropized Landscapes in the Trans-Mexican Volcanic Belt: The Cases of Zacapu and Tzintzuntzan*

The Trans-Mexican Volcanic Belt provided a fertile environment for the development of major agrarian societies, like the Mexicas or Tarascans. It is commonly accepted that these were responsible for shaping the agricultural landscapes that astonished the Conquistadors, and whose reality is now demonstrated by lidar technology, which reveals thousands of agrarian features around the settlements. However, landscapes are dynamic entities difficult to address. Dating their components, like terraces, where datable elements are rare and stratigraphies are complex, is particularly challenging. This, however, is fundamental to discussing their establishment and evolution in relation to the societies that inhabited them. Optically stimulated luminescence (OSL) has proven effective in addressing this issue but has been discarded in the volcanic highlands of Mexico, where conditions for its use are not optimal (low radioactivity, few datable minerals). Taking advantage of recent advances in mapping and OSL, we tested the novel methodology of OSL Profiling-and-Dating to assess its efficiency in two important areas of Western Mexico, Zacapu and Tzintzuntzan. We obtained relevant dates allowing us to place archaeological sites within the long-term history of landscapes. These results raise questions about the role of elites in shaping agricultural landscapes or the prehispanic impact on their current state.

Dorrington, Coren [181] see Godhardt, Ava

Doubles, Catherine (University of Illinois Urbana-Champaign), Brandon Ritchison (University of Illinois Urbana-Champaign), and Maureen Meyers (New South Associates)

[212] *The Cumberland Gap Frontier: How Migration Studies and Radiocarbon Dating Informs Social Networks across the Appalachian Mountains during the Fourteenth through Sixteenth Centuries*

The Cumberland Gap connects regions and peoples on either side of the Appalachian Mountains, a boundary that shapes not only modern state lines but also how archaeologists describe and interact with cultural frontiers in the past. Two sites at the center of this work are Carter Robinson and Ely, both single-mound Mississippian sites in Lee County, Virginia. These sites represent two disparate waves of migration and habitation across the Appalachian Mountains. Previous work has discussed the connections these two sites have with broader migrations and economic and political changes along the eastern frontier of the Mississippian cultural world. However, they also represent a western frontier with communities from the coast and the Chesapeake region in Virginia. In this paper we present our most recent work involving regional chronologies and social network connections about the communities moving through and living in the Cumberland Gap using Carter Robinson and Ely as case studies. Preliminary intra- and inter-site relations are considered at both sites, addressing potential changes over time.

Downey, Sean (Ohio State University)

[160] *An Adaptive Self-Organization Framework for Explaining the Social and Ecological Dynamics of Swidden Agriculture*

Indigenous societies across the tropics manage forested landscapes through swidden (aka “slash-and-burn”) agriculture—a customary practice that has been studied for centuries. However, insights from complexity science have yet to be integrated into a coherent framework for understanding this enduring coupled human-natural system. Drawing on nearly 20 years of fieldwork in two Q’eqchi’ Maya villages in southern Belize, this

presentation outlines how household-level decisions, social norms, and customary land-use practices drive swidden disturbance patterns. I present a theoretical framework based in complex systems science, statistical results from a global remote sensing analysis, and a mathematical model that identifies power-law distributions and spatial correlations as common signatures of adaptive self-organization. These findings suggest that adaptive self-organization is a general property of swidden agriculture, with broad implications for interpreting archaeological landscapes and for understanding how Indigenous land management has shaped sustainable and unsustainable practices in socioecological systems throughout human history.

Doyle, Anna (Argonne National Laboratory), Jamie Lewis (Argonne National Laboratory), Victoria Harvey (Department of the Air Force), and Curtis Alcantar (Tejon Indian Tribe)

[184] *Ethical Stewardship in Practice: Osteology, Consultation, and Care for Ancestors at Edwards Air Force Base*
Situating among the dunes and playas of the Western Mojave Desert, Edwards Air Force Base with support from Argonne National Laboratory conducted a survey validating heterogeneous references within legacy records of “cremations” and “possible human remains” for fragmentary, heat-altered bone. Such variability impedes accurate NAGPRA inventories and complicates care decisions. In partnership with the Yuhaaviatam of San Manuel Nation and the Tejon Indian Tribe, a consultation-led osteological framework that centers ethical stewardship while improving accuracy and transparency was developed. This approach integrates (1) reconciliation of records to resolve conflicting references, (2) co-developed terminology and decision criteria guided by Tribal perspectives, (3) transparent confidence assignments with plain-language rationales, and (4) targeted, minimally invasive verification—both in the field and repository. Crucially, Tribal partners participated beyond consultation: joint field days and repository review sessions incorporated Tribal perspectives into real-time assessments of fragmentary materials to distinguish ancestors and agree on care pathways. Preliminary outcomes include improved NAGPRA inventories, standardized language and documentation, improved inter-rater consistency, and shared SOPs that support respectful repatriation. Framing osteology as care, co-practiced with Tribal partners, strengthens trust and data integrity and is adaptable to adjacent regulatory and stewardship contexts while remaining grounded within NAGPRA’s frameworks.

Doyle, Anna [218] see Smith, Catherine

Dragun, Avi [257] see Armitage, Ruth Ann

Drain, Kailyn

[101] *Rediscovering the Brady Artifact Site: A Glimpse into Nebraska’s Early Archaic Period*

From 1938 to 1942, during the construction of the Jeffrey Reservoir supply canal near Brady, Nebraska, a significant collection of artifacts were unearthed, including lithic flakes/tools, bison bones, charcoal/fire pits, and human remains. Despite initial interest, the site remained largely unexamined in an archaeological context for nearly a century. Recent analysis of the artifacts suggests use as a bison hunting ground with carbon dating placing it in the Early Archaic period. Faunal analysis, lithic sourcing, and predictive modeling suggests the site to be larger than originally excavated and containing important information on Great Plains subsistence strategies. The Brady Artifact site presents an opportunity to expand the prehistoric record of Nebraska and better understand human activity during the Early Archaic period. Further research will provide insight into the lives of early inhabitants and their adaptation to the region, while also acting as a case study in how to better utilize legacy data in the field of archaeology.

Drake, Eric [350] see Kooiman, Susan

Drake, Lee [200] see Hart, Isaac

Drake, Stacy [282] see Slovak, Nicole

Dresser-Kluchman, Elizabeth (University of California, Berkeley)

[47] *Reconstituting Environment and Landscape in Gallina, New Mexico*

The Gallina region of the North American Southwest, in the hills of northern New Mexico, has been studied

for more than a century, yielding a large body of formal and informal archaeological reporting and impressions. Over the last several decades, characterizations of the people who lived in the Gallina region between about 1100 and 1300 CE have shifted from assumptions of social and environmental marginalization toward an understanding of intentionality behind a series of iconoclastic Southwest choices in homes, objects, and, notably, the location of Gallina homes and lives in hilly, woodland, and forested areas. During this time, explicit study of plant and animal relations has been sporadic and limited. Drawing on archival sources, flotation samples, and previously published work, this paper brings multiple datasets into conversation with the implicit and explicit characterization of Gallina places in archaeological work and the archaeological imagination. From this framing, I take the Gallina landscape as a multi-inhabitant, reciprocal, and productive one and aim to recombine separate ecological threads beyond the bounds of assumed, often implicit, and archaeologically enforced limitations.

Dresser-Kluchman, Elizabeth [219] see Tripcevich, Nico

Drew, Brooke [216] see Wilson, Jeremy

Drexler, Carl (Arkansas Archeological Survey)

[155] *Unraveling Nakuukuwidish: Finding Patterns in a Caddo and Settler Saltmaking Site*

Nakuukuwidish is a Caddo and Settler saltmaking site in the Rolling Fork River Valley of western Arkansas. The Arkansas Archeological Survey and Arkansas Archeological Society began excavations there in 1984 and in the intervening years held numerous public training program digs at the site, recovering immense volumes of material culture and identifying hundreds of features. With large-scale excavations now complete, we turn to trying to make sense of this mass of data, and this paper focuses on teasing out patterning in the features identified to date and the growing database of radiocarbon dates analyzed for the site. The timing, practice, and import of saltmaking varied greatly across Caddo history, and early results from the research at Nakuukuwidish add to the complexity of this story.

Driggers, Kristopher (San Antonio Museum of Art)

[260] *Recontextualizations: The Ancient Americas at San Antonio Museum of Art*

Among collections held by US art museums, the Ancient American collection at the San Antonio Museum of Art is perhaps unique in that it is presently curated in adjacency with the museum's superlative collection of Popular Art, such that ancient American objects are shown alongside artworks created by Indigenous artists of the nineteenth- and twentieth-century Americas. Over the collection's long history, however, it has been contextualized in a number of different frameworks, adapting as the museum evolved from its early collecting to today. This presentation offers a narrative of nearly a century of exhibition and collecting practices at the San Antonio Museum of Art and its parent organizations, beginning with the earliest acquisitions of circa 1928. It highlights the ways in which the development of the museum's collection have responded to larger trends in the field, while also noting the specificity of the museum's history in light of its South Texas context.

Drucker, Dorothée [180] see Milton, Emily

Druggan, Patrick

[85] *Chronometric Evidence Does Not Support Cahokia's "Big Bang"*

Cahokia was the largest precontact Indigenous population center north of Mexico, and its development and dissolution are tied in myriad ways to numerous communities across the American Southeast and Midwest. Most current scholarship emphasizes a "Big Bang," which models the emergence of Cahokia as a profound and rapid event at ca. AD 1050 characterized by dramatic demographic expansion, migration, unprecedented monumental construction, and residential reorganization that speaks to the emergence of new social arrangements and a centralization of political authority. This model, however, is underpinned by materially based chronologies. In this paper, I synthesize the existing regional radiocarbon data, individually assess the reliability of dates, and provide revised ceramic chronologies within a contemporary Bayesian framework. I leverage this to produce new demographic estimates and present these data alongside models of monumental construction in order to evaluate the pace of demographic expansion and the timing of social change as

materialized in construction events. Results suggest that the demographic expansion of Cahokia was more gradual and later in time than current models propose, and the political history of Cahokia materialized in monumental construction is far more dynamic.

Duan, Qimeng (Washington University in St. Louis)

[354] *Chenopods and Barnyard Grasses as Potential Neglected Crops in Ancient China*

Historical texts and archaeological evidence suggest that chenopods and barnyard grasses have a long history of use in China, whereas their potential cultivation history remains largely undocumented from a biological perspective. Recent studies have begun to recognize their value as crops, while largely lacking systematic morphological analysis. Shifting focus from traditionally studied staple crops such as millets and rice to weedy plants, this study integrates historical texts and archaeological records as well as drawing insights from parallel research. I propose viable methods for documenting morphological changes resulting from human-mediated selection. Ultimately, this study aims to highlight the significance of neglected crops and their potential contributions to food security and agrobiodiversity.

Dudgeon, John [56] see Sutherland, Rachel

Dufresne, Sydney (Salve Regina University)

[178] *Revolution in Rhode Island*

This research applies archaeological geophysics to Revolutionary War–era sites in Rhode Island, with the objective of identifying subsurface features that inform understandings of conflict, occupation, and preservation. Surveys employed ground-penetrating radar, electrical resistivity, magnetometry, and GPS to detect buried anomalies, distinguishing between colonial period and later modifications. Fieldwork at Conanicut Battery, the Windmill Hill Historic District, and Vernon House on Aquidneck Island demonstrates the effectiveness of geophysical prospection for reconstructing eighteenth-century military and domestic landscapes. These results contribute to the expanding research of archaeological studies on Revolutionary New England and highlight the value of noninvasive methods for guiding future excavation and interpretation.

Duke, Daron (Far Western Anthropological Research Group), D Craig Young (Far Western Anthropological Research Group), and Anya Kitterman (Hill AFB)

[74] *Pleistocene Footprints on the Great Salt Lake Desert: Age, Context, and Subsurface Sensitivity at the Utah Test and Training Range*

Recently discovered human footprints at two sites on the Great Salt Lake Desert record adults and children moving through the shallow waters of an ancient wetland distributary. This landscape, known as the Old River Bed delta (ORBD), was once part of a vast marshland that disappeared in the Early Holocene, leaving a barren playa now serving as the US Air Force's Utah Test and Training Range. Radiocarbon dating of organic material from footprint infills places the tracks in the terminal Pleistocene, ca. 12,600–11,900 calibrated years ago, contemporaneous with a Haskett archaeological record. We detail the dated material, contextualize the findings within the ORBD, and present a geoarchaeological model that defines areas of subsurface potential for additional footprints and related archaeological material. The project highlights military stewardship that protects significant cultural resources while supporting mission planning and readiness.

Duke, Daron [348] see Henrikson, L.

Duke, Daron [319] see Knell, Edward

Duke, Daron [319] see Martin, Erik

Duke, Guy [267] see Juengst, Sara

Dumaine, Danielle [114] see Fulton, Kara

Dumitru, Ioana [357] see Alders, Wolfgang

Dumouchel, Laurence [356] see Pobiner, Briana

Duncan, Neil (University of Central Florida)

[44] *Reconstructing Indigenous Foodways on Florida's East Coast through History, Paleoethnobotany, and Microbotanical Analysis*

Plant microremains studies represent an underutilized resource in the southeastern United States and particularly in Florida. This gap represents significant opportunities for plant microremains research that can illuminate aspects of diet, subsistence strategies, and trade networks for which we have limited archaeological evidence. The challenge is compounded by sparse ethnohistoric documentation of Indigenous practices involving plants during the early contact period and the absence of direct cultural continuity on the central coast, where original populations were displaced or eliminated through European colonization. This presentation draws on fragmentary historical accounts of plant use along with more modern ethnobotanical data from descendants of northern Indigenous groups (Seminole and Miccosukee) who relocated to the area following colonization. These combined sources inform the interpretation and identification of starch grains recovered from pottery residue dating to late precolonial archaeological contexts at Cape Canaveral, Florida. Investigations from two sites confirm the use of starch sources, *Zamia* and *Smilax*, along with other foods such as maize, bean, and squash, associated with an archaeological “hunter-gatherer” culture. The application of archaeological plant microremains analysis offer transformative potential for reconstructing foodways in Florida.

Duncan, Neil [44] see Kiernicki, Lydia

Duncan, Neil [44] see Sponholtz, Julia

Dungan, Katherine (Arizona State Museum)

[34] *On the Road Again: The History and Legacy of Arizona Highway Salvage Archaeology*

From the mid-1950s through the 1970s, archaeologists associated with the Arizona State Museum and Museum of Northern Arizona carried out scores of archaeological projects in advance of road construction under the umbrella of “Highway Salvage” archaeology. These mid-twentieth-century decades saw immense change in archaeology both as a profession and as an intellectual undertaking. Particularly relevantly to the theme of this session, this era saw the growth of a view of archaeological sites in the United States as public heritage and archaeological research as a public benefit, culminating in the passage of legislation that underlies cultural resource management archaeology today. This paper explores the social context of Arizona’s Highway Salvage Program, including the role of state government as a stakeholder in the name of the “public,” and the program’s legacy in the form of policy, archaeological practice, and knowledge, and the collections curated by the Arizona State Museum.

Dunham, Sean [350] see Kooiman, Susan

Dunn, Regan [271] see Gusick, Amy

Dunning, Katherine [302] see Tykot, Robert

Dunning, Nicholas (University of Cincinnati)

[338] *Changing Perspectives on Puuc Region Aguadas*

John Lloyd Stephens was the first person to call attention in print to the curious nature of *aguadas* in the Puuc region of the Maya Lowlands in the 1840s. While appearing as natural ponds, these features showed strong evidence of being cultural creations. In the twenty-first century, Bill Ringle investigated the intriguing mix of naturalistic and anthropogenic elements in Puuc *aguadas* using an innovative combination of lidar imagery analysis and ground-based study. This paper looks at new and old data available on Puuc *aguadas* including their origins and use history highlighting Bill’s invaluable contributions. Comparisons are also made between these ancient reservoirs in the Puuc and other parts of the Elevated Interior Region of the Maya Lowlands. The evolving forms of water capture and storage demonstrate the critical role of these technologies in the human settlement of this seasonally water-starved region.

Dupey, Elodie (Universidad Nacional Autónoma de México)**[97]** *Textiles and Codices in Prehispanic Nahua Culture*

Given that textiles from prehispanic Mesoamerica are rarely preserved, we must extend beyond the meager archaeological evidence to achieve deeper understandings of their role and meaning in these cultures. For example, historians, art historians, and ethnologists have made important contributions to our understanding of the material, formal, and symbolic aspects of textiles. These studies have focused on other artifacts representing textiles in various contexts, colonial texts and images that reveal their aspects and uses, and analogies with the practices of current Indigenous societies. Rather than focusing on archaeological textiles, this paper will examine prehispanic artworks and colonial texts to reveal the convergences that may have existed between textiles and codices in Postclassic Nahua societies. Indeed, while it is not common for textiles and codices to be studied together, they do share significant features, especially in terms of their materiality, but also considering what we know about their use in ritual practices. This approach will include an initial reflection on the boundaries as well as the permeability between the categories of textile and book in prehispanic Nahua culture.

Dupey, Elodie [257] see Buti, David

Dupuy, Paula [315] see Berner, Jack

Dupuy, Paula [315] see Tashmanbetova, Zhuldyz

Duran Chacon, Sergio (UMSA)**[40]** *From Natural Landscapes to Archaeological Memoryscapes: New Perspectives on Hunter-Gatherer Occupation in the Huaycho River Basin, Puerto Acosta (Lake Titicaca)*

Lake Titicaca and its surroundings region constitute a key region for understanding the arrival, movement, and settlement of nomadic hunter-gatherer groups in the south-central Andes. However, systematic archaeological research remains limited—particularly along the eastern slopes of the basin—hindering our ability to reconstruct a comprehensive picture of this crucial period, which laid the foundations for the later development of sedentary and complex societies. The PAYA (2017–2020) and ALTI-plano (2023–2026) projects, conducted in the Puerto Acosta area, have produced a systematic archaeological record of surface contexts, leading to the identification of multiple occupations associated with a diverse lithic industry. The preliminary analysis of these sites sheds light on the cultural dynamism between ca. 9000 and 2000 BC, revealing patterns of mobility and early human occupation. These findings offer new perspectives on mobility and subsistence strategies during the Preceramic period and invite us to understand the natural landscape as a lived space imbued with memory, emphasizing the ongoing interactions between humans and their environment in the highlands of the Andes.

Durant, Phoebe, Mollie Kauderer (Peer), Kolbe Anderson, and Asli Erem (Peer)**[269]** *Celtic Presence in the Vardar (Axios) Valley: Archaeological Insights from Demir Kapija Gorge*

This paper will examine the Celts, Indo-European peoples, presence through the Vardar (Axios) Valley in Northern Macedonia. We focus on findings from recent excavations at Markova Kula, a Hellenistic fortress located in Demir Kapija, as well as archaeological and historic evidence from the surrounding region. Iron Gates is the location of a constricted valley of the Vardar River. This made it a strategic military location over several millennia. At least seven known fortresses, including Markova Kula, are located throughout Demir Kapija, spanning multiple time frames. Research and archaeological evidence suggest that in the early third century BCE, the fortress at Markova Kula was in conflict during the Celtic raids in the Vardar Valley. Indications from other sites in North Macedonia place the Celts in the region around 279 BCE. We will detail recent excavations at Markova Kula and discuss findings highlighting the Celtic presence at the site. Analyzing evidence from the surrounding Vardar Valley will piece together the cross-cultural interaction between ancient Macedonians and Celts throughout the region.

Durrani, Nadia**[322]** *Communicating Archaeology with Brian Fagan*

Brian Fagan was renowned for his ability to communicate archaeology. He was the author of over 50 popular

books and a portfolio of textbooks that have introduced hundreds of thousands of students to the subject. But how did he do it? In this session, his long-term coauthor Nadia Durrani reflects on some of Brian's greatest lessons and rules for communicating archaeology to wide audiences. Having written over 20 books with Brian, including the award-winning *Climate Chaos: Lessons in Survival from our Ancestors*, Nadia will zero in on how Brian approached the craft of writing and share hands-on insights to getting published.

Duru, Gunes [347] see Munro, Natalie

Dussubieux, Laure (Field Museum of Natural History)

[162] *Glass Bead Compositions in East and South Africa Reassessed in the Light of the Most Recent Discoveries in Glass Research*

Starting around the seventh century AD, glass beads are found at many archaeological sites on the east coast of Africa as well as in the southern part of the continent. These beads have been investigated using various techniques to mostly determine their elemental compositions and sometimes their isotopic compositions, with the goal to better understand their circulation. After two decades of intense glass research around the Indian Ocean, a number of new glass types and subtypes have been discovered based on their elemental compositions, and more precise hypotheses about their place of origin have been proposed, based on their isotopic compositions. A result of this investigation is that the picture offered by the study of glass beads in East and South Africa has evolved, and interpretations published years ago need to be reassessed and updated. Additionally, the amount of data concerning the compositions of glass beads in these regions has increased significantly, making it possible to more precisely re-create ancient exchange networks.

Dussubieux, Laure [35] see Cook, Duncan

Dussubieux, Laure [162] see de Barros, Philip

Dussubieux, Laure [162] see Fleisher, Jeffrey

Dussubieux, Laure [162] see Kenoyer, Jonathan

Dussubieux, Laure [162] see Mtetwa, Ezekia

Dussubieux, Laure [162] see Ogundiran, Akin

Dussubieux, Laure [162] see Then-Obluska, Joanna

Duwe, Samuel (University of Oklahoma)

[194] *Colonization at the Speed of Light: The Heliograph and the Geronimo Campaign of 1886*

This poster specifically focuses on one brief but dramatic event: the Geronimo Campaign of 1886. Famously, General Nelson Miles deployed a network of heliographs (sun-mirror signaling via Morse code), a technology imported from Great Britain who developed it in the crucible of colonial endeavors in Pakistan. Twenty-four nodes were established on mountains across southern Arizona and New Mexico. From April to August the system yielded over 2,000 heliogram messages and was hailed by Miles and contemporaries as a significant factor in the eventual capture of Geronimo in September. These claims have been disputed by later historians who question the effectiveness of the heliograph network at aiding in military operations. A primary unanswered research question for historians is the effectiveness of the heliograph network in ending significant Indigenous military resistance in the Southwest. An equally important topic includes how the Apache conceptualized, responded, and adapted to a network of surveillance and the cloud of colonial control. A first step to address these questions is to define the network as it operated in the summer of 1886. I present the results of geolocating heliograph stations and conducting GIS analyses, the baseline for future material and network analysis work.

Dwyer, Raquel

[258] *Paleoethnomedicine: Identifying Medicinal Plant Use through Macrofloral Remains*

Paleoethnobotany has often emphasized food plants, leaving other domains of plant use comparatively underexplored. Ethnomedicine, a long-established branch of ethnobotany, offers a valuable framework for addressing this gap. In this paper I argue for a "paleoethnomedicine" and introduce a methodology for testing medicinal plant use through macrofloral remains. The approach reconstructs a prehistoric pharmacology—culturally specific systems of plant-based healing—that can serve as an analytical tool for surveying medicinal

plant use across archaeological sites within defined cultures, regions, and time periods. Once reconstructed, these pharmacologies allow for site-level interpretation that considers both the availability of medicinal plants and their potential cultural applications. This produces a more holistic analysis of culturally deposited macrofloral remains and opens the possibility for reinterpretations of past plant use. By situating plant remains within the socio-dynamics of healing performances, paleoethnomedicine highlights how medicinal plants were woven into identities, practices, and relationships beyond subsistence. This methodology is demonstrated through a survey of 63 archaeological sites in central Sweden dating from 600 to 1200 CE, illustrating both its practical application and its broader potential for comparative research across cultures and time periods.

Dye, David (University of Memphis)

[38] *The Spirit Lodge at Spiro*

Spiro's ritual practitioners broke with past traditions when they created a medicine lodge housing other-than-human beings in the late fourteenth century. The Hero Twins are key deities among those placed in the lodge, based on carved wood figurines and masks, engraved shell imagery, and symbolic weaponry. The remaining figures and images in the tableau include other-than-human beings affiliated with the Twins based on Indigenous oral narratives. The spiritual congregation, when assembled in the Spirit Lodge, acted as sentient beings instrumental in controlling the weather, furthering cosmic renewal and promoting rebirth.

Earl, Dale

[157] *Shells and Subsistence: Harvesting Freshwater Invertebrates in Preceramic Belize*

Despite existing collections of small freshwater invertebrates recovered from sites throughout the Neotropics, their impact on subsistence strategies during the Late Pleistocene-Middle Holocene remains largely unstudied. This project uses quantitative analysis of the changes in relative abundance to investigate the timing of incorporation of invertebrates into the forager diet at the site of Saki Tzul in the Maya Mountains. The analysis of these faunal remains indicates that the inhabitants of Saki Tzul employed a strategy of procurement focused on small freshwater invertebrates, from the late Pleistocene to the Middle Holocene. These results necessitate a reevaluation of how freshwater invertebrates are ranked in studies of Neotropical foraging efficiency, which could meaningfully alter our understanding of Preceramic foraging practices.

Earley, Caitlin (Johns Hopkins University)

[92] *"Only Connect!": Touch and Tactility in Classic Maya Art*

The sweep of quetzal feathers; the butt of a spear; a toe or finger: all of these iconographic elements brush up against hieroglyphic texts on low relief Maya sculpture from the Classic period. These purposeful interactions build new meanings based on the interrelationships between text and image and a carefully invoked sense of touch. Building on observations made by Stuart, I look in this paper at touch as a design principle in Maya art, concentrating on a spectrum of Maya identities, from kings to captives to flesh-and-blood viewers who would have engaged with sculpture in the seventh and eighth centuries. I explore the ability of touch to emphasize, reveal, and even subvert messages conveyed by ancient scribes and sculptors. Combined, tactile interactions between hieroglyphs and imagery evince a fundamental relationality and emphasize the importance of considering touch as a vital communicative medium.

Eastman, Jane [208] see Riggs, Brett

Ebert, Claire [58] see Blastic, Anna

Ebert, Claire [326] see Densel, Allison

Ebert, Claire [36] see Ellis, Olivia

Ebert, Claire [263] see Hoggarth, Julie

Ebert, Claire [277] see Jensen, Matthew

Ebert, Claire [282] see Mink, Kirsten

Ebert, Claire [201] see Suarez, Nicholas

Eberts, Sophia [114] see Bossler, Natalie

Echauri, Ileana [161] see Lacoste Jeanson, Alizé

Eche Vega, Jorge Eduardo [100] see Peña, José

Echevarria Paulino, Lizardo Gonzalo

[16] *Quince años conociéndonos y reconociéndonos: Un trabajo de colaboración entre el Proyecto PIARA y nuestra comunidad de Hualcayán, Peru*

Somos la Comunidad Campesina de Huaylcayán, un pueblo agricultor quechua y españolhablaante ubicado en la sierra de Áncash, Perú. Fue en el año 2009 cuando llegó el proyecto de arqueología PIARA Perú para estudiar las antiguas ruinas que están dispersas por nuestras tierras. Al comienzo, la arqueología no era algo en lo que pensáramos mucho. Nuestra preocupación estaba más en sembrar y cuidar de nuestros animales. Antes de que llegara PIARA, ya sabíamos que nuestras tierras guardaban ruinas y tumbas con huesos y objetos que llamamos “huacos”, y que a veces venían personas de fuera buscando esas cosas para llevárselas. Pero después de varios años trabajando junto al equipo de PIARA, hemos empezado a mirar nuestras tierras y nuestra historia de otra manera. Las historias sobre nuestros orígenes —historias que se habían enterrado con el tiempo y con la conquista española hace siglos— ahora están empezando a aclararse. Además, PIARA no vino solo una vez y se fue. Regresan cada año, no solo para excavar, sino también para trabajar con nosotros en el diseño de festivales sobre nuestro patrimonio, apoyar en nuestras escuelas, e incluso traer campañas médicas. Por todo esto, PIARA se ha convertido en un socio importante en nuestras vidas. Sin embargo, no todo ha sido fácil. Por ejemplo, el sueño que compartimos de atraer visitantes a través del turismo arqueológico no se ha hecho realidad tan rápido como esperábamos, y ha habido algunas dificultades para las familias cuyas chacras se encuentran dentro de zonas arqueológicas. En esta presentación queremos contar nuestra versión de la historia: cómo ha crecido esta relación con PIARA, qué ha significado para nosotros y hacia dónde esperamos que nos lleve en el futuro.

Edgcomb, Owen [185] see Moriarty, Matthew

Edwards, Briece [318] see Butler, Virginia

Edwards, Briece [227] see Johnson, Jeremy

Edwards, Briece [183] see Lewis, Michael

Edwards, Nicolette (Central Washington University), Karen Lupo (Southern Methodist University), Dave Schmitt (1959–2025), and Lucien Nguerede (Ghent University)

[157] *Ngarro (Snail) Procurement by Contemporary Congo Basin Forest Foragers and Implications for the Archaeological Record*

Hunter-gatherers in many parts of the world consume snails and other kinds of invertebrates, including in tropical, non-coastal environments. Among contemporary Congo Basin forest foragers, these food items serve as important sources of protein during certain times of the year when prey accessibility is low, and this was likely true in the past. However, although snails are often reported in the ethnographic record as a common food item for these populations, detailed information on methods of procurement is sparse. This study reports on recently recorded methods used by the Bofi and Aka forest foragers in the southwestern Central African Republic to procure snails (*ngarro* in Bofi) for both consumption and trade, as well as some details about foraging rates, dietary impacts, the effect of commodification on the collection of this resource, and potential archaeological correlates. These lines of evidence support why it is important to consider invertebrates, an often-overlooked resource, in the archaeological record of tropical foraging populations past and present.

Edwards, Richard (University of Wisconsin-Milwaukee Archaeological Research Laboratory Center), William Balco (University of Wisconsin-Milwaukee), Laurie Reitsem (University of Georgia), and Bee Williams (Northern Illinois University)

[344] *Hunting Landscapes: Parsing Oneota Hunting Strategies Using Light Stable Isotope ($\delta^{13}\text{C}$ and $\delta^{15}\text{N}$) Assay of Deer (*Odocoileus* sp.) Remains*

The separation of Oneota villages into widely spaced clusters has caused extensive speculation about many

aspects of the political, social, and ecological landscapes in the western Great Lakes. To better understand Oneota hunting strategies, deer (*Odocoileus* sp.) remains, recovered from pit features at the Koshkonong Creek Village (ca. CE 1100–1450) in southeast Wisconsin, were subjected to light stable isotopes ($\delta^{13}\text{C}$ and $\delta^{15}\text{N}$) from bone collagen. The results indicate that none of the deer sampled consumed any maize, the top-ranked food resource at the site and heavily consumed by domestic dogs throughout the Koshkonong Locality. This has major implications for interpreting Oneota agricultural and landscape management practices, gender dynamics, mobility, and intergroup dynamics.

Eeckhout, Peter (ULB)

[33] *The Logic of Heterogeneity: Interpreting Relational Ontologies at Pachacamac, Peru*

How can relational ontology inform archaeological interpretation? The B15 building at Pachacamac, excavated during three intensive field seasons, provides a compelling case. This structure preserves a 1,000-year occupational sequence marked by diverse ritual events: individual and collective burials, sanctuary construction episodes, production of cult objects, and deposits of offerings such as shells, seeds, manuports, semiprecious stones, miniatures, and sacrificial animals. Considered in isolation, these heterogeneous elements offer little insight into the building's meaning. Viewed relationally, however, they reveal an emic logic in which ritual actions are dynamically interconnected, both within individual phases and across temporal horizons. Local memory appears to have actively integrated previous deposits and events, maintaining a coherent ritual framework over centuries. This suggests a distinctive conception of time—one of continual reactivation rather than linear succession—challenging Western categories of “past,” “death,” and “antiquity.” By emphasizing ontological relationships rather than discrete artifacts or episodes, this case highlights how a relational approach can produce a richer, more culturally grounded interpretation of ritual landscapes.

Eeckhout, Peter [337] see Holbrecht, Lucas

Eerkens, Jelmer (University of California, Davis), Glendon Parker (University of California Davis), Kyle Burke (University of California, Davis), Alan Leventhal (Muwekma Ohlone Tribe of the San Francisco Bay Area), and Charlene Nijmeh (Muwekma Ohlone Tribe of the San Francisco Bay Area)

[268] *Paleoproteomic Analysis of Human Tooth Enamel at an Early Holocene Site in Santa Clara, California*

This collaborative project between the Muwekma Ohlone Tribe and UC Davis explores the preservation of proteinaceous biomolecules in human enamel samples from individuals buried at CA-SCL-1070/H, or Mánni Húyyú Muwékma Yatiš Túnnešte-tka (“Place Where the Ancient People Are Buried Site” in the Muwekma Ohlone language), located in modern-day Santa Clara, California. Radiocarbon dates place the burials in the Late Pleistocene to Early Holocene, approximately 14,000 to 7,000 years ago. Our proteomic analyses focus on providing sex estimates for individuals who did not retain osteological markers of sex, such as non-adults and fragmentary burials lacking pelves. Sex estimation is based on the recovery of amelogenin-related peptides. We also focus on recovery and identification of immune-related peptides, such as immunoglobins and C-Reactive Protein, to provide insight into ancient health.

Eerkens, Jelmer [221] see Chen, Jennifer

Eerkens, Jelmer [221] see Malarchik, Diana

Eerkens, Jelmer [56] see Malik, Mustafa

Eerkens, Jelmer [170] see Mendoza-Blajos, Olivia

Eerkens, Jelmer [170] see Wu, Nikki

Efird, Mary (University of Maryland)

[170] *Navigating Preservation Pitfalls in Stable Isotope Analysis of Icelandic Cod Vertebrae*

This presentation explores the challenges of applying stable isotope analysis to archaeological Atlantic cod (*Gadus morhua*) remains from Iceland, with a focus on preservation-related limitations. During a six-week research period, I conducted carbon and nitrogen isotope analysis on cod vertebrae from multiple Icelandic archaeological contexts. A significant number of specimens failed to yield sufficient collagen, limiting the scope

and resolution of the dataset. In response, I implemented several methodological adjustments, including modifications to sampling strategy, collagen extraction protocols, and expectations for dataset construction. This presentation examines the role of preservation in shaping the feasibility and direction of biomolecular research in zooarchaeology, offering practical insights for navigating preservation-driven setbacks in the laboratory.

Egan, Rachel (Tetra Tech)

[339] *Using Blogs to Stir Up Interest in Archaeology: Behind the Scenes of FoodAndArchaeology.com*

My blog, FoodAndArchaeology.com, was created to foster interest in archaeology and food by exploring the origins and cultural significance of foods and their ingredients, from ancient domestication processes to traditional dishes. This paper explores the methods and thematic content I have utilized to engage readers with archaeology via the universal and relatable medium of food. By offering accessible narratives on the historical and cultural contexts of ingredients and dishes, combined with practical guidance on re-creating historically inspired recipes at home, the blog fosters hands-on learning experiences that deepen understanding of past human societies. This approach demonstrates how digital media can expand the landscape of archaeological teaching, making it more inclusive and approachable for audiences ranging from novices to enthusiasts. By connecting archaeological knowledge to everyday culinary practices, I aim to nurture empathy for past (and present) cultures and to promote equitable access to archaeological knowledge. Furthermore, this integration of archaeology with food culture and history creates dynamic pedagogical opportunities that transcend traditional educational boundaries. Ultimately, this blog provides an example of how innovative public outreach through digital storytelling can inspire learners by making archaeology tangible, tasty, engaging, and relevant to daily life.

Égüez, Natalia (IPNA-CSIC Spanish National Research Council), Lucía Castellano-Rotger (Universidad de La Laguna), Alexia Serrano-Ramos (Universidad de Granada), Carolina Mallol (Universidad de La Laguna), and Juan Manuel Jiménez-Arenas (Universidad de Granada)

[170] *Coprolite or Not? Resolving Fossil Feces Identification through a Multiproxy Strategy in the Early Pleistocene Site of Fuente Nueva 3 (Orce, Spain)*

Fossilized feces, or coprolites, represent a valuable source of paleoecological and taphonomic information. However, their reliable identification poses a “beastly challenge”: distinguishing genuine coprolites from geologically similar concretions. This methodological difficulty is especially pronounced in complex Early Pleistocene contexts such as Fuente Nueva 3 (Orce Basin, Granada, Spain), one of the earliest Oldowan sites in Western Eurasia. To tackle this obstacle, we applied a multiproxy approach to 28 carbonated samples, first identified as carnivore coprolites, combining sterol biomarker analysis, X-ray diffraction (XRD), and micromorphology. Preliminary results reveal key lipid compounds, suggesting notable preservation of organic matter under anoxic and bacterially active conditions. XRD analysis further distinguishes between samples dominated by quartz, lacking organic indicators, and others containing fluoroapatite, consistent with digested bone. These results support the identification of several samples as true coprolites, while others appear to represent sedimentary or diagenetic mimics. Beyond the specific findings, this study highlights how an integrated methodological strategy and interdisciplinary collaboration can help “tame” one of zooarchaeology’s recurrent challenges: the ambiguous recognition of fossil feces in taphonomically complex contexts. Our approach provides a replicable framework for addressing similar obstacles where the boundary between biogenic and geological remains is blurred.

Égüez, Natalia [315] see Conesa, Francesc

Ejarque Gallardo, Ángela (SECIHTI Postdoctoral Researcher, Coordinación Nacional de Conservación del Patrimonio Cultural [CNCPC-INAH])

[164] *Materiality of Color and Cosmetics in Teopanazco Funerary Rituals*

Body painting practices in Teotihuacan during the Early Classic period (150/200–650 CE) permeated multiple spheres of life, from daily and ceremonial activities to death itself. Within this framework, color functioned as an aesthetic element but also as a powerful symbolic and ritual medium. Archaeological evidence demonstrates the wide range of contexts where pigments were applied—on architecture, ceramics, offerings,

and directly onto the human body—underscoring their central role in Teotihuacan’s cultural and ideological dynamics. A remarkable example comes from the funerary offering discovered at Teopancazco (burial 105–108), which included miniature vessels containing pigments of different colors, providing decisive evidence for the cosmetic and ritual use of pigments and organic substances used as binders in the preparation of chromatic mixtures. Building on this framework, the present work focuses on the study of pigments identified on three skulls recovered from one of the main burial pits at Teopancazco, within the project “Teotihuacan Elite and Government. Excavations at Teopancazco,” directed by Dr. Linda R. Manzanilla. Through the integration of archaeometric analyses and contextual interpretation, the results obtained illuminates the intersection of ritual practice, social identity, and symbolic expression in Teotihuacan funerary traditions.

***This presentation will include images of human remains.

Ejarque Gallardo, Ángela [310] see Mitrani, Alejandro

El-Hassan (Sokhari), Ahmed [323] see Minor, Elizabeth

El Zaatari, Sireen [170] see Russo, Gabriele

Elaine, Lynda

[156] *The Spanish Bison Hide Trade and the Reshaping of Southern Cheyenne Gender Roles (1833–1849)*

Between 1833 and 1849, the Spanish bison hide trade at Bent’s Old Fort—a major hub on the Santa Fe Trail in present-day southeastern Colorado—introduced capitalist and patriarchal systems into Southern Cheyenne society, reshaping traditional gender roles. The commodification of buffalo hides, combined with the pressures of intertribal displacement, disrupted household structures and destabilized women’s roles. One outcome was the rise of polygynous arrangements, reflecting both adaptive strategies and externally imposed demands. Bison had long been central to Southern Cheyenne life—economically, socially, spiritually, and politically. Communal hunts reinforced kinship and reciprocal economies, but trade tied Indigenous lifeways to global markets. This shift disrupted gendered divisions of labor, weakened spiritual relationships with the bison, and embedded capitalist structures into tribal life. Drawing on oral histories and historical records—including trade records, traveler accounts, ethnographic notes, and government reports—this study explores how Southern Cheyenne women adapted to, negotiated with, or resisted these changes. By centering women’s lived experiences, this research highlights cultural agency and challenges narratives that portray Indigenous women as passive victims. It contributes to broader discussions on patriarchy, colonial economies, and resilience among Indigenous peoples of the nineteenth-century Great Plains.

Elera, Carlos [211] see Gonzalez-La Rosa, Luis Manuel

Elera, Carlos [337] see Jankowski, Maegan

Ellens, Samantha [179] see McKinney, Madelyn

Ellick, Carol (Archaeological and Cultural Education Consultants)

[322] *From the Words of Others*

Brian Fagan said that he felt he was regarded more as a writer than an archaeologist, yet without one, he was not the other. Through his decades of work, words, and dedication to the profession, Brian Fagan reached audiences beyond students, classrooms, and the academy. He saw not just a gaping hole, but an opportunity. From writing general archaeology text books to translating the scientific findings of archaeology and cultural history for the public, Brian’s dedication had impacts beyond imagination. This presentation will consist of a video compilation of segments by colleagues and friends honoring Brian Fagan and his work.

Ellis, Kelsey (University at Buffalo)

[350] *Core to Core: Reconstructing Gotland’s Past*

The Late Antiquated Little Ice Age (LALIA) took place in the Northern Hemisphere between 536 and 660 CE, caused by a series of volcanic explosions which resulted in low solar activity due to ash that decreased temperatures and precipitation regionally. The tempo and spatial scope of LALIA has been largely debated as

having little or major influence on human settlement patterns, social change, and adaptations during the Iron Age. Looking at multiproxy evidence from palynological data, macrobotanical data, and archaeological settlement changes can highlight the impacts of LALIA on both local and regional areas of Northern Europe, particularly on the island of Gotland, located in the Baltic Sea. Environmental impacts from LALIA within other regions within Northern Europe include migration, population decline, settlement abandonment, subsistence shifts, and general instability. The utility of gathering more proxy data, such as on the island of Gotland, can further our understanding of local impacts LALIA had on islands and coasts in Northern Europe and what those impacts were. This paper looks at furthering palynological studies to observe LALIA impacts on Gotland through data analysis of several wetland sites in association with archaeological sites.

Ellis, Olivia (University of Pittsburgh), John Walden (Galen University), Claire Ebert (University of Pittsburgh), Julie Hoggarth (Baylor University), and Jaime Awe (Northern Arizona University)

[36] *Household Food Production Practices at the Ancient Maya sites of Baking Pot and Lower Dover*

The production and consumption of food are core household activities. Investigation of these practices can speak to overarching community identity, power dynamics, economics, and inequality. The upper Belize River Valley represents a complex ecotone ranging from the alluvial floodplain, *bajos*, to the shallow hillslope soils, which the ancient Maya (900 BCE–900/1000 CE) modified and adapted to cultivate diverse plants and acquire a variety of foodstuffs. In this study, we compare regional environmental and soil productivity and associated land-use practices with household patterns of food production and consumption among 22 households of varying statuses within the upper Belize River Valley polities of Baking Pot and Lower Dover. Comparisons between elite and commoner production and consumption reveal that status and agricultural practices played an important role in structuring foodways irrespective of ecological niche. This reveals that dynamic relationships existed between foodways, local ecology, land use, economics, and household wealth and status.

Ellis, Olivia [161] see Schnell, Joshua

Elster, Eli, Breyten van Der Merwe (University of Stellenbosch), Betsy Sethathi (University of Pretoria), and Madison McCartin (University of California, Davis)

[209] *Expanding the Ethnoarchaeological Record of Psychoactive Compound Use In Southern Africa*

Historically, Southern Africa has been identified in cross-cultural surveys as containing an extremely limited record of psychoactive compound use. But ethnobotanical research over the last two decades has identified dozens of psychoactive compounds being employed by traditional healers in Southern Africa. These compounds include a number of potent hallucinogens, some of which were indisputably employed for preservative purposes by indigenous groups before colonial contact. However, there has been minimal ethnographic research attempting to detail current uses of these hallucinogens in Southern Africa. Furthermore, no known archaeological studies have searched for traces of hallucinogenic use in the Southern African material record. Here, we document initial efforts to fill these gaps in the African ethnobotanical record. We explore findings from fieldwork conducted in Lesotho and the Eastern Cape on the use of two native hallucinogens—*Boophone disticha* and psilocybin mushrooms—among traditional healers. Notably, psilocybin use in Southern Africa constitutes the first definitive instance of native psilocybin use outside the Americas. We use this evidence to explicate a beginning archaeometric program to search for biochemical and genetic traces of these compounds in material artifacts from Khoisan and Bantu cultures.

Elvir, Wilmer (Universidad Nacional Autónoma de Honduras)

[349] *Prunum apicinum como adorno personal y fúnebre en Selin Farm: Evidencias de las temporadas 2016 y 2024*

La marginela atlántico (*Prunum apicinum*) es una especie marina de conchas blancas o pálidas que habita en fondos arenosos y fangosos poco profundos, además de praderas de pastos marinos. Más allá de su función natural, estas conchas adquirieron un valor simbólico en las tierras bajas mayas durante el Preclásico, donde fueron depositadas en contextos funerarios, a menudo formando collares situados sobre el pecho o cuello. Este patrón se ha documentado en sitios de Guatemala, Belice y México, principalmente asociados a contextos ceremoniales, lo que revela su importancia dentro de las prácticas rituales en el área

mesoamericana. En el sitio Selin Farm, noreste de Honduras, la presencia de *Prunum apicinum* se ha registrado en dos temporadas de campo que permiten ampliar la comprensión de su uso simbólico. En 2016, se documentó en el Montículo I como adorno personal en rituales asociados a festines comunitarios. Posteriormente, en la temporada 2024, se halló en entierros del Montículo H, siguiendo el mismo patrón identificado en las tierras bajas Mayas, pero extendido cronológicamente en la fase Selin Temprano (300-600 dC). Estos hallazgos refuerzan la continuidad del uso ritual y funerario de la especie y evidencian conexiones culturales entre Mesoamérica y la región noroeste de Honduras.

Emerson, Paige [22] see Burhenn, Madison

Endonino, Jon (Eastern Kentucky University)

[273] *Local Practice and Regional Process: The Lower Mississippi River Valley Origins of Florida's Late Archaic Mounds*

Contemporary Archaic mound-building communities in the Lower Mississippi River Valley (LMRV) and peninsular Florida are recognized and accepted, but no serious inquiry into potential relationship between them have been undertaken. Nonlocal ground stone artifacts in some of Florida's Thornhill Lake phase (TLP) mounds are the only evidence of contact and were assumed to have arrived through down-the-line exchange. Previously I argued that TLP mound-building was a local development, a transformation of earlier Mount Taylor shell mounding and mortuary practices indigenous to the Middle St. Johns River Valley. Data from the past 15 years of fieldwork and analysis made this interpretation untenable. In this paper I argue that the ultimate origin of the TLP is the LMRV in Mississippi and Louisiana. Support is found in the material practices of the TLP groups what were without local antecedents and absent among their contemporaries in peninsular Florida. Practices with LMRV parallels include building monumental earthen architecture, indirect heat cooking, microlithic technology, and ground stone artifacts. Localized adaptation is insufficient to explain these similarities. I explore migration and ethnogenetic processes within a practice framework as alternatives to in situ development.

Endzweig, Pamela [333] see Derr, Kelly

Eng, Jacqueline (Western Michigan University), Michelle Hrivnyak (Western Michigan University), and Erdene Myagmar (National University of Mongolia)

[277] *Bioarchaeological Survey of Iron Age Xiongnu Burials from Elite Contexts*

The Xiongnu confederacy (ca. 200 BCE–100 CE) of the Inner Asian steppe, famed for their mounted calvary and incursions against the neighboring Han Empire, constructed monumental mortuary features throughout this region. The larger elite tombs attributed to the Xiongnu, sometimes referred to as “ramped tombs,” are characterized by their large size and deep pits, with square/rectangular stone terrace construction above the burial and a dromos to the south. They are often associated with smaller satellite burials adjacent to the main tomb structure and include funerary items indicative of wealth and far-flung trade. However, despite the attention to mortuary context, relatively little focus has been given to the occupants of the elite burials themselves, nor the surrounding satellite burials. While extensive looting of these tombs limits *in-depth* analysis of skeletal remains, this study surveys what is known about Xiongnu elite tombs for bioarchaeological information on demographic profile, health, diet, and disease, including data from a relatively new site, Yamaan us in western Mongolia. Here, we focus on comparative Xiongnu contexts and consider these in relation to other Iron Age elite mortuary sites such as those of the Pazyryk culture in Siberia. *****This presentation will include images of human remains.**

Eng, Jacqueline [302] see Grimes, Vaughan

Engelbert, Lynne (Institute for Canine Forensics)

[90] *Expanding Roles for Historic Human Remains Detection Dogs*

The Institute for Canine Forensics continues to conduct traditional field-based surveys; however, we are increasingly called upon to address emerging and urgent needs. In response to the January 2025 changes to NAGPRA, our teams are now assisting with the review of academic collections across the country. Climate

change is also reshaping our work, as coastal and river shoreline erosion exposes burials that require documentation and protection. Another growing area of response involves cremains recovery following massive urban wildfires, such as those in Southern California in January 2025, which demand specialized training in hazardous environments. Perhaps most significant is the request to locate unmarked burials of children who died at residential schools, a legacy that continues to cause deep trauma for Native and Indigenous communities in the United States and Canada. This presentation will outline the training, preparation, and adaptability required for Historic Human Remains Detection (HHRD) dogs and their handlers to respond effectively to these evolving critical projects.

Englehardt, Joshua [262] see Bernard, Henri

Epperson, Alexandra

[115] *Looted Lithics: A Paleoindian and Archaic Collection from the Jornada Mogollon*

This paper presents a lithic analysis demonstrating the value of a looted lithic collection. The collection originated on Bureau of Land Management land in the Jornada Mogollon region of the American Southwest. It provides a valuable dataset for studying Paleoindian and Archaic technological traditions. This analysis documents projectile point typology, raw material type, and flaking patterns, with attention to point traditions such as Paleoindian (Clovis and Folsom), Archaic, and Pueblo types. Quantitative and qualitative data were collected on over 2,200 artifacts, including size dimensions, weight, edge-wear, and other identifying descriptors. These artifacts were then compared with other assemblages from the Southwest. This poster illustrates the difficulties in working with artifact assemblages recovered without a research orientation. The orientation is provided by this project-specific research design, which contributes to our growing understanding of technological variability and adaptation across prehistoric occupations. This collection focuses on curated and surface-collected assemblages, emphasizing the role of lithic collections in building broader archaeological interpretations where there is little to no provenience or existing research goals.

Eppich, Keith, Elsa Damaris Menéndez, Damien Marken, and Maria de los Angeles Cuyan

[36] *The Social Dimensions of Craft Production in the Classic Maya Lowlands, a Working Model*

This paper addresses the issue of placing Classic Maya household production within its distinct social context. In Classic Mayanist studies, the social composition of household production remains largely unknown. The archaeological record is replete with examples of workshop production, from salt to shell to obsidian to chert to ceramics, among others, each contributing to the complex exchange systems of the various Classic Maya economies. Yet the social units operating such workshops are unknown. Ethnographic evidence suggests a strong kin-based element to craft production; thus, household production depends heavily on their own social composition and the local structure of Classic society itself. This proposes a working model for the social units responsible for household production, using examples from El Perú-Waka', Guatemala, and El Pozito, Belize. The result appears to be different types of social units producing goods for different economies, impoverished lineages for local social barter, noble houses and attached specialists for prestige economies, and specialist obsidian and ceramic workshops producing for local market exchange.

Epps, Radhika, and Annie Danis (Cal Poly Pomona)

[346] *Vibrant Plastics: An Archaeology of University Campus Trash and Global Materiality*

This paper assesses how plastic waste exists as an agentive, enduring, and mobile material. Over the past two years, Cal Poly Pomona's (CPP) Anthropology Department has been researching campus waste in the CPP Garbage Project. Headed by Dr. Annie Danis, students collaborate with Facilities Management and Planning to sort and analyze the contents of garbage cans across campus. Building on the fundamentals of William Rathje's Garbage Project (1975), students compare consumption patterns across years and buildings, and construct object itineraries to investigate the journey of artifacts from raw material to production, use, and disposal. Plastic is by far the most prevalent material class in the CPP assemblage. By tracking the formation, use, discard, breakdown, and creative reuse of plastic artifacts, we analyze their role in nonnormative socioecological landscapes using Jane Bennett's (2010) political theory of nonhuman agency. From our archaeological perspective informed by interdisciplinary discard studies (Liboiron 2022; Arefin 2021), we

argue that plastic waste is not a passive pollutant that must be managed and eventually eradicated, but rather a spatiotemporal marker through which we can cultivate and utilize alternate landscapes of memory and preservation.

Erauw, Céline (Vanderbilt University), and Carmela Alarcón Ledesma

[314] *Balancing Quantity and Quality: Managing Well-Preserved Remains in Coastal Peru*

Research on archaeobotanical and zooarchaeological remains has led to the development of recovery protocols and analytical methods that enable the extraction of maximum information from minimal material. However, in the central coast of Peru, the exceptional preservation of organic remains presents both an opportunity and a challenge. Our presentation will address these challenges through a case study of the Lurín Valley. The Lurín Valley is one of the most archaeologically rich regions in Peru. Its ecological diversity, encompassing four distinct ecosystems, supports a wide range of wild flora and fauna. Research on the prolonged and continuous occupation of the Lurín Valley across various cultural phases reveals significant changes in the social organization of its settlements, shaped by interaction, conquest, and conflict. These shifts also brought about transformations in the landscape and altered patterns of resource use for both subsistence and economic purposes. While the abundance of data is a privilege, it also requires adapting existing methods, handling large volumes of material, and managing both quantitative and qualitative datasets effectively.

Erazo Gutiérrez, Fernanda [32] see Correa Gurrulat, Itaci

Erb-Satullo, Nathaniel [315] see Ho, Joyce Wing In

Erdman, Katherine (Nazarbayev University), and Madina Makulbekova (Nazarbayev University)

[339] *Dialogues for the Future: Training Archaeology and Heritage Communicators in Kazakhstan*

Blurring the line between the classroom and the outside world is the future of effective archaeological education. Students at Nazarbayev University can participate in an applied public heritage course focused on learning the fundamentals of archaeological survey through a multi-week fieldwork project at former gulag camp. However, the primary focus is training them to open dialogues with various audiences in different contexts. Students conduct interviews to better understand how people perceive local heritage, participate in an archaeology education program at a village school, and supervise an archaeology camp for kids in an urban center. They also consult with professionals working in roles where communication with diverse publics is paramount. Each year, students work as a team to identify a target audience and develop a collaborative project in a medium they think will effectively communicate their heritage-focused message. This service-learning approach is uncommon across disciplines in Kazakhstani universities. For this reason, it is important to determine the efficacy of such an educational approach. New evaluative work on this course and its model demonstrates a strong potential for raising interest in heritage in Kazakhstan. This paper presents the goals and framework of the course and results from a qualitative assessment of it.

Erem, Asli [269] see Durant, Phoebe

Erfttenbeck, Hanna (Grinnell College), and Natalia Handziuk (University of Toronto)

[115] *Renewed Work at Early Bronze Age Tall al-Handaquq South, Jordan*

As one of the largest known sites of the Early Bronze Age (EB, 3800–2000 BCE) in the southern Levant, Tall al-Handaquq South plays a key role in our understanding of the emergence, resilience, and ultimate demise of some of the earliest cities in the world. Small-scale excavations in the 1990s exposed a well-preserved residential complex, contributing significantly to our understanding of people's everyday lives during the EB III period. Since 1996, no further work has been conducted at Tall al-Handaquq South, and there are many questions about the nature of the settlement that remain unanswered. Here we present the results of our catch-and-release survey conducted during the summer of 2025. The 2025 season focused on the northern slope of the site, and explored its extent, occupation history, and preservation.

Ericson, Jessica (Community Connections LLC), and Jasmine Saxon (Community Connections LLC)

[169] *International Archaeology Day at Red Rocks Park and Amphitheatre: A Case Study for Community-Engaged Scholarship (CES)*

How do we continue to engage the public in archaeology and history? By co-creating opportunities for involvement! International Archaeology Day in the Denver, Colorado, metro area began as a small but impactful effort by volunteers at Roxborough State Park to share archaeological knowledge with the community. In 2023, Community Connections took over the event and moved it to Red Rocks Park and Amphitheatre in Morrison, Colorado, hosting over 40 organizations and more than 1,000 guests. This presentation examines the planning and implementation of the event, the partnerships that made it possible, and the strategies employed to communicate archaeology in accessible and engaging ways. Framed as a form of community-engaged scholarship (CES), this case study reflects on the role of place-based public programming in cultivating stewardship, fostering dialogue between professionals and the public and expanding archaeology's visibility, relevance, and inclusivity.

Ericson, Jessica [169] see Saxon, Jasmine

Ermigiotti, Paul [335] see Coffey, Grant

Ervin, Gary (Latin American Historical Archaeology Laboratory, UMB)

[107] *Mapping Marronage in the Chota Valley: Using GIS to Model Routes of Afro-Ecuadorian Resistance*

This research is part of and contributes to two collaborative and community-based projects of the Latin American Historical Archaeology Laboratory at the University of Massachusetts, Boston: the "Sites of Afro-Ecuadorian Memory in the Ancestral Territory of the Chota Valley-La Concepción, Salinas and Gualupe" project and the "Collaborative Archaeology with African Diaspora Communities in the Andes of Ecuador, Ancestral Territory of the Chota Valley (Imbabura-Carchi)" project. Using geospatial datasets, this study aims to model routes or pathways associated with acts of resistance by Afro-Ecuadorians living at the haciendas in the Chota Valley (Provinces of Carchi and Imbabura). By connecting the results of these models to archival documents and oral histories, this study will provide insight into the possible networks connecting Afro-Ecuadorian communities in the Chota Valley to the Palenques of Esmeraldas as well as help us to better understand the geographic potentialities of places made and inhabited by Afro-Ecuadorians. Furthermore, by comparing the results of these models to known routes of Afro-Ecuadorian resistance, this study will explore the potential and limitations of such modeling techniques.

Escalante, Kirsty (Tulane University; ICF)

[352] *An Analysis of Maya Archaeological Site Looting across Northern Guatemala*

Archaeological looting in the Maya area has been an enduring concern for over six decades, yet the remote forest environment has prevented researchers from understanding the full scale of the issue. The recent application of lidar for archaeological research has facilitated the large-scale study of illicit digging in the dense Maya forests for the first time. Using a combination of lidar data from northern Guatemala, field verifications of potential looting incidents, and existing literature and excavation reports, this paper presents the recent investigations of Maya archaeological site looting across multiple areas of the department of Petén in northern Guatemala. Fieldwork and analyses of lidar surveys from archaeologically unstudied areas in the Petén reveal looting that had not been previously identified, highlighting the pervasive and persistent illicit digging practices within the region. Quantification and geospatial analyses of looting incidents in the Petén further demonstrate the potential of lidar and GIS for estimating the scale of looting across the landscape and identifying potential risk factors for Maya archaeological sites. A regional study of illicit digging therefore provides an understanding of looting patterns that had not been possible with traditional survey techniques both in the Maya area and other heavily forested regions.

Eschbach, Krista (University of Cincinnati), and Evan Grant (University of Cincinnati)

[79] *Beyond Black Boxes: Advancing Best Practices for the pXRF Analysis of Ceramics and Clays*

Much of the chemical characterization of archaeological ceramics and clays has been undertaken among a

small number of laboratories and practitioners, generating technical reports and creating somewhat of a “black box” approach to ceramic provenance. This situation is changing, at least partially due to an increasing interest among archaeologists in using portable X-ray fluorescence (pXRF) for the geochemical analysis of ceramics and clays. The pXRF spectrometer is touted for its accessibility, relatively low-cost, quick results, nondestructive benefits, and portability that facilitates its use in the field or lab. With this interest has come a growing number of studies related to best practices, covering a full range of concerns from sample preparation procedures, instrument calibration, data processing, and analytical techniques. These developments are extending discussions related to compositional analysis to a growing number of practitioners and beyond the “black box.” In this poster, we discuss the objectives and methods of ongoing research at the University of Cincinnati to advance best practices for the pXRF analysis of ceramics and clays.

Escobar, Edwin [355] see Thompson, Josephine

Esdale, Julie (CEMML), Kelly Graf (University of Kansas), and Ted Goebel

[195] *Small Sites, Big Insights: An Example from the Middle Holocene Occupation at Shég' Xdaltth'i'*

The Shég' Xdaltth'i' site in central Alaska is known for its dense late Pleistocene occupations found in stratified loess deposits. However, only a small amount of material dating to the middle Holocene component at the site is found overlying the ancient cultural layers. Spatial and lithic analysis of artifacts from this period provide insights on activities representing just a brief moment in time and provide a fine-grained look at past human behavior.

Esdale, Julie [195] see Graf, Kelly

Esdale, Julie [195] see Rasic, Jeffrey

Esparza Olguín, Octavio [223] see Tsukamoto, Kenichiro

Espinosa, Alicia (Université Paris I Panthéon-Sorbonne), and Jefrin Ascencio Falla (Universidad Nacional Toribio Rodríguez de Mendoza de Amazonas)

[267] *Considerations on the Maritime Foundations of Andean Societies during the Early Colonial Period from Case Studies on the Northern Coast of Peru (Sixteenth–Seventeenth Centuries)*

The maritime foundations model has often been discussed in light of the Preceramic and Initial periods on the Peruvian coast, leading to contrasting views on the importance and interrelationship between coastal and agricultural resources in the development of Andean communities. In this occasion, we would like to tentatively extend this discussion to the early colonial period, marked by the conquest and the gradual establishment of the colonial system by the Spanish Crown, by examining the following questions. During this period of major transition, to what extent was the importance of the sea and its resources transformed and transmitted by Andean communities, at the level of their social, economic, and cultural practices? For example, did the animal and plant colonization led to new food practices that abandoned the consumption of fish and shellfish? In terms of craftwork, what place did marine iconography and materials such as spondylus hold among the possibilities offered by the influx of new artisans, techniques, and goods? The discussion will be based mainly on works carried out since 2023 by the Proyecto Arqueológico Guadalupe in the Jequetepeque Valley at the Anlape site, a region where texts recount the central importance of agriculture that we wish to contrast.

Espinosa, Alicia [224] see Figueroa Beltran, Carlos

Espinosa Ramirez, Lizandra, Reyna Solis, and Emiliano Melgar Tisoc (Templo Mayor Museum)

[307] *Las piedras preciosas y su relación con la especialización operativa del tlaticqui (lapidario) en el Códice florentino*

El papel de los tlaticque o lapidarios mexicas especializados en la elaboración de objetos con piedras preciosas, quienes desempeñaban un rol fundamental dentro de la organización social mexica. Estos artesanos manufactureros de bienes lujosos que sus piezas cumplían funciones estéticas, simbólicas y rituales. El Códice florentino en los libros IX, X y XI describe las cadenas operativas lapidarias. Dichas cadenas comprenden la

búsqueda y obtención, transportación, comercialización y manufactura de piedras. La fuente combina texto e imagen para ofrecer una visión integral del proceso, destacando la minuciosidad técnica y la complejidad gestual de los lapidarios. Un ejemplo notable es la figura del *tlaiximatini* o “buscador de piedras”. Su inclusión evidencia que el oficio del *tlatecqui* no se limitaba al trabajo manual, sino que formaba parte de una estructura más amplia que abarcaba la localización de materias primas y la especialización de tareas. En este sentido, la ponencia enfatiza cómo las descripciones del *Códice florentino* revelan no solo la pericia técnica de los lapidarios, sino también la estrecha relación entre los materiales empleados —piedras preciosas, conchas y caracoles— y los valores estéticos, sociales y simbólicos que les confería la cosmovisión mexicana.

Espinoza Escobar, Luis [33] see Muro Ynoñán, Luis

Estep, Kaleah

[343] *Postcolonial Community Perspectives on Cultural Heritage and Archaeology in Corozal, Belize*

How people engage with and understand cultural heritage shapes how it is preserved within communities and understood by broader academic audiences. Heritage is typically described as a tangible or intangible property inherited; however, due to the diverse cultural identities within a postcolonial context, Belizean cultural heritage challenges top-down models of heritage management and raises new questions about who benefits from defining and curating heritage sites. This paper asks how community members in Corozal, Belize, perceive and engage with cultural heritage in a postcolonial context. Using photos of local heritage sites to facilitate discussions and gather the community's perspectives on heritage and archaeology allows for an inclusive approach to these topics. A unique understanding of Corozal's current state of cultural heritage and archaeology is created by bringing diverse community voices into conversation with existing literature. Many of the issues discussed by community leaders and scholars centered on disseminating information and the relationship between the community, community leaders, and archaeologists. Local claims are supported by community discussions, revealing complex relationships between people's engagement with sites and their knowledge of the landscapes' long-term history. Therefore, the community's voices provide a better understanding of how to frame archaeology and heritage efforts in the area.

Estève, Julia [344] see Morrow, Giles

Estrada, Victoria (Laboratorio de Prospección Arqueológica UNAM), and Agustín Ortiz Butrón (Instituto de Investigaciones Antropológicas, UNAM)

[310] *Analysis of Chemical Residues in the Plaza of the Columns during the Terminal Occupation of Teotihuacan*

Archaeological research at the Plaza of the Columns has been ongoing for nearly a decade under the codirection of Drs. Saburo Sugiyama and Nawa Sugiyama, during which several architecturally significant structures have been documented. Since 2023, investigations have focused on Group 43, where excavations have exposed multiple rooms and an adjoining courtyard. These contexts present notable concentrations of charcoal and ash, suggesting episodes of burning and structural destruction. In several cases, the remains of beams and heavily charred timbers were identified atop collapse deposits and, in some instances, directly on floor surfaces, producing extensive burn stains. Such evidence is consistent with broader citywide patterns of intentional burning, documented during the terminal phase of Teotihuacan; events that are widely interpreted as integral to the processes leading to the city's collapse. The present study applies chemical residue analysis, employing spot-test techniques, to evaluate activity areas within Group 43 prior to their destruction. This approach seeks to identify the functional nature of these spaces and to assess how the sudden conflagration and subsequent collapse disrupted the daily practices of the inhabitants of the Plaza of the Columns, during Teotihuacan's final occupation.

Estrada-Belli, Francisco (Tulane University)

[36] *A Spatial Model for Urban and Rural Organization of Elite Plaza Groups, Agriculture, and Exchange in the Central Maya Lowlands Revealed by Lidar*

Thanks to regional-scale high-resolution lidar data from various sources it is possible to address two prevailing views on agricultural household production in the Maya Lowlands. The first view states that rural households and communities were disembedded from the elite power structure and the local political center.

The second view regards the existence of two separate realms or lifeways in the Maya world, one primarily urban, the other rural. Through quantification of a number of features relating to house size, location, agricultural terracing and enclosures it is possible to (1) outline an organizational model by which even the most isolated households lived within a short walking distance (3–5 km) of an elite plaza group. The implication is that the elite may have been able to oversee production, either in agriculture or craft by the surrounding households. In return, they could have provided administrative and ritual services as well as space for daily markets to the community/neighborhood; and (2) a spatial model by which 100% of agricultural features (terraces, stone enclosures, canals) were located within an easy walking distance (3–5 km) of a household in periurban and rural zones.

Eubanks, Jill, and Adrian Whitaker (Far Western Anthropological Research Grp)

[167] *Cultural Resource Management Data as a Tool for Historical Ecology and Modern Conservation*

Zooarchaeologists have long touted the use of archaeological assemblages to understand past human-animal interactions. Archaeological data, however, are infrequently integrated into paleoecological, historical ecology, and modern habitat restoration/species reintroduction practices. With current academic trends moving away from university-based research on collections from California archaeological sites and with the repatriation and reburial of collections across the state, site- and region-specific studies are becoming more difficult to conduct. An important, and underutilized source of data is the so-called gray literature comprised of cultural resource management reports. Far Western Anthropological Research Group has long made it a practice to gather data from CRM reports to look for larger trends in archaeological data. This paper will provide examples of the utility of broadscale distributional data which can be used to inform modern conservation, species reintroduction, and habitat restoration efforts, including a summary of species representation and geographic distribution of our gathered data. We will provide examples of applications of precontact distributions of artiodactyls, salmonids, and gray pine (*Pinus sabiniana*) trees to modern ecological and conservation studies.

Eubanks, Jill [296] see Martisius, Naomi

Evans, Freddie [216] see Seidemann, Ryan

Evans, Lydia (University of Illinois Urbana-Champaign), Emily Reed, Stefania Wilks (University of Utah), Jonathan Dombrosky (Crow Canyon Archaeological Center), and R. J. Sinensky (Crow Canyon Archaeological Center)

[314] *Exploratory Macrobotanical and Microfaunal Analysis of Turkey Penning at the Haynie Site (5MT1905)*

Turkeys and humans have long-standing relationships across North and Central America, including in the Ancestral Pueblo Southwest. Turkey penning provides a window for archaeologists into complex interactions between people and avian communities, including feeding, husbandry, feather and meat use, and care. Identifying turkey pens in the archaeological record, however, has often focused on a narrow set of material evidence such as eggshells, dung, and gastroliths, tentatively linked to turkeys. This assumption creates a “top-down” approach that excludes the possibility of other captive birds, like raptors, or alternative taphonomic agents such as nesting birds post-occupation. Moreover, little attention has been paid to additional materials routinely recovered from such contexts, or to quantifying the densities of eggshells and gastroliths in pens compared to other contexts. We explore macrobotanical and faunal remains recovered from flotation samples to identify patterns associated with inferred CE 1000–1125 turkey penning at the Haynie site (5MT1905) in southwestern Colorado with an emphasis on taphonomy. Connecting these patterns with evidence from stratigraphy, dung, soil nutrients, and eggshell and gastrolith densities represents a “bottom-up” approach that allows for the evaluation of multiple hypotheses, while developing expectations for places of intense human-domestic interaction.

Evans, Tomos (Washington University in St Louis)

[294] *Investigating Africa's Largest Monument: Analysis of the Linear Earthwork of Sungbo's Eredo, Nigeria, Using Novel Excavation, Archival, and Survey Data*

At 100 miles in its total circumference and surrounding a vast area of territory of the Ijebu Yoruba kingdom

in southwestern Nigeria, the linear earthwork of Sungbo's Eredo, crossing contemporary Lagos and Ogun States, may be Africa's largest known single structure. Despite the unprecedented nature of its scale, monumentality, and elaboration, its dating, construction, and functionality remain relatively little understood. This presentation presents recent archaeological, archival, and ethnographic research at the Eredo aimed at reconstructing its chronology, process of construction, and evolving uses and meanings over centuries of history. Novel data from collaborative excavations at the earthwork, archival research in the UK and USA, recent lidar survey of the Eredo, and study of shrines and sacred groves adjacent to it are synthesized to address these considerations. It is hypothesized that the Eredo was a complex multifunctional and multivalent structure used for a range of sociopolitical purposes, built around the fourteenth/fifteenth century AD following a unitary plan/concept but via a segmented process of construction. Such functions and outcomes of its construction included military defense and deterrent, spiritual protection, regulation of movement, and reification and negotiation of community memory and social power, processes that evolved and developed over centuries of repeated reengagement.

Everett, Adrian (Yale University)

[104] *An Update on the Escuintla Hoards: New Additions to the Pantheon of Teotihuacan-Style Ceramics from the Pacific Coast of Guatemala*

Many Early Classic sites in Escuintla, Guatemala, boast an enigmatic category of artifacts: Teotihuacan-style ceramics. Originally described by Nicholas Hellmuth as the "Escuintla Hoards," the concentration of Teotihuacan-style ceramics in Escuintla are a testament to the interaction that took place between Teotihuacan and Escuintla during the so-called Teotihuacan Horizon in Mesoamerica. This presentation will explore the significance of Teotihuacan-style ceramics excavated at the major Early Classic center of Montana and its rural neighbor El Remanso, with an emphasis on recently identified and inconspicuous ceramics with links to Teotihuacan. Models of Teotihuacan interaction with Escuintla will be assessed in light of Hellmuth's expanding Escuintla hoards.

Everett, Caden

[297] *Determining the Health of Burial I at Petra through Osteological and Comparative Analysis*

Researcher Caden Everett with the help of Dr. David Johnson determines the health of Burial I from Site 6 in Petra through an age-at-death and paleopathology assessment of the burial's skeletal material. Burial I was compared to other Nabataean burials from Petra's North Ridge Tomb 2 to determine if Burial I can be considered healthy for a Nabataean. Cranial sutures, epiphyseal fusions, tooth wear, rib wear, and the state of the pubic symphysis were used to determine age at death. Paleopathologies were identified by observation of recovered skeletal material. Everett discovered that Burial I was 50+ years old when he died and had osteoarthritis throughout his lower body and a hole inside the olecranon fossa of the left humerus. In comparison to Tomb 2, Burial I is older with fewer paleopathologies. This is significant because it illuminates the general health of Nabataean Petra and the future work that needs to be done by archaeologists in Petra.

Fábregas Valcarce, Ramón (Universidade de Santiago de Compostela), and Oscar Lantes-Suarez (Universidade de Santiago de Compostela)

[272] *Long and Distinctive: The Case of Certain Ground-Stone Axes from Prehistoric Galicia (NW Spain)*

Ground stone axes are among the most common items found amid the grave goods recovered from the megalithic tombs of Galicia, dating to the Neolithic period. In this paper, we shall deal with a peculiar set of polished axes characterized by a length exceeding 15 cm, often thoroughly manufactured and made from a yellowish, schist-like stone. X-ray diffraction and fluorescence analysis carried out on several of these pieces reveals a similar mineralogical and elemental composition with variable presence of plagioclase and Ca-Mg amphiboles, which are responsible for the light color of most of the analyzed specimens. Although we are not in a position to pinpoint a specific origin for the raw material, it appears to have a regional origin and distribution. However, some findings from other regions (Asturias, central Portugal, Brittany) may indicate that artifacts of these characteristics were particularly valued and therefore subject to exchange with more distant areas.

Fábregas Valcarce, Ramón [272] see Mosquera Castro, Tania

Fafin, Manon, Jazmin Alvarado (UNAM), Andrew Somerville (Iowa State University), and Marion Forest (Sorbonne University)

[49] *Living in Teotihuacan during the Postclassic: Insights from a Mexica Period Domestic Space (AD 1150–1500)—Hacienda Metepec Project*

Located in the heart of the Mexico Basin, northeast of Mexico City, the site of Teotihuacan has been extensively documented and excavated, revealing a dense occupation during the Classic (AD 100–600) period. While documented, the following Epiclassic (AD 600–900) and Postclassic (AD 900–1500) periods remain understudied in comparison to the Classic period, despite a proven occupation of the site during these phases. As part of a new research project (Hacienda Metepec Project) focusing on the occupation of Teotihuacan after its fall, several excavation campaigns were conducted between 2022 and 2024 in the Hacienda Metepec neighborhood, located east of the city's ceremonial center. The discovery of a Mexica (AD 1150–1500) domestic complex provided significant insights on the construction, occupation, and abandonment of a domestic space in the Postclassic period. This poster presents the results of the excavation, informing on the functions of this domestic space, as well as the activities and movements carried in it. These elements allow us to consider new ways of occupying Teotihuacan, while demonstrating the persistence of the Classic model in terms of both architecture and urban planning.

Fairbanks, Regina, Sherry Flint-Garcia (US Department of Agriculture), Anthony Ranere (Temple University), Jeffrey Ross-Ibarra (University of California, Davis), and Dolores Piperno (Smithsonian Tropical Research Institute)

[354] *Understanding the Evolution of Exposed Maize Kernels with Population Genomics and Phytoliths*

Maize domestication transformed a wild grass with inaccessible seeds into a productive grain crop. Inedible, highly silicified fruit cases enclose each kernel of the wild relative teosinte, whereas maize kernels sit exposed beneath the husk. Previous work implicates a mutation in the gene *tga1* as the main driver behind the evolution of exposed kernels in maize, and proposes that the mutation arose in managed fields, being too deleterious for survival in the wild. It has also been hypothesized that, given the mutation's effect on silica deposition, it may underlie differences in phytoliths produced by the teosinte ear and the maize cob. Using genomic data, we identify that the mutation arose in wild teosinte populations prior to domestication. In addition, we analyzed a set of experimental maize lines to assess the effect of *tga1* on the types and morphology of phytoliths produced by maize. We find that *tga1* alone does not explain the differences in phytolith assemblages between the teosinte fruit case and the maize cob but unexpectedly may affect leaf phytoliths. Our findings have implications for understanding the timing and tempo of maize domestication, as well as for the interpretation of archaeological phytoliths.

Faith, Tyler [221] see Norwood, Alexandra

Faith, Tyler [170] see Wong, Gillian

Fajardo, Blanca (UNAH), Whitney Goodwin (Archaeometry Laboratory at MURR), Alejandro Figueroa (University of Missouri), and Leslie Reeder-Myers (Temple University)

[349] *Excavando la abundancia: Estrategias de campo para el manejo de depósitos complejos en Selin Farm, noreste de Honduras*

Previas excavaciones en Selin Farm enfrentaron una riqueza arqueológica extraordinaria: densos depósitos de conchero que contenían cantidades sin precedentes de cerámica, hueso y carbón, todos en notables estados de preservación. Tal abundancia representa una oportunidad y un desafío: cómo recuperar conjuntos de datos de alta calidad sin sobrecargar la infraestructura local de gestión patrimonial ni comprometer una ética de campo responsable. Este trabajo presenta la metodología de campo de la temporada de excavación de Selin Farm en 2024. Las unidades de excavación aplicaron control estratigráfico y muestreo volumétrico sistemático y protocolos de recuperación anidados que incluyeron zarandeo en seco y muestreos selectivos. Estrategias de retención selectiva —guiadas por muestreo estadístico, criterios de preservación y prioridades de investigación— aseguraron que solo se conservaran porciones representativas de categorías de artefactos altamente redundantes, mientras que materiales menos sensitivos fueron re-enterrados para favorecer su preservación a largo plazo. Este marco metodológico responde a las realidades logísticas en Honduras y a debates éticos más amplios en la arqueología, ofreciendo un modelo para trabajar con conjuntos

arqueológicos grandes y complejos que equilibran el potencial de investigación y la gestión sostenible del patrimonio.

Fajardo, Blanca [349] see Goodwin, Whitney

Fajardo, Carmen (Universidad Nacional Autónoma de Honduras)

[308] *Archaeological Research in Southeastern Honduras*

Our research in southeastern Honduras has been conceived to contribute to recurrent efforts in the region to move the discussion from a traditional emphasis on determining cultural affiliation to approaches that focus attention on internal social dynamics at several regional scales of analysis. Carrying out systematic surveys and excavations in southeastern Honduras, research has concentrated on exploring local developments and the emergence of social differentiation in the region, as well as identifying craft production activities and local exchange. It has been amply pointed out that in both northeastern and eastern Honduras no great amount of commodities was mobilized through interregional exchanges; however, ongoing research in the area indicates the contrary. Furthermore, our approach underscores the potential of combining survey, excavation and ethnoarchaeological data to propose patterns of local and supra-communal interaction. By considering both local-scale practices and broader exchange dynamics, southeastern Honduras emerges as a valuable case study for understanding how communities negotiated social differentiation and participated in long-distance exchange systems.

Fajardo, Sebastian (Leiden University), Nicolás Loaiza (Instituto Distrital de las Artes), Natalia Alvarez (Instituto Colombiano de Antropología e Historia), Philip Riris (Bournemouth University), and Marco Madella (Universitat Pompeu Fabra)

[311] *Technological Activities and Social Resilience in Early Isthmo-Colombian Societies*

Global studies have shown that while farming societies may be more vulnerable to specific disturbances, they exhibit greater long-term demographic resilience. However, the specific strategies employed by these early sedentary populations to mitigate and adapt to such disturbances remain not well understood. This research explores this question in the Isthmo-Colombian Area, specifically testing for evidence of significant downturns in human activity, and evaluating which of theoretical driven strategies could have been most effective in ensuring the long-term social configuration of these societies. We utilize a dataset of calibrated radiocarbon dates from the region, employing summed probability distributions (SPD) as a proxy for human activity. We compare our SPD-derived estimates of human activity against population estimates derived from other archaeological proxies to validate our findings. The study also investigates the speed and frequency with which precontact population changes align with patterns in technological intensity, including the production of new materials, infrastructure development, and social interaction.

Falco, Colette (Institute for Canine Forensics)

[90] *From Silence to Recognition: HHRD Dogs in Residential School Contexts*

At former residential schools, the search for unmarked burials is both a scientific challenge and a profound cultural responsibility. Historic Human Remains Detection (HHRD) dogs offer archaeologists a noninvasive method to narrow search areas, preserve site integrity, and refine investigations where archival records are incomplete or absent. Their alerts provide directional guidance that complements archaeological evidence, oral histories, and community knowledge. Each deployment is guided by Indigenous leadership, with cultural protocols defining boundaries, practices, and decision-making. In this way, HHRD dogs do more than locate scent; they act as mediators between science and memory, enabling archaeologists to proceed with both accuracy and respect. Case studies from residential school contexts illustrate how canine detection strengthens interdisciplinary collaboration, supports community-led truth-seeking, and safeguards sacred spaces. When pairing the unique capabilities of trained dogs with archaeological methods, we move from silence toward recognition, recovering histories too often overlooked and honoring those whose stories remain beneath the ground.

Falcucci, Armando (New York University), Nuno Bicho (ICArEB, Universidade do Algarve), Ben Marwick (University of Washington), and Justin Pargeter (New York University; University of Johannesburg)

[336] *Introducing the RStone Project: A Replicable Framework for Quantitative Lithic Analysis*

Lithic analysis is a cornerstone of prehistoric archaeology. Not only are lithics the most common finds in contexts predating the invention of pottery but also the product of learned behavior. By carefully reconstructing the reduction sequence, from the sourcing of knappable materials to the detachment of sought-after tools, archaeologists are able to answer a range of questions aimed at better understanding the biocultural processes that led to the evolution of hominin lineages. Despite the growing number of scholars developing quantitative methods to model biocultural processes through lithic analysis, some core challenges of the discipline are seldom acknowledged. We argue that the most pressing matter is building a replicable system that guides the collection of categorical, ordinal, and continuous attributes, testing interobserver reliability and thus enabling broader inter-analyst comparative studies. In this presentation, we will introduce RStone, a Marie Skłodowska-Curie project that will develop open-source tools, including an R package, to promote Open Science and address the reproducibility crisis in lithic studies. We then apply the system to the southern African MIS 3, quantitatively testing the hypothesis of cultural fragmentation. As a proof of concept, we will present initial results from the MSA/LSA assemblages at Boomplaas Cave.

Falls, Eva (US Army Corps of Engineers, Baltimore District), and Amy Murphy (US Army Corps of Engineers, Baltimore District)

[74] *Fort Lesley J. McNair Flood Risk Management Study, Southwest Washington, DC*

The US Army Corps of Engineers (USACE), Baltimore District, and Joint Base Myer-Henderson Hall (JBM-HH) prepared a Flood Risk Management (FRM) Study for Fort Lesley J. McNair (Fort McNair) in Washington, DC. The study area for this effort is within the boundary of Fort McNair, with consideration for the surrounding waterways, water features, contributing drainage areas, and regional infrastructure. The FRM Study involved investigating, planning, and preparing for flooding on the installation. The process involved several steps, including developing up-to-date flood-risk mapping, and identifying installation features subject to flooding, including a National Historic Landmark and multiple other historic properties eligible for the National Register of Historic Places. The study also evaluated various flood risk management measures to mitigate anticipated flood damages to vulnerable installation features and archaeological sites at Fort McNair. The study assessed a variety of flood vulnerabilities, included consultation with a wide range of stakeholders, and evaluated a variety of solutions to address flooding at Fort McNair including structural, nonstructural, and nature-based solutions. This poster presents the FRM Plan's conclusions, with next steps and options for Fort McNair to consider as they balance flood risk management along with their mission requirements and other priorities.

Fang, Yuan (University of Oregon)

[284] *Social Network Analysis of Bronze Mirror Ownership in Ancient China*

Bronze mirrors, valued as symbols of wealth, status, and cultural identity in ancient China, offer a window into past social hierarchies. This research uses social network analysis (SNA) to examine a unique dataset of 1,411 bronze mirrors, compiled from excavation reports published in *Kaogu*, China's leading academic journal for archaeological research. It represents the first and only comprehensive collection of its kind, spanning the Neolithic to Qing periods. Focusing on the Han (206 BCE–220 CE) and Liao-Song (907–1279 CE) periods, which yield the most mirror records, this study maps owner-mirror relationships as networks. Results reveal fragmented networks, indicating that mirrors were unique possessions tied to individual prestige. Nobles and officials dominate ownership, underscoring bronze mirrors' role in signaling elite power and social distinction. Statistical models show a slight tendency for individuals of similar social ranks to share mirror types, reflecting class-based cultural practices. Uneven ownership patterns highlight social inequalities, with elites holding prominence. The unique dataset and innovative approach reveal how bronze mirrors reflected and shaped societal shifts, cultural dynamics, and evolving elite identities in ancient China's rich history, offering fresh perspectives on its complex social structure and heritage.

Fanning, Claire (University of Missouri)

[114] *Applications of X-Ray Fluorescence for the Detection of Toxic Pesticides in Museum Collections Subject to NAGPRA*

Museums have a long history of applying pesticides to objects in their care, and these treatments were not always clearly documented. As museums continue the process of repatriation in compliance with NAGPRA, the responsibility of harm mitigation cannot be overlooked. It is of the utmost importance that we thoughtfully address the mental and spiritual elements of harm done to ancestors and surviving communities but also the physical harm they may be exposed to as part of the repatriation process. This poster will present results and interpretations of research that will demonstrate the potential applications of X-ray fluorescence spectrometry in the detection of pesticides on artifacts. X-ray fluorescence is an increasingly accessible and cost-effective method of analysis available to museums. It is a minimally invasive and nondestructive method for examining culturally sensitive artifacts, which makes it potentially ideal for incorporation in respectful and safe practice. This project seeks to demonstrate where the technology can be most meaningfully applied for the protection of descendant communities and museum employees.

Farace, Anthony (University of Florida)

[266] *Crafting Connection: Assessing Mississippian Social Networks and Identity through Ceramic Practices in the Central Mississippi River Valley*

This project examines how small-scale communities in the northern Central Mississippi River Valley (CMRV) navigated large-scale social change before and during the rise of the Cahokia (AD 800–1200). While Mississippianization is often framed as a top-down diffusion of ideology and practice, this study foregrounds community-level decisions by analyzing ceramic production in regions tied to Cahokia through migration and exchange. The presence of Varney Red-like ceramics in the Richland Complex of Greater Cahokia suggests sustained interaction between these regions just before and during Cahokia's emergence. To investigate how these connections materialized in everyday practices, the study employs a multi-method approach: qualitative and quantitative ceramic petrography to examine mineral inclusions and paste recipes, LA-ICP-MS and NAA for geochemical sourcing of raw clay and hematite, and a techno-functional and use-wear analysis to infer vessel function and production sequences. Assemblages from two CMRV and two Greater Cahokia sites are compared. These methods reveal how technological choices (such as temper selection, forming techniques, and surface treatment) were maintained, modified, or replaced in response to shifting social networks. This project explores how craft expresses identity, how material practice reflects intercultural interaction and migration, and models a bottom-up approach to cultural change informed by descendant community perspectives.

Fargher-Navarro, Lane (PAST Foundation/Ohio State University), Ricardo Antorcha Pedemonte (Cinvestav Del IPN- Unidad Merida), and Robert Cook (Ohio State University)

[285] *Misreading the Maya Forest: Environmental Degradation or Human-Mediated Biocultural Legacies*

The Maya Forest (*kanan k'aax*) is not solely a tropical ecosystem but a historically mediated landscape shaped by long-term human activity. Building on the Intermediate Disturbance Hypothesis (IDH), we adopt a biocultural framework that emphasizes the interdependence of ecological and cultural diversity. Situating human-environment mediations (H-EMs) within the *longue durée*, we integrate historical ecology and archaeology to assess their long-term consequences. Our study draws on chemostratigraphic evidence from the Lagunas de Yalahua region in Yucatán, Mexico, combining elemental and stable isotope data, carbonate and organic matter profiles, and archaeological investigations. Through this multiproxy approach, we evaluate whether cultural and ecological richness coincide within the Maya Forest. The results suggest that, rather than representing a case of irreversible environmental degradation, *kanan k'aax* embodies resilient biocultural legacies and ecological mosaics, shaped through sustained intermediate disturbance, and preserved as a palimpsest of human-mediated environments.

Fargher-Navarro, Lane [277] see Cook, Robert

Farquharson, Kyle (University of Calgary), Kathryn Reese-Taylor (University of Calgary), Armando Anaya Hernández (Universidad Autónoma de Campeche), Felix Kupprat, and Joshua Lockett-Harris (University of Calgary)

[55] *Examining Preclassic Maya Networks and Influence through Civic-Ceremonial Architecture in Southern Campeche*

Preclassic (1000 BCE–200 CE) cities of varying scale are noted for their monumental civic-ceremonial architecture, including ballcourts, E-Groups, and triadic complexes. These constructions are often used as proxies for a center's prominence in the Preclassic landscape, as they reflect the ability of emerging elites to organize large-scale labor. This study examines the relative influence of Preclassic centers within an interaction network situated in southern Campeche using two complementary approaches. First, architectural traits are compared as indicators of site significance within regional networks. Second, social network analysis is applied to model spatial connections and evaluate how sites were linked to one another. Together, these methods provide a clearer picture of how Preclassic centers shaped patterns of hierarchy, interaction, and regional organization across the region.

Farr, Jeremy [357] see Stone, Abigail

Farrell, Ian (University of Utah)

[81] *Art of the Steal: When Is Defending Stored Food Worth the Cost?*

Food storage is an important part of numerous human subsistence strategies, especially for people living in areas with high seasonal variability. For Fremont maize farmers in Utah, agricultural surplus was critical to survival due to the arid and highly variable climate. Some Fremont invested considerable effort into protecting their harvests by constructing granaries in strikingly difficult to access cliff faces and overhangs, while others constructed storage structures at residential sites or in hidden yet easy to access areas. Building difficult to access granaries is likely part of a defensive strategy (Boomgard 2009), which seems to only have been one of several storage strategies Fremont maize farmers employed. The decision to engage in costly defensive strategies must have been worthwhile due to the presence of theft, but the point at which defense becomes a viable strategy is less clear. Using models derived from game theory, this project examines when defense, theft, or engaging in neither strategy is optimal depending on the frequency of each behavior.

Fasthorse, Volney [169] see Clark, Andrew

Fauvelle, Mikael

[159] *A Fisher-Forager Sea: Maritime Exchange in the Baltic Sea Region during the Middle Neolithic*

The story of the Neolithic is usually focused on agriculture. In the Baltic Sea, however, fisher-foragers dominated the region's islands and coasts throughout most of the Neolithic period. The Pitted Ware Culture (PWC) occupied many coastal regions of the Baltic Sea, the Danish archipelago, western Sweden, and coastal Norway for over a thousand years (ca. 3500–2300 BCE), maintaining a resolutely fisher-forager way of life at the same time as agriculturalists were dominating the area's interior regions. In this paper I present new data on connectivity between PWC sites in order to better understand the social organization of these Neolithic fisher-foragers. I present a snapshot of the maritime economy that connected fisher-foragers in the Baltic Sea Region through the exchange of ceramics, figurines, stone tools, and other goods. Finally, I argue that the practice of long-distance maritime travel, trading, and raiding that we see emerging with the PWC represent the first manifestation of a seafaring way of life that would come to characterize Scandinavia for much of its history.

Faux-Campbell, Jennifer

[23] *An Educational Experiment: Piloting General Education Archaeology Courses for Rising Scholars Students*

On October 6, 2021, Governor Newsome signed in law AB 417: Rising Scholars Network: Justice-Involved Students. This bill's purpose was to expand higher educational opportunities and reduce equity gaps among Rising Scholars students. Rising Scholars students are those who have formerly experienced incarceration or are currently incarcerated. At Palo Verde College, where 7–10 anthropology courses are offered to Rising

Scholars students each semester, the need for ensuring Rising Scholars students are provided with a robust educational experience is crucial. However, due to the unique challenges faced by Rising Scholars students, anthropology instructors have historically struggled to deliver a comprehensive archaeological curriculum. This began to shift in the fall semester of 2025, when faculty gained the opportunity to offer their courses through California's learning management system, Canvas. In this paper, I will explore the impact of delivering archaeology courses to Rising Scholars students via Canvas, with the goal of creating a pedagogical framework that addresses equity gaps and promotes a supportive, effective learning environment for all community college students.

Fedick, Scott (University of California, Riverside), Anabel Ford (MesoAmerican Research Center, UCSB), Jorge Mendoza-Vega (ECOSUR), and Narciso Torres (The Maya Forest Alliance: Exploring Solutions Past)

[81] *Agricultural Suitability at the El Pilar Archaeological Reserve, Belize and Guatemala: Initial Results Utilizing Traditional Ecological Knowledge and Modern Soil Science*

As detailed soil mapping at the El Pilar Archaeological Reserve nears completion, we previously presented our methods for evaluating agricultural suitability and results for soil preferences of 31 indigenous food plants known to be important traditional subsistence resources for the lowland Maya past and present. Here, we group plants with similar soil preferences as determined by traditional ecological knowledge of our Maya colleague and matched these preference groups with soils mapped by our soils team using current descriptive and analytical methods under the World Reference Base soil classification system. We offer our findings as a locally tailored alternative to the more generic conventional approach of the FAO suitability classification scheme. We suggest that our methodological approach to agricultural suitability expands the view of cultivability and will enable detailed modeling of ancient land-use practices under a long-term system of managed successional cultivation.

Fehren-Schmitz, Lars (UCSC)

[337] *Paleogenomics and the Central Andes: Looking Back, Moving Forward*

Over the past decade, paleogenomic research has provided valuable insights into population histories, pathogen evolution, and biodiversity, primarily across Eurasia. In South America, particularly the Central Andes, such studies remain limited, but genomic data are gradually expanding. Unlike Eurasian contexts characterized by large-scale migrations, Andean researchers tend to adopt a regional, context-specific approach, fostering closer collaboration with local communities and interdisciplinary research. This presentation reviews the contributions of paleogenomics to our understanding of Andean population dynamics and explores how recent methodological advances could enable more detailed insights into the genetic relationships and continuity of individuals and groups across history. It also critically examines the methodological and ethical limitations of current genomic research, emphasizing the importance of integrating bioarchaeological and interdisciplinary perspectives. By reflecting on these challenges, the presentation will try to highlight pathways through which paleogenomics could contribute to developing a more inclusive and comprehensive bioarchaeological framework in the Andes.

Fehren-Schmitz, Lars [301] see Patroni Castillo, Karla

Fehren-Schmitz, Lars [297] see Rietz, Alexandra

Fehren-Schmitz, Lars [301] see Sacco, Samuel

Fehren-Schmitz, Lars [24] see Verdugo, Cristina

Feinen, Karlee (University of Wyoming), and Randy Haas

[101] *Optical Profilometry and Microwear Analysis of Anomalous Paleoindian End Scrapers Reveals Spur Utilization*

How hunter-gatherer populations adapted mountain environments is a perennial question in archaeology. A central technological adaptation to these environments is leather clothing, which is signaled by the archaeological occurrence of lithic hide-scraping tools. End scrapers are one of the most common tool types in early North American lithic assemblages ranging in size and shape. Paleoindian end scrapers sometimes exhibit anomalous spur features characterized by one or two lateral protrusions located on the working edge. This analysis examines use-wear on a large sample of Paleoindian end scrapers from the northern

Rocky Mountains. Low-power light microscopy and optical profilometry are used to examine the ostensible working surfaces of the spur features as well as the working edges. Additionally, experimental scraper analysis examined the effectiveness of the optical profilometer to quantitatively measure use-wear. Preliminary results indicate that both the dorsal and proximal surface were used in scraping tasks, consistent with the hypothesis that the spurs were functional and not merely incidental to hafting or maintenance. This finding points to an unknown technological tradition likely associated with clothing manufacture among the Rocky Mountain's first peoples. We conclude with a series of hypothetical applications to spur future research.

Feinman, Gary [35] see Cook, Duncan
Feinman, Gary [102] see Klassen, Sarah

Feng, Xueyxi [267] see Juengst, Sara

Fenger, Jo

[177] *Beans and Smiles*

The Moche culture located on Peru's northern coast emerged in the early Intermediate period of ~200 BCE through ~AD 700. In the nineteenth century archaeologists found well-crafted textiles, jewelry, and ceramics with similar iconography. The fine-line storytelling ceramic vessels have been extensively researched. Decapitations and various ornamentations like foxes and owls are on human bodies as in "The Procession" were considered myths, until decapitated bodies, human blood identified in a ceremonial goblet, and the graves of the Lords of Sipan were discovered. Wars and conflicts fought with rivals to obtain territory is the accepted interpretation of the Moche images. Examining illustrations, another scenario of warriors being painted beans is revealed. Bean runners brought beans to be counted and sorted for contests. A warrior wins by grabbing the opponent's hair. The "prisoner" strips leaving his attire in a tripod formation and a loose rope is placed around his neck. He is drugged, then goes gleefully as a community commitment to be sacrificed for the whole. This study presents this new interpretation.

Fenn, Malachi [323] see Ayers-Rigsby, Sara

Fenn, Thomas (University of Oklahoma), and Madelyn Onan

[326] *"It Takes a Village": Socioeconomic Aspects of Ancient Copper Production by Nomadic Pastoralists at Marandet, Niger*

The archaeological site of Marandet, Niger, likely was a seasonal encampment in antiquity occupied by nomadic pastoralists taking advantage of a nearby water spring. Eventually, copper metallurgy also was practiced at the site as evidenced by the recovery and documentation of tens of thousands of ceramic crucibles, from refuse pits, used for melting and casting copper metals (metallurgical activities date from ca. 600–1400 CE). Marandet played a key role in contributing to Trans-Saharan trade networks, and examining ancient metallurgical remains from the site will aid in understanding role(s) the people and this production played in local, regional, and long-distance trade networks. Connections between development and spread of copper-based metallurgies and nomadic pastoralist groups have been suggested previously, but detailed studies are few. This research examines production of ceramic crucibles at Marandet as proxy for understanding socioeconomic organization of the community. Evidence indicates high variability in the metrics of the crucibles, suggesting that many, if not all, members of the community helped produce the crucibles, as opposed to one or two craftspeople. Implications on understanding socioeconomic aspects of the community and ancient copper production in sub-Saharan West Africa during the late first and early second millennia AD are discussed.

Fenn, Thomas [301] see Gehling, Emily
Fenn, Thomas [183] see Onan, Madelyn

Fennessey, Brenna (University of Florida), Lawrence Conyers (University of Denver), Elizabeth Sawchuk (Cleveland Museum of Natural History), Katherine Grillo (University of Florida), and Elisabeth Hildebrand (Stony Brook University)

[281] *The Curious Case of the Missing Cavity: A Reanalysis of Ground-Penetrating Radar Data from Ng'imaniania*

(Manemanya), a Monumental Mortuary Site in the Turkana Basin, Kenya

Ng'imanimania (Manemanya) is one of several megalithic pillar sites in the Turkana Basin of northwestern Kenya, part of a distinct mortuary tradition associated with the arrival of pastoralism to the region at the end of the African Humid period (ca. 5000–4000 BP). These mortuary sites, typically characterized by large stone pillars, cairns, and mounded platforms overlying deep mortuary cavities, have been central to discussions regarding social networks, monumentality, and mobility of early herding communities in eastern Africa. In 2013, we conducted ground-penetrating radar (GPR) surveys at Ng'imanimania and three other pillar sites west of Lake Turkana. Renewed excavations at Ng'imanimania in 2025 prompted a reanalysis of the 2013 GPR data with new questions about the layout and construction of this site. Here we present a comprehensive reanalysis of the 2013 GPR data, incorporating advances in geophysical interpretation and new archaeological data to inform our understanding of the complex mortuary tradition at Ng'imanimania. Beyond site-specific findings, this study addresses the challenges and opportunities afforded by software advances and the integration of new excavation results in the reanalysis of geophysical datasets more than a decade after collection.

Fenoglio, Fiorella [331] see Helmke, Christophe

Fenoglio, Fiorella [276] see Leiva, Jennifer

Ferguson, Jeffrey (University of Missouri), James Davenport (University of Missouri), Matthew Pailes (University of Oklahoma), and Matt Peeples (Arizona State University)

[26] *Compositional Comparison of Contemporary Mata Ortiz and Ancient Casas Grandes Pottery and Implications for Production*

While ancient potters in the Casas Grandes region and contemporary potters at Mata Ortiz lived in the same geological setting, they lack direct historical connection. There are, however, interesting technological convergences in their ceramic traditions. Early Mata Ortiz pottery specifically focused on replication of Medio period Casas Grandes Polychromes with the goal of producing similar products with access to similar materials. Interestingly, samples of prepared clays prepared by Juan Quezada as well as a sample of community pots do not show strong similarity in paste chemistry with ancient pottery. Previous attempts to partition Casas Grandes compositional data have lacked the group resolution seen in other regions and this has been attributed to geologic homogeneity. Comparing these archaeological data to compositional data from an ethnographic setting is helping to establish expectations for regional compositional variability. Variability in composition can be influenced by geology, material choice, technology, scale of production, market forces, and other factors that are not easily visible in the archaeological record. Despite these obstacles, scales of variability between contemporary and ancient pastes can inform us about complex issues such as specialization and scale of production. Compositional data from other Southwest regions provide further perspective on scale of variability.

Ferguson, Jeffrey [212] see Critz, Tuesday

Ferguson, Jeffrey [26] see Davenport, James

Ferguson, Jeffrey [201] see McKee, Brian

Ferguson, Jeffrey [211] see Schollmeyer, Karen

Ferguson, Loudon (University of Missouri Columbia)

[296] *The Ethics of Experimental Lithic Replication*

Lithic replication is a common form of experimental research in archaeology, and often the first one new students are introduced to. Additionally, replicated lithic artifacts provide useful hands-on examples that are often used to allow the public to interact with physical examples of artifacts without handling actual artifacts. However, there are a number of ethical considerations to be made about archaeological lithic replication—the use of limited raw material sources for the practice, what artifacts are acceptable subjects for replication, and what purpose experimental replicas should serve in archaeological research and education alike. This poster aims to explore these questions and examine the possible paths forward for ethical experimental replication in archaeology.

Fernandes, Paul (Paléotime; CNRS, UMR 8068 TEMPS), Piboule Michel, Médard Thiry, Vincent Delvigne (CNRS), and Jean-Paul Raynal (CNRS, UMR 5199 PACEA)

[93] A Tailored Petroarchaeological Approach for the Study of Silicites

In the early 2000s, silicites used for tool making discovered in archaeological sites in the French Massif Central were studied to source their origins. Modifications in structure, shape, surface form, mineralogy and chemistry specific to each silicite type were identified. The concept of an evolutionary chain was developed to account for transformations observed between their initial position, the diverse outcrops along their sedimentary dissemination and their place of collection by humans. Deciphering these modifications enables us to distinguish for each artifact the set of traces specific to the trajectory of the raw material used. This multiscale approach broadens classical petroarchaeological analysis by adding a dynamic dimension. When referenced to ad hoc collections (*lithothèques*), it can discriminate between primary, sub-primary, and secondary origins of almost all knapped raw materials. It is based on a nondestructive, low-cost, rapid scientific approach and combines geological and petrographic observations with geochemical and mineralogical analyses tailored to specific questions. Standardized practices and the teaching of this method considerably broadens its scope of application in archaeology. This major methodological advance is particularly suited to regions rich in secondary-position sources of silicites where the diversity of transformations observed complicates the identification of the raw materials used.

Fernandes, Paul [93] see Delvigne, Vincent

Fernandez-Diaz, Juan Carlos [308] see Cohen, Anna

Fernandez Souza, Lilia [354] see Zimmermann, Mario

Fertelmes, Craig, Christopher Garraty (Logan Simpson Design Inc.), Bruce Phillips (BGP Consulting LLC), and J Andrew Darling (Logan Simpson)

[71] Archaic to Akimel O'odham: 5,000 Years of Land Use on the Rawhide Wash Alluvial Fan, Phoenix, Arizona

The Rawhide Wash alluvial fan in north Phoenix, Arizona, is a dynamic and relatively mesic landscape within the Sonoran Desert of the American Southwest. The fan's natural environment not only attracted humans to the area but also served to quickly bury and preserve cultural features that are vestiges of plant-resource provisioning and processing activities. Logan Simpson recently completed archaeological data recovery at four sites on the alluvial fan—AZ U:5:33(ASM), AZ U:5:94(ASM), AZ U:5:216(ASM), and AZ U:5:227(ASM). The results of the investigation yielded evidence for nearly 5,000 years of land use, spanning the Middle Archaic through early historic periods (ca. 3100 BC–AD 1850). Combining archaeological, geomorphological, chronometric, archaeobotanical, and ethnohistorical analyses, this poster presents a synthesized reconstruction of human adaptation and subsistence strategies on the alluvial fan.

Ferwerda, Carolin [46] see Casana, Jesse

Ferwerda, Carolin [46] see Paulsen, Paige

Fetterhoff, Alex (New Mexico Consortium), Mary Kliejunas (USDA Forest Service), and Grant Snitker

[73] Just Give Me Something to Break! Assessing Post-fire Artifact Fracturability through an Experimental Study

In a previous study, we developed a quantitative, field-based study to evaluate how pile burning may create direct impacts on surface artifacts, such as sooting and cracking. However, our study design did not consider the longer-term effects of fire exposure, such as increased vulnerability to fracturing. Fracturability is a cause of concern due to its potential impact on future identification and interpretation of artifacts and assemblages. To expand this study, we are continuing our partnership on the Plumas National Forest in Northern California's Sierra Nevada to explore how the fracturability of basalt lithic artifacts relates to pile burning. Using experimental artifacts, we are measuring the maximum force needed to fracture basalt lithic material after being exposed to heating through pile burning. From this project, we hope to continue aiding the Plumas National Forest's Heritage and Wildland Fire programs in creating proactive fuels management plans that reduce risk for archaeological assemblages while also achieving fuels reductions goals.

Fields, Otis

[342] *Catch of the Day: Marine Catfish as a Proxy for Resource Use at Precontact Sites on Cape Canaveral, Florida*
Excavations at Cape Canaveral, Florida, have uncovered multiple precontact archaeological sites associated with the Indigenous Ais culture spanning a period from AD 900 to 1565. Archaeological faunal remains excavated at these sites demonstrate that the Ais subsistence relied heavily on coastal resources, in particular marine catfish (*Ariopsis felis* and *Bagre marinus*). Using allometric equations to estimate the approximate length and weight of marine catfish specimens from three sites at Cape Canaveral, otoliths, dorsal spines, and pectoral spines, compared to modern specimens, showed that there was continuity in catfish size over time. The results suggest that Ais fishers may have targeted adult catfish in shallower waters where they school rather than seek juvenile catfish that schooled further offshore. These findings help us to better understand precontact fishing and environmental management practices.

Fields, Stormy (University of Alaska), Joshua Reuther, Sambit Gosh (University of Alaska Fairbanks, Alaska Stable Isotope Facility), and Matthew Wooller (University of Alaska Fairbanks, Alaska Stable Isotope Facility, College of Fisheries and Ocean Science UAF)

[179] *Determining Resource Utilization from Hearth Sediments at the Mesa Site, Alaska, Using Stable Isotopes*
The Mesa site is a unique archaeological site in northern Alaska. Excavated between 1978 and 1999, the site sits on a mesa-like landform and includes the remnants of 40 ancient hearths. Most radiocarbon dates from the site fall between 9730 and 11,660 calibrated years before present, which overlap with the relatively cool, dry climate of the Younger Dryas stadial. The constricted chronological dates and large number of hearths suggest the site was used intensely for a relatively short period of time. Large bifacial points, along with debitage found at the site, suggest the target resource was large mammals but organic preservation at the site is poor, which has limited zooarchaeological studies. We analyzed sediments from 28 hearths from the Mesa site using bulk and compound-specific stable isotope analyses to help determine the diversity of food resources used at the site. A two-end member mixing model using the bulk stable nitrogen isotope data determined the proportional contribution of aquatic versus terrestrial resources in the hearths. We coupled these findings with further analyses of 14 hearths for compound specific carbon isotope analysis of fatty acids (CSIA-FA) to determine the proportional contributions of terrestrial, marine (or anadromous) and freshwater resources.

Fierro Padilla, Rafael (Instituto Nacional de Antropología e Historia), and William Mex Alborno (Universidad Nacional Autónoma de México)

[161] *Los vasos decorados de la tumba IV del Edificio 24 de Yaxchilan, Chiapas*
En 1983, durante la novena temporada de campo en Yaxchilán, Chiapas, el equipo dirigido por Roberto García Moll llevó a cabo exploraciones intensivas en las principales estructuras de la Gran Plaza, lo que permitió el hallazgo de la Tumba IV en el Edificio 24. Este contexto funerario contenía diversos objetos de piedra verde, concha, perla, obsidiana y vasijas de cerámica, lo que indica la importancia del personaje inhumado que, de acuerdo con estudios previos, pertenece a un infante. En la presente ponencia se exponen las características generales del Edificio 24 y el contexto del hallazgo de la Tumba IV, para centrar la atención en un par de objetos que formaban parte del ajuar y que corresponden a dos vasos piriformes finamente decorados, únicos en la colección cerámica de Yaxchilán, los cuales no sólo presentan pseudoglifos sino también elementos iconográficos como la Cruz K'an y la deidad K'awill, que sugieren una función dedicatoria y su posible pertenencia a la élite gobernante, por lo que, teniendo en consideración el análisis estilístico y epigráfico de los vasos, se estima una cronología y se busca una primera aproximación al personaje inhumado en este contexto funerario.

Figuerola, Alejandro (University of Missouri), Carla Hadden (Center for Applied Isotope Studies, University of Georgia), Leslie Reeder-Myers (Temple University), and Whitney Goodwin (Archaeometry Laboratory at MURR; University of Missouri)

[349] *Refining the Stratigraphy and Chronology of the Selin Farm Site, Northeastern Honduras*
The Selin Farm site has long anchored regional chronologies since its first investigations in the 1920s and Paul

Healy's excavations in the 1970s. More recently, coring, lidar, and radiocarbon dating have provided new insights into its occupational sequence. This paper presents initial results from the 2024 excavations that have continued to refine the stratigraphy and chronology of three key mounds at the site, including perhaps its earliest monumental construction. Stratigraphic exposures revealed complex sequences of clay and shell deposition, clarifying construction histories only partially uncovered by earlier coring. Materials from these contexts also refine the temporal framework of mound construction and use, sharpening the chronological resolution of Early, Basic, and Transitional Selin phases (ca. AD 300–1000). These results demonstrate how shell mound construction at Selin Farm began as large, accumulated feasting deposits that continued to expand into large-scale building episodes beginning around AD 600. By anchoring site-wide stratigraphy in new excavation data, this research provides a critical update to nearly a century of work at Selin Farm and establishes a stronger baseline for interpreting production, feasting, and social practices along the northeastern Honduran coast.

Figueroa, Alejandro [349] see Fajardo, Blanca

Figueroa, Alejandro [349] see Goodwin, Whitney

Figueroa, Alejandro [308] see Reeder-Myers, Leslie

Figueroa, Cristian [91] see Coronado, Anabella

Figueroa Beltran, Carlos (San Diego State University), Alicia Espinosa (Université Paris I Panthéon-Sorbonne), Jefrin Ascencio Falla (Universidad Nacional Toribio Rodríguez de Mendoza de Amazonas), Catalina Soto (Universidad Academia de Humanismo Cristiano, Chile), and Karlo Paredes Medina (Universidad Nacional de Trujillo, Peru)

[224] *A Community in Transition: Scientific and Social Challenges of the Early Colonial Period Research at Anlape, Northern Coast of Peru*

Occupied since precontact times, the site of Anlape was transformed in the sixteenth century into a major sanctuary dedicated to the Virgin of Guadalupe. Known primarily through historical sources as the Sanctuary of Our Lady of Guadalupe, the site today preserves the remains of a precontact ceremonial mound, beside which stands the convent founded by the Augustinian Order during the colonial period. The Guadalupe Archaeological Project, developed in collaboration with the residents and authorities of the district of Guadalupe, is a Franco-Peruvian scientific and cultural initiative. Its objective is to investigate the material remains of the site to better understand how native Andean populations experienced and integrated colonial norms into their domestic, economic, and cultural practices. In parallel, the project has established a robust site management program focused on heritage dissemination and community engagement. This strategy not only aims to share the knowledge generated through research but also to foster active community participation in valuing and preserving the site. In this way, Anlape aspires to become a culturally vibrant and socially meaningful space for future generations. *****This presentation will include images of human remains.**

Finamore, Daniel

[53] *Visualizing Pembroke Hall, Belize: Reconstructing an Eighteenth-Century Mahogany Works through Iconographic Excavation*

Archaeological investigations of Caribbean sugar plantations have focused on landscape and the construction of spatial order designed to control relations among the enslaved residents, planters, and overseers. In the New River Valley, Belize, enslaved people lived in temporary camps while cutting and processing massive mahogany trees for export. A survey identified 19 sites that were surface collected, providing insights regarding social and economic conditions of the residents. But examination of the internal arrangement of these transient camps and their discreet activity areas such as individual slave houses, kitchen areas, or claimholder dwellings was impeded by bioturbation through natural flooding and agriculture. The survey also underscored the loss to industrial development of perhaps the largest of the woodcutter camps, known as Pembroke Hall, which became the site of the first sugar refinery in Belize. That loss was balanced, however, by the recent appearance of a detailed drawing of that camp, which provides a fresh dataset and locational framework through which artifacts from the related sites can be reexamined.

Finley, Whitney (University of Nevada, Reno), Caroline Syzdek (University of Nevada, Reno), Christopher Mayo (University of Nevada, Reno), and Christopher Jazwa (University of Nevada, Reno)

[124] *Subsistence Strategies during Early Village Formation on Santa Rosa Island, California*

At the time of Spanish contact, the Chumash of the Santa Barbara Coast and adjacent islands of Southern California lived in large villages under the control of chiefs. We use faunal data from a prominent settlement site, CA-SRI-130, on the south side of Santa Rosa Island to understand the transition to complex, high-population-density village settlement on the island. The densest occupation at CA-SRI-130 dates to the Middle period from approximately 1,650–1,100 years ago. While this predates the largest island villages, it otherwise resembles them in structure, with a high density of large, deep house depressions and dense faunal deposits. We compare the faunal assemblage to that at the nearby Late period village sites of CA-SRI-97 and CA-SRI-135 to determine whether dietary diversity and the contribution of fish and sea mammal at this earlier settlement site are consistent with the other large village sites. This will provide insight as to whether population density at CA-SRI-130 resembled that at the Late period villages and if dietary change accompanied the transition to denser village sites. This study has important implications for understanding the formation of chiefdoms among coastal hunter-gatherer fishers and the role of faunal resources in supporting increasing population densities.

Finn, Gabriel (Wapsi Valley Archaeology Inc.), Daniel Finn-Kandel (Wapsi Valley Archaeology Inc.), and Nurit Finn (Wapsi Valley Archaeology Inc.)

[207] *Between Passion and Practice: The Robert Voigt and Robert Beard Collections as a Lens on North American Avocational Archaeology*

Archaeological debate continues as to whether collaboration with private collectors preserves knowledge or legitimizes destructive practices. The Robert Voigt and Robert Beard Collections, composed of more than 3,000 artifacts amassed between 1968 and 2005 from more than 100 Iowa archaeological sites, provides a critical case study for evaluating how avocational practices simultaneously constrain and extend archaeological interpretation. Unlike most private holdings, these collections include site-level provenience, detailed inventories, and artifact labeling, which allow reconstruction of a collection timeline and the systematic analysis of tool typologies and raw material use. The preserved documentation enables a rare glimpse to examine collector behavior and to interpret long-term patterns of technological change and procurement strategies spanning over 10,000 years of Iowa's past. This case demonstrates the tensions between the ethical risks of normalizing unconstrained collector behavior and the analytical value embedded in well-documented private assemblages.

Finn, Jennifer [348] see Henrikson, L.

Finn, Nurit [207] see Finn, Gabriel

Finn, Nurit [204] see Finn-Kandel, Daniel

Finn, Nurit [228] see Maki, David

Finn-Kandel, Daniel (Wapsi Valley Archaeology Inc.), Nurit Finn (Wapsi Valley Archaeology Inc.), and Justine McKnight (Archeobotanical Consultant LLC)

[204] *From Kernels to Chronology: Refining Moingona Phase Oneota Chronology and Agricultural Practices through the Fort Des Moines Site #2 (Site 13PK61)*

The Moingona phase of the Central Des Moines Valley represents the earliest expression of Oneota settlement in Iowa. Yet the Moingona phase remains poorly defined chronologically, a difficulty which compounds modern understanding of other cultural traditions, such as the reconstruction of subsistence practices. Excavations at Fort Des Moines Site #2 (13PK61) address these gaps through analysis of more than 30 radiocarbon dates, the largest dataset yet analyses for a Moingona Oneota site, together with macrobotanical analysis and stable isotope analysis of recovered plant remains. The resulting sequence places the site within a constrained chronological window, providing an anchor for the poorly resolved Moingona phase timeline. Plant remains indicate a strong emphasis on *Zea mays* ssp. *mays* along with *Phaseolus* bean, Eastern Agricultural Complex staples, and other locally available fruits and nuts. Isotopic signatures from

charred maize suggest soil management practices consistent with sustained agricultural productivity. Together, these findings establish Site 13PK61 as a key reference point for refining Moingona phase chronology and agricultural strategies, with broader implications for understanding Oneota expansion and the intensification of maize-based agriculture in central Iowa.

Finn-Kandel, Daniel [207] see Finn, Gabriel

Finn-Kandel, Daniel [228] see Maki, David

Firenzi, Alexandria (UNR)

[167] *Modeling the Past, Informing the Future: Archaeological Approaches to Climate Variability*

[WITHDRAWN]

Firenzi, Alexandria [72] see Saper, Shelby

Fishburn, Eleanor [219] see Bailey, Alva

Fitch, Simon [228] see Cook Hale, Jessica

Fitzhugh, Ben [313] see Corrales, Jillyan

Fitzmaurice, Rosamund (Independent Researcher)

[277] *Energetics, Capacity, and Viewshed at Lamanai's Terminal Classic Ballcourt: Preliminary Study and Plan for Excavations*

Architectural energetics is a well-established method of measuring labor and determining methods of labor organization among societies. Capacity analyses help archaeologists to determine the maximum number of individuals who could reasonably fit into particular structures, thus aiding understandings of the use of the structure. Finally, viewshed analyses demonstrate the visual impact of structures on their surroundings, and thus their potential importance. Scholars use such measures across Mesoamerica to answer questions about control over labor, practical use of structures, and local pride in monumental architecture. This poster proposes a combination of these methods for the known ballcourt (N10-40/41) at the Maya site of Lamanai, Belize. We present preliminary analyses of these combined methods as well as a plan to refine measurements and test ideas with targeted excavations. Based on these observations, I propose a ratio of labor:use for the Lamanai ballcourt to determine the number of person-days necessary to construct a structure balanced against its maximum use as described by capacity and viewshed. This ratio of labor:use can help archaeologists determine the types of labor organization for certain structures, ranging from voluntary to coercive. Focus on the ballcourt furthers the understanding of Lamanai's labor management during the Terminal Classic period.

FitzPatrick, Mackinley (Harvard University)

[43] *Khipu Knots and Data Plots: Materiality in a Digital Age*

With the digital turn squarely upon us, archaeologists are increasingly amassing large datasets and applying computational tools, from data science to artificial intelligence. This presentation examines what can be gained from this digital revolution—and what we must be careful not to leave behind. Using khipus—Andean knotted-cord records—and ongoing decipherment efforts as a case study, this presentation explores how we might bridge the gap between material things and their digital snapshots. Khipus are unique not only for what they encode, but because the information they record is inseparable from the medium itself. Their tactile nature and material irreducibility make them an ideal lens for reflecting on the promises and pitfalls of digitization. In what ways can the digitization of khipus, as well as other archaeological datasets, benefit from a material-based approach? And how might material study, in turn, be enriched by digital methods? In an era of expanding digitization and increasing pressures toward standardized, machine-readable data in archaeology, what role does materiality—with all its imperfections—still play? And what risks do we run if we strip it away?

Fitzpatrick, Scott (University of Oregon), and Victor Thompson (University of Georgia)**[271]** *From the Gates of Hell to the Garden of Eden: Jon Erlandson's Contributions to Island and Coastal Archaeology*

Jon Erlandson's contributions to island and coastal adaptations have moved our discipline forward in numerous and significant ways. His research, and that of his collaborators and students, has brought to the spotlight the importance of coastal adaptations in human history. Here we revisit some of the key themes that Jon has contributed to during his long career, including the harvesting of aquatic resources in deep time, their role in both human migration and evolution, and their impetus in shifts and innovations in human technologies. Erlandson's work demonstrates that these regions are far from being marginal or unproductive landscapes. Instead, they were dynamic settings where human societies not only persisted but flourished and offer critical insights into issues surrounding resilience and sustainability. Building on these contributions, we revisit several key themes from Erlandson's career and consider their implications for the future of island and coastal archaeology.

Fitzpatrick, Scott [159] see Montenegro, Alvaro

Fitzpatrick, Scott [271] see Rick, Torben

Flad, Rowan [261] see Lin, Kuei-chen

Fladd, Samantha (Washington State University), and Sarah Kurnick (University of Colorado Boulder)**[274]** *The Empire of Archaeology in Interpretations of the Past*

What evidence is valued in archaeology? And, who defines what constitutes evidence within the discipline? As archaeology confronts its entrenched legacies of colonialism, scholars too often overlook how archaeology itself acts as an "empire." Mirroring the linear progress and rises and falls often encapsulated in archaeological narratives about the past, the discipline itself regularly recounts its own progress narrative from culture historical descriptions to the peak of objective, neutral, processual science, before its descent into postprocessualism. Through a consideration of archaeological terminology, photographs, and maps, we illustrate the ways purportedly neutral and objective methodologies introduce value systems that reify the position of archaeologists as arbiters of the past. Drawing from a wide range of examples in the discipline, we question what it would mean for the field to center other approaches. Rather than watch the discipline retreat to a claim of scientific objectivity, particularly in this political moment, we advocate for increased reflexivity regarding the progress made in recent decades and a renewed commitment to rehashing and reshaping the contours of the empire that is archaeology.

Flammang, Amandine (Cornell University)**[337]** *Different Kinds of Dead? Taphonomical Analysis to Explore Funerary Deposition Using Andean Commingled Remains*

The interest in commingled skeletal assemblages is a relatively recent new advance in bioarchaeology. Developments in methodology of the French "archaeothanatology," which has long dealt with communal tomb contexts, have only recently reached the English-speaking world, and in particular Andean bioarchaeology. In the Andes, the ontological status of the dead involved constant interaction with them, leading to varied practices in terms of funerary deposition and postmortem manipulation of the remains. Moreover, in the highlands, subsequent looting adds further complication when trying to interpret these already complex ancient practices. This paper describes a detailed taphonomical analysis, including bone representativity, of four commingled assemblages from the Upper Nepeña drainage, Peru, dating from the Late Intermediate period (1000–1400 CE). Coupled with standard biological profiling, the assessment of the preservation of the assemblages and, crucially, their comparison, suggests different types of funerary depositions and funerary practices. These include the primary deposition of mummified individuals, secondary selection of specific anatomical elements, and possible secondary depositions of bone bundles. This research highlights the importance of recording taphonomy in a standardized manner and the value in reporting it, especially when dealing with commingled contexts. ***This presentation will include images of human remains.

Flatt, Brittany [194] see Jacobson, Jodi

Fleisher, Jeffrey (Rice University), Zachary McKeeby (University of Virginia), Laure Dussubieux (Field Museum of Natural History), Matthew Pawlowicz, and Abigail Chipps Stone (Illinois State University)

[162] *Glass Beads in Zambia in the First and Second Millennium AD*

This paper presents results of typological and chemical analyses of glass beads from six sites in western Zambia. The assemblage includes 341 beads, of which 112 were analyzed by LA-ICP-MS. The results of these analyses are the most comprehensive presentation of imported glass beads in Zambia and provide evidence that glass beads from Indian Ocean networks were traded north of the Zambezi since the first millennium AD. The assemblage includes beads from at least four of the established bead series known from southern Africa. This paper will discuss the distribution of these beads across sites in western Zambia and possible trade routes through which they arrived. Finally, the paper will address some issues encountered in linking beads to established series.

Fleisher, Jeffrey [357] see Pawlowicz, Matthew

Fleisher, Jeffrey [357] see Stone, Abigail

Fletcher, Emily

[352] *The Legacy of the Gulkana Site: Collaborative Digital Archaeology and Northern Dene Technology*

Even 50 years after initial excavations, the legacy data from the Gulkana site still holds value to both archaeologists and Northern Dene communities as a locus for copperworking innovation. Guided by the FAIR and CARE principles, this digital public archaeology project was designed to revitalize this important legacy dataset into a resource that is useful not only to archaeologists, but also to Ahtna community members. Ahtna leadership identified target outreach activities, research questions, and final products. Legacy data from three decades of excavations at the Gulkana site were combined into the first comprehensive dataset about the site.

Flicker, Dylan (Harvard University), Kaedan O'Brien (SUNY Oneonta), John Rowan (University of Cambridge), and Marta Mirazon Lahr (University of Cambridge)

[350] *Integrating Multiple Trophic Levels to Account for Carnivore Bone Accumulation Bias in Fauna-Based Paleoenvironmental Reconstructions*

Understanding human-environment interaction in the past requires reconstructing ecologies through indirect proxies. Ecomorphological analyses of fossil Bovidae are frequently employed to extrapolate paleoenvironments; however, the assumptions inherent in such reconstructions are seldom explicitly stated, quantified, or addressed. Here, I examine bias resulting from the site formation processes at two South African Pleistocene cave sites, Swartkrans and Kromdraai. These sites are suggested to have formed partly due to carnivore behavior, with many non-carnivoran fauna accumulating after being dragged in as prey. This project employs established taxon-free ecometric methods to test the hypothesis that this nonrandom accumulation process biases ecological reconstructions from herbivore remains. I present the first ecometric paleoenvironmental reconstructions based on bovid dental data from Swartkrans and Kromdraai. I then present alternative paleoenvironmental reconstructions from carnivore dental traits. By combining bottom-up and top-down proxies, this work demonstrates that, in the context of these sites' formation processes, sole reliance on the presence or absence of herbivore taxa is insufficient to infer paleoenvironment. This emphasizes that the record should be viewed as an actively filtered product of both biological and geological processes, rather than a passive archive of past life. Complete paleoecological reconstructions must integrate multiple trophic levels and site formation processes.

Flint-Garcia, Sherry [354] see Fairbanks, Regina

Flood, John [264] see Blair, Christopher

Florence, Monica [304] see Biondi, Ella

Flores-Blanco, Luis (ASU), Melissa Romero (UNASAM), Kusy Toledo (UNASAM), Gonzalo Irureta (UNMSM), and Edith Champi (UNSAAC)

[40] *Early Funerary Traditions in the Titicaca Basin: Archaic and Formative Period Evidence from Kaillachuro (5.3–3.0 ka)*

This paper presents archaeological evidence of two distinct funerary traditions in the Titicaca Basin observed at the site of Kaillachuro. During the Terminal Archaic period (5.3–3.5 ka), burials at Kaillachuro are characterized by their simplicity: single graves, secondary burials—mostly of males—moderate use of ochre, and no associated architecture. These practices reflect an intimate relationship with the dead within semisedentary societies, albeit with a biased selection of individuals by age and sex. In contrast, toward the Early Formative period (3.5–3.0 ka), the site reveals a significant change: the appearance of funerary cists with stone masonry, secondary burials that continue to include males but also incorporate children and women, sometimes multiple graves, extensive use of ochre, and evidence of burning to seal burial contexts. This evidence suggests a more elaborate, more inclusive ritual and an increasing formalization of mortuary treatment. This transition indicates a transformation in forms of memory, community identity, and the management of ritual space. It is proposed that these two funerary traditions, recorded at a single site, reflect broader changes in the social organization of the Titicaca Basin.

Flores-Blanco, Luis [343] see Haas, Randy

Flores-Blanco, Luis [173] see Williams, Patrick Ryan

Flores Colin, Alberto [35] see Lentz, David

Flores Colin, Alberto [223] see Montgomery, Shane

Flores Esquivel, F.C. Atasta [312] see Vázquez López, Verónica

Flores Manzano, Carlos (Yale University)

[252] *The Rise and Fall of The Kingdom of Chalchuapa*

This study explores the rise and decline of the Kingdom of Chalchuapa by combining lidar technology, settlement pattern analysis, and a review of key sociopolitical and material traits such as obsidian, ceramics, sculpture, and writing. Lidar imagery reveals a complex and hierarchical settlement structure centered on a monumental core, surrounded by secondary sites, agricultural terraces, and road networks that illustrate the kingdom's organizational capacity. These data, integrated with traditional archaeological evidence, suggest that Chalchuapa thrived through its control of resources, long-distance trade, and its role as a cultural and political center in the region. Material culture, including diagnostic pottery styles, obsidian industries, and stone sculpture, highlights the sophistication and far-reaching connections of this polity. Writing and iconography further underscore its integration into wider Mesoamerican traditions of power and representation. Importantly, new research has uncovered gaps in the archaeological record that hold promise for clarifying the territorial extent and influence of Chalchuapa prior to the Ilopango Caldera eruption, an event that dramatically altered the cultural landscape of the region. By bridging new technological approaches with classic archaeological methods, this study repositions Chalchuapa as a pivotal case for understanding resilience, complexity, and collapse in ancient Central America.

Flynn-Arajdal, Yasmine, Christina Halperin (Université de Montréal), Katherine Miller Wolf (University of West Florida), Jean-François Hélie (UQAM), and Tagnon Missihoun (Université du Québec à Trois-Rivières)

[292] *Dietary Practices of Precolumbian Maya Children from the Terminal Classic City of Ucanal, Guatemala*

The process of weaning and the introduction of solid food in the diet of children represent important milestones in the formation of social persons. Food consumption practices can be rooted in regional identity, age, sex, and various aspects of personhood. In the Maya area, initial studies of weaning among precolumbian populations have suggested that this process may occur around the ages of 2–4 years old. Although initial studies have indicated that girls may have gone through the weaning process earlier than their male counterparts, more research is needed from different regionally specific datasets to better understand this pivotal period of childhood through the lens of sex and gender. This paper combines the analysis of the

sexually dimorphic peptides of the Amelogenin protein in tooth enamel with the isotopic analysis of carbon and nitrogen to provide insight into the diet and weaning of biochemically sexed individuals at the archaeological site of Ucanal, Petén, Guatemala. We seek to determine if patterns in access to solid food and weaning practices identified from Terminal Classic (ca. 810–950/1000 CE) Ucanal correspond with initial studies of precolumbian children elsewhere in the Maya Lowlands and to better understand childhood as it intersects with gendered practices.

Folch, Ramon (SHESC-Arizona State University)

[161] *The Postclassic Sites of Comitán, Chiapas: New Data, New Sites, New Possibilities*

Locating two sites in the region of Comitán that are mentioned in historical accounts of the sixteenth century adds to the previously known sites of Pantla and Atahuistlan, excavated and published in the 1990s. Opening new areas of study and models to explain settlement patterns, craft production, and heritage management in the area. Postclassic archaeology in the region of Comitán has been based on isolated finds and the exploration the site of Los Cimientos carried out in the last century. The sites of Tepancuapa and Zacualpa show how defensive sites were associated to ceramic production sites, fishing, and ritual landscapes. Expanding the universe of sites from this time lets us take a deeper look into the lifestyle of the inhabitants of the borderlands of the Maya and Spanish controlled regions of Chiapas, which directly impact the history of modern inhabitants where written documents are rare. Mapping, archival research and ethnoarchaeology show exciting possibilities for the little-known Tojolabal and Chuj Maya archaeology.

Foley, Sarah (ICArEHB-Universidade do Algarve, Faro, Portugal), Gina Buckley (ICArEHB, Universidade Do Algarve), Hannah James (Vrije Universiteit Brussels, Belgium), Christophe Snoeck (Vrije Universiteit Brussels, Belgium), and Nuno Bicho (ICArEHB, Universidade do Algarve)

[221] *Toward a Bioavailable Sr-Isoscape of Mozambique: Analysis of Faunal Enamel from Colouche I Cave*
Mozambique provides a critical landscape for understanding the dispersal of modern *Homo sapiens* across Southeast Africa during the Late Pleistocene. Investigating this expansion requires attention to localized patterns of landscape use and its impact on population dynamics and behavioral evolution. Strontium ($^{87}\text{Sr}/^{86}\text{Sr}$) isotope analysis has become a fundamental tool for detecting past human mobility. However, due to the scarcity of human remains in this temporal and regional context, it is necessary to infer human subsistence behavior and landscape use from isotopic signatures in mammalian tooth enamel. This presentation examines faunal mobility in central Mozambique through Sr-isotope analysis of mammalian tooth enamel excavated from Colouche I Cave in the Inhambane Province. These results are integrated with the development of a bioavailable Sr-isotope ($n = 41$) baseline for central Mozambique using modern plant sample, which provides an essential foundation for future studies of faunal and human mobility, subsistence, and resource procurement strategies. This research advances understanding of regional mobility during the Late Pleistocene and supports international efforts to map $^{87}\text{Sr}/^{86}\text{Sr}$ isotope variability across Africa.

Follensbee, Billie (Missouri State University)

[307] *Picking through the Evidence: Using Chaîne Opératoire to Examine the Morphology of Formative Period Mesoamerican Greenstone Picks, “Spoons,” and Shells throughout Their Life Cycles*

Recent research has convincingly proposed that Classic and Postclassic period Mesoamerican and Isthmian greenstone artifacts were not exclusively decorative ornament or purely symbolic objects but also served as functional tools. Nevertheless, studies proposing that Preclassic/Formative period greenstone artifacts may have served as functional tools continue to be challenged, with these challenges often based on the forms of specific examples of the artifacts. This study reanalyzes Preclassic/Formative period greenstone artifacts known as picks, trilobe “spoons,” and shells using the *chaîne opératoire* approach and experimental archaeology to examine the morphology of the artifacts and how their forms likely changed throughout the artifacts’ life cycles. The different forms of the surviving artifacts are reconsidered through the lens of breakage, repair, modification, and use-wear, with the additional consideration that Mesoamerican greenstone objects are known to have served as inalienable goods that were further modified and repurposed over multiple generations, also likely changing their functions and meanings.

Fonseca Ibarra, Enah (INAH)**[164]** *Identities and Rituals: Traces of the Social Component at Teopancazco, Teotihuacan*

The study of 2,935 ceramic figurines recovered under the project “Teotihuacan: Elite y gobierno” (led by Dr. Linda R. Manzanilla) explores a highly communicative archaeological indicator. By analyzing morphological and spatial patterns—alongside associated elements—we propose potential uses/functions of these figurines at Teopancazco, linking them to ritual practices that varied by figurine type, location, and chronological phase. Spatial distribution analysis reveals differences between sectors of this neighborhood center, offering insights into the ceremonies conducted and the social groups that may have coexisted in each area over time. This work presents hypotheses on how ritual activities and community dynamics were structured within Teotihuacan’s urban landscape.

Fonseca Ibarra, Enah [276] see Leiva, Jennifer

Fontan, Marco [107] see Vasquez-Young, Aria

Fontenla, Ruth (Universidad Mayor de San Andres), and José Capriles (Pennsylvania State University)**[306]** *Ceramic Traditions, Landscape, and Social Processes of the Early Formative Period in the Taraco Peninsula*

The Early Formative period (1500–800 BCE) was a pivotal time in the south-central Andes, marked by the emergence of agropastoral villages and the consolidation of ritual and community practices that reshaped the landscape and social structures. This presentation reports the results of analyses on ceramic assemblages from the 2022 and 2023 excavations of the Chiripa and Chiaramaya sites on the Taraco Peninsula, Bolivia. A morpho-technological analysis, which integrated the study of formal and technical ceramic attributes, not only illuminated stylistic choices regarding raw materials, forms, and finishes but also revealed manufacturing traditions and insights into learning and cultural transmission processes. The recovered ceramic materials provide crucial information about continuities and variations in pottery practices, as well as the environmental, social, and regional connections that integrated these communities into a broader network of landscape use and social interaction. Collectively, these results contribute to a more comprehensive understanding of the landscape, cultural traditions, and social processes that defined the Early Formative period in the Lake Titicaca Basin.

Fontenla, Ruth [91] see Blom, Deborah

Ford, Anabel (MesoAmerican Research Center, UCSB), Lingbi Zhong (UCSB), and Sherman Horn III (Goodwin & Associates)**[266]** *Preclassic Construction of El Pilar: Relative and Absolute Dating*

This paper will examine the earliest Preclassic construction history of the main Plaza Copal at El Pilar. We combine ceramic chronological characteristics and ¹⁴C radiocarbon dating to analyze the changes in assemblage and sequence. Changes in ceramic assemblages from construction fill indicate shifts in civic construction efforts and planning between the Middle and Late Preclassic periods. According to the ceramic sequence, the Middle Preclassic marks the initial phase of civic building at El Pilar, while the Late Preclassic indicates a transition toward organized and complex architectural planning. Radiocarbon dates from major structures surrounding Plaza Copal validate the long-standing traditional ceramic dating sequence. Together, the use of relative and absolute dating methods provides a reliable framework for understanding the chronology of early civic construction at El Pilar.

Ford, Anabel [81] see Fedick, Scott

Ford, Anabel [165] see Horn, Sherman

Ford, Ashton [181] see Trenkle, Logan

Ford, Ben (Indiana University of Pennsylvania)**[344]** *Fishing to Farming: The Lagoa da Pederneira, Portugal, Landscape and Rapid Environmental Change*

From the thirteenth to eighteenth century the Lagoa da Pederneira, located inland of Nazaré, Portugal, transitioned from a maritime environment, to riverine, to agricultural as the lagoon rapidly filled with sediment. Due to a complex combination of geological and human causes, a landscape that once supported large ships and fishing communities is now farmland. A similar process occurred in several other locations along the Portuguese coast. A combination of geological, archaeological, and historical data are brought together to explore how the residents of the lagoon adapted to this changing landscape.

Ford, Emily [283] see Sain, Douglas

Forde, Jamie

[97] *The Qualities and Ontologies of Silk Vestments in Colonial Mixtec Churches*

This paper examines liturgical vestments made of silk that would have adorned churches in the Mixteca Alta region of Oaxaca during the sixteenth century. Virtually all of these objects are lost to us today; however, we can attempt to reconstruct them from colonial written inventories and pictorial records. In this paper, I focus on a list of purchases of liturgical vestments depicted in the *Codex Sierra*, using collections of analogous items still preserved in Europe in an attempt to elucidate what such items might have looked like and how they would have been crafted. While church adornments made of silk were seen as fundamental necessities throughout colonial Mexico and the broader Catholic world, in the Mixteca Alta, they took up more significant meanings, as the Indigenous communities that purchased them simultaneously produced the raw materials from which they were woven. To further explore this dynamic, I examine sixteenth-century Indigenous terms for silk and related objects, suggesting these materials were related to other precious prehispanic substances and folded into surviving Mesoamerican understandings of sacrality.

Forest, Marion (Sorbonne University)

[210] *Northern Michoacán in the Mesoamerican Postclassic World: A Perspective from the El Palacio Site*

Located in the north-central region of the state of Michoacán, Mexico, El Palacio is an extensive archaeological site whose occupation likely began in the ninth century and continued through the colonial period. Since the 1980s, various archaeological investigations have been carried out at the site, producing a significant corpus of material data. Among these are specific categories of objects—such as ceramic vessels, figurines, and obsidian artifacts—whose manufacturing processes, iconographic features, and stylistic traits demonstrate the site's incorporation into broad long-distance cultural networks. This paper presents a synthesis of these data with the aim of analyzing the degree of integration of this region into the dynamics of exchange and cultural interaction across Mesoamerica during the Early Postclassic period.

Forest, Marion [49] see Fafin, Manon

Forest, Marion [278] see Saumur, Jennifer

Forton, Maxwell (Binghamton University)

[344] *Processions and Spirals: Iconography and Human Movement at Chaco Canyon*

Located in northwest New Mexico, Chaco Canyon is a cultural landscape built around sacralized human movement, with systems of public architecture, roadways, and shrine networks designed to formalize the movement of people into the canyon, while artifactual evidence points toward large gatherings of people and the veneration of sanctified movement. This evidence forms the basis for interpretive models of Chaco being a regional ceremonial center and pilgrimage destination. This theory is in keeping with sacralized movements being an integral aspect of the ceremonies and ontologies of historic and contemporary Puebloan communities. I assess this model of Chacoan social organization through the placement of rock imagery in relationship to access points and corridors of movement at Chaco. Chaco Canyon is a figured landscape with thousands of petroglyphs and pictographs found in a range of forms and settings. Despite rock imagery in the American Southwest being an integral feature of pilgrimage journeys and cosmographically defining ceremonial spaces, the relationship of Chaco's landscape iconography to formalized movement and ceremonial performance remains largely unevaluated. I present an update to my dissertation research, showing how iconography functioned as a symbolic structure guiding and shaping the movement of people through the Chaco cultural landscape.

Foster, Cheryl (Louisiana State University), Heather McKillop (LSU), and E. Cory Sills (University of Texas at Tyler)

[165] *Methodological Advances in Imaging Classic Maya Wooden Architecture: A Case Study from Ta'ab Nuk Na*
The Paynes Creek Salt Works in southern Belize preserve an unparalleled record of Late Classic Maya wooden architecture, with posts and associated materials preserved in mangrove peat below the sea floor. At Ta'ab Nuk Na, one of over 100 salt production sites in the lagoon system, upright wooden posts delineating buildings remain in situ, providing rare insight into construction practices within a specialized production landscape. During recent investigations, selected waterlogged posts were documented and sampled directly in the field using controlled excavation and mapping procedures to record provenience in relation to architectural features. In addition to posts, fragments of wood charcoal were collected for comparative study. Imaging techniques, including high-resolution digital photography (scanning electron microscope, Leica MC205FA stereo/macroscope, Bausch & Lomb Stereo Zoom microscope, Dinolite) and 3D scanning (NextEngine, Artec Space Spider), were employed to capture fine structural details of both waterlogged wood and charcoal while minimizing handling stress. This integrated approach links site-specific field sampling with nondestructive digital imaging, establishing a methodological framework for the preservation and study of perishable wooden architecture at underwater Maya sites such as Ta'ab Nuk Na.

Foster, Cheryl [278] see Meaux, Amanda

Foti, Peyton, and Ryan Kennedy (Indiana University)

[279] *Narrating the Story-less: Understanding the Lives of Sex Workers through the Material Culture of New Orleans, Louisiana's Former Red-Light District "Storyville"*

New Orleans, Louisiana, encapsulates America's "melting-pot" notion, culminating in an area of diverse music, art, and food. Along with its richness in culture, the city became known for its richness in vice. Storyville (1898–1917), the city's former red-light district, was once a central hub for the city's culture and vice. Crowned as one of the food capitals of the United States, food and cuisine are an integral part of the city's history and culture. But what does that history look like in the context of a nineteenth-century red-light district? This poster examines the faunal material recovered during the excavation of one city block in the former footprint of Storyville. This project aims to offer a new perspective into the lives of sex workers living in Storyville, especially regarding their diet and cuisine. This research will focus on lifestyles, dietary practices, food waste, and transportation, using faunal analysis to begin reconstructing the lives of the people residing in the former red-light district.

Fouche, Jodi (University of Alaska Fairbanks), Cinthia Campos-Hernandez (University of Wyoming), Haley Purifoy, and Briana Doering (University of Wyoming)

[313] *A Proposal for Standardizing Methods in Paleoethnobotanical Data Collection for the Subarctic*
Early archaeologists' misconceptions about the significance of plant resources and the preservation of botanicals in subarctic archaeological contexts have hindered research for years, leading to an underrepresentation of these datasets. Recent studies, including our meta-analysis of soil samples from various sites in the interior, spanning from the Late Pleistocene to the historic period, demonstrate that macrobotanicals, particularly those affected by fire, preserve well. However, in our attempts to synthesize data, we noted variations in sampling and processing strategies across different projects. Here, we present our proposal for standardizing macro- and microbotanical sampling strategies from archaeological sites. The protocol can be adapted to fit different projects' budgets and goals. It will also help current and future researchers study and compare past people's subsistence and plant-use practices across time and space, revealing further insight into the social lives of plants, land use, and seasonality.

Fovenyessy, Stephanie (Chronicle Heritage), Kristin Landau (Chronicle Heritage), Nicholas Schulte, and Michael Mirro (Chronicle Heritage)

[283] *Integrating AI and GIS for Cultural Resource Management Projects*

The integration of artificial intelligence (AI) with geospatial technologies is poised to transform mapmaking, data visualization, and spatial analysis. As Esri introduces Beta versions of its AI Assistant, our team has had the opportunity to explore this emerging technology through hands-on testing of natural language prompts,

the development of innovative workflows, and a critical evaluation of its potential uses. Within the context of cultural resource management, we consider the benefits and limitations of AI-driven tools into traditional GIS practices. In this poster, we showcase several of our favorite applications, drawing attention to tools that show significant promise for future updates and implementation. We also present fun examples where AI outputs fall short of expectations, underscoring the continued necessity for human expertise and ongoing refinement. Together, these cases illustrate the dynamic and rapidly evolving relationship between AI and GIS, affording exciting new possibilities with cautious, informed adoption.

Fowles, Severin (Barnard College, Columbia University), Simona Cheung (Barnard College), Cayla Cruz Gancy, Lillia McEnaney, and Braylon Quiver

[114] *The New Tribal Museum: Challenges and Opportunities as Seen from the Picuris Pueblo Museum and Interpretive Center*

Amid widespread calls to fundamentally rethink the collection, curation, display, and interpretation of the ancestral belongings of Indigenous North American communities, tribally owned and managed museums are emerging as crucial spaces for the development of new protocols, representational strategies, and modes of collaboration with descendant stakeholders. In this poster we explore the challenges and opportunities that arose during our recent efforts to develop an inaugural exhibit at the newly reopened Picuris Pueblo Museum and Interpretive Center. Built in the 1960s, the original Picuris Museum was envisioned by tribal leaders as a form of local economic development, but its exhibits were designed by non-Native archaeologists for a decidedly non-Native audience. Shuttered in the 1990s, the museum languished for two decades, until a new generation of tribal leaders moved to reimagine, expand, and reopen the facility, significantly adding new collections capabilities to house and care for ancestral belongings long stored away from home in non-Native institutions. Here, we focus on the lessons learned.

Fowles, Severin [179] see Kirby, Julia

Fox, Griffin (Chronicle Heritage), Hanna Murphy (University at Buffalo), and Matt Matsulavage (University at Buffalo SUNY)

[112] *Practical Methodologies and Ethical Frameworks in the Preservation of Earthen Architecture*

The negative effects of anthropogenic climate change continue to pose significant risks for the long-term preservation and integrity of earthen cultural resources. To this end, there is a need for archaeologists and cultural heritage specialists to develop cost-effective and relatively nondestructive methods of analyzing, preserving, and restoring these resources when necessary. This poster serves as both a practical exercise in measuring the value of relatively accessible analytical techniques such as the use of portable X-ray fluorescence (pXRF) both in field and laboratory settings and also as a contribution to the wider conversation among heritage professionals regarding the how, why, and where of earthen architectural preservation and restoration. Is it better to reconstruct or stabilize resources with original materials or techniques? Or is it possible to utilize more rigorous restoration techniques that better withstand the damages of climate-related wear and still maintain a resource's character for future generations?

Frachetti, Michael (Washington University)

[321] *Alterity and Political Autonomy among Turkic Highlanders of Central Asia, Sixth–Eleventh Century CE*

Medieval Turkic populations are best known for forging formidable nomadic polities in the steppes of Central Asia, where they reigned for centuries from the sixth–thirteenth centuries of the Common Era. On the periphery of their steppe homeland, however, the integration of Turks into the urban oases, city states, and shifts in political hegemony that spanned such areas, varied according to a range of facets shaping political, ideological, and military alignment and participation on the part of Turks with their neighbors, from Xinjiang, Tibet, and Central Asia (Sogdiana). Although a range of archaeological and art historical data illustrate the ways in which Turks simultaneously participated in major currents of political and economic formation, new data is also revealing how they used unique material and ideological signaling to differentiate themselves both as cultural entities and as autonomous political powers, positioning them as intricate players within the shifting hegemonic landscape of Medieval Central and Inner Asia. This paper reviews the Turkic expressions of autonomy and alterity, within and between a range of complex social and political settings throughout the

early medieval period in Sogdiana and Ustrushana, and more widely across Asia from the sixth to thirteenth centuries CE.

Frachetti, Michael [315] see Berner, Jack

Frachetti, Michael [315] see Jo, Mirae

Frachetti, Michael [315] see Tashmanbetova, Zhuldyz

Frahm, Ellery [336] see Gill, Jayson

Frahm, Ellery [296] see Ru, Huiwen

France, Phoebe [217] see Carter, Alison

Franchetti, Fernando [95] see Neme, Gustavo

Franco, Nora (CONICET & Universidad de Buenos Aires), Ryan Parish (University of Memphis), and Lucas Vetrivano (Universidad de Buenos Aires)

[93] *First Approaches to Siliceous Rocks Variability in the Southern End of the Deseado Massif, Patagonia*

Early human occupation sites were identified in the Deseado Massif, an area with high siliceous rock availability, which is not present in nearby regions. In its south, La Gruta I site was dated at ca. 12,800 cal BP, and it was occupied during a wet period in the area. It was probably a game spotting site, located by a lagoon that is mostly dry today. Siliceous rocks are abundant in the area, including heterogenous outcrops with great variability in color and quality. The best raw material sources were utilized for knapping artifacts. The macroscopic variability of these sources was analyzed and different availability areas were identified. On this basis, reflectance spectroscopy was used in order to discriminate between them. Here we present the preliminary results on the source variability, source characterization, and use.

Francois, Alexis (Epsilon Systems Inc.), and Austin Ringelstein

[219] *Black Archaeological Perspectives from the Alice Ballard Homestead Site*

In 2025, we have come to understand that working on archaeological sites and collections associated with Black Americans should operate in the spirit of and embody elements of restorative justice. Restorative justice casts a wide net ranging from excavating “dangerous histories,” divesting from colonial narratives, and providing platforms to address new questions unshackled from Eurocentric perspectives. But what does restorative justice look like when Black archaeologists work on Black American sites? It has the potential to heal generational trauma and provide a lens of interpretation through lived experiences. Recent investigations at the Alice Ballard Homestead site can provide avenues for restorative justice and anti-racist paradigms. A portion of this paper is rooted in this experience, questioning why we know what we know about the Black postbellum experience and examining how we can shift the theoretical framework to one more rooted in action-oriented and relevant restorative justice work with a public archaeology component.

Franconi, Tyler (Brown University)

[174] *“Undoubtedly the Liberator of Germany”: The Uneasy Reception of Arminius in Heavy Metal*

Heavy metal is a musical genre built on transgression and has often championed rebellion and a strong sense of anti-modernity in its lyrics. Many artists turn to historical figures for inspiration, especially drawing on early Roman sources that describe resistance to their rule in western Europe. Figures like Vercingetorix or Boudicca have thus received substantial attention from bands as heroic rebels against Rome. It is therefore notable that Arminius, the Cheruscan warrior who rebelled against Roman occupation and annihilated three legions in Germania in 9 CE, is less commonly encountered in metal. More recently, the Nazis championed Arminius as the progenitor of the Aryan Race, and he has largely been regarded as an historical persona non grata since the end of World War II. However, the archaeological discovery of Arminius’s battlefield at Kalkriese, Germany, in 1987 brought him back into the public eye, culminating in the dedication of a new museum in 2009, 2,000 years after the battle. Subsequent attempts to rehabilitate Arminius’s image have been met with varied success. This paper explores metal’s unease with the tension between ancient reality and modern interpretation, demonstrating that even a genre that revels in controversy can struggle with such a fraught legacy.

Frandsen, Kristina (Museum of Idaho), L. Suzann Henrikson (Museum of Idaho), and Joshua Gene Clements

[211] *Investigating the Owl Cave Bison Bone Bed: Evidence of An Early Holocene Mass Kill*

Previously published research on Owl Cave focused on the Pleistocene mammoth remains found in the deepest layers of the cave, glossing over the dense bison bone bed in Layer 16. Although information gleaned from the lower layers of the cave is relevant to understanding its function and helps contextualize its presence on the Eastern Snake River Plain, recent taphonomic analysis of Layer 16 has shed new light on Holocene-era human-animal relationships, with Owl Cave as a spatial nexus. In 2018, the Museum of Idaho received into its collections all the material excavated from the Wasden archaeological site. Since then, the museum has spearheaded a monumental rehousing and re-cataloguing effort. Using the newest catalogue, we have been able to analyze taphonomic signatures present in a 48m² area of the bone bed and compare the data with information from other well-documented archaeological sites of the same time period. Our data suggests that over 100 bison were involved in a single mass kill event on the Eastern Snake River Plain during the early Holocene, and that the ancestors of the Shoshone and Bannock tribes butchered the bison using a “gourmet” butchering pattern similar to terminal Pleistocene / early Holocene sites on the Great Plains.

Franklin, Hayward [294] see Rospopo, Steven

Franklin, Jay [345] see Bryce, William

Franklin, Lauren (University of Arizona)

[336] *How Culture Takes Shape: 3D Geometric Morphometric Analysis of Retouched Flakes from Tabun Cave, Israel*
Tabun Cave in Israel is an iconic Lower-Middle Paleolithic site known for its long cultural sequence and its rich and variable artifact assemblages. While Tabun has been studied for nearly a century in many different ways, this perspective incorporates 3D geometric morphometric (GM) analysis to explore trends in stone tool manufacture and artifact form during the late Lower Paleolithic (LP) Acheulo-Yabrudian (AY) at Tabun. AY lithic industries are characterized by the extreme persistence of relatively few tool types manufactured in diverse ways. This behavioral continuity is maintained not just through artifact form but also in techniques like heavy and/or extensive retouch intended to extend tool life histories. GM techniques are especially helpful in examining these life histories because they allow us to control for allometry, or how size relates to shape. This gives GM analysis an advantage over traditional linear analysis because we can more clearly capture variation in form without correlating it with size. Whether the allometry of these AY retouched flakes is consistently correlated with or independent from life history (and therefore reduction) will help explain how toolmakers at Tabun maintained such cultural continuity for so long.

Franklin, Maria [277] see Boyd, Douglas

Franklin, Maria [264] see Menaker, Alexander

Freeman, David

[90] *The Mystery of the Dry Creek Necropolis*

This study shows current results of the discovery of an undocumented site of burials on branches of the Lassen Trail, near their termini, in Tehama County. This research raised the question of why there is an increase of the burial rate on this portion of the Lassen Trail. Typically, burials are less than 0.1 per km, while this site is 14.28 per km. Using satellite, lidar, GIS, and HHRDD, these sites were found. Initially eight elevated rock features with attributes to four trail branches on a 3.5 km corridor were suspected to be pioneer burials (1850–1870). Six features tested positive for human remains by HHRDD Grebenkemper with Kalli, Lee with Saoirse under poor conditions. Two of these features, 220 m distance, yielded another 17 positive alerts in two groupings. These groupings suggested the burials were of a common site. Subsequent site interrogation yielded a possible total of over 50 burial sites 400 m in length. Speculation for this large number of burials has been focused on finding a currently non-documented mass casualty event as there is insufficient period population base to support this high burial concentration. More HHRDD coverage is needed to resolve this Gold Rush–era mystery.

Freeman, Jacob (Utah State University)**[263]** *Even Resilient Societies Experience Population Recessions*

Why do human populations experience long-term declines in their numbers and the productivity of their economies? To answer this question, we develop a general theory of innovation-driven infrastructure growth and recession under resource constraints. The model identifies two innovator's dilemmas that may lead to recessions in human systems. (1) The fast-slow innovator's dilemma describes a mismatch between the fast accumulation of people and technology on a landscape and slower changes in the abundance of resources. (2) The delicate balance dilemma describes a tension between the creation of new infrastructure networks and the destruction of resources. An over-reliance on network innovations that increase the productivity of capital can shrink the safe innovation space of a system and lead to the collapse of a coupled human and natural system. Based on an analysis of 33 archaeological regions with evidence of innovations in food production, we argue that recessions generated by dilemma (1) are common but not necessarily collapse generated by dilemma (2). These results suggest that greater social complexity increases the time-scale mismatch between the growth of human and resource systems, generating larger expansions (the party) followed by a recession (the hangover). Even human systems resilient to external shocks can experience recessions.

Freeman, Jacob [282] see Cleary, Celia

Freeman, Jacob [263] see Dastrup, Neil

**Freiwald, Carolyn (University of Mississippi), Terry Powis (Kennesaw State University),
Christina Halperin (Université de Montréal), and Keith Prufer (University of New Mexico)**

[157] *What We Know (and Wish We Knew) about Jute (Pachychilus sp.) Snails*

Freshwater gastropods called *jute* are found across the Maya region, and *Pachychilus* species snail shells appear in diverse archaeological contexts. The river and stream-dwelling snails have long fascinated researchers as they are a traditional food that has been used for millennia, and the shells number in the thousands and even millions at archaeological sites. Our knowledge of past human behavior, however, is limited by sparse information on the ecology of the snails themselves, including species distribution and the ecological conditions required for healthy populations. This presentation first summarizes available research, including type specimens in museum collections, attempts to experimentally raise snails, and available genetic and isotopic data. It then reviews archaeological publications before describing an ongoing project in the Maya region on the cultural ecology of jute use, past and present. Our multiphase project will explore modern *jute* biological (and later genetic) diversity in northern Guatemala and Belize. We will combine biological investigations with interviews with modern families who use jute snails to guide our interpretations of animal management among past Maya populations. Investigating a traditional soup—*sopa de jute*—can inform a broader understanding about resource use during shifting environmental conditions.

Freiwald, Carolyn [282] see Mink, Kirsten

Freiwald, Carolyn [62] see Snyder, Madeline

French, Kirk (Pennsylvania State University)**[339]** *Take a Shot of Archaeology: An Overview of Penn State's Booze and Culture Class*

The Anthropology of Alcohol (ANTH140) is one of the largest anthropology courses in the United States—with over 700 students enrolled each semester. Utilizing a four-field approach, the course investigates the world's earliest and most utilized psychoactive drugs. The rich and colorful history of alcohol in the United States, and particularly on college campuses, helps to fuel student interest. The course introduces students to the basic concepts of anthropology by highlighting the variability of alcohol use through time and space. Relying on ethnographic, biological, linguistic, and archaeological data, the course introduces students to what we know about how humans first produced and currently use fermented beverages across cultures. From the world's first beer in China to craft breweries in the United States, the class explores the historical and societal impacts of alcohol production. From the ceremonial use of fermented agave in central Mexico to ritualized tailgating at football games, students are presented with the highly varied ways in which alcohol is consumed.

Freund, Kyle, and Jeremias Pink**[198]** *Assessing the Impact of Firing on the Trace Element Composition of Clays*

The use of energy-dispersive X-ray fluorescence spectrometry (XRF) for the analysis of ceramic artifacts has typically centered on identifying distinct geochemical groups within an assemblage and/or matching ceramic artifacts to specific clay sources or alluvial systems. For those focused on clay provenance, there are methodological issues surrounding the effects of firing on the composition of raw clays that are not being systematically addressed in various archaeological contexts. For this study, raw clays were collected from 17 localities in the Pioneer Basin of eastern Idaho and analyzed with XRF both before and after firing to test whether there were significant differences in the trace element composition of these materials. The results of this study have implications for future provenance studies that compare ceramic artifacts to raw or fired clays, in turn developing methods to compare pre- and posttreatment multivariate data using a combination of statistical techniques.

Freund, Kyle [198] see Clements, Joshua

Friberg, Christina (Field Museum), Emily Starck (Field Museum), and Erin Murphy (Field Museum)**[56]** *Finding Woolly Dogs at the Field Museum***[WITHDRAWN]**

Friberg, Christina [123] see Yeahia, Sabrina

Fricke, Jeremy (Camp Naco)**[34]** *Borders, Boundaries, Bridges: Embracing Complexity at Camp Naco in the Arizona Borderlands*

Camp Naco, a historic Buffalo Soldier post on the Arizona–Mexico border, offers a lens into military history, Indigenous land use, and cross-border interactions. This project employs community-engaged archaeology to explore the site's layered histories, integrating artifact analysis, landscape study, and oral histories with participatory programs for local residents, descendants, and visiting scholars. The work is not without challenges: navigating sensitive histories, negotiating diverse perspectives, and confronting gaps in the historical record requires patience, humility, and dialogue. By centering historically marginalized voices, the project reveals the tensions and contradictions inherent in borderlands history. Public workshops, site tours, and educational initiatives ensure research is accessible and meaningful, demonstrating that while community-engaged archaeology is complex and sometimes difficult, it can foster understanding, strengthen connections, and build bridges across communities.

Friend, Sadie [268] see Bartelink, Eric

Fries, Eric (ARAP), John Morris (National Institute of Culture and History, Belize), and Emilio Torres (UC Berkeley)**[355]** *Elite Influence in the Interstice: New Insights from the Aguacate Sites in Western Belize*

Recent efforts in remote sensing and ground truthing survey at the complex of Aguacate minor centers in western Belize have provided a new perspective on the nature of settlement patterns across the region at the northern frontier of the Belize River Valley. Resurveyed minor centers have proven to contain more extensive monumental features than previously recorded. Some of these minor centers are linked by chains of continuous settlement, suggesting that they are distributed nodes of elite activity within the greater settlement landscape rather than independent political centers. At the same time, new settlement features continue to be revealed by removal of vegetation cover throughout the project area. Documentation and evaluation of these features through satellite images and GIS analysis reveals a more densely populated landscape than previously thought, with many loci of settlement distributed throughout the area. The relationship between settlement clusters and monumental groups varies throughout the research area, and may provide insight into the variability in function of these monumental clusters.

Frisbie, Allyson

[202] *Understanding Religion, Memorialization, and Colonial Family Dynamics through the Study of Infant Burials in Providence, RI*

Founded in 1700 and active today, North Burial Ground (NBG) provides over 300 years of history of Providence, Rhode Island. As a common burial ground, its 40,000 tombstones materially reflect shifting cultural, social, and political views, evidence of the region's long-standing diversity. Studying tombstones and their iconography provides an avenue to understand values and traditions, and how they change over time. Through a summer-long study of infant (>1 year) tombstones from 1700 to 1812 at NBG, I ask: How are infants memorialized and grieved, and what does this tell us about the role of infants in the colonial family structure and religious dynamics? This project contributes new perspectives to the study of family dynamics at this time.

Frolík, Jan [297] see Rietz, Alexandra

Froman, Tara [91] see Masur, Lindi

Fruhlinger, Jake [74] see Amend, Tessa

Frye, Elena (Indiana University of Pennsylvania)

[281] *Searching for the Chapel School: Geophysical Investigations and Targeted Excavations at the Basilica of the Sacred Heart of Jesus (Conewago Chapel)*

Founded in the early eighteenth century, the Basilica of the Sacred Heart of Jesus (formerly known as the Conewago Chapel) is a Catholic church campus in Hanover, PA. At the time of its founding, the basilica was the largest Catholic church in the country, and the current church building is the oldest stone Catholic church in the United States. Throughout the church's nearly 200-year history, several buildings were constructed and subsequently demolished on the property, including the original chapel school building; however, the exact location of this building is not known. This project utilizes a noninvasive geophysical survey, including ground-penetrating radar and magnetic gradiometer surveys, to search for buried structural remains of the building. The results of the geophysical survey are tested using targeted archaeological excavations to confirm the presence of structural remains based on anomalies identified in the geophysical survey and attempt to associate any structural remains identified with buildings from the church's historical records.

Frykholm, Soren (University of Michigan), Ana Cristina Reyes García (UNAM), and Ricardo Higelin Ponce de Leon

[94] *Lifeways and Health at Monte Negro, a Late Formative Center*

Between 1937 and 1940, Alfonso Caso and his colleagues excavated at Monte Negro, a mountaintop settlement in western Oaxaca, providing early insights into Late Formative (ca. 300–100 BC) cultural developments. Javier Romero's bioarchaeological study of 28 individuals revealed unusually tall stature and a high frequency of dolichocephaly (relatively rare in Mesoamerica), as well as practices of annular cranial modification, trepanation, and dental inlay. The combination of biological and cultural traits remains unique in Mesoamerica and continues to spark debate over the origins and ethnicity of Monte Negro's inhabitants. Recent excavations (2023–2024) have expanded the skeletal sample with five additional individuals, allowing for reassessment using modern bioarchaeological techniques and comparative datasets from across Oaxaca. Here we present findings from ongoing research, focusing on (1) taphonomic processes and mortuary practices; (2) indicators of health, nutrition, and physiological stress; and (3) Monte Negro's place within broader demographic and epidemiological trends of the Late Formative. These analyses offer a new opportunity to situate Monte Negro within regional trajectories while reexamining the anomalous traits first recorded by Romero. ***This presentation will include images of human remains.

Fuenmayor, Daniela (Perennial Environmental Services), and Pamela Geller

[346] *Fast Fashion, Slow Decay: The Archaeology of Toxic Textile Waste*

Given the hyperaridity of Chile's Atacama Desert, preservation of ancient textiles—produced, utilized, and

intentionally interred by local communities for millennia—is exceptional. Today, archaeologists unearth the remnants of these past activities. They also encounter mountains of discarded clothing rising from the desert's sand to form one of the world's most striking archives of textile waste. These sites are more than just dumps—they are toxic landscapes, where dyes and fibers crafted from synthetic polymers accumulate, persist, and transform the environment. From an archaeological perspective, such modern deposits can be read through typology, degradation, temporal shifts, and spatial patterns, offering insight into how waste itself becomes part of cultural and environmental histories. In this presentation, we explore the legacies of textile pollution in the Andes, focusing on the Atacama as both a local crisis and a global case study of “plasticized” ecologies. Using historical aerial photography and spatial analysis, we trace the long-term consequences of textile waste for the environment and the communities of the area. Finally, we consider how fast fashion intensifies these dynamics, pushing even traditional textile regions into unsustainable systems of plastic-driven production and pollution.

Fuentes, Sarita [62] see Oshiro, Janet

Fujita, Harumi (INAH Centro BCS-La Paz)

[88] *Early and Middle Holocene Coastal Occupations at the Faro Punta Marquez Site, Baja California Sur, Mexico*
The Faro Punta Marquez site, located on the Pacific coast of the southern Baja California peninsula along the edge of the Magdalena Plains, contains a paleocoastal component dated to >10,000 cal BP. Extensive surface recordation and analysis of radiocarbon samples, artifacts, and faunal materials from three excavated units revealed a subsistence economy based principally on nearshore intertidal marine resources during three primary occupational periods dated to the Early, Middle, and Late Holocene. Currently, this is the only paleocoastal site component reported along the Pacific Coast south of the well-documented Terminal Pleistocene and Early Holocene sites of Cedros Island, though several paleocoastal sites and components have been documented along the Gulf Coast of the southern part of the peninsula. We present the results of our analysis including subsistence and technological trends for the Early (~10,600–9400 cal BP) and Middle (~6400–4300 cal BP) Holocene components demonstrating a significant change in the taxa and number of marine mollusks, crustaceans, and sea urchins harvested, indicating a severe transformation of the nearshore habitat in the site vicinity after 9400 cal BP, when the tested area of the site was abandoned, before being reoccupied in ~6400 cal BP.

Fuks, Daniel (Ben-Gurion University of the Negev)

[163] *Can Archaeobotany Promote Present-Day Agricultural Biodiversity?*

Biodiversity loss is a global challenge, directly associated with agricultural expansion of a small number of commodity crops. A recent review indicated that selective biases in modern agriculture may replicate themselves in environmental archaeology, specifically in geometric morphometric and ancient DNA analyses of archaeobotanical remains. After exploring this evidence, the present paper will draw on case studies from the Middle East and Mediterranean to ask whether the direction of influence can go the other way. That is, can research on ancient agriculture contribute to present-day biodiversity conservation efforts? Indeed, archaeobotany and related disciplines are uniquely poised to offer a deep historical perspective on how some crops became marginalized while others colonized the globe, and to examine the chronological depth of local growing conditions, agricultural traditions and sustainability. Such data on ancient crops, their past geographic distributions, domestication status, local significance and infraspecies diversity could be of great value for designing policies to expand and promote agricultural biodiversity.

Fuller, Dorian [315] see Radivojevic, Miljana

Fullerton, Helen (University of Oklahoma)

[58] *Evaluating the Distribution of Casas Grandes Polychromes and Symbolic Motifs*

The Casas Grandes ceramic tradition included a variety of striking polychrome types with both geometric and rarer figurative motifs. Researchers invoke the presence of these ceramics and, in some cases, specific motifs as key lines of evidence in evaluating the sociopolitical character of the central site of Paquimé and the larger Casas Grandes World. The content of designs is also employed in reconstructions of specific beliefs

and ritual practices known from regional ethnographic records. Despite this central place in interpretations, we have a very limited understanding of the actual frequency of polychrome ceramics and essentially no quantitative data on the commonality of the most relevant iconic motifs across the Casas Grandes region. This poster begins to fill that gap by collating data on recent and legacy excavations and attempting a quantification of symbolically laden motifs.

Fulton, Deirdre [302] see Grimes, Vaughan

Fulton, James [263] see Kidwell, Jasmine

Fulton, Kara (University of North Texas), Danielle Dumaine (University of North Texas), Rochelle Gregory (University of North Texas), Melissa McKay (University of North Texas), and Elizabeth Ranieri (University of North Texas)

[114] *Heritage Management as Workforce Development: Applied Learning Outcomes from a New Multidisciplinary Minor*

As heritage professions evolve, there is growing demand for applied, workforce-ready skills that prepare students for careers in museums, tourism, public history, and cultural resource management. In response, we developed a multidisciplinary undergraduate minor in Applied Heritage Management, offering coursework in Public Engagement, Museum Studies, Heritage Travel, and Heritage Laws and Ethics. Each course integrates applied, community-based projects with local organizations to foster practical experience alongside academic learning. This poster presents the framework and preliminary findings from a mixed-methods assessment of student learning outcomes and career readiness within the minor. Students completed pre- and post-course surveys evaluating self-reported competencies in a variety of workforce skills. Community partners also provided feedback on the alignment between academic training and industry needs. This research contributes to ongoing conversations about preparing students for applied careers in heritage management, emphasizing community partnerships as a vehicle for both public engagement and workforce development.

Furtado, Anthony (San Diego State University), and Nicole Mathwich (San Diego State University)

[124] *Beyond the 10 km Radius: Updating the Records of Inland Distribution of Marine Resources in San Diego County*

Marine fauna were a vital component of precontact subsistence along the California coast. In San Diego County, most archaeological sites cluster within 1–2 km of the shoreline. In contrast, inland sites contain smaller amounts of shell and faunal remains, raising questions about mobility, exchange, and seasonal use. Earlier studies (e.g., Quintero 1987; Jones 1992) proposed that marine resources rarely traveled beyond 10 km inland, but this threshold has not been tested with larger, more recent datasets. This poster presents preliminary results from an updated database of faunal remains from San Diego County, assessing how distance and geography shaped the distribution of marine resources. Drawing on assemblages reported in gray literature archived by the Southern Coastal Information Center, the study compares distributions across distance, temporal period, and resource type (pelagic fish, non-pelagic fish, and shellfish). The analysis assesses whether marine resources extend farther inland than previously assumed and examines changes over time. By testing the 10 km “coastal foraging radius” with new data, this research refines our understanding of inland marine resource use. It provides fresh insights into precontact mobility and exchange networks in Native California.

Gaddis, Katherine [89] see Meyer, Francesca

Gaddis, Katherine [89] see Ramsier, Marissa

Gaddis, Katherine [89] see Szyndler, Michael

Gaete, Nelson (Sociedad Chilena de Arqueología), and Mauricio Uribe (Universidad de Chile)

[340] *Geoglifos y redes de movilidad prehispánicas entre la costa de Tocopilla y la cuenca del río Loa, región de Antofagasta, Chile*

Este trabajo busca aportar y contribuir al conocimiento de los geoglifos como parte de un complejo sistema

relacionado con la movilidad y circulación de ideas, bienes y personas, donde prácticas y relaciones de intercambio y reciprocidad construyen un complejo sistema cosmológico que articula territorio y movilidad entre humanos y no humanos, incluidas la tierra y el cielo. Nuestro estudio ha permitido registrar y sistematizar información arqueológica relevante sobre redes de movilidad y geoglifos, entre la costa de Tocopilla y la cuenca del río Loa, pasando por las Pampas de Miraje, Joya, Chug-Chug, Chuquicamata, y Cere, Salar de Talabre, hasta la localidad de Chiu-Chiu, en las provincias de Tocopilla y El Loa, región de Antofagasta, como parte de la ejecución de un programa de investigación relacionado con el cumplimiento de compromisos ambientales de un proyecto de la principal empresa minera de nuestro país.

Gaggioli, Amanda (University of Memphis), and Kristine Martirosyan-Olshansky (Cotsen Institute of Archaeology, UCLA)

[353] *Environmental Change and Material Choices at Neolithic Masis Blur, Armenia*

In recent decades, geoarchaeology has highlighted how stratigraphic analysis and soil and sediment chemistry can amplify the social interpretation of cultural deposits and materials (Bauer 2023). Recent innovations in the geoarchaeology of seismically triggered soft sediment deformation structures (SSDS) also offer new avenues for exploring geological aspects of the human past (Gaggioli 2024). Since 2023, a geoarchaeology program has been exploring the complexities of human-geological environment relationships at Neolithic (early sixth millennium BCE) Masis Blur in Armenia. Ongoing excavations have uncovered dense human occupation in thick (3.2–3.7 m) layers linked to the Aratashen-Shulaveri-Shomutepe culture (Martirosyan-Olshansky et al. 2013). Microporphylography, FTIR, and XRD analyses of targeted in situ stratigraphic samples elucidate the changes in environmental conditions and settlement history. Results indicate the role of seismic activity and lacustrine hydrology in material choices, such as mudbrick sourcing and construction techniques. The results contribute to understanding how local site-specific environmental conditions factor into the emergence of agriculture and associated cultural, economic, and political developments in Neolithic Armenia and the broader Caucasus and Southwest Asian region. More broadly, they demonstrate the advantages of using a combinatory geoarchaeology approach to investigate paleoenvironmental conditions in relation to cultural material choices, uses of space, and postdepositional processes.

Gagnon, Celeste [337] see Sutter, Richard

Gagnon-Smith, Samuel [193] see Murakami, Tatsuya

Galban, Maria (National Museum of the American Indian)

[260] *Answers in the Archives: Untangling Provenance in NMAI Archaeological Collections*

Since 2010, the National Museum of the American Indian has been working on a groundbreaking provenance research project to reconstruct the acquisition history of the NMAI's entire Indigenous collection from the Western Hemisphere. Utilizing archival resources, the NMAI has reconstructed how items entered the museum's collection over a 100-year period and uncovered the complex connections between objects and previously unknown collectors, dealers, archaeologists, and Indigenous sources throughout the Americas. Not only has the project provided us with a more accurate understanding of our collections, as well as the museum's involvement in the Indigenous art market, it has also helped to launch collaborative projects to reconnect our collections with the communities who created them. As a result of these collaborations and combined avenues of research we are now able to create deeper and more complete narratives about our collections.

Gallaga, Emiliano (UNACH), Elizabeth Paris (University of Calgary), Roberto López Bravo (Universidad de Ciencias y Artes de Chiapas), and Yael Gumeta Sr. (UNICACH)

[161] *Mom . . . Why Is This Obsidian Gray and This One Is Black? El Mirador de Juarez, Chiapas, Mexico, and Its Long-Distance Exchange and Obsidian Consumption*

The El Mirador de Juarez site is located in the northwest corner of the state of Chiapas, strategically located where the Chiapas Central Highlands meets the Gulf Coast plain. This location served as an important nexus for important interregional trade routes, including the historically described "Los Zoques" route between the Gulf Coast and the Jovel Valley area, providing connections to Aztec trade colonies such as Cimatán. The

earlier iterations of these important trade corridors allowed for the regular movement of valuable items over long distances, including obsidian tools. Obsidian was broadly exchanged in ancient Mesoamerica from concentrations of sources in Central Mexico and highland Guatemala to a wide range of sites and household consumers. Recent research at the site provided a small sample of obsidian material that was characterized using X-ray fluorescence spectrometry. The results suggest that the residents of El Mirador de Juarez were receiving obsidian from both highland Guatemala and a variety of Central Mexican sources, suggesting the site's long-standing role in mediating interregional exchange.

Gallaga, Emiliano [272] see Gumeta, Yael

Galland, Noémie (ULB)

[100] *Agriculture, Plant Use, and Fertility in Casma Iconography, North-Central Coast of Peru (ca. Ninth–Fourteenth Centuries CE)*

In recent decades, archaeological research on the north-central coast of Peru has gradually revealed a previously overlooked coastal polity, known today as Casma (ca. ninth–fourteenth centuries CE). Like other coastal cultures, the Casma people relied on both marine and agricultural resources for subsistence. In particular, the highly fertile valleys of their territory sustained agriculture for millennia, becoming central to the Casma's political economy and likely shaping their ideology. This paper explores this theme through an iconographic analysis of Casma representations related to agriculture, plant use, and fertility. Although Casma iconography has received little attention so far, compositions involving vegetal resources are abundant in the Casma Molded ceramic style, widespread along the north-central coast at the time. Various plants such as maize, yuccas, and beans are sometimes depicted alone, sometimes included in complex scenes, notably featuring anthropomorphic figures formerly interpreted as deities of agricultural fertility. Identifying the vegetal resources in Casma iconography, comparing them with plant remains from Casma sites, and interpreting the scenes in which they appear provide new insights into the economy and diet of the ancient Casmeños, as well as the role of agricultural production and fertility in their belief system and broader relationship with their environment.

Gallardo, Francisco [32] see Cabello, Gloria

Gallardo, Francisco [32] see Pestle, William

Gallardo, Francisco [32] see Sabo, Allison

Gallareta Cervera, Tomás (Kenyon College)

[338] *How Would Bill Fry This Turkey? Ideas of Transformation at Chan Chich and Tiho Witz, Belize*

Bill Ringle was a profound thinker, a dedicated scholar, researcher, and Mayanist. He has influenced what we know today about how the ancient Maya of the Yucatán organized themselves and thrived in a karstic environment without permanent water sources. Ringle focused on a diverse range of topics, including settlement patterns, ideology, and architecture. However, he was particularly interested in the concept of transformation and its expression in the archaeological record. Recent lidar data at the site of Chan Chich, Belize, by the Belize Estates Archaeological Project (BEAST), revealed several unrecorded features beyond the previously mapped limits of the site. These included a large and previously unregistered site we named Tiho'witz. The site is extensive, and has a striking quincunx layout. In this paper, I will examine Ringle's ideas about the archaeology of political organization, transformation, and monumentality, and discuss how his ideas have influenced my research at Chan Chich and Tiho'witz in Belize.

Gallareta Cervera, Tomás [53] see Novotny, Claire

Gallareta Negrón, Tomás (INAH Yucatán)

[87] *The Quarrymen*

The stone industry, besides agriculture, was a major economic activity among the Puuc Maya. Lidar images, together with site survey and mapping, have made it possible to identify limestone outcrops that were exploited as quarries. Previous research including excavations and experimental archaeology in the region has shown the existence of kilns that were used for the production of lime. These ancient features are highly

visible in lidar imagery as well as the remains of ancillary structures that could provide shelter and facilities for the people engaged in quarrying activities. The most evident examples are related to large complexes of masonry structures known as palaces. Maps will be presented of several Puuc sites such as Labna, Chacmultun, and Kiuic, showing the presence of quarries, kilns, and structures used by the quarrymen. This contextual information allows us to understand the economic importance of this activity for the ancient Puuc Maya.

Gallareta Negrón, Tomás [338] see May, Rossana

Gallegos, Jesus [104] see Sobrino, Santiago

Galvan, Melissa (Tulane)

[338] *Middle Preclassic Interaction Network in the Puuc Region, Yucatán: Paper in Honor of Dr. William Ringle*
Our understanding of the ancient Maya way of life in the northern Maya lowlands has been profoundly shaped by the lifelong work of Bill Ringle. Through his research, fieldwork, and commitment to incorporating new technologies, he made immense contributions to the studies of Maya settlement patterns, economy, and sociopolitical interactions. Bill's legacy will continue to influence Maya archaeology for years to come. His exceptional intellect, ingenious thinking, and endless energy inspired many who had the opportunity to work with him. This paper presents an overview of Bill's contributions to the study of the Middle Preclassic (1000–400 BCE) in the Puuc region and how these paved the way for future investigations. He led extensive lidar-supported surveys and excavations at various sites within the area, uncovering a network of early monumental constructions. Contemporaneous sites of varying sizes have been identified, prompting us to examine the sociopolitical implications of these distinctions. A preliminary approach to understanding the nature of the interactions among these sites involved a compositional analysis of Middle Preclassic ceramics. The paper discusses the results of these studies, continuing the dialogue initiated by Bill's research, emphasizing the importance of interdisciplinary methods and collaboration in exploring the complexities of ancient Maya societies.

Gamble, Lynn (UC Santa Barbara)

[322] *Honoring Brian Fagan: A Legacy of Responsibility and Integrity in Archaeology*
I honor Brian Fagan coming from the viewpoint of a student and then later as a colleague and fellow faculty member. Professor Fagan instilled an ethos of responsibility and accountability in the field of archaeology. He firmly believed that our research must reach a general audience for the viability of the discipline. Two recurring themes in his large undergraduate course, Introduction to Archaeology, were emphasized throughout the many years he taught. The first is that archaeologists, students, and the public have a responsibility not only to recognize but also to respect the descendants of the sites that are investigated. The second is that no one should unnecessarily damage a site through looting or unpermitted investigations. This includes an obligation that researchers report their work. Brian emphasized to students that even though they may not become archaeologists, they should remember and stand by these principles throughout their lives. As a colleague, Brian provided support and encouragement, and most importantly, sage advice, on both professional and personal matters. His expertise in writing and dedication to the field of archaeology are renowned. The discipline has experienced a profound loss.

Gámez, Daniel [214] see Hallensleben, Markus

Gancy, Cayla

[294] *Ghost in the Landscape: Ruination and Identity in Appalachia*

This paper centers the postindustrial ruin in Appalachia as a site of critical social inquiry and investigates how identity and community are negotiated in postindustrial communities. Elitist and etic assumptions enshrine a mythology that social dereliction accompanies structural dereliction; this idea epitomizes the industrial ruin as a negative structure with negative value. Yet, I argue, to solely confine ruins to the context of wasted space not only maintains capitalist constructs of space-value but assumes industrial finalism, which occludes local agency. While a liberative view of the ruin is illusory, I argue that it can have palimpsest-like moments of

utopic transcendence. Through this paper, I work toward a broader narrative of how local agency operates in and around these structures that accounts for the “loose ends” of capitalism via a queer-Marxist perspective. Concerned with how the people of Appalachia negotiate identity and belonging within these spaces, this thesis explicates the industrial ruin through archaeological surveys, material culture analysis, and ethnographic interviews.

Gancy, Cayla [114] see Fowles, Severin

Gantt, Jillian [319] see Nyers, Alex

Garbellano, John Michael (University at Albany)

[342] *Using AMS Dating to Refine the Chronology of Shellfish Exploitation in the Hudson River Estuary*

This research focused on generating new AMS dates on the Dogan Point site, located at George's Island Park in Westchester County, as a step toward refining the larger chronology of shell middens in the Hudson River Valley. To date, we have generated a total of 20 AMS dates on curated and recently excavated materials from the site. These new AMS dates suggest a long history of occupation at Dogan Point and help confirm what previous archaeologists have stated about the chronology of this site and it being one of the oldest shell middens in the northeast. This paper addresses the results of these new AMS dates and questions that Garbellano and the New York State Museum have attempted to answer through renewed fieldwork at Dogan Point.

Garcia, Jorge [79] see Burr, Vivian

Garcia, Laura [124] see Lehr, Juniper

Garcia, Magdalena [165] see Vidal-Elgueta, Alejandra

Garcia Asenjo, Maria [198] see Gonzalez Garcia, Jorge

García De León, Arturo (Leiden University), Alexander Geurds (Leiden University, University of Oxford), Carlos Villanueva (Museo Gregorio Aguilar Barea), and Dennis Braekmans (Leiden University)

[79] *Sticking Our Heads Together? A Unique Find Context of Stone Effigy Heads from Central Nicaragua*

During early 2025, a unique find was reported by local farmers in the vicinity of the town of Juigalpa, in the Chontales region of Nicaragua. This consisted of a total of 36 portable spherical stones carved to render human facial characteristics. Found, as part of quarrying activities, in a large rectangular mounded structure this find is unprecedented for Nicaragua and invokes comparison to the widely documented sculptural practice of depicting “trophy heads” in the regional archaeology of the Atlantic watershed of Costa Rica. This poster invites discussion on this hitherto unknown archaeological feature by situating the stones heads in a regional cultural landscape and an analytical framework which includes the stylistic assessment and the initial results of nondestructive X-Ray fluorescence spectroscopy to contribute to the material characterization of these effigy heads. Preliminary stylistic observation indicates that these heads may have been systematically arranged in their primary context. Compositional results indicate a wider regional procurement of the stones, alluding to ritual depositional practices that aimed to bring in participants from wider social surroundings.

García González, David [272] see Rodriguez-Rellán, Carlos

García Hernández, Melina, and Takeshi Inomata (University of Arizona)

[307] *Middle Preclassic Greenstone Objects from Ceibal, Guatemala, and Aguada Fénix, Mexico*

Our excavations at Ceibal, Guatemala, and Aguada Fénix, Mexico, uncovered numerous Middle Preclassic caches in the E-Group plazas. They contained various greenstone objects, including axes, pectorals, and other ornaments. They resembled contemporaneous caches found at sites on the Gulf Coast and Chiapas, including

La Venta, Chiapa de Corzo, and San Isidro, suggesting that those communities shared similar ritual practices. At the same time, there were important differences between them. Objects from Ceibal and Aguada Fénix lacked Olmec iconographic motifs representing supernatural beings, which were probably tied to the power of rulers and elites. These patterns probably reflected different political organizations. While communities on the Gulf Olmec region and Chiapas had hierarchical organizations with rulers, communities of Ceibal and Aguada Fénix likely had less pronounced social inequality.

García Hernández, Melina [312] see MacLellan, Jessica

García Hurtado, María Fernanda [221] see Buckley, Gina

García-Lewis, Angela [169] see Kroot, Matthew

García Mollinedo, Miguel, Alfredo Saucedo (SUNY-Albany), Carl Wendt (CSU-Fullerton), and Rebecca Gonzalez Lauck (INAH TABASCO)

[262] *Analyzing Settlement Patterns in the La Venta Olmec Region through GIS and Open-Source Lidar Data*

The La Venta region was the setting for one of the most significant developments of social complexity in Mesoamerica during the Preclassic period (ca. 1800–400 BC). This region is named after La Venta, one of the most prominent Olmec sites, and it encompasses the Tonalá River basin within the floodplains of the southern Gulf Coast. Over the past decades, numerous archaeological survey projects have been conducted in the area, generating a substantial body of data on the archaeological sites' characteristics, locations, and chronologies. However, this information has not been integrated into a comprehensive regional study of settlement patterns. In this analysis, the datasets from various archaeological projects were compiled and standardized using GIS, which made it possible to visualize chronologically the number and distribution of settlements. Based on architectural features and the presence or absence of monumental sculpture, a typological classification of sites is proposed. Subsequently, using 5 m resolution open-source lidar data, several GIS analyses were performed. These analyses make it possible to assess the relationship between settlement locations and the environment over time, as well as the potential sociopolitical implications of the regional site distribution with the emergence and florescence of the La Venta polity.

García Mollinedo, Miguel [262] see Saucedo, Alfredo

García Mollinedo, Miguel [312] see Wendt, Carl

García-Piquer, Albert (Autonomous University of Barcelona), and Colin Grier (WSU Anthropology)

[159] *The Sociopolitics of Central Coast Salish Seafaring: Sea-Framing Complex Social Networks on the Pacific Northwest Coast*

Recent and classic Northwest Coast scholarship addressing central Coast Salish social and political organization emphasizes decentralized politics, horizontal network systems ("affinal ties"), and a strident emphasis on local autonomy. How such practices emerge and the conditions under which they are sustained has been addressed in part, but here we explore how seafaring specifically supported complex social networks and how a heterogeneous environment provided the context for the emergence of such networks. While neither should be considered causal, both provide the framework upon which decentralized politics and local autonomy were overlain. Our goal is to consider the Coast Salish case to highlight how a broad array of circumstances—technological, social, and ecological—are critical for theorizing the histories of maritime societies. We highlight how such a task requires an array of fresh methodological approaches, including modeling, seascape analysis, and the contextualized integration of Indigenous ontologies and historical sources. Our paper aligns with recent calls to re-theorize fisher-hunter-gatherer mobility and social organization from a truly water-based perspective.

Garcia-Putnam, Alex (University of New Hampshire), Maddie Beihl (Strawbery Banke Museum), Amy Michael (University of New Hampshire), Mark Doperalski (State of New Hampshire), and Heather Rockwell (Salve Regina University)

[216] *Searching for a Yellow Fever Mass Burial in Portsmouth, New Hampshire's Historic North Cemetery*

Both popular histories and initial analyses of the archives associated with the North Cemetery (1753–1926), located in downtown Portsmouth, New Hampshire, pointed toward the presence of a mass burial of 55 individuals who died in the summer of 1798 from a yellow fever outbreak. Surface features—a lack of visible grave markers in an otherwise crowded cemetery and a large ovoid depressed area—narrowed the search down to two possible locations. Ground-penetrating radar was used to examine these spaces prior to any ground disturbance. A significant anomaly (4 × 7 m) was detected approximately 1 m below the surface in one of the locations. Test excavations revealed a large glacial erratic rather than a mass burial; test excavations at the other possible site were also negative. These results, while unexpected, have led to larger questions about the history of the cemetery, far beyond the bounds of a single epidemic summer. In this presentation we will discuss the search for this mass burial and the results of the subsequent archival and ethnohistoric examination of the cemetery and those interred within it.

Garcia-Putnam, Alex [22] see Boutte, Kerry

Garcia Ramirez, Pamela [161] see Herrera-Parra, E. Moisés

Garcia Ramirez, Pamela [94] see Ichikawa, Akira

Garcia Ramirez, Pamela [94] see Joyce, Arthur

García Vázquez, Berenice (ENAH)

[284] *El análisis arquitectónico del Grupo I: La relación entre los rasgos arquitectónicos y las relaciones sociales de producción, reproducción e intercambio de los diferentes estadios sociales de los pobladores de Holmul*

A través del análisis arquitectónico del Basamento I y el Edificio D de Holmul, ubicados dentro del Grupo I de Holmul, se infieren las consecuentes etapas y fases constructivas, implicadas en cada estadio social, emanadas durante los periodos Preclásico Tardío, Clásico Temprano y Clásico Tardío. Las inferencias que aquí se abordan resultaron de una tipologización de rasgos arquitectónicos, que coadyuvó a enfatizar la relación que existe entre los cambios arquitectónicos en respuesta a las necesidades sociales, políticas y religiosas de las ocupaciones humanas y la contradicción de las relaciones sociales de producción. Además, se presentan las herramientas de registro arqueológico que se emplearon en este trabajo, en donde destacan el dibujo tradicional arqueológico y el empleo de la tecnología lidar.

Gardner, A. Dudley (WAARI)

[249] *Integrity of Setting: Issues in Cities or Towns Where Cultural Deposits Possess High Integrity but the Site Is in a Slum or Blighted Area*

Integrity of setting is considered a significant factor when evaluating a site for inclusion in the National Register of Historic Sites. This determination is relatively easy when the site in question still retains much of the same features present during the historical time period. The question is whether or not historic or prehistoric sites retain integrity of setting in slums or blighted areas. This paper will argue that archaeological sites with intact archaeological deposits do retain integrity of setting in most cases. We will use two potentially eligible National of Register Historic sites, one a Chinatown in Wyoming and another a barrio in Denver to argue for their integrity of setting by comparing them to a potentially eligible prehistoric site in Colorado.

Gardner-O'Kearny, William (Portland State University)

[207] *Adding a Frame of Reference: Woodworking Ground Stone Tools from Two Wapato Valley Archaeological Sites*

The value of revisiting past archaeological work and analysis is becoming increasingly evident. When we approach data that have sat untouched for years or decades with new research questions, analytical methods, and fresh eyes, we often generate new insights. A case in point is the Wapato Valley Archaeological Project (WVAP) centered in the Portland Basin of Oregon and Washington. Begun nearly 40 years ago, its primary sites were extensively studied. However, a rigorous analysis of ground stone artifacts from the Cathlapotle

and Meier sites was never fully realized. This presentation provides an overview of the process of reopening that line of inquiry with a focus on ground stone woodworking tools. The objectives of this presentation are (1) summarize previous findings associated with the ground stone artifacts from these sites, (2) explain the processes and methodologies involved with returning to this dataset, (3) delineate possible implications for our understanding of contact era Indigenous household dynamics in the Wapato Valley arising from the preliminary results of this reexamination, and (4) connect those results to WVAP goals which have ongoing significance for Northwest Coast archaeology and for Indigenous peoples of the Lower Columbia River.

Garland, Carey (University of Georgia), Amanda Roberts Thompson (University of Georgia, Laboratory of Archaeology), Nina Schreiner (SC Institute of Archaeology and Anthropology), Ellen Lofaro (University of Tennessee, Knoxville), and RaeLynn Butler (Muscogee (Creek) Nation)

[184] *The Southeastern NAGPRA Community of Practice (SNACP): A Year in Review and Looking toward the Future*
The Southeastern NAGPRA Community of Practice (SNACP) emerged in response to challenges that many institutions in the region face when complying with and implementing the Native American Graves Protection and Repatriation Act (NAGPRA). Recognizing that implementation is often siloed, under-resourced, and complex, SNACP brings together NAGPRA practitioners, tribal representatives, archaeologists, and museum professionals to foster regional connections, share resources, and build relationships rooted in respect and collaboration. This community-based initiative began with virtual meetings in 2020 and has continued until today, with monthly virtual meetings and presence at various regional and national conferences through organized NAGPRA panels and symposiums. Drawing participants from a broad range of institutions across the Southeast, SNACP has highlighted the need for open dialogue, peer support, and shared strategies for addressing NAGPRA challenges. Participants have identified key barriers, including but not limited to insufficient funding, limited staff capacity, and inadequate institutional support. SNACP has responded by promoting cross-institutional collaboration, resource sharing, and the co-creation of best practices. As the network grows, it serves as a model for how communities of practice can support more ethical and effective repatriation processes nationwide. In this poster, we provide an update on SNACP, discussing recent and future initiatives and directions.

Garland, Carey [184] see Conger, Megan

Garland, Carey [184] see Hill, Mary

Garland, Carey [85] see Howland, Matthew

Garnett, Justin [49] see Williams, Makayla

Garnica, Marlen (Universidad de San Carlos De Guatemala)

[255] *Religious Syncretism in Rock Art during the Colonial Period in Highland Guatemala*

The use of religious symbols in rockshelters and caves occurred after the Spanish conquest and during the colonial period. The Spanish conquistadors knew that these localities were used for sacred rites by Indigenous people, but they attempted to prohibit the practice of their beliefs by limiting access to these remote and sacred localities. It is interesting to observe the presence of paintings with Christian iconography such as priests and crosses in rockshelters in Guatemala, with examples of this in Esquipulas, San Juan Ermita, and in the Quiché area. Painted motifs indicate that resistance and acculturation occurred with the continuous use of these sacred places. In contrast to the presence of native symbols in churches seen today, we have a type of syncretism of Christian religious iconography in native sacred places, a practice that evaded control of the colonial religious authorities. As well, there are rock art manifestations that have lasted through time and are transformed in Christian rites.

Garrard, Andrew [228] see Ames, Christopher

Garraty, Christopher [71] see Fertelmes, Craig

Garrido, Francisco (Museo Nacional de Historia Natural), and Maria Plaza-Calonge (Universidad Católica de Chile)

[309] *Where Did the Metals Go? Inca Policies of Redistribution of Prestige Goods in the Far Southern Provinces*

It is well known that the Incas used metals as prestige goods, often presented as gifts to establish political relationships with local elites, particularly in the imperial provinces. However, less attention has been given to how these items actually functioned in the creation of alliances with the Incas, or whether their presence fostered the development of social hierarchies among local populations. By examining the distribution of metals in the southern Atacama Desert (Copiapó Valley), our aim is to explore their use and contextual significance in order to assess how objects such as tumi knives, bracelets, and axes may have contributed—or not—to the development of social complexity and the consolidation of stronger ties with the Inca Empire.

Garrison, Thomas (University of Texas at Austin)

[35] *Maya Settlement, Environment, and Politics: Following in the Well-Trodden Footsteps of Nick Dunning*

Throughout his distinguished career investigating the ancient Maya Lowlands, Nick Dunning is probably best known for his work on Maya soils and the resulting reconstructions of paleoenvironments and agricultural systems. However, since his early work on the Puuc Dunning has always had a broader perspective on how ancient environments integrate with settlement systems and Maya political authority. This holistic approach is neither completely bottom-up nor blatantly top-down, which is refreshing when examining a culture whose core cosmology permeated all socioeconomic levels of society with leaders that used the natural forces of agriculture like sun, rain, and maize as legitimation for dynastic rule. Dunning's methods were particularly influential during my formative graduate student days when we collaborated at San Bartolo, Guatemala. This research established my fundamental approach to all subsequent projects in the Maya Lowlands at sites like El Zotz and Tikal. By treating settlement, the paleoenvironment, and geopolitics as mutually integrated systems across diverse landscapes we can get a dynamic view of stability and change in the Maya Lowlands that does not prioritize elites over farmers or vice versa. This paper reviews how Dunning has inspired my own research, including a new project at Naranjo, Guatemala.

Garstone, Brenda [165] see Balme, Jane

Garvey, Raven (University of Michigan)

[336] *A Simulation-Based Approach to Identifying Patterns of Transmission in Archaeological Lithic Assemblages*

Simulation plays an increasingly important role in the study of cultural transmission, allowing researchers to refine theoretical models and quantify the effects of transmission on material culture. Archaeologists have used simulation studies to generate “comparative collections” of lithic artifacts, test the long-run effects of transmission biases, and assess the reliability of commonly employed metrics like the coefficient of variation (CV) in the study of past transmission. These simulations facilitate interpretation of empirical data—such as standardization or diversity in archaeological assemblages—relative to expectations derived from different transmission models. This paper explores simulation-based approaches to identifying potential transmission effects among archaeological lithic assemblages with the ultimate goal of enhancing archaeology's contributions to our understanding of cultural evolutionary dynamics.

Garvin Suero, Arianna (University of California, San Diego), Alí Altamirano Sierra (Áreas Costeras y Recursos Marinos, Pisco, Peru), and Lizbeth Pariona Muñoz (Universidad Nacional de Trujillo)

[45] *Buried Companions: Canine Burials and Human-Dog Relationships during the Viru Period (ca. 200 BC–AD 800) at Puerto Malabrigo, Peru*

Modern life in Puerto Malabrigo, Chicama, Peru, involves interacting with dogs—some accompany fishermen to the bay, others wait anxiously at busy local eateries, and many serve as guardians on front porches. Human-dog relationships in Malabrigo have persisted for at least 2,000 years. During 2023 excavations, Proyecto de Investigación Arqueológica de Puerto Malabrigo uncovered three dog burials in a partially excavated room of a Viru household (ca. 200 BC–AD 800). The dogs were cared for; one had a textile wrapped around its head, while the other two were placed beside each other against a wall. These finds are similar to the Viru dog burials at the Castillo de Tomoval site in the Viru Valley (Strong and Evans 1952) and

the Pampa La Cruz site in the Moche Valley (Osores and Prieto 2017; Prieto 2023), indicating that dogs held broad significance for the Viru people. In this paper, we discuss ancient human-canine relationships at Malabrigo and present canine faunal analysis along with hair morphological and color descriptions. Since the dogs are remarkably well-preserved, we propose ideas, such as aDNA, hair micro-morphology, and isotope analyses, which will significantly contribute to the study of ancient Andean dogs. We invite suggestions for future research.

Garvin Suero, Arianna [84] see Chew, Zi-Qi

Garzón-Oechsle, Andrés (Scripps Center for Marine Archaeology, University of California San Diego)

[85] *The Hojas-Jaboncillo Lidar Potree Portal: Making Lidar Accessible to Local Archaeologists in Ecuador through a Web-Based Potree Interface*

In Ecuador, lidar applications at Hojas-Jaboncillo (Manabí) and the Upano Valley (Morona-Santiago) have revealed monumental anthropogenic landscapes, reshaping interpretations of regional societies. However, limited access to data processing and visualization technologies has disadvantaged Ecuadorian archaeologists compared to their international colleagues. To address this inequity, Ecuadorian archaeologist Dr. Andrés Garzón-Oechsle and data systems analyst Scott McAvoy, members of the Cultural Heritage Engineering Initiative (CHEI) in collaboration with the Centro de Investigación y Museo Cerro Hojas-Jaboncillo, created a Potree-based digital repository of Hojas-Jaboncillo lidar. This platform, accessible as a web portal, offers advanced visualization created to accentuate archaeological features and landscape modifications along with measurement tools that can be used from any computer with Internet access. The aim of this platform is to democratize access, foster collaboration, and strengthen national archaeological research capacities.

Gaskell, Sandra (ARC Archaeology Resources & Culture), Waylon Coats, and Danette Johnson (Tribal GIS Sierra Miwuk Nation)

[123] *Six Bands of the Southern Sierra Miwuk Nation: Potoyunte, Awalache, Ahwahneechee, Siyante, Chauchilla, Nutchu*

This report examines the lives, leadership, and settlement patterns of the Southern Sierra Miwuk Nation (SSMN) during the historic transition from Spanish occupation through the military conflicts of the California Gold Rush. It provides biographical sketches of key captains prior to the nineteenth century and situates their leadership within the broader cultural, geographic, and political transformations of the period. Drawing on Whitney's (1871) description of "tracts," the report traces family routes, village occupancy, and consolidation of bands under environmental and external pressures. It also incorporates Mariposa Indian War diaries to document military movements and the mobility of Miwuk leaders during conflict. Correcting misconceptions from Richard Levy's 1978 chapter, as referenced in the 2018 OFA Proposed Findings, the study redefines territorial boundaries through Indigenous perspectives, supported by 7.5 quadrangle maps and Native place-names. The analysis includes seven land allotments linked to captains' families, highlighting their continuity with ancient settlements and trail systems. Geographic landmarks, ceremonial settlements, and treaty-era leadership are used to identify the six historic bands—Potoyunte, Awalache, Ahwahneechee (Yo-ke-mi-te), Siyante, Chauchilla, and Nutchu—illustrating how captains' roles in settlement, leadership, and cultural persistence shaped the SSMN landscape.

Gasparyan, Boris [336] see Gill, Jayson

Gasparyan, Boris [336] see Kovach, Tanner

Gassiot-Ballbé, Ermengol [163] see Antolin, Ferran

Gastelum, Alfonso [210] see Punzo Díaz, José Luis

Gatch, Whitley [251] see McNutt, Ryan

Gauthier, Nicolas (University of Florida), and Nicholas Martin (University of Florida)**[160] *Simulating Social-Ecological Cascades during the Second Plague Pandemic***

Infectious disease outbreaks emerge from complex interactions among demographic, environmental, and social systems, yet traditional epidemiological models typically isolate disease dynamics from these broader contexts. Archaeological and historical records reveal that past pandemics like the Black Death (1346–1353 CE) cascaded through coupled human-environmental systems for centuries, with climate variability, agricultural cycles, and population structure shaping disease transmission in ways poorly captured by conventional compartmental models. The fundamental challenge lies in understanding how population heterogeneity and connectivity mediate relationships between environmental change and epidemic dynamics across multiple temporal and spatial scales. Here we demonstrate that integrating food-limited demographic models with spatial metapopulation disease models reveals predictable windows of epidemic vulnerability tied to demographic cycles and resource availability. Using agent-based modeling, machine learning, and Bayesian data assimilation, we identify critical thresholds where surplus grain production in agrarian societies creates urban rat reservoirs capable of sustaining plague transmission, enabling outbreaks to be predicted decades in advance. Our approach bridges complexity science methods with archaeological data to show that pandemic emergence depends not on single factors but on synchronized cascades across complex, social-ecological networks.

Gauthier, Nicolas [76] see Torvinen, Andrea

Gavazzi, Max [159] see Montenegro, Alvaro

GDR “Silex” [93] see Tuffery, Christophe

Ge, Yun (University of California, Riverside), Carmen Adriano-Morán (Universidad Nacional Autónoma de México), Diana Martínez-Yrizar (Universidad Nacional Autónoma de México), Emily McClung de Tapia (Universidad Nacional Autónoma de México), and Guillermo Acosta-Ochoa (Universidad Nacional Autónoma de México)

[310] *Burning the City: Charcoal Analysis and the Collapse of Teotihuacan*

The social and political collapse of Teotihuacan during the sixth century CE was marked by the widespread burning in the urban center. While these ritual termination events have long been interpreted through architectural destruction and idoclastic devastation, paleoethnobotanical data provide new perspectives on the materials and practices involved. This paper presents the results of paleoethnobotanical analysis from the Plaza of the Columns, where concentrated deposits of charcoal associated with burned columns, architectural features, and surrounding contexts were recovered. Taxonomic identification of wood charcoal reveals patterns in the selection of fuelwood and construction timbers, offering insights into local resource use, provisioning systems, and intentionality in acts of burning. Spatial analysis of charcoal distribution further demonstrates that the burning was neither uniform nor accidental, but rather structured and targeted, suggesting deliberate destruction with political and ritual dimensions. By integrating plant remains with broader archaeological evidence, this study highlights the role of fire and wood use in the dynamics of Teotihuacan’s collapse and contributes to understanding the entanglement of environmental resources, urban space, and social transformation at the end of the Teotihuacan.

Geary, Robert [219] see Reddy, Seetha

Gehling, Emily, Jessica Cerezo-Román (University of Oklahoma), Thomas Fenn (University of Oklahoma), and Kenichiro Tsukamoto (University of California, Riverside)

[301] *Using Isotope Analysis to Uncover Migration Patterns at El Palmar, Campeche, Mexico*

This study investigates the migration patterns of an outlying population at El Palmar, Campeche, Mexico. These individuals were a social group called standard-bearers (*lakam*), a role that emerged in the Late Classic (600–800 CE). These persons potentially acted as ambassadors between El Palmar and neighboring Maya polities. In this study, we pose two research questions: (1) did any of these individuals spend significant time away from El Palmar? and (2) if so, which Maya sites did they live at? To address these questions, we analyzed

the strontium and lead isotope signatures derived from bone and tooth enamel samples. There have been no published isotope data using human remains from El Palmar, a major gap in the site's archaeological context that this study will address. Our analyses will reveal if these individuals were native to El Palmar or if they lived elsewhere for a significant period of time in the most recent years of their lives. If the isotope values reveal that one or more individuals did live elsewhere, it would support the hypothesis that these people were ambassadors and shed light on how El Palmar interacted with the larger Maya world.

Geller, Pamela

[346] *Plastics Age, Synthetic Revolution: Lessons from V. Gordon Childe*

To frame this session, which explores archaeologists' contribution to the study of plastics and their many adverse impacts, I turn to the idea of *revolution*. Political scientific perspectives—those that conceptualize revolution as bracketed in time and violent or combative in nature (e.g., American Revolution, French Revolution, Haitian Revolution)—prove inadequate here. I am not, however, so quick to eschew Marxist ideas. As reflected in the theorizing of V. Gordon Childe, a more apt touchstone for archaeologists, a revolution extends over the long term and involves large-scale change, not just of societies but of species, environments, and ontologies. At the intersection of human populations, resource exploitation, and tool innovation, archaeologists and bioarchaeologists may document the radical transformation of biocultural relations over the *longue durée*. Moving from the Neolithic Revolution to the Urban Revolution to the Industrial Revolution, it is arguable that the current Plastics Age ushered in a Synthetic Revolution that has unfolded over some 150 years. Relationally speaking, what attributes does the latter share with prior revolutions and how is it distinctive? There is also a sense of evolution in the revolution. But does the Plastics Age herald progress or retrogress (or neither)?

Geller, Pamela [346] see Fuenmayor, Daniela

Geller, Pamela [346] see Novorska, Lauren

Gembicki, Maciej, Marek Polcyn (Lakehead University, Thunder Bay, Canada), and Asta Rand (Cardiff University)

[89] *Apotropaic Burials and Epidemic-Era Rituals: Bioarchaeological Evidence from Drawsko, Poland*

Funerary traditions provide essential insights into how past societies understood death and responded to crises. This study focuses on the cemetery at Drawsko, Poland, used as an auxiliary burial ground during epidemic outbreaks in the seventeenth–nineteenth centuries. Historical and archaeological evidence suggests that inhabitants feared the dead could return as harmful beings (*upiór*), which led to the incorporation of apotropaic measures into mortuary practice. These included decapitation, placing sickles around the neck, weighing bodies with stones, and inserting coins or flints into the mouth. Analysis of 556 graves revealed that apotropaic burials constituted 20% of interments—an unusually high proportion in Poland. Strontium isotope data indicate that most of the deceased were local. Osteological assessments of age-at-death demonstrated a statistically significant association ($p = 0.02$) between coin placement and age group. Older adults were typically buried with coins in the mouth, whereas younger adults had coins placed on the chest. Such patterns suggest deliberate and symbolic practices, possibly reflecting differences in social status or beliefs tied to age at death. The results highlight that so-called “anti-vampiric” rituals were not rare or deviant practices but rather an integral part of local mortuary behavior, challenging rigid distinctions between “typical” and “atypical” burials. ***This presentation will include images of human remains.

Gembicki, Maciej [327] see Airola, Danielle

George, Heather [91] see Masur, Lindi

George, Jessie [271] see Gusick, Amy

Georgiev, Deni [269] see Morris, Jessica

Gerard-Little, Peregrine [198] see Orr, Andrew

Geurds, Alexander (Leiden University, University of Oxford)**[168]** *Rosemary Joyce's Research Impact in Europe, or How to Visit Single Malt Distilleries*

Since the early 2000s (at least) Rosemary Joyce and Rus Sheptak have formed a regular presence at European universities, including Oxford, Leiden, and Paris. Loosely drawing on James Scott's classic notion of hidden transcript, this paper explores what might have motivated them to undertake these sheer countless long-haul flights from California across the Atlantic Ocean to visit this multilingual quagmire over and over again. The evidence presented here draws on studies of participant-observation by the author, accumulated over more than two decades and departs from their stellar contributions at Spanish, French, Irish, English, Dutch, German, Swedish, etc., university towns. In part such contributions are well-established, although perhaps somewhat less among colleagues across North America. But such stories also risk mistaking tactical trips for academic attitude. This paper outlines some of their main forms of academic impact in Europe over this long period, leading to the hypothesis that gaining access to remote locations such as Bladnoch, Springbank, Ardbeg, and Bowmore was a form of backstage travel to enjoy the finer things in life, woven in with delivering keynotes, participating in doctoral committees, and defending a doctoral thesis.

Geurds, Alexander [79] see García De León, Arturo

Ghorai, Julia [301] see Ng, Laura

Giacinto, Adam [334] see Burns, William

Gibbs, Anna**[324]** *Survey, Status, and Sepulchral Architecture: A Preliminary Analysis of San Giuliano's Etruscan Necropolis*

The San Giuliano Archaeological Research Project (SGARP) is an interdisciplinary investigation of the San Giuliano landscape in Lazio, Italy, spanning settlement and funerary phases from the Bronze Age to the medieval period. Central to the project is a large Etruscan necropolis distributed across a mosaic of interdigitating plateaus and ravines, composed primarily of Orientalizing tumuli (ca. seventh century BCE) and Archaic rock-cut chamber tombs (ca. sixth century BCE). Since 2016, every visible tomb has been recorded by GPS and documented for architectural elements indicative of chronology, funerary status, and association. This paper evaluates the ability of tomb plan, dimension, style, and spatial relationship (distance to nearest neighbor, distance to occupation), to determine clusters that indicate kinship, patronage, other socioeconomic or cultural networks, and diachronic change (via seriation). The results show that, despite extensive looting, erosion and typical problems of archaeological data collection (which center on the question of how to combine information from older studies, changes in practices of documentation, and issues of reliability), grouping Etruscan tombs according to these characteristics reveals meaningful variation. More broadly, this study highlights the value of systematic survey for reconstructing patterns of community organization in Etruscan funerary landscapes.

Gibbs, Hannah (University College London Institute of Archaeology)**[91]** *The Third Space: How Community Maps Create a Communal Third Space alongside Indigenous and Non-Indigenous Ways of Knowing*

Non-Indigenous ways of knowing and practice, rooted in historically close relationships between archaeology, scientific imperialism, and colonial perceptions of territory, have used cartographic projection to delineate landscapes as static. Indigenous ways of knowing acknowledge landscapes as places of identity, well-being, and subsistence, and have made place-based representations of landscapes using tangible and intangible maps, petroglyphs, drawings, dances, 3D objects, and dream interpretations. Community mapping through community meetings, community drawing, photographic survey, story trekking, and community asset audits has enabled active community involvement in landscape recording. This can be a successful way of engaging with heritage and landscapes through both non-Indigenous and Indigenous ways of knowing. The ongoing inherent hostility toward Indigenous Knowledge in institutional structures in academia, heritage management, and landscape recording emphasizes how essential this is for Indigenous communities and their allies. This presentation will focus on how community mapping produces a "third space" alongside Indigenous and non-Indigenous ways of knowing. Using examples from Indigenous co-collaboration around the world, this will

showcase the three key qualities of this third space: communal environment, fosters cultural exchange, promotes interaction. The thriving third spaces in these examples offer a flexible, relevant approach to recording, turning static spaces into immersive places to connect.

Gibson, David (El Camino College)

[156] *From Chiefly Seat to Peasant Industrial Space: The Transformation of Dysert Castle over 500 Years*

Díseart Molanín was one of three chiefly residences of the Uí Déaghaidh composite chiefdom during the high middle ages in northern County Clare, Ireland. Currently, it is the location of a restored late medieval tower house that functions as a local archaeological interpretive center. A program of survey on the castle grounds revealed an estate field boundary wall system and the castle's original entry road. An excavation that was carried out on the campus of the center over 1995–1996 confirmed the duration of the chiefly center for at least 300 years. The facilities at the castle had been gradually expanded in the sixteenth century with the addition of a banquet hall and an enclosing wall with an associated stables and gatehouse. The enclosing wall and stable were dismantled by an occupying parliamentary garrison that was established on the premises in 1651 by Henry Ireton, Oliver Cromwell's son-in-law. The garrison created a bake house from some of the rubble. Though the castle was damaged, it continued to be regarded as the center of a manor. A lime kiln and bloomery were erected within the bake house in the eighteenth century, and it probably functioned simultaneously as an animal pen.

Gierek, Lynn (Argonne National Laboratory), and Daniel O'Rourke (Argonne National Laboratory)

[198] *Historic Preservation at Argonne National Laboratory: Highlighting the Laboratory's World-Changing Scientific Contributions*

Argonne National Laboratory traces its origin to the Manhattan Project. Even prior to the formation of the National Laboratory, Metallurgical Laboratory staff of the University of Chicago focused on the development of nuclear reactors. Their efforts culminated in Chicago Pile I, the first nuclear reactor, which produced the first controlled nuclear chain reaction in 1942. After World War II, the Metallurgical Laboratory staff were reorganized and became the core staff of Argonne National Laboratory at its new location near Lemont, Illinois. In 1946, Argonne National Laboratory was named the reactor development center for the Atomic Energy Commission. Large portions of the Argonne campus that were constructed in the 1940s and 1950s remain, while many of its unique facilities devoted to nuclear reactor development have been documented and removed. This poster will discuss the accomplishments of Argonne National Laboratory, the unique facilities that were developed by laboratory staff in pursuit of their goal of nuclear power, and the historic preservation efforts undertaken to document the world-changing technologies created at Argonne. The poster will also highlight the world-class science and facilities currently at the laboratory.

Gierek, Lynn [198] see Orr, Andrew

Giersz, Milosz (University of Warsaw), and Patrycja Prządka-Giersz (University of Warsaw)

[272] *Makers of Majesty: Elite Craft Production and the Politics of Luxury at Castillo de Huarmey*

Luxury is inferred from finished objects; this paper shifts focus to the makers and materials that made luxury possible. Excavations at Castillo de Huarmey uncovered not only an unlooted Wari royal mausoleum but also graves of skilled artisans who transformed clay, fibers, metal alloys, shells, bone, and wood into prestige goods and regalia for Wari elites. By combining evidence from burials, craft organization, and object circulation, we argue that the political power of luxury came as much from the social identities and ritualized labor of producers as from material rarity. The paper explores gendered and status-based divisions of labor, apprenticeship and knowledge control, and choreography of making as a performative act linked to court ceremonies and funerary displays. Tracking object-maker relationships from workshop to tomb, and the controlled circulation of goods, reveals how craftsmanship reinforced loyalty networks, signaled proximity to power, and stabilized value across ecological contexts. A view from afar—from a coastal Wari court at the empire's edges—highlights how luxury was co-created by imperial and local actors and how elite artisans occupied complex roles as both servants and stakeholders in Wari sovereignty. This approach redefines Andean prestige goods as the results of embodied expertise, distribution strategies, and social negotiations.

Giersz, Milosz [45] see Tomczyk, Weronika
 Giersz, Milosz [207] see Villacorta Ostolaza, Luis Felipe

Gifford-Gonzalez, Diane (University of California, Santa Cruz)

[167] *California Native Dietary Practices: Archaeological Insights for Contemporary Health*

For Native Californian communities today, establishing healthy dietary practices is a key challenge. The standard American diet has proven harmful to many tribal members' health, leading advocates to pursue food sovereignty initiatives that nourish both body and spirit through traditional Native foods. Plant and animal remains from archaeological sites along California's central coast reveal how Indigenous communities met their nutritional needs before European colonization. This presentation reviews basic human nutritional requirements, highlighting the ongoing, higher-than-average dietary demands of pregnancy, breastfeeding, and early childhood development. I argue for broadening archaeological analyses to address how marine invertebrates, land and sea vertebrates, and plants fulfilled the unique needs of the groups critical to cultural survival, rather than gauging foraging success solely in terms of caloric returns. I recommend calculating noncaloric returns for regionally important species in partnership with tribal communities. A collaborative approach ensures that scientific inquiries serve contemporary Native food sovereignty goals while honoring traditional ecological knowledge.

Gifford-Gonzalez, Diane [279] see Nowak, Jacqueline

Gil, Adolfo (Instituto de Evolución, Ecología Histórica y Ambiente-IDEVEA [CONICET & UTN]), Jose Rogan (IDEVEA [CONICET & UTN]), Clara Otaola, Manuel Lopez (IADIZA [CONICET]), and Gustavo Neme (IDEVEA/CONICET)

[263] *Human Population Dynamics in Contrasting Ecosystems: A Comparative Perspective for the Subtropical Andes during the Holocene*

Central Chile and central-western Argentina, both part of the subtropical Andes near 30–35° S, are situated on opposite sides of the Andes Mountain range. Despite their geographic proximity, these regions exhibit significant differences in ecosystems, resource availability, and climatic conditions. Both areas incorporated domesticated resources, primarily maize, during the late Holocene. The Andes should act as a geographic barrier. In this presentation, we assess whether the ecological and climatic differences on opposite sides of the Andes influenced human population dynamics in each region. Contrary to our initial expectations, both regions show similar patterns in population dynamics when modeled using radiocarbon dates. However, the Chile sequence experiences larger population cycles than the sequence in Mendoza. We discuss the similarities, differences, and evaluate potential explanations for this counterintuitive pattern using the Ideal Specialization Model.

Gil, Adolfo [95] see Neme, Gustavo

Gill, Jayson (Wesleyan University), Tanner Kovach, Ellery Frahm (Yale University), Boris Gasparyan (National Academy of Sciences of the Republic of Armenia), and Daniel Adler (University of Connecticut)

[336] *Realized to Potential Utility: Integrating 3D Measures of Retouch at the Late Middle Paleolithic Site of Lusakert-I, Armenia*

There are a multitude of indices designed to quantify unifacial stone tool reduction through retouch and resharpening. Accurately measuring the reduction of tools allows us to comment on levels of curation, transport, mobility, site occupation, resource scheduling, and technological organization, among other behaviors. Proposed indices of retouch range from being reliable proxies for mass/volume lost, to more abstract quantifications of realized to protentional utility. Different indices are found to measure unique components of a tool's reduction sequence, and as such are well-suited to being combined for a deeper understanding of the sequence. We use multiple indices to measure unifacial tool reduction at the late Middle Paleolithic site of Lusakert-I (65–34 ka), a rockshelter in the Hrazdan River gorge of central Armenia. We utilize both 2D hand measures and digital measures from 3D scans to test the differences of each approach. Further, we incorporate an additional measure of actual to possible perimeter of retouch to provide a more

robust understanding of reduction. We use this approach to explore relationships between retouch and occupation timing, tool type, and toolstone source at Lusakert-I.

Gillam, J. Christopher (Winthrop University), and Richard Chacon (Winthrop University)

[16] *From Enslavement to Empowerment: Connecting Communities through Anthropology and Archaeology at Historic Brattonsville, South Carolina*

Ongoing research with local descendants of the enslaved, interaction with other plantations' descendant communities, archaeological fieldwork on living quarters, and the reconsecrating of an ancestral cemetery of the enslaved at Historic Brattonsville, South Carolina, are enabling community activities and improved discourse between slave descendants, site managers, and the public. Continuing, annual education programs like "By Way of the Backdoor," held each Saturday in February, highlight the lifeways and contributions of the enslaved to the plantation system. Likewise, Brattonsville's descendants are active in other annual education programs, such as the "By the Sweat of Our Brows" event, held each September. Recent interactions with descendants of the enslaved at James Madison's Montpelier Plantation, and others, have led to the organization of the Brattonsville African American Descendants' Project (BAADP) at Historic Brattonsville. All these efforts merge as a means of further improving historically tense race relations in the region and promotion of understanding in a shared, if divergent, cultural heritage through community-based, educational activity.

Gillespie, Jeanne (University of Southern Mississippi)

[316] *Looking for the Olmeca Xicalanca in All the Right(?) Places: Xochitepetl, Teocalhuayacan, and Santa Ana Chiautempan as Olmeca Xicalanca Centers with Gulf Coast Connections?*

Using four recent examinations of the Olmeca Xicalanca by John Pohl, Juliette Testard, Aurelio López Corral, and David M. Carballo that problematize the origins and presence of the Olmeca Xicalanca in the Puebla-Tlaxcala Valley in conjunction with prehispanic and colonial pictorial evidence and recent archaeological data, this article seeks to better understand if/how an examination of places dedicated to or showing evidence of activities dedicated to or practiced by female celebrants, specifically pulque and water-management, can contribute to the conversation. Using Pohl's construction of Cholula as Flower Mountain as a point of departure, I will look at the mountains of Matlacueye, Yauhtepec, and Xochitecatl, as well as the sites of Teocalhuayacan and Santa Ana Chiautempan, to see if an affiliation with Xochitecatl/Toci/Tlaxoteotl may demonstrate connections to the coastal origins of the Olmeca Xicalanca.

Gillespie, Susan (University of Florida)

[168] *Unfinished Business: Returning to Early Collaborations*

Rosemary Joyce's prolific scholarly career has produced a wide range of empirical studies in Mesoamerican archaeology as well as theoretical contributions to the discipline. As she enters her "emerita" phase, however, there is still some unfinished business going back to her graduate school days. After receiving our doctoral degrees from the University of Illinois in the mid-1980s and going off on our separate ways, Rosemary and I continued our informal collaboration aided by a new-fangled technology called "email." We dabbled in topics in Maya iconography especially—she being my coach—only a fraction of which resulted in actual publications. Here I return to one of those unfinished papers, dealing with the enigmatic 819-Day-Count calendrical cycle of the Classic Maya, centered at Palenque, Mexico. Thirty years later, it is still worth another look. In the intervening decades, even as Maya epigraphy has advanced to read the hieroglyphs phonetically and new astronomical interpretations have been offered for this ritual cycle, the iconographic data at Palenque have not been sufficiently recognized. This paper demonstrates their relevance to understanding the cosmic entanglement of the 819-Day-Count with embodied kingship in a short-lived royal calendrical cult.

Gilmore, Kevin (HDR), and Paul Buckner (HDR)

[263] *Managing on the Margin: Sociocultural Adaptation to Population Pressure and Climate Volatility during the "AD 1300 Event" on the Limestone Plateau of Northern Guam*

The "AD 1300 Event" was a period of rapid cooling, dropping sea level, and increased climate volatility ca. 1250–1400 CE. This event contributed to culture changes observed throughout the Pacific Basin, and we

propose it had a significant effect on settlement patterns and population in northern Guam. After initial colonization ca. 1500 BCE, the ancient Chamorro preferentially inhabited villages in embayments at the foot of the interior limestone plateau, close to freshwater springs and critical littoral resources. In contrast, the limestone plateau, which contains only ephemeral water sources, was mostly used logistically for forest resources. After 2,500 years of relative stability, human population in the embayments increased significantly coincident with the warm and dry Medieval Climate Anomaly, 950–1250 CE. At the beginning of the “AD 1300 Event” a portion of the population expanded onto the limestone plateau, as indicated by habitation sites, midden accumulation, and possible soil amendments to increase horticultural production. These data suggest Latte period Chamorro may have adapted to rapidly changing climate by adopting both extensive and intensive horticultural methods in a marginal, inland environment. This is best explained as an adaptive response to food stress caused by a rapid reduction in resources concurrent with greatly increased population.

Gilmore, Zackary (Rollins College), Stella Stollings (Rollins College), and Brynna McDonald (Rollins College)

[300] *As Is the Water, So Are the People: An Interdisciplinary Exploration of Water Health along the Wekiva River*
Narratives surrounding freshwater resources frequently center on the perceived health of particular water bodies or drainage systems. What constitutes a healthy lake, river, or spring, however, is highly context-dependent and likely to shift as various dimensions of health fluctuate in importance. This project represents an interdisciplinary effort (combining information from archaeology, history, and environmental science) to explore how perceptions of the health of the Wekiva River of Central Florida have varied and changed through time. First, we combine archaeological data from precolumbian contexts with contemporary Indigenous perspectives gleaned from published sources to demonstrate how the Wekiva River was engaged and perceived by its original inhabitants. We then use archaeological and archival sources to contrast Indigenous relationships with the river with those held by disparate stakeholders (e.g., wealthy industrialists, farmers, tourists, turpentine workers, etc.) around the turn of the twentieth century. Finally, we introduce recently collected water quality data to discuss how the river’s health is understood today. Our goal is not only to construct a broad-based narrative of past and current ideas regarding the health of the Wekiva River but also to encourage consideration of how we might equitably define and achieve standards of freshwater health moving forward.

Gilpin, Dennis [34] see Ingram, Scott

Gilstrap, William (MIT)

[76] *To Break Through, We Must Break Out: Training Archaeologists for a Future through a Break in Pedagogical Norms*

The past several decades have normalized the utilization of materials characterization techniques to increase our understanding of archaeological material culture. Be it mineralogical, chemical, or structural, materials characterization has improved general anthropological knowledge of craft vis-a-vis society, providing insight into organization, mobility, diet, economy, identity, power, and even value. The importance has been demonstrated time and again, there is weight to these analytical findings; both for archaeology and other, more modern-facing disciplines including civil and materials engineering. Having shown elsewhere the dearth of training programs for the budding archaeological materials scientist and how this affects our future as a discipline, this paper discusses formalized training of archaeological materials characterization, how it benefits archaeology as a discipline, and how it prepares students to engage with modern ideas of engineering, such as environmental accountability and materials sustainability.

Gingerich, Joseph (Ohio University), and Kurt Carr (State Museum of Pennsylvania)

[285] *Identifying Early Paleoindian Activity Areas in Eastern North America: A Case Study from the Shoop Paleoindian Site*

In this paper we summarize the distance between Paleoindian activity areas at several northeastern Paleoindian sites. The discreteness of artifact clusters at many well excavated and mapped sites such as Shawnee-Minisink show that specific protocols in testing and mapping must be conducted to identify activities. Our data also show that while the spacing of many known Paleoindian artifact clusters are

consistent, typical survey/testing methodologies are unlikely to identify some activity areas. We demonstrate this pattern at the Shoop Paleoindian site in Pennsylvania, where close interval shovel testing identified multiple well preserved activity areas.

Giovannangelo, Victoria, Lacy Hazelwood (University of Montana), Holli McDonald (University of Montana), Meradeth Snow (University of Montana), and Michael Searcy (Brigham Young University)

[25] *Multidisciplinary Approaches to Health at Paquimé: How the Osteological Paradox Can Push Us toward Incorporating Multiple Methods*

Paleopathology has long been sequestered to skeletal remains to draw inferences about past disease; however, this can be limited, as those who succumb to disease quickly may not show skeletal indications. Thus, an accurate account of health in a given time and space is not obtained. Through advancements in techniques, the incorporation of ancient DNA and bioinformatics alongside the osteological record provide new lines of evidence to create a more comprehensive picture of past health and disease load. Using an integrated approach that combines skeletal analysis, molecular techniques, and bioinformatics, along with the archaeological record, our research allows for a more holistic understanding of health at the prehistoric site of Paquimé in northern Mexico (AD 1200–1450). This study focuses on osteological assessments of the skeletal assemblage to provide direct evidence of pathologies and traumatic injuries preserved in the skeleton. Biological profiles are combined with molecular data to show how aspects of an individual's identity may have contributed to health inequalities. Finally, bioinformatic analysis targeting the detection of bacterial taxa present in this population will demonstrate pathogenic diseases that had not manifested in the skeletal remains. By synthesizing these datasets, we explore how environmental, cultural, and biological factors shaped overall health.

Giovas, Christina [271] see LeFebvre, Michelle

Givens, David [46] see Leslie, David

Glass, Andrew [43] see Vail, Gabrielle

Gleason, Sean (University of Wisconsin-Milwaukee)

[101] *Core at Door: Lithic Analysis of Cove and Ida Bay Sites*

[WITHDRAWN]

Glinski, Iris

[75] *The Ceramics Show the Way: An Analysis of Economic Relationships between a Seventeenth-Century Spanish Estancia and Different Pueblo Groups Outside of Santa Fe, New Mexico*

LA 20000 (the Sanchez site) is a seventeenth-century Spanish estancia occupied before the Pueblo Revolt of 1680. It is located just outside of present-day Santa Fe, New Mexico. Research done on the site has the potential to provide insight into the initial years of Spanish colonization of the Pueblo people. Over 90% of the ceramic assemblage uncovered consists of ceramics made locally by the Pueblo people. There is no archaeological or documentary evidence that supports the idea that ceramic production occurred at LA 20000. Therefore, it can be inferred that the locally produced ceramics came from Pueblo villages. The goal of this research is to explore the economic interactions between the two groups by conducting an attribute analysis of 400 sherds selected from the assemblage. Ware type, decoration, vessel form, and temper were all considered to best identify each ceramic sherd. This research aims to answer the question of whether vessels were produced and transported from an individual Pueblo in close proximity to LA 20000 or multiple of varying distances. Tracing the source(s) of ceramic production will shed greater light on the complexities of the economic activity and connections that existed between Pueblo villages and Spanish households.

Glover, Catherine, John Walden (Galen University), Frank Tzib, Antonio Beardall (Texas State University), and Jaime Awe (Northern Arizona University)

[114] *Reconstructing Household Ritual through the Integration of Archival Records, Museum Collections, and Pedestrian Survey at Barton Ramie, Belize*

Barton Ramie became central to regional Mesoamerican settlement studies following Gordon Willey and colleagues' 1965 publication *Prehistoric Maya Settlements in the Belize Valley*, yet little-recognized work was also carried out in 1954 by Marcus Chambers, estate manager of the British Colonial Development Corporation at Barton Ramie. Chambers excavated the large plazuela BR-96, uncovering caches of eccentric chert and obsidians in the unusual context of a house mound. Curated separately from the bulk of the Barton Ramie assemblage at the Harvard Peabody Museum of Archaeology and Ethnology, much of the BR-96 assemblage was donated to the Pitt Rivers Museum. These materials can now be reconsidered alongside dispersed archival traces—lot cards, fieldnotes, and photographs—and surface collections from the now-plowed mound. Although the evidence is fragmentary, lacks provenience, and is derived from a heavily damaged context, its integration provides a clearer picture of BR-96 as a Late Classic elite household and possible administrative locus whose occupants engaged in the types of rituals commonly associated with monumental major centers. While significant archaeological questions remain unanswered, this case shows how historic field observations, museum collections, archival records, and recent fieldwork can be integrated to reconstruct Barton Ramie's occupational history and household diversity.

Glover, Jeffrey (Georgia State University)

[338] *Mounds, Monumentality, and Mosaic Masks: Reflections on Bill Ringle's Impact on Maya Studies from the Yalahau Region*

From the beginning of my graduate studies, Bill Ringle's work has played a pivotal role. As a doctoral student conducting a regional settlement pattern survey in the Yalahau region of northern Quintana Roo, it is not surprising that I would have turned to Bill's work at Komchen and Ek Balam. Subsequently, as codirector of the Proyecto Costa Escondida, our team has been investigating coastal Maya settlements and their connection to Chichen Itza, and Bill's work again has proved incredibly valuable and insightful. There is a difference, however, between simply referencing an article and being truly inspired and transformed by one, and I can say it was the latter that marked my scholarly interaction with Bill's work. Then, there was Bill the person. From meetups at the annual fourth of July parties to conferences, I always enjoyed listening and learning from Bill and swapping mapping stories. It was also his long-lasting friendship and collaboration with George and Tomas that I found inspiring. This paper celebrates the work of Bill Ringle and his impact on settlement pattern studies in the northern Maya lowlands and on my development as a scholar.

Glover, Jeffrey [84] see Jiménez Cano, Nayeli

Glover, Jeffrey [84] see Smith, Derek

Godbout, Genevieve [324] see Brown, Matthew A.

Godhardt, Ava (Waubonsee Community College), Ella Mizenko (Western Colorado University), Coren Dorrington (Western Colorado University), David Hyde (Western Colorado University), and juniper bradford

[181] *Structure 31 at La Milpa, Belize: A Maya Range Structure in the Exclusive Plaza C*

The 2025 field season marks the first year of the Tzaman Acropolis Research Project (TARP), and excavations centered on the three range structures (Structures 29, 30, and 31) and acropolis enclosing Plaza C of La Milpa, a major ancient Maya polity. La Milpa is the third-largest site in Belize and is situated in the La Lucha Uplands of northwestern Belize, within the Rio Bravo Conservation Management Area. Plaza C is located in the southern group of La Milpa, the site's third-largest plaza, and notable for the restricted access to this space. This poster will examine the initial excavations of Structure 31, the western range structure, including its architecture and associated artifacts, and we will provide some preliminary thoughts on its form and function.

Godhardt, Ava [181] see Hyde, David

Godos, Fernando (Brown University)

[161] *Architecture and Urbanism in Lacanjá Tzeltal, Chiapas: Influences and Similarities in the Usumacinta Region*
The archaeological site of Lacanjá Tzeltal, the ancient seat of the Sak Tz'i dynasty during the Late Classic

period, is located on the outskirts of the modern ejido of the same name in the municipality of Ocosingo, Chiapas. Despite the damage it has suffered due to severe looting, it stands out for its urban and architectural features that distinguish it within the geographic area of the Upper Usumacinta during the Late Classic period. Although not classified as one of the largest dynastic cities in the region, Lacanjá Tzeltal exhibits urban and architectural patterns whose use and function suggest a certain relationship, similarity, and influence with other larger sites, such as Palenque, Yaxchilan, and Piedras Negras. First, a regional overview of urban and nonurban settlements in the Lacanjá Tzeltal region will be provided, with particular attention to the landscapes of La Mar and Piedras Negras. Subsequently, a more detailed analysis of the urban environment of Lacanjá Tzeltal will be provided.

Godwin, Eric (University of Oklahoma)

[278] *Evaluating Lithic Debitage from Structure 24 at Spiro*

Current research on lithic debitage at Spiro is sparse and its implications for broader understandings of Caddo domestic activities are currently best understood through its similarities with expedient Mississippian lithic production practices. Recent field school excavations in 2022 and 2024, led by the University of Oklahoma, were focused on answering questions related to Structure 24, a previously unidentified earthen-topped house, and its purpose at the site. This poster presents research from a current master's thesis analyzing lithic debitage to highlight the functionality of Structure 24 in context with Dan Rodgers's 1980 excavations at House Mound 5, which also analyzed lithic debitage.

Godwin, William [295] see Miller, Jesika

Goebel, Ted, Kelly Graf (University of Kansas), and Kyle Kohlstedt (University of Kansas)

[195] *The Distinctive Bifaces of Shég' Xdaltth'i' (Central Alaska): A New Trans-Beringian Technology of the Early Allerød Interstadial*

Investigations at Shég' Xdaltth'i' have led to the discovery of a well-preserved cultural layer unequivocally dating to 13,800 cal BP, coincident with the onset of the global Allerød interstadial and ~700 years before the appearance of Clovis in temperate North America. Ongoing excavations have yielded 37 flaked-stone tools, including 18 unifacial flake tools, 16 bifacial artifacts, one cobble plane, one adze/side-scraper combination tool, and one burin spall from a biface. Raw materials are mostly rhyolite, but basalt, chert, quartzite, and schist occur. Unifacial tools include 11 invasively retouched side scrapers, five marginally retouched flakes, and one flake with use-wear. The bifacial artifacts include nine small fragments representing finished or near-finished bifaces of unknown shapes, one roughly worked piece of schist, and six complete (or nearly complete) finished bifaces with distinctive bipointed, diamond-shaped outlines. Details on the technology, design, and inferred use of these points are presented in the poster. The Shég' Xdaltth'i' points are unique for central Alaska, where most bifacial "Chindadn" points dating to the later Allerød interstadial are triangular or teardrop-shaped. Instead, they are similar to specimens from early Allerød-aged sites in arctic northeast Asia including Nikita Lake and Berelekh, suggesting a trans-Beringian connection at this time.

Goebel, Ted [295] see DeGruson, Emily

Goebel, Ted [195] see Esdale, Julie

Goebel, Ted [165] see Liard, Aurelie

Goebel, Ted [195] see Rasic, Jeffrey

Goebel, Ted [195] see Shelley, Nathan

Goebel, Ted [115] see Whitehead, Mason

Goedert, Tristan, Samantha Krause (Texas State University), Gwen Olivier, Marie White, and David Greenwald (Jornada Research Institute)

[204] *A Geoarchaeological Investigation of Agriculture in the Mesilla Phase Creekside Village Site in Southern New Mexico*

There are many archaeological sites in the American Southwest dating from the late Archaic period to the early Formative period that remain relatively understudied. This has limited our understanding of both past human occupations in the region and its archaeological history. One of these emerging important sites is

Creekside Village (Mesilla phase, approximately 650–1100 CE) in the Tularosa Basin, New Mexico. This site encompasses natural springs as well as human-constructed canals and reservoirs associated with the Indigenous Jornada Mogollon occupation of the area. Our ongoing geoarchaeological investigation of the canals at the site represent some of the first analyses in the area that aid archaeologists to better understand the development of agriculture across the Southwest. This paper showcases recent results from geoarchaeological investigations at Creekside Village. Here we present excavation and analysis of canals and reservoirs at the site, showcasing magnetic susceptibility, elemental analysis, and other paleoecological reconstructions. These results refine our understanding of the Creekside Village site and the extent of agriculture and water management used by the Jornada Mogollon over the course of their occupation of Creekside Village.

Goeller, Ana (Cornell University)

[83] *The Animals from a Late Medieval Village and Castle: A Comparative Faunal Analysis of Ballintober Castle, Ireland*

Ballintober Castle in County Roscommon is an Anglo-Norman stronghold in Late Medieval Ireland, a time when the English nobility were advancing west and north, and the Gaelic Irish kings and chieftains still maintained control over the more remote parts. These lands west of the River Shannon are understudied, especially the archaeofaunal remains. Ballintober Castle is one such site situated where the last high kings of Ireland, the O'Conors, ruled, and marked by conflict and entanglement with the Anglo-Normans over their lands. Ballintober is thus both a frontier zone and a contested space, and we can better understand this critical period in the history of Ireland's colonization through the human-animal relations that existed within. My research provides a comparative faunal analysis of Ballintober Castle, a high-status site, and its associated medieval village, a low-status site, to examine these relations both within areas of conflict and among elite and non-elite populations. I will present the developing results of species breadth and diversity and cooking practices between the castle and the village, and contribute to the larger discussion of how subsistence and animal exploitation is negotiated in rural Medieval Ireland.

Goffredo, Roberto [292] see Bader, Alyssa

Goldberg, Kelly (University of South Carolina)

[48] *Scaffolding Archaeology, Education, and Dissemination in South Carolina*

Throughout the state of South Carolina, the histories of prominent residents are featured in educational curricula, interpretive exhibits, and memorials. The same, unfortunately, cannot be said about individuals from marginalized communities who are often underrepresented in the history books and excluded from common public channels. Further, individuals from such underrepresented backgrounds comprise a disproportionately small portion of archaeological trainees, resulting in a circular feedback loop that fails to ameliorate disparities in historic representation. Since May 2022, collaborations between South Carolina Parks, Recreation, and Tourism and the University of South Carolina have developed a collaborative approach centered on educational opportunity and community outreach. This poster discusses the ways in which collaborations with local descendants and a focus on educational engagement among K–12 and postsecondary institutes have directed archaeological research design in state-wide projects and engaged archaeology as a tool to augment regional education. These collaborations have directly contributed to the development of interpretive materials seeking to magnify potential community outreach and increase the diversity of stakeholder pools in the renovation of educational strategies, and increasing the use of archaeological data in educational capacities.

Golden, Charles (Brandeis University), Mallory Matsumoto (University of Texas at Austin), and Stephen Houston (Brown University)

[161] *The Monuments of Lacanjá Tzeltal, Chiapas, Mexico: A Sak Tz'i' Capital*

Recent archaeological and epigraphic research has identified Lacanjá Tzeltal, Chiapas, Mexico, as a capital of the Late Classic Maya (600–820 CE) dynasty known as Sak Tz'i' ("White Dog"). Nonetheless, most of the several dozen stone monuments that have been documented at the site vary notably in form and surface treatment from unprovenanced inscriptions that epigraphers had previously attributed to the Sak Tz'i'

kingdom. Although some hieroglyphic inscriptions have been recovered on the ground at Lacanjá Tzeltal, most monuments lack surface carving. Additionally, the great diversity in local monuments' form, surface treatment, and context suggests significant changes in the sculpting tradition at Lacanjá Tzeltal over its history. This paper presents results of recent archaeological and epigraphic research at Lacanjá Tzeltal and contextualizes the site's monumental corpus within the regional tradition of the western Maya lowlands. It also addresses the implications of these finds for understanding the history of settlement at Lacanjá Tzeltal and of the Sak Tz'i' kingdom.

Golden, Charles [355] see Bazarsky, Alexandra

Goldstein, Paul

[60] *The Way Back Home: Tiwanaku Settlement and Caravan Routes of the Locumba Valley, Peru*

Recent systematic survey by the Proyecto Arqueológico Locumba sheds new light on the timing and sequence of Tiwanaku's occupation of the western valleys of the south central Andes. In contrast to the densely populated Moquegua province to the north, the Locumba colony is a slightly later, secondary occupation of highland Tiwanaku colonists. Significant differences in choice of site location are discussed in relation to Locumba's unique juxtaposition of well-watered and poorly watered agricultural zones and routes to Moquegua, the altiplano homeland, and valleys to the south.

Golitko, Mark (University of Notre Dame)

[295] *A Terminal Pleistocene to Late Holocene Archaeological Sequence from the Aitape Area of Northern Papua New Guinea*

The mid-Holocene (~7000–3000 BP) is theorized as a transformational period in southwestern Pacific prehistory associated with increasing populations, adoption of resilient tree-cropping, and in some areas, the introduction of highland domesticates. Recent studies suggest increasing movement of goods including obsidian and widespread stylistic similarities suggesting increased intercommunity engagement and/or mobility. Yet the mid-Holocene archaeological record for much of New Guinea, and particularly the island's north coast, is poorly understood owing to limited actual dated mid-Holocene sites. Here, I present a substantial corpus of new radiometric dates from a rockshelter (AIT14-11) near Aitape, on the Sepik coast of northern Papua New Guinea. This archaeological sequence begins in the terminal Pleistocene, but primarily dates between ca. 7000 and 300 BP, with particularly intensive periods of usage preserved between ~7000–4000, ~2000–1000, and ~500–300 BP. While there is substantial evidence for disturbance in the AIT14-11 stratigraphy, excavations there shed light on mid-Holocene life on the north coast of New Guinea, the beginnings of pottery usage in the Aitape area around 2000 BP, as well as documenting a relatively unchanging pattern of invertebrate exploitation despite major global and local environmental shifts that occurred during the usage of the rockshelter.

Gomes, Ana [221] see Skosey-LaLonde, Elena

Gomes, Marina [107] see Sallum, Marianne

Gomes, Vera [221] see Skosey-LaLonde, Elena

Gomez, Esteban (University of Denver)

[168] *After Omoa: Lessons Learned in the Field*

Rosemary Joyce's impact on Mesoamerican archaeology, and in Honduras specifically, is undeniable. Many of the papers in this session will speak to her many contributions to the field of archaeology, from her theoretical frameworks and innovative research approaches, her work in museology, to the countless anthropologists she has mentored over the years. It's an honor to speak on her behalf. In this paper, I want to take a moment to reflect on the ways she and Dr. Rus Sheptak shaped me as a scholar, from my commitment to community-oriented research to the power of storytelling. I am no longer a practicing archaeologist, but I still apply many of the principles I learned from Rosemary and Rus in my research and teaching today. My paper will begin with my archaeological research on the colonial frontier in eastern El

Salvador, and continue with the research program that was cut short by Honduras's congressional-led coup of 2009. In this paper I will give specific attention to the importance of community collaboration, and the subtle lessons I learned about mentorship.

Gomez, Manuel (University of New Mexico)

[55] *Isolated or Connected? Reassessing Gallina Settlement Clusters in Northwestern New Mexico*

This study focuses on the Gallina people of New Mexico (1100–1300 CE), who inhabited the highlands 70 km northeast of Chaco Canyon. Their settlements include unit houses, pit houses, and cliff dwellings, mostly represented as isolated homesteads. During the thirteenth century CE, larger villages with communal storage and defensive towers emerged. Examining Gallina settlement patterns offers insights into social organization, mobility, and responses to environmental and social pressures. This study refines site categorizations for isolated pit houses and single masonry structures, multi-unit habitations, and settlement clusters. Drawing on previous scholarship and new data collected in the Rio Gallina Canyon, I analyze site distribution and proximity to group isolated sites into dispersed communities. Results suggest that Gallina settlements were strategically located across varying elevations and landforms, possibly reflecting seasonal occupation patterns or access to resources. Defensive towers likely served as focal points for dispersed populations, functioning as lookouts or communication hubs. Comparisons with adjacent landforms reveal how agricultural potential, defensive concerns, and water availability influenced site placement. This study incorporates Indigenous perspectives, GIS modeling, and archaeological survey data, to provide a clearer understanding of Gallina adaptations and their broader regional interactions.

Gomez, Yazmin (Universidad Nacional Mayor de San Marcos), and Luisa Diaz Arriola (UNMSM)

[309] *Los textiles de San Pedro de Armatambo: Cambios y continuidades en la tradición textil Ychsma bajo el influjo del Tahuantinsuyo*

La presente exposición aporta datos sobre los procesos de ocupación del Imperio del Tahuantinsuyo en la costa central peruana, en el territorio Ychsma (valles bajos de Rímac y Lurín), a partir del análisis de la materialidad textil recuperada de contextos funerarios disturbados del Horizonte Tardío del sitio San Pedro de Armatambo. El objetivo principal de la investigación fue identificar cambios y permanencias en la tecnología e iconografía textil Ychsma durante la expansión inca. El análisis de estas evidencias textiles muestra que los ychsmas incorporaron ciertos elementos asociados al estilo Inca, pero su textilería mantuvo rasgos locales significativos. Generando una discusión sobre los conocimientos en torno a la producción textil y los préstamos de ciertos elementos estilísticos que podrían tener su origen en el Intermedio Tardío y se afianza durante la expansión Inca.

Gomez, Yazmin [309] see Chu Barrera, Alejandro

Gómez García, Yajaira (UDLAP), and Marisol Corona Andrade (ENAH [Escuela Nacional de Antropología e Historia])

[316] *La relación de los materiales de Cacaxtla con los grupos olóctonos del periodo Epiclásico*

Durante mucho tiempo se ha establecido que el grupo Olmeca Xicalanca en Cacaxtla, fue el grupo que durante tres siglos en el valle de Puebla-Tlaxcala a partir del siglo VIII dC y gobernó Cholula a manera de un gobierno dual. En Cacaxtla la presencia de los Olmecas Xicallancas, se deriva de Muñoz Camargo, quien describe que Cacaxtla fue ocupado por estos y su construcción defensiva, en la zona entre San Francisco Tenexyecac y San Miguel Xochitecatitla. Sin embargo, hay evidencia para el cuestionamiento de esta narrativa, pues es el mismo Muñoz Camargo es quien establece que este grupo aparecería en el valle en 1100 dC, varios años después del abandono de Cacaxtla inferido por dataciones de carbono 14 (800-900 dC) tomadas de las últimas etapas constructivas (Santana, 2011:5-9). Ante esta constante discusión, la presente información tiene el propósito de ubicar la posición de la evidencia alóctona en los materiales de Cacaxtla-Xochitécatl durante el epiclásico. Los materiales de referencia serán principalmente los de la Bodega Arqueológica, la cual contiene la evidencia arqueológica de los primeros años de excavación y con la que se pretende discutir si es probable la existencia de material Olmeca-Xicallanca.

Gomez-Saavedra, Mirtha (Pennsylvania State University)**[202]** *The Archaeological Site of Orozas: Rock Art and Prehispanic Routes in the Inter-Andean Valleys of Tarija, Bolivia*

The archaeological site of Orozas, located in the inter-Andean valleys of southern Bolivia, is known for its petroglyphs and engravings strategically situated near the banks of the river of the same name. In addition to rock art, the site includes a highland settlement connected to a network of prehispanic routes that linked the Chaqueño piedmont of Tariquía, the Tarija valleys, the Sama Range, the Cinti canyon, and other inter-Andean valleys. These routes facilitated interactions among populations from diverse ecological zones, promoting the exchange of goods, knowledge, and cultural practices, which created a complex landscape of shared cultural traits and identities. This presentation reports on recent research at the Orozas settlement, including the first excavations, radiocarbon dating, topographic survey, and material analysis. The results indicate an occupation span of approximately 400 years, between 800 and 1200 CE, corresponding to the late Early Regional Developments (400–800 CE) and the Regional Developments Late (800–1200 CE). This research contributes to a better understanding of interaction dynamics and exchange networks between highland and piedmont regions of the Andes.

Gomez-Saavedra, Mirtha [306] see Callisaya, Luis

Gonlin, Nancy (Bellevue College), and April Nowell (University of Victoria)**[339]** *Night Enters the Archaeology Classroom*

The incorporation of the night offers a fresh perspective in archaeology, whether teaching a general course or a geographically specific course, such as those on Europe, North America, or Mesoamerica. The parallax perspective of the night stands in contrast to “daily practices” and produces a full round of activities including dusk to dawn. Students express wonder at finding out the enormous scope of behaviors and beliefs that occur after dark, ranging from the quotidian to the extraordinary. In this paper, we draw examples from various courses (Paleolithic art, Mesoamerican archaeology, North American archaeology, world archaeology, and archaeological methods and theory). These courses readily lend themselves to the study of the night as it relates to household archaeology, craft production, ritual, and performances. The realization that heritage extends from the landscape into the night sky and includes the cosmos is a valuable one. Today, light pollution dominates the darkness, simultaneously washing out the stars, our imagination, and a critical component of all cultures. The night beautifully fulfills the objective of having students think critically about the past, present, and future, and how they can effect change through modification of their own nocturnal footprints. Examples of assignments and their successes are included.

Gontarski, Sarah (Yale University), and Anthony Villar Quintana (UNMSM)**[62]** *Spaces of Life and Death: Funerary Practices and Evidence of Interregional Interaction In Wanguilan, Utcubamba Valley*

The archaeological site of Wanguilan, located in the middle Utcubamba basin within the Conila-Cohechan communal territory, has been explored through systematic surveys, surface collections, and archaeological excavations during the field season of 2025. Through material found within residential and funerary contexts evidence suggests an occupational sequence spanning the Middle, Late Intermediate Horizon, and Late Horizon. Throughout the occupation of this site a settlement was constructed utilizing the natural environment along with artificial platforms and circular stone structures within residential areas, along with the construction of sarcophagi within the cliff face that makes up the funerary context. These two areas, separated by natural and man-made divisions, illustrate the explicit separation of sectors of the living and the dead. The importance and function of these divided sectors are further shown through the uncovered material including complex textiles, the remains of juvenile and adult individuals, decorated human remains, and finally foreign ceramics from the north coast and the Andes. Wanguilan likely represents a point of interregional trade across northern Peru while simultaneously reflecting a community with strong beliefs and ritual practices, especially those surrounding life and death.

Gonzales, Eric, James Brady (California State University, Los Angeles), and Michele Bleuze (California State University, Los Angeles)

[206] *Red Pigments of the Ancient Maya: Investigating Two Enigmatic Subterranean Skeletal Assemblages*

The ancient Maya utilized red pigments, either red ochre or cinnabar, for funerary and ritual purposes. Since the use of cinnabar has been largely documented in tombs, the practice is assumed to be reserved for the upper echelons of Maya society. An example is the use of cinnabar having been sprinkled over the bodies of kings and queens, such as the Red Queen at Palenque. At the Cueva de Sangre, Dos Pilas, Guatemala, the red-painted bones of two individuals, one juvenile, were found in a non-tomb context raising the possibility that the practice of bone-painting may have been more common but that without the protection afforded by a tomb or cave the evidence is not preserved. The partial bodies of the individuals were deposited on the surface of the cave floor, and the presence of cut marks is inconsistent with both a funerary function and elite status. Additionally, at the Cueva de Sangre and Midnight Terror Cave, Belize, the use of hematite seems to have had a different application of the pigment. This paper will discuss the implications of these unique discoveries with seemingly different applications and postmortem treatments.

Gonzales, Liz [213] see Woloszyn, Janusz

González, Abdiel [272] see Mayo Torné, Julia

Gonzalez, Albert [219] see Tripcevich, Nico

Gonzalez, Ana [311] see Carvajal Contreras, Diana

Gonzalez, Jesus (Museo Miraflores), Jessica Clark, Michael Callaghan (University of Central Florida), and Rodrigo Guzman (University of Central Florida)

[99] *Excavations of Three E-Groups at El Mirador, Guatemala: New Insights into Preclassic and Classic Maya Ritual Architecture*

The 2025 field season of the UCF El Mirador Lidar Project marked the first new excavation effort at El Mirador in nearly four decades, targeting three groups resembling Preclassic period E-Group complexes. These investigations aimed to refine our understanding of the site's occupation history, architectural development, and ritual function during the Preclassic and Classic periods. Using lidar, GIS analysis, excavation data, and materials analysis we discuss preliminary results from investigations in the Leon Group, Monos Group, and Ux Kuy Nah group (adjacent to the Central Acropolis). All excavations focused on central plazas and eastern structures. Excavations and artifacts reveal long histories of use beginning in the Middle Preclassic period and continuing through the Late Classic period. These extremely preliminary findings contribute to broader interpretations of E-Group functionality, occupation history, and architectural continuity at El Mirador, complicating previous interpretations about the history of the site.

Gonzalez, Silvia (Liverpool John Moores University), Geissel Vargas (UNAM, Mexico), Samuel Rennie (Bournemouth University, United Kingdom), and Judith Ruiz Gonzalez (Instituto de Investigaciones Antropológicas, UNAM, Mexico)

[311] *Historias en movimiento: Dinámica poblacional en el centro y noroeste de Costa Rica: Estudio diacrónico de seis sitios arqueológicos (500 aC-1350 dC)*

El sur de America Central constituye un espacio construido socioculturalmente a lo largo de milenios. Las características geomorfológicas del puente terrestre centroamericano favorecieron el surgimiento de sociedades complejas con desarrollos locales, divergencia sociocultural y relaciones intra e interregionales que marcaron su historia. La región se distingue por un gran dinamismo, reflejado en estudios arqueológicos, lingüísticos, etnohistóricos y genéticos, los cuales ofrecen un campo fértil para comprender las relaciones entre los grupos habitantes de lenguas chibchenses y otros de diverso origen étnico que habitaron el área. La ponencia explora la dinámica poblacional a partir de la bioarqueología, mediante el análisis de seis sitios arqueológicos en el centro y noroeste de Costa Rica. Estos espacios fueron ocupados tanto por comunidades chibchenses, así como por grupos con manifestaciones socioculturales vinculadas a la esfera mesoamericana, entre ellos los hablantes de chorotega (lengua oto-mangue), asentados tras el 800 dC. El estudio adopta un

enfoque diacrónico (500 aC-1350 dC) para explorar las particularidades poblacionales y sus cambios a lo largo del tiempo. Se busca, aportar una perspectiva sobre la interacción inter e intra-regional en un territorio clave para comprender los procesos de poblamiento y migración del istmo centroamericano.

Gonzalez Carretero, Lara [163] see Slucky, Alexandra

González Cruz, Arnaldo [84] see Varela, Carlos

González Díaz, Alfonso [84] see Varela, Carlos

Gonzalez Esteban, Cristina (University of Oxford), and James Bacon

[178] *Before the Raster: Creating a Standardized Approach for Using and Understanding Maya Lidar Point Clouds to Improve Data Interpretation*

Using lidar data involves checking the dataset in preparation for the interpretation of the features that it may contain. Often, archaeologists rely on raster visualizations or the DEM to review the dataset for mapping potential features and subsequent ground truthing. Unfortunately, this process encourages over-prediction of false positives and false negatives. To avoid these errors and to improve interpretations we suggest beginning the checking process by reviewing the point cloud. For this purpose, we use profiles in combination with the DEM and other raster visualizations. This approach reduces incorrect predictions and allows for improvements to be made to the point cloud via better filtering and classification; creating a solid base from which the DEM and subsequent visualizations can be used for analysis. In this study, we present this standardized method, which utilizes both rasters and point clouds, as a tool for researchers to create a more reliable model for archaeological interpretation of any site, and to allow comparisons and adaptations between unique sites.

González Fernández, Víctor [311] see Berrey, Adam

Gonzalez Garcia, Jorge (Argonne National Laboratory), Lori Collins (Argonne National Laboratory), Maria Garcia Asenjo (Argonne National Laboratory), Zachary Smith (Argonne National Laboratory), and Thomas Penders (Space Launch Delta 45)

[198] *Digital Twins of the Space Age: Multimodal 3D, AI/ML, and GIS for Aerospace Heritage and Adaptive Management*

We demonstrate multimodal 3D survey methods, integrated with artificial intelligence (AI), machine learning (ML), and Geographic Information Systems (GIS), that are transforming aerospace documentation at Cape Canaveral Space Force Station (CCSFS). Through digital twin capture and data fusion, our workflow offers scalable and cost-effective solutions for monitoring, analysis, and long-term management of archaeology and infrastructure. CCSFS, increasingly threatened by storm surges, hurricanes, and coastal erosion, serves as a critical testbed for advancing digital preservation and site management strategies. Case studies highlight iconic Apollo, Gemini, and Mercury programs, central to the race to space, as well as Cold War sites. Examples include digitized artifacts such as a disarticulated and degraded gantry, preserved virtually for its significance to early spaceflight. We also present a 3D archaeological reconstruction of the first blockhouse, constructed to support Bumper 8, a two-stage rocket that combined a modified German V-2 first stage with a WAC Corporal second stage, one of the earliest US-designed sounding rockets, which was launched in 1950. Although no longer extant, its reconstruction recovers a foundational chapter in the Cape's legacy. Results demonstrate that multimodal 3D with AI/ML-driven analysis improves condition assessment, modeling, mitigation, and interpretation, establishing a transferable framework for infrastructure documentation.

González Gómez de Agüero, Adrián [305] see McCuaig, Julia

González-Hernández, Galia [164] see Beramendi-Orosco, Laura

Gonzalez-La Rosa, Luis Manuel (University of British Columbia), Izumi Shimada, Carlos Elera (Museo Nacional Sicán), and Aleska Alaica (University of British Columbia)

[211] *Managing Multispecies Relationships in an Arid Environment: Zooarchaeological and Isotopic Evidence from the Middle Sican site of Sialupe, Lambayeque Valley, Peru (900–1100 CE)*

Even in arid environments, biodiverse landscapes allow for the management of a range of animal species. On Peru's arid north coast, during the Middle Sican period (900–1100 CE), communities were dedicating daily and long-term tasks to the care and husbandry of camelids, dogs, and guinea pigs. In addition, wild species such as deer, marine birds, and Pacific fish were contributing to subsistence strategies through hunting and opportunistic collection. In this paper we mobilize zooarchaeological and isotopic datasets to shed light on the population structures for wild and domesticated species. As a key site of multi-craft production (pottery making and metalworking), we interpret preliminary results through the perspective of flexible subsistence and management practices in place during a pivotal time in the Andean past, when shifting social relationships demanded nimble strategies to mitigate local community interactions and nonlocal pressures from Moche and Wari political spheres.

Gonzalez-La Rosa, Luis Manuel [221] see Akimoff, Anya

Gonzalez Lauck, Rebecca (INAH Tabasco)

[262] *El próximo ciclo de investigaciones en La Venta, Tabasco*

Se presentará un breve recuento del último siglo de investigaciones en La Venta y sus alrededores para contextualizar las líneas de investigación que pudieran aplicarse a futuro en la antigua ciudad olmeca ubicada en La Venta, Tabasco.

Gonzalez Lauck, Rebecca [262] see García Mollinedo, Miguel

González López, Ángel (North Carolina Museum of Art)

[260] *From the Excavation Units to the Orphanage*

This presentation explores how inconsistent collection and record management has resulted in the loss of archaeological context and the separation of individual pieces that once formed large scenes. This is especially true when objects move between different institutions and storerooms within Mexican museums and sheds light on the multiple pathways through which objects lose part of their biography. Specifically, this presentation focuses on three sets of stone reliefs that originally formed polychromed benches in two important buildings in Tenochtitlan—the Templo Mayor and Motecuhzoma's Palace. These artifacts are notable because they contain archaic features from Tula Xicocotitlan; however, they also present Mexica (Aztec) innovations. The reliefs portray processions of warriors, rain and corn deities, and a mountain, suggesting it was a personal seat for the city's ruler. While initially excavated with full provenance, these monuments have since lost partial information, including when and where they were recovered, the original organization of the stones, and most importantly, any other associated artifacts or features. This paper argues that combining archaeological practice and archival examination may help to identify lacunae in the records, expand our understanding of provenance, and fill in gaps in information.

Gonzalez-Tennant, Edward (Texas State University)

[256] *An Archaeology of Tejano Erasure in the Lower Rio Grande Valley, Starr County, Texas*

The Lower Rio Grande Valley of the South Texas Borderlands is home to thousands of years of Indigenous history, centuries-old Spanish and later Mexican communities, and a growing white population that moved to the region in the mid to late nineteenth century. This last migration involved considerable whitewashing of the region's history, particularly the erasure of Tejano communities. Tejanos are descendants of earlier Spanish, Mexican, and Mestizo settlers in this region. Historical scholarship has typically minimized their history and instead focused on myths about the "taming" of the region by Anglos. This paper discusses a collaborative project exploring the history of a rancho dating to the nineteenth and twentieth centuries. The paper's focus is archaeology's emerging contribution to documenting and raising awareness about the region's Tejano and Mexican American presence. I conclude with a brief discussion about the application of digital technologies to document and virtually reconstruct the site as a form of public outreach.

Goode, Ron [167] see Tushingham, Shannon

Goodwin, Whitney (Archaeometry Laboratory at MURR; University of Missouri), Leslie Reeder-Myers (Temple University), Alejandro Figueroa (University of Missouri), and Blanca Fajardo (UNAH)

[349] *Selin Farm in Context: Site History, Excavations, and Emerging Insights*

The Selin Farm site, situated along the Guaimoreto Lagoon in northeastern Honduras, provides an unparalleled window into the cultural, economic, and ecological dynamics of the region between AD 300 and 1000. Since Paul Healy's initial excavations in the 1970s, Selin Farm has anchored archaeological interpretations of the lower Río Aguán Valley, and subsequent investigations by researchers in this session (2013–present) have expanded our understanding of the site's history, scale, and complexity. This paper offers an updated overview of the site and current research, setting the stage for the interdisciplinary analyses presented in this session. We summarize the site's extensive shell deposits, key excavation areas, sampling strategies, and major findings to date. These deposits—rich in faunal, botanical, and material remains—highlight how Selin Farm's inhabitants engaged with the diverse resources of the Guaimoreto Lagoon and surrounding landscapes. Preliminary analyses point to a community deeply embedded in local and regional exchange networks, experimenting with new forms of subsistence, craft production, and social organization.

Goodwin, Whitney [349] see Fajardo, Blanca

Goodwin, Whitney [349] see Figueroa, Alejandro

Goodwin, Whitney [266] see Palomares, Teresa

Goodwin, Whitney [308] see Reeder-Myers, Leslie

Gopnik, Hilary [314] see Lau, Hannah

Goralski, Craig (Cypress College)

[339] *The Trials and Tribulations of Teaching and Learning in Hostile (or Indifferent) Educational Environments*

Every field class comes with a myriad of potential obstacles. Overcoming them (or avoiding them) is an essential skill for educators of field archaeology. This paper discusses the institutional, logistical, economic, and physical trials and tribulations associated with a high-altitude field class taught at one of California's community colleges. It will discuss how the author seeks to maximize learning and prepare students for careers in archaeology when allies are few, resources are short, and even oxygen is somewhat limited. The essential role that field classes can play at community colleges, and in California's community colleges in particular, will be explored, with an emphasis on how to “sell” your field class to administrators, stakeholders, and students.

Gosh, Sambit [179] see Fields, Stormy

Gover, Reese

[277] *The Longevity of Colonial Influence: A Chemical and Statistical Analysis of Egyptian and Nubian Ceramics in Nubia*

The Nubian sites of Askut, Tombos, and Hannek present different levels of Egyptian colonial control over the region. Askut was colonized twice, Tombos once, and Hannek never. The comparison of these sites allows us to see how colonial power impacts material culture over time. This poster analyzes this impact through statistical analysis of count data and instrumental neutron activation analysis (INAA) data. Since the chemical composition of Nile silt is relatively uniform, any visible differences in the composition are likely due to manufacturing traditions. The count data shows a statistically significant correlation between colonial periods and predominant style. Chi-square tests show a greater significance between predominant style and site than between predominant style and colonial status. Principle component analysis (PCA) was performed on INAA data obtained from Carrano, Ferguson, Girty, and Smith (2008) to identify how the composition of ceramics varies across sites and periods. The results show that some samples from Askut, Hannek, and Tombos have a shared ceramic tradition, with select samples from Askut and Hannek showing a significant difference. The

differences in the INAA data, reinforced by the statistical analysis of the count data, suggest a clear and lasting impact of colonial power on ceramics traditions.

Gowland, Rebecca [42] see Halcrow, Sian

Graesch, Anthony [182] see Quinn, James

Graf, Kelly (University of Kansas), Lyndsay DiPietro (Baylor University), Nathan Shelley (Center for the Study of the First Americans, Texas A&M University), Richard Vachula (Auburn University), and Julie Esdale (CEMML)

[195] *Geoarchaeology at the Shég' Xdaltth'i' Site, Interior Alaska: An Update*

In a 2020 online SAA poster symposium, we presented details regarding the stratigraphy and dating of the Shég' Xdaltth'i' archaeological site, located about 30 miles south of Fairbanks in interior Alaska. The site is multicomponent and well stratified in eolian deposits that mantle a MIS-6/4 glacial outwash terrace. The oldest cultural layer at the site dates to 13.8 ka with subsequent occupation events at 13 ka, 12.7 ka, and 5 ka. With this poster presentation, we will present updated geoarchaeological results, focusing on a multipronged approach to site formation and paleoecology. We will undertake various sediment analyses related to identifying sediment source, site formation, and presence of human-derived fire, including micro-charcoal, magnetic susceptibility, bulk geochemistry, soil and hearth micromorphology, and XRF analyses.

Graf, Kelly [195] see Esdale, Julie

Graf, Kelly [195] see Goebel, Ted

Graf, Kelly [195] see Harbort, Mia

Graf, Kelly [195] see Henry, Aureade

Graf, Kelly [195] see Hockett, Bryan

Graf, Kelly [165] see Liard, Aurelie

Graf, Kelly [195] see Rasic, Jeffrey

Graf, Kelly [195] see Sewing, Mason

Graf, Kelly [195] see Shelley, Nathan

Grant, Evan [79] see Eschbach, Krista

Grauer, Kacey (University of Denver), and Zachary Nissen (Northwestern University)

[199] *Interactive 3D Documentation of a Late Postclassic Maya Shrine and Kol Modeled / Chen Mul Censer Vessels from a Riverine Settlement in Belize*

This poster outlines methods of documenting and analyzing Late Postclassic (1250–1500 CE) architecture and artifacts associated with Indigenous Maya settlement of an island in the New River, Belize. In 2025, the New River Island Project conducted excavations of a Late Postclassic shrine, which revealed over 1,600 fragments of Kol Modeled effigy censers (part of the Chen Mul Modeled ceramic system). We utilized 3D modeling to document Postclassic architecture, in situ deposits, and refit Kol Modeled figures. This poster features QR codes that enable people to interact with their 3D models directly on their smart phones. Together, excavations and 3D modeling provide new insights into the importance of this riverine settlement within the tradition of ritual pilgrimage that began at Mayapan and radiated throughout the Maya Lowlands during the Late Postclassic and early colonial periods.

Grávalos, M. Elizabeth

[33] *Thinking with “Sañumama” to Analyze Earthly Materials: Toward a Relational Thin-Section Petrography of Ceramics from Ancash, Peru*

Quechua language uses multiple words to describe clay: while *chaco* refers to an ingredient in contemporary Andean cuisine, *racu* references suitable material for making pots. Such terms are a part of a lexicon rooted in Indigenous relational ontologies. Clay is not an abstract substance but rather is defined by its intended use, origin, or relationship to a person/ancestor. For example, Hernández Príncipe's 1622 account of Olleros (Recuay, Ancash, Peru) describes potters who venerated subterranean holes, referring to them as *sañumama*,

and revering specific, animate clay sources. And while there are many words that refer to a finished vessel, one that is *saño* describes this sacred relationship with *sañumama*. This paper thinks with Andean concepts to conduct thin-section petrography of ceramics from the site of Jecosh (Ancash; ca. 340 BCE–1630 CE). I ask: Can an inert thin section tell us about Andean relational personhood, and by extension, dynamic landscapes? Researchers trained in Euro-American earth sciences understand minerals as predefined, perhaps unintentionally portraying Andean pottery making as abstract. By utilizing Quechua taxonomies of earthly materials, this petrographic analysis intends to re-enliven the relationality of geomaterials. This might more accurately portray the lived experiences of Andean potters and their landscape knowledge.

Grávalos, M. Elizabeth [33] see Bray, Tamara

Grave, Peter [217] see Heng, Piphah

Grave, Peter [217] see Stark, Miriam

Graves, William (Statistical Research Inc.), and Gordon Rakita (University of North Florida)

[82] *Syncretic Religious Phenomena in Colonial Contexts: An Introduction*

In this introduction, we will provide a conceptual framework for the symposium by critically examining the terms “colonialism” and “syncretism.” “Syncretism” is a controversial term and concept that deserves critical and historical unpacking. Yet regardless of how we might view that concept, the phenomena of blended religious practices and beliefs are real and deserve our attention. Likewise, “colonialism” is a difficult concept in need of unpacking. Though we often imagine European imperialism of the fifteenth through nineteenth centuries when we speak of colonialism, archaeologists have access to colonial contexts and context where multiple cultures influenced each other that took place earlier and around the world. Therefore, archaeologists have the potential to provide a more extensive empirical record of colonial encounters, identity, power, conflict, cultural resistance and persistence, and the role religious syncretism plays in those processes.

Graves, William [82] see Rakita, Gordon

Greaves, Russell (Office of Contract Archeology, University of New Mexico), and Joseph Hackman (University of Utah)

[95] *Ethnoarchaeology of Horticulture and Foraging Economies among Different Subpopulations in the Savannas of the Orinoco Plains, Venezuela*

Indigenous Pumé currently living in the Venezuelan grasslands of the Orinoco Plains (*llanos*) have distinctively unique subsistence economies associated with different microenvironments and possibly demographic structure. Savanna-dwelling Pumé continue to practice mobile hunting and gathering while River-dwelling Pumé combine some foraging with reliance on horticulture. The Pumé recognize these population and subsistence differences while acknowledging they are the same ethnicity. We use behavioral observations, environmental parameters, and demographic data to address how these distinct economies are influenced by the costs and benefits of reliance on cultivated versus wild foods in different ecological settings. We particularly examine whether Binford’s (2001) perspective that foragers with access to aquatic resources may intensify exploitation of these clumped resources distinctly from focusing on plant foods. Analyses focus on soil fertility, plant and animal biomass distribution, mobility, community or camp size, and population densities. We investigate how demographic factors, combined with discrete variation in ecosystems, address ways that population dynamics may shape contrasting reliance on cultigens or other diversification strategies in adjacent portions of this savanna. The Pumé case offers unique opportunities to examine factors influencing the timing and character of the emergence of horticultural and agricultural adoption.

Greaves, Russell [95] see Kramer, Karen

Grebenkemper, John (Institute for Canine Forensics)

[90] *Canine Detection of Nineteenth-Century Human Death Sites*

Many emigrants, soldiers, and explorers died in the western United States during the nineteenth century. For

some of these deaths, we have the name and approximate location of their death or burial. Properly trained canines can determine the precise location of a burial or, for a death without burial, the place where the body decomposed. This presentation will explore several examples of historical research and canine fieldwork to determine where individuals died.

Green, Adam (University of York), and Aftab Alam (Aligarh Muslim University)

[102] *Trajectories of Governance in the Deep History of South Asia*

Large-scale governance is a hallmark of South Asia's archaeological record. The region has been home to many contrasting forms of governance, many of which transformed over time along with their societies. For example, the region was home to the Indus civilization (~2600–1900 BC), an extensive urban society that encompassed thousands of settlements stretching from the foothills of the Himalaya to the Arabian Sea. Indus governance supported impressive feats of collective action: its cities are replete with large-scale public architecture, civic infrastructure, and standardized protocols for recording information and facilitating exchange. Indus cities lacked palaces, ostentatious tombs, exclusionary temples, and individual-aggrandizing art—direct archaeological proxies of elites—challenging traditional archaeological theories and suggesting that they were governed by remarkably egalitarian ideological regimes. The Indus de-urbanized around 1900 BC, and a long period of small-scale settlement growth followed in its wake. After nearly a millennium, a large number of polities emerged in the Ganges-Yamuna Doab. These *mahajanapadas* adopted a wide range of governance forms, some of which shared traits with their Indus predecessors, but combining these with new forms of agriculture and collective action. In this presentation, we review evidence of this transition in South Asian governance, and outline new directions for research.

Green, Daniel [221] see Norwood, Alexandra

Green, Emma (Brigham Young University), and Chris Merritt (Utah State Historic Preservation Office)

[280] *Downtime on the Tracks: Exploring Recreational Spaces and Features in an 1800s Transcontinental Railroad Town*

Railroad towns along the transcontinental railroad incorporated a diverse array of buildings and spaces made to extend beyond the purpose of railroad service. The abandoned transcontinental railroad branch town of Terrace, Utah, exemplifies this through the addition of a garden and library to the customary structures common to railroad towns during the late 1800s. This research focuses on the relevant features and artifacts located in proximity to both the garden and library uncovered during the joint excavation of Terrace conducted by the Brigham Young University Archaeological Field School, Utah State Historic Preservation Office, and the Bureau of Land Management in May 2025. Data results from the research will highlight the impact of recreational buildings and endeavors on the overall population and environment of Terrace, and possible broader applications of similar recreational pursuits present in other railroad branch towns.

Greene, Gustave [305] see Smith, Emily

Greentree, Jennifer [22] see Ramsey, Madison

Greenwald, Alexandra (University of Utah), A. Ja'net Baide (University of Utah), Alan Leventhal (Muwekma Ohlone Tribe of the San Francisco Bay Area), and Charlene Nijmeh (Muwekma Ohlone Tribe of the San Francisco Bay Area)

[268] *Weaning Age and Early Childhood Diet of Ancestors Interred at the Pleistocene-Holocene Transition Site Mánni Húyyú Muwékma Yatiš Túnnešte-tka*

Stable isotope data measures ($\delta^{15}\text{N}$ and $\delta^{13}\text{C}$) of weaning age and early childhood diet derived from serial micro-samples of first molar dentin are reported and serve as proxies for reproductive and parental investment strategies employed by Late Pleistocene and Early Holocene ancestors interred at Mánni Húyyú Muwékma Yatiš Túnnešte-tka between ~14,000 and 7000 cal BP. In natural fertility populations, weaning age is a reliable proxy for inter-birth intervals. These data improve our understanding of PHT fertility rates, and by extension, population dynamics of early foraging populations in North America.

Greenwald, Alexandra [111] see Baka, Abby
 Greenwald, Alexandra [268] see Burns, Gregory
 Greenwald, Alexandra [268] see Kievman, Hayley

Greenwald, David [204] see Goedert, Tristan

Greenwood, Kate (Greenwood Consultancy), Madonna Thomson (Jagara Daran Pty Ltd), and James Bonner (Jagara Daran Pty Ltd)

[258] *Uses of Trees for Everyday Material Culture Items by Yagera People in South East Queensland, Australia*
 Very little is known about the use of trees for material culture items by Traditional Owners in south east Queensland. A collaborative research project was designed and undertaken between a principal archaeologist undertaking their PhD with Jagera Daran Aboriginal Cultural Heritage Body as research partners. The main aim was to understand the Indigenous and archaeological significance of culturally modified trees and the bark/wooden material culture items that are created from tree bark and wood in the area. The project included fieldwork to document and record extant culturally modified trees, interviews with Traditional Owners, archival research and museum visits both in Australia and overseas to understand the wooden artifact assemblages from the area. Analysis of wooden artifacts was completed with a wood technician expert at the British Museum. This presentation will show the results of the project, including a predictive model of culturally modified trees based on tree species type and use, along with community outcomes such as training of Yagera women rangers and other community members.

Greer, Mavis (Greer Archeology)

[158] *Montana Rock Art and a Zooarchaeologist Mentor*

Students often complain they cannot find an advisor who welcomes a thesis or dissertation on rock art, but that was not the case with me. Returning to a PhD program after several years of CRM, I had plans for a central Montana rock art dissertation, and luckily I found in Lee Lyman an advisor who felt all archaeological topics deserve to be explored. For him mentorship was not limited to having a student that could do his analysis and write a paper that he could coauthor as it is with many, but instead to him it meant helping a student learn the process of doing archaeological research and presenting that research in a manner that contributes to understanding past lives as a behind-the-scenes advisor. I am an example of his openness to promoting learning and expanding our knowledge of the past without an expectation of collaboration or accolades associated with the topic, and this is reflected in the archaeological record of Montana rock art as demonstrated by examples from the central part of the state.

Gregorio de Souza, Jonas (Barcelona Supercomputing Center/Centro Nacional de Supercomputación)

[160] *Modeling Cultural Expansions as Complex Systems: Insights from Eastern South America*

Understanding how large-scale cultural processes emerge from the interplay of demography, mobility, and ecology is a central concern of complexity science in archaeology. Computational approaches such as agent-based simulations provide powerful tools for investigating how social and cultural dynamics unfold as adaptive, information-processing systems over time. Yet applying these methods to the archaeological record remains challenging, particularly given issues of incompleteness and uncertainty in chronological datasets. In this presentation, I examine these questions through the case of the late Holocene expansion of major language families in eastern South America. These expansions, some of which have clear archaeological correlates, offer a valuable context for evaluating hypotheses of demic diffusion and cultural transmission. I revisit previous simulation work on these processes, assess its methodological limitations, and outline new directions, including the integration of machine learning for parameter exploration and fine-tuning. Such approaches have the potential to reveal the emergent patterns underlying long-term human–environment interactions, shaping the ethnolinguistic landscapes of South America and beyond.

Gregory, Rochelle [114] see Fulton, Kara

Grier, Colin [159] see Garcia-Piquer, Albert

Griffin, Brooklyn [169] see Means, Bernard

Griffin, Robert, Kelsey Herndon, Heather Hurst (Skidmore College), and Boris Beltran

[35] *Bajo Control: Soils, Water, and Ancient Land Use at San Bartolo*

At San Bartolo, we are examining how *bajos*, *aguadas*, and terraces together contributed to a dynamic landscape that supported long-term human activity. As part of Nick Dunning's legacy of geoarchaeological investigation in the region, we combine soil sampling, coring, and stratigraphic analysis with lidar and GIS-based hydrological modeling to explore how these features were modified and sustained across centuries. Our results from *bajo* margins point to sediment enrichment and cultivation, terraces highlight slope management and soil retention, and *aguadas* provide insights into histories of water storage and use. Taken together, our results suggest processes of niche construction in which human practices and environmental variability became interwoven, producing landscapes that were inherited and reworked across generations. By situating San Bartolo within this broader environmental context, we emphasize how the site's murals were embedded in both ancient and modern landscapes, while also contributing to current discussions about recognizing the region—including the site and its surrounding environment—as a potential UNESCO World Heritage landscape.

Griffith, Cayden

[299] *Shaping the Plains: Copper and Bronze Age Settlement Ecology in the Great Hungarian Plain*

Using a settlement ecology approach, this study analyzes how prehistoric communities in the Great Hungarian Plain prioritized landscape features in response to social, economic, and environmental changes from the Late Copper Age through the Middle Bronze Age. Through GIS-based analysis of settlement patterns from the Magyarország Régészeti Topográfiája, paleohydrological reconstructions, soil data, and historical and ethnographic accounts, I evaluate preferences for agriculture, trade, and mobility—both interregional and intraregional—conceptualizing these patterns as a “mental balance sheet” reflecting strategic decision-making. Settlement locations were not random nor solely environmentally driven but resulted from communities weighing diverse priorities. In the Late Copper Age Baden communities favored pastoral-friendly solonetz soils, with minimal preference for rivers or wetlands. In the Early Bronze Age Makó and Nyírség phase communities prioritized major rivers, emphasizing trade and mobility while avoiding wetlands. In the Middle Bronze Age Ottomány communities maintained riverine access without avoiding wetlands, while later Gyulavarsánd communities prioritized wetlands and meadow clays, possibly reflecting intensified agriculture and intraregional connectivity. These shifting patterns reveal evolving priorities, driven by social change, population movements, and trade networks, offering insights into the dynamic socioeconomic landscape of Eastern Europe.

Griffith, Cayden [252] see Griffith, Zachary

Griffith, Robin [314] see White, Chantel

Griffith, Zachary (University at Buffalo), and Cayden Griffith

[252] *The Known and the Unknown: Settlement Ecology of Nuragic Sardinia*

This study applies a settlement ecology approach to investigate economic factors influencing the strategic decision-making of site location preference in Nuragic Sardinia during the Bronze and Early Iron Ages. Using GIS-based analysis of 11,042 archaeological sites in Sardinia—including *nuraghi*, villages, Giants' Tombs, and sanctuaries—we evaluate proximity to agriculturally viable land, geological resources (copper, lead/silver, obsidian), harbors, and coastlines. Results indicate Nuragic communities strategically prioritized some of these factors while ignoring others. Differences in settlement patterns between various types of *nuraghi* and villages are observed. These patterns suggest evolving economic strategies and changes in sociopolitical organization. Using this information, we discuss the extent to which economic facts can (and cannot) be used to inform our understanding of settlement and sociopolitical organization in Nuragic Sardinia, and how this research may provide insight into undiscovered villages.

Grillo, Katherine [281] see Fennessey, Brenna

Grimes, Catherine**[75]** *Ceramics and Politics in Nineteenth-Century New Mexico***[WITHDRAWN]****Grimes, Vaughan (Memorial University), Etienne Houle (Memorial University), Jacqueline Eng (Western Michigan University), Deirdre Fulton (Baylor University), and Colleen Zori (Baylor University)****[302]** *Feeding Fortresses: Investigating Dietary Change and Social Transformation during the Incastellamento Process in Central Italy*

This project explores dietary transformations during *incastellamento* (AD 1000–1300) in High Medieval Central Italy, using the archaeological site of San Giuliano as a case study. The relocation of rural populations to fortified hilltop settlements during the Italian Medieval period likely reshaped food access and consumption, creating dietary distinctions tied to social status, biological sex, and religious practices. These changes occurred alongside the rise of the Papal States, agricultural innovations, and the spread of C₄ crops like millet, with aquatic resource use influenced by Catholic fasting traditions. While *incastellamento*'s socioeconomic impacts are well-studied, its effects on individual diets at localized sites remain under-researched. Traditional archaeological methods (e.g., zooarchaeology, material culture) and bulk bone collagen stable isotope analyses of carbon and nitrogen offer insights, but they are limited by preservation biases and diet-metabolic protein source averaging. Here we present the background to our project and discuss how compound-specific isotope analysis of amino acids (CSIA-AA: carbon and nitrogen) can be used to refine human diet reconstructions and improve differentiation between plant/animal protein sources. This study integrates CSIA-AA with archaeological, osteological, and historical data offering a new and biomolecular-focused perspective on diets and social change during the Italian Medieval period.

Grone, Mike [47] see Apodaca, Alec

Grossman, Kathryn (North Carolina State University)**[186]** *Putting the Baa Back in Urbanism: Affordances, Herding, and the Social Zooarchaeology of Early Cities in Northern Mesopotamia*

I present here a new path for thinking differently about the archaeology of urbanization, one that is explicitly rooted in social zooarchaeology. I argue first that studies of early urbanism have failed to take into account the multispecies nature of cities. In order to develop a framework for thinking about the role of animals in urbanization, I draw on the concept of affordances. I argue that explicit engagement with animal affordances offers a means of developing a new methodological tool kit for social zooarchaeological research. I focus in particular on behavioral affordances to explain how the sociality of herds underpins the world's first cities. A case study based on zooarchaeological analysis conducted at the site of Hamoukar in northern Mesopotamia illustrates the potential of a multispecies approach to the world's first cities. My goal is to reinvigorate archaeological studies of urbanism and urbanization by opening up space for thinking differently about the social foundations upon which cities were built.

Grote, Mark [170] see Mooneyham, Erin

Grote, Willow, Kurt Rademaker (Center for the Study of the First Americans), Jo Osborn (Texas A&M University), Victoria Schwarz, and Caitlin Doherty (Center for the Study of the First Americans, Texas A&M University)**[180]** *The Problem with People and Ponies on the Peruvian Puna in the Pleistocene: Uchcumachay Revisited*

The Uchcumachay rockshelter, situated over 4,100 m asl in the Chinchaycocha (Lake Junín) Basin of Peru, is one of the few sites in South America with potential evidence of human and extinct megafauna interaction. Initial investigations in 1972 by Peter Kaulicke and team recovered evidence of a stratified occupation, with stone tools and faunal remains of extinct Pleistocene horse and deer in the basal deposits. Kaulicke interpreted these deposits to represent the result of human hunting of extinct Pleistocene fauna. However, radiocarbon dates were never obtained. In 2024, the PaleoAndes team began new excavations to study the stratigraphy and radiocarbon date the site. While there are bones of extinct Pleistocene horse and sloth

present in the basal deposits, the radiocarbon dates and stratigraphic relationships both show that humans did not interact with Ice Age animals at Uchcumachay during the Pleistocene.

Grover, Margan [48] see Harrod, Ryan

Grunvig, Jeremy [344] see Satterwhite, R. David

Gruver, Steph (University of Florida)

[300] *Fishing through the Past for a Way Forward*

The Humboldt Current has provided the coast of Peru with one of the most productive marine ecosystems in the world. Communities of fisherfolk have enjoyed these bountiful conditions for at least 15,000 years. On the north coast, dynasties have maintained traditional fishing techniques, they are known as *sabios*, or the knowledgeable ones. Such dynasties have been maintained through limiting “intruders” from entering their fishing grounds with water rights and gatekeeping knowledge from them. In the 1970s, dynastic fishermen of Huanchaco, Peru, continued to prohibit intruders from entering their fishing grounds. Individuals seeking to enter the profession of fishing were forced to go elsewhere and learn through experimentation. Today, 40 km south of Huanchaco at Playa Ramada, professional fishermen are implementing the same techniques as Moche and Chimú fisherfolk did 1,000–500 years ago on that same beach. Interviews with fishermen at Playa Ramada have shown that these men ride *caballitos de totora* and use stone lures and bolas to capture their desired fish. The presence of stone lures and bolas in the deposits of the Moche- Chimú site of Uripe, an archaeological site on Playa Ramada, suggests that the same fishing technology has been utilized on this beach for a millennia.

Gryba, Eugene [319] see Smith, Heather

Gryctko, Lauren [22] see Ramsey, Madison

Gu, Yunong

[261] *Currency on the Edge: The Emergence of Early Knife-Shaped Coinage within Cross-Cultural Exchange*

One of the long-standing debates on the origins of coinage centers on whether money first arose as a state-imposed unit of account for taxation or as a market-driven medium of exchange designed to overcome the inefficiencies of barter. The discovery of early knife-shaped coins in the Yanshan region—situated between the Central Plains and the Eurasian Steppe—offers a distinct perspective, suggesting that coinage could also emerge from the need to facilitate external exchange across the boundaries between different groups. By contextualizing these finds within their broader archaeological and historical contexts, we can examine not only the cultural significance and economic functions of early coinage but also its transformative impact on patterns of interaction and exchange networks.

Guderjan, Thomas (University of Texas at Tyler), Colleen Hanratty (Maya Research Program), Alexander Parmington (Australia Cultural Heritage Management), Dominick Vander Notelear (Vlaams Erfgoed Centrum), and Lutz Schubert (University of Cologne)

[178] *Ancient Maya Manipulation of Residential Space in Northwest Belize*

Lidar data from 2016 caused the discovery of Linear Stone Boundary Markers (LSBMs) surrounding residential spaces at Xnoha, a Classic Maya center in northwestern Belize. The initial identification of these features was confirmed via multiple ground truthing surveys and cross-feature excavation as well as mapping of houselots, shovel testing and artifact density mapping, and soil chemistry within houselots. These data have been augmented in 2023–2025 by multiple backhoe trenches and dating based on ceramic analysis and radiocarbon and thermoluminescence dating. Drone-based imagery was used to parse out LSBMs that surrounded houselots from linear features that exist within houselots. While we are still working toward distinguishing between such features, it is clear that we can now define houselot boundaries and community structure in ways not possible in the past. This understanding also enables increased precision in estimating prehistoric population sizes.

Guengerich, Anna [30] see Comeca Ramirez, Gianina
Guengerich, Anna [58] see Crandall, James

Guernsey, Julia (University of Texas), Michael Love (Calif State Univ-Northridge), Lori Hager (Pacific Legacy Inc.), and Mallory Melton (Lycoming College)

[248] *Middle Preclassic Figurines from La Blanca, San Marcos, Guatemala: Feeding, Fragmentation, and Mutilation*
[WITHDRAWN]

Guerra, Willi [177] see Hansen, Richard

Guerrero, Francisco (University of California, Merced), and Beth Scaffidi (University of California, Merced)

[213] *Weaning Practices and Childhood Diets in the Majes Valley of Arequipa, Peru, during the Early Intermediate Period and Middle Horizon (ca. 200 BCE–1000 CE)*

This study investigates weaning practices and childhood diets in the Majes Valley of Arequipa, Peru, during the Early Intermediate period and Middle Horizon (ca. 200 BCE–1000 CE). It examines how endemic violence and communal social status influenced parental investment across the valley. Analyzing stable carbon and nitrogen isotopes from the first molars of over 30 individuals from Uraca, Beringa, and La Real revealed dietary shifts between pre-weaning and post-weaning phases. The research posits that children from elite sites (Uraca and La Real) and potentially injured males may experience later weaning ages due to greater parental investment. Findings indicate that all children consumed mixed C₃/C₄ diets, with mean weaning age ranging from 2.5 to 3 years, aligning with broader Andean patterns. However, children at Uraca were weaned slightly later than those at Beringa and La Real, potentially reflecting community strategies to mitigate risk in a more violent environment. The study also suggests that weaning practices varied based on gender and social-ecological contexts. This research hypothesizes the need to integrate isotopic evidence with bioarchaeological data on violence and health to better understand childhood in the ancient Andes.

Guevara-Duque, Maria Isabel (University of Illinois at Chicago)

[79] *Mapping Ancient Copper Use in Ecuador: Preliminary Results from a Large-Scale pXRF Study*

Copper was a critical material in prehispanic South America, valued for its physical, functional, and symbolic properties. While northern Peru is often viewed as the center of Andean metallurgy, Ecuador's extensive copper deposits and archaeological evidence point to an equally significant but understudied tradition. This research challenges the notion that Ecuadorian metallurgy was merely derivative of Peruvian innovations, proposing instead that it was a dynamic and locally rooted industry. Over 1,600 copper artifacts—including bells, axes, tweezers, needles, and ornaments—were analyzed using portable X-ray fluorescence (pXRF), representing 15 cultural groups from 500–1400 CE. This constitutes the largest metal artifact dataset ever assembled in Ecuador. Preliminary results reveal a wide range of alloy compositions, reflecting diverse metallurgical practices adapted to specific functional, economic, and symbolic needs. These findings suggest complex patterns of copper consumption and circulation, highlighting Ecuador's active participation in shaping regional metal economies. This study fills a major gap in the archaeological understanding of Andean metallurgy and underscores the need for continued interdisciplinary research to trace production sources and exchange networks.

Guillet, Sébastien [33] see Raillard Arias, Daniela

Guiry, Eric (Simon Fraser University)

[339] *Embodied Data: Lived Experience as a Pedagogical Tool in Stable Isotope Analysis*

Archaeological science can be a challenging area to teach within arts and humanities contexts. Pedagogical approaches in the field often emphasize quantitative reasoning, which may create barriers for students who struggle with numerical data or who approach learning from diverse perspectives. Inclusive pedagogy frameworks, particularly those grounded in Universal Design for Learning (UDL), emphasize multiple ways of knowing and highlight how accessibility can enhance learning outcomes without reducing intellectual rigor. This paper situates an experiential learning exercise in stable isotope analysis within that broader pedagogical

context but also extends it by drawing on the author's lived experience of disability. By centering lived experience and decentralizing authority through peer-to-peer dialogue, the exercise reframes isotopic data not as abstract figures but as narratives embedded in everyday life. Informal student feedback suggests that this strategy not only supports those marginalized by data-heavy instruction but also fosters collaborative engagement and deeper comprehension across the cohort. In positioning accessibility as a foundation rather than an add-on, and by acknowledging how disabled perspectives generate new pedagogical insights, the paper demonstrates how inclusive pedagogy can enrich the teaching of technical subjects in archaeological science.

Guiry, Eric [282] see Bari, Dawn

Guiry, Eric [84] see Bernard, Hayden

Guiry, Eric [79] see Kennedy, Ryan

Guiterman, Christopher [165] see Campbell, Wade

Gumeta, Yael (UNICACH), and Emiliano Gallaga (UNACH)

[272] *La Vajilla del Capitan: Ceramic Analysis from the Presidio San Carlos, Chihuahua*

Humans wherever they go attempt to re-create its surroundings with elements that make them feel comfortable/familiar. In this particular case, on the summer of 2018, a total archaeological collection survey was made at the remains of the Presidio of San Carlos, near the community of Manuel Benavides, Chihuahua. A presidio, to protect the frontier of the viceroyalty of New Spain in 1770, was placed in the middle of nowhere of the Chihuahuan Desert. The material evidence found illustrated that even in this far end of the kingdom, the *presidiales* attempt to re-create a familiar scenario. The material evidence, as ceramic distribution patterns in the area, forms, and possible uses and activities of daily life, reveal this material as a social status marker and a cultural identity from those who occupied the presidio during this period of occupation at the end of the eighteenth century.

Gumeta, Yael [161] see Gallaga, Emiliano

Gunchinsuren, Byambaa [170] see McCartin, Madison

Gunn, Charles (Craft Academy)

[111] *Modeling Artifact Distributions across Postclassic Mayapan*

I examine the distribution of artifacts throughout the Postclassic city of Mayapan (AD 1200–1450), in the Yucatán peninsula. I utilized data collected by the Carnegie Institution of Washington, DC, comprising 356,722 artifacts recovered from middens associated with 109 architectural features scattered throughout the city. The data was classified into many categories relating to origin, material specificity, and chronological period to help explore the relationship between artifacts to structure type and purpose. ALS (aerial laser scanning) technology was used to map the city itself, with the ALS data being imported into the ArcGIS graphical software, where our artifact data is now able to modeled onto the structures themselves. With these tools, I was able to fully analyze the distributions of many goods, whether they be manufactured tools, foreign pottery, or obsidian blades. The use of new graphical and mapping technology is vital for the future of archaeology in Central America, and this presentation serves to inform others of the utility of these exciting tools in archaeological analysis.

Gunn, Joel

[35] *The Rabbit and the Pith Helmet: Nicholas Dunning and the Rise Lowlands Geo-intelligence*

Nick has always been the person who could pull a geological rabbit out of a hat. One of my early questions to him was why there is a 10 m layer of gypsum over the elevated interior region of the Yucatán Peninsula. His response was of course the Chicxulub impactor. The meteor that killed the dinosaurs 65 million years ago gave rise to the remarkable feat of Maya engineering in the first millennium CE: building year-round urban centers on hill tops smeared with toxic chemicals. In 1932 an archaeologist declared that the Yucatán Peninsula was flat and that the climate did not change. By 2022 Nick had populated it from hilltops to *bajos*,

Nick is always the reliable source for invaluable information on the context of one of the world's great civilizations. When I wanted to understand the wealth of Dzibanche, the source quickly appeared out of Nick's hat in the form of stable wetlands. Nick is not only familiar with the Maya Noosphere, in many perspectives he proves to be the Noosphere. Thanks, Nick, for being a good friend and an ever present encyclopedia.

Gunter-Bassett, Madeleine (Virginia Museum of Natural History), and Hayden Bassett (Virginia Museum of Natural History)

[347] *Beyond Pastoralist-Forager Binaries: Modeling Mixed Subsistence Strategies in the Horn of Africa*

Archaeological approaches to pastoralism in the Horn of Africa have traditionally emphasized mobile herding as a distinct subsistence strategy, separate from coastal foraging. However, coastal sites in Djibouti and Somaliland show evidence of both pastoral activities and marine resource exploitation during the first millennium AD, raising the possibility that mixed subsistence strategies were more common than previously recognized. This paper examines whether ecological variables can predict where mixed subsistence strategies were most viable along the Gulf of Aden coastline by developing and testing complementary Archaeological Predictive Models (APMs) for pastoralist and coastal foraging habitat preferences in ArcGIS. When tested against archaeological site distributions, these models identify significant overlaps in preferred habitats, particularly in areas where wadis meet the coast. Examined alongside marine shell data from coastal sites, these results suggest that communities strategically positioned themselves to access both terrestrial and marine resources, and that local decision-making about resource access may have shaped the organization of broader regional networks. Overall, these results suggest that resources concentrated at terrestrial-marine interfaces may have incentivized hybrid subsistence strategies in coastal regions—a pattern that may be particularly pronounced in arid coastal environments where terrestrial resources are scarce and patchily distributed.

Guo, Junlin [281] see Zimmer-Dauphinee, James

Gupta, Chloe

[214] *Tracing the Origins of a Han Dynasty Artifact: Multidisciplinary Analysis of a Rare Bronze Qilin Figurine*

The UCLA Waystation Initiative stewards cultural objects prior to voluntarily returning them to the nation or community of origin. Among them is a bronze *qilin* figurine presumably from third-century CE China. In Chinese mythology, a *qilin* is a unicorn-like creature that symbolizes good fortune. While thermoluminescence dating assigns the object to the Han Dynasty and it is reported to have been discovered along the Silk Road, its authenticity and provenance remain uncertain due to extensive restoration and its distinctive style. To address these uncertainties, and with the permission from China, a multifaceted analytical approach was implemented to determine whether the figurine's materials and construction match known Han Dynasty manufacturing practices or indicate modern alterations. Integrated analyses of the corrosion, pigments, and repairs resolved ambiguities regarding the artifact's chronological and geographic context. An investigation of cultural heritage laws and provenance records yielded a more thorough comprehension of the *qilin*'s origin and history. The examination revealed that the figurine is composed of leaded bronze and contains modern pigments, suggesting it is a pastiche piece incorporating authentic ancient materials alongside modern restorations. This interdisciplinary approach to provenance research serves as a case study for evaluating other puzzling artifacts of uncertain origin.

Gupta, Neha, Desiree Martinez (Cal Poly Pomona), Sarah Kansa (Open Context), and Christopher Nicholson (Center for Digital Antiquity [tDAR])

[335] *What Do the FAIR and CARE Principles Mean in the Practice of American Archaeology?*

In this paper, the authors present ongoing work by the FAIR+CARE Cultural Heritage Network, a group working to investigate, develop, demonstrate, and promote more equitable cultural heritage data practices in archaeology. The Network aims to reconcile the apparent social and technical contradictions between two highly regarded data management principles: the CARE (collective benefit, authority to control, responsibility, and ethics) and FAIR (findability, accessibility, interoperability, and reuse). The Network's four codirectors will discuss activities to date aimed at advancing the capacity of Tribal Historic Preservation Offices, CRM,

federal and state agencies, universities, repositories, and publishers to curate data that relate to Indigenous Peoples in an ethically responsible manner. Specifically, the authors discuss how centering the cultural rights of Indigenous Peoples and descendant communities creates ground for decision-making and capacity building throughout the data life cycle in American archaeology.

Gupta, Neha [335] see Ryan, Susan

Gusick, Amy (Natural History Museum Los Angeles County), Jillian Maloney (San Diego State University), Roslynn King (Colorado School of Mines), Regan Dunn (La Brea Tar Pits), and Jessie George (La Brea Tar Pits)

[271] *An Enduring Legacy: Submerged Paleolandscapes Research in the Southern California Bight*

Starting ~20,000 years ago, the eastern Pacific Rim region was subject to massive sea-level rise, inundating previously exposed lands and causing significant changes to ecosystems and landforms. This massive inundation coincides with the currently understood timing of initial human dispersals into what is now North and South America. Recognizing that the drowned paleolandscapes of this region may hold data integral to the story of our human migration histories, Jon Erlandson and colleagues developed a project that was the beginning of now over a decade of work on submerged paleolandscapes in the ecological and cultural hot spot of the Southern California Bight. This enduring research and the discoveries it has produced have added to our understanding of the paleoenvironment and paleolandscape in a region and time critical to our human history. This research also highlights the importance of social scientists collaborating with marine and geoscience disciplines and traditional knowledge holders, a cross-disciplinary approach that Jon has championed throughout his career. Recent discoveries show that understanding the history of vast submerged paleolandscapes is integral to our understanding of human cultures, not only along the eastern Pacific Rim, but around the world.

Gusick, Amy [50] see Buratti, Heidi

Gutierrez, Angelina, and Dana Bardolph-Carsen (Northern Illinois University)

[208] *Lives in Ruins? Assessing College Tuition and Wage Prospects for Careers in Archaeology*

The pressures of rising college tuition are raising questions about whether a degree in higher education is worth the return on investment in today's society and economy. This study aims to acknowledge the issues of affording college and the opportunities granted in the face of college wealth premiums from the perspective of the field of archaeology. The college wealth premium is understood as additional opportunities and increased salaries offered to those with a degree in higher education compared to those without. Using the midwestern United States as a case study, we discuss the gender/race wage gap, college debt, loan inequity, and general employment opportunities, and present data on university tuition, job postings, and salary ranges in archaeology. We examine these data to determine the value of a college degree for those entering the job market in archaeology. With the goal of contributing to more equitable sociopolitical agendas, we consider how this issue can impact future generations of students, including women, first-generation students, and students of historically marginalized backgrounds.

Gutiérrez, Gerardo (University of Colorado at Boulder), and Mary Pye (New World Archaeological Foundation, BYU)

[272] *The Value of Pigments in the Highlands of Mexico: Their Archaeological Contexts and Trading*

The study of pigments needs to engage with larger questions associated with the economic, cultural, and ideological arrangements that made possible the presence of multiple color palettes in ancient societies. Here we explore the utility, desirability, and difficulty to mine, harvest, transform, and trade pigments and coloring materials in the Highlands of Mexico. We focus on examples of the early Olmec palette of Guerrero and continue with technological changes during the Classic period in Teotihuacan and the general adoption of Maya Blue during the Epiclassic. This includes the appearance of "cultural" or local pseudo-Maya Blues (having no palygorskite); we then assess whether the Aztecs succeeded in creating their own Aztec Blue using a Central Mexico source of palygorskite/sepiolite.

Gutiérrez, Gerardo [86] see Hinojosa-Balino, Israel

Gutiérrez, Gerardo [316] see Richter, Kim

Gutiérrez, Royma (Universidad de Ciencias y Artes de Chiapas)

[331] *Marcadores de estatus en las unidades habitacionales de Chalcatzingo, Morelos, durante la fase Cantera*
Durante la fase Cantera (700-500 aC), Chalcatzingo era el centro ceremonial más importante al oriente de Morelos, con un área mayor a 43 hectáreas y más de mil habitantes. El espacio construido estaba planeado de manera que hay un área central en la que se concentran los monumentos de piedra tallada, entierros con ofrendas de lujo, arquitectura pública y residencial de élite, así como edificios especiales. Distintos autores han planteado que alrededor del área central se ubican las zonas residenciales de no élite. Ante este planteamiento, aunado a los hallazgos de la Terraza 24, vale la pena reexaminar si en las áreas que han sido catalogadas como periféricas no se asentaba la élite. El objetivo de esta investigación es exponer los resultados del análisis de cuatro unidades habitacionales periféricas al área central para sumar al conocimiento sobre las unidades habitacionales de la fase Cantera, así como los elementos arqueológicos que indican la diferenciación social en dichos espacios.

Guzman, Rodrigo (University of Central Florida), Scott Macrae (University of Central Florida), Jeffrey Brzezinski (University of Central Florida), Brigitte Kovacevich (University of Central Florida), and Michael Callaghan (University of Central Florida)

[99] *The Geomorphology and Landscape of El Mirador Region*

El Mirador is a large and densely populated archaeological site located in the central Maya Lowlands, situated on elevated terrain within the Central Karstic Plateau north of Guatemala. As part of the Pacunam Lidar Initiative 2 (PLI2), a 512 km² area was surveyed using lidar technology, revealing detailed topography and settlement patterns in El Mirador and surrounding areas. Archaeologists from the Project Lidar-Mirador at the University of Central Florida (PALM-UCF) used multiple visualizations of the digital elevation model (DEM) generated by PLI2 to identify landscape features and the distribution of settlements across the region. Between 2022 and 2025, a comprehensive analysis was conducted, including feature digitization, extensive ground verification, density and clustering studies, hydrological assessments, and spatial modeling. The results of these analyses provide new insights into how land was used, and settlements were organized in El Mirador and nearby areas. They also shed light on the availability, potential use, and management of water resources, an especially important factor given the scarcity of water in the karstic plateau due to its unique hydrological cycle. These findings contribute to a broader understanding of settlement patterns and population dynamics in the Preclassic and Classic Maya Lowlands.

Guzman, Rodrigo [99] see Brzezinski, Jeffrey

Guzman, Rodrigo [99] see Callaghan, Michael

Guzman, Rodrigo [99] see Gonzalez, Jesus

Guzman, Rodrigo [99] see Macrae, Scott

Guzman, Rodrigo [99] see Micheletti, George

Guzman, Rodrigo [99] see Sherwood, Chloe

Guzman-Armenta, Ramon, Guadalupe Sanchez Miranda (ENAH), and Leopoldo Veléz

[88] *Early Holocene Projectile Points from El Gramal and the Coastal Plain of Sonora*

The present research focuses on the lithic analysis of projectile points from El Gramal, an extensive and multicomponent archaeological site located in the region of the Tastiota estuary between Guaymas and Bahia Kino with a long human occupation, which has a wide variety of cultural evidence, starting in the Early Paleoindian (13,250–10,000 yr BP), through the Archaic (10,000–4500 yr BP), to the Comcaac occupation. The site along with several surrounding areas was toured and collected by archaeology enthusiasts since the 1970s. In 2007 and 2016 archaeological research was carried out on the site that has helped us to understand it better. The Tastiota and the Sonoran River Delta region contains significant Paleoindian occupation with more than 50 Clovis points collected, but the Early and Middle Holocene occupation is also of great importance to the history of the Sonoran Desert. Here we present the analysis of the Archaic collections of this important site and reiterate the importance of practicing an inclusive archaeology.

Gyucha, Attila [343] see Lingle, Ashley

Haas, Jennifer (University of Wisconsin-Milwaukee)

[218] *Repatriation beyond NAGPRA: Collaborative Archaeological Practice under Wisconsin's Burial Sites Law*

This paper presents a case study illustrating how repatriation outside the scope of NAGPRA is conducted under Wisconsin's burial sites law, through collaborative engagement with Native Nations. In 2020, and again in 2023–2024, the University of Wisconsin–Milwaukee undertook large-scale archaeological investigations along the western shore of Lake Winnebago (Fond du Lac County, Wisconsin), focusing on extensive precontact Native American village and mortuary sites. These projects, completed for the municipalities of Neenah and Oshkosh, were designed to meet state-level cultural resource and burial site compliance requirements. The paper outlines a repatriation process developed in consultation with Native Nations and state regulatory authorities. This approach prioritized preservation in place and in-field repatriations, significantly reducing the likelihood that cultural items would be removed and curated in institutional collections. Both projects were successfully completed to the satisfaction of Native Nations and regulatory agencies, offering a valuable model for repatriation practices beyond the framework of NAGPRA.

Haas, Randy, Cecilia Chávez Justo (Collasuyo Archaeological Research Institute), Luis Flores-Blanco (ASU), Mark Aldenderfer (University of California, Merced), and Elizabeth Klarich (Smith College)

[343] *Finding Warawara: A Public Archaeology Book about the First Andean Highlanders*

In 2018, excavations at the site of Wilamaya Patjxa in the south-central Andean highlands of Peru resulted in the discovery of two individuals interred with hunting tools dating to 9,000 years ago. To the surprise of many, osteological and proteomic analysis revealed that one of the hunters was a young adult female. The female individual's tool kit included some 18 tools associated with large-mammal hunting and processing. Following publication of the findings and with support from the US Embassy in Peru, we initiated an effort to share our findings with the public. Working with members of the Aymara community of Mulla Fasiri, an Aymara illustrator, an Aymara translator, and Peruvian and US archaeologists, we co-constructed a 48-page, illustrated, trilingual story titled "The Hunters of Puno." Our paper introduces a story about Warawara, Phaxsi, their family, and their community of nomadic foragers who encounter and solve a life challenge on the Andean Altiplano. The story and illustrations combine traditional Aymara knowledge and archaeological knowledge. It is a story of a strong and innovative family and a resilient Aymara culture. We discuss the challenges and rewards of our effort, highlighting how collaborative archaeology led to the discovery of Warawara.

Haas, Randy [101] see Celia, Claudia

Haas, Randy [221] see Chen, Jennifer

Haas, Randy [101] see Feinen, Karlee

Haas, Randy [211] see Noe, Sarah

Haas, Randy [277] see Snyder, Tom

Habu, Junko (University of California, Berkeley)

[220] *Jomon Pottery, Foodways, and Social Practices: Case Studies from the Early Jomon Period (7000–5500 cal BP)*

The Jomon culture of the Japanese archipelago (ca. 16,000–2500 cal BP) is known for the presence of decorated pottery, ritual artifacts and features, large settlements, food storage, and long-distance trade. The most common form of Jomon pottery is the deep bowl, which was assumed to have been used not only for cooking but also for storage. A major change in the Jomon pottery assemblage occurred during the latter half of the Early Jomon period, when shallower bowls, including small shallow bowls for rituals, became a common component of the pottery assemblage. These changes in pottery assemblage composition may have been closely tied to changes in social practices, subsistence activities, and foodways. Differences in size of pottery used at each site and features can also provide us with useful information when we infer site function.

Hackman, Joseph [95] see Greaves, Russell

Hadden, Carla [349] see Figueroa, Alejandro

Hadden, Carla [342] see Schwadron, Margo

Haefner, Joseph (HDR Engineering), and Kelsey Lynne Radican (HDR)

[301] *Lithic Technology as Indicators of a Late Prehistoric Settlement Pattern at Turkey Peak, Palo Pinto County, Texas*

Archaeologists from HDR Engineering, on behalf of Palo Pinto County Municipal Water District Number 1, recently completed eligibility testing at seven precontact sites (41PP375, 41PP377, 41PP378, 41PP384, 41PP385, 41PP387, and 41PP388). Data for each site's fire-cracked rock and faunal assemblages to date suggest variation in site use ranged from bison kill/butchering sites to sites characterized by intensive cooking episodes. This poster will present the results of lithic analysis from select sites to assess if this posited variation in site use is represented in these corresponding assemblages and what can be inferred for the organization of lithic technology when these sites are evaluated as components of a settlement pattern system.

Haïdar-Boustani, Maya [170] see Russo, Gabriele

Hakala, Alan [199] see Pawlowicz, Leszek

Hake, Seven [115] see Connell, Mary

Halcrow, Sian (Otago University | Ōtākou Whakaihu Waka, Aotearoa New Zealand), Rebecca Gowland (Durham University, UK), Holly Hancox (Otago University | Ōtākou Whakaihu Waka, Aotearoa New Zealand), Karen Reader (Otago University | Ōtākou Whakaihu Waka, Aotearoa New Zealand), and Jamie Metzger (Takarangi Research and Museum of Wellington, Aotearoa New Zealand)

[42] *The Chosen Young: Necropolitics, Age, and Personhood of Fetuses and Infants in Historical Anatomical Skeletal Collections*

In the nineteenth and twentieth centuries, many fetal and infant bodies were collected for anatomical study, yet little attention has been paid to their origins or the ethical issues surrounding their use in teaching and research. This study presents case studies from the W. D. Trotter Anatomy Museum and the Pathology Museum at the University of Otago | Ōtākou Whakaihu Waka, Aotearoa New Zealand. Combining osteological and preserved body analysis with archival research, we investigate how these remains were historically acquired. We apply a framework of necropolitics of reproduction and the life course to interrogate how systemic structures of power and inequity—such as gender, age, institutionalism, disability, and class—shaped experiences of death and bodily autonomy. Life course theory demonstrates how marginalization is embedded from the very beginning of life, where infants' trajectories were shaped by disability, social circumstances of pregnancy, and aspects of parental social status. Infants with developmental defects or born to lower-class parents were more likely to be denied recognition of personhood and appropriated into scientific collections. Illegitimacy compounded this marginalization, reflecting broader societal values. These histories demand critical reflection when considering the care of these remains.

***This presentation may include images of human remains.

Hale, Jessica [180] see Pietraszek, Alyssa

Haley, Bryan [111] see Teja, Melissa

Haliburton, Stefanie (Texas State University)

[293] *Don't Nock It till You Try It: An Analysis of Expedient Flake Tools at the Zatopec Site (41HY163), San Marcos, Texas*

Transitional periods, specifically the transition of weapons systems during the Late Prehistoric period within central Texas, have centered on lithic projectiles and points. Expedient flake tools are transcendental across the spatiotemporal continuum of lithic assemblages, and determining the task or tasks can help determine the

function of a site (Pearce and Barbetti 1981; Bamforth 1986, 2002; Barham et al. 2011; Waters et al. 2011). Often, expediency and curation are seen on opposite ends, and only within the last few decades have they been examined as a spectrum within archaeological contexts. Expediency does not need to be defined as fast, unskilled, or technology with no forethought; expedient technology can be just as tactile as curated systems. From a craft specialist's perspective, experimental bone and woodworking were conducted to create atlatls, bows, and related implements with expedient flake tools. The use-wear was compared microscopically to the Zatopec sites (41HY163) in San Marcos, Texas. The results indicated increased use-wear with hard material during the Toyah phase, with tool efficiency decreasing with bipolar reduction. In this presentation, I will discuss the interpretations and results of the microscopy on the experimental expedient flake tools and how they compare to the Zatopec sites.

Hall, James [299] see Bennett, Jeremy

Hall, Jennifer [218] see Bishop, Katelyn

Hall, Mark (Independent Scholar/retired US Dept. of Interior-Bureau of Land Management)

[49] *From the Late Iron Age through the Early Medieval Period: Temporal Relationships between Climatic, Demographic, and Sociopolitical Events in the Irish Province of Ulster*

A database of over 480 radiocarbon dates from over 180 sites in the Irish province of Ulster (Republic of Ireland: counties Cavan, Donegal, and Monaghan; Northern Ireland: counties Antrim, Armagh, Derry/Londonderry, and Tyrone) is used to examine population dynamics from the Late Iron Age through the end of the Early Medieval period (ca. 2100–780 BP). Bayesian bounded growth models are fit to the dataset using *nimbleCarbon*. The Widely Applicable Information Criterion provides strong evidence that a logistic-exponential growth model with a change point fits the data best. This model sees positive logistic growth and then at the change point, negative exponential growth. The 95% Highest Posterior Density (HPD) for the date of the change point is 1367–1232 BP (AD/CE 583–718). The goodness-of-fit for the model ranges from 0.752 to 0.913 (95% HPD). These results indicate a significant demographic downturn during the Late Antique Little Ice Age (ca. 1414–1290 BP; AD/CE 536–626). Based on the Irish annals, this is also a time of dynastic warfare between rival political polities. A second demographic downturn occurred after the onset of the Viking incursions.

Hall, Morgan (UC Davis)

[45] *Beyond the Osseous: An Introduction*

Zooarchaeology is a field defined by the identification and interpretation of nonhuman animals in the archaeological record. Zooarchaeologists do this through numerous methods of research. However, due to preservation bias in the archaeological record, much of the discourse in archaeological journals and conferences focuses on the quantification, analysis, and interpretation of osseous materials. While no doubt the cornerstone of zooarchaeology, an emphasis on osseous analysis can leave the potential of analysis of non-osseous material untapped. Faunal materials like skin, hair, leather, or soft-tissue organs present researchers with rare research opportunities as well as novel challenges with preservation and curation. When faced with these materials, researchers are challenged to look outside their typical method of analysis and seek opportunities for learning, interdisciplinary research, and collaboration. This includes perishable fiber analysis, ZooMS analysis, and stable isotope analysis of non-osseous material. This symposium provides a venue for zooarchaeological researchers to present and discuss the application of non-osseous faunal material to answer questions concerning human-animal interactions.

Hallensleben, Markus (UBC), Daniel Gámez (University of California, Los Angeles), and Keith Jordan (CSU Fresno)

[214] *How to Build a Reciprocal Online Archive? Avant-Garde Artist Wolfgang Paalen as Writer in Exile and Collector of Indigenous Belongings*

Wolfgang Paalen (1905–1959) is known as surrealist artist who influenced the American Abstract Expressionism. Being in exile from 1939 on, he extracted cultural objects and other belongings from Indigenous peoples in the Pacific Northwest and Mexico that we will bring for the first time to the attention

of local knowledge holders, so that they may someday be returned in some instances; but in others we explore the possibility of not being able to reconnect with their descendants. By building a non-colonial, participant-centered, new relational, Indigenous storywork-based knowledge network for a multilingual online Paalen archive of his exile writings, we reimagine the ways that critical editorial and reciprocal archival practices can enable us to make lost cultural heritage accessible and grapple with the impact and ongoing tensions of our colonial history. The main goals and questions for our interdisciplinary research project with collaborators from Canada, Austria, Germany, France, Mexico and the US are (1) how to develop a practical-strategic framework for a decolonial approach that includes Indigenous voices and stories? and (2) How to tackle the complex discourses around restitution, repatriation and return in Mexico, Canada, the US, and Europe with a project that is inter-First Nations and trans-Indigenous community oriented?

Halligan, Jessi (Center for the Study of the First Americans, Texas A&M University)

[180] *Radiometric Ages of Greenbriar and Suwannee Projectile Points at the Page-Ladson Site, 8JE591, in the Aucilla River, Florida*

The Page-Ladson site (8JE591) in the Aucilla River basin in northwestern Florida, a drowned terrestrial locality, contains strata with well-preserved organic materials in archaeological contexts, allowing us to create absolute cultural chronologies, re-create paleoenvironments, and discuss human subsistence strategies. For the past several years, we have been conducting further investigations of a cultural component in and on a soil that has ages spanning the Younger Dryas and earliest Holocene. The soil contains multiple diagnostic artifact styles, including Bolen, Suwannee, and Greenbriar, and has yielded the first radiometric ages for both Suwannee and Greenbriar. This paper discusses these ages and the context of these finds, providing the first modeled ages for these point types in the US Southeast.

Halligan, Jessi [180] see Dempsey, Lily

Halligan, Jessi [180] see Pietraszek, Alyssa

Halling, Abigail

[214] *Provenance Research of Predynastic Egyptian Objects: Emerging Questions Concerning Restitution and Authenticity*

In recent years, many museums have begun requiring that purchased objects possess a thorough and verifiable provenance. This is a calculated effort to reduce the market value of unprovenanced materials and to de-incentivize the looting of archaeological sites. Simultaneously, multiple museums are performing provenance research on existing collections and, when appropriate, initiating the voluntary restitution of objects to their nations and/or communities of origin. Aiming to enhance both the transparency and application of provenance research, this paper examines the methodologies and complex ethical considerations that may be encountered during the research process as it pertains to the objective of voluntary return. I focus on the close examination of two cultural objects: a predynastic Egyptian zoomorphic palette, and a serrated knife, both made of graywacke. This paper presents a detailed and chronological explanation of the technical methods of provenance research such as material analysis, typological sequencing, and examination of auction records and existing literature. This is followed by an exploration of the ethical ambiguities raised in the determination of the authenticity of cultural objects by entities outside of the source country. Additionally, the potential educational applications of objects identified as inauthentic will be discussed.

Halling, Christine [22] see Boutte, Kerry

Halling, Christine [216] see Seidemann, Ryan

Halperin, Christina (Université de Montréal)

[321] *Bodies That Didn't Matter: Alterity among the Ancient Maya*

Judith Butler's seminal work, *Bodies that Matter: On the Discursive Limits of "Sex"*, underscored the two-fold way in which only some types of gendered and sexed bodies "mattered" or are considered as legitimate and the way in which identities are produced as "matter" and tangibly embodied in citational performances. Although this paper is not specifically about gender or sex, it draws inspiration from the notion of "bodies

that matter” in an exploration of alterity among the ancient Maya. It examines, in particular, ways in which the body was a site for the making of alterity as they were inscribed, painted, effaced, or rendered absent—both in living flesh and in enduring images in stone, ceramics, and other media. Bodies that were tattooed, scarred, painted, pierced, adorned or unadorned were highly ambivalent—both the marks of becoming, beauty, and belonging, but also setting apart as Other. Classic and Postclassic Maya governing systems exploited and reworked this ambivalence to their favor in the historical recounting of conflict, in their treatment of captives, and in the enslavement of the most marginalized.

Halperin, Christina [292] see Flynn-Arajdal, Yasmine

Halperin, Christina [157] see Freiwald, Carolyn

Hamada, Riley (University of Utah), Daniel Dalmas (University of Utah), and Lawrence Todd (GRSLE Inc.)

[115] *Lithic Diversity, Population Change, and Mobility: Insights from the GRSLE Dataset*

Drawing on more than 250,000 systematically recorded artifacts from the Greybull River Sustainable Landscape Ecology (GRSLE) Project, this study examines lithic raw material diversity across Paleoindian, Archaic, and Late Prehistoric periods in the Absaroka Mountains of northwestern Wyoming. Over 1,800 temporally diagnostic projectile points provide a framework for evaluating long-term trends in raw material use. Using ArcGIS and RStudio, we compare spatial and temporal distributions to assess how demographic change, mobility, and exchange shaped technological choices. Preliminary results suggest that shifts in population density influenced both the relative reliance on local stone and the scope of nonlocal materials present. These findings highlight the value of regional, landscape-scale approaches for exploring behavioral change, while also situating high-country assemblages in broader regional and interregional contexts. By bridging systematic mountain datasets with comparative perspectives, this project contributes to ongoing debates about mobility, interaction, and adaptation in the Greater Yellowstone Ecosystem.

Hambley, Joanna [323] see Mitchell, Juliette

Hamdam, Mohamed [93] see Beauvais, Pierre-Antoine

Hamilton, Derek

[83] *“Celtic Cowboys” Revisited: Sulfur Isotopes and Iron Age British Animal Mobility*

The middle of the Iron Age in southern central Britain (ca. 400–200 cal BC) is a period that is often seen as becoming regionally inward-looking. A primary focus of the mixed agriculturalists is on building and maintaining massive hillforts. There is very little long-distance exchange or trade noted in the archaeological record, and the metalwork at the time takes on insular forms (e.g., involuted brooches) that separate it from the Continental connections observable in both the Early and Late Iron Age. This paper will present the results of recent multi-isotopic work ($\delta^{13}\text{C}$, $\delta^{15}\text{N}$, and $\delta^{34}\text{S}$) on animal bone collagen from Iron Age sites in southern Britain, which alter this narrative. The high variability in $\delta^{34}\text{S}$ observed within the horses can be interpreted as being the of these animals being used to cover large distances. The data from cattle cover their lifetime and are indicative of them being moved potentially upward of 100–300 km prior to their death and deposition. The scale of the mobility within the animal populations and differences in patterns between different sites leads to new questions about the broader economy at this time.

Hamilton, Erin (Center for Archaeological Studies, Texas State University), and Amy Reid (Center for Archaeological Studies, Texas State University)

[182] *Guardians of Bobcat History: Integrating Campus Archaeology and CRM Training at Texas State University*

Texas State University (TXST), as a political subdivision of the state, must consider cultural resources when planning or undertaking development projects on TXST property. The Center for Archaeological Studies (CAS) is authorized to coordinate project reviews and facilitate TXST’s compliance with applicable cultural resources laws. CAS is issued annual permits to conduct archaeological investigations on TXST property and make recommendations on the management of cultural resources such as the significant archaeological sites associated with the springs that form Spring Lake. These springs have attracted human populations for over

13,000 years, evidenced by numerous archaeological deposits and multicomponent sites. Recent investigations associated with the construction of Live Oak Hall produced new evidence of this area's archaeological significance while providing students with field and lab experience. This poster discusses CAS's approach to campus archaeology that integrates a mission to provide professional training and research opportunities to TXST students and presents the results of the Live Oak Hall project as a testimony of this approach.

Hammerstedt, Scott (University of Oklahoma), Patrick Livingood (University of Oklahoma), and Amanda Regnier (Oklahoma Archeological Survey)

[301] *Preliminary Results of 2025 Excavations at Spiro Mounds*

This paper summarizes results of the University of Oklahoma 2025 summer field school at Spiro Mounds. Excavations, which continued from the 2024 season, focused on three areas of the site identified during geophysical survey: a temporary structure on the Lower Terrace, a Harlan phase (AD 1100–1250) midden concentration at the interface of the Upper and Lower Terraces, and what we tentatively interpret as an Evans phase (AD 900–1100) house mound and midden on the Lower Terrace. Preliminary results are presented in this paper.

Hampson, Daniel [181] see Stauffer, Kaeleen

Hampson, Daniel [277] see Van Dyke, Ruth

Hancock, Alexa [272] see Mayo Torné, Julia

Hancox, Holly [42] see Halcrow, Sian

Handziuk, Natalia [115] see Erfttenbeck, Hanna

Hanks, Bryan [201] see Suarez, Nicholas

Hanna, Robert [169] see Clark, Andrew

Hannigan, Ashley [282] see Taivalkoski, Ariel

Hannigan, Elizabeth (Arizona State University), Julianne Stamer, Claire Zikidi, and Jane Bulkstra (Arizona State University)

[297] *Citational Practices in Queer Archaeology: An Alternative Genealogy and Case Study from Archaic Period Greece*

Archaeologists often situate their theory in the works of white Western academics with limited engagement with the works of Black and Indigenous scholars. This citational practice reinforces anti-Black and colonial tendencies in the field and inhibits the growth of a community-oriented archaeology. Queer archaeology, in particular, roots its theory in white scholars like Judith Butler, with little to no mention of the Black, Indigenous, and South Asian feminists (e.g., the Combahee River Collective, Gloria Anzaldúa, Chandra Mohanty, etc.) who greatly expanded the boundaries of queer theory. Some archaeologists like Maria Franklin and Whitney Battle-Baptiste have used Black feminist theory to expose the impact of coexisting marginalized identities in historic American contexts. Here, I propose the use of theories from the global majority (e.g., intersectionality and subaltern studies) to explore the complex lives of women from Archaic period Greece. With this case study from Archaic period Greece, I build an alternative genealogy for queer archaeology that is rooted in Black and Indigenous feminist thought. Furthermore, the aim of this paper is to reaffirm queer archaeology as a tool to expose power relations in the past and a means of deconstructing them in the present.

Hanratty, Colleen [178] see Guderjan, Thomas

Hansbrough, Kay [229] see McCormick Alcorta, David Rafael

Hansen, Richard (Idaho State University; FARES Foundation), Willi Guerra (University San Carlos, Guatemala), Jose Suasnavar, Divina Perla Barrera, and Edgar Ortega (Proyecto Cuenca Mirador)

[177] *The Epistemology of Apocalypse: The Battle on Tigre Pyramid in the Early Classic Period*

Archaeological investigations at El Mirador, Petén, Guatemala, over several decades have produced extraordinary evidence of a battle on the upper main platform of the pyramid between Teotihuacan warriors and Maya defenders. This event occurred several hundred years after the site had been abandoned and the evidence includes hundreds of obsidian projectile points from highland Mexico, as determined by XRF analyses, projectile points from the lowlands, other weapons of warfare, osteological remains, evidence of burning and intentional destruction of architecture. The evidence of human remains associated with projectile points is remarkable in light of probable vulture and mammal depredation of the victims. The limited number of defenders is indicated by the fact that evidence of this battle has not been identified on any other structures at the site, nor any of the other sites investigated to date in the basin. In addition, defacement of monuments appears to have been enacted by Teotihuacan warriors, as suggested by the presence of Tlaloc imagery on two monuments from the site. This evidence, in the context of the construction of defensive walls and moats at El Mirador and other sites in the basin suggests a panorama of conflict in the Early Classic period. ***This presentation will include images of human remains.

Hansen, Richard [355] see Thompson, Josephine

Hanson, Kelsey (University of Texas at Arlington)

[26] *The Geological and Tactile Foundations of Juan Quezada's Artistic Legacy*

Juan Quezada's artistic accomplishments are internationally recognized, yet the most foundational elements of his work are often underappreciated: his tactile knowledge of local geological materials and his ability to transform even the most difficult clays into exquisite ceramic art. Quezada's innovations were framed by a "taskscape" of daily routines that provided the spatial framework for discovery, facilitating his encounters with the geological materials and prehistoric Casas Grandes pottery that inspired him. From these encounters, a lifelong history of discovering and testing geological materials across the Mata Ortiz landscape culminated in a deep, tactile understanding of ceramic materiality. For potters, the tactile qualities of clays—feel, plasticity, workability—are critical, yet these sensory parameters are often neglected in archaeological research. This paper addresses this gap by integrating oral histories with archaeometric analysis to document Juan's embodied knowledge. Raw, processed, and fired samples of Quezada's key clay sources were analyzed using X-ray diffraction to understand the tactile interventions that made his ceramic art possible. Considering these alongside documented oral histories of Juan's land use reveals how this sensorial, place-based knowledge was cultivated through a lifelong dialogue with the Mata Ortiz landscape.

Hanson, Kelsey [26] see Martínez-Tagüña, Natalia

Hanson, Kelsey [26] see Peeples, Matt

Hanson, Kelsey [26] see Vidal-Solano, Jesus

Hanten, Nicholas [334] see Burns, William

Haque, Tatfeef [217] see Rivera, Michael

Harbort, Mia (University of Kansas), and Kelly Graf (University of Kansas)

[195] *Lithic Technological Analysis of the Dry Creek Site, Central Alaska*

This poster investigates the lithic technology of Dry Creek, utilizing lithic material excavated during the 2011 field season. Dry Creek is a key archaeological site in Interior Alaska, sitting within the Nenana River Valley. It was the site of multiple occupations over several thousand years during the late Pleistocene and the early Holocene; Component 1 dates to ~13.5 ka and component 2 dates to ~11 ka. This analysis examines lithic tools and debitage from these components to assess changes in technological organization. Additionally, we track raw material frequencies within and between components to reveal changing patterns in technological provisioning strategies. The culmination of this work will be a better understanding of how people acquired

and utilized resources as they moved across the landscape.

Hard, Robert [282] see Carpenter, Michelle

Hard, Robert [115] see White, Tyler

Hardes, Jonathan [71] see Schachner, Gregson

Hardie, Megan (University of Colorado Boulder), Fermin Lopez (Pueblo of Pojoaque), and Scott Ortman (University of Colorado Boulder)

[34] *Learning from the Old Ones: An Example of Collaborative, Indigenous-Centered Bioarchaeology with the Pueblo of Pojoaque*

Building on our long-term partnership in archaeological research and stewardship, anthropologists from the University of Colorado Boulder and tribal leadership of the Pueblo of Pojoaque began collaborating on bioarchaeological projects in January 2025. The tribal council and cultural committee support the sharing of these projects through collaborative publications and presentations. Here, we discuss our first project, which involved recovering, interviewing, and reburying an Ancestor revealed through erosion on tribal land. We detail how we performed collaborative, Indigenous-centered bioarchaeology as we established methods to care for Pojoaque Ancestors. Over four days, tribal members, CU anthropologists, and BIA representatives planned and completed a successful reburial that braided bioarchaeological and traditional practices, centering the understandings of tribal members in both communicating with and caring for this Ancestor. Our project is an example of bioarchaeology that takes place within a community-initiated project that primarily serves the purpose of care and preservation but also provides value to descendants through scientific investigation. It is through informed, involved relationships between researchers and community members that such work can be performed successfully to primarily benefit tribes in matters of both traditional care and scientific learning.

Hardie, Megan [184] see Lopez, Fermin

Hardin, Alize [349] see Kiahtipes, Christopher

Hare, Timothy (Morehead State University), and Marilyn Masson (University at Albany SUNY)

[36] *Identifying and Analyzing Colonial Period Maya Settlement at Hunacti, Yucatán*

New airborne laser scanning (ALS) data from the site of Hunacti aided in analyzing the distribution, form, and organization of colonial period house groups at this important sixteenth-century mission site. The greatest methodological challenge to this project was the superposition of colonial settlement over an extensive and monumental prehispanic site. An additional challenge was Hunacti's short-term occupation. Pedestrian survey developed criteria characteristic of colonial-era houselots and guided subsequent excavations. Results of this research involving ALS, ground survey, and excavation data in 2025 illuminate the importance of the built and natural environments to familial strategies for choosing domestic group locations. Findings to date illustrate distinctiveness of colonial period houses in terms of form, spatial association, and distribution with respect to the church and monumental center, gridded streets, and water sources, which in part conform to and in part diverge from idealized mandates of urban form imposed by the Spanish regime.

Hare, Timothy [338] see Masson, Marilyn

Harkness, Rebecca (University of Arizona)

[166] *Why Decorate a Cooking Pot? The Interplay between Technological and Decorative Aspects of Mogollon Corrugated Ceramics*

Over the last 30 years, migration has grown in the archaeological literature from a topic limited to the identification of movement to explorations of complex processes that result from different forms of interaction and transformation over time. These processes involve varying sizes of groups and distances, as well as push and pull factors, resulting in diverse outcomes. The interplay between local and migrant communities can have a profound impact on cultures and economies. Between 1250 and 1450 CE, the

cultural landscape of the US Southwest underwent a significant transformation as diverse communities migrated from their homelands into areas with long-established local populations. I investigate this period of flux by analyzing corrugated ceramics across five sites in the Arizona Highlands and Point of Pines regions as evidence of the negotiation of identity in newly formed multicultural communities before and after migration. I examine the extent of variation in attributes that indicate differing scales of identity and address how utilitarian ceramics (cooking, storage, and serving) were embellished, focusing on the interplay of technological and decorative aspects.

Harkness, Rebecca [166] see Place, Noah

Harris, Brandy [300] see Wunderlich, Shelly

Harris, Joseph (University of Chicago)

[209] *Networks before the Neolithic: New Findings across Epipaleolithic to Chalcolithic Mesopotamia*

I present my study of the Braidwood legacy assemblages—the overlooked residues of Robert Braidwood's 1950s test excavations across Prehistoric Mesopotamia, held by the UChicago ISAC. Approaching a million artifacts, these assemblages comprise one of the largest collections in the world from prehistoric Iraq and Iran. Moreover, they represent the only surviving hunter-gatherer assemblages from certain regions, whose landscapes have since been “developed.” After discussing the unique importance of these assemblages amid ongoing warfare and landscape destruction, my study of these assemblages seeks to advance our understanding of the “Neolithization” of Mesopotamia. Several strands of my analyses point to vast, strong, and maintained networks of interconnection across >1,000 km, as early as 15,000 years ago—a fact long assumed but rarely evidenced. I involve chipped stone, obsidian XRF sourcing, micro-use-wear, fauna, shell, and other material culture classes to portray striking affinities in the tempos of the “Neolithic Revolution”—the emergence and spread of agriculture, sedentism, and new modes of thinking—across such distances.

Harrison, Brent [79] see Mink, Philip

Harrison-Buck, Eleanor (University of New Hampshire)

[341] *Modeling the Prehispanic Urban Marketplace: A Tale of Two Maya Cities*

Prehispanic marketing is examined here using two Maya centers that could be characterized as “gateway cities” controlling inland-coastal trade—Chunchucmil in northwest Yucatán and Altun Ha in northeast Belize. Chunchucmil—a well-documented urban marketplace—is presented here as a comparative model for theorizing Altun Ha where a marketplace was recently identified. Several presenters in this session describe configurational, distributional, and contextual studies with the mapping and testing of this site. Here, I examine Altun Ha's urban marketplace and its role as a gateway city using a spatial approach (Hirth 1978, 1998), which I compare with Chunchucmil. Both sites are situated on relatively marginal agricultural land, likely controlled salt production, show an abundance of imports, and are connected to the coast via water routes, linking them to a circumpeninsular maritime trade network tied to the Gulf Coast region by at least Terminal Classic times. I discuss the importance of this inland-coastal route for the long-distance movement of “waterborne” goods like obsidian, jade, salt, shell, and chert. I consider Altun Ha's role as a major distribution center, present evidence for merchant-producers around the site's marketplace, and cross-examine Pendergast's (1992) notion of reciprocal relations at Altun Ha in the context of the market economy.

Harrison-Buck, Eleanor [341] see Kaeding, Adam

Harrison-Buck, Eleanor [35] see Krause, Samantha

Harrison-Buck, Eleanor [341] see Murata, Satoru

Harrod, Chris [263] see Latorre, Claudio

Harrod, Ryan (University of Alaska Anchorage), Ariel Taivalkoski (University of Alaska Anchorage), Liz Ortiz, Margan Grover (Bold Peak Archaeological Services), and Ted Parsons (University of Alaska Anchorage)

[48] *From the Field to the Lab: The “Bear Farm” and Alaska Consortium of Zooarchaeologists Collection for Teaching Methods*

In fall 2015, the Department of Anthropology and Geography at the University of Alaska Anchorage (UAA) started obtaining bear carcasses from the Alaska Department of Fish and Game. The municipality of Anchorage has large populations of black and brown bears, which frequently interact with humans and occasionally die as result. The carcasses were buried in a wooded university property at a field site called the “Bear Farm” that serves as a classroom for students learning forensic archaeology and 3D modeling. After excavation, the bear skeletal remains are donated to the Alaska Consortium of Zooarchaeologists (ACZ), a special interest group of the Alaska Anthropological Association. The ACZ Arctic and Subarctic comparative faunal collection is housed at UAA. The skeletal remains in the collection are used to teach students zooarchaeological identification and methods. The collection also is a community resource, providing reference materials for federal, state, and private cultural resource management practitioners in Alaska and Canada.

Harrod, Ryan [282] see Taivalkoski, Ariel

Hart, Isaac (University of Utah), Rachel Quist (US Army Dugway Proving Ground), Andrea Brunelle, Lee Drake, and Jennifer DeGraffenried (US Army Dugway Proving Ground)

[200] *Human Population Dynamics and Paleoenvironmental Change in the Lake Bonneville Basin*

We compare a lithic tool–based estimate of human populations in the Lake Bonneville Basin to paleoenvironmental records of hydrologic activity and terrestrial productivity. Results shed light on the relationship between hydrology and human settlement and subsistence patterns through the Holocene in the Lake Bonneville Basin.

Hart, Siobhan [48] see Baustian, Kathryn

Hartley, Erika (Western Michigan University)

[345] *Exploring the Impacts of Dewatering a Colonial Fort*

To “preserve the past for the future,” it is necessary to examine not only the preservation methods employed on artifacts in collections but also the environmental factors impacting the preservation of archaeological sites and the methods used to excavate them. Investigations at Fort St. Joseph, an eighteenth-century mission, garrison, and trading post, have led to the recovery of approximately 350,000 artifacts over the past 25 years, providing insights on the Fur Trade and colonial interactions occurring in the western Great Lakes region. Situated along the banks of the St. Joseph River, the fort site requires the use of a dewatering system to conduct archaeological work due to the installation of twentieth-century dams that have left the area inundated. As the water table is continuously raised and lowered during the field season by human interference and year-round by climate change, it is important to begin considering the impacts that these processes are having on the items waiting to be unearthed.

Hartley, Erika [280] see Doppke, Ella

Hartman, Gideon [79] see Rockwell, Sophie

Hartman, Ginger [181] see Bielenberg, Henry

Haruda, Ashleigh [314] see Ammerman, Steven

Harvey, Amanda (Rincon Consultants), Heather Atherton (Environmental Science Associates), Mai Hopstone (Environmental Science Associates), Amy MacKinnon (California High-Speed Rail Authority), and Abrianna Verduzco (Harris)

[334] *Walking on Perfect Planks: Historical Boardwalks in Downtown Fresno*

The last decade plus of work on Construction Package I (CP-I) in downtown Fresno has resulted in extensive cultural resources monitoring. Multiple sites and features have been identified as a result of the construction work offering interesting insight into historical period Fresno. This presentation explores the history and salvage archaeology of two historical period wooden boardwalks in downtown Fresno on the west side of the Union Pacific Railroad (UPRR). In 2020, construction uncovered a linear wooden structure, oriented perpendicular to the UPRR tracks at the intersection of Inyo and G streets (Inyo Street Boardwalk). In 2020, and again in 2023, a second buried wood structure was identified at the intersection of Mariposa and G Streets (Mariposa Street Boardwalk), approximately 470 feet to the north of the Inyo Street Boardwalk. This wooden structure also runs perpendicular to the UPRR tracks. Both the Inyo Street and the Mariposa Street Boardwalks are most likely associated with the railroad station house as depicted on the 1888 Sanborn map. Using a mix of archaeological and architectural history methods, we explore how these two structures helped keep Fresno residents' feet dry during annual floods and directed their use of the city.

Harvey, Amanda [334] see Carwin, Eleni
Harvey, Amanda [334] see Newcomb, Alyssa

Harvey, Victoria [50] see Breitzkreutz, David
Harvey, Victoria [184] see Doyle, Anna

Hasil, Jan [177] see DeGeorgey, Alex

Hastorf, Christine (University of California, Berkeley), Maria Bruno (University of Nevada, Reno), Venicia Slotten (University of California, Santa Barbara), Emily McKenzie (University of California, Berkeley), and Alejandra Domic (Pennsylvania State University)

[306] *Multidisciplinary Archaeobotanical Investigations of Early Plant Domestication on the Taraco Peninsula, Bolivia*
One of the core goals of the Taraco Archaeological Project is to understand the long-term people-plant relationships on the Taraco Peninsula, southern basin of Lake Titicaca, during the preconquest times. In this final phase of our project, our team of scholars conducted a range of archaeobotanical analyses to better understand the arc of settling on the landscape through the lens of plant domestication. This presentation focuses on the Early Formative phase, when people began to increasingly rely on agriculture. We summarize our recent findings from both macro- and micro-plant remain analysis, to trace not only the increasing focus on agriculture by these residents but also the changes in their primary staple food plants over time.

Hastorf, Christine [306] see Bruno, Maria
Hastorf, Christine [44] see Domic, Alejandra
Hastorf, Christine [306] see McKenzie, Emily

Haupt, Lauren [335] see Watts, Joshua

Hausdorf, Cassie, Signe Aspengren (University of California, Santa Barbara), Emily Zavodny (University of Central Florida), János Dani (University of Szeged / Déri Museum), and Danielle Riebe (University of Georgia)

[305] *What's the Game Plan? Comparing Herding and Gaming Practices in the Late Neolithic in Southeastern Hungary*

The rich prehistory of the Great Hungarian Plain, in particular that of the Late Neolithic (ca. 5000–4500 BC), can be better understood through investigations into animal management and subsistence strategies through stable isotope analysis. The Herpály culture has been differentiated from other contemporaneous Late Neolithic archaeological cultures by its assumed stronger dependence on wild animals over domesticated ones. However, more analyses must be carried out on zooarchaeological assemblages from Herpály sites to better support or refute this claim. Recent excavations at the Herpály site of Szentpéterszeg-Körtvélyes II, the external settlement of the Herpály culture's eponymous tell site of Berettyóújfalu-Herpály, has resulted in the recovery of cattle, deer, pig, and sheep/goat bones that have been sampled for stable isotope analyses. The results of these isotopic analyses will then be compared to those of the nearby Herpály site, Csökmő-

Káposztás-domb. Not only will the results from Szentpéterszeg-Körtvélyes II offer additional insights into local subsistence strategies, but the comparison between the two sites will provide a broader regional perspective on Herpály cultural herding and gaming practices.

Hauser, Neil (Coal Creek Research Inc.), Craig Banister (Coal Creek Research Inc.), and Teri Hauser (Coal Creek Research Inc.)

[318] *Colorado Projectile Point Database*

Creation of the online Colorado Projectile Point Database is being accomplished by working with private collectors, museums, and federal and state curation centers. The goals of the project are (1) bring into the archaeological record information on projectile points that are in private collections, (2) make images and associated information on projectile points from Colorado available for research by both professions and the public, (3) informing collectors about their projectile points, and (4) emphasizing the importance of using best practices when collecting. A protocol has been developed that collects information on the projectile points while protecting the locations of possible archaeological sites and the private collectors. At the same time, the process emphasizes the value that can be realized by bringing this information into the archaeological record and combining it with the information from professionally curated points from excavations.

Hauser, Teri [318] see Hauser, Neil

Haverland, Fiona (University of Vermont), and John Crock (University of Vermont)

[182] *Regional Precontact Site Distributions in Vermont: Sampling Bias or Reality?*

The Vermont Division for Historic Preservation's Archaeological Inventory (VAI) is a comprehensive dataset of all archaeological sites within the state, including over 2,600 currently known precontact-era Native American sites. The majority of sites included in the VAI were first documented and reported by cultural resource management (CRM) organizations as part of the required state and federal permitting processes for development projects within Vermont. There are clear regional patterns of site distribution throughout the state. However, it is unclear whether these differences reflect the reality of precontact era settlement in this portion of New England or if these patterns are the result of sampling bias inherent in a dataset generated by an uneven distribution of compliance-based surveys. Using GIS and statistical modeling, we will explore the regional variations in precontact era Native American site distribution in Vermont as well as discuss the strengths and limitations of primarily CRM-derived datasets.

Haverland, Fiona [341] see Brouwer Burg, Marieka

Haverland, Fiona [35] see Krause, Samantha

Hawkins, Nyah (Cal Poly Humboldt-Cultural Resources Facility), Christopher Perez, Karen Carlson (Cal Poly Humboldt), and Jessica Morris (Cal Poly Humboldt-Cultural Resources Facility)

[269] *Cults and Religious Practices of Ancient Upper Macedonia: Using Archaeological Evidence to Understand Ancient Beliefs*

In collaboration with Cal Poly Humboldt, Museum Bitola, and Institute Prilep, we present an analysis of key religious activities at the site of Gradishte in Crnobuki and to the north in the region surrounding Demir Kapija. Using the ancient written sources, the archaeological record and comparative studies of surrounding sites such as Heraclea Lyncestis and Stobi, we work to define the major religious cults and practices in Upper Macedonia. The site at Crnobuki has produced evidence for religious practices from the eneolithic, with the discovery of a Venus figurine fragment in the 2025 field season, through the end of the Roman Empire, with iconography of gods such as Dionysus and Zeus. We discuss how religious practices and devotion were understood differently than they are in our modern world, and how this informs our study of ancient belief systems.

Hawks, Dustin [227] see Johnson, Jeremy

Hawks, Dustin [183] see Lewis, Michael

Hayashida, Frances [284] see Murphy, Beau

Hayden, Lauren (Ohio State University), Mark Hubbe (Ohio State University), and Amanda Agnew (Ohio State University)**[89]** *Skeletal Correlates of Stress and Mortality in Eleventh-Century Giecz, Poland*

The Piast stronghold in Giecz was an important center for political, religious, and social transitions in eleventh–twelfth-century Poland, a period that witnessed important social changes as a response to the formation of the Polish state. As one of the earliest fortified settlements of the Piast dynasty, Giecz provides a unique opportunity to study how physiological stress manifests biologically from the consolidation of political power and spread of Christianity. This study assesses the impact these transitions had on developmental stress experienced by individuals who lived during this period and were buried in the local cemetery and is based on the analysis of 161 adult individuals excavated from the cemetery. Developmental stress is assessed through vertebral neural canal dimensions (VNC), which have been shown to correlate with levels of physiological stress and metabolic disruptions during growth. Specifically, this study tests the hypothesis that the exposure of higher levels of physiological stress during growth are associated with shorter lifespans. The results will be used to discuss the importance of integrating developmental and dental stress markers to explore the lived experiences of Giecz individuals, as their prevalence is an indicator of the political, religious, and socioeconomic transitions during medieval times. *****This presentation will include images of human remains.**

Hayes, Li (Cornell University)**[150]** *Sourcing Sacred Smoke: Organic Residue Analysis of Archaeological and Reproduced Honduran Incensarios and Candeleros*

The label *incensario* (censer) has been applied to a wide variety of ceramic objects excavated from Mesoamerican archaeological sites, though little organic residue analysis has been performed on these to understand what materials produced the smoke that still blackens their walls. This is the same story for the enigmatic tube-chambered ceramic *candeleros* (candleholders) found around Teotihuacan, Kaminaljuyu, Copan, and the adjacent regions of northwestern Honduras. This work uses modern replicas of Naco and Lower Cacaupa Valley *candeleros* and *incensarios* with modern materials spanning a diverse suite of prehispanic organic substances to generate smoke-laden sherds. Standard and accelerated solvent extraction protocols were modified using these sherds to maximize the GC-MS yield of characteristic biomolecules for each substance sampled. A selection of 70 *candelero* and *incensario* sherds excavated across 50 years of archaeological work conducted with the Instituto Hondureño de Antropología e Historia in the Naco, Cacaupa, and Ulúa Valleys of Honduras are sampled using these refined organic residue protocols. The biomolecular fingerprints of the residues recovered from these legacy collections were compared to the modern control samples, and the degree of degradation and contamination was evaluated.

Haynes, Hannah**[185]** *Media Narratives in CRM Archaeology: Miami as a Case Study*

Archaeology is a fascinating topic for the general public, though they rarely interact directly with the field. Often, a primary source of information for the public is news articles detailing major archaeological projects in their community, which vary in sensationalism and accuracy. One notable example of this is in Miami, Florida, an area of rich cultural history dating back millennia, from the Tequesta and other Indigenous groups to today's many diverse cultures. Miami has recently faced controversies in the world of cultural resource management; due to this, the archaeological projects here have been the subject of many journalistic articles. This provides rich grounds to explore the ethical considerations and complexities of CRM archaeology within an urban context. In this case study, I aim to discuss the media narratives that have developed in Miami archaeology and their impacts on the perception of CRM projects conducted there and make broader comparisons to archaeological projects conducted in other regions.

Haynes, Tanner (WSP)**[352]** *Reconstructing Presence: Using Neural Radiance Field 3D Modeling to Create Explorable Spaces*

Archaeologists increasingly seek innovative methods to engage the public with cultural heritage beyond static displays and traditional site reports. Neural Radiance Fields (NeRF) offer a promising tool for creating immersive, photorealistic 3D environments from photographic data. Unlike conventional modeling or

photogrammetry, NeRF captures the subtleties of directional light to reconstruct spaces. This paper explores the application of NeRF to archaeological contexts, demonstrating how the technology can transform site documentation into engaging digital experiences. By situating artifacts, features, or architecture within navigable environments, NeRF-based models provide viewers with a sense of presence that fosters curiosity, accessibility, and deeper understanding. Such interactive reconstructions can extend the reach of archaeology to diverse publics, from museum visitors to online learners, while preserving fragile sites in digital form. This approach highlights the potential of NeRF to bridge the gap between scholarly research, cultural resource management, and public interpretation, offering new pathways for storytelling and heritage communication.

Hays, Christopher (University of Wisconsin-Milwaukee)

[273] *Poverty Point: The First Major Transcontinental Culture in Eastern North America*

This paper argues that Poverty Point is the first major transcontinental culture in eastern North America, and it had structural characteristics and patterns that can be found in the two subsequent major transcontinental cultures: Hopewell and Mississippian. I begin by establishing the intercontinental reach of Poverty Point including the well-known evidence of large quantities of exotic raw materials at Poverty Point culture sites and the less well-known evidence for the presence of Poverty Point culture sites in the central Mississippi Valley, the lower Ohio Valley, and northeastern Florida. Then I highlight the common characteristics that Poverty Point shared with Hopewell and Mississippian. These include particular types of valuable raw material and some key attributes: distinctive monumental architecture, distinctive smoking pipes and figurines, and an abundant blade and core microlith industry. Finally, I consider hypotheses explaining these shared characteristics.

Hazard, Rebecca [56] see Sutherland, Rachel

Hazelwood, Lacy (University of Montana), Holli McDonald (University of Montana), and Meradeth Snow (University of Montana)

[62] *Ritual Violence and Identity at Paquimé*

The prehistoric site of Paquimé, located in the Casas Grandes region of northern Mexico, was a major regional center known for its complex social organization, distinctive architecture, and evidence of ritualized behavior. Prior research has documented trauma patterns consistent with ritual violence within the Paquimé skeletal assemblage. However, questions remain regarding the identities of these individuals and the reasoning behind their selection for targeted violence by the community. Did an individual's age, biological sex, kinship affiliations, and/or migrant status predispose them to these ritually violent acts? To address these gaps, the presented research utilizes ancient DNA and isotope analyses to reconstruct the biological sex, residential histories, and genetic relatedness among victims. In combination with osteological analysis, the data (collected with approval from the Mexican Consejo de Arqueología) provide insight into prehistoric patterns of violence in northern Mexico and may explain how certain demographic variables were selected for over time across practices. The research will demonstrate the logic and intentionality behind ritual violence through the most accurate and comprehensive biological/molecular profiles for the skeletal assemblage to date, which in turn, is critical for the overall preservation and integrity of the cultural patrimony. ***This presentation will include images of human remains.

Hazelwood, Lacy [25] see Giovannangelo, Victoria

Hazelwood, Lacy [292] see McDonald, Holli

Hazelwood, Lacy [282] see Sommer, Evan

Hazelwood, Scott [337] see Becker, Sara

He, Xiaoge (Peking University)

[261] *Beyond Casting: Soldering Techniques of Sanxingdui Bronzes*

The Chinese Bronze Age is defined by the predominance of casting, in which molten metal is shaped into intricate forms using clay molds. However, a significant number of Sanxingdui bronze artifacts from Southwest China demonstrate techniques beyond casting—namely, fabrication, which involves working bronze in its solid state. Among these, soldering stands out as one of the most extensively employed

methods by Sanxingdui craftsmen, distinguishing their bronzes from their Shang counterparts. This research examines the soldering techniques found in Sanxingdui bronzes, summarizes key characteristics of their use, highlights the integration of diverse bronze-working methods by Sanxingdui artisans, and explores possible cultural interactions reflected through these technological choices.

He, Yahui

[44] *Mortuary Practices in the First Urban Center of the North Loess Plateau, China: A Microbotanical Perspective*
During the late Neolithic period in the Yellow River region (ca. 5000–4000 cal BP), a significant wave of urbanization unfolded, marked by the emergence of settlement hierarchies, social stratification, and interregional interactions that laid the foundations for early state-level political structures. On the north Loess Plateau, the Shimao site developed as the first urban center, accompanied by the construction of both urban and rural residential settlements as well as elite cemeteries. In this study, we employ a multiproxy microbotanical approach, including starch, phytolith, and bast fiber analyses of dental calculus, human skeletal remains, and pottery vessels, to investigate mortuary practices at Shimao. The results reveal diverse practices associated with the deceased, including plant-based foodways, the use of wrapping cloths and garments, and evidence of mortuary feasting, highlighting the sociopolitical dimensions of human–plant relationships in the urbanization process.

He, Yiduo

[301] *A Communal Landscape? Lidar Evidence for Late Preclassic Maya Urbanism in the Mensabäk Basin, Chiapas*
Studies on the Preclassic Maya suggest that social organization—the ways people interact and relate to one another—can often be reflected in patterns of movement on the urban landscape. However, little is known about how people traveled and perceived the urban spaces of the Mensabäk Basin in Chiapas, Mexico, where a number of Late Preclassic (400 BC–AD 250) sites, including Noh K'uh and Tzi'bana, are located. This study models mobility using least-cost path analysis and Potential Path Field (PPF), which maps time-bounded cumulative accessibility, to delineate probable corridors and zones of interaction. I argue that the results point to a corporate, community-oriented urbanism in Mensabäk: instead of imposing a sense of hierarchy, the urban layout likely reinforced communal identity and collective governance. Finally, waterways functioned as a natural infrastructure for mobility and integration, extending regional accessibility. This reveals a potentially unique approach to urban planning among Maya cities in the Late Preclassic during a period of population growth and emerging centralization.

Headrick, Annabeth (University of Denver)

[87] *Creating Ancestors in a Foreign Land: Teotihuacan in Guatemala's South Coast*

The groundbreaking work of Patricia McNany demonstrated that ancestral reckoning was not solely associated with royal dynasties intent on legitimizing their power. Instead, she showed that ancestral remembrance permeated the lives of the Maya from all strata, shaping their architecture, agricultural practices, and daily lives. In this spirit, this paper will look at the censers manufactured for immigrants from Teotihuacan in Central Mexico. By the fourth century CE, these immigrants had moved into the South Coast of Guatemala, and their censer tradition was clearly a means for maintaining their traditions, including ancestral remembrance, specifically in their mortuary bundle form. This study will explore the enduring pull of ancestral reckoning despite displacement from their homelands and amid a cultural vortex where new identities must have been created. One censer in particular attempted to replicate the architecture of Teotihuacan and infuse it with ancestral imagery. The censer raises questions that will be explored about whether the imagery depicts a remembered temple at Teotihuacan or attempts to harness this memory and create arguments of land tenure in a new land.

Heckel, Claire, Jennifer Miller (Southern University of Science and Technology), Hannah Keller (Yale University), Potiphar Kaliba (Malawi Department of Museums and Monuments), and Jessica Thompson (Yale University)

[162] *Assessing Variation in Prehistoric Disc-Shaped Beads from the Kasitu River Valley (Malawi): Results and Methodological Implications*

Disc-shaped beads from African archaeological sites are among the oldest high-modification ornaments in the

world. Excavation methods suitable to their recovery have substantially expanded known assemblages from MSA, LSA, and Holocene contexts in Africa in recent decades. Research into the production, circulation, and morphological variation of these objects has proliferated, presenting promising material for comparison at the regional and continental scales. However, a standardized methodology and vocabulary for describing bead shape has been much slower to emerge, presenting obstacles to meaningful comparison. Excavations in the Kasitu River Valley have yielded a substantial assemblage of OES and LSS disc-shaped beads ($n = 262$ complete beads) and production debris spanning the Late Pleistocene to Holocene periods. Our study applies digital morphometric analysis to these assemblages to efficiently measure more than a dozen morphological attributes. The results present an opportunity to assess patterns of variation within and between these sites over time and assess how different approaches to measuring and describing shape impact our impressions of morphological variability. Here, we present the methods of analysis, discuss patterns of variation, and suggest some methodological strategies to facilitate more robust inter-assemblage comparisons. Regarding the latter, a typology based on detailed quantitative data is proposed.

Heckman, Robert (Statistical Research Inc.), Andrew Saiz (Statistical Research Inc.), Phillip Leckman (Statistical Research Inc.), and Bradley Vierra

[49] *Projectile Point Classification in New Mexico Part 1: 13,000 Years of Projectile Point Morphology*

Projectile points are among the most common artifacts used as temporal markers in the American Southwest. Most of the recorded archaeological sites in New Mexico consist of lithic scatters, but currently there is no standardized format for classifying projectile points in New Mexico. The range of technological variation in projectile point morphology over the last 13,000 years presents challenges to archaeologists who seek to correctly identify specific point types and tie them to their associated time periods. The correct identification of projectile points and their temporal placement is critical for developing recommendations and evaluating site eligibility for inclusion on the National and State Registers of Historic Places. This poster summarizes the range of projectile point morphology resulting from Bradley J. Vierra's collaborative investigations with colleagues from across New Mexico. The authors celebrate the electronic publication of a monograph that provides detailed guidance, type descriptions, and illustrations needed to standardize identifications and increase the reliability of identifying complex point types, ranging in age from Paleoindian to historic times. The project was brought to completion through a Cooperative Ecosystem Studies Unit assistance agreement uniting efforts of the New Mexico Bureau of Land Management, Statistical Research Inc., and New Mexico State University.

Heffner, Sarah (Independent Consultant)

[23] *CERCLA and Section 106: A Balancing Act*

The Environmental Protection Agency's (EPA) Superfund Program falls under CERCLA, which stands for the Comprehensive Environmental Response, Compensation, and Liability Act. On-site cleanup actions are required to comply with the substantive, not administrative, elements of various state and federal laws, including Section 106. This effectively eliminates the substantive need for permits, concurrences, and agreement documents. The EPA works closely with cultural resources subject matter experts to complete the Section 106 processes, who must balance the need to protect and preserve cultural resources while also allowing for the cleanup of these contaminated sites to proceed. This presentation highlights two recent EPA projects, the Argonaut Mine in Jackson, California, and the Afterthought Mine in Bella Vista, California.

Hegel, Casey [282] see Borrayo, Jazmin

Heilen, Michael (Statistical Research Inc.), and Shelby Manney (Arizona National Guard)

[74] *From Reaction to Resilience: Adaptive Approaches to Heritage Management*

Heritage management has long relied on reactive, project-based approaches that emphasize site-by-site compliance rather than broader strategies for preservation and research. While this approach has generated extensive data, it often fails to adapt to changing conditions and its effectiveness is rarely evaluated. Today, with shrinking budgets, weakening regulatory frameworks, mounting environmental pressures, and challenges to the authority of heritage institutions, the limitations of a reactive stance are clearer than ever. To remain relevant and effective, cultural resource management must embrace proactive, adaptive planning and

management strategies that emphasize heritage resilience. This means shifting from repetitive project responses toward synthetic, programmatic approaches that address classes of sites, landscapes, and cultural traditions at regional scales. It requires integrating environmental and cultural stewardship, building predictive and evaluative models, and leveraging decades of accumulated data to identify both vulnerabilities and opportunities. Equally essential is the early and sustained involvement of Indigenous communities, whose knowledge and perspectives are central to effective stewardship and the resilience of living heritage. This poster argues that in an era of scarce resources and intensifying threats, proactive heritage management must focus on adaptability, synthesis, and collaboration to ensure the long-term preservation of cultural places and landscapes.

Hélie, Jean-François [292] see Flynn-Arajdal, Yasmine

Helmer, Elliot

[274] *Mending the Shatter Zone: Autonomy, Kinship, and Identity on the Southern Northwest Coast*

Today, the southern Northwest Coast (SNWC) exists at the boundary of many things: the anthropological boundary between the Northwest Coast and California culture areas, the political boundary between the modern states of Oregon and California, and the intellectual boundary between regional academic traditions with divergent theoretical positions. These modern boundaries have been reified by archaeological narratives surrounding the migration of new linguistic groups into the region during the Late Holocene. This migration took place amid a suite of significant changes that would ultimately culminate in the so-called ethnographic pattern, including a shift to surplus-based storage economies, the intensification of ecological stewardship practices, the formation of plankhouse villages, and the appearance of new and elaborated artifact types. Models proposed to explain these developments are often laden with imperialist assumptions about the nature of intercultural interaction, population movement, and group identity that are exacerbated by the conceptualization of the SNWC as a region divided along numerous borders. This paper challenges these narratives by reevaluating the archaeological evidence in the context of local oral histories and ontologies to highlight how long-standing principles of household autonomy and sociopolitical fluidity allowed for the collaborative formation of new cultural identities in a changing world.

Helmke, Christophe (University of Copenhagen), Fiorella Fenoglio (Centro INAH Querétaro, Mexico), Carolina Meza (INAH Centro Morelos), and Mario Córdova (INAH-Morelos)

[331] *Documentación y análisis del Monumento 24 de Chalcatzingo: Implicaciones para los orígenes de la escritura en el Centro de México*

Los orígenes de la escritura en Mesoamérica siguen siendo motivo de debate, con discusiones que han privilegiado la evidencia de Oaxaca, la región olmeca y las tierras bajas mayas. En contraste, la Altiplanicie Central de México ha sido ignorada o figura de manera periférica en estos debates. La documentación reciente y el análisis epigráfico del Monumento 24 de Chalcatzingo invitan a reconsiderar esta posición. Evaluado en conjunto con artefactos inscritos procedentes de Tlatilco y Tlapacoya, este monumento aporta indicios para la presencia temprana de escritura ya desde la fase Cantera (700-500 aC), antecediendo así por varios siglos las primeras evidencias de Oaxaca y el área maya. La evidencia señala la existencia de una tradición local de escritura bien desarrollada, de carácter independiente. Dada la escasez de textos tempranos y las incertidumbres en su datación, tales conclusiones deben ser tomadas con cautela, pues hallazgos singulares pueden modificar de manera significativa los modelos vigentes. No obstante, el peso de la evidencia indica que entre la transición del Preclásico Medio al Tardío múltiples tradiciones escriturarias estaban ya establecidas en varias regiones de Mesoamérica, subrayando el papel central de la Altiplanicie en la historia más amplia de los primeros sistemas de escritura.

Henderson, A. Gwynn [273] see Pollack, David

Henderson, Breanna (SCI Engineering Inc., CAIRN)

[295] *A Cultural Resource Assessment of Cave Sites at Craters of the Moon National Monument*

In September 2024 and 2025, CAIRN – Cave Archaeology Investigation & Research Network representatives Breanna Henderson (archaeologist), Michael Schoeneweis (photographer), Jessi Schoeneweis (photographer),

and Robert Barber (caver) completed a cultural assessment at CRMO - Craters of the Moon National Monument, Idaho. The assessment was under the direction of CRF – Cave Research Foundation representative Mark Jones (project leader) during cave survey and mapping of caves in the park. The assessment included revisiting several known sites and the documentation and assessment of Lariat Cave.

Henderson, Tatiana (California State University, San Bernardino), and Guy Hepp (California State University, San Bernardino)

[179] *New Obsidian Sourcing Results from La Consentida, an Early Formative Period Village Site in Oaxaca, Mexico*
In this poster, we present the X-ray fluorescence (XRF) sourcing results for 265 pieces of obsidian recovered from primary contexts at the Early Formative period (2000–1000 cal BCE) village site of La Consentida in coastal Oaxaca, Mexico. Previous research at La Consentida, directed by the poster coauthor, has produced evidence of early pottery, mounded earthen architecture, a transition to sedentism, and complicated systems of interaction during the founding of Mesoamerica's earliest villages. Our poster summarizes the first author's MA thesis work and provides new sourcing information on obsidian samples recovered from a diverse range of contexts at La Consentida. The 265 pieces, which we submitted to the Archaeometry Lab at the University of Missouri for XRF analysis, bolster the previously published sourcing results from 45 pieces of obsidian recovered at the site. These results, in conjunction with previous interaction research focused on obsidian, the ceramic vessel assemblage, and iconography, may suggest that the site was involved in broader and more complex networks of exchange than previously understood. The results of the XRF analysis are still pending, but will be available and contextualized soon.

Hendon, Julia (Gettysburg College)

[168] *Small Details, Big Ideas: A Consideration of Rosemary Joyce's Contributions to Honduran Archaeology*
This paper argues that our understanding of the history of Indigenous Honduras before and after European occupation has benefited from Rosemary Joyce's commitment to research on and preservation of archaeological sites and collections. Drawing on Joyce's work in the Lower Ulua, Cuyumapa, and Oloman valleys, this paper highlights the value of her process of integrating the smallest details with overarching frameworks. Through her work, carried out in a collaborative manner with colleagues, the interested public, and local communities, Joyce has developed a perspective on social, political, and economic relations among smaller and larger settlements in the region, as expressed through material culture, settlement patterns, and art, that reminds us of anthropology's goal of understanding the full spectrum of human relations and organization.

Hendrickson, Mitch [217] see Stark, Miriam

Henebry-DeLeon, Lourdes [318] see Neller, Angela

Heng, Piphal (Yale University), Miriam Stark (University of Hawai'i), Lisa Kealhofer (Santa Clara University), and Peter Grave (University of New England)

[217] *Integrating the Angkor Empire: Neutron Activation Analysis on Stoneware from Angkor's Mekong River Centers of Thala Borivat and Sambor*

Angkor was Southeast Asia's largest premodern state, yet little is known about the economic relationships between people living in the capital and the provinces. Previous research has relied on epigraphic data to assess the degree of political centralization, with some scholars arguing for attached specialization in the construction of state architecture and metal crafts. Ceramic stoneware, both glazed and unglazed, represents a widespread hallmark of the Angkorian state, and diagnostic examples are found on nearly every site across the Angkorian world. Using compositional data from stoneware recovered at two sites along Cambodia's Mekong River, this article examines core-periphery relationships between the ninth and fourteenth centuries CE and provides rare insights into Angkor's political economy from production, distribution, and consumption.

Heng, Piphal [217] see Acabado, Stephen

Henning, Savanna (University of Tulsa), Danielle Macdonald (University of Tulsa), Lisa Maher (University of California, Berkeley), and Alan Simmons (UNLV)

[299] *Beyond the Rockshelter: Lithic Technologies and Mobility in Epipaleolithic Cyprus*

Pre-Neolithic sites on the Mediterranean island of Cyprus remain rare, limiting our understanding of the island's earliest inhabitants. This paper addresses this gap through a comparative lithic analysis of Epipaleolithic assemblages from the southern coast of the island, integrating both newly excavated and legacy collections. The study examines Mazotos-Petounta I & II alongside Akrotiri Aetokremnos and the Akrotiri Dunes Archaeological Project (ADAP) assemblages, expanding the available dataset for this underrepresented period. Using attribute analysis and a *chaîne opératoire* approach, this research reconstructs technological strategies, raw material procurement, and tool production sequences to ask: What do raw material choices and reduction strategies reveal about mobility and landscape use across coastal and upland environments? Beyond technological insights, this project frames legacy collections not as static repositories but as active datasets that continue to generate knowledge. By placing the Aetokremnos and ADAP assemblages in dialogue with newer material from Mazotos, this paper demonstrates how reengaging with older collections can open new comparative possibilities, refine interpretations of Epipaleolithic lifeways, and contribute to broader discussions of adaptations in island contexts.

Henrikson, L. (Museum of Idaho), Daron Duke (Far Western Anthropological Research Group), and Jennifer Finn

[348] *Folsom, Western Style: The Idaho Record*

The initial occurrence of Folsom technology in southern Idaho, as elsewhere, appears to emerge near the onset of the Younger Dryas and likely coincides with a surge in regional bison populations. A recent review of Idaho's Folsom record produced a total of 76 projectiles recovered from 45 separate localities. Although the highest frequency of Folsom occurs near the expansive wetlands of the Lake Terretton Basin, many other Folsom sites are associated with perennial water courses that span the region. Of the 76 Folsom projectiles recovered, 35 are made from Idaho obsidian. However, the Folsom tool kits recovered from Owl Cave and It Still Breathes are heavily dominated by obsidian, most of which comes from quarries located less than 30 km away. Although the investigation of Folsom land use in Idaho is ongoing, the data already suggest that the people utilizing Folsom technology in the region were well acquainted with the local geography, resources, and available toolstone. This evidence is in direct contrast to recent assertions that the Idaho Folsom record is relatively scant and merely reflects a brief influx of Folsom bison hunters from the Great Plains.

Henrikson, L. [211] see Frandson, Kristina

Henry, Aureade (CNRS), Carmen Martínez-Varea (Universitat de València), and Kelly Graf (University of Kansas)

[195] *Willow Smoke and Tundra Plants: First Seed Remains from Shég' Xdalth'í's Allerød and Younger Dryas Components*

Charcoal studies on early Alaskan sites are quite rare, but even rarer are reports regarding seed remains. Thanks to the important and relentless effort put into systematic sampling at Shég' Xdalth'í, where sediments have been floated using 2.0, 1.0, 0.5, and 0.25 mm mesh sizes, a small collection of seeds was recovered. It reveals the presence of at least three plant families—Rosaceae (rose family), Fabaceae (pea family), and Polygonaceae (buckwheat family). Although their preservation state does not allow for a more precise identification, we argue that these remains were brought to the site by humans, as they (1) all correspond to potentially edible plants, (2) are charred, (3) the charcoal study shows that combustion remains at the site originated from human-built hearths, and (4) accidental combustion of fruits attached to the firewood is unlikely as there is no taxonomic match between the seeds coming from ligneous plants (Rosaceae) and the charcoal remains. Indeed, the monochromatic anthracological results show a strict selection of willow (*Salix*), probably because shrubby willows were the largest biomass providers in the Pleistocene shrub-tundra. Hopefully, our ongoing experimental, morpho-architectural work on charcoal aimed at discriminating shrub size will soon provide crucial knowledge about ancient landscape physiognomy.

Henry, Jason (Oregon State University), and Loren Davis (Oregon State University)**[155] A ~9500 cal BP Western Stemmed Tradition Living Surface at Cooper's Ferry/Nipéhe, Idaho**

Excavations at the Cooper's Ferry/Nipéhe site in the lower Salmon River canyon of western Idaho have revealed a well-preserved early Holocene living surface dating to ~9500 cal BP. Identified at the top of Lithostratigraphic Unit 6 (LU6), this surface is associated with Windust points and represents a domestic context of the Western Stemmed Tradition. In situ artifacts, faunal remains, and a possible living structure provide one of the earliest clear indications of domestic living spaces and architecture in the Pacific Northwest and North America. Spatial analysis within a GIS framework documents the distribution of chipped stone artifacts, faunal elements, and cultural features, revealing activity areas related to tool production, food processing, and habitation. The resulting spatial patterning provides rare insights into household organization during the early Holocene and underscores the significance of Cooper's Ferry/Nipéhe for understanding settlement and lifeways of Western Stemmed Tradition peoples.

Henshaw, John (William & Mary)**[226] A Riverine Frontier: Evaluating an Indigenous History of Migration, Drought, and Social Interaction**

Megadrought, migration, violence, and social upheaval were ubiquitous throughout the Eastern Woodlands in the centuries preceding European colonialism. The Chesapeake region has been intellectually separated from the history of these processes throughout the Middle Atlantic and Southeast and cast as a distinct and unincorporated case. This paper aims to rectify this distinction and develop a model for how migration, climate change, and identity intersect in the active construction of a purely Native frontier. I suggest that migration and climate change instigated a riverine frontier centered on the Potomac-Shenandoah drainage circa AD 1400–1600. This frontier was the product of active community-scale decisions to transform social interaction and dictate exchange systems to maintain regional stability and navigate intercultural tensions which existed across ethnic and linguistic boundaries. Rooted in concepts of coalescence and hybridity, this research aims to center agency in a complex web of multiscale frontier practice.

Henshaw, John [353] see Briggs, Rachel

Hepburn, Heidi**[70] Reevaluating Site Function at the Mary Rinn Site (36IN29): A Comparative Analysis of Fire-Cracked Rock and Botanical Remains**

The Mary Rinn site (36IN29) is a Late Prehistoric site located on the north side of the Crooked Creek floodplain in Indiana County, Pennsylvania. This research seeks to reevaluate the function of, and duration of occupation at, the Mary Rinn site by analyzing food-related materials from the site, as observed through the FCR and botanical assemblages recovered during previous investigations. Both assemblages can yield insight into foodways and site function. FCR reflect selection criteria and preferences with heated-stone technologies, and these attributes may indicate both the duration of site occupation and manner of use. Similarly, botanical remains offer complementary evidence of foodways as well as subsistence strategies, particularly the degree to which time and labor was invested in horticulture (i.e., as indicated by cultigens) or in versus foraging (i.e., as indicated by wild plant species use). Because foodways are inextricably linked to seasonality, mobility, and settlement patterns, this research will integrate both datasets to characterize subsistence strategies and other foodways at Mary Rinn. In doing so, it will provide a foundation for reevaluating whether the site has been accurately classified as a permanent village, or was instead the location of more transient, seasonal occupations.

Hepp, Guy (California State University, San Bernardino), and Marc Levine (University of Oklahoma)**[94] From Typology to Untypology: Late Postclassic Period Figurines from Tututepec, Oaxaca**

In this paper, we present new findings from our study of ceramic figurines from Late Postclassic period (CE 1100–1522) Tututepec, Oaxaca. We revise our previous attempt to form a typology of the collection and turn to assemblage theory to argue that these objects resist formal typology while illuminating discussions of figurine production and use, social identity, and interregional interaction. We focus on constellations of features, including those related to manufacture, gesture, and attire, that transcend simple typological

boundaries. We argue that this approach is broadly applicable to archaeologists struggling with similar issues of artifact classification in that it foregrounds what figurine makers themselves chose to emphasize. Finally, we compare the collection with imagery from the Mixtec codices and ethnohistorically documented figurine use among southern Mexico's native peoples. We conclude that these figurines likely formed part of a ritual and material vocabulary related to petitioning practices. Though they surely had other uses, and though it may never be possible to decipher the specific petitions they mediated, similar small-scale figural representations remain a part of modern Indigenous petitioning practices in Mesoamerica.

Hepp, Guy [179] see Henderson, Tatiana

Heppner, Annalisa (City Cemetery Director, City of Providence), Jordi Rivera Prince (Brown University), and Daniel Turner (Brown University)

[216] *The Promise of Cemetery Studies for Community-Engaged (Bio)Archaeology: provenAI nce and the Potential of Generative AI for Noninvasive Bioarchaeology in the North Burial Ground Archives (Providence, Rhode Island)*

Nearly 325 years of US history can be found in a 114-acre Rhode Island cemetery: the city of Providence's North Burial Ground (NBG). Founded in 1700, NBG has uniquely been integrated by both race and class since its initiation. NBG's history represents individual experiences and institutional change—including critical junctures in history like immigration, enslavement, and urban renewal. NBG staff began formally hand-recording burials in 1848, and these nearly 180 years of written records remained stored in the NBG archive. Facilitating access to the records was an identified priority of descendants, residents, and city administration and is a focus of the North Burial Ground Documentation Project. To mitigate the time and labor required to transcribe tens of thousands of burials, we created *provenAI nce*, a novel framework and open-source Python library using Anthropic's foundation model, Claude, to structure diverse sets of written information. *provenAI nce* has facilitated the exploration of questions of relevance to (bio)archaeology on a scale and timeline not previously possible. We present initial analyses from the NBG archives, particularly focused on an intersectional analysis of social inequality in the thirteenth colony to demonstrate the promise of cemetery studies for a (bio)archaeology beyond bones.

Herbert, Gregory (University of South Florida), Madelyn Mette (US Geological Survey), Thomas Pluckhahn (University of South Florida), and Jaime Rogers (University of South Florida)

[157] *Using Carbon and Oxygen Isotope Geochemistry of Oyster Shells to Reconstruct Habitat of Collection in Tampa Bay, Florida*

Oxygen isotopes in marine mollusk shells vary mostly with temperature and are commonly used by archaeologists to reconstruct season of harvest from coastal shell middens and mounds. Carbon isotopes from shells are rarely studied due to perceived complexities in their interpretation. Here, we show that carbon isotopes in modern oyster shells from Tampa Bay, Florida, reliably record reef position along a salinity gradient, and that the combined use of oxygen and carbon isotopes is a powerful tool for investigating habitat of collection and frequency of oyster transport across the bay and riverine landscape. We also apply these geochemical proxies to prehistoric shells from Tampa Bay shell middens and mounds and find that shells were probably collected from adjacent habitats and not transported far. Oysters from lower bay archaeological sites consistently have a higher salinity isotopic fingerprint, while oysters from upper bay sites consistently have a lower salinity fingerprint. Given the greater number of oyster shell middens and mounds around the lower bay than upper bay, we infer that high salinity oyster reefs were prevalent in the Tampa region in prehistoric times, even though they are mostly nonexistent today.

Herbert, Gregory [349] see Kiahtipes, Christopher

Herdt, Reagan, Amy Klemmer (University of Wisconsin-Milwaukee), and Valentina Martinez (Florida Atlantic University)

[84] *Marine Resource Utilization during the Guangala Phase at Rio Chico, Ecuador*

Fish and shellfish resources have been continuously exploited along the coast of Ecuador for thousands of years and remain a key component of subsistence today. Combining archaeological mollusk and fish

assemblages with modern ecological data can contribute to a broader understanding of marine subsistence strategies employed by preindustrial coastal communities during periods of social and economic change. The Río Chico site (N4C3-170) on the central coast of Ecuador was occupied almost continuously for 5,000 years (ca. 3500 BCE–1532 CE). During the Guangala phase (100 BCE–800 CE) there were significant cultural transformations, such as increasing regional trade and early craft specialization. This paper presents the results of a zooarchaeological analysis of the marine faunal remains from a large Guangala phase pit feature (Feature 733) excavated by Florida Atlantic University (FAU) to examine which marine resources were significant during this phase. All remains were identified to the family level and a subset of this sample was identified to the genus/species level. This investigation contributes to the growing body of research on the less-understood Guangala phase and can be utilized for comparison of marine faunal remains from comparable contexts in coastal Ecuador and beyond.

Hermes, Taylor [315] see Ho, Percy Hei Chun

Hermes, Taylor [315] see Kim, Donghee

Hernandaz, Earl [350] see Wang, Yen Chun

Hernandez, Christopher [352] see Landau, Kristin

Hernández, Enrique [355] see Thompson, Josephine

Hernandez, Hector, and Ken Seligson (California State University Dominguez Hills)

[275] *Basalt Caches at Xanab Chak, Yucatán: An Analysis of Preclassic Maya Offering Practices*

During the Middle Preclassic period (ca. 950–300 BCE) in the Puuc region of Yucatán, the Maya of Xanab Chak buried multiple basalt-based caches in their central plaza. Xanab Chak was relatively small during the Preclassic period, thus investigations at the site can provide critical insight into the development of early ritual practices within small-scale communities in the Northern Lowlands. The caches consisted of basalt hand axes and basalt pieces placed together into spherical shapes, basalt stacked on top of greenstone celts within a ceramic vessel, and loose pieces accompanying burial remains. The caches were placed as offerings during the expansion of the site's central plaza. Despite the frequent use of basalt at Xanab Chak, the volcanic stone is not native to the area, meaning that it was acquired through interregional trade networks. This paper presents the results of my qualitative analysis and cross-referencing with basalt and greenstone cache offerings across the Maya region and other Preclassic Mesoamerican cultures like the Olmec. Through a careful examination of the basalt pieces and their contexts, this paper argues that basalt served as a conduit and amplifier for spiritual power used to signify change in the plaza and to honor the dead.

Hernandez, Isabella (University of Calgary), Elizabeth Paris (University of Calgary), Jennifer Meanwell (MIT), Roberto López Bravo (Universidad de Ciencias y Artes de Chiapas), and Gabriel Lalo Jacinto (Centro INAH-Chiapas)

[157] *The Taphonomy of Freshwater Culinary Gastropods: A Case Study from Tenam Puente, Chiapas, Mexico*

Culinary gastropods are staples in numerous dietary traditions worldwide, and many have lengthy histories of consumption. However, there are many unanswered questions about how taphonomic processes differentially affect gastropod remains, particularly of freshwater species. This paper will present the results of various experiments to better understand the taphonomic behavior of two culinary freshwater gastropods, *escargot* (*Helix pomatia*) and *jute* (*Pachychilus indiorum*). Comparisons of the two species' response to a range of stressors allow us to gain deeper knowledge of pre- and postdepositional processes affecting their preservation. Experiments included the taphonomic effects of boiling, dry roasting, tumbling, and the preparation of traditional soup recipes from north and central Chiapas, Mexico. We apply insights from the experimental results to an archaeological sample of *jute* from the ancient Maya site of Tenam Puente to interpret the taphonomic factors affecting its shell assemblage.

Hernandez, Isabella [157] see Paris, Elizabeth

Hernandez, Raymond [294] see Ortiz-Aguilu, Juan-Jose

Hernandez, Xiomay, and Gabriel Prieto (University of Florida)

[100] *A Vessel For Ethnic Expression: How Pottery Reflects Identity in the Residential Areas of Chan Chan*

This study investigates the role of pottery in expressing social identity within the residential neighborhoods of Chan Chan (1050/1100–1450 CE), the capital of the Chimú civilization on the north coast of Peru. The research examines a collection of 255 ceramic fragments excavated during the 2022 field season under the direction of Professor Gabriel Prieto. Previous excavations have uncovered nonlocal featherwork, textiles, and food, suggesting the presence of diverse ethnic groups within the city. How these groups functioned in Chimú society is still under speculation, but the material evidence suggests production of local and nonlocal styles was contemporaneous in the city. While prior studies have examined wares from the Small, Irregular, Agglutinated Rooms (SIAR) of Chan Chan, this research focuses on the expression of ethnicity through ceramic decoration. The materials reveal the production techniques and artistic styles of residents from the BJ unit, a neighborhood part of the SIAR that housed most of the population and potentially served as a dynamic space of cultural interaction. By analyzing style, surface treatment, and decoration through a comparative lens informed by the archaeological context, this study aims to uncover how prehispanic artisans expressed local and nonlocal identities in the great urban metropolis.

Hernández Castillo, Daniel (University of Florida)

[267] *Ideology and Ecology in Coastal Adaptations: Seven Millennia of History at Longotoma, Southern Andes (32°24'S)*

Sedentism, monumentality, and pronounced hierarchies are relatively rare outcomes of marine and coastal resource use, even along the Andean coast. The Maritime Foundations of Andean Civilization (MFAC) model sought to explain one such phenomenon but does not account for the social trajectories of the southern Andes. One productive venue opened by the MFAC is examining how ideologically mediated access to the sea could foster or inhibit certain political structures, considering culture as creative refusal. In the Longotoma Dune Field, we explore how ritualized coastal access shaped different social outcomes over the past 7,000 years. Middle to early Late Holocene occupations suggest that daily rituals helped deflect social inequality. By the Late Intermediate period, processions provided continuity in coastal use, though marine resources held shifting roles in local economies throughout the sequence. Today, ritual access to the coast in the lower Longotoma Valley continues to reinforce social structures, illustrating the interplay between ideology and ecology. This case highlights the value of integrating MFAC's core questions with historical ecology and political organization to better understand the varied social trajectories of maritime communities in the southern Andes and beyond.

Hernández Espinoza, Patricia Olga [25] see Martinez Mora, Estela

Hernández Garavito, Carla (University of California-Santa Cruz), and Gabriela Oré Menéndez (University of Nevada Las Vegas)

[33] *Pacha-Making: Spatial Modeling and the Construction of Indigenous Landscapes in Huarochirí (Lima, Peru)*

In the Andes, *pacha* refers to the space-time, the matter, cycles, and relationships in which life takes place. In a way, *pacha* stands for the world of a community; thus, it's not a universal or static category but is necessarily mediated by the relationships between human and nonhuman agents, as well as the moments of upheaval and transformation experienced by a community. In this presentation, we investigate the spatial narratives of the seventeenth-century Quechua-written document known as the Huarochirí Manuscript as a project of *pacha*-making. The manuscript describes the long history of communities, places, and *huacas* (sacred place-beings) as they create the landscape in which the different groups within Huarochirí constructed and derived meaning. Using spatial modeling, and particularly circuit analysis, we correlate the “world” depicted in the manuscript and the different temporalities and landscapes implied in the text, with archaeological site distribution, to represent an emergent landscape, in constant transformation, and embedded in history, as mediating the historical processes experienced by *huarochirano* communities. We aim to move beyond static representations of landscapes and instead define a methodological approach to investigating connectivity, movement, and relationships in the construction of a shared *pacha* among a community through their own testimonies.

Hernández Lara, Luis, Ann Cyphers (UNAM), Jose Luis Ruvalcaba Sil (UNAM), Alejandro Mitrani (LANCIC, UNAM), and Luis Abel Jiménez Galindo (University of British Columbia)

[262] *Caracterización arqueométrica de los artefactos suntuarios de mineral de óxido de hierro de San Lorenzo, Veracruz: Resultados preliminares*

El Formativo Temprano (1900-1000 cal aC) fue un periodo crucial en Mesoamérica que atestiguó el surgimiento de las primeras sociedades complejas. La circulación de bienes de prestigio tuvo su inicio en estos tiempos como un medio de competencia y validación del estatus entre las élites de distintas regiones. Entre estos bienes se encuentran algunos minerales de óxido de hierro como la hematita, ilmenita y magnetita. San Lorenzo, Veracruz, fue sede de la primera capital olmeca y sus habitantes utilizaron artefactos suntuarios de distintos óxidos de hierro. Estos minerales no tienen su origen en la región olmeca. La ponencia presentará los resultados preliminares del estudio de una muestra de 100 artefactos de mineral de óxido de hierro recuperados por el Proyecto Arqueológico San Lorenzo Tenochtitlán, dirigido por Ann Cyphers (†). Esto incluye el análisis arqueométrico de composición elemental y molecular de los artefactos, así como su distribución espacial-temporal en San Lorenzo y su hinterland. El estudio de los artefactos suntuarios arroja nuevos datos sobre las preferencias culturales en San Lorenzo y las interacciones y redes de intercambio interregional en las que participaron los olmecas durante el periodo.

Hernandez Mejia, Jacqueline [309] see Chu Barrera, Alejandro

Hernandez Murillo, Camila [307] see Menager, Matthieu

Herndon, Kelsey [35] see Griffin, Robert

Herrera, Anthony [114] see Zaragosa, Gabriella

Herrera, Roberto (Medgar Evers College CUNY)

[248] *Gender and Authority in Greater Chiriquí: A View from Southern Costa Rica*

Although research in the Central Caribbean and Greater Nicoya regions has addressed the topic to a degree, women's roles within precontact communities have received relatively little attention further south in the Diquís and Greater Chiriquí regions. This paper examines the material representation of women's roles in southeastern Central America, focusing primarily on figurines documented at the late Aguas Buenas period site of El Cholo (ca. 300 BC–AD 800). It also draws on comparative evidence from the Osa Peninsula, the Diquís, western Panama, and the more northerly areas of the Central Caribbean and Greater Nicoya. By situating El Cholo within this broader regional framework, this paper highlights how women's social and political presence was materialized in the archaeological record, as well as the implications this has for the way archaeologists view social organization in the late Formative period of southeastern Central America.

Herrera, Sarah (Idaho National Laboratory)

[198] *Evolving Section 106: Turning Red Tape into Green Lights*

The current landscape of NHPA Section 106 compliance demands innovative approaches to meet regulatory standards, and this poster presents a strategic blueprint for refining compliance operations and showcases innovative solutions that address ever-changing demands, with specific reference to the Idaho National Laboratory (INL) and the US National Laboratory system more broadly. Energy Emergency declarations, new Department of Energy (DOE) Nuclear Energy Authorizations, executive orders to streamline environmental reviews, and other emerging challenges all require modern processes and adaptive strategies. At INL, the Cultural Resource Management Office (CRMO) meets these growing Section 106 compliance needs primarily through flexibility granted in its recently finalized Programmatic Agreement. Our ongoing reinterpretation and adjustments within this agreement consistently reveal new ways to enhance efficiency and reduce the oversight burden on the DOE, Idaho Operations Office. Moreover, new technological advances, including the potential deployment of AI tools, are under consideration to expedite our review processes. Initial project data comparisons show a demonstrable increase in efficiency and in streamlining project reviews, and the CRMO is exploring program alternatives and other strategies to maximize our effectiveness that may be applicable within the wide National Laboratory system.

Herrera-Parra, E. Moisés (Brown University), Shanti Morell-Hart (Brown University), Harper Dine (University of Exeter), and Pamela Garcia Ramirez (Escuela Nacional de Antropología e Historia [ENAH])

[161] *From Terrace to Tamale: Agricultural Landscapes in the Central Usumacinta Region*

Previous research in the Central Usumacinta Region has demonstrated that people made good use of diverse landscapes and ecologies. Yet key questions persist regarding their cultivated crops and the agricultural methods used. Recognition of the diversity of Maya agricultural strategies, together with the application of lidar, have revealed a wide range of agricultural features across the region, including channeled fields. Despite these advances, the relationships between such features and specific crop species remain poorly understood. Paleoethnobotanical research, through the identification of macro- and microbotanical remains, offers a critical avenue for addressing this gap, providing direct evidence on plant use and cultivation practices. Recent excavations of domestic spaces at sites such as Piedras Negras, Budzilhá, and Lacanjá-Tzeltal have yielded direct evidence of plant species, including maize, sweet potatoes, manioc, squashes, and beans, among others. These species form a broad spectrum of food crops, cultivated in modified spaces with varying environmental affordances. Building on previous paleoethnobotanical work, this study integrates new data from terraces and channeled fields to expand our understanding of the relationships between cultivated plants and their surrounding environments. This research enhances prior approaches to the ways social and agricultural landscapes were constructed and sustained in the Central Usumacinta Region.

Herrick, Hannah [323] see Minor, Elizabeth

Herrin, Leigha (New South Associates Inc.), and Rachel Black

[22] *Beyond the Headstones: Mapping, Cataloguing, and Revitalizing Broadfield Cemetery*

The Broadfield Cemetery sits on a large, undeveloped tract of land across from the Evelyn, Grantly, Hofwyl Broadfield, and New Hope Plantations in Brunswick, Georgia. For decades, the cemetery sat overgrown, neglected, and utilized as a clandestine dumping site. Several well-meaning but detrimental clean up attempts over the years resulted in the loss of most of the traditional memorial items left on graves. In 2023, New South Associates Inc. was contacted by the Georgia Department of Natural Resources to conduct an archaeological study of the grounds containing the cemetery. A history of the cemetery and its associated plantations was gathered, a full inventory of identified markers and interments was collected, and a map of the cemetery architecture was made. This presentation details the history, methods and results of the survey, and the future survey and cleanup efforts planned by Georgia Department of Natural Resources to keep this cemetery open to the descendants.

Herrmann, Corey (Vanderbilt University)

[274] *Volcanic Solidarity, Memories of the Coming Time War, and Other Recipes for Disaster Archaeology*

The end of the world is here once again, and the empire is hell-bent on accelerating it. Catastrophes of climate and consumption proliferate and amplify each other's effects; disaster capitalism is the (re)order of the day. Disasters do not only disrupt space but also distort the experience of time, history, and memory. Imperial chrono-politics are essentially a war against time, seeking to collapse past, present, and future into a historical singularity. Empires wish to naturalize their supremacy and to extinguish all those deemed unworthy of their whitewashed, gold-painted telling of human history as an imperial march of progress. Archaeologists are perfectly positioned to oppose imperial agendas, as investigators of history and (potential) collaborators with marginalized peoples across space-time. In this paper I suggest there are peculiar solidarities that archaeologists can and should form with disasters. Volcanoes, El Niño, and other super-natural catastrophes are vehicles of counterpower. Indigenous peoples across Abya Yala have lived with these hazards since time immemorial, recognized these catastrophic capacities, and brought these entities into new worlds of relation. Finding solidarity (*tinku*) with these Earth-shakers (*pachacuti*) serves archaeologists to better understand the ancestors they learn from, to resist the present moment, and liberate the future.

Herzog, Nicole (University of Denver), Jen Rovnpera, and James O'Connell (University of Utah)

[48] *Plants Bridging People: Surprise Valley Indigenous Traditional Ecological Knowledge Field Days*

“The land makes people live right. The land looks after us. The land looks after people” (Annie Peaches; Basso 1996:38). This poster describes a series of collaborative, collective, knowledge-generating workshops that provide opportunities for tribal youth and elders, university students and educators, and land managers to co-generate ecological and cultural information related to the management of first foods on the ancestral lands of the Northern Paiute. In these workshops, tribal leaders share information about culturally important plants and their management via traditional ecological knowledge. During the workshop, students and community members are introduced to methods used in archaeology and STEM to document and describe plant ecology and distribution in response to cultural burning and harvesting efforts for the root crop, yapa (*Perideridia bolanderi*). Real-time data are collected on-site and analyzed in partnership to generate proposed plans for the management of yapa-harvesting grounds and associated cultural sites on federally managed lands. Data and a discussion of the results are shared among community partners and contribute to our understanding of human plant-use and resource availability and in so doing build a more equitable model of information gathering and sharing that takes into account Indigenous perspectives.

Hess, Erin

[257] *Until We Reach the Desired Color: A Discussion of Brain-Tanned and Smoked Hide Hues*

Smoking a brain-tanned animal hide using a low-heat smudge fire is the final step in processing the hide for a variety of uses, including for garments, containers, and shelters. The smoking process secures the natural brain fats and oils to the hide fibers to protect the hide from decomposition, improve water resistance, increase dimensional stability, and to permanently prevent the resulting leather from stiffening after wetting and drying. Smoking also imparts a distinctive hue on the leather that is dependent on the fuel material used in the smudge fire. This paper discusses the process of brain-tanning and smoking animal hides and the resulting leather hues observed from using different smudge fire fuel materials. Identifying the source of these different hues is important for understanding the selection and use of smudge fire fuel material. It is also important for understanding which leather hues may have been produced in specific regions to be able to incorporate those hues into educational interpretations and depictions of past lifeways.

Hewitt, Anthony [77] see Millard, Matthew

Hiếu, K Thanh [217] see Suter, Kai Anne

Higelin Ponce de Leon, Ricardo [94] see Frykholm, Soren

Higgins, Howard

[169] *Collaborative and Community Archaeology: Exactly What Do We Mean by That?*

This paper examines the basis of the archaeology we (in this session) do. Specifically, it examines what is meant by the terms “collaboration” and “community.” “Collaboration” may imply a situation of equality, but this is usually not the case. The researcher has power of various types (such as allocation of funding) that may not be shared by other collaborators. There is frequently a power imbalance and how this imbalance is expressed and what it implies is discussed. Similarly, who actually constitutes the “community”? If one of these communities has been defined, how does someone become included or excluded from it? Occupying a critical position in or in association with the community is the researcher. It is argued that knowing where and how the researcher fits in with this community is vital to the success of the undertaking. The paper concludes with a discussion of shared goals that should and often do underlie our projects.

Hilbert, Yamandú [170] see Russo, Gabriele

Hildebrand, Elisabeth [281] see Fennessey, Brenna

Hill, Amanda (Kiowa Tribe)

[16] *Building Relationships for Better Understanding and American Accountability*

One-sided observations and romanticized narratives taint research of American history. In what it is now known as the Texas Panhandle, the “Cowboys versus Indians” narrative is not only limited to Western novels

but is evident in historic preservation as well. In fact, the first sentence on the Lyman's Wagon Train Battle historic marker begins with "During the US Army campaigns in 1874 against marauding Indians . . ." The term "marauding Indian" refers to my people, the Kiowa. The literal definition of the word marauding means to go about in search of things to steal or people to attack. This leads readers to believe the band of starving Kiowa, in search of sustenance and survival, were harassing dutiful soldiers when, in fact, they were only distracting the travel of a military wagon supply train from the nearby Kiowa encampment of vulnerable women and children. This sentence on an official, historical marker is evidence of the false, romanticized narrative that has now been incorporated into American history. This false narrative is not only offensive to the descendants of this historic battle but also fuels misunderstanding between the citizens of this country. Collaborations, such as Lyman's survey, offer unique opportunities for engagement and consultation on private land otherwise not subject to federal regulations like Section 106 consultations. Building relationships with the land owners, the local communities, and the archaeologists involved in the study of our shared histories has provided a deeper understanding of this historic event and the Kiowa people.

Hill, Brittany, Eric Bartelink (California State University, Chico), Bridget Wall (Far Western Anthropological Research Group), and Christina Macdonald (Caltrans D5)

[50] *Falling into History: The Examination of a Historic Period Unidentified Person*

This paper examines the case of an unidentified historic Euro-American male individual, estimated to be between 40 and 50 years of age at time of death, recovered from an eroding slope on a beach near Monterey, California, in 2024. While this individual was not found as part of a larger site, Prosser buttons found on clothing worn by the individual date to the late nineteenth century. Adding to their uniqueness is the presence of a Tile A1 fracture to the iliac wing of the right innominate bone. Clinically, this type of fracture is common to motor vehicle–pedestrian accidents and is rarely seen in historical contexts. The 1880 Federal Population Schedule (US Census) for townships noted whether a recorded person was "maimed, crippled, bedridden, or otherwise disabled." This detail was not noted in previous or subsequent census years. Based on the results of a biological profile analysis, 25 men from the area, who fit within the estimated age range, were noted to have a disability; however, no details regarding their injury or ailment were recorded. We explore additional investigative methods, including isotopic and aDNA analysis, in an attempt to narrow down the individual's identity. ***This presentation will include images of human remains.

Hill, Erica (University of Alaska Southeast)

[313] *Multispecies Agency: Implications for Paleoenvironmental Reconstruction*

Archaeologists have long recognized that human adaptations in the past were conditioned by the plants and animals that surrounded them. Increasingly, however, archaeologists are reframing these interactions, recognizing the past as a multispecies construction. This paper conceptualizes nonhuman agents, such as kelp, beavers, and migrating caribou, as historical actors and explores human-environment relations from a multispecies perspective. Examples from Alaska illustrate how dynamic multispecies relationships co-created the paleoenvironments we seek to reconstruct through archaeological analysis.

Hill, Mary, Amanda Roberts Thompson (University of Georgia, Laboratory of Archaeology), and Carey Garland (University of Georgia)

[184] *Revitalizing NAGPRA at the University of Georgia: Expanding Compliance through Collaborative, Institution-wide Efforts*

The University of Georgia (UGA) began compliance with the Native American Graves Protection and Repatriation Act (NAGPRA) in the 1990s, but initial efforts were incomplete and stalled for decades. In 2019, UGA renewed its commitment to this work, leading to the adoption of an institutional NAGPRA Policy designed to facilitate the good-faith discovery of all NAGPRA-eligible holdings in UGA's possession, control, or custody. This policy also established the UGA NAGPRA Committee to oversee this work, with representation from diverse university units and Tribal partners. This initiative reflects a deliberate shift toward collaborative and transparent compliance processes that prioritize Tribal consultation, uphold the highest respect for Tribal sovereignty, and ensure the ethical stewardship of Ancestors and cultural items while they remain in UGA's care. This poster provides an overview of UGA's compliance history and outlines the strategies that have successfully supported the institution-wide expansion of NAGPRA compliance in

recent years, including policy and procedure development, systematic assessment of holdings on a unit-by-unit basis, and centralized support for descendant community collaboration. Through these efforts, UGA seeks to establish a foundation for meaningful, long-term partnerships with Tribal Nations that extend beyond NAGPRA into all facets of archaeological practice.

Hill, Mary [184] see Conger, Megan

Hill, Rebecca (Bureau of Ocean Energy Management)

[338] *The Puuc Post-monumental Complex (PPC) and Late Terminal Classic Civic Organization*

Among Bill Ringle's innumerable scholarly contributions is that to our understanding of the changing landscape of the Puuc region at the end of the Terminal Classic period. During the early tenth century or late ninth century AD, Puuc inhabitants constructed a series of formal arrangements of buildings and other architectural features that postdate the Terminal Classic Puuc Colonnade-Mosaic architectural phase. Our working nomenclature for this late Terminal Classic architectural group is the "Puuc Post-monumental Complex (PPC)." As a result of his analysis of lidar data collected by the National Center for Airborne Lidar Mapping (NCALM), Ringle observed that PPCs in the BRAP sample are always adjacent to Early Puuc Civic Complexes (EPCCs), which are considered to have been central to Puuc civic organization during the Late Classic period. This paper examines the implications of the construction of PPCs at multiple northern Maya Lowland sites at the close of the Terminal Classic.

Hill, Matthew, Jr. [319] see Knell, Edward

Hinder, Kimberly [264] see O'Sullivan, Rebecca

Hinkle, Rory (University of California, Berkeley), and Jun Sunseri (UC Berkeley)

[183] *Developing Community-Led Lidar Tools for Archaeology*

Light detection and ranging (lidar) uses laser pulses to measure the laser's flight time between the scanning device and the surface of a scanned object. Over the past five years this technology has become more accessible to the public through the Apple Pro device series. This laser spatial-sensing technology can create detailed 3D digital renders of spaces and objects, often including photogrammetric data captured in the process. The development of easily shared and stored 3D scans and free 3D rendering software is an opportunity for archaeologists to consult with communities while building datasets. To demonstrate this utility, we created a prototypical comparative collection of World War II European Theater aviator gear that includes 3D scans taken with volunteers at the Oakland Aviation Museum using handheld lidar technology and archival data. We also developed a series of educational videos. We offered our library and videos to Defense Prisoner of War (POW) / Missing in Action (MIA) Accounting Agency (DPAA) researchers with in-field experience and collected their responses to a qualitative survey. In this poster we detail relevant use-cases for community-engaged lidar collections, the methods used to develop the materials, user response to the prototype, limitations to our research, and goals for future research.

Hinojosa-Balino, Israel (Durham University), Kim Richter (Getty Research Institute), and Gerardo Gutiérrez (University of Colorado at Boulder)

[86] *Huastec Settlement Patterns and Sculptural Style of the Panuco River: Remote Survey and Material Analysis*

Because many early museum collections of Huastec sculptures were looted, we only have vague information as to their exact geographic origins and archaeological contexts. A group of 30 sculptures was recovered by Francis Vecelli while the mapping of the Panuco River and then purchased in 1832 by Captain James Vetch. This collection, now in the British Museum, has never been analyzed as a group and offers insights on the sculptural style of the Panuco basin prior to major changes caused by oil extraction in the early twentieth century. We assess this sculptural collection together with a remote sensing survey, using the 12 m radar DEM of the TerraSAR-X and TADEM-X satellites to map archaeological sites that created high-ground artificial islands along the Panuco River. Our goal is to understand the ancient Huastec landscapes from where these sculptures were collected.

Hirniak, Jayde [336] see Murray, John

Hirshman, Amy (West Virginia University), and Emma Grace Snyder

[266] *Two Groups or One? Experimental Intra-assemblage Ceramic Morphological Assessment from the Late Postclassic Pátzcuaro Basin, Michoacán, Mexico*

The Lake Pátzcuaro Basin, Michoacán, Mexico, ceramic classification was created using a combination of Type-Variety Analysis and Modal Analysis, and moreover emphasizes macroscopic observations of paste patterns as the first classificatory division. The published description indicates two of the paste categories, Tariácuri Brown and Yaguarato Cream, may be the same. Subsequent NAA research indicated they are chemically similar. General shape descriptions and select rim profiles were also published, but no systematic morphological work by paste exists for the original collection. Therefore, our study continues to assess this classification by statistically assessing rim morphology data, with comparison to the NAA data. Our reevaluation of the classification of these pastes has implications for the ceramic production model for the basin as well as highlights opportunities and limitations of this classificatory methodology and application of macroscopic observations.

Hitchcock, Robert [34] see Kenny, Brian

Ho, Joyce Wing In (Harvard University), Lorenzo Castellano (Brown University), Lynne Rouse (German Archaeological Institute), Sören Stark (New York University), and Nathaniel Erb-Satullo (Cranfield University)

[315] *Ore, Fuel, and Technology in the Late Second Millennium BC Metal Production at Kimirek-Kum-I, Uzbekistan*
Metal production is an arena where technologies intertwine with environments, as resources like ores and wood fuels are exploited within the framework of existing metallurgical knowledge and social interactions. While ancient metallurgy in Central Asia has long been studied, many questions remain about the environmental dynamics of metal production during the Late Bronze to Early Iron Age (LBA-EIA). Recent investigations of slags, metal objects, and environmental proxies from Kimirek-kum-I (KKI; ca. 1250–1050 cal BC) in southern Uzbekistan provide new insights into both metallurgical technologies and paleoenvironmental conditions. Using Scanning Electron Microscopy–Energy Dispersive X-Ray Spectroscopy (SEM-EDS), we observe that KKI's producers undertook multiple stages of metallurgy. Slag compositions reveal nuanced technological practices, as well as the smelting of polymetallic copper ores to obtain copper and copper alloys. An examination of the microcharcoals embedded in slags was compared with charcoal remains from other contexts at KKI and beyond to explore fuel utilization in this now-desert landscape. Taken together, we highlight the interconnections between ore exploitation, fuel use, and technological choices in metallurgy in LBA-EIA Central Asia.

Ho, Percy Hei Chun (Harvard University), Svetlana Shnaider (CNRS – Al-Farabi Kazakh National University, Almaty, Kazakhstan), Donghee Kim (Seoul National University), Taylor Hermes (University of Arkansas), and Christina Warinner (Harvard University, Cambridge; Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany)

[315] *Genomic Evidence for the Dispersal of Early Domestic Sheep into Central and Inner Asia*

The domestication of sheep and their dispersal into Central Asia had profound impacts on human-environment interactions in the region. Recent research discovered the presence of domestic sheep at Obishir V in southern Kyrgyzstan and proposed an agropastoral expansion to the Eurasian interior by ca. 6000 BCE, almost 3,000 years earlier than expected. Despite these findings, much regarding the origins of livestock in montane Central Asia remains unresolved, such as how domesticated sheep dispersed into the Eurasian interior, and whether Neolithic sheep populations at other Central Asian sites, such as Jeytun in Turkmenistan (ca. 6500 BCE) followed similar or different dispersal and management trajectories. These unresolved questions on early population history and structure of Central Asian domestic sheep also stem from a lack of deeply-sequenced sheep genomes from the region. Here, we explore the results of our analyses of ancient genomes from Neolithic Obishir V and Jeytun, alongside published domestic and wild sheep genomes from Neolithic Iran, Anatolia, Caucasus, and Europe. Based on these results, we discuss the nature of early dispersal and management of domestic sheep in Central Asia.

Hockaday, William [263] see Kidwell, Jasmine

Hockett, Bryan (University of Nevada, Reno), Mariya Antonosyan (Max Planck Institute of Geoanthropology), Julie Meachen, Matthew Collins (University of Cambridge; Globe Institute, University of Copenhagen), and Kelly Graf (University of Kansas)

[195] *The Hunters and Trappers of Shég' Xdaltth'i': Morphometric and Paleoproteomic Identifications of Bones at a ~14,000 cal yr BP Campsite along the Tanana River Valley, Alaska*

Morphometric and paleoproteomic (Zooarchaeology by Mass Spectrometry [ZooMS]) techniques were used to identify bones recovered from the 2013–2023 excavations at Shég' Xdaltth'i', a ~13,800 cal yr BP campsite located along the Tanana River Valley in Interior Alaska. Results indicate these early eastern Beringian foragers hunted and trapped a wide diversity of animals. These include large terrestrial herbivores (bison, mammoth, horse, elk, caribou, and ox), medium-sized terrestrial game (arctic hare, wolf, fox, and lynx), and a wide diversity of birds, including waterfowl (swan, crane, heron, ducks, geese, gull) and terrestrial birds (grouse, ptarmigan, raven, and eagle). The lynx bone compares favorably with the Eurasian lynx (*Lynx lynx*), perhaps the first known identification of this species in eastern Beringia.

Hockett, Bryan [165] see Liard, Aurelie

Hockett, Bryan [72] see McDonough, Katelyn

Hodgkins, Jamie [279] see Casillas, Sanjuana

Hoffman, Austin (University of California, Santa Barbara)

[81] *Plants and Politics: Egyptian Plant Interactions during the Middle Kingdom and Second Intermediate Period at Elephantine*

The island of Elephantine acted as the southern border of Egypt and, as such, played a vital role in regional administration and trade. The 13th to the 17th Dynasties marked a transformative era for the Egyptian state, transitioning from the Middle Kingdom (2000–1680 BCE) to the Second Intermediate period (1680–1550 BCE). At the end of the Middle Kingdom, the Egyptian state decentralized, with the foreign Hyksos 15th Dynasty dominating in the north, and the Nubian Kingdom of Kush extending its domain in the south. Further decentralization is indicated by the presence of the 14th and 16th Dynasties, suggesting a fragmented political landscape. In navigating this new political landscape, the people of Elephantine maintain their relationships with the remaining Egyptian state, but foster connections with the rising polities. This study explores changes in the paleoethnobotanical assemblage over time by comparing the macrobotanical remains from the Middle Kingdom, when the centralized power of the state was strong, to the Second Intermediate period, which was characterized by competing regional powers. Through analyzing the archaeobotanical database from Realities of Life on Elephantine project, it is possible to deepen our understanding of the impact of political decentralization on plant interactions at Elephantine.

Hoffman, Christopher (University of California, Berkeley)

[209] *Does (Archaeometallurgical) Data Corrode? Early Metallurgy in Mallorca, Spain*

In this paper, I reconsider archaeometallurgical data from Mallorca, Spain, previously available only in a doctoral dissertation and an unpublished manuscript. These data were gathered in the 1980s and comprise compositional, metallographic, and lead isotope data from artifacts excavated at nine Copper Age and Bronze Age sites (2200–500 BC). At the time, these data represented a new departure: while compositional data had been acquired, the addition of metallographic and lead isotope studies were novel, and there were many gaps in our understanding of archaeometallurgical contexts in neighboring areas. This limited our ability to provide more than a local and descriptive understanding of these data. However, major archaeometallurgical programs in Mallorca, Spain, and beyond have been conducted and now allow us to place these data in a much broader context. By validating and recontextualizing this information, this corpus of analytical data helps improve our understanding of early metal objects (as technology, as material culture, and as social practice) in this region and beyond. It also reaffirms that a comprehensive holistic approach to technology (emphasizing multiple lines of evidence, the object's use-life and *chaîne opératoire*, and cultural context) provides valuable insight into the social dynamics of technology and material culture.

Hoffman, Sarah (SUNY-University at Buffalo)

[62] *Using Aerial Thermography to Identify an Eroded Medieval Icelandic Church and Cemetery Site (ca. 1200–1563 CE)*

The farm, church, and cemetery on Haffjarðarey were active from ~1200 to 1563 CE. Excavated twice over the past 150 years, with cemetery interference since the late nineteenth century, the island site off the western coast of Iceland continues to experience coastal erosion. Two temporally and geographically divided excavations in the early twentieth century resulted in a similarly divided cemetery population and the perception that Haffjarðarey was a small and unremarkable site. However, the combined skeletal population (MNI~120), local folklore, and church records tell a different story. Previous expeditions in 1905 and 1945 were unable to identify structural features, and only two photographs and one hand-drawn partial site map are known, neither of which indicate the location of the cemetery nor its boundaries. Here, we present the results of our noninvasive survey of Haffjarðarey using aerial thermography and discuss the efficacy of this method outside the standard diurnal cycle. We created comprehensive orthographic and thermal maps that successfully illuminated archaeological features and may allow us to identify the original church, cemetery, and farm locations. Through paleopathological analysis, this survey, and prospective further investigations, we aim to better understand Haffjarðarey. ***This presentation will include images of human remains.

Hoggarth, Julie (Baylor University), John Walden (Galen University), Frank Tzib, Claire Ebert (University of Pittsburgh), and Jaime Awe (Northern Arizona University)

[263] *Climate, Agricultural Innovation, and Population Dynamics at Baking Pot, Belize*

Studies on the ancient Maya have described demographic cycles of development and decline, particularly during the “Classic Maya collapse,” which was marked by site abandonment and population decline across the central and southern Maya lowlands from 750 to 1000 CE. However, less attention has focused on understanding population dynamics and the relationship between food production, agricultural innovation, and climatic changes. Here, we describe research focused in the upper Belize River Valley at the site of Baking Pot. We outline expectations for population dynamics using the theories of Malthus, Boserup, and models that integrate these methods (e.g., Wood’s MaB Ratchet). Next, we compare the nature of population changes at Baking Pot, comparing these data to climatic records. Finally, we present the initial stages of the research in Baking Pot’s periphery to date the ditched fields as well as hillside terraces and describe how the results of this research will address questions regarding the interplay between climate change, food production, agricultural innovation, and paleodemography at Baking Pot from the Preclassic to Postclassic periods (1000 BCE–1500 CE).

Hoggarth, Julie [58] see Blastic, Anna

Hoggarth, Julie [326] see Densel, Allison

Hoggarth, Julie [36] see Ellis, Olivia

Hoggarth, Julie [277] see Jensen, Matthew

Hoggarth, Julie [263] see Kidwell, Jasmine

Hoggarth, Julie [201] see Suarez, Nicholas

Holbrecht, Lucas, Sélim Natahi (Max Planck Institute for Evolutionary Anthropology), Priscilla Bayle (UMR5199 PACEA, Université de Bordeaux), and Peter Eeckhout (ULB)

[337] *Artificial Cranial Modification as a Marker of Identity and Population Dynamics at the Site of Pachacamac, Peru*

Artificial cranial modification (ACM) is a cultural practice designed to permanently produce specific head shapes that vary within and between populations and are often interpreted as markers of ethnic and sociocultural identity. Examining this variability in the funerary contexts of the Peruvian site of Pachacamac provides insights into the identity of the deceased and local population dynamics. Under the Inca Empire, Pachacamac was a major pan-Andean pilgrimage center, but the scale of pilgrimage in pre-Inca times remains debated. Here, we investigate ACM as a tool to explore the origins and diversity of Pachacamac’s pre-Inca populations. We combined typological classifications with geometric morphometric analyses of 3D surface scans from nearly 100 individuals, using a 515-landmark template. ACM appears as a widespread practice across sexes and periods of occupation. Most skulls show tabular forms typical of the coastal region, with no

clear evidence of extra-regional individuals. Our analyses show moderate to high morphological variation within typological categories, indicating low standardization in cephalic devices and/or cultural differences between local or regional subgroups. Overall, our results suggest that Pachacamac's pan-Andean role emerged only under Inca's influence, while earlier periods could reflect a more localized scope. This presentation will include images of human remains.

Holcomb, Justin (Kansas Geological Survey, University of Kansas), and Rolfe Mandel (Kansas Geological Survey)

[249] *Geoarchaeology beyond Earth: Integrating Cultural Heritage into Planetary Science*

On September 13, 1959, the second Soviet cosmic rocket (Luna 2) crashed into the lunar surface in the Palus Putredinis region, officially creating the first archaeological site on another celestial body. Since that impact, humans have interacted with 10 other extraterrestrial surfaces, leaving behind artifacts (e.g., scientific equipment, rovers, landers, impactors, cultural items), features (e.g., rover and human trackways, sampling locations), and sites (e.g., impacts, landings and crashes) that collectively form the archaeological record of the solar system. From a contemporary archaeological perspective, the vast quantity of debris scattered across the solar system represents the material footprint of our species' history of dispersal—first out of Africa and eventually off Earth. This cultural (space) heritage offers a unique opportunity for archaeologists to begin contributing to planetary science. We present recent research demonstrating how archaeologists can study the rapidly expanding archaeological record of off-Earth environments. Specifically, we highlight the value of geoarchaeological reasoning within extraterrestrial contexts and emphasize the importance of developing a more multidisciplinary planetary science.

Holcomb, Justin [72] see Blong, John

Holcomb, Justin [72] see McDonough, Katelyn

Holcomb, Justin [71] see Thompson, Jordan

Holland, Rachel [206] see Kohanski, Neil

Holland, Rachel [206] see Rosa Figueroa, Jeffrey

Holland-Lulewicz, Isabelle (Pennsylvania State University), Asa Cameron (Pennsylvania State University), Christina Carolus (Pennsylvania State University), Jacob Holland-Lulewicz (Pennsylvania State University), and Bukhchuluun Dashzeveg (National University of Mongolia, Yale University, Pax Environmental)

[315] *The Importance of Wetland Resources in the Agropastoral Socioecological Systems of Central Asia*

Wetland resources, such as fish and aquatic plants, serve as integral components to the emergence of political, social, and economic complexity of communities. They provide critical ecosystem services to human societies (and in this case their animal co-parts) as demonstrated through extensive archaeological research of communities across wetland ecosystems globally. Compared to research on islands and coasts, interior wetland contexts too provide such critical lifelines, yet receive far less attention. One area where the role of wetland ecosystems has been undertheorized is in the mobile agropastoral communities of Central Asia. While stable isotopic studies of human remains recovered across Central Asia often suggest a significant contribution of aquatic resources, investigations into these socioecological systems lack complementary, high-resolution zooarchaeological and paleoethnobotanical analyses to empirically corroborate isotopic signatures. This paper reviews our current understanding of the role of wetland ecosystems across Central Asia and presents preliminary data from an intensively dated Xiongnu village in the eastern Mongolian steppe, Khairt Suurn, to begin to understand the role of wetland resources within the broader regional evolution of agropastoral economic and political complexity.

Holland-Lulewicz, Isabelle [315] see Dashzeveg, Bukhchuluun

Holland-Lulewicz, Isabelle [315] see Holland-Lulewicz, Jacob

Holland-Lulewicz, Jacob (Pennsylvania State University), Christina Carolus (Pennsylvania State University), Asa Cameron (Pennsylvania State University), Isabelle Holland-Lulewicz (Pennsylvania State University), and Bukhchuluun Dashzeveg (National University of Mongolia, Yale University, Pax Environmental)

[315] *The Role of Temporal Resolution in Understanding Nomadic Political Ecologies: A Xiongnu Case Study from the Eastern Mongolian Steppe*

Central Asia is critical to elucidating key human-ecosystem phenomena including the adoption and intensification of agropastoralism, the evolution of mobile statecraft, and the fine articulation between ecological opportunities and sociopolitical complexity. Indeed, Central Asia has been an incubator of cutting-edge theory and methodological innovation. Despite our increasing resolution of the human-environment interface, data, questions, and interpretations remain bound to legacy chronological frameworks. The broad temporal boxes residual of culture-history (e.g., Early, Late Bronze Age, Iron Age) continue to structure narratives, masking variation at finer spatial and temporal scales while downplaying continuities across space and time. In this presentation, we outline the role that intensive radiocarbon dating and modeling programs could play in exploring the social, political, and economic mechanics of human-ecosystem dynamics. To do so, we focus on preliminary data from Khairt Suurnyn, a recently excavated and intensively dated Xiongnu village in the eastern Mongolian steppe. We track the internal history of this village, characterizing the temporality of both its emergence and abandonment, and contextualize this microhistory within broader regional processes of empire building and the evolution of agropastoral economies. We end with a series of outstanding questions in Central Asian archaeology that might be approached via intensive chronological research.

Holland-Lulewicz, Jacob [315] see Dashzeveg, Bukhchuluun

Holland-Lulewicz, Jacob [315] see Holland-Lulewicz, Isabelle

Holley-Kline, Sam

[21] *Archaeological Workers beyond Disciplinary Boundaries: Race and Labor in the Work of Morris Steggerda*
Between 1931 and 1939, Morris Steggerda of the Carnegie Institution of Washington's Department of Genetics conducted eugenic research in association with the CIW's program of Maya research. Steggerda's research brought a combination of anthropometric, psychological, and genealogical methods that presumed, and instantiated, a logic of racial continuity with degradation. Examining Steggerda's unpublished data files, however, demonstrates the extent to which he relied on archaeologists and archaeological labor for his conclusions. In this paper, I examine how CIW-sponsored eugenics research moved from archaeological workers to the Maya "race" as a whole, and from that whole to the prehispanic Maya past. In so doing, I discuss how workers in archaeology participated in knowledge production beyond disciplinary boundaries.

Hollimon, Sandra (Santa Rosa Junior College)

[50] *California, Alaska, Siberia, Russia: Indigenous Labor in the Russian America Company through the Lens of Loan Words*

Russian eastward expansion in the seventeenth and eighteenth centuries was spurred, in part, by the pursuit of Siberian furs. As part of this effort, the practice of appointing indigenous liaison spokesmen spread from Siberia through Russian America. These were known as *toion*, from the Yakut word for headman or chief. This presentation examines these labor practices in cultures exploited by the Russian America Company in pursuit of furs, especially sea otters. I examine the adoption of the loan word *toion* in Alaskan Native languages and Kashia Pomo at Metini / Fort Ross. The Kashia language has loan words adopted from Russian, Alutiiq, Kamchadal, and Coast Miwok. The multiethnic makeup of the Ross Colony (1812–1842) that resulted in this linguistic process is my focus.

Hollingshead, Ian, and Adriana Fabiola Sanchez Balderas (University of Victoria)

[70] *K'Oben: An Ethnography of the Hearthstones in Mensäbäk, Chiapas, Mexico*

Despite the relevance of the hearth as a central element for cooking and non-cooking activities among ancient Maya, the main attention to this feature has been focused on its role and social/symbolic importance, but the hearthstones have been often overlooked in archaeological studies. Different hearth-style features

are used for diverse food preparation and for non-cooking activities, but literature regarding hearth styles from archaeological sites in the Mayan area is limited. There are few records of hearths, fire-cracked rock (FCR), in the archaeological reports and full description and analysis have only been done in recent years. This paper focuses on studying the different hearth features styles, uses, and maintenance among Hach Winik from Mensäbäk, Chiapas. Preliminary results of the ethnographic research suggest the preference for the use of elevated hearths (bench) among Indigenous households and the reuse of hearthstones over time. Ethnographic research may provide information of use, adoption, and adaptation of fire features, as not all burning presence may be evidence of a hearth.

Holman, Tamara [101] see Barlow-Diemer, Aidan

Holmes, Charles [195] see Wygal, Brian

Hong, Seungyeon (University of Georgia)

[102] *Collective Action and Sociopolitical Transformation during the Baekje-Goguryeo Conflict (AD 475–551), Three Kingdoms Period of Korea*

The paper explores relations between local communities and ruling groups to reexamine the so-called collapse of the early Baekje state, following military invasion of the central Korean Peninsula by the Goguryeo state (AD 475–551). The study challenges elite-centric models that frame state collapse as the top-down ultimate disintegration of political structures. Instead, it highlights how sociopolitical transformations were shaped by varying degrees of collective action between the communities and rulers, including both Baekje state officials and intrusive Goguryeo forces. These interactions reveal whether political regimes were collaborative or coercive in form, thereby providing insights into the resilience or failure of governance structure amid political upheavals. The research compares two regions in the central Korean Peninsula: the Baekje capital area and a peripheral hinterland. By integrating Bayesian modeling of radiocarbon dating and stylistic analysis of pottery assemblages, the study examines how collectivity changed temporally and regionally during the inter-polity conflict. Stylistic similarities with central authorities' assemblages can be a proxy for elite-directed production, whereas the divergent styles can reveal more collective, community-oriented traditions. This approach reveals community responses to shifting state power, reassessing collapse not as an abrupt demise of government control but as a social transformation mediated through community-state interactions.

Hong, Seungyeon [49] see Birch, Jennifer

Hoobler, Ellen (Walters Art Museum)

[260] *From Ancient America to New Delhi, via Los Angeles: The Heeramanek Collection of Ancient American Art*
The interest of many, if not most, mid-century dealers and collectors of Ancient American art was piqued for three main rationales: these works' connection to Modern art, through "primitivism"; a love of craftsmanship, found in delicately painted Maya ceramics or exquisitely carved hardstones; or the US-Latin America connections, for geopolitical strategy or the "tremendous vogue" for Latin American culture. Nasli Heeramanek forged a different path. Born and raised in Mumbai, India, as a brash young man Heeramanek emigrated to New York to sell Indian and South Asian art from his family's gallery. He quickly connected with educational institutions and museums across the USA, likely how he met Earl Stendahl and became a client of his galleries. Over time, Heeramanek came to appreciate and develop his eye for Ancient American works. In 1966, he donated part of his collection, comprising 200 works of art from the Ancient Americas, to the National Museum in New Delhi. Still displayed today in India but undercatalogued and often ignored, this paper explores how the works came to India and how they have been understood and appreciated there.

Hoover, Brooke (University of Alaska), and Gerad Smith (University of Alaska)

[71] *Frozen Shores in 3D: Using Unreal Engine to Reconstruct Paleo-lake Environments*

Current archaeological and geological literature relies on 2D maps, written descriptions, and restrictive 3D geospatial software. For nonspecialists, these can be difficult to envision. By exploring the potential in recent advances in 3D modeling software, we transform 2D data into an immersive 3D paleoenvironment. This

assists in bridging the gap of representation of past environments, and making them more accessible. Here, we apply this to the early Holocene Greater Tangle Lakes, a paleo-proglacial lake in central Alaska associated with important Denali tradition archaeological contexts.

Hopkins, Maren, and Juan Quezada Olivas

[26] *Living Legacies of Juan Quezada: Ethnographic Insights of Land Use and Clay Composition*

Juan Quezada Celado left behind a rich history and profound legacy on Mata Ortiz and the art community worldwide; however, his knowledge of the geologic resources needed for pottery production was relatively understudied for most of his career. Ethnographic research with Mr. Quezada in 2021 and 2022 sought to document many of the clay sources he used during his life, capturing his history of discovery of individual sources and the ways he then learned to process raw materials he collected from the earth into productive clay. This paper focuses on the ethnographic process used to understand Juan Quezada's personal history and expert knowledge, and its potential to contribute to broader scientific inquiries. This work shows the significance of community-based research for understanding social, historical, and technological questions.

Hopkins, Maren [26] see Martínez-Tagüena, Natalia

Hopkins, Maren [26] see Peeples, Matt

Hopkins, Maren [26] see Vidal-Solano, Jesus

Hopper, Alaura (University of California Santa Cruz)

[124] *"Traditional Control": The California Academy of Sciences Basket Collection Distribution Map and Hot Spot Analysis*

As the American government laid claim to land in the newly formed state of California after the US invasion of Mexico, anthropologists and amateur collectors began a frenzy of collecting. One of the most notable objects collected was baskets woven by Native Californians. Baskets were often collected as part of the myth of extinction created and perpetuated by anthropologists and coincided with ideas around cultural fixity. However, baskets were also collected by weavers for different reasons; to preserve traditions and solidify relational ties. Basket collections reveal a nuanced decades-long relationship between Native nations, institutions, basket weavers, art dealers, anthropologists, and amateur collectors. The project applies a GIS Hot Spot analysis to a distribution map of the basket collection from the California Academy of Sciences in order to add a geographic dimension to the diverse historical entanglement. The distribution map will be created utilizing the public, accessible online dataset from the museum collections. The formation of these datasets, distribution maps, and statistical analysis, will help to build geographical ideas of ecological and political transformation in California during the late nineteenth and early twentieth centuries with the intent of characterizing the role of activism by California weavers in future projects.

Hopper, Michael (Choctaw Nation of Oklahoma)

[91] *Indigenous Perspective*

Indigenous Archaeology has emerged in the past decades as a new approach to practicing archaeology. What makes this approach to archaeology different from traditional theories of practice and thought is that it incorporates Indigenous perspectives and methodologies to gain an understanding of the experiences of Indigenous peoples of the past. These perspectives and methods do not strictly follow the traditional theory or foundation of archaeology. The focus is on the people and their connection to the lands that they come from, using devices and ideologies that align with Indigenous worldviews. The main argument of this approach is whether Indigenous Archaeology is needed and if it is an acceptable theory of archaeological thought. In the following paper, I will address that question using my own Indigenous (Choctaw and Osage) perspective. This paper will be an introduction to Indigenous Ideologies, Indigenous Archaeology, the future of Indigenous Archaeology, and case studies. By exploring and connecting these topics, I hope to establish a better understanding of Indigenous Archaeology as an authentic practice when studying the past of Indigenous peoples.

Hopstone, Mai [334] see Atherton, Heather

Hopstone, Mai [334] see Harvey, Amanda

Horn, Christina, and James Coburn (Colorado Mesa University)

[327] *Early Nonmetric Data Analysis of Skeletal Long Bone Morphology from the Jomon Period through the Kofun Period*

This analysis will show the factors and patterns that led to the hybridization of the modern Japanese people through the blending of the native Jomon and the continental immigrants. In order to understand this hybridization of the two groups, the nonmetric data analysis will also incorporate environmental factors as well as physical alterations based on physical developments to the new environment for the immigrant population as well as new dietary additions for the native population. *****This presentation will include images of human remains.**

Horn, Christina [327] see Coburn, James

Horn, Sherman (Goodwin & Associates), Anabel Ford (MesoAmerican Research Center, UCSB), and Justin Tran (University of California, Riverside)

[165] *Making a Home in the Forest: Maya Agroforestry and the Provision of Perishable Building Materials at El Pilar*
Scholars of ancient Maya architecture have traditionally focused on masonry structures. The imposing remains of stone-built temples, palaces, and ballcourts left indelible marks on the forested landscape and in the popular imagination of Maya civilization. Far outnumbering stone edifices, however, were residential buildings of wood and thatch—products harvested from the forest-and-field tapestry of Maya cityscapes. As organic building materials leave few traces after centuries in the tropical forest, archaeologists have paid them little attention beyond recognizing their use in domestic architecture. Ongoing research at El Pilar, an ancient Maya city in Belize and Guatemala, explores Maya use of wooden building materials through the framework of the milpa-forest garden cropscape. Traditional ecological knowledge reveals the sustainability of this system to produce food and materials for house construction. Using lidar topographic analysis and full-coverage settlement survey at El Pilar, coupled with ethnographic information from Maya citizen scientists, we present a model for understanding Maya sustainable agroforestry methods developed over millennia in the tropics. The Maya had a variety of trees to choose from, but all woods were not equally suited to the specifics of house construction, and careful management of resources was necessary to provision their populations.

Horn, Sherman [266] see Ford, Anabel

Horowitz, Rachel (Washington State University)

[36] *Households, Workshops, and Household Workshops: Understanding Biface Production in Western Belize*
Crafting and specialization are frequently discussed topics within household archaeology. Previous studies illustrate that much craft production in the Maya area occurred in households, especially of flaked stone lithic tools. Previous studies of household craft production in the Mopan Valley, western Belize, identified the presence of multiple biface production workshops within the region. The presence of multiple, contemporaneous workshops allows a discussion of the potential for economic competition among lithic producers and an evaluation of the role of householders in regional lithic economies. This paper will examine the role of households in biface production and exchange through the lens of the Manzanero Lithic Workshop, a mostly Late Classic period biface production area in Succotz, Belize. The relationship of the households at the site with the workshop area will be discussed and compared with other household lithic producers in the Mopan Valley and elsewhere in the Maya lowlands. We suggest that biface producers were predominantly household craft specialists with workshops located adjacent to the households and that the location of these workshops was based on ease of access to lithic raw material resources. Economic competition among biface producing households may have influenced production activities.

Horowitz, Rachel [341] see Cap, Bernadette

Horowitz, Rachel [293] see Marken, Damien

Horowitz, Rachel [115] see Ramos, Andrew

Horowitz, Rachel [71] see Thompson, Jordan

Horseman, Grace, Shanti Morell-Hart (Brown University), Shane Montgomery (University of Calgary), Armando Anaya Hernández (Universidad Autónoma de Campeche), and Felix Kupprat

[44] *Cultivated Landscapes at the Peripheries of the Ancient Maya City of Calakmul*

Located within the elevated interior of the Central Maya Lowlands, the people of the ancient Maya city of Calakmul negotiated an environment characterized by a lack of natural permanent water sources and relatively thin, rocky soils. Despite these challenges, the city thrived, supported, in part, by a variety of agricultural strategies adapted to the karstic landscape and *bajo* margins. Here, we present lidar and microbotanical data related to the cultivation and subsistence strategies used in and around two houselots in Calakmul's urban periphery. In particular, we highlight home gardens and "garden crops" as significant features of ancient Maya landscapes that are at the intersections of local and regional systems. Combining geospatial and paleoethnobotanical analyses, this research explores the spatial and botanical variations within the agro-urban landscape at Calakmul and considers what any variations may reveal about the organization and maintenance of economic, political, and social relationships at Calakmul, particularly for the non-elite.

Horseman, Grace [355] see Bazarsky, Alexandra

Horsley, Tim [264] see Blair, Christopher

Horton, Delaney (University of Oklahoma)

[173] *Analysis of Red Slipped Ceramics from Clement (34MC8): A Multi-mound Center in Southeastern Oklahoma*

Red slip is a common decorative technique used by Indigenous potters in the southeastern United States. This decorative type spans a large range geographically and temporally, yet little research has been focused on creation and use of red slipped vessels. Clement (34MC8), an ancestral Caddo, multi-mound center in southeastern Oklahoma, has an abundance of fineware, slipped ceramics (representing 30% of the ceramic assemblage). The magnitude and variety among red slipped sherds allowed for an extensive study of red slipped ceramics to be completed. A compositional analysis was completed on a sample of red slip sherds using LA-ICP-MS successfully identified two different slip recipes. This project aims to display the importance of slip research and the ability to answer questions regarding crafting and identity in the past. Archaeometry research is one avenue to further integrate raw material studies into ceramic research.

Horvat Oštrić, Kristina [347] see Stehr, Katy

Hosek, Lauren (University of Colorado Boulder), and Alanna Warner-Smith (American University)

[216] *Death at the Front Door: Historical Bioarchaeological Approaches to Epidemics*

While bioarchaeologists have long considered infectious disease, the recent COVID-19 pandemic has deepened interest in epidemics. Pandemics and epidemics conjure a sense of the large-scale as diseases sweep through communities, span continents, and cross oceans. However, at the microscale, these diseases creep through households and neighborhoods, altering social, political, and economic relationships on a fundamentally local level. As bioarchaeologists, we are trained to shift between scales of analysis, from individual bodies to populations and patterns, and the development of historical bioarchaeology has long fostered forays into other data sources. Here, we discuss cholera in the islands of the Caribbean and Spanish flu and scarlet fever in mining communities of the Mountain West through a local perspective, centering on-the-ground experiences of the diseases and their many societal impacts. Notably, these diseases do not leave osteological traces, and their presence is typically assessed through mortuary contexts and archival records. As such, we turn to other sources of data, including maps, cemetery data, newspaper reports, and oral history. These sources also allow us to articulate these local processes with larger histories of each disease as people and pathogens move through landscapes/seascapes—and their remains and stories persist into the present.

Hosek, Lauren [292] see Bader, Alyssa

Hosek, Lauren [196] see Coppock, Rachel

Houcini, Nawel

[40] *"Uru": History, Meaning, and Stakes of an Ethnonym: For an Epistemological and Semantic Study of the Uru Culture*

This work focuses on the Uru populations living in the lake areas of the territories of present-day Peru and Bolivia. Since the sixteenth century, these populations have been described in written sources in a depreciative and contradictory manner. We have chosen to undertake interdisciplinary research in order to better understand this subject: archaeology, epistemology, sociology of knowledge, and semantics. Thus, we were interested in this Uru phenomenon with several questions, including the following: how is it that a cultural group existing at least since the colonial period according to chronicles and traveler's stories is so difficult to describe? How was knowledge about the Uru built? What does Uru mean? How was it used and what does it refer to? And more broadly, what are the limits and challenges of scientific intervention in defining an archaeological culture in a context where populations still identify with what is considered to be past? In this logic, we have constituted four different corpora by their medium: written sources, preserved objects from the collections of MUSEF (La Paz, Bolivia) and the Musée du Quai Branly (Paris, France), photographs (private and public funds), and interviews conducted in Peru and Bolivia.

Houck, Charles [338] see Smith, J. Gregory

Houghten, Holly (Mescalero Apache Tribe, THPO)

[37] *Certificates and Training for Tribal Monitors*

Tribes should be involved in all aspects of cultural resource management, including planning, identification, interpretation, mitigation, and management. Many agencies, CRM companies, and project proponents are instituting programs to incorporate tribal members into cultural surveys, data recovery projects, and other alternative mitigation initiatives. Tribal monitors are selected by THPOs and cultural departments for this type of work based on their traditional knowledge and interest in conducting fieldwork. Like fresh archaeological graduates who did not attend field school, they still require training in archaeological methods, GIS field recording technology, and general fieldwork practices in both classroom and field settings. In this presentation, Ms. Houghten discusses the importance of tribal monitor para-archaeology training that integrates traditional knowledge, archaeological field methods, and a comprehensive understanding of state of federal cultural resource laws. The presentation will also discuss the importance of para-archaeology certificates for future fieldwork opportunities for the tribal monitors.

Houk, Brett (Texas Tech University)

[35] *Nick Dunning and the Three Rivers Adaptive Region*

In 1992, Richard E. W. Adams and Fred Valdez Jr. launched the Programme for Belize Archaeological Project in northwestern Belize as the intellectual and methodological successor to the Ixcanrió Regional Project, which had operated in northeastern Petén in 1990 and 1991. To overcome the artificial separation of an otherwise contiguous research area caused by the modern border between Belize and Guatemala, Adams created the Three Rivers Region. Named for and largely delimited by the Río Azul, Río Bravo, and Booth's River, the Three Rivers Region began as a largely heuristic device for Adams and other project members to frame their research questions and comparisons. Nick Dunning and colleagues built on the initial concept and included the Three Rivers region as one of 27 adaptive regions in the Maya lowlands. This presentation highlights Nick Dunning's decades of fieldwork in the area and his many contributions to our understanding of the development of the Maya in the Three Rivers adaptive region.

Houk, Brett [341] see Murphy, Kaitlin

Houk, Brett [36] see Thompson, Amy

Houle, Etienne [302] see Grimes, Vaughan

Houle, Jean-Luc [315] see Conesa, Francesc

Housse, Romuald, and Wendy Rocio Chavez Irusta (Universidad Mayor San Andrés)

[40] *From Collapse to Integration: Political Landscapes and Settlement Patterns during the Late Intermediate Period on the Eastern Shores of Lake Titicaca*

The aftermath of Tiwanaku's collapse triggered profound transformations in settlement patterns across the Lake Titicaca Basin during the Late Intermediate period (1100–1430 CE). While these changes have long been documented in other parts of the basin, the little-studied Puerto Acosta region (Bolivia), on the eastern slopes of the lake, presents a particularly striking and distinctive trajectory. Pucarás hilltop settlements are especially numerous here, representing one of the highest site densities across the entire altiplano. Yet, despite this remarkable density, most sites are discreetly located and only lightly defended, in contrast to the heavily fortified settlements found elsewhere in the basin. Drawing on recent results from the ALTI-Plano Project, complemented by comparative perspectives, this paper suggests that this organization resulted from two distinct processes. First, demographic growth created pressure on resources, leading to the relocation and proliferation of household clusters across the landscape. Second, populations restructured into small and closely organized defensive communities, whose strategies relied less on large fortifications than on dispersed settlement, visual control, proximity to terraced fields, and the symbolic protection of *chullpas*. This settlement model endured into the Late Horizon, with little evidence of major reorganization under Inca integration (1430–1532 CE).

Houston, Stephen (Brown University)

[92] *Lighting the Way: Playing with Visibility in Maya Glyphs*

A scholar of Dave Stuart's perception invites us to look at human sight. This paper addresses the play of light and dark in the design, execution, and use of Maya glyphs. Drawings of texts stress contents, a central target for epigraphic scholarship. But they do not highlight the dynamic role of daylight or torchlight, variable by season or time of day, in a deliberate choreography of material texts and their conditions of viewing. The supposition here is that light was orchestrated, its history and idiosyncrasies inferable. From this comes plausible access to scribal intent and patron's impulses.

Houston, Stephen [35] see Dine, Harper

Houston, Stephen [161] see Golden, Charles

Houston, Stephen [53] see Stuart, David

Howard, Sully (Cornell University)

[227] *Twenty Years after the Storm: Contemporary Archaeology of Hurricane Katrina in Coastal Mississippi*

On August 29, 2005, Hurricane Katrina ripped through the Gulf Coast, decimating Mississippi coastal communities and southeast Louisiana. Twenty years later, I have returned to the Mississippi Gulf Coast to what is now an unassuming lot taken by grass and towering oak trees, though this was once a place my family called home. This autoethnographic/autoarchaeological "homecoming" marks the beginning of a larger project that explores the effects of extreme weather events in US Southeast coastal communities and highlights themes such as memory, materiality, disaster, and ghosts. By excavating and documenting my own family's "disaster," this research explores the critiques and debates surrounding the genre of ruins, particularly what it means to represent such subjects when the work is carried out by the personally affected. Between excavating a pool and a pond, the findings of this work offer a snapshot of Katrina and a material encounter with what my family—or Gulf Coast residents more broadly—believed to have been lost forever. Spanning time past, present, and future, this research stands as a testament to the ongoing aftershocks of Hurricane Katrina and challenges a vision that imagines Katrina's wake in the rearview.

Howard-Brown, Ann-Marie [44] see Kiernicki, Lydia

Howe, Mark (International Boundary and Water Commission)

[212] *Changes along the US-Mexico Border: Where Walls Divide the Past from the Present*

The United States–Mexico international border was established in 1848 and 1853 under treaties. Since this time, the border has become more urbanized, fenced, and finally militarized with large new sections of border wall. This discussion will emphasize what new deviations have occurred to the border along both the

Rio Grande and the land border. On the land border from the Pacific Ocean to El Paso, Texas, the land monuments delineating the border have been damaged from years of wall building. Even though archaeological surveys have been completed in the past, many of the monument construction camps are being impacted and destroyed due to wall construction in pristine locations. In and along the Rio Grande down to the Gulf of America, locations of recorded sites are facing impacts due to wall building and new road construction. Because of wall building, archaeological sites are now behind the walls and impacts due to looting, destruction or other means make it harder to monitor. With the establishment of National Defense Areas (NDA), increased military activity has amplified these problems. Investigation of pre and post survey locations and mitigation will show that progress is not always the best for protection of cultural resources.

Howell, Chris, Jennifer Abplanalp (Argonne National Laboratory), Jennifer Josephs, Jamie Lewis (Argonne National Laboratory), and Catherine Smith (Argonne National Laboratory)

[74] *Examining the NAGPRA Consultation Processes within the US Department of the Air Force*

[WITHDRAWN]

Howell, Chris [218] see Smith, Catherine

Howell, Marly, Alison Carter (University of Oregon), and Carmen Sarjeant (Archaeological Investigations Northwest)

[217] *Expanding the Scope: A Comprehensive Study of Decorated Earthenware Ceramics during the Pre-Angkor and Angkorian Periods*

This study explores decoration variation on Khmer earthenware ceramics during the Pre-Angkor (six–eighth centuries CE) and Angkor (ninth–fifteenth centuries CE) periods from the Prasat Baset site, including data from all trenches, in Battambang province, Cambodia. Whereas the stoneware decorations have undergone numerous studies, the low-fired earthenware (the majority of the ceramics assemblage) remains understudied. Across trenches decorated ceramics were found in vast amounts, perhaps indicating that painted and other decorations stemmed from this location. Across time periods there are patterns in decorations indicating traditions passed down overtime; however, change in decorations over centuries may offer insight into changing politics, migration, and practices. Understanding decoration variation over time may help us understand culture during Pre-Angkor and Angkorian times. Sherds were sorted using a typology based on sand temper and surface treatment, then further categorized by surface treatment to consider decoration variation over time. Results indicate that painted ware decreases prevalence and Angkorian motifs emerge during Angkorian times. They also indicate how Pre-Angkorian ceramics had greater decoration variation versus the more neutral decorations seen during the Angkorian period. Decorations appeared to correlate temper types which raise additional questions to the purpose of temper variation, design variation, and loss of certain decorations overtime.

Howell, Marly [217] see Sarjeant, Carmen

Howland, Matthew, Carey Garland (University of Georgia), and Victor Thompson (University of Georgia)

[85] *Inundating the Undated: Analyzing How Sea-Level Rise Threatens Our Ability to Study the Past in Georgia, USA*

This paper describes the potential impacts that sea-level rise (SLR) will have on our ability to address particular archaeological research questions on the Georgia coast. In general, spatiotemporal biases in academic research have led to a situation where the distribution of archaeological sites that have been intensively investigated and well-dated with precise radiocarbon analysis does not reflect true patterns of ancient settlement (Garland et al. 2024). The impacts of climate change on archaeological sites will also be spatially biased, given the threat SLR inundation poses to archaeological sites on the Georgia coast. While inundation and possible damage/destruction of any archaeological site is concerning to cultural heritage professionals, these impacts are exacerbated when sites have not been well investigated or dated. Addressing this, this paper presents analysis of SLR-driven inundation scenarios and their impacts on archaeological sites along the Georgia coast that have not been dated through radiocarbon analysis. Through examination of the locations, estimated ages, and cultural affiliation of these sites, we highlight valuable research questions that

may not be viable in certain climate futures. Moreover, we argue that archaeologists have a moral imperative to document, analyze, and date these sites before they are permanently impacted by climate change.

Hristova, Petya

[275] *Crafting Style, Comfort, and Prestige: A Review of Plant Use beyond Food in Late Neolithic and Chalcolithic Southeast Europe*

In the Balkan late prehistory, expressive materiality together with procurement of raw materials, as well as semi-processed goods, become a norm. In this paper I review evidence for plant use beyond food in Late Neolithic and Chalcolithic in southeast Europe. By studying the use of plants in specialized crafts, textile making in contexts of multimedia working areas for example, we learn how the later prehistoric societies created various forms of sociopolitical organization and cultural expression. The presence of plant remains and impressions in multimedia work areas or “workshops” demonstrate “craft interaction” among staples such as textiles, pottery, and gold- and bonework. It begins toward the middle of the Late Chalcolithic (Golyamo Delchevo) and is more pronounced toward the Early Bronze Age at sites such as Krivodol, Mandalo, and Sitagroi. Specific classes of decorated tools and implements additionally embellished with decorative materials might be associated with textile making. Mixing materials and techniques to achieve a specific function or effect imbues familiar shapes with transformative agency in an effort not only to maintain but also to expand existing social networks. While pursuing innovations enriching the regional symbolic repertoires of prestige likely specialists created technological advances in other media as well.

Hrivnyak, Michelle [277] see Eng, Jacqueline

Hu, Di (James Madison University)

[306] *Do Lithic Proxies for Agricultural Sedentism Coincide Chronologically with Non-lithic Proxies on the Taraco Peninsula, Bolivia?*

This paper focuses on the transformations of food production during the transition from the Early to Middle Formative on the Taraco Peninsula, Bolivia. This transition saw significant demographic shifts, including increased village populations, settlement nucleation, intensified tuber and quinoa collection, and expanded ceremonial construction. Ceramic and survey data suggest the emergence of multi-community polities with distinct stylistic and ritual traditions in the Middle Formative, indexing broader political and economic reorganization. Lithic analysis from the Taraco Archaeological Project suggests notable changes in raw material procurement and production, reflecting greater spatial nucleation of different stages of lithic tool production and agricultural tools during this transition at important ceremonial sites like Chiripa. In the case of the Taraco Peninsula, as in many other parts of the world, monumental ceremonialism may have preceded agricultural intensification and sedentism. This paper demonstrates that lithic evidence for agricultural intensification and sedentism—such as the nucleation of all stages of lithic tool production and the rapid increase in agricultural tool frequency—is fully consistent with other lines of archaeological evidence.

Hu, Di [309] see Chiou, Katherine

Hu, Yijie

[261] *The Interaction of Bronze Resources between Central and Northern China during the Eastern Zhou Period: A Perspective from Bronze Artifacts Unearthed in the South-Central Region of Inner Mongolia*

A number of bronze artifacts with northern characteristics have been discovered in the south-central region of Inner Mongolia, China, dating from the late Spring and Autumn period to the Qin and Han dynasties. Based on typological analysis, this study employs lead isotope ratio analysis to analyze the resource characteristics of the bronze production. The results indicate that the resources utilized in the production of these bronzes varied across different periods and were closely connected to the Central Plains. The interaction of resources between the Central Plains and the regions along the Great Wall reflects the powerful production capacity of the workshops in the Central Plains. The output of various metal raw materials and bronze artifacts from these workshops enabled most areas along the Great Wall to overcome the bottleneck of insufficient metal resources, forming a bronze production industry without the need for mining and smelting processes.

Hua, Quan [217] see Stark, Miriam

Huang, Cindy Hsin-yee (Arizona State University), and Jonathan Paige (New Mexico Consortium)

[336] *Not Your Parents' Lithics! Or Is It? Assessing Prior Technological Context as a Predictor of Lithic Miniaturization across Eurasia*

The emergence of microliths and microblades in Europe and Asia marked one of the most significant shifts in the stone tool kit of Upper Paleolithic peoples across the continent. Researchers have critically assessed microblade and microlith assemblages, their stratigraphy, and their associated radiocarbon dates to identify potential origins. However, these approaches have often focused on describing the technological shift as a response to paleoenvironmental changes. While fruitful, these analyses can miss another key component: the prior technological context of emergence. Microlith emergence, for example, may depend partly on the prior technological knowledge that exists in a population of toolmakers, or groups could readily invent the microlithic tool kit regardless of prior technological knowledge. In this paper, we conduct an analysis of the technological context of microlith and microblade emergence in sites across Eurasia. Using the procedural-unit approach, we quantify variability in stone tool production among assemblages preceding miniaturization in each region. This method allows us to quantify variability in core and tool production steps and test whether the prior technological history of an area impacted when and how microliths and microblades emerged. Ultimately, this study clarifies our techno-functional understanding of the shift to miniaturization and the drivers of this major change.

Huang, Cindy Hsin-yee [336] see Paige, Jonathan

Huang, Kechu (New York University)

[321] *Humanity, Animality, and the Situated Logics of Governance in the Ancient World*

In this paper, I focus on parallels in the archaeological record between the treatment of untamed animals and that of unruly humans. Historians and anthropologists have noted that, cross-culturally, the management of animals has often served as a model for how those in power govern and even domesticate those they render compliant. I use this observation as a starting point to propose a framework for understanding strategies of subjugation and authority in early states—one rooted in the alterity of human-animal and animal-animal relations. And just as importantly, navigating local ontologies and categories is central to studying the creation of new forms of social order. In doing so, I explore archaeological, visual, and textual evidence from two ancient societies—Early Dynastic Egypt and Shang China—during periods when both were experimenting with and negotiating new conceptions of personhood, animality and governance. More specifically, this paper focuses on accounts of war expeditions and hunting activities, both considered essential to rulers as methods of ordering. Equally important is what came after capture, a key variable in understanding the ontological differences between what had been taken. In this vein, notions of predation, capture, and domestication help frame “proper,” yet shifting, political relations between beings.

Hubbe, Mark [89] see Hayden, Lauren

Hubbe, Mark [45] see Kirgesner, Samantha

Huckleberry, Gary [88] see Worthey, Kayla

Hudson, Erin

[322] *Living the Dream: Brian Fagan's Impact on an Everyday Archaeologist*

Even prior to embarking on a graduate school career, I was inspired by Dr. Fagan's prolific writing for both archaeologists and the public. In graduate school I dreamed of “growing up” and writing books that made archaeology interesting and accessible for everyone. After telling my graduate mentors that “I want to be Brian Fagan when I grow up,” they arranged for him to give a lecture at the University of New Mexico. During that visit, I had the privilege of talking with Dr. Fagan and exploring his career trajectory and approach to writing. Twenty years later and gainfully employed in CRM, I still think of his approach to writing as I sit down to author my own reports. While I have yet to write a book, this presentation will explore how my

dream of growing up to be like Dr. Fagan continues and influences my everyday work.

Huerta, Danielle

[75] *The Role of LA 20000 in Spanish Colonial Mining, Mineral Circulation, and Nascent Communities of Practice*
The Spanish estancia of LA 20000, located 20 miles southwest of Santa Fe, New Mexico, was likely among the largest ranching enterprises established along the Camino Real during the seventeenth century. Documentary sources suggest the affluent Marquez family may have owned the property and potentially maintained another estancia, Acomilla, in the southern Rio Grande. Strategically positioned 5.2 miles from San Marcos Pueblo, one of the largest producers of Rio Grande Glaze Ware pottery, and 1.3 miles from the Cerrillos Hills where there were known turquoise and galena mines, LA 20000 occupied a location well-suited for extracting tributary resources, mobilizing labor, and engaging in colonial mining endeavors. This study presents petrographic, lead isotope, and LA-ICP-MS compositional analyses of Rio Grande Glaze Ware recovered from both LA 20000 and San Marcos Pueblo. These data provide insight into the role that LA 20000 may have played in the acquisition, circulation, and trade of mineral resources—particularly galena lead—used in the production of glaze-painted ceramics by Pueblo potters and in silver smelting by Spanish colonists. Additionally, this data indicates LA 20000 was a multiethnic place that gave rise to a new community of practice wherein potters experimented with different lead glaze recipes.

Hughes, Nicole

[22] *“All the Friends of America’s Brittish Intrest”: A Queer Approach to Kinship within an Eighteenth-Century British-Aligned Bioarchaeological Multiple-Interment Site*

Within bioarchaeology, kinship has primarily been understood as a biogenetic system in which genealogy dictates how we conceptualize and identify our kin from non-kin or relatives from non-relatives. However, biogenetic relatedness does not always equate to kinship, and instead, the queer theory concept of kin-making, which involves purposeful acts of care, shared experiences, commensality, and ritual, should be used to explore how kin are created and maintained over time. This interdisciplinary research project explores kinship and kin-making among archaeological human skeletal remains buried in a multiple-interment site within the cellar of the Ste. Marie house property located at the Fortress of Louisbourg, an eighteenth-century colonial site in Cape Breton, Canada. Specifically, this presentation examined four lines of evidence: stable isotope values extracted from the human skeletal remains, mortuary patterns recorded upon excavation, personal adornments buried with the archaeological individuals, and the abundant historical archive that provided contextual information. These sources were used to interpret how kin were created and maintained between and among the dead who were buried in the cellar and the living who interred them.

Hugins, Kiana (Northeast Information Center)

[124] *Reading the Landscape: Geospatial Insights on Historic Culturally Modified Trees in Northeastern California*
Culturally modified trees (CMTs) are trees physically altered by humans for cultural and social purposes through cutting, carving, or altering growth patterns. This study focuses on aspen trees carved by Basque sheepherders in Lassen National Forest during the nineteenth–twentieth centuries. Carvings include images, names, and messages shared that reflect the isolation and challenging daily life experienced by herders. This paper incorporates themes from landscape archaeology and the archaeology of human experience to describe how these carvings are shaped by labor, economic, and political circumstances during a transformative period in the western United States. The analysis combines archival research, a hierarchical classification of carving types, and least-cost path analysis to understand how terrain shaped grove selection. It establishes diverging paths across 50 sites and evaluates differences in environmental and landscape variables. The results show that sites are situated in higher-elevation, gently sloped, northwest-facing locations with favorable grazing conditions. This indicates that herders intentionally chose which groves to carve in, impacting sites’ spatial distribution. Such patterns support the hypothesis that local terrain informed how herders moved through and experienced Lassen National Forest. These findings illustrate how the geospatial analysis of CMTs advances archaeological efforts to document, protect, and preserve their historical narratives.

Huidobro, Consuelo [58] see Morello Repetto, Flavia

Hultquist, Nicole [314] see Meiggs, David

Hummel, Taylor

[194] *uhnawayé'kye: Visualizing Ancestral Tuscarora Space in North Carolina's Inner Coastal Plain*

Following the massive loss at Neyuherú-ke? in March of 1713, Tuscarora people and their allies made the difficult decision to move north away from their homelands in what would come to be known as North Carolina to seek shelter among the Haudenosaunee Confederacy in the north, becoming the sixth nation by 1722. Today, the Tuscarora Nation is a federally recognized tribal nation whose current territory is located 10 miles northeast of Niagara Falls, NY, yet maintains ties to their ancestral homelands in what is now North Carolina over 1,000 miles away. I explore the historical geography of the Tuscarora homelands in the inner coastal plain region of North Carolina by analyzing Tuscarora place-names and comparing them to archaeological sites. Framing this project within a land-back perspective, I compile Tuscarora place-names and use GIS to map them alongside ancestral Tuscarora archaeological sites to reclaim mapping as a tool of reconnection, offering contemporary Tuscarora citizens a way to visualize ancestral homelands and connecting language to place.

Humphrey, Kenneth

[127] *Statistically Mapping Profile Stratigraphy Using Close Range Digital Photogrammetry and Random Forest-based Regression Modeling*

The Hell Gap Locality I witness wall is carefully mapped and extensively studied throughout excavation, providing geomorphologists with valuable insights into sedimentation and soil development. Archaeologists, still working to refine the dates of stratigraphic units, are utilizing increasingly innovative geoarchaeological methods to improve the precision of their measurements. Regardless of the approach to date a stratigraphic unit, both old and new methods still rely on mapping stratigraphy in relation to cultural features and artifacts with associated dates. As sophisticated as new methods are, delineating stratigraphy still relies on visual observation, professional judgement, and hand-drawn maps. The purpose of using close-range digital photogrammetry and random forest-based regression modeling is to create a digital soil map identifying characteristics such as texture, organic content, or oxidation/reduction within a profile wall at a sub-centimeter resolution. The high-resolution continuous soil data can then be statistically grouped using both soil characteristics as variables as well as location in the profile. The results are statistical groupings that can identify soil formation processes using variables that indicate sedimentation such as texture, soil layers using variables that indicate soil horizons such as organic content, or cultural features such as charcoal or red ochre.

Hundley, Miles [81] see Carmody, Stephen

Hunter, Raymond

[323] *Interscalar Vehicles for an Archaeology of Climate Change*

A key challenge for archaeologists oriented toward the problem of climate change is scale: how can we simultaneously attend to the often-local concerns of the communities with whom we work, the focused scales to which our data often speak, and to the decidedly global concern of a climate careening past tipping points? Addressing this issue in archaeological practice requires an approach that can speak to multiple publics across scales, while also meeting both the demands of rapid climate mitigation and slow-science ethics of depth, reflection, and community engagement. In this paper, I suggest that archaeological attention to materials makes the discipline uniquely well positioned to respond to this challenge. In particular, I highlight Gabriell Hecht's concept of "interscalar vehicles" as an archaeological tool kit for understanding the changing climate at local and planetary scales. I illustrate my argument by reference to findings from my work in the Peruvian Andes and Ontario, Canada.

Hunter, Sydney (Ohio State University)

[163] *Agropastoral Production at Kimirek-Kum I: An Early Iron Age Settlement on the Outskirts of the Bukhara Oasis*
Archaeobotanical analysis of early Iron Age settlement in the Bukhara Oasis of Uzbekistan offers an opportunity to investigate the sustainability of agropastoral systems with the introduction of new agricultural

production regimes and the onset of irrigation. As early as the mid-second millennium BCE, agropastoral communities living on the peripheries of the Bukhara Oasis, or within the surrounding hyperarid Kyzyl-kum Desert, practiced low-investment summer cultivation using traditional water harvesting techniques. The timing and sociocultural implications of the establishment of more complex irrigation and agricultural production systems, the ways in which these new technologies were incorporated into preexisting food economies, and the ensuing environmental outcomes remain important topics of study. Macrobotanical remains (charred seeds and plant parts) and microbotanical remains (phytoliths) from the site of Kimirek-kum I (ca. 1300–1000 BCE), a seminomadic settlement west of the modern Bukhara Oasis, provide evidence of a complex regime of agricultural production and wild plant use in the mid-second millennium BCE. This site serves as a case study to investigate how communities within marginal landscapes (wherein reliance on surface water for irrigation is inherently risky) incorporated agriculture products into existing pastoral systems which minimized risk and took advantage of the natural landscape.

Hunter, Sydney [314] see Ammerman, Steven

Huo, Yuankai [281] see Zimmer-Dauphinee, James

Hurst, Heather (Skidmore College)

[92] *Finding Meaning in Broken Texts: David Stuart and the San Bartolo-Xultun Archaeological Project*

Twenty-five years ago, the San Bartolo-Xultun Project formed to investigate newly discovered murals at a site in the Maya lowlands. The San Bartolo wall paintings would be the largest corpus of Preclassic Maya writing (ca. 300 BCE–100 CE) collected during archaeological investigations, comprised of numerous texts paired with imagery. Yet most of these texts are fragmentary and represent selected broken pieces of larger artworks that were intentionally interred. This paper considers the deliberate actions in terminating texts as part of Preclassic Maya curation of writing and reflects on Maya placemaking through the decipherment and context of these texts. In his role as project epigrapher, David Stuart's sustained attention to the San Bartolo corpus illustrates how reading texts in context has benefited scholarship of Maya religion and belief systems.

Hurst, Heather [260] see Bass, Angelyn

Hurst, Heather [48] see Baustian, Kathryn

Hurst, Heather [35] see Griffin, Robert

Huseby, Nadine

[196] *The Epidemiological Transition in Historic Boulder, Colorado: Health and Mortality in the Late Nineteenth and Early Twentieth Centuries*

The epidemiological transition model (a decrease in mortality caused by infectious diseases and an increase in mortality from noncommunicable diseases) has been primarily studied at national levels and in large-scale urban populations. However, it is unlikely that the epidemiological transition occurred uniformly within or across populations. To examine variation in the nature and pace of the epidemiological transition, this study focuses on mortality records ($n = 4,408$) for people buried in Boulder, Colorado's Columbia Cemetery between 1870 and 1925. Boulder at this time was a small but growing city, quite different from the majority of contexts in which the epidemiological transition has been studied to date. Evaluation of health patterns in Boulder at this time contributes to growing interest in the variation in the epidemiological transition that may have existed across time and space. This study uses data on age at death and cause of death in survival analysis and hazards analysis to evaluate changes in survivorship and mortality, respectively, over time as a reflection of underlying health. Temporal trends in causes of death are also assessed via analysis of proportionate mortality.

Hussain, Aiysha [91] see Masur, Lindi

Husslein, Sophie

[283] *Analyzing Patterns of Cultural Exchange among Prehistoric Sites in Kaibab National Forest, Tusayan Ranger District, Arizona*

This poster summarizes the results of Chronicle Heritage's recent South Kaibab Fuels Reduction Class III Survey, conducted on behalf of the Kaibab National Forest (KNF) in advance of fire-reduction treatment. The survey covered 6,890 acres of KNF land within the Williams Ranger District. The Coconino Plateau is at the intersection of multiple prehistoric cultures and settlements spanning thousands of years and notably contains one of the largest obsidian sources in Arizona—the San Francisco Volcanic Field. Chronicle Heritage's survey identified 39 Ceramic period archaeological sites affiliated with Ancestral Pueblo, Sinagua, Cohonina, and Cerbat cultures. These sites provide a distinctive picture of exchange and interaction between the culture areas. This poster summarizes newly recorded site data and examines the role of shared natural resources in prehistoric cultural exchange, with particular focus on the frequency and patterns of obsidian usage within the project.

Huster, Angela (Chronicle Heritage)

[97] *More Than an Ecological Niche: Agave Textile Intensification under the Aztec Empire*

Textiles formed one of the key currencies and tribute-payment items in Postclassic Mesoamerica, and textile production in general increased significantly over the course of the Postclassic period. The two primary fibers used for textile production, cotton and agave, had different climatic ranges for cultivation and different social values of the resulting textiles, with cotton cloth typically valued over that of agave fiber. In Central Mexico, increases in cotton textile production have been interpreted as evidence of increased market integration and increased tribute burdens, while sites with high levels of evidence for agave textile production are typically interpreted as cases of specialization resulting from ecologically marginal environments. Using data from Calixtlahuaca, an Aztec period site in the Toluca Valley of Central Mexico, this paper presents a case of agave textile production in a non-marginal environment, with a focus on the changes in the spatial and social organization of production before and after incorporation into the Aztec Empire.

Huster, Angela [283] see Murphy, Shambri

Hutson, Scott (University of Kentucky), Richard Terry (Brigham Young University), and Zachary Larsen

[35] *Systematic Settlement and Soil Survey across a 4 km² Rural Landscape in Yucatán*

In 1987, Nick Dunning conducted one of the first studies of soil phosphates in the Maya region. Combining multiple lines of evidence, including phosphate fractionation, he identified a relic infield garden within the Sayil site core. Dunning's combination of settlement archaeology and soil studies inspired our own research in the rural area east of Uci, Yucatán, Mexico. This paper reports the results of systematic settlement mapping, excavation, and phosphate testing across a 4 km² area.

Hutson, Scott [338] see Ardren, Traci

Hyde, David (Western Colorado University), and Ava Godhardt (Waubensee Community College)

[181] *The Long Walk: Ritual Space and Its Relationship with Elite Residences at the Medicinal Trail Hinterland Community*

Group M is a nonresidential architectural group within the Medicinal Trail Hinterland Community, an ancient Maya site in northwestern Belize and part of the La Milpa polity. Group M is situated atop a knoll and marks the northern terminus of the site. A long narrow stretch of ridgetop separates Group M from Group B, the corporate-head residential group. Excavations have identified ritual deposits such as caches, dedicatory and termination offerings, and problematic deposits. These findings, along with its location, size, and architectural features, suggest that it functioned as a ceremonial center for the community's inhabitants. Its location relative to Group B, as well as similarities in the ritual deposits found at both groups, suggest that Group M was closely associated with the hinterland elite residential groups. This poster will examine the connection between the Group M and Group B, and how Group M may have functioned within the broader context of the Medicinal Trail Community, as well as the significance and motivation behind the problematic deposits, or deposits that are difficult to classify, and how this relates to the abandonment of the Medicinal Trail Community at the end of the Late Classic period.

Hyde, David [181] see Bielenberg, Henry
 Hyde, David [181] see Brown, Troy
 Hyde, David [181] see Godhardt, Ava
 Hyde, David [181] see Stauffer, Kaeleen
 Hyde, David [181] see Stroup, Delaney
 Hyde, David [181] see Trenkle, Logan
 Hyde, David [181] see Volpe, Hannah

Ibarra, Emilio [164] see Martínez-Yrizar, Diana

Ibarra Asencios, Bebel [123] see Choi, MinJoo

Ibirogba, Abiola

[227] *Marginal Spaces, Places of Survival: Investigating Settlement Strategies on a Landscape of Trauma*

The eighteenth–nineteenth centuries saw the influx of migrant communities into the immediate coastline of the Badagry Region, Lagos state, Nigeria, to escape slavery and war characterizing the period. However, historical archaeological discourse of the coast during this period have mostly focused on precolonial polities lying slightly inland without attention to marginal spaces that served as “safe havens” for Ogu communities seeking to protect themselves on the coast. Using multiple threads of evidence, I examine how these communities did not merely survive an emergent landscape of trauma but drove regional wealth and production during the time

Ichikawa, Akira, Arthur Joyce (University of Colorado Boulder), and Pamela Garcia Ramirez (Escuela Nacional de Antropología e Historia [ENAH])

[94] *Feasting in Times of Environmental Crisis: Excavating Earth Ovens in the Late Classic Domestic Area at Rio Viejo, Oaxaca*

Feasting manifests in diverse forms and contexts across spatial and temporal settings. Although there is evidence of feasting throughout the prehispanic era, this study focuses on examining evidence of communal feasting at Río Viejo, Oaxaca, as a societal response to environmental crisis—particularly the droughts that occurred at the end of the Late Classic period. Archaeological data from large earth ovens in several domestic areas and key facilities for food preparation reveal an assemblage of plants, terrestrial animals, and marine resources. Among the uncovered earth ovens, some were expertly elaborated, featuring a ventilation system made from stones and pottery sherds, with one extending to a depth of approximately 2 m. Although further research is needed, these findings may suggest that supra-household events brought people together to share food and time, reinforcing social cohesion in the face of resource scarcity. Feasting likely served multiple functions: reinforcing political authority, constructing social distinctions, commemorating significant life events, and fostering communal solidarity during periods of environmental stress.

Ichikawa, Akira [94] see Joyce, Arthur

Ige, Akinlolu [162] see Ogundiran, Akin

Iizuka, Fumie, Masami Izuho (Tokyo Metropolitan University), Daigo Natsuki (University of Tokyo), Hisao Mori (Obihiro City Board of Education), and Loren Davis (Oregon State University)

[104] *Incipient Jomon Pottery from the Last Ice Age in Hokkaido, Japan: Inter-site Comparisons*

The earliest ceramics from Hokkaido are dated to as early as ~14,900 cal BP. At the Society for American Archaeology meeting in 2024 we presented results of pottery analyses from Tachikarushunai M-I (TCM) site. Here, we present preliminary results from pottery analysis from the Taisho 3 site dated between ~15,000–14,300 cal BP and ~14,000–13,600 cal BP (though the actual dates are considered to be several hundred years younger). Results suggest that the TCM site may exhibit thinner vessel wall characteristics and although decorative techniques are similar across both sites, minor amounts of sherds have decorative techniques not likely present in Taisho 3. In contrast, Taisho 3 pottery is harder and sherd sizes tend to be larger. Although

these variabilities in technology may be due to the limited sample size in this study, and sherd size differences may reflect depositional environments, it is possible that pottery of Taisho 3 was distinct and associated with environmental differences. We tentatively suggest that Taisho 3 may have been made and discarded in a warmer, more fuel-rich environment by foragers with decreased degrees of mobility.

Iizuka, Yoshiyuki [209] see Sakaguchi, Takashi

Ike, Nkem

[321] *Black Expressive Materiality: Belonging, Identity, and Ontology*

The early twentieth century in the United States was a period transformed by aspirations for Black self-determination and hope for inclusion into the American body politic. However, these newly freed citizens were met with legal segregation, race massacres, and racial terror lynchings that forged the need for majority Black towns, districts, and enclaves. At the same time, social and biological characteristics such as primordial difference, inherent criminality, and social unfitness were affixed to Blackness and served to justify violence against communities by reinforcing their alterity status. Using the majority Black Historic Greenwood District in Tulsa, Oklahoma, the site of the 1921 Tulsa race massacre, as a case study, this presentation explores processes of othering more fully. A deep engagement with the material culture of the post-massacre landscape can provide a lens through which the very idea of difference appears as a location of materiality and immateriality and frames ontological understandings that work to resurrect a more complete picture of Black life. When the historical context of early Black life is considered, Greenwood becomes not just a site of violence but also one where tangible action against practices of domination is ongoing and ever-present.

Ingleman, David

[356] *Bone Zones Revisited: Toward a Revised Zonation Method for Archaeofaunal Description and Quantification*

The “Bone Zone” method of osteological description and quantification, which divides skeletal elements into “zones,” can be used to estimate the Minimum Number of Elements (MNE) and element percent completeness. I begin by reviewing the Bone Zone method as developed by Serjeantson for mammals (Serjeantson 1991) and birds (Cohen and Serjeantson 1996) and by Barrett (1995) for fishes. Potential drawbacks to these systems are noted, including ambiguous zone descriptions, a focus on long bone fragments and a corresponding inattention to flat and irregular bones, and the potential for quantitative distortions related to the protocol for counting zones as present only if more than half of the zone was preserved. Next, I suggest hybridizations and modifications of existing models to address certain methodological limitations, including the implementation of a zone fraction summation approach. I then apply the original Bone Zone method and my modified version to two historical Hawaiian archaeofauna assemblages, one well-preserved and one more fragmentary. Statistical analyses of the results produced by these methodological variations reveal the strengths and weaknesses of each approach.

Ingram, Scott (Colorado College), and Dennis Gilpin (PaleoWest Archaeology)

[34] *Community-Engaged Archaeology in the Cimarron District of Northeastern New Mexico: Seventy Years of Impacts and Opportunity*

One of the longest running community-engaged archaeological projects in the North American Southwest began at Philmont Scout Ranch near Cimarron, New Mexico, in the 1950s. This work has persisted with various levels of consistency and professional attention to present. A conservative estimate of at least 100,000 people (Scouts ages 14–21 and their adult leaders) have participated in the project to better understand human lifeways of what is archaeologically identified as the Cimarron District. Exposure to the archaeological methods and ethics learned at Philmont has stimulated dissertations, theses, publications, academic field schools, and the entry into archaeological careers (CRM and academic) of dozens of seasonal camp staff members. This presentation is a synthesis and culture history of what has been learned about human lifeways (ca. 400–1950 CE) documented in this frontier zone between Plains, Pueblo, and postcontact cultures. It is also an effort to bring renewed scholarly understanding and attention to the opportunities for future research within the Cimarron District and associated collections.

Inomata, Takeshi (University of Arizona)**[312]** *Critical Issues in the Study of Preclassic Social Change on the Gulf Coast of Mexico*

This paper discusses the critical issues in the study of social change during the Preclassic period on the Gulf Coast of Mexico. They include (1) the nature and chronology of formal rectangular site plans, (2) the nature of sites that lack rectangular plans, (3) the development of the E-Group, (4) the spread of caching practices involving greenstone objects, (5) social and political organizations of those sites, and (6) transition to full sedentism and intensive agriculture.

Inomata, Takeshi [307] see García Hernández, Melina

Ionita, Gabriela [211] see Schollmeyer, Karen

Irureta, Gonzalo [40] see Flores-Blanco, Luis

Isaza Aizpurua, Ilean (Estación Científica COIBA-AIP Smithsonian Tropical Research Institute)**[87]** *Beauty Ideals and Ritual Symbolism behind Individual Ornamentation*

I first met Patricia “Tricia” McAnany at Boston University, just as I was beginning my master’s degree. She made a gracious first impression and expressed genuine interest in my research pursuits. During my first semester at BU, I enrolled in her statistics course, where she generously supported my analysis of shell ornaments recovered from 43 ritual contexts at K’axob, leading to a coauthored journal article in *Ancient Mesoamerica* and a chapter in the *K’axob* volume. I was also fortunate to join Tricia in the field during the final excavation seasons at K’axob and the early explorations of cave sites along the Sibun Valley in Belize. These formative experiences deepened my understanding of how beauty ideals, ritual symbolism, and spiritual beliefs converge through personal ornamentation in ancient Maya communities—insights that continue to inform my archaeological work in the Pan-Chibcha region. This proposed presentation will explore the material and symbolic dimensions of ornamentation at formative sites in Central America, highlighting how our publication has contributed to broader interpretations of cultural expression and identity across regions.

*** **This presentation will include images of human remains.**

Isaza Aizpurua, Ilean [311] see Carvajal Contreras, Diana

Ivanov, Sergei [314] see Cameron, Asa

Iverson, Ivory [282] see Taivalkoski, Ariel

Iwanaga, Joe [327] see Yagi, Hiroaki

Izak, Jessica (University Leipzig)**[302]** *Interweaving Plants and People: Material Practices in Petra, Middle Egypt*

Excavations by the Joint Mission of Munich and Cairo University and the German Archaeological Institute at the priestly settlement of Petra (Tuna el-Gebel, Middle Egypt) investigated a Graeco-Roman house complex, yielding over 12,000 plant remains. The assemblage includes cereals, pulses, fruits, fiber and dye plants, fodder, and exotic imports, reflecting diverse “routes of entry” into the site through local cultivation, regional provisioning, and long-distance exchange. Far from serving as isolated data points, the botanical remains connect directly to craft production, ritual activity, and domestic routines, embedding plants in the lived practices of a community at the edge of the Nile Valley. By combining perspectives from practice theory, consumption theory, and assemblage thinking, this paper interprets plants not simply as food but as agents of social differentiation, economic connectivity, and material transformation. Waste deposits thus emerge as archives of practice, where status, networks, and craft intersect in tangible form. In this way, archaeobotanical evidence from Petra redefines waste, plant use, and resource flows as material practices, opening avenues for thinking about status, identity, and networks in Graeco-Roman Egypt.

Izquierdo, Ana Luisa (Centro de Estudios Mayas, IIFL, UNAM), and Pablo Mumary Farto (Centro de Estudios Mayas, Instituto de Investigaciones Filológicas, UNAM)

[205] *Mujeres escondidas en la plástica maya: Dinteles y paneles*

En el interior de ciertos templos mayas, hubo representaciones de mujeres de la realeza generalmente en actos rituales de derramamiento de sangre, pero invisibles al público general, sino acaso solo observados por el oficiante y no detenidamente en la mira, por la forzada posición para observarlos y leer sus textos. El conjunto mayor de mujeres escondidas se encuentra en Yaxchilán, pero las hay también en Calakmul. Asimismo, están algunos paneles como el de Xcalumkin y La Corona, menos reclusos que los dinteles, pero también alejados de la vista pública. La hipótesis para exponer es que pudo tratarse de un archivo histórico invisible, pero de gran fuerza histórica, política y religiosa, siempre desplegando un potencial de energía sagrada, pero no de legitimación del poder como ciertos mayistas proponen, porque su ubicación les daba secrecía. Nos referiremos al entorno político de ese entonces y las posibles explicaciones de estas formas rituales protagonizadas por mujeres de la realeza.

Izuho, Masami [104] see Iizuka, Fumie

Izuho, Masami [170] see McCartin, Madison

Jackson, Kendal [200] see Malerba, Amanda

Jackson, Lily [51] see Li, Yue

Jackson, Margaret (University of New Mexico)

[294] *Marking Time and Place: Landmark Astronomy in the Moche Valley, Peru*

How did the Moche people of Peru's north coast (0–eighth century CE) mark or recognize calendrical intervals? How did they know when to plant and harvest, and how did they anticipate the times of year when ocean currents shifted to bring good fishing? In this paper, I suggest that an important element to understanding Moche calendrics and time keeping lies in deciphering the complex spatial relationships between key places, mountain peaks and celestial movements. Although very little information survives, it is increasingly well-understood that in later times, the Incas charted the progression of celestial bodies in relation to landscape and architecture to mark the cyclical (re)appearance of specific celestial events, such as the regular movements of important stars, lunar cycles, solar progression, equinox, and solstice. I propose that the Moche employed a system of landmark astronomy that was likely a precursor to the Incas. And indeed, the Moche themselves were likely following a north coast tradition long established at very early sites such as Chankillo (near Casma Valley). The present paper presents the results of field testing, modeling, and mapping selected sites in the Moche Valley designed to test the hypothesis.

Jacobs, Babalola (Arizona State University), and Matthew Kroot (Arizona State University)

[353] *The Dynamics of Later Stone Age Social Change and Ecological Adaptation in West Africa: A Lithic Analysis from Senegal*

Understanding how human groups adapted to environments in West Africa during the Later Stone Age requires examining the relationship between technology, ecology, and chronology. This study investigates lithic assemblages from the Bandafassi region of southeastern Senegal to explore changes in community organization and behavior through time. We ask how tool lithic technology and assemblage composition vary across historical phases in relation to landforms, ecologies, and toolstone sources, and what these patterns reveal about settlement organization and mobility. Preliminary analysis suggests patterned relationships between lithic variability, site type, and environmental niches that provide insight into technological choices and adaptive strategies between time periods. This work contributes to broader questions about the dynamics of cultural change, ecological adaptation, and technological organization in the African Later Stone Age, as well as highlighting the value of integrating environmental and lithic data to reconstruct long-term trajectories of social change.

Jacobs, Sarah [167] see Tushingham, Shannon

Jacobson, Jodi (CAS Texas State University), and Brittany Flatt**[194]** *All Is Not as Ordered: Faunal Analysis of St. John's Seminary and Mission Concepción (41BX12)*

Ongoing research at Spanish Mission sites often examines spatial variation in deposits at sites to tease out areas of use by both Indigenous groups living at or near the Mission, as well as to establish socioeconomic differences between Spanish individuals inhabiting the site. Such research can present a more robust understanding of daily lifeways often hidden from, or contradictory to, written records. Data recovery excavations of the multicomponent archaeological assemblage at St. John's Seminary (41BX12) in San Antonio, Bexar County, Texas, were undertaken by Terracon in 2019. Analysis of the fauna recovered from the excavations was undertaken by the Center for Archaeological Studies in 2022 and 2023. Patterning of faunal material within the site with regard to architectural features indicated variations between deposits in (1) species presence, including differences in primary (beef) versus secondary (sheep/goat) choice food resources; (2) degrees of presence of wild game versus domesticated species; and (3) skeletal part frequencies of domesticated resources. These variations suggest differences in access to resources, as well as differences in food preferences by individuals at the site. In some cases, the findings are in contradiction to written historical accounts.

Jacobson, Jodi [182] see Moore, Elizabeth

Jaimes Betancourt, Carla (University of Bonn), Kodiak Aracena (University of Bonn), and Hortensia Nina (Universidad Mayor de San Andres)**[309]** *Between the Andes and the Amazon: Inca Presence at Macahua and Local Dynamics of the Tacana People*

The archaeological site known as Las Ruinas de Macahua, also referred to as the "Fort of Ixiamas," is one of the most remarkable examples of stone architecture east of the Bolivian Andes. From 2023 to 2024, we conducted a research program at the request of the Indigenous Council of the Tacana People (CIPTA) that combined lidar mapping, architectural documentation, 3D photogrammetry, stratigraphic excavations, and community collaboration. These investigations provided new insights into the cultural affiliation, chronology, and function of an architectural complex frequently associated with the Inca expansion into the lowlands. Designed from a transdisciplinary perspective, the project integrated archaeological data with ethnohistorical sources and Tacana oral histories to examine how the Tawantinsuyu interacted with Amazonian populations in a frontier setting. According to Tacana traditions, the site is connected to ceremonial practices related to the Apus, and the stone architecture is considered a distinct legacy from their own construction traditions. These perspectives imply that Macahua may have been a pivotal node of interaction between the Andes and the Amazon. This presentation explores Macahua's role in Inca territorial, ritual, and control processes, emphasizing the importance of collaborative methodologies and knowledge coproduction in reconstructing complex regional histories.

Jain, Sahil**[185]** *Start 'em Young: Eliciting K-12 Engagement in Anthropology and Archaeology*

Secondary school (SS) students are uniquely challenged in identifying opportunities for exploration of anthropology. SS students may find selected opportunities including college-level coursework, academic research, and internships in museums. Field schools provide a unique and ideal entry point for learning about archaeology through skill-building, networking with colleagues, and career exploration. However, barriers for participation include prerequisite classes, student age, and timings of field schools. During the summer of 2025, a Foothill College field school included a SS student among its group of 26 students. All participants lived and collaborated with members of the Cangahua, Ecuador, community in the Andean Highlands. The field school combined the structure needed to understand archaeology with traditional lithic and pottery labs and complimented the experience with unstructured opportunities to learn from Indigenous Kichwa-speaking community members, including self-directed immersive service learning explorations. The program's structure provided a powerful foundation for Indigenous Archaeology, and gave both a physical and cognitive framework for budding anthropologists and archaeologists. This poster provides an overview of the current barriers to pursuing anthropology prior to undergraduate studies, shares perspectives of high school students who are actively pursuing anthropology, and suggests future actions which can inspire future generations of anthropologists and archaeologists.

Jakeli, Ninon [93] see Mgeladze, Ana

Jalbert, Catherine (Terracon Consultants Inc., Houston, TX), and Victoria Pagano

[280] *Wooden It Be Nice if We Could Preserve Everything? A Case Study in Archaeological Monitoring in Urban Contexts from Brownsville, Texas*

Often considered a method of last resort in Texas's urban environments, archaeological monitoring plays a vital role in gathering information regarding the potential for at-risk cultural resources, especially where traditional survey methods are not feasible due to development constraints. While commonly also used in precontact settings as a mitigative tool, its application in urban areas shifts toward salvage archaeology and the need to recover data from actively disturbed contexts. This poster draws on a recent case study in the core of historic downtown Brownsville, Texas, where monitoring of infrastructure replacement has led to the discovery of remnant in situ creosote-treated wooden street pavers beneath successive episodes of modern asphalt. An early twentieth-century paving system, the use of creosote enhanced resistance to decay and provided a durable, cost-effective alternative to brick pavers. This discovery offers a rare glimpse of early street construction techniques and urban modernization in South Texas underscoring the value of monitoring to identify and document overlooked infrastructure features that contribute to the material record of community planning/development. Through this case study, we demonstrate the ways archaeological monitoring can recover significant historical data from complex urban settings when experienced practitioners work within clearly defined protocols for data collection and documentation.

James, Hannah [221] see Foley, Sarah

James, Nathaniel, Alexia Decaix (National Museum of Natural History, Paris), Jonathan Kenoyer (University of Wisconsin), Richard Meadow (Harvard University), and Jade d'Alpoim Guedes (University of Washington)

[45] *Dung Burning and Archaeobotanical Taphonomy at the Indus Site of Harappa, Pakistan*

Whether used as fuel, a building material, or fertilizer, animal dung represents a critical economic and cultural resource within agropastoral economies. In South Asia, the use of cattle dung to fuel cooking hearths is documented in archaeological, historic, and ethnographic records. While there are direct markers of animal dung in the archaeological record, one potential proxy, charred archaeological grains and weed seeds, remains heavily debated. Using charred grains and weed seeds as evidence, archaeobotanical analysis using crop-processing models investigate the social and economic organization of urban "consumer" and nonurban "producer" sites. Here, we analyze an archaeobotanical assemblage from the Indus site of Harappa, Pakistan (3700–1300 BC). The ubiquity of small weed seeds, typically removed during the early stages of a harvest, is argued to result from the burning of cattle dung for fuel. This additional taphonomic consideration in agropastoral contexts adds nuance to the understanding of Harappa's labor organization and food supply with implications for understanding animal human interactions, crop-processing models, and fuel use.

James, Sydney (Arizona State University), Carolyn Dillian (Coastal Carolina University), and Cheryl Cail (Waccamaw Indian People)

[169] *Beyond Compliance: Digital Solutions for Protecting Indigenous Cultural Landscapes*

Current national and state cultural resource laws are often inadequate for safeguarding culturally significant Indigenous landscapes, especially when projects impact landscapes indirectly. While early and frequent collaboration with Indigenous communities is ideal, the consultation process often places a disproportionate burden on Tribes in terms of resources such as time and personnel. This process is also frequently underfunded by cultural resource firms. To address this, we have proposed a secure, culturally sensitive online geodatabase that preserves geospatial data on archaeological sites, historic villages, cemeteries, Traditional Cultural Places, and Traditional Ecological Knowledge. The goal of this project is to serve as a permanent database for the long-term preservation of digital cultural heritage for Indigenous communities of South Carolina while allowing CRM professionals to conduct more informed cultural resource reviews. In this first stage, we focus on advancing Indigenous studies and digital humanities through comprehensive, culturally sensitive documentation and preservation of the history and traditional landscapes of the Waccamaw Indian People, a state-recognized Native American tribe headquartered in Aynor, SC. In

collaboration with the Waccamaw Indian People we discuss this, as well as approaches to mitigating important ethical considerations impacting data sovereignty such as control over culturally sensitive information, access, and long-term maintenance.

James, Sydney [111] see Peltzer, Summer

Jamison, Gregg (University of Wisconsin-Milwaukee), and Daniel Joyce (GAB PJB RSW LLC)

[777] DPAA Partners in PNG: Insights from a Terrestrial Aircraft Crash Site

Since 2014, the University of Wisconsin's Missing in Action Recovery and Identification Project (UW MIA Project) has partnered with the Defense POW/MIA Accounting Agency (DPAA) to help recover and repatriate the remains of American MIA from World War II. We have conducted four missions over seven seasons at aircraft crash sites in Europe, all of which have resulted in successful recoveries. Our approaches are innovative and provide students and other volunteers with practical, hands-on experience in archaeological and forensic field methods, historical research, and real-time analyses of recovered materials. In 2025, the UW MIA Project partnered with DPAA on a recovery mission in Papua New Guinea (PNG), our first outside of Europe. This poster highlights the complexities of working on a terrestrial aircraft crash site in PNG, with emphasis on challenges, partnerships, and adaptable field methods. Though each recovery mission is complex and unique, applying flexible, evidence-based archaeological strategies are necessary to support DPAA in providing the fullest possible accounting for our missing armed services personnel to their families and nation.

Jamsranjav, Bayarsaikhan [315] see Conesa, Francesc

Janes, Stephen (MIAMO Archaeology)

[226] Revisiting the Chacoan Roadway System

In 1980, Margaret Obenauf introduced the term "Chacoan Roadway System" following her analysis of aerial photographs and recognition of photographic alignments in the images. Between 1983 and 1987 archaeologists were successful with ground surveys in confirming the existence of at least four of Obenuaf's roads crossing the San Jaun Basin. Since then, the map of the roadway system has gone unchanged. However, between 2003 and 2019 ground surveys were conducted across the southern half of the basin that have collected evidence for at least five more regional roads. During these surveys an east to west oriented feature was found that is unique among all long roads in the basin. It is defined primarily by long linear sherd scatters. Located along the north slope of Lobo Mesa this road/line does not connect great houses, but it does pass near several. The discovery of this feature and other new roads suggests a new description of the Chacoan Roadway System is needed.

Jankowski, Maegan (George Mason University), Haagen Klaus (George Mason University), Beth Scaffidi (University of California, Merced), Kayeleigh Sharp (Northern Arizona University), and Carlos Elera (Museo Nacional Sicán)

[337] Decorating the Dead: Cinnabar Paint, Mortuary Patterns, and Bioarchaeology at Huaca Las Ventanas

Multidisciplinary approaches in the bioarchaeology of identity have flourished in this field since the turn of the twenty-first century. The combination of mortuary archaeology and bioarchaeology in particular creates a cohesive approach in understanding complex social identities reflected in the osteological record. Adding additional approaches from other archaeological subdisciplines could bring about new insights for understanding group social identity dynamics. This research examines individuals from funerary contexts at the Middle Sicán site of Huaca Las Ventanas. The Middle Sicán religious polity was a dynamic, complex Andean society on the north coast of Peru from 900 to 1050/1100 CE. It was comprised of multiple ethnic groups including the elite Sicán and the commoner Muchik. Mortuary and bioarchaeological analyses reveal that these individuals represented intersecting identities between the social status groups. Photogrammetry, pXRF, digital image enhancement, and soil color analysis were used to understand intersecting identities embodied through cinnabar and hematite paint found on skeletal remains, grave goods, and backdirt. Combining archaeological science methods with bioarchaeological and mortuary analyses revealed a mix of both social identities emulated through skeletal remains, grave goods, and red pigment of the burials. We

recommend that bioarchaeologists employ methods from other archaeological subdisciplines to examine identity in complex societies.

Janz, Lisa (University of Toronto Scarborough, ON)

[72] *Tamsagbulag and Sedentism in East Asia: On Villages, Millet, and Cattle*

Tamsagbulag is located in the far eastern steppe of Mongolia and was discovered in the mid-twentieth century. Only recently have systematic, multiyear excavations and analyses by the Gobi-Steppe Neolithic project begun to provide a clearer picture about the nature of this unique site. Originally categorized as a Late Neolithic agropastoralist village focused on millet farming and cattle herding, new data shows the site to be comparable with Early Neolithic village sites in Siberia and Inner Mongolia, with its own unique flare. Here, I will provide an overview of project results, showing how Tamsagbulag fits into the larger picture of sedentism in Northeast Asia, including uncovering unique trajectories in the diet, a clearer understanding of mobility, and new insights on the organization of housing and waste.

Jaramillo, Sara (University of Massachusetts Boston)

[75] *Zooarchaeological Analysis of a Spanish Late Colonial and Territorial Periods Site in Northern Rio Grande, New Mexico*

Throughout the eighteenth and nineteenth centuries, the Southwest region of the modern United States underwent important political changes. Specifically, the modern state of New Mexico was controlled by the reign of Spain, Mexico, and the United States, consecutively. Such political changes had repercussions on the regional economy and labor regimes, evidenced in the types of resources and products produced, imported, and consumed by the population. Preliminary results from zooarchaeological analysis and documentary evidence from Las Golondrinas, a Spanish rancho located in La Cienega Valley, New Mexico, offers a glimpse into diachronic changes in animal production, processing, and consumption taking place at Spanish ranchos in the northern Rio Grande Valley during the late colonial (eighteenth and early nineteenth centuries) and the territorial (nineteenth to mid-twentieth centuries) periods. Furthermore, these results explore how animal husbandry practices relate to domestic labor and the implementation of broader regional labor regimes during these periods.

Jarzemsky, Julie [181] see Trenkle, Logan

Jazwa, Christopher (University of Nevada, Reno)

[167] *Contemporary Approaches to Understanding Human Settlement in the Context of Environmental and Climate Change in Coastal California*

Human settlement, both today and in the past, can be influenced by a variety of factors including climate change, social systems, resource distribution, conservation efforts, and technology. A long-standing interest among archaeologists and local and descendant communities has been to understand the distribution of archaeological sites, both to predict where other sites might be and to understand fundamental components of human cultures. In this paper, I will discuss recent efforts to model human settlement patterns, especially how they changed over time in the context of environmental change, with a focus on implications for theoretical connections between coastal Alta and Baja California. This includes ecological modeling within human behavioral ecology. I will also talk about efforts to reconstruct past environments and how recent advancements have allowed for more fine-grained connections between settlement patterns and ecological change. I will discuss potential future avenues of growth in coastal settlement modeling, including areas of focus for future archaeological data collection like tribal or international collaborations.

Jazwa, Christopher [124] see Finley, Whitney

Jenkins, Dennis [72] see McDonough, Katelyn

Jenkins, Kathleen [114] see Zaragosa, Gabriella

Jenks, Kelly (New Mexico State University), and Barnet Pavao-Zuckerman (University of Maryland)**[82]** *Syncretic Practices Involving Livestock in Spanish Colonial Contexts*

Spanish colonization of North America set into motion many things that would prove to be enormously consequential for all living beings in and beyond their sphere of influence. The introduction of Eurasian livestock altered preexisting ecologies and economies, forcing indigenous and immigrant peoples to incorporate these new realities into their worldviews. This dynamic process, across space and over time, produced syncretic understandings of these animals and their metaphysical roles in this “new world.” This paper explores archaeological and historical evidence of syncretic practices involving Eurasian domesticated animals in colonial contexts in the American Southwest and beyond.

Jennings, Justin (Royal Ontario Museum)**[321]** *An Empire of Others: The Inca, Ayllu, and a Politics of Difference*

The Inca Empire is typically seen as the culmination of a 4,000-year old tradition of Andean state-building. The Inca, in this model, is more of the same—a bigger, more powerful version of the expansionist polities that came before it. This paper, in contrast, argues that the empire was a break in tradition for its founders, a radical experiment in alterity that created an unbridgeable gap between conquerors and conquered. Although the idea of a ruling class divorced from the body politic does not seem unusual in Western thought, this idea would have been foreign to those living in much of the Central Andes when the Inca first expanded in the early fifteenth century CE. Instead, most societies in the region were organized around the idea of the ayllu, a fungible concept of a kin-based community with collective ownership of land and resources. The ayllu was designed to both curb political centralization and encourage more familial relationships. The ayllu was a wealth-in-people political strategy. The Inca stretched, and then sought to shatter, this strategy, developing an alternative doctrine that they were fundamentally different, and better, than everyone else.

Jennings, Justin [213] see Bautista, Stefanie

Jennings, Madeline (Washington State University)**[91]** *Addressing the Contemporary Necessities and Desires of the Quapaw People and Their Cultural Heritage*

This paper is a culmination of MA research conducted by and with the Quapaw Nation of Oklahoma. The paper will include the survey, recording, and conservation methods of a mostly unmarked cemetery, featuring a deep dive into tribal archives in an attempt to identify those who are buried. There will be an analysis of where in the tribal timeline the burials fit in, and why they are located where they are. Beyond that, there is a section of this paper dedicated to talking to members of the Quapaw community and hearing directly from them what they consider to be cultural heritage and what is most important when it comes to preservation, protection, and education related to that heritage. There will be a discussion of methods for both sections of the paper, including reflections on community based practice and adaptability.

Jennings, Thomas [319] see Smith, Heather

Jensen, Anne [155] see Krus, Anthony

Jensen, Matthew (Northern Arizona University), Jaime Awe (Northern Arizona University), Julie Hoggarth (Baylor University), Claire Ebert (University of Pittsburgh), and John Walden (Galen University)**[277]** *Evidence for Household Involvement in Regional and Interregional Trade and Exchange in the Upper Belize River Valley*

Research focusing on regional and interregional trade in the Maya area has traditionally reflected a bias toward elite acquisition of exotic items that were acquired from long-distance and nonlocal sources. This research reflects a divergence from this traditional pattern in that it focuses on the involvement of commoner household groups in the acquisition of both local and nonlocal materials and resources. Among the questions we address are how extensive the evidence for non-elite involvement in trade and interaction is, what materials constitute the most common exotics consumed by commoner households, and is there

evidence of changing patterns of interaction over time? The research also focuses on sites in the upper Belize River Valley because its long history of settlement pattern studies and household archaeology provides us with an excellent database to address these investigations.

Jeong, Choongwon [315] see Kim, Donghee

Jepson, Emma [91] see Masur, Lindi

Jerrems, William (Boise State University)

[353] *Pleistocene Pluvial Lakes of the Great Basin Offered a Welcoming Home to Paleoindians*

The Lahontan Basin, once a huge Pleistocene pluvial lake, located in the northwestern Great Basin, has had a long history of rising and falling water levels dependent on heavy precipitation and decreased evapotranspiration of the Pleistocene Ice Age climatic regime. The climatic implications of a dynamic lake of such magnitude would have had a substantial impact on early inhabitants of the northwestern Great Basin. Once thought to be too harsh an environment for early human habitation, the Lahontan Basin including the greater northwestern Great Basin pluvial lakes evidence an early lake shore habitation in a milder climate than previously believed. An unusual collection of osseous tools was recovered from the northern shore of Pyramid Lake suggesting the dynamic nature of the Lake's hydrologic oscillating nature and shifts in climatic regime. A unique climatic regime along with an amazing inventory of now extinct megafauna appears to have provided a unique landscape for the earliest inhabitants of the northwestern Great Basin.

Ji, Youngbae (Gyeongju National Research Institute of Cultural Heritage)

[284] *Silk Road Echoes at the Silla Royal Palace, Wolseong Site: New Archaeological Evidence of Cultural Transfer in Ancient Korea*

This presentation examines cultural exchange and interaction as evidenced by a unique bird-shaped ceramic excavated from the royal palace Wolseong, Gyeongju in the Silla capital. Unearthed in the central C District, the disc-shaped artifact—5 cm in diameter—was recovered within a cultural layer about 3 m north of a Unified Silla period fence. SEM analysis revealed residual lead components in its once-green glaze, now largely oxidized and flaked, while lead isotope ratios match sources in Jeollado and Chungcheongdo, implying long-distance procurement of materials. Assigned to the seventh century based on glazing techniques and the patterns, the bird motif displays a clear Sasanian Persian decorative influence. That echoes patterns found along the Silk Road—spanning Persia, Central Asia, and China—yet transformed by local Silla manufacturing methods. As a rare example within Silla assemblages, this piece reflects the transmission of Western motifs into Korea and the dynamic processes by which foreign artistic traditions were indigenized. By tracing both stylistic and scientific evidence, this study highlights the vibrant frontier interaction that underpinned early medieval cultural connectivity.

Jiang, Han, Rachel Reid (Washington University in St. Louis), and Xinyi Liu (Washington University in St. Louis)

[305] *Animal Diets and Husbandry Practices in China between 6000 BC and AD 220: A Meta-analysis of Animal Stable Isotope Data*

This study presents a meta-analysis of animal diets and husbandry practices in China between 6000 BC and AD 220, using carbon and nitrogen stable isotope data from 69 archaeological sites published between 2005 and 2024. The project examines temporal and spatial dietary shifts among domesticated animals (pigs, dogs, cattle, sheep, goats, and horses) and one wild comparison group (deer) to address two key questions: (1) how indigenous cultivation systems influenced animal diets, and (2) how introduced livestock were managed within local husbandry traditions. The findings suggest that dietary consumption among commensal species closely overlapped with human diets across various regions. A pronounced north-south division emerges in animal diets around 5000 BC, mirroring the pattern observed in human diets. Additionally, regional shifts in animal management strategies are also observed, particularly in the Loess Plateau, where cattle appear to have been foddered, while caprids seemed to remain herded in grazing landscapes. The results highlight the complexity of prehistoric human-animal interactions, revealing how local ecological conditions, subsistence strategies, and cultural traditions could have shaped livestock diets and management strategies. By integrating

isotopic analysis with archaeological records, this study contributes to a broader understanding of early food globalization and its impact on human-livestock relationships.

Jiménez, Máximo [349] see Rose, Autumn

Jimenez, Peter (Instituto Nacional de Antropología e Historia)

[210] *Supra-regional Interaction and Ritual Response in Times of Climatic Stress*

During the Early Postclassic period (AD 900–1200) Mesoamerica's interaction networks extended to a geographical realm unparalleled, neither before nor after. This occurred during the Medieval Warm Period when climatic instability may have likewise peaked throughout the area. Material culture patterns found in many of the regions of South, Central, and West Mexico suggest a common ritual response that was system-wide. Rising difficulties in food security and access to prestige-goods made on regional political systems during this time may have been a contributing factor in the archaeological perceivable evidence for organized networks of trading institutions, markets and traders. Shared ideological codes and ritual practices may have been one of the key factors in this system's integration.

Jimenez, Peter [210] see Somerville, Andrew

Jiménez-Arenas, Juan Manuel [170] see Égüez, Natalia

Jiménez Cano, Nayeli (University of California San Diego), Nadia Rubio-Cisneros (Mar Sustentable Ciencia y Conservación), Arina Solis-Gómez (Unidad Académica de Ciencia y Tecnología de Yucatán, UNAM.), Jeffrey Glover (Georgia State University), and Juan Carlos Pérez Jiménez (El Colegio de la Frontera Sur)

[84] *Integrating Archaeological Data to Trace Long-Term Fisheries Histories in the Yucatán Peninsula*

Coastal environments are highly vulnerable to anthropogenic and environmental disturbances that directly affect the productivity of fishery resources exploited by local communities. Among these resources, fish are the most intensively harvested, and their study serves as a key indicator of ecosystem health. Examining these records from a diachronic perspective is particularly valuable, as it allows the identification of long-term changes in species diversity and abundance. The Yucatán Peninsula is one of the most productive fishing areas in the Mesoamerican region, yet its historical ecology remains poorly documented. Despite a long tradition of ichthyic resource use since prehispanic times, the region is now severely affected by overfishing, tourism development, pollution, and climate change. This study reviews ichthyoarchaeological evidence from prehispanic Maya settlements, complemented by our own analyses, which include high-resolution taxonomic identifications and size estimations. The results reveal the presence of species that are currently threatened or have shifted their biogeographic ranges, as well as fluctuations in the size of target taxa. Comparisons between archaeological data and modern fisheries contribute to building a historical reference for Yucatán fisheries. These findings document progressive environmental degradation, while also highlighting sustainable fishing practices as a relevant methodological tool for contemporary fisheries conservation.

Jiménez Delgado, Gerardo [312] see Arieta Baizabal, Virginia

Jiménez Galindo, Luis Abel [262] see Hernández Lara, Luis

Jo, Mirae (Washington University in St. Louis), Michael Frachetti (Washington University), and Farhod Maksudov (Academy of Sciences of the Republic of Uzbekistan)

[315] *Reconstructing the Hydraulic Landscape of Highlands in Early Medieval Central Asia*

Across time, societies have adapted to diverse environments by developing artificial water systems, adopting new water management techniques, and transforming hydraulic landscapes. Yet archaeological investigations primarily focus on lowlands near major rivers or oases, often supported by complex agricultural irrigation systems. This leaves an important question unanswered: How do humans shape natural hydrological systems to facilitate urbanization in extreme environments? This study examines the hydrological systems of highland settlements in medieval Uzbekistan, with a focus on Tugunbulak (TGB), occupied from the sixth to eleventh

centuries. The central question is: How did inhabitants of TGB develop and manage their water system? To address this, the research compares the hydrological systems of TGB with those documented in Central Asia and beyond. It then develops a preliminary hydrological model of the site to identify potential human interventions in natural water flow. Building on this framework, the research proposes hypotheses about how the past society managed water at the site. Finally, the presentation introduces findings from recent field surveys that test these hypotheses and refine our understanding of the site's hydrological setting.

Johnson, Danette [123] see Gaskell, Sandra

Johnson, Emily (UC-Santa Barbara), and Amber VanDerwarker (UC-Santa Barbara)

[312] *Subsistence and Settlement beyond the Olmec Heartland: Comparative Perspectives from Macrobotanical Data*
Macrobotanical preservation in the humid tropics of the Gulf Coast of Mesoamerica is often considered poor. However, projects employing systematic paleoethnobotanical sampling have yielded key insights into Formative period (1400 BCE–100 CE) foodways. This paper presents new data from the Proyecto Arqueológico Suchilapan (PAS) and compares it with previously analyzed Gulf Coast assemblages from La Joya, Bezuapan, and Tres Zapotes. At La Joya, a long sequence of occupation shows increasing sedentism and maize reliance alongside surplus production and intensive farming. Bezuapan documents episodic settlement, raised-field agriculture, and later evidence for food storage, while Tres Zapotes, which rose as a regional center in the Late Formative (400 BCE–100 CE), preserves diverse assemblages including maize, beans, sapote, and coyol across elite and non-elite contexts. The Suchilapan assemblages, recovered from community plaza contexts at three small ceremonial settlements, have yielded wild seeds, fruits, palm species, and squash with less evidence of maize, providing an additional perspective on regional subsistence. Considered together, these datasets highlight the diversity of agricultural strategies and foodways on the Gulf Coast, and they allow us to consider how plant use intersected with settlement systems, social differentiation, and political change throughout the Formative period.

Johnson, Jeremy (Confed. Tribes of Grand Ronde), Sharrah McKenzie (Confed. Tribes of Grand Ronde), Dustin Hawks (Confederated Tribes of Grand Ronde), Michael Lewis (Confed. Tribes of Grand Ronde), and Briece Edwards (Confederated Tribes of Grand Ronde)

[227] *Shedding Sheridan and Marginalizing Militaria: Recentering the Indigenous History of Fort Yamhill, Grand Ronde Reservation, Oregon*

In 2025, 106 acres of original Reservation land, known as Ft. Yamhill State Park, was transferred from Oregon State Parks to the Confederated Tribes of Grand Ronde (CTGR). Public interest and state interpretation of the former Fort Yamhill State Park has emphasized the property's militaria identity: as a fort (1855–1865), occupying military units, and its infamous commander then Lieutenant Phillip Sheridan. As the property has come back into possession of the CTGR Tribal Historic Preservation Office, it is reassessing these historic narratives of place. This paper presents a combination of remote sensing, 3D imaging, oral histories, reexamination of legacy collections, and archival data. Through placing these datasets within a wider historic context, we can expand the understanding of place to recognize the tribal community who built, maintained, and outlasted the fort's military presence.

Johnson, Jeremy [183] see Lewis, Michael

Johnson, Lisa (University of Nevada Las Vegas), and Lucas Johnson (Nellis Air Force Base CRM)

[168] *Life Mineralized: The Co-constitution of People and Stone in the Ancient Maya Lowlands*

Archaeological practice can often lead to a distancing of humans and things when materials are analyzed for what they can tell us about human actions in the past. Typically, stone artifacts are described for their practical use and the techniques by which crafters shaped them. This approach assumes a one-way relationship. An increased interest in theories of materiality and a new materialism has inspired some archaeologists to consider human/thing relationships differently. In her recent book, Rosemary Joyce asked, "How might geological materials that contemporary Euroamerican scholars think of as inert be *active*?" In this presentation, we consider the comingling of humans with geological materials and the many ways in which ancient Maya people and stone were mutually constituted. Our continued focus on household archaeology at

Palenque has led us to argue that stone was an active force in the everyday lives of the people living in the city more than a thousand years ago and that people and stone were shaped through a constant tempo of activity, water and mineralization.

Johnson, Lisa [168] see Campiani, Arianna

Johnson, Lucas [168] see Johnson, Lisa

Johnson, Myra [333] see Kallenbach, Elizabeth

Johnston, James [333] see Coughlan, Michael

Jolie, Edward (University of Arizona)

[326] *10,000 Years of Perishable Material Culture from El Gigante Rockshelter, Honduras*

Ethnographic and archaeological data show that plant- and animal-based technologies including cordage, netting, textiles, basketry, and related crafts make up more than 90% of what people in preindustrial societies use on a daily basis. However, due to poor preservation of organic material, archaeological collections of such perishable material culture from Mesoamerica are rare and this limits efforts to reconstruct the roles and importance of perishable technologies that were likely both very ancient and sophisticated. The antiquity and diversity of the exceptionally well-preserved perishable artifact assemblage excavated from El Gigante enhances the site's archaeological significance and contributes to our understanding of long-term technological trajectories and regional affinities in textiles, basketry, and related manufactures. This presentation discusses initial results from detailed attribute-oriented technological stylistic analysis of the perishable artifact assemblage from El Gigante Rockshelter.

Jolie, Edward [353] see Bustos, David

Jolly, Jennifer (Ithaca College)

[260] *Elizabeth Easby: Scholar-Collector*

Elizabeth Easby was a curator, scholar, and collector of American antiquities. Alongside her husband, Dudley Easby, the Secretary of the Metropolitan Museum of Art, she amassed a collection of over 200 objects from the preconquest Americas. While Elizabeth and Dudley both published their research and Dudley was her senior, Elizabeth claimed the authority of formal training, with a BA from Cornell and a MA from Columbia. She worked professionally as a researcher at the American Museum of Natural History and did curatorial work for the Brooklyn Museum, Metropolitan Museum of Art, and University of Pennsylvania. Elizabeth and Dudley were instrumental in bringing precolumbian art to the Metropolitan Museum of Art. This paper examines the "scholar-collector," considering how professional experience in the field shaped the Easby's collection and how collecting shaped her professional work. Such intersecting interests are seen in her publications, including her 1968 book, *Pre-Columbian Jade from Costa Rica*, published by the dealer Andre Emmerich. My study draws from the Easby archives and study of their collection, which are housed at Ithaca College. Studying the "scholar-collector" fills a missing gap in Michael Coe's accounting of the early market for precolumbian art and raises important ethical issues.

Jones, Abdul [280] see Chadwick, William

Jones, Bradford (Texas Historical Commission-Archeology Division), Alex Barker (Arkansas Archeological Survey), and John Doershuk (University of Iowa Office of the State Archaeologist)

[52] *Held-in-Trust: The Public, Ethical, and Scientific Mandate to Publish State Archaeological Collections Information Online*

As stewards of our cultural heritage, the states hold vast archaeological collections in public trust. Scattered among many museums and repositories nationwide, collections can be difficult to find by researchers, descendant communities, educators, CRM companies, and resource managers. Institutional silos, budgetary

constraints, differing data systems, limited technical capacity, and limitations of analog finding aids have constrained the usefulness and potential scholarly and public value of these collections at the state and national levels. Through the publication of nonsensitive, equivalent reference information through the Digital Index of North American Archaeology, the Nationwide Collections Locator Project represents a vital step forward in fulfilling states' ethical and public mandates to democratize access to our shared past and foster new avenues for collaborative research within and across state lines. Addressing the curation crisis by promoting and facilitating research on existing collections, this effort ensures that the archaeological heritage of all Americans is public and can be found, understood, and appreciated by current and future generations. For the initial three states participating—Texas, Arkansas, and Iowa—this project is a critical public service that has illuminated the challenges of integrating differing datasets and priorities in a shared public platform.

Jones, Christine (Texas A&M University Central Texas)

[83] *Q Fever and the Skeleton: Paleopathological Approaches to Human and Animal Health in China*

Q fever, or Query fever (*Coxiella burnetii* infection) is a worldwide zoonosis, first identified in Australia in 1937 and China in 1950. Q fever leaves detectable signs on the skeletons of adults and children and causes miscarriage and stillbirth in humans and animals, but the disease has not until recently been seriously considered within paleopathology or zooarchaeology, nor have any genomic studies identified *C. burnetii* in any animal or human prior to 1937. Asia has long served as a crucial stage for the intertwined evolution of human societies and their relationship with nature, and recent zooarchaeological and genomic studies show promising breakthroughs. This paper discusses Q fever in China using the One Paleopathology approach, focusing on the intersections between Chinese historical texts such as the sixteenth-century traditional medical treatise *Ben Cao Gang Mu*, varied avenues of zooarchaeological and paleopathological research, and recent studies of human and animal health and disease to highlight remaining queries in the study of Q fever. Identifying past *C. burnetii* genotypes is crucial, and paleopathological research in this area has the potential to greatly enhance our knowledge of Q fever's evolution and its impact on human and animal health.

Jones, Emily Lena (University of New Mexico)

[224] *Sheep and Their Socioenvironmental Impacts in Seventeenth-Century Central New Mexico*

When the first Spanish colony was established in New Mexico in 1598 CE, the colonists were accompanied by a suite of domestic livestock of Eurasian origin, of which sheep were the most abundant. Documents and archaeology both indicate that throughout the seventeenth century, sheep played a central role in mission and settler economies. But how many sheep were actually present at this time, and what kinds of environmental impacts did they cause? While we know that by the end of the nineteenth century, the commercial sheep industry had grown to a level to cause significant overgrazing in at least parts of the region, the seventeenth-century record suggests a more complex picture. In this presentation, I review the available documents alongside the zooarchaeological record from central New Mexico to draw conclusions about sheep and their socioenvironmental impacts in the Middle Rio Grande in the early Spanish colonial period.

Jones, Emily Lena [170] see Judkins, Abigail

Jones, Eric (University of Colorado Boulder)

[196] *Rain, Dirt, and Farm Production in Madison County, New York, 1850–1880*

The late nineteenth century was a critical time in US agriculture. Farmers throughout the North were commercializing, creating the family-farm-as-business approach that would become the core of the national agricultural economy for over 100 years. Farmers in Upstate New York, where Madison County lies, were at the center of this movement, eventually forming one of the most productive dairy industries in the country. However, the late 1800s were tumultuous times, politically, economically, and climatologically. I use a combination of PDSI and PMDI drought indices; GIS-based spatial analysis of farm locations and soil types; local, regional, and national economic histories; and census agricultural schedules to examine how precipitation and soil type may have impacted farmers' attempts to increase overall production levels. I also examine these results in the context of historical economic, political, and social factors that were at play. The results show the flexibility of farmers at this time and their ability to continue the commercializing process in the face of a complex suite of ever-changing conditions.

Jones, Eric [216] see DeWitte, Sharon

Jones, Eric [196] see Viebjerg Larsen, Peter

Jones, Kate [323] see Millhauser, John

Jones, Olivia (West Virginia University), and Olivia Moyer (Wheeling University)

[114] *An Advocational Legacy: The Archaeological Work of Father Clifford Lewis at Wheeling Jesuit University*

The history of archaeology in West Virginia is a topic that rarely incorporates the contributions of avocational individuals. Archaeology in West Virginia began with the founding of the West Virginia Archeological Society (WVAS) in 1949 by multiple avocational archaeologists and one professional archaeologist. While the formative years of West Virginia archaeology were imperfect by today's standards, the individuals involved served as the earliest site recorders. This poster evaluates advocational archaeological work in West Virginia by concentrating on one individual: Father Clifford Lewis, a Jesuit priest, and founding member of the WVAS who recorded sites throughout the state. This project presents new archaeological information recorded by Lewis and reflects on the legacy of an advocational archaeologist. A multi-method approach which incorporates archival research and research of legacy collections was used for this project. Previously misplaced archives and artifacts were found, inventoried, and digitized. Over 800 artifacts from two sites and dozens of archival documents with no known copies have been located within the Lewis archives. This additional information led to updating site forms and a more complete biography of Lewis' contribution to West Virginia archaeology. This project lays the groundwork for additional historical research on archaeologists in the region.

Jones, Scott (Eastern New Mexico University)

[127] *Making Models before We Ruin Them: Creating 3D Models of Specimens before Destructive Analysis*

The initial full documentation of specimens is imperative when conducting destructive analysis of archived collections. Currently, the accepted documentation process consists of taking regular photos of the specimens and documenting what is being done to the specimen. With advances in close-range photogrammetry researchers can capture specimens with greater detail and display the specimens as a 3D object. Could using 3D photogrammetry of archived specimens being slated for destruction analysis be the future for archiving these specimens? In conjunction with my current master's thesis, three tibia and three radii of *Bison antiquus* from Blackwater Draw Locality I have been selected for isotopic analysis and radiocarbon dating. Before sampling, the bison bone specimens from Blackwater Draw will be scanned and reconstructed into 3D models using Polycam, which will then be submitted to the Blackwater Draw Museum. This study will document the benefits and challenges of creating 3D models of the specimens, while sharing the models to shareholders in compliance with destructive analysis.

Jones, Terry (Cal Poly San Luis Obispo)

[219] *Community Engagement and Historical Ecology: Investigating a Pre-incarceration Japanese-American Farmstead on the Central California Coast*

Over four days in May 2023, a Cal Poly San Luis Obispo field class investigated the site of the Yoshida family farmstead occupied between 1928 and 1936 on the central coast of California, shortly before the family was removed to a World War II incarceration camp. Twenty-five members of the Yoshida family (four generations) were present during the excavation and continued their involvement through post-field analysis and interpretation of recovered materials, which included a rich faunal assemblage from the farmstead privy. Insights from family members were invaluable in understanding the cultural behaviors underlying the marine shells and fish bones. Furthermore, the marine fauna offered fascinating insights into the nearshore ecology of the early twentieth century, providing contrast with, and links to, the preceding 10,000-year Chumash record. Ichthyofaunal remains reflect an El Niño event from nearly 100 years ago while findings of red abalone (*Haliotis rufescens*) shells help flesh out the recent end of this species' long-term ecological history.

Jones, Terry [167] see Brown, Kaitlin

Jonsson, Emily (MOS Research, LLC)

[34] *Preserving Hispano Heritage in Southern Colorado: Insights and Challenges from the Juan de Dios Ruybal Homestead*

Constructed between 1855 and 1870, the Juan de Dios Ruybal homestead represents one of the oldest continuously inhabited Hispano homesteads in the San Luis Valley of southern Colorado. The Ruybal family has long been active in mutual aid societies and broader efforts to protect Hispano rights in the San Luis Valley, making the homestead a powerful symbol of both family and community history. As part of a statewide initiative to identify and preserve historic places associated with underrepresented communities, this project has worked closely with members of the Ruybal family and local community to document the homestead and develop a sustainability plan for long-term preservation. Community members have played an active role in documenting the site and contributing oral histories, family records, and perspectives on preservation goals. This paper considers how archaeologists can serve as facilitators not only in community-engaged research but in community-engaged preservation, interpretation, and outreach. In doing so, it asks how we can reorient both our research and the products of our research to support community preservation goals and interpretations of their own history.

Jordan, Alayna [114] see Zaragosa, Gabriella

Jordan, Keith [214] see Hallensleben, Markus

Jorge, Robbie [251] see McNutt, Ryan

Joseph, J.W. [251] see McMahon, Patricia

Joseph, J.W. [251] see Weber, June

Josephs, Jennifer, Chris Howell, Alison Sara Rubio (Department of the Air Force), Theresa De La Garza (Colorado State University-Fort Collins/CEMML), and Julie Esdale (CEMML)

[74] *Effective American Indian Communication and Consultation Training Workshops: Summary and Highlights*
[WITHDRAWN]

Josephs, Jennifer [218] see Smith, Catherine

Joyce, Arthur (University of Colorado Boulder), Akira Ichikawa, and Pamela Garcia Ramirez (Escuela Nacional de Antropología e Historia [ENAH])

[94] *Changes in the Domestic Lives of Commoners from 700 to 1100 CE at Río Viejo, Oaxaca, Mexico*

Previous research in the lower Río Verde Valley, Oaxaca, has provided regional-scale evidence for the collapse of the polity centered at the urban center of Río Viejo at approximately 900 CE. These data show that the construction of monumental architecture ceased, a carved stone monument depicting a ruler was intentionally damaged, settlement moved from the floodplain into the low piedmont, and the social hierarchy declined significantly. Ongoing research in the region has shifted the focus to the lives of commoners through excavations in four residential areas of Río Viejo. Excavations have exposed the remains of 21 residences spanning the Late Classic to Early Postclassic period along with two modest public buildings, burials, earth ovens, middens, and offerings. The results discussed here suggest that social changes involving commoners at Río Viejo included decisions by people to leave the city, leading to its eventual abandonment, changes in the use of space and in domestic architecture, and economic changes including an increase in the spinning and weaving of cotton, increased participation in long-distance exchange, and greater access to wealth items. This transition was recognized as culturally significant as indicated by evidence for termination ceremonies and the dismantling of a public building.

Joyce, Arthur [94] see Ichikawa, Akira

Joyce, Daniel [77] see Jamison, Gregg

Joyce, Rosemary (University California Berkeley)**[308]** *In Tension: Ancient Honduras between the Isthmo-Colombian Region and Mesoamerica*

Under culture area and culture history frameworks, Honduras was long treated as a frontier zone for Mesoamerica. This had two major effects that this paper addresses by instead viewing ancient Honduras in relation to neighboring regions, east and west. First, Honduras, viewed as the location of the Mesoamerican frontier, saw a disproportionate attention to the extreme western zone, the periphery of Maya states, and a scarcity of research beyond the presumed frontier; second, ancient Honduran societies were viewed in comparison with Mesoamerican societies, and assessed as backward. When Honduran objects were found in other Central American countries, or Honduran materials aligned better with neighbors to the east, these observations could only be treated as evidence of intrusive incidents, following the logics of trait-unit and site-unit defined for cultural history. Adopting a framework rooted in theories of practice and models of heterarchic and anarchic social organization, this paper presents an analysis of ancient Honduran people living in relation to their neighbors, west and east, creating sustainable societies where key freedoms were preserved. Far from existing on a frontier between advanced and backward cultural areas, the people of ancient Honduras fostered geographically and socially extensive relations that supported highly cosmopolitan cultural life.

Judkins, Abigail (Washington State Department of Transportation), and Emily Lena Jones (University of New Mexico)**[170]** *Furs, Flippers, and Fiascos: Use of the Walakpa Legacy Collection in Northern Alaska Zooarchaeology*

Legacy collections can provide vital information about previously excavated archaeological sites, some of which may have been severely damaged or destroyed. These collections, however, pose particular challenges relating to curation, chronology, and ownership that can impact their research potential. In this paper, I discuss these challenges using the historic assemblage from the Walakpa collection as an example. This material was excavated in the 1960s near Utqiagvik (Barrow) in northern Alaska. As one of the few collections from this region where historic materials were collected, it provides a means to explore market integration in northern Alaska during the historic period. However, the collection's history places limitations on the questions that can be asked and the methodologies that can be employed. I discuss the limitations of poor stabilization of materials, lack of chronological control, and disputes over collection ownership for research as well as techniques that can help to meet these (and similar) challenges.

Juengst, Sara (UNC Charlotte), Xueyxi Feng (UNC Charlotte), Sarah Rowe (University of Texas Rio Grande Valley), and Guy Duke (University of Texas Rio Grande Valley)**[267]** *Maritime Foundations of Alternative Power: Resource Use and Social Strategies at Buen Suceso, Ecuador (3750–1450 BCE)*

In 1976, Moseley proposed that ample marine resources along the western coast of South America could have supported the development of early “civilization” represented by the creation of monumental architecture and the emergence of new industries. These new activities, Moseley argues, were marshaled by corporate authorities, and thus a few controlled the labor of many. This premise has been challenged many times since then, with convincing evidence for communal and/or anarchical labor resulting in monumental architecture, particularly when marine or other nonagricultural resources make up the resource base. Buen Suceso, a multicomponent site in coastal Ecuador, provides a case study of how people make different choices about power and social organization over time, and how these choices correlate with resource use and subsistence strategies. Occupied between 3750 and 1450 BC and subsequently between AD 700 and 1000, people likely used both coastal and inland resources at various times, although to what degree remains unclear. In this paper, we examine mortuary, bioarchaeological, and isotopic evidence of diet, disease, and status in order to investigate changes in power and resource use over time. ***This presentation will include images of human remains.

Juengst, Sara [337] see Stumpf, Mara

Julison, Julie (Wayne State University), and Patrick Mbullo Owuor (Wayne State University)**[247]** *Who Owns This Shit: Issues of Data Sovereignty of Human Coprolites*

Human coprolites—fossilized fecal matter—are increasingly becoming essential for research and innovation within the scientific community. Despite their importance, coprolites are typically stored in museums, labs, or storage areas within universities without any regard to notification or signed consent from descendant communities. Archaeologists have collected these specimens as artifacts for decades, yet there are minimal ethical procedures in place, despite their potential ability to contain personal information. Moreover, issues around data ownership encompassing coprolites remain with researchers and institutions, with minimal mention of the Indigenous communities where these specimens originate. Using literature review and document analysis, this research investigated the status of informed consent from Indigenous communities before research was conducted on coprolites and the availability of data after it was published. We compared these practices with other stored human biological specimens and found that although the coprolites are sourced from Indigenous populations and are biologically viable, they do not receive thorough ethical consideration. These findings provide the basis for developing guidelines regarding the collection, storage, and utilization of dried human fecal matter in research.

Junge, Justin [182] see Anderson, Shelby

Jurado, Alexander (Tulane University)

[173] *The Production and Consumption of Obsidian Tools at Middle Formative Tlalancaleca, Puebla*
Tlalancaleca was a major urban center in Puebla-Tlaxcala during the Middle to Terminal Formative periods (1000 BCE–CE 250). To better understand its formation, it is necessary to study the economic activities and provisioning networks of inhabitants during the onset of urbanization in the Texoloc phase (650–500 BCE). To this end, this paper presents the results of a technological-attribute analysis of 1,701 obsidian artifacts from a Texoloc phase residence and community structure at Tlalancaleca. These data are paired with the results of geochemical sourcing to reconstruct the organization of Tlalancaleca's lithic economy. Comparisons between structures and across Texoloc phase strata will shed light on how the lithic economy varied for inhabitants and through the course of initial urbanization.

Jurado, Erik (University of Colorado Boulder)

[331] *Being “Teotihuacano” in Classic Period Morelos: Evidence for Public and Domestic Ritual at San Ignacio*
San Ignacio is located in the Amatzinac Valley of Morelos, approximately 10 km south of the Formative center of Chalcatzingo, where it was the largest site in eastern Morelos during the Classic period (300–600 CE). Previous studies argued based on regional settlement data that San Ignacio might have been a Teotihuacan administrative center. In 2019, I initiated the Proyecto Arqueológico Mapeo y Prospección de San Ignacio (PAMPSI) to investigate this hypothesis. In this paper, I present the evidence for Classic period ritual at San Ignacio and discuss its implications for understanding the site's relationship with Teotihuacan. Key artifacts include Teotihuacan-style figurines, *candeleros*, and censer appliques. I contextualize this sample with related findings elsewhere in Morelos. Based on these data, I consider what it might mean to be “Teotihuacano” in Morelos during the Classic period and address what additional data is needed to better understand the relationship between the Classic period inhabitants of Morelos and Teotihuacan.

Kaeding, Adam (I06 Group), Eleanor Harrison-Buck (University of New Hampshire), Jack Biggs, and Bridgette Degnan (University of California, Santa Barbara)

[341] *Investigating Terminal Classic Cottage Industries around the Marketplace at Altun Ha: Specialized Production of Marine Shell and Obsidian*

Recent investigations by the Belize River East Archaeology project have documented evidence supporting the identification of a marketplace within Plaza C at Altun Ha. This paper focuses, from the contextual perspective, on two features: a dense, horizontally expansive deposit of worked and unworked marine shells investigated in 2024; and an equally dense deposit of obsidian blade fragments and debitage investigated in 2025. These deposits provide insight into the scale and organization of specialized production that suggests the presence of cottage industries associated with Altun Ha's marketplace. Both deposits date to the Terminal Classic (ca. 750–950 CE) and are associated with a production locale positioned between the marketplace and the main Terminal Classic elite residence (Zone E) at Altun Ha. Discussion of the spatial relationships between these features—characterized by distinct clustering of materials—and their wider

context challenge the concept of a dual economy that separates the economic production and circulation of market-sourced goods from palace economies. Ongoing research promises to elucidate the degree of central administration in Altun Ha's regional market network and provide insights into the role of the marketplace as both a hub of economic exchange and center of manufacture during the Terminal Classic.

Kaharudin, Hendri [271] see O'Connor, Sue

Kahn, Jennifer (William & Mary)

[215] *Assemblages of Craft Specialists, Stone Tools, and Ritualized Sites: The Case of Adze Craft Specialists in Eastern Polynesian Chiefdoms*

Adzes, stone tools similar to axes but hafted differently to their wooden shafts, were the most widespread woodworking tool in precontact Eastern Polynesian societies. Their analyses have been predominantly technologically focused, following an assumption that adzes served solely as utilitarian tools, despite ethnographic and ethnohistoric evidence suggesting adze use in varied forms of ritualized production. Through the lens of social theory and examining archaeological data, I link the materiality of everyday life, which included adze production and use in and around high-status temples, in addition to adze production in use in small and large quarry sites and workshops, to social structuration in Polynesia. My goal is to illustrate how bundled assemblages of people, places, and things, in this case craft specialists, the adzes they used to fabricate ritualized objects, and ceremonial spaces, leave material traces suggestive of highly ritualized activities. In temple contexts, both the act of producing adzes, as well as their use, re-use, and final deposition, can be considered ritualized activities, particularly when temples are associated with high-quality source stone. As I argue, enmeshments between craft specialists, elite ritual sites, fertility, and communication with the gods created new avenues for marking social production and social personae.

Kaliba, Potiphar [162] see Heckel, Claire

Kaliba, Potiphar [304] see Xu, Tianrui

Kalisher, Rachel (University of California San Diego)

[42] *Maternity at the Microscale: Identification of Reproductive Events via Histologically Guided Elemental Analysis*
Reproduction represents a major milestone in a female's life course. During gestation, birth, and breastfeeding, a constellation of new relationships and responsibilities takes shape, while the maternal body undergoes profound internal and external changes. Yet, despite its significance, reproduction remains largely invisible in the past. Bone's constant remodeling overwrites any macroscopic alterations that could be reliably linked to reproductive events. In contrast, microscopic layers of bone form on a multidienn rhythm and preserve a reliable life history record. These layers are developmentally sensitive to metabolic disturbances and can therefore have the potential to encode data about reproductive events, even years after they occur. Here, we build on our previous study on nonhuman primates (*M. mulatta*; Cerrito et al. 2022) with a sample of humans (*H. sapiens*) with documented histories. Using field-emission scanning electron microscopy and energy-dispersive X-ray analysis, we investigate relative elemental concentrations across bone formed over multiple years, for which we resolved chronology. Our results indicate that the concentrations of Ca, P, and Mg in reproductive females differ significantly from all others. We end by considering the bioarchaeological significance of this method, arguing that it offers archaeologists a new tool for targeted questions about maternity in ancient societies.

Kallenbach, Elizabeth (University of Oregon), Chris Ruiz (University of Oregon, Museum of Natural and Cultural History), Stephanie Craig (Kalapuya Weaving and Consulting), and Myra Johnson (Confederated Tribes of the Warm Springs)

[333] *Native Oregon Basketweaving and the Role of Nineteenth-Century Hop Fields as Places of Connection, Resilience, and Innovation*

The traditional art and technology of Native Oregon basketweaving requires ecological knowledge of a diversity of native plants such as willow, hazel, dogbane, and stinging nettle. The changing socioeconomic landscape of the nineteenth century resulted in reduced access to ancestral native plant gathering areas, and thus new choices were made based on economic necessity. Many weavers incorporated novel materials such

as cotton, wool, cornhusk, and sisal fiber. Hop fields of the late 1800s were places where Native peoples (and people of many backgrounds) contributed labor during the hop picking season. Hop farms were also places where Native peoples traded or sold baskets to collectors, where families connected, celebrated, and gathered hop string to be repurposed as weaving elements. This project presents (1) the results of fiber identification using microscopy for nineteenth-century Columbia Plateau and Willamette Valley basketry housed at the University of Oregon Museum of Natural and Cultural History, and (2) incorporates Indigenous perspectives on weaving during this time. This study offers a more nuanced look at nineteenth-century fiber use and celebrates the enduring legacy of Oregon's weavers.

Kalodner, Jacob (Harvard University)

[315] *Prospecting Eneolithic / Early Bronze Age Settlement Landscapes and Human–Environment Dynamics in Eastern Kazakhstan*

Afanasievo communities (ca. 3300–2500 BCE) are well attested in the Altai–Irtysh mortuary record, yet secure settlement locations remain scarce and are entirely absent in Kazakhstan. This paper presents a pilot framework for scouting candidate Afanasievo habitation zones in northeastern Kazakhstan, where new mortuary sites in the Tarbagatai region have recently been reported. Drawing on legacy gazetteers—especially the 1960 *Archaeological Map of Kazakhstan*—alongside reports of Afanasievo settlements in Russia, Mongolia, and China, I build exploratory landscape layers to highlight potential locales. These include hydrology, terrain, pasture proxies, ecotone edges, visibility, and likely movement corridors. The workflow is deliberately iterative: light predictive mapping and checks against higher-resolution imagery (where available) generate a ranked roster of targets that can be tightened or relaxed as collaborator leads and ground observations accumulate. Immediate outcomes include a transparent search plan for upcoming seasons—what to test first and why—and clear criteria for revising expectations. More broadly, the exercise probes how early herders positioned daily-use spaces at the steppe–mountain interface and how those patterns relate to the better-known mortuary geography. The aim is practical: to turn a vast landscape into a short, testable list of Afanasievo settlement leads.

Kamenov, George [221] see Buckley, Gina

Kamp, Kathryn (Grinnell College), and John Whittaker (Grinnell College)

[339] *Breathing Life into the Past through the Arts*

The people of the distant past sometimes feel remote to students. As teachers, we must find ways of engaging students, sharing archaeological data and perspectives with them, and making archaeology and the past relevant to their current lives. Archaeologists balance on a tightrope, trying to make the past real while simultaneously avoiding the implication that we can simply imagine the past in terms of the present. Assignments that challenge students to evaluate or produce literature, film, or art depicting elements of the past using concrete evidence stimulate discussions of topics generally ignored. When students use art to put themselves into an imagined past based on evidence, it humanizes the people of the past and increases respect for them. Such exercises include learning about general patterns and considering details of the data that support our understandings of past people.

Kamp-Whittaker, April (California State University, Chico), Bonnie Clark (University of Denver), and Annie Danis (Cal Poly Pomona)

[34] *Ever-Evolving Engagement: Working with the Changing Community at Amache*

Successful community engagement is dynamic and ever changing. In the 16 years since the Amache Community Archaeology Project started working at the Amache National Historic Site, a World War II Japanese American incarceration center, the needs of the community and general public have shifted. This paper explores how a community engaged approach to archaeology and interpretation at the site has evolved overtime to respond to community needs and the social and political environment. This has been a process of co-learning and teamwork within the archaeological team and between different stakeholder communities. Here we will explore the success, failures, and missteps that have contributed to our current engaged approach.

Kanamarlapudi, Nithya

[50] *Kinship and Contracts: Cultural Landscapes of Spanish Town and English Town at New Almaden*

This paper examines the contrasting social and cultural landscapes of Spanish Town and English Town, two neighboring mining settlements at the New Almaden mercury mine in nineteenth-century California. While both towns were shaped by the demands of extractive industry, they reflected distinct community structures rooted in the cultural traditions of their residents. Spanish Town, inhabited largely by Mexican and Californio families, emphasized kinship ties, shared religious practices, and communal living arrangements, visible in the clustering of adobe homes and cooperative approaches to work and daily life. In contrast, English Town, settled primarily by Anglo-American miners and managers, was organized along more individualistic and corporate lines, with timber-frame houses arranged in grid patterns, a reliance on formal labor contracts, and an emphasis on wage work tied to company oversight. These differences were also evident in responses to labor discipline and environmental challenges: Spanish Town residents often negotiated flexible work relationships and maintained community resilience through social networks, while English Town operated more rigidly within standardized industrial frameworks. By comparing the material and social fabric of these two settlements, the paper highlights how cultural traditions shaped mining communities and underscores the diversity of experiences within California's extractive economies.

Kang, Gui-Hyung [220] see Kwak, Seungki

Kangas, Rachael [339] see Miller, Sarah

Kansa, Eric (Open Context [OC]), Melissa Cradic (OC), and Leigh Anne Lieberman (OC)
[335] *Tools for Improving Ethical Open Data Governance for Archaeology and Digital Heritage*

This paper presents the development of ethical open data tools that promote CARE and FAIR data governance frameworks in archaeology. These resources are being created by a network of archaeological and paleoecological data stewards, open-access repository managers, and data users called Ethical Open Science (EOS) for Past Global Change Data. While the FAIR (Findable, Accessible, Interoperable, and Reusable) Data Principles focus on eliminating barriers to open data and encouraging interoperability, access, and reuse, the CARE (Collective benefit, Authority to control, Responsibility, and Ethics) Principles for Indigenous Data Governance prioritize Indigenous sovereignty, the integrity of traditional knowledge, capacity-building, and community support. Two examples of such governance-driven resources include (1) processes for internal data and policy audits and (2) a data intake questionnaire for open data stewards and repository managers who handle submissions and accessions. These resources are designed to evaluate the degree of alignment of datasets, policies, and practices with CARE and FAIR, with an emphasis on improving benefits sharing, protecting sensitive information, and creating transparency around provenance, permissions, and reuse. They are also intended to provide guidance for collaborative practice and models for ethical open data management in order to reduce risks of harm and to encourage meaningful collaborations.

Kansa, Eric [52] see Wells, Joshua

Kansa, Sarah (Open Context)

[314] *The Data Life Cycle in Zooarchaeology and Paleoethnobotany: Identifying Areas That Support Integration*

Despite their potential to inform shared research questions about ancient diet, resource management, trade, and ritual, zooarchaeology and paleoethnobotany remain distinct "specialist" fields. Zooarchaeologists and paleoethnobotanists on the same excavation may do their work at different times or in different locations, perhaps never having the opportunity to overlap and discuss their findings or opportunities for collaboration. Furthermore, while each follows a general process of data collection, analysis, reporting, and reuse that fit with the practices and expectations of their respective fields, their results may not be as intelligible or accessible to others seeking to use the data they produce. While we can celebrate successful data integration by small teams of specialists, how can we support use and integration of the ever-increasing amount of data available in online repositories? This paper examines current data collection and dissemination practices with a goal of identifying parts of the data life cycle that offer opportunities for improved understanding, collaboration, and data integration.

Kansa, Sarah [335] see Gupta, Neha

Kansa, Sarah [335] see Ryan, Susan

Kansa, Sarah [219] see Tripcevich, Nico

Kansa, Sarah [52] see Wells, Joshua

Kardulias, Drosos (University of Michigan)

[252] *Digitally Reconstructing Diverse Medieval Roman Martial Landscapes on the Greek Island of Kalymnos*

In the early seventh century AD, the Roman Aegean was devastated by warfare and the retreat of the Roman state. The island of Kalymnos, unlike its neighbors, shows signs of having resisted this trend through the construction of three fortified towns. The Medieval Roman Archaeological Survey of Kalymnos's 2025 field season represents the first full digital mapping of two of the island's three Early Medieval fortifications. These highly defensible settlements, previously described as small and sparsely populated, now appear to be dense towns, whose defensive works grow in complexity with each new observation. This paper presents the results of the summer 2025 field season, including photogrammetric models of architecture, maps of structures, and reconstructed defensive layouts. Combined with new discoveries on offshore islets, a picture emerges of a vibrant and expansive Kalymnian community not only enduring the endemic warfare of the Early Middle Ages but thriving through it. Specific focus is given to the state of preservation at these sites, as well as the surprising diversity evident in layout and architecture, suggesting that this tumultuous time produced divergent survival strategies even within the same island community.

Kardulias, Paul Nick (College of Wooster), Nigel Brush (College of Wooster), Gregory Wiles (College of Wooster), and Nicholas Wiesenberger (College of Wooster)

[101] *Solidifying the Late Archaic Date of Unfluted Lanceolates in Ohio: Evidence from the Cox South-E Site (33CS986), Coshocton County*

Excavation at the Cox South-E site (33CS986), a lithic workshop in Coshocton County, Ohio, between 2023 and 2025, retrieved a large number of unfluted lanceolate points. Since the 1960s, many archaeologists dated these points to the Late Paleoindian period based on the use of chert from the nearby Upper Mercer quarry that was also the source of fluted Paleoindian points in Ohio and surrounding states, and their similarity to points found in association with remains of *Bison antiquus* in western states. Radiocarbon dates from several lanceolate workshop sites in Ohio fall in the Late Archaic, as do those from features at the Cox site. Feature 105 yielded 87 broken and complete lanceolates and preforms among the 50.35 kg of lithic debris, indicative of intensive flintknapping. The midden containing this large amount of material was buried and sealed beneath an overlying undisturbed alluvial layer. We suggest one possibility for their use was hunting modern bison, whose presence is archaeologically and historically attested in Ohio and adjacent states as late as 1800 during the Little Ice Age; similar cooler conditions existed in the region during the intense 4200 BP event described by paleoclimatologists, providing conditions that could have supported bison herds.

Karmowski, Jacek [89] see Szyndler, Michael

Kaspura, Molly (Santa Clara University), Charly Aylward (Santa Clara University), Kolby Yamamoto (Santa Clara University), Kaylee Arbaugh (Santa Clara University), and Monica Arellano (Muwekma Ohlone Tribe)

[124] *Precolonial Diversity and Intensification of Plant Use at the Archaeological Site Thámien Rúmmeytak (CA-SCL-128/H), Located in Present-Day San Jose, CA*

We present the results of a study of seeds found within soil samples from eight Late period thermal features excavated at the archaeological site known as Thámien Rúmmeytak, as part of a cultural resource management project. The analysis has been undertaken with the permission of Monica Arellano of the Muwekma Ohlone Tribe, designated as the Most Likely Descendant (MLD). The study of plant remains from archaeological sites in what is now Santa Clara County can augment what we know about Indigenous foodways in this area. There is still much more to learn about variability in and diversity of plant diets across the region, which can be relevant for recreating heritage practices and contributing to tribal food sovereignty. Previous studies suggest the intensification of small seed use in the Santa Clara Valley during the Late period (930–180 BP). By examining a site from what is now downtown San Jose, we consider intensification, overall plant diversity, and the distance of plants from their sources, which can be compared to findings from contemporaneous sites. This research project will inform archaeologists, Muwekma Ohlone Tribal members,

and other interested parties about the plant diets of precolonial residents of this important site.

Kassadjikova, Kalina [297] see Rietz, Alexandra

Kassadjikova, Kalina [301] see Sacco, Samuel

Kassebaum, Theo (University of North Carolina-Chapel Hill)

[347] *Like a Lamb to the Slaughter: An Analysis of the Juvenile Caprine Remains from Tel Abel Beth Maacah*

This paper examines caprine—sheep and goat—remains from Iron Age Tel Abel Beth Maacah from a social zooarchaeology perspective by specifically considering how neonate, juvenile, and adult animals are situated within a multigenerational system of livestock production. To do so, Zooarchaeology by Mass Spectrometry (ZooMS) data differentiating juvenile sheep from goats is presented alongside a larger discussion of the demography data of the faunal assemblage. The management, and culling, of young lambs and kids alongside adult sheep and goats underscores the diversity of the animals engaged in the economic, dietary, and religious practices at the site. By reexamining the roles of young animals in these production systems, this paper reveals how sheep and goats contribute to the social network of Tel Abel Beth Maacah at several (st)ages.

Kato, Hirofumi (Hokkaido University)

[159] *The Formation of Marine Indigenous Societies in the Northern Island of Japan and Their Historical Background*

In the northern part of the Japanese archipelago, coastal navigation technology has been developed since prehistoric times, and long-distance trade centered on luxury goods shall be taught. Particularly, during the prehistoric social stage (ca. 4,000–2,000 years ago), jade and obsidian were the main trade goods, accompanied by shell ornaments. This tradition and historical experience formed the foundation for the development of indigenous societies as maritime hunter-gatherers. Particularly, from the late ancient period to the medieval period (fifth to tenth centuries CE), collective contact and cultural integration were promoted, leading to the formation of new archaeological ethnicities. This movement laid the groundwork for the formation of ethnic groups in the Northeast Asian local community in later periods. This presentation examines the historical background of the long-distance navigation technology of the Ainu from the perspective of contact and cultural integration within maritime societies.

Katzman-Tranah, Lucille

[226] *Tent Poles: Indications of Habitation Styles and Climatic Shifts in Kodiak, Alaska*

The Tanginak Spring site (KOD-481) on Sitkalidak Island in Southwest Alaska was excavated as a field school by the University of Washington. KOD-481 was dated to a stretch of the Ocean Bay period, between 7500 and 6000 yr cal BP. This period is well known in the Kodiak region for being a time of great change to the lives of the Alutiiq peoples who inhabit the archipelago. During Ocean Bay, archaeologists have argued that Alutiiq ancestors moved between impermanent summer and winter camps, living in skin tents that allowed for frequent residential mobility. Climatic shifts echoed throughout the material record, and can be seen in changes in housing structure style. Among Kodiak archaeologists, there is ongoing disagreement about the kinds of structures people lived in during Ocean Bay I times and about when people transitioned from less permanent to more permanent housing structures. By analyzing post-hole size and location throughout the site, I will evaluate temporal changes in the durability of residential structures, and seek to improve archaeological understanding of the evolution of residential lifestyle through time at the Tanginak Spring site and in the Kodiak archipelago more generally.

Kauderer, Mollie [269] see Durant, Phoebe

Kaufmann, Cristian [72] see Borrero, Luis

Kealhofer, Lisa [217] see Heng, Piphai

Kealhofer, Lisa [217] see Stark, Miriam

Kealy, Shimona [271] see O'Connor, Sue

Keegan, Barry [93] see Kitchel, Nathaniel

Keim, David (Shumla Archaeological Research & Education Center), and Diana Radillo Rolón (Shumla)

[276] *Rock Art Preservation: Combining Digital Illustrations and Databases for Pictograph Conservation*

Shumla Archaeological Research & Education Center has developed a Rock Art Graphic Database (RAGD) to digitally document pictographs in the Lower Pecos Canyonlands, Texas. This advanced recording system follows a standardized and replicable method, ensuring consistency in the documentation across multiple sites. It is also designed to be updated and allow the integration of new data. The database is organized into two parts. First, rock art imagery is documented through sketches, accurate color sequencing, microscopy, portable X-ray fluorescence spectroscopy, and radiocarbon dating. All of which are layered on top of high-resolution and color-enhanced photographs in an Adobe Photoshop file. Second, approximately 150 attributes are recorded in an iconographic inventory catalogue with detailed descriptions for each figure. Using Eagle Cave, 41VVI67, we will demonstrate that the RAGD is a comprehensive and accessible collection of data that supports and improves the methods of digitally preserving rock art figures and murals.

Keller, Hannah [162] see Heckel, Claire

Kellett, Lucas (University of Maine at Farmington)

[301] *At the Eastern Frontier: A Preliminary Settlement History of the Paucartambo Region (Cusco, Peru)*

The poster outlines recent results from an exploratory 20 km² archaeological survey in the Paucartambo Valley at the eastern margin of the Cusco region. Serving as the last highland valley in the Inka heartland before the upper Amazon Basin, the project offers valuable insights into the role this frontier zone played during Inka imperialism and other periods of cultural development. The project documented over 35 sites from the Formative to colonial times (~1500 BCE–1800 CE). A preliminary analysis shows a very strong Inka presence (~1350–1530 CE) with a moderate occupation during the Late Intermediate period (LIP, ~1000–1400 CE) and Formative (~1500 BCE–500 CE) periods. The high density of LIP burial monuments (*chullpas*) and range of Inka structures (storehouses [*qolqas*], roads, way stations [*tambos*]) reveal that the valley was most intensely occupied after 1000 CE.

Kellner, Corina (Northern Arizona University), Christina Conlee (Texas State University), Sarah Kerchusky, and Aldo Noriega

[324] *Mummy Bundles Found at Huaca del Loro in Nasca, Peru, in Broader Andean Middle Horizon Context*

In situ archaeological mummified individuals (*fardos*; mummy bundles) from Nasca, Peru, are rare, but these remains can lead us to a better understanding of burial practices during a time of imperial conquest. The Wari administrative site of Huaca del Loro in Nasca, Peru (650–1000 CE), has a typical D-shaped temple and an associated compound. Within this temple complex, we found four individuals buried in a seated, flexed position wrapped in layers of textiles and cotton batting (mummy bundles, or *fardos*). Elite individuals were usually treated in this way on the coast during the Middle Horizon. Using various methods, including X-ray radiographs, basic textile analysis, and isotopic data, we contextualize these individuals within the wider Middle Horizon, with special reference to the scope of Wari imperial power and societal changes around the Andes. Human remains may be shown during this presentation. Funding provided by the United States National Science Foundation Archaeology Grant #1758084.

Kellner, Corina [57] see Underwood, Kaylee

Kello, Nika [201] see Sales, Katherine

Kelly, John (Public Archaeology Laboratory Inc.)

[350] *New Insights into the Precontact History of Winter Island: Archaeological Investigations at the Plummer Farm School Site in Salem, Massachusetts*

Previous archaeological surveys on Winter Island in Salem, Massachusetts, indicated that the 45-acre island was used as a settlement and burial site by precontact Native American groups during the Archaic and

Woodland periods. These surveys identified eight seemingly distinct precontact sites spread across the landform. Recent archaeological data recovery excavations and monitoring work conducted by the Public Archaeology Laboratory Inc. have shown that the previously identified site areas are linked and actually represent distinct activity areas within the Plummer Farm School site, a large multicomponent habitation site. The investigations provided more information about the island's occupation and use by Native American groups, including the lithic practices of the site's occupants, how the island's occupation changed through time, and how its occupation was potentially related to the occupation of nearby sites overlooking coves on the Salem coastline.

Kelly, John [284] see Marcucci, Samuel

Kelly, Kaley (University of Tennessee)

[30] *Household and Hominy: Ethnobotanical Analysis of the Ravensford Site in Cherokee, North Carolina*

The Ravensford site in Cherokee, North Carolina, constitutes a multicomponent village site occupied by the Cherokee from the Early Archaic to the historic period, excavated by TRC Environmental Corporation (TRC) from 2003 to 2008. Here I focus on plant remains recovered from Middle to Late Qualla period (1500–1838) structures consisting of paired winter and summer houses. The rich paleoethnobotanical data allow us to contextualize paleobotanical remains as components of a larger matrilineal society where female-dominated spaces included the family home, and its relationship to traditional foodways, health, and well-being.

Kelly, Mary Kate (Mount Royal University)

[43] *Considerations in 3D Printing a Maya Stela*

Advances in 3D data collection and utilization are inspiring multifaceted approaches (pun intended) to digital heritage. This paper considers the opportunities, benefits, challenges, and costs of creating 3D printed replicas of ancient Maya carved monuments. Maya stelae are large stones, generally between 1 and 3 m in height, which bear finely detailed carvings of imagery and hieroglyphic writing. Replication using 3D printers comes with limitations—specifically in overall size, and in resolution—which decrease the visibility of details on the 3D print in comparison to the original. In this paper, I compare different common 3D printer types with respect to cost, resolution, size, and accessibility of use, with the goal of increasing legibility. I also consider the impact that 3D prints can have for accessibility of scientific understanding by local, heritage, and steward communities. It is easier than ever now to collect 3D data—what we do with these data matters.

Kelly, Mary Kate [183] see Berenson, Sydney

Kelmelis, Kirsten [282] see Mink, Kirsten

Kelsey, Brady (University of Connecticut)

[169] *Memory, Material, and Making Together: Coproducing Heritage Knowledge with Descendant Artists in the Isthmo-Colombian Area*

This paper presents the initial findings of my dissertation research, which investigates how Chibchan- and Afro-descendant communities of the Isthmo-Colombian Area (ICA) mobilize art and heritage in both material and immaterial forms transnationally and intergenerationally. My preliminary findings have revealed how art can function as a collaborative method in archaeology that makes visible alternative temporalities and spatialities, channels collective memories, and creates new possibilities for coalition with descendant communities. I argue that archaeologists can use art as translation, both in material and practice, to enable collaboration across differences and create coalitional spaces with descendant communities. Results from archival research and early collaborations with artists and archaeologists demonstrate how multimodal practices such as sensorial coding, countermapping, and participatory art workshops generate forms of knowledge that neither archaeology nor art could produce alone. Through integrating art, archaeologists can move beyond extractive models of knowledge production and toward a critically engaged coproduction of knowledges that aligns with descendant communities' priorities. This approach offers a model for how archaeology can engage multiple pasts through art to not only reshape how we understand material culture

and the past but also provide tools for building relationships, negotiating meaning, and fostering more equitable forms of community-engaged archaeology.

Kemp, Kassie [339] see Miller, Sarah

Kennedy, Jaime (University of Oregon Museum of Natural and Cultural History), Michael Coughlan (University of Oregon), Kelly Derr (Historical Research Associates Inc.), and Perry Chocktoot (Klamath Tribes)

[333] *Landscape Archaeobotany and Indigenous Ecological Practices in the Pacific Northwest*

Archaeobotanical analyses of residential and logistical task sites provide valuable insights into human–plant relationships but often capture only part of broader cultural engagement. To fully understand these dynamics, archaeologists must adopt landscape-scale perspectives that also account for activities that may leave minimal archaeological evidence in localized contexts, such as collecting and consuming trail foods, selective and targeted plant tending, low-intensity burning, and tree modifications, among other practices. This paper examines the landscape-scale paleoethnobotanical record of Indigenous groups in the western Cascades of the Pacific Northwest, with a focus on identifying and documenting culturally modified trees (CMTs). It highlights the significance of CMTs, the practices through which they are created, and their role in understanding human–plant relationships. Although centered in Oregon, the methods employed are broadly applicable to comparable environments across western North America.

Kennedy, Jaime [333] see Coughlan, Michael

Kennedy, Jaime [333] see Derr, Kelly

Kennedy, Jason (Lyon College), Juliet Morrow (Arkansas Archeological Survey), Sarah Stuckey (Arkansas Archaeological Survey), and Jami Lockhart (Arkansas Archeological Survey)

[156] *The Greenbrier Site, a Sixteenth-Century Town on the White River of Arkansas*

This presentation presents data from excavation of a 9 m² burned structure at the Greenbrier site (3IN1), a late Mississippian town site located on private land on the White River in the Arkansas Ozarks. Ceramic sherds from this house and eight radiocarbon dates from the site indicate that Greenbrier is contemporary with Late Mississippian sites in the eastern Lowlands along the St. Francis and Mississippi Rivers and occupations in the Carden Bottoms portion of the Arkansas River valley. Prestige goods suggest that Greenbrier was part of the wider Mississippian sociopolitical economy and was likely a node along a major trade route. Gradiometry of <30% of the site identified traces of a double ditch and/or palisade that appears to have been expanded at least once, over 123 dwellings, and a square ground/central plaza. Excavation of House I in 2023–2024 revealed a central hearth and platform surrounded by posts. Radiocarbon dates on charred plants recovered in recent excavations precisely date the burning of the structure to the mid-sixteenth century and suggest the destruction of the house may be attributable to the de Soto expedition that passed through this area in 1541.

Kennedy, Jennifer

[299] *Lithic Raw Material Procurement and Mobility Patterns during the Paleoindian and Prehistoric Periods in the North Fork Shenandoah River Watershed in Virginia*

The North Fork Shenandoah River watershed in Virginia remains understudied, particularly for the Paleoindian and Archaic periods. Most archaeological research in the Shenandoah Valley has focused on the South Fork, with its theories often generalized to the entire region. However, the South and North Forks lie on opposite sides of the Massanutten Mountains, representing distinct ecotones with different climate histories during and after the glacial maximum. These differences caution against assuming comparable settlement and mobility patterns across the two watersheds. This study presents preliminary results of the study of a substantial private collection of lithic materials, a pedestrian survey at site 44SH0065, and a GIS overlay analysis of site and raw material locations in order to better understand subsistence-settlement strategies utilized during the Paleoindian and Archaic periods along the North Fork Shenandoah River. While past studies have emphasized ephemeral foraging, this research suggests site continuity and a logistic mobility strategy linked to lithic raw material procurement.

Kennedy, Ryan (Indiana University), Eric Guiry (Simon Fraser University), Kristine Korzow (Texas A&M University), Domenique Sorreso (Indiana University), and Paul Szpak (Trent University)

[79] *From Swagger Stick to Seascape: Isotopic, ZooMS, and pXRF Analyses of Shark Vertebrae Canes*

In this poster, we present ongoing stable isotope, Zooarchaeology by Mass Spectrometry (ZooMS), and pXRF analyses of nineteenth- and early twentieth-century swagger sticks and canes decorated with shark vertebrae. These objects and the vertebrae that adorn them were part of a poorly documented global trade of shark-based commodities, including teeth, skins, and liver oil. Given modern conservation concerns and the relative lack of shark samples in contemporary archaeological sites, analyses of canes and other objects decorated with shark vertebrae have great potential to provide new insights into human impacts on sharks, shark historical ecology, and shark-based trade networks. To demonstrate this potential, we present data collected from three canes, two swagger sticks, and a riding crop, all decorated with shark vertebrae. We examine construction methods and materials, identify likely shark taxa via ZooMS and morphological analysis, and examine shark ecology and the use of single or multiple individuals within objects via stable isotope analysis. Ultimately, our analysis not only provides new insights into the production and trade of shark vertebrae canes but also speaks to past shark harvesting strategies and the ecologies of targeted species.

Kennedy, Ryan [84] see Bernard, Hayden

Kennedy, Ryan [279] see Foti, Peyton

Kennedy, Ryan [83] see Korzow, Kristine

Kennedy, Sarah, and Elizabeth Arkush (University of Pittsburgh Center for Comparative Archaeology)

[40] *Inca Expansion and Native Resistance in the Peruvian Altiplano*

Investigations at Machu Asillo, a pre-Inca, Late Intermediate period hillfort (*pukara*) in the northern Lake Titicaca Basin of Peru, shed light on the process of Inca expansion into the high-altitude plateau surrounding Lake Titicaca (the Inca province of “Collasuyo”). Recent research indicates an initial phase in which Incas built religious and administrative centers in signature Inca architectural styles, while at the same time some local populations occupied and built highly defensive *pukara* settlements nearby. Subsequently, these hillforts were abruptly abandoned and Inca control over the region was fully cemented. Inca architecture is present at a number of sites in the Titicaca Basin but is almost never found at *pukaras*. However, the *pukara* Machu Asillo, named in Inca narratives as a stronghold in a major rebellion of Colla populations, does contain Inca architecture. The location and design of these structures suggests high-status and ceremonial functions, potentially used to commemorate Inca victory over local resistance. Preliminary results from 2025 excavations confirm short-term ceremonial use of the Inca structures. Abandonment was associated with burning of the Inca structures, potentially suggesting local Colla resistance to Inca control. Our results underscore the complex reality of ancient imperial expansion.

Kennedy, Sarah [202] see Cogan, Jesse

Kennedy, William (SUNY Cortland), Sierra Polivka-Curri (SUNY Cortland), and Hollis Miller

[313] *Contextualizing Colonial Period Sugpiaq Foodways at the Ing'yuyq Village Site, Alaska*

Sugpiaq peoples of the Kodiak Archipelago, Alaska, have maintained a relationship with the local lands and waters through subsistence, stewardship, and ceremony over thousands of years. This relationship was renegotiated, but not severed, by Russian and American colonial entanglements with Sugpiaq peoples over the past three centuries. Here we analyze assemblages from Ing'yuyq Village (KOD-114; 1600–1840 CE) to explore Sugpiaq ancestors' foodways before and during the period of Russian colonialism on Kodiak (1760–1867 CE). During this period, Sugpiaq hunters were systematically removed from villages during the productive summer months in service of the Russian fur trade. Ethnohistoric evidence has suggested that those who remained on Kodiak experienced bouts of famine. While we do not question that there were periods of starvation, our analysis of faunal remains and belongings used for processing and cooking food suggest that foodways at Ing'yuyq were not greatly altered. We argue that Sugpiaq people in the Late

Holocene had already adapted a highly flexible social and economic system in response to the environmental instability of the Little Ice Age (ca. CE 1350–1850), which enabled them to respond effectively to the disruptions of the Russian colonial period.

Kennett, Douglas [95] see McCool, Weston
 Kennett, Douglas [285] see Mitchell, Spencer

Kenny, Brian, and Robert Hitchcock (University of New Mexico)

[34] *Community-Driven Historical Archaeology as Economic Development: Folsom New Mexico's Living Heritage*
 In Folsom, New Mexico, descendants and new village residents actively preserve community history through local initiatives. The Team McJunkin project offers an additive component to existing community knowledge, proposing historical archaeological research as phased economic development for this northeastern New Mexico ranching community. Following the 1888 railroad transformation of Ragtown into Folsom, a diverse community emerged including Black ranch foreman George McJunkin, generational families, village residents, and transient cowboys. Commercial goods (bricks, canned foods, fencing wire) distributed by rail and wagon became embedded in complex social networks across ranch headquarters, line camps, and gathering places. Survey-level investigations have revealed patterns of material use, adaptation, and disposal across different community contexts. Crushed cans, construction debris, and ranching equipment scattered throughout the landscape reflect systems of exchange and reciprocity connecting Folsom's diverse residents. Future analyses incorporating lidar, typological studies, residue analyses, and technologies like portable spectroscopy may trace how goods were sorted into social and economic contexts. Partnering with the Folsom Museum's community historians, we demonstrate how historical archaeology can increase local knowledge to create sustainable heritage-based economic opportunities. This work positions archaeological research in economic development to grow scholarly rigor and rural resilience in the contemporary Southwest.

Kenoyer, Jonathan (University of Wisconsin), Randall Law (UW-Madison), and Laure Dussubieux (Field Museum of Natural History)

[162] *Carnelian Beads in North and East Africa: Changing Technology and Trade Networks from the Pre-Dynastic to the Islamic Period*

Studies of carnelian bead technology in various regions of northern and eastern Africa demonstrate the long history of hard stone bead production and trade across a broad region. Pre-Dynastic beads from the site of Hierakonpolis and various beads from later Dynastic periods show a long continuity in technology and resource exploitation in the lower Nile River Valley. During the later historical periods, the upper Nile in Sudan and further regions to the east in coastal East Africa see evidence for links to carnelian beads made in South Asia and traded along the Red Sea routes or eastern coastal trade networks. LA-ICP-MS analysis, combined with detailed morphological studies of the beads will be presented to highlight the complex overlap of these different trade networks.

Kenoyer, Jonathan [45] see James, Nathaniel

Kerchusky, Sarah [324] see Kellner, Corina

Kerr-Painter, Stanley (SNL)

[198] *Least-Cost Path Modeling to Predict Tribe/Pueblo Pathways*

Lands in and surrounding Albuquerque, New Mexico, have been traversed and utilized by Tribes/Pueblos for thousands of years. Albuquerque's East Mesa has shared stories of trails leading to salt lakes, connecting communities, and resource areas accessible by the current Route 66. In 1942, the military claimed more than 1,000 acres along the East Mesa, inhibiting access to these trails. This project focused on identifying the possible trails through a least-cost path analysis to generate what would be the most efficient route by those commuting on foot and overlaying existing archaeological survey data.

Kewanyama, Devin [335] see Renteria, Rebecca

Keyser, James (Oregon Archaeological Society)**[38]** *Narrating One's Vision: New Insight into Columbia Plateau Vision Quest Imagery*

Hundreds of classic Columbia Plateau—tradition vision quest compositions occur throughout the Columbia Plateau region, from central British Columbia to central Oregon, and from the Cascade Range to the Rocky Mountains. Typically, these images consist of stick-figure humans arranged in static compositions juxtaposed with a simple animal, a geometric shape, and tally marks. Petroglyphs at the Vissotzky site (24FHI583) in far northwestern Montana include more than a dozen such vision quest compositions dating to approximately 2,000 years ago. But what sets half of these apart from typical examples is that they use a track sequence as a narrative device to detail what occurred during the vision itself. By analogy with other vision quest and biographic art, for the first time we are able to “listen” to the artists’ own voices narrating specifically what they experienced during a key religious ritual structuring Columbia Plateau life.

Khan, Faizan (Lipscomb University), and Fred Valdez Jr. (University of Texas at Austin)**[178]** *Pushing Boundaries of the La Milpa Realm: Identifying Archaeological Features and Neighborhoods through Lidar Analysis*

La Milpa is the third-largest Maya site in Belize, Central America, and is characterized by features such as temples, houses, *aguadas*, causeways, canals, and other structures. However, the full extent of these features is often difficult to identify because they are buried under soil and concealed by dense vegetation. The introduction of lidar (light detection and ranging) surveys in archaeological studies has brought about a revolution in the field of archaeology, particularly in areas covered by vegetation. This research study focuses on detecting archaeological structures and other features on the northwestern outskirts of the ancient Maya city of La Milpa through a lidar survey, followed by analysis in ArcGIS Pro. With the help of lidar surveys, more than 2,000 archaeological features and neighborhoods in the northwestern outskirts of La Milpa were identified. Additionally, based on the lidar survey findings, the paper examines the settlement patterns of the ancient Maya at La Milpa, utilizing geospatial analyses to assess the degree to which these settlement patterns were random or intentional social organization.

Khosla, Ashok (www.khipufieldguide.com)**[43]** *The Khipu Field Guide: Decipherment of Inca Khipus*

The KhipuFieldGuide (KFG) is an open-access digital repository dedicated to the decipherment of Inca khipus, or knotted records. The KFG illustrates how software design principles, coupled with a multidisciplinary team of scholars, can accelerate the decipherment of ancient information systems in the digital age. Conceived by computational linguist and independent scholar Ashok Khosla, the KFG was seeded with consolidated datasets from earlier scholarship. Its holdings are now being continually expanded through the addition of newly documented khipus with continuous reassessment of its legacy data. Unlike decipherments based on bilingual corpora, khipus lack a parallel “decoded” output. The KFG team’s progress has relied on interdisciplinary team collaboration—archaeology, anthropology, linguistics, and software design—combined with structured reasoning and visual-statistical analysis. Driven by its research team, the KFG now functions as a comprehensive platform offering the world’s largest curated open-source khipu dataset, search utilities, annotation of signs and quantitative features, data-driven visualization, statistical measurement, and an extensive bibliographic apparatus. With our technical and organizational foundations now firmly established, our objective is to expand the corpus at scale and to provide others with the resources, education, and analytic tools necessary to accelerate the decipherment of khipus.

Kiaer, Julia**[277]** *Toward an Archaeology of Protest: Understanding the 2024 Columbia University Student Protests through Material Culture*

Through an archaeological study of the 2024 student protests at Columbia University, I consider how a purposefully spectacular event is erased from the institutional space it protests and how a materialist perspective can resituate and inform how contemporary protest movements are rendered archival. When the NYPD cleared the “Gaza Solidarity Encampment” from the lawns of Columbia University on April 30, 2024, the grass was marked with yellowed outlines of tents and muddy pathways. Although the protest had ended in its visible form, traces remained. By engaging with analyses of protest materials, oral histories,

surveys of protest sites, and comparative studies with other college campuses, I contextualize the encampment within histories of protest, the current environment of college campuses, and contemporary archaeological theory on graffiti and homelessness. In a new era of academic and political repression, there is an urgency to develop archaeological methods that preserve traces of resistance in institutional spaces, thereby protecting subversive histories. This project contributes to contemporary archaeological theory by filling a critical knowledge gap in how ephemeral political events are recorded, remembered, and contested.

Kiahtipes, Christopher (University of South Florida), Gregory Herbert (University of South Florida), Jaime Rogers (University of South Florida), Stephanie Sanders (University of South Florida), and Alize Hardin

[349] *Paleoecological Assessment of Sedimentary Archives from Guaimoreto Lagoon, Honduras*

Coastal lagoons provide a diverse and reliable set of resources and are important environments for small-scale fishing economies worldwide. Influenced by both marine and terrestrial conditions, they are simultaneously vulnerable to changes in the local terrestrial environment as well as global-scale changes in marine conditions. Guaimoreto Lagoon is located on the north coast of Honduras and is an ideal location to evaluate contemporaneous environmental and archaeological records to better understand feedbacks between the Holocene evolution of the lagoon system and human influences on this environment spanning from the Classic Maya era to present. We present data on fossil pollen, foraminifera, and organic carbon content from multiple locations within Guaimoreto Lagoon to demonstrate both localized and general changes in the lagoon system. With chronologies controlled by both radiocarbon assay and short-lived radioisotopes, we provide insights into the chronology of environmental changes that parallel major demographic and cultural changes across the last 4,000 years.

Kiahtipes, Christopher [200] see Malerba, Amanda

Kidder, Tristram [304] see Xu, Tianrui

Kidwell, Jasmine (Baylor University), Julie Hoggarth (Baylor University), William Hockaday (Baylor University), James Fulton (Baylor University), and Bryon Schroeder (Center for Big Bend Studies / Sul Ross State University)

[263] *Lipid Molecular Biomarkers and the Sedimentary Archives of Far West Texas: Human Demographics, Hydroclimate, and Paleoecology of the Late Quaternary*

The Chihuahuan Desert region of far west Texas remains understudied in terms of its cultural, climatic, and environmental past. Using sedimentary deposits from a remote west Texas cave, we apply molecular geoarchaeological techniques paired with regional radiocarbon summed probability distributions (SPD) to reconstruct human demographics, hydroclimate, and paleoecology while generating new proxy datasets. This work focuses on recovery of molecular fossil lipids, or biomarkers, preserved in sediments. These biomarkers provide environmental context and record information that may not be preserved in other records. From the sediments, the preserved leaf wax (n-alkanes), fecal stanols, and other non-polar and polar lipids were extracted in a lab, characterized by GC-MS and then, select total lipid extracts were submitted for bulk lipid radiocarbon dating. Together, these climatological and ecological proxy data are compared to SPDs to contextualize human demographic variability from the Late Pleistocene through the Holocene to better understand how the earliest occupants of far west Texas responded to long-term climatological and ecological change.

Kiernicki, Lydia (University of Central Florida), Neil Duncan (University of Central Florida), Ann-Marie Howard-Brown (Jamaica National Heritage Trust), and Peter Siegel (Montclair State University)

[44] *Microbotanical Residue Analysis of Ceramics from the White Marl Site, Jamaica*

White Marl is the largest and most complexly organized Taíno archaeological site documented in Jamaica. The site currently faces threats from a proposed highway-expansion project. The Jamaica National Heritage Trust; the University of the West Indies, Mona Campus; and Leiden University conducted rescue investigations to assess and document the archaeological deposits within the proposed project impact zone.

Building on previous studies of the White Marl assemblage, a sample of sherds from domestic and ritual deposits were analyzed for microbotanical remains. Well-preserved starch grains and phytoliths revealed the use of maize (*Zea mays*), llerén (*Calathea* sp.), yam (*Dioscorea* sp.), yautía (*Xanthosoma* sp.), manioc (*Manihot esculenta*), and ginger (Zingiberaceae). These findings expand the growing and diverse archaeobotanical database for Jamaica specifically and the Greater Antilles generally.

Kievman, Hayley (University of Utah), Jack Broughton (University of Utah), Alexandra Greenwald (University of Utah), Alan Leventhal (Muwekma Ohlone Tribe of the San Francisco Bay Area), and Charlene Nijmeh (Muwekma Ohlone Tribe of the San Francisco Bay Area)

[268] *Faunal Remains at Mánni Húyyú Muwékma Yatiš Túnnešte-tka*

This paper reports faunal remains associated with interment at a Pleistocene-Holocene Transition (PHT) site (Mánni Húyyú Muwékma Yatiš Túnnešte-tka) in central California. Specimens include a range of fauna, with elk (*Cervus canadensis*) as the primary large-bodied mammal. Well-preserved teeth from coyote (*Canis latrans*) and elk found at the site, along with intrusive rodent remains, may inform environmental reconstructions, contributing to a greater understanding of PHT ecosystems.

Kievman, Hayley [268] see Burns, Gregory

Kilby, David [41] see Lohse, Jon

Killingsworth, Finn [155] see Powis, Terry

Kim, Donghee (Seoul National University), Taylor Hermes (University of Arkansas), Christina Warinner (Harvard University, Cambridge; Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany), and Choongwon Jeong (Seoul National University, Seoul, Republic of Korea)

[315] *Ancient Genomes Illuminate the Origins and Dispersal of Cattle across Central Asia and Eurasian Steppe*

The domestication and spread of cattle brought major transformations to human societies. Central Asia and the Eurasian Steppe have long served as critical corridors for the movement of people, technologies, and livestock, including cattle. However, the scarcity of ancient cattle genomes from this region has left several key questions unresolved: the origins of Inner Eurasian cattle, dispersal routes of early East Asian cattle, and the admixture dynamics of cattle during the Late Bronze and Iron Ages. To address these questions, we produced and analyzed 184 ancient bovine genomes from 51 archaeological sites across Inner Eurasia spanning the Chalcolithic to the modern period. Key archaeological horizons represented include the Afanasievo, Sintashta–Andronovo, and Scythian/Saka cultures, as well as sites from the Inner Asian Mountain Corridor (IAMC). We designed a 974K Single Nucleotide Polymorphism (SNP) panel applied to 184 capture libraries alongside 68 whole genomes from well-preserved specimens. By integrating these genomic data across regions and periods, we explore how cattle mobility and admixture were linked to human movement, trade, and pastoral practices across Inner Eurasia.

Kim, Donghee [315] see Ho, Percy Hei Chun

Kim, Habeom (UC Berkeley)

[301] *How Does Landscape Experience Impact People's Choice of Movement? A Computational Modeling Approach Using Middle Mumun (2900–2400 cal BP) Settlement Data in Korea*

This study investigates how past human migration may have been influenced by landscape experience using computational modeling approach based on Middle Mumun settlement data in Korea from 2900 to 2400 cal BP. By simulating a large number of pedestrian travel pathways near settlement locations, the study models how past settlers may have perceived the potential for movement freedom laden in their settlement landscape in their everyday lives. The resulting model is then compared against existing radiocarbon data to test how landscape experience may have influenced past migrant's choice on where they move to establish new villages. The study's result suggests that landscape experience played a significant role in past people's decision on where they choose to move and how they choose to interact with foreign environment and

other cultures.

Kim, Jangsuk [76] see Olzbayar, Gankhuyag

Kim, Nam [293] see Tripoli, Simone

King, Adam (SCIAA), and Terry Powis (Kennesaw State University)

[293] *Exploring the Organization of Granite Tool Production at Pacbitun, Belize*

Through excavation and survey over the past decade, we have identified a granite working community on the western periphery of Pacbitun—an ancient Maya city in the Belize River Valley of west-central Belize. Occupied since the early Preclassic period, it reached its peak during the Late Classic when its residents created as many as 22 platforms for producing granite manos and metates. Located just 8 km from Mountain Pine Ridge granite quarries, Pacbitun was uniquely positioned to take advantage of abundant granite sources. The scale of tool production far outweighed the needs of Pacbitun's residents, suggesting granite workers produced tools for external trade networks. In this paper we explore the organization of granite working and hypothesize that a community of independent specialists produced granite tools. In some cases, individual granite workers produced on platforms located adjacent to isolated residential mounds, while in others granite workers positioned multiple production platforms in the vicinity of multi-mound plazuela groups. We think both represent production at the household level but at households of varying sizes. We further suspect granite tool production was organized at higher social levels but have yet to determine whether that occurred at the center or on the periphery.

King, Artemis [115] see Connell, Mary

King, Kylie (Getty Research Institute), and Payton Phillips Quintanilla

[317] *"The computer has entered the house of the Muse": Everett Ellin, from Dealer to Digital Humanist*

Everett Ellin (1928–2011) occupies a distinctive place at the intersection of the mid-century art market and the early development of the digital humanities. As a dealer, he helped bring Abstract Expressionism to the West Coast through his Los Angeles galleries, which operated between 1957 and 1963. Like other dealers of the period, Ellin appealed to vanguard collectors by displaying Mesoamerican objects alongside modern and contemporary painting and sculpture—an approach rooted in a visual sensibility he subsequently took to the Guggenheim Museum as Officer-in-Charge of Public Affairs. Ellin was also among the first to envision how digital technologies could transform access to cultural heritage, which led him to found the Museum Computer Network in the late 1960s involving institutions like the Museum of the American Indian, Museum of Primitive Art, Brooklyn Museum, and Museum of Modern Art. Ellin presciently quipped in 1969, "At long last, the computer has entered the house of the Muse and—like the man who came to dinner—the guest is here to stay." Fifty years on, digitization remains uneven, many records are still incomplete, and information loss persists. Ellin's legacy invites reflection on both the transformative potential and enduring limitations of technology in the stewardship of cultural objects.

King, Roslynn [271] see Gusick, Amy

King, Stacie (Indiana University)

[215] *Making and Becoming in Oaxaca's Past and Present*

In this paper, I reflect on the areas where my own scholarship in Oaxaca has been enhanced and improved by Rosemary's interventions. From my early work in coastal Oaxaca on social identity, households, childhood, and craft production, Rosemary made an indelible impact through her teaching, writing, and mentorship. Her influence is visible in work that has continued to emerge from that project years and decades later. As I embarked on my faculty career teaching archaeology, Rosemary's research remains popular among my students, especially work on childhood, monumentality, chocolate, figurines, and sex and gender. My research project in Nejapa, Oaxaca, of the last two decades examines Postclassic-colonial transitions, ruins, and the vicissitudes of political authority and economic exchange networks in multiethnic landscapes. I find myself consistently returning to Rosemary's writings and thinking about social identity and the practices that make

and create people and communities. Rosemary's greatest inspiration, however, has been her advocacy and fight for better conditions for students, Indigenous scholars and communities, ancestors on museum shelves, and for the people of Honduras, and her defense of education, and especially the arts and humanities. It is here that I have learned the most and have far to go to emulate.

Kinkopf, Katherine (North Carolina State University)

[216] *Archival Bioarchaeology as Methodology for Disability Justice Work at the Pacific State Hospital in Pomona, California*

The Pacific State Hospital was operated by the state of California in the early twentieth century to incarcerate people who were deemed “feeble-minded” through a eugenic-motivated social program. Today, the property is owned and managed by Cal Poly Pomona, a California State University in Los Angeles County, and is slated for flex-commercial development. Due to a number of factors stemming from the university's administration, proposals for noninvasive archaeological and geophysical investigation have been repeatedly denied. In this presentation, I share my experiences practicing an “archival bioarchaeology” to disrupt the expedient and unscrupulous development of this sensitive dark heritage site. This perspective draws on bioarchaeology's deep engagement with human biology and anatomy, with archive-based documentary analysis to address questions that may seem beyond the traditional scope of bioarchaeology. Here, I read autopsy records, death records, and patient case files within bioarchaeological and critical disability studies theoretical frames to trace how some human remains traveled from the Pacific State Hospital through Southern California's medical-industrial complex, while others may remain in clandestine burials still on the property today. This work bridges gaps in state narratives around disability and eugenics to help inform further Disability Justice-oriented organizing around the site's protection and memorialization.

Kinnaird, Tim [178] see Dorison, Antoine

Kirby, Daniel [170] see Wu, Nikki

Kirby, Julia (Columbia University), and Severin Fowles (Barnard College, Columbia University)

[179] *The Ceramic Economy of San Antonio del Embudo in Northern New Mexico, 1725–1900 CE*

During the eighteenth century, in the wake of the Pueblo Revolt, a series of land grant communities were established in northern New Mexico, on the far northern edge of the Spanish Empire. Dwarfed demographically by surrounding Pueblo villages, vulnerable to military attack by newly empowered equestrian groups like the Comanche and Ute, and entirely lacking support from the colonial government, such communities were precarious, faulting affairs whose survival entirely depended on relationships with Indigenous groups. In this poster we examine these relationships of dependency through an assemblage of eighteenth- and nineteenth-century pottery excavated in the plaza community of San Antonio del Embudo, using stylistic and compositional analyses to trace evolving patterns of exchange between the village and its Tewa, Tiwa, and Athapaskan neighbors.

Kirch, Patrick [342] see Perez, Elizabeth

Kirgesner, Samantha (Ohio State University), Rebekah Strong (Ohio State University), Mark Hubbe (Ohio State University), and Abraham Badu-Tawiah (Ohio State University)

[45] *Paper Spray Ionization Mass Spectrometry for Protein Residue Artifact Analysis*

Residue analysis can be used in archaeological research to identify organic remains on artifacts, including lithics, to better understand the use of artifacts as well as life habits of past societies. In particular, the extraction and detection of blood proteins from stone has been a focus of debate and various methods have been developed, with no consensus on their effectiveness and accuracy (Craig et al. 2020). In this paper, we introduce the use of paper spray mass spectrometry to the detection and identification of protein residues from archaeological material. This experimental set-up includes the analysis of protein residuals on archaeological substrates, such as chert and ceramics. Blood protein standards of hemoglobin and myoglobin were placed on various substrates which were then extracted and analyzed using wax printed filter paper triangles through mass spectrometry. To elucidate the impact of matrix effect on detection of blood proteins,

whole blood was applied to substrates for analysis. A limit of detection was performed to understand the minimum concentration of protein that is detectable by this method. While this research is entirely experimental, it represents a first step toward improving methods to detect the presence and preservation of ancient proteins in the archaeological record.

Kirk, Scott (Auxilio Management Services; University of New Mexico), William Balco (University of Wisconsin-Milwaukee), and Michael Kolb (Metropolitan State University of Denver)

[123] *Norman Castles in Western Sicily: A Comparison of the Castles at Salemi and Monte Bonifato with the Norman Castles of England*

In AD 1061, five years before the Norman Conquest of England, Robert Guiscard and his brother Roger besieged the Sicilian port city of Messina and began the slow process of taking the island from the Fatimid Empire. Though less studied than their northwestern focused kinsman, Norman rule over Sicily resulted in a rich blend of Greek, Arabian, North African, and northern European culture evident in almost all aspects of twelfth- and thirteenth-century Sicilian life. Yet, while this blending of cultures is apparent in Norman seats of power, such as the Palazzo Reale and the Zisa in Palermo, the typical Norman castle had much more in common with the castles of the northwestern Europe than it did with other architectural displays on the island. This poster focuses on two castles in the Trapani Province of modern Sicily, those of Salemi and Monte Bonifato, illustrating the Norman design at their core, comparing them to the castles of England, and demonstrating, in the case of the Salemi castle, how the additions made to castles in Sicily diverge from those made to the castles of the British Isles.

Kirk, Scott [124] see Mooney, Sean

Kitchel, Nathaniel (Salve Regina University), Brandi MacDonald (Archaeometry Laboratory, University of Missouri Research Reactor), Jonathan Lothrop (New York State Museum), and Barry Keegan (New York Archaeological Society)

[93] *Rocks and “Territory” at the Edge of the Ice Age World: Elucidating Fluted-Point Period Land-Use Practices in Northeastern North America through Lithic Raw Material Characterization*

Distinctive fine grained red (and green) stone is common in late Pleistocene fluted-point period archaeological sites in North America east of the Hudson and south of the St. Lawrence rivers (the Northeast). This stone is often attributed to the Munsungun Lake geologic formation located in far northern Maine yet found frequently at sites hundreds of kilometers from this source. These identifications are supported by various techniques linking artifacts from fluted-point period sites to the Munsungun Lake formation. While other potential sources of knappable red (and green) stone are now known just outside the Northeast and may have occasionally been misidentified as arising from the Munsungun Lake formation ongoing “petroarchaeological” work in the region is helping illuminate and refine the territories used by fluted-point period foragers. These refinements open new avenues to understand human landscape use during the fluted-point period in the Northeast in far greater detail. This in turn, helps elucidate the social and ecological factors that allowed the fluted-point period foragers of the Northeast to inhabit and traverse the vast territories they did. Here we report updated identifications of red stone from fluted-point period sites in the Northeast using neutron activation analysis (NAA) discussing how these refined identifications shift understandings of fluted-point period land use.

Kitchel, Nathaniel [148] see Rockwell, Heather

Kitterman, Anya [74] see Duke, Daron

Klarich, Elizabeth (Smith College)

[40] *Beyond the Northern Basin: Pukara and Their Late Formative Neighbors (200 BC–AD 200)*

Pukara, an early population center in the northwest Titicaca Basin, is well-known for its monumental terraces and sunken courts, iconographically rich polychrome pottery, and diverse (and highly mobile) stone sculptures. Based on architectural and stylistic similarities, Pukara is often characterized as a later phase of

the Middle Formative Yaya-Mama Religious Tradition and as influential to the later Middle Horizon Tiwanaku culture in the southern basin. However, due to the challenges of conducting research projects that cross national borders and to the numerous geographical and temporal gaps in our regional databases, we often accept these characterizations without digging deeply (and critically) into the archives, museum collections, and more recently collected datasets. As we celebrate the 100th anniversary of its “scientific discovery” by Peruvian scholar Luis E. Valcárcel, it seems appropriate to consolidate datasets from Pukara, from recently investigated northern basin sites, and from contemporaneous sites in the southern basin in order to evaluate the existing evidence for Late Formative interaction, influence, and population movement in the circum-Titicaca basin. Proposals for future research collaborations to address major gaps in regional datasets are briefly outlined.

Klarich, Elizabeth [343] see Haas, Randy

Klassen, Sarah (CU Boulder), Alison Carter (University of Oregon), Linda Nicholas (Field Museum of Natural History), and Gary Feinman (Field Museum of Natural History)

[102] *From Temples to Waterworks: Quantifying Governance along the Autocratic–Collective Spectrum at Angkor, 802–1431 CE*

This study applies a quantitative governance framework to the Angkorian Empire, adapting metrics originally developed for cross-cultural analysis by a Coalition for Archaeological Synthesis working group sponsored by the Amerind Foundation to examine shifts along a collective–autocratic axis over more than six centuries. Drawing on archaeological, epigraphic, and architectural datasets, we assess governance through two dimension, concentration of power and citizen inclusiveness, using robust proxies for fiscal financing, bureaucratic organization, monumental and ritual investment, and socioeconomic inequality. We construct an autocracy index for successive historical phases, from Angkor’s consolidation under Jayavarman II to its fifteenth-century political transformations, and evaluate its relationship to demographic trends, urban infrastructure development, religious change, and external political pressures. The results reveal dynamic governance patterns: periods of intensified centralization and elite control coincide with shifts to external resource extraction, expansion of patrimonial bureaucracies, and large-scale ceremonial construction, while more collective phases are associated with integrative water management projects and local temple patronage. By demonstrating the applicability of the autocracy index to a single, well-documented polity, this study offers a model for high-resolution, diachronic analysis of governance and reframes narratives about political authority in premodern Southeast Asia.

Klaus, Haagen (George Mason University)

[337] *Andean Bioarchaeology at the Crossroads: Ethical, Methodological, and Theoretical Considerations on the Future of Skeletal Studies in Peru*

Andean bioarchaeology today occupies a space between many traditional approaches and transformative new questions and methods. This paper considers ethical, methodological, and theoretical topics relevant to central Andean bioarchaeology. First, increasingly sincere engagement and exchange with local descendant communities and stakeholders is vital, as is the concept of co-creation of knowledge and long-term commitments to the mentorship and training of Peruvian students. Second, over the last 20 years, we have unevenly applied an array of new methods in archaeology and bioanthropology. Considered here are the potential future roles of 3D scanning, expansion of isotopic and aDNA approaches, transition analysis in age estimation, transdisciplinary approaches (e.g., osteoimmunology), and high-resolution mass spectroscopy/multimodal imaging in the study of biological stress. Our theoretical and thematic landscapes can productively focus on contextualized studies of later-life consequences of early life stress, climate change and resilience, socioeconomic inequality, embodiment, and application of a syndemic approach to ancient health. These topics collectively stand to help propel our field into the coming decades and establish Andean bioarchaeology as a cutting-edge exemplar in the field globally. ***This presentation features images of human remains with permission granted by local descendant and stakeholder communities.

Klaus, Haagen [337] see Jankowski, Maegan

Klemmer, Amy [84] see Herdt, Reagan

Klessig, Barbara (Cal Poly Humboldt)

[269] *Tools of the Trade: Continuing the Investigation of Textile Production on the Macedonian/Roman Site of Crnobuki Gradishte, Macedonia*

Globally, textiles are one of the most common threads we have with other humans. Humans have developed an intricate and amazing process in textile production that includes a variety of tools, materials and technologies. The tools used in ancient textile production may seem simplistic and crude but are feats of ingenuity and creativity. As ancient textiles themselves do not survive as frequently as other artifactual evidence, the tools used and the technologies behind them are a critical resource for understanding the processes involved in textile production. This presentation explores the ongoing investigation of textile production at the site of Crnobuki Gradishte, located near Bitola, Macedonia, by examining new evidence from the 2025 excavation season, along with the previous seasons of 2023 and 2024. The data collected includes lidar and GIS imaging, physical data of the tools and analysis of their distribution, along with soil analysis, which can help to determine whether the materials used were sourced locally or brought in from outside the community. This research looks to support the proposition that textile production was a large contributor to the economy of Crnobuki and gain a better understanding of gender roles in Pre-Roman Macedonia.

Kliejunas, Mary [73] see Fetterhoff, Alex

Knell, Edward (California State University, Fullerton), Erik Otárola-Castillo (Purdue University), Daron Duke (Far Western Anthropological Research Group), Matthew Hill Jr. (University of Iowa), and Lauren Slowinski (Fullerton)

[319] *Advances in Western Stemmed Tradition Projectile Point Typology: A Geometric Morphometric Analysis of Paleoindian Age Mojave Desert Lake Mohave and Silver Lake Points*

A prior geometric morphometric (GM) analysis of 96 Paleoindian age, Western Stemmed Tradition (WST) Lake Mohave and Silver Lake projectile points from California's Mojave Desert had three key results: (1) Lake Mohave and Silver Lake points were stylistically distinct and separated with 95% accuracy; (2) some Lake Mohave points had uncharacteristic short stems, representing a quantifiable typological variant from other parts of the Great Basin; and (3) evidence for both types exist that indicates resharpening was allometric, modular and integrated. The previous study excluded the problematic "neckless" Lake Mohave points present in the Mojave Desert. Here we include 25 "neckless" specimens that expands our sample to 119 points and provides a fuller accounting of morphological, and potentially typological, variability. This project also incorporates a hafted retouch index analysis that allows us to better assess typological implications of resharpening. GM studies provide an advanced method to increase the accuracy of WST point type identifications against meaningful variation in technological investment and functional tolerances.

Knutson, Sara Ann

[215] *Marble Vases, Silver Coins: Reflections on Social Archaeology from Mesoamerica to the Islamic World*

In this presentation, I will reflect on the influence of Rosemary Joyce's enduring academic legacy on my own work, an anthropological archaeologist working in and with the Islamic World, as one of her former PhD students at UC Berkeley. While carved marble vases from the Ulúa Valley in northwestern Honduras indeed emerged in a different, distinct social archaeological context than the Arabic-inscribed silver 'Abbāsid coinage minted in Baghdad, Iraq, these materials are more or less contemporaries. There are, however, additional and perhaps unexpected resonances between these materials that emerge from our respective, yet connected, anthropological analyses. I will reflect on these anthropological resonances through perspectives from social archaeology, new materialism, museum anthropology, cultural heritage, anthropological theory, and pedagogy.

Kocer, Jacqueline (University of New Mexico)

[166] *Borderland Identities and Shared Practices: Gallina (1100–1300 CE) Communities in the Northern New*

Mexico Highlands within the Ancestral Puebloan World

This paper examines Gallina (1100–1300 CE) ceramic production practices as a lens for understanding identity and interaction in the Ancestral Puebloan Southwest of northwestern New Mexico. Situating Gallina identity has posed challenges for archaeologists, especially since no modern tribal group has yet claimed descent. How Gallina communities functioned internally and interacted along the cultural frontier with the broader Ancestral Puebloan world offers insight into their cohesion and affiliations with neighboring groups. Were the Gallina a cohesive group bound by shared practices, and how did they advertise their identity among themselves and to surrounding groups? Using the frameworks of Communities of Practice and Communities of Identity, I analyzed ceramics from four villages dating to the mid-1200s: two in the Western Zone near Chaco/Aztec and two in the Eastern Zone heartland. Results show technological uniformity in low-visibility attributes such as clay recipes and forming techniques, supporting a Gallina-wide community of practice. In contrast, highly visible attributes reveal layered identity signaling. Painted black-on-gray motifs formed a cohesive symbolic repertoire, while variation in utility ware designs expressed smaller-scale affiliations, possibly tied to kin groups. This case demonstrates how multiscale analyses of pottery illuminate social boundaries and community organization in borderland contexts.

Koenig, Viola (Cultural and Social Anthropology/Altamerikanistik)

[260] *Tracing Origins: The First Analysis of the Middle American Research Institute's Donor Files and Some Unexpected Findings*

The Middle American Research Institute's (MARI) collection at New Orleans began with its founding director William E. Gates's private library and expanded over the years with a focus on archaeological and ethnographic materials. Today, the collection remains relatively modest—under 50,000 objects—but gained early international recognition through its distinctive focus on Middle America. Expansion accelerated under Franz Blom (1926–1940), who systematically cultivated donors, as documented in the “Donor Files.” My survey of donor biographies and object provenances reveals patterns typical of port-city collections alongside unique features that define MARI's holdings. Geographical sources largely reflect proximity to Middle America and US regional influence, yet include contributions from Louisiana and adjacent states—stemming from ties to Tulane University and the international scholarly networks of MARI's directors. Additionally, the political dynamics during MARI's formative years—before, during, and after World War II—triggered unusual collection movements toward New Orleans and produced further unexpected outcomes. This presentation explores these historical trajectories and the surprises revealed by the collection's provenance.

Koenig, Viola [97] see Pacheco Silva, Monica

Kohanski, Neil (ERM), Rachel Holland, and Jeffrey Rosa Figueroa (California State University, Los Angeles)

[206] *The Use of Ethnography to Infer Manuport Deposition in Maya Cave Artifact Assemblages*

Manuports are generally defined as unmodified or minimally modified items transported to the area where they are recovered during archaeological investigation. Linda A. Brown has identified a class of discarded items that she calls *sacra*, which were collected from a variety of contexts because of their presumed possession of ritual power. *Sacra* may include not only unmodified items such as crystals that are traditionally considered as manuports but also actual artifacts that are collected, transported, and repurposed for a ritual function. It is well accepted that cave artifact assemblages are ritual assemblages, but little attention has been paid to the extent that they may be formed by this larger, more inclusive idea of manuports. This paper uses ethnographic sources to explore this possibility.

Kohler, Paige (Michael Baker International)

[300] *The Motivating Factors of Different Stakeholders for Preserving Archaeological Heritage in Jordan*

This study investigates the preservation of cultural heritage and the significance of archaeological heritage in the country of Jordan, integrating methods from sociocultural anthropology to address an archaeological problem. This study asks the question, “How is value placed on archaeological heritage in the country of Jordan?” I expected to find that tourism and its contribution to the economic stability of Jordan is the single greatest motivator for the protection and preservation of archaeological heritage in Jordan, being that

cultural tourism makes up a major portion of Jordan's productive economy. To answer this question, this study examines the role of local communities in archaeological research and the cultural resource management industry to determine if benefits to the community are associated with this, and, if so, how involving local communities in archaeology can promote a greater understanding of their past, thereby facilitating these benefits. Interviews were conducted with study participants at four distinct locations across Jordan. In conclusion, this research finds that tourism is the most widely shared motivating factor of different stakeholders for preserving archaeological heritage in Jordan, rather than a sense of connectedness to archaeological heritage itself.

Kohlstedt, Kyle [195] see Goebel, Ted

Kohut, Lauren (Winthrop University), BrieAnna Langlie (Binghamton University), Matthew Velasco (Cornell University), and Antonella Rivera Tames

[213] *Defending the Valley: Achomani and Shifting Landscapes in the Pre-Inka Colca Valley, Peru*

Despite more than 60 years of archaeological research in the Colca Valley, Peru, little is known about Late Intermediate period (LIP; 1100–1450 CE) settlement in the region. In this paper, we present preliminary findings from our excavation and mapping of the site of Achomani, an elaborate and strategically located fortified settlement in the central Colca Valley. Our results indicate that Achomani was inhabited primarily in the LIP and abandoned during—or even before—Inka colonization of the valley. As such, our results provide a unique lens into pre-Inka settlement dynamics and lifeways in the region. Excavations in 2025 yielded carbonized plant remains and evidence of culinary activities that will shed light on subsistence during a period of climate instability. Ceramic remains also indicate use of the site during the Middle Horizon, a poorly understood period in the valley. We situate these findings within regional LIP settlement patterns. This case study highlights how agropastoral practices influenced settlement locations and security concerns in the Colca Valley. Architectural investment and strategic control of economic resources at Achomani complicate narratives of the LIP that focus on flattened social hierarchies and drought-induced food shortages.

Kohut, Lauren [204] see Angell, Emma

Kolb, Charles

[266] *Introduction: Ceramics and Archaeological Sciences*

The “Ceramics and Archaeological Science Symposium” (C&AS) is the outgrowth of Ceramic Ecology symposia held at 35 AAA annual meetings beginning in 1986 as a tribute to Professor Fred Matson. As the numbers of archaeologists have dwindled at the AAA, the organizers relocated the symposia, renamed C&AS, to the annual SAA meetings to emphasize ceramic archaeological sciences and physicochemical analyses. The Society for Archaeological Sciences (SAS) sponsors us. The aim of our sessions is to foster interdisciplinary and international dialogues among scholars and practicing potters alike. One goal is to push the boundaries of what can be understood about ceramics, “the people who made and use them” (Matson 1965). We welcome a variety of papers, especially those that focus on the presentation of new or improved methods and techniques for the analysis of ceramic materials; evaluate data derived from the application of these methods in archaeological, ethnoarchaeological, art historical, ethnographic, and experimental settings globally; use diverse theoretical approaches to answer a variety of questions, ranging from exchange and provenance to the economic organization of production and consumption; and focus on the theory and practice of ceramic analysis and interpretation, especially in collaboration with a variety of communities.

Kolb, Michael [123] see Kirk, Scott

Kollias, G. Van (Brandeis University)

[161] *Obsidian Exchange and Lithic Tool Production in the Middle Usumacinta River Region: A View from the Frontier*
Perspectives from interstitial communities are critically important for understanding regional exchange networks that linked, and circumvented, ancient Maya polities. Over two decades of research in the Usumacinta River Region of Chiapas, Mexico, conducted by the Proyecto Regional Arqueológico Sierra del Lacandón, Proyecto Paisaje Piedras Negras-Yaxchilán, and the Proyecto Arqueológico Busiljá-Chocoljá have

contributed significantly to our understanding of decentralized exchange economies in the region. This research serves as a robust foundation for further studies into ancient Maya production and exchange practices as they articulated regional centers with hinterland communities. Presented here are the results of an obsidian distributional analysis from El Jovero, Chiapas, Mexico, a community positioned at the geographic and social frontier of three major ancient kingdoms: Piedras Negras, Lacanja Tzeltal-Sak Tz'i', and Yaxchilán. This study is contextualized within a broader understanding of obsidian production and exchange practices in the region and includes reanalysis of materials from previous investigations at major and minor centers and hinterland communities. Functionalist and behavioral-technological analysis of lithic tool production at El Jovero serves to identify specialized production locations and a formal tool assemblage that further contextualizes this communities' sociopolitical interactions within regional trade networks.

Kooiman, Susan (Southern Illinois University Edwardsville), Sean Dunham (US Forest Service), Eric Drake, and Matthew Boyd (Lakehead University)

[350] *Small Sites, Big Insights: Investigations of Interior Hunter-Gatherer Sites in the Northern Great Lakes*

Hunter-gatherers lived in various environments and utilized different resources on a seasonal basis, so sites of various sizes, functions, and locations were vital components of their settlement and subsistence patterns. In the Northern Great Lakes, large coastal aggregation sites have traditionally been the focus of research due to their size and perceived importance, but these sites only provide a partial picture of the annual subsistence round. Recent archaeological and paleoecological investigations have targeted small Woodland period sites located near interior lakes in the Indian River drainage in the Upper Peninsula of Michigan, with a focus on locales that may have supported wild rice (manoomin) in the past. These sites, occupied after 1000 BCE, were important for late summer manoomin collection and processing, cold weather hunting, and/or other important subsistence activities, and they provide insight into human adaptations to social and environmental changes. Deeper explorations of these oft-ignored interior locales help us better understand the full breadth of settlement and subsistence patterns of local populations in the past.

Koontz, Rex (University of Houston)

[86] *Narrativity and Iconicity in the Later Art of El Tajín*

This presentation examines the evolution of elite art styles in north-central Veracruz, Mexico, from the Classic through Early Postclassic periods, advocating for a regional perspective within the broader Classic Veracruz tradition. Focusing on the decline of El Tajín, I analyze how elite artistic practices adapted to changing power dynamics. As the city waned, narrative strategies in art shifted, employing new compositional formats to reflect evolving elite relationships. Artists incorporated new materials and visual influences from the Mixtequilla and Maya regions. Concurrently, the audience for these pronouncements became more restricted and moved away from the ceremonial core. Following El Tajín's collapse, smaller regional sites further transformed elite art, readopting an iconicity reminiscent of the Early Classic period. This paper argues that these changes in artistic form and narrative strategy stand in relationship—although not always direct and transparent—to the sociopolitical transformations of the region during and after El Tajín's decline.

Kornfeld, Marcel

[127] *Hell Gap Site: An Introduction*

Hell Gap site, Wyoming, is a stratified Paleoindian site, its sediments encasing one-third of the earliest North American prehistory. The original investigation of the site unraveled Great Plains Paleoindian chronology but added significant data beyond that single goal. At the time of original investigations of the 1960s, Hell Gap provided a glimpse into Paleoindian campsites and lifeways thereby providing data beyond that recovered from the better known bison kill sites. The purpose of my introduction is to provide a background for the digital studies of various aspects of the site, as well the continuing virtual preservation efforts at Hell Gap.

Kornfeld, Marcel [229] see Peterson, Michael

Korzow, Kristine (Texas A&M University), Ryan Kennedy (Indiana University), Peter Sauer (Indiana University), Jonathan Schlesinger (Indiana University), and Sathira Deegala (Texas

A&M University)**[83]** *Taking Archaeology to Tusk: American Manufactured Ivory Piano Keys as a Window to Human-Elephant Interactions in the Nineteenth Century*

Animal commodification is central to human-animal interactions in the recent past. While elephant ivory has been a commodity for thousands of years, the ivory trade increased dramatically with European colonial projects in Africa and Asia beginning in the sixteenth century. Initially a luxury material, ivory came to be used as raw material for myriad objects. By the nineteenth century the trade had reached truly industrial scales as tusks flowed to European and American workshops and factories. Industrial objects including piano keys, billiard balls, and cutlery handles drove entire industries in places like Ivoryton, Connecticut. This expanded ivory trade of the nineteenth century heavily impacted elephants, leading to significant population declines for African and Asian elephants. Despite the wealth of items and records, research remains limited on historical ivory items. This project builds on that limited work, by looking specifically at American manufactured products. We present data from a combined approach of ZooMS; stable isotopes of carbon, nitrogen, oxygen, and strontium; aDNA; and morphometrics on ivory piano keys. This multi-method approach allows us to reconstruct production pathways, trade routes for raw ivory, and elephant biogeography during the time frames that modern elephant populations were being molded into the remnant populations of today.

Korzow, Kristine [84] see Bernard, Hayden

Korzow, Kristine [79] see Kennedy, Ryan

Korzow, Kristine [315] see Tashmanbetova, Zhuldyz

Kosakowsky, Laura [104] see Aimers, Jim

Kosiba, Steve (University of Texas, San Antonio)**[33]** *"Dwelling in Equivocation": Andean Archaeology and Indigenous Knowledge*

With this presentation, I discuss the relevance of the term "equivocation," as described and deployed in the influential ethnographic texts of Catherine Allen, Marisol de la Cadena, and Guillermo Salas Carreño, to the understanding of indigenous Andean cultural practices, landscapes, and knowledges. The term "equivocation" works as an explanatory and methodological tool. It is explanatory in that it refers to a situation in which the anthropologist and their interlocutor can recognize that they are both talking about the same object of observation, but the ontological grounds by which they understand that object are incommensurable. It is methodological in that anthropologists who employ the term are choosing to critically deconstruct instances of equivocation rather than attempting to interpret them in accordance with the theory du jour. With the intention of prompting a discussion rather than promoting a research design, I reflect on whether and how archaeologists can dwell in equivocation, such as, for example, the incommensurability of the data from absolute dating methods and the knowledge of Indigenous communities who root places and landscapes in times immemorial. I engage in self-critique, reflecting on equivocations and epistemological gulfs that have arisen in my collaborative archaeological, ecological, and ethnographic research in Cusco, Peru.

Kotegawa, Hirokazu (Universidad Nacional Autónoma de Honduras)**[312]** *Técnicas de la producción escultórica monumental y la sociedad olmeca*

La sociedad olmeca se considera como una sola sociedad sólida, fuerte e influyente. Pero ¿es la verdad? Por lo menos, pensamos que hubo las capitales San Lorenzo y La Venta, aunque ocuparon esta función en distintos momentos. Además, cuando observamos las características sociales y culturales de ambas capitales, podemos ver ciertas similitudes por ser solo una sociedad, pero también podemos encontrar diferencias entre ellas, por ejemplo, distintas maneras de la deformación craneal representada en las figurillas de barro. En esta ponencia vamos a enfocarnos a las técnicas de la producción escultórica monumental en distintas partes de la zona nuclear olmeca para examinar si hubo diversas técnicas o sólo una técnica empleada para producir este objeto relevante social, económica e ideológicamente. Si se encuentran diferentes técnicas escultóricas monumentales, es probable que la sociedad olmeca no fue una sociedad homogénea ni tenía una fuerte cohesión. Si fue así, tal vez, se dividieron en varios grupos sociales, aunque se unieron para formar una sociedad. Probablemente esta fragmentación social de los olmecas influyó a las sociedades posteriores de la misma región de la costa sur del Golfo de México, ya que las sociedades del período clásico de la región

muestran distintas características.

Kotegawa, Hirokazu [262] see Aguilar, Maria

Kovacevich, Brigitte (University of Central Florida), and Jessica Clark

[99] *Updates on Obsidian from the El Mirador Region of Guatemala*

This paper will discuss the preliminary results of analysis of over 50 obsidian artifacts excavated from ritual structures and plazas in the site center of El Mirador. This will include weights, measures, and technological analysis, as well as chemical compositional analysis using a handheld X-ray fluorescence device. The results will be compared to previous findings by past projects.

Kovacevich, Brigitte [99] see Callaghan, Michael

Kovacevich, Brigitte [99] see Clark, Jessica

Kovacevich, Brigitte [99] see Guzman, Rodrigo

Kovacevich, Brigitte [99] see Sherwood, Chloe

Kovach, Tanner, Nikoloz Tushabramishvili (Ilia State University), Boris Gasparyan (National Academy of Sciences of the Republic of Armenia), and Daniel Adler (University of Connecticut)

[336] *Testing Hypotheses for the Origins and Relatedness of Early Upper Paleolithic Laminar Technologies in the Armenian Highlands and Southern Caucasus*

While archaeological research in the Armenian Highlands and southern Caucasus over the past three decades has greatly expanded our understanding of the Upper Paleolithic in this region, the origin of the Upper Paleolithic there, and its relationship to industries in adjacent regions, remains unclear. Some researchers have proposed similarities with Levantine technocomplexes such as the Early Ahmarian, while similarities to and differences with the Aurignacian have both been claimed as well. We look to move beyond approaches to comparison that rely on named stone tool industries as the comparative unit of analysis. Instead, we approach the problem of relatedness at an assemblage level. We synthesize lithic attribute data from over 35 Early Upper Paleolithic assemblages spanning the Armenian Highlands and southern Caucasus, the Levant, the Zagros, and Europe. Continuous and categorical attributes of laminar blanks are compared using univariate and multivariate techniques, including traditional hypothesis tests, dimensionality reduction, and distance-based clustering analyses.

Kovach, Tanner [336] see Gill, Jayson

Kovacs, Evan [77] see Mazza, Alba

Koyiyumptewa, Stewart [277] see Bernardini, Wesley

Koyiyumptewa, Stewart [335] see Coffey, Grant

Koyiyumptewa, Stewart [314] see Sinensky, R. J.

Kracht, Emily (University of California, Santa Barbara), Neill Wallis (Florida Museum of Natural History), and Reniel Rodriguez Ramos (Universidad de Puerto Rico)

[173] *Local and Long-Distance Ceramic Exchange in Early Puerto Rico: A Comparative Sourcing Study*

This study reports the results of recent neutron activation analysis (NAA) of 60 ceramics recovered from Santa Elena and Toita sites in Puerto Rico. Both are large village sites with long occupational histories (circa AD 400–1500s). Data are evaluated using bivariate and multivariate analyses to identify trends in compositional variability, style, and potential source areas and trade routes. These results are also compared to data from a previous NAA study on the island, from the sites of Maisabel and HU-7, as well as from previous studies of eastern Dominican Republic and St. Croix assemblages, resulting in a total sample of 500 ceramics evaluated here. These sites together cover a broad range of ceramic styles, occupational histories, and diversity of settlement types, ultimately representing a comprehensive evaluation of eastern Puerto Rico and its connections to the broader region. Results indicate that intraisland exchange was happening at greater

levels than previously assumed, and connections between islands may have been prolific as well. The importance of open data and reevaluating prior analyses is also emphasized.

Kracinski, Andrew [179] see McKinney, Madelyn

Kral, Joseph (Institute for Canine Forensics)

[90] *Preserving the Legacy of the Hawthorne Chinese Cemetery*

The Hawthorne Chinese Cemetery has long suffered from neglect and damage, reflecting a broader history of marginalization. This presentation will examine the cemetery's historical context, the physical impacts it has endured over time, and the efforts undertaken to mitigate these impacts. The town of Hawthorne was established in 1881, and by 1883 was thriving due to local mining interests. Chinese residents, both immigrant and US-born, played a central role in the town's development and success. The cemetery's first documented burial occurred in 1892, with the last known burial in 1913. Many descendants later became prominent business owners in California and Nevada, further contributing to regional history. This paper will review previous archaeological studies, including Historic Human Remains Detection (HHRD) K9 surveys conducted in 2008, as well as present findings from new HHRD K9 surveys. Together, these data provide important insights into the cemetery's preservation, while also honoring the contributions and legacy of the Chinese community in Hawthorne.

Kramer, Karen (University of Utah), and Russell Greaves (Office of Contract Archeology, University of New Mexico)

[95] *Are Mixed Economies a Long-Term Strategy, Not a Transition? Evidence That Farmers and Hunter-Gatherers Diversify Economic Portfolios to Retain Their Subsistence Base*

Mixed economies rather than signifying a transition from one form of subsistence to another is reconsidered as a long-term, stable strategy. Using the examples of two contemporary small-scale societies, Pumé hunter-gatherers and Maya farmers, we ask whether diversifying economic portfolios is a strategic means to retain a foraging and a farming subsistence base, respectively. For Pumé foragers, despite incorporating some manioc as a fallback food, they retain a hunting and gathering livelihood. In this context, the economic returns to foraging provide equal or higher returns compared to horticulture, and the social costs are too great to abandon foraging. For Maya farmers, when faced with new market options, some families redouble their efforts in traditional agriculture. Other families switch to wage laborer and commit to buying rather than growing food. However, the majority maintain a foothold in both livelihoods, investing in both food and market production. Maya households with diversified economic portfolios are larger, wealthier, have broader social networks, and recover faster from climate and economic shocks. Both examples evidence that diversification is a key buffering strategy to mitigate uncertainty. Findings have implications for the long-term stability of mixed economies in both the ethnographic and archaeological records.

Krasinski, Kathryn (Adelphi University), Brian Wygal (Adelphi University), and Angela Wade (Chickaloon Native Village)

[169] *Annie Nicolai Wickersham Homesite (ANC-04904): A Multicomponent Site, Chickaloon River, South-Central Alaska*

The ANW Homesite is a multicomponent archaeological site in Ts'it'ohhna' (Matanuska Valley), south-central Alaska, that preserves material evidence of Dene life before and during the early decades of direct colonial contact in the Matanuska watershed including the Prohibition era. It is the site of survival, perseverance, and resilience in the face of alcoholism, violence, coal extraction, and colonialism. Within Chickaloon Native Village's (CNV) ancestral territory fewer than 11% of sites on the National Register of Historic Places are related to Dene peoples. Through this CES project, partners from CNV and Adelphi University in New York joined to identify and investigate the birthplace of Chickaloon's Clan Grandmother and inadvertently uncovered buried cultural components including a rich lithic workshop, activity area, and segments of the Chickaloon River Trail. The site demonstrates substantial and sustained habitation by ancestral Dene peoples along the Chickaloon River for at least 5,500 years.

Krasinski, Kathryn [195] see Wygal, Brian

Krause, Samantha (Texas State University), Marieka Brouwer Burg (University of Vermont), Fiona Haverland (University of Vermont), and Eleanor Harrison-Buck (University of New Hampshire)

[35] *The Unique Hydrology of Coastal Belize Wetlands: Revisiting Early Work and Providing New Context to an Ancient Maya Wetland System*

The Maya site of Chau Hiix is located on the Western Lagoon within the complex coastal wetlands of the Crooked Tree Wildlife Sanctuary (CTWS) in northern Belize. This extensive inland wetland-lagoon system is a protected RAMSAR Wetland of International Importance. The unique and complicated hydrology of the Western Lagoon in the CTWS is still influenced today by modifications created by the Maya and their Archaic ancestors. Since 2019, the Belize River East Archaeology (BREA) Project has conducted excavations within the CTWS to better understand the human management of this heavily modified wetland-lagoon system. Previous investigations conducted over two decades ago by Dr. Anne Pybrun identified a linear earthen feature just east of Chau Hiix in the southern end of the Western Lagoon, which she identified as a berm and dam. In the summer of 2024, our team relocated this artificial berm-like feature and conducted initial test excavations, establishing the dates of this feature's construction and use and cross-examining whether it functioned as a dam and influenced flood regimes and stream flow. This paper presents our ongoing investigations of this large earthwork using a combination of geoarchaeological techniques and remote sensing.

Krause, Samantha [204] see Goedert, Tristan

Krigbaum, John [298] see Brinn, Andrew

Krigbaum, John [221] see Rubinatto Serrano, Juliana

Krizek, David (Riley Engineering), and Bernadette Carra (WestLand Engineering & Environmental Services)

[37] *Working with Tribal Communities, a Project Proponent's Perspective*

Community engagement and the importance of culture and history to Tribes are not topics covered in engineering college. Yet, during dozens of tribal engagements over the years, it has become clear that a person's background does not dictate their true value in meaningfully collaborating with Tribal communities on matters related to development and cultural impacts. What matters is the project proponent representative's commitment to actually listening to Tribal concerns and to valuing their recommendations for avoidance, mitigation, sensitivity training, or alternative ways to help Tribes and their needs. Development and impacts on archaeological sites and landscapes can be an anxious and fraught time, but treating Tribes respectfully from the start and actually taking the time to develop meaningful relationships can help everyone in the long run. Westland's Tribal Monitoring Program, working with Tribes and project proponents, has developed strategies and protocols to ensure tribal voice during the course of development projects from planning to post-project updates. This presentation discusses some of those methods and the importance of tribal engagement from the perspective of a project proponent.

Kroot, Matthew (Arizona State University), Matt Peeples (Arizona State University), Angela Garcia-Lewis (SRP-MIC Cultural Preservation Program), Christopher Schwartz (S'edav Va'aki Museum), and Alissa Ruth (Arizona State University)

[169] *Schools, Tribes, and Governments Partnering Together: The Arizona State University Field School at S'edav Va'aki in Phoenix, Arizona*

Student field training in archaeology is an important issue for not just instructors but future employers, regulators, and communities impacted by archaeological practices. It is essential that instructors teach students about the ethics of archaeology as a social practice and the regulatory context of their archaeological work, as well as field methods. In this paper, we present the design process, structure, and outcomes of the ASU field school at S'edav Va'aki—a partnership between the university, Tribal Historic Preservation Offices of the Salt River Pima-Maricopa and Gila River Indian Communities, and the city of Phoenix. We review the outcomes for these collaborative entities including student learning about field methods, ethics, and legal regulations, historic preservation, and Tribal participant experiences. We also

discuss the challenges faced and the anticipated results that we will systematically track over time to determine if the course is producing transformative impacts in archaeological practice. Finally, as part of our model of consistent collaboration over the long-term that uses an iterative design paradigm to produce a continuously responsive course, we describe ongoing revisions to our class intended to increase student engagement while conducting independent work and increase the decision-making power of nonacademic collaborators in the project.

Kroot, Matthew [353] see Jacobs, Babalola

Krug, Andrew (University of Oklahoma), Matthew Pailes (University of Oklahoma), and Guadalupe Sanchez Miranda (ENAH)

[88] *Emerging Insights on the Late Archaic Early Agriculture Period in the Sierra Madre Occidental Mexico*

This presentation will summarize insights gained from recent fieldwork at Archaic and Early Agriculture period sites in Sonora, Mexico, with a focus on the foothills of the Sierra Madre Occidental. This region is critical for evaluating the spread of cultigens, lithic technologies, and other elements of cultural identity that evidence persistent parallels on both sides of the Sierra Madre Occidental throughout much of the Archaic and Early Agriculture period. There is now increasing evidence that the Sierra Madre Occidental region was not only periodically visited on logistical forays by adjacent groups but also a locus for early experiments with increased periods of sedentism. Rather than a marginal environment with topographical characteristics that impeded occupation, the region may have been a key locus in the transition from highly mobile hunters and gatherers to farming societies that facilitated the transmission of technology and identity across Northwest Mexico.

Krupa, Krystiana (University of Illinois Urbana-Champaign), Teresa Palomares (Illinois State Archaeological Survey), Georgia Abrams (Illinois State Archaeological Survey), and Tamira Brennan (Illinois State Archaeological Survey)

[218] *Processes and Challenges of NAGPRA Reviews of Legacy Collections: An Example from the University of Illinois*
Legacy collections present unique challenges for compliance with the Native American Graves Repatriation Act (NAGPRA), including incomplete contextual data, missing institutional records and field documentation, and the impacts of long-term deferred maintenance on collections condition and accessibility. These issues are particularly problematic during preparation for Tribal review, when clarity, stability, and transparency are essential. This paper discusses how such challenges were addressed by the Illinois State Archaeological Survey (ISAS) in collaboration with the University of Illinois Urbana-Champaign's NAGPRA Office during preparation for NAGPRA review of early to mid-twentieth-century legacy collections. We present the roadmap developed prior to review, including steps, strategies, and problem-solving approaches, and emphasize the importance of making collections available for in-person Tribal review. These challenges are not unique to ISAS; many institutions face similar issues, particularly when NAGPRA responsibilities are spread across multiple departments, units, or museums within a single institution. We offer recommendations for best practices in preparing legacy collections for NAGPRA review and considerations for facilitating collaborative reviews between Tribal and institutional representatives.

Krupa, Krystiana [218] see Bishop, Katelyn

Krus, Anthony (University of South Dakota), Lauren Norman (University of Kansas), Sarah Unkel (University of Kansas), Justin Tackney (University of Kansas), and Anne Jensen (University of Alaska Fairbanks)

[155] *Birnirk-Thule Social Relationships Reexamined In Light of a Context-Appropriate Chronology for the Alaska North Slope*

Excavations on Alaska's North Slope from the 1950s to 1960s revealed a concentration of ancestral Iñupiat/Inuit sites, including four sites with a series of interments associated with the Birnirk culture. More recently, excavations at the Nuvuk site unearthed younger burials associated with the late ancestral Iñupiat (the Thule and precontact Iñupiat cultures). Together, these sites provide a detailed record of ancestral Iñupiat mortuary activity in the North Slope of Alaska. We present new radiocarbon dates on Birnirk

individuals from four sites and model these together with previously published dates to establish the timing of mortuary practices. The results suggest that interments at these sites broadly date to the centuries around the start of the first millennium AD, more recent than previously estimated. Birnirk activity on the North Slope likely lasted less than a century, with no evidence that sites were sequential. The models further suggest that both Birnirk and Thule groups were interring their dead in the same region, often at the same time, complicating a direct Birnirk to Thule transition. We discuss the implications of this shift toward a younger Birnirk age on interpretations of ancestral Inupiat interaction in the region and on interpretations about Thule emergence and expansion.

Kuboyama, Waka

[307] *What Makes the Celtiform Pendants Even More Sophisticated? Material Analysis at the Denver Art Museum*
Celtiform pendants from precolumbian Costa Rica (500 BCE–900 CE) are characterized by skillfully decorated carvings on jade and greenstones. A human or animal face is carved on the poll of a celt, while the bit is not decorated, leaving the edge clear. Decoration with perforation, string-sawing, and painting make the celtiform pendants even more sophisticated. The presenter discusses about the gold stuff found on the perforated holes of celtiform pendants in the Denver Art Museum, which can be interpreted as a residues of gold painting. Recent results of technological replication of celtiform pendants will also be presented.

Kuhn, Elora (Temple University)

[112] *Ethics of Care: Comparative Approaches to the Ethical Stewardship of Human Remains in US and European Museums*

This research examines the ethical climate surrounding the stewardship of human remains in anthropological museums, particularly American and European institutions. Human skeletal remains increasingly occupy a contested space in museum practices, having long been incorporated into collections as scientific specimens, educational resources, and objects of curiosity, primarily acquired from marginalized and “exotic” communities. Their treatment raises profound ethical questions related to repatriation, cultural sensitivities, provenance, acquisition practices, decolonization, destructive analysis, and the consent—or lack thereof—of descendant or affiliated communities. Institutional responses to these concerns vary greatly. This project investigates how museums across the Atlantic navigate these concerns by examining how they store, preserve, research, teach with, and display human remains, as well as the ethical guidelines and curatorial discretions governing such activities. Particular attention is given to the distinct historical, cultural, and legal contexts that shape contemporary museum practices, the degree to which current debates and critiques inform their responses, and whether professional guidelines influence policies and attitudes. This comparative study highlights the areas where Western museums diverge in their ethical frameworks, contributing to broader discussions on responsible stewardship and the evolving role of museums in negotiating scientific, cultural, and ethical claims over the dead.

Kuijt, Ian (Univ. of Notre Dame), George Milner (Pennsylvania State University), Anna Prentiss (University of Montana), Chip Wills (University of New Mexico), and David Webster (Penn State University)

[263] *Global Archaeological Baby Boom Scenarios? Reconsidering Widely Accepted Population Estimates for New and Old World Prehistoric “Mega Sites” and Villages Packed with Architectural Remnants*

Increases and declines in human population levels are fundamental parameters when modeling population pressure, carrying capacity, and impacts on environments at local, regional, and global levels. Developing robust and explicit means of tracking population increase and decline, however, is methodologically complicated. Drawing on research in multiple areas and periods of the New and Old World, we argue that in many classical cases, including at Mississippian sites in the Eastern Woodlands, Pueblos of the American Southwest, and Neolithic sites in the Near East, estimates of archaeological populations were intuitively developed largely in the 1940s–1980s and now stand as unquestioned historical narratives. The attractive framing that greater settlement area and monumental architecture reflect more people is central to these narratives, especially for those seduced by the bigger is better ethos of our modern world. Yet archaeologists have largely failed to explicitly operationalize this relationship when generating population estimates, and they rarely consider long-term village organizational histories or ethnographic analogs. There is an urgency to

reconsider how many people really lived in New and Old World settlements that purportedly reflect population explosions (i.e., prehistoric Baby Booms) before developing arguments for what took place, how it happened, and why it did so.

Kuma, Dela

[103] *From Japan to West Africa by way of Europe Networks: Fragments of Tastes in Mid-Nineteenth- and Twentieth-Century Ghana*

Ceramics recovered from archaeological sites in southeastern Ghana offer a glimpse into the entangled networks of global exchange that connected West Africa to Asia and Europe during the nineteenth and twentieth centuries. Among these finds are fragments of Japanese and European wares whose presence in hinterland Ghana reflects the layered movement of goods, people, and tastes across oceans. This paper discusses the circulation and deposition of these ceramics to highlight how imported materials were integrated into local contexts of consumption and meaning.

Kupprat, Felix, Alejandra Chávez Herrerías, Debra Walker, Kathryn Reese-Taylor (University of Calgary), and Armando Anaya Hernández (Universidad Autónoma de Campeche)

[355] *Settlement Units from the Postclassic Period (AD 900/1000–1550) in the Surroundings of Calakmul, Mexico*

It has long been assumed that the Bajo El Laberinto region in southern Campeche, Mexico, which includes the massive ancient city of Calakmul, was almost completely abandoned toward the end of the Terminal Classic period (AD 800–900/1000) and that there was no significant reoccupation until the boom of the chewing gum industry in the twentieth century. Evidence of human activities dated to the Postclassic or early colonial period in that region has often been interpreted as faint remnants of pilgrimages or sporadic incursions that did not lead to the establishment of formal settlements. However, through lidar mapping we identified several Postclassic villages in the region, which are surrounded by defensive moats and feature domestic structures that are visible on the surface. By means of additional high-resolution topographic surveys, as well as excavations in various features, we have confirmed the preliminary dating of these settlements and approach the way of life of their inhabitants through their material remains.

Kupprat, Felix [35] see Anaya Hernández, Armando

Kupprat, Felix [55] see Farquharson, Kyle

Kupprat, Felix [44] see Horseman, Grace

Kupprat, Felix [277] see Lockett-Harris, Joshua

Kupprat, Felix [341] see Longstaffe, Matthew

Kupprat, Felix [36] see Reese-Taylor, Kathryn

Kurnick, Sarah (University of Colorado Boulder), David Rogoff (Independent Scholar), and Nicholas Puente (University of Colorado Boulder)

[275] *A Domestic Locus of Fishing Net Manufacture at Punta Laguna, Yucatán, Mexico*

Insights from the spatial turn, and particularly Henri Lefebvre's triad of modes of spatial production, usefully distinguish between conceived and lived spaces and thus encourage scholars to consider how individuals retrofit aspects of the built environment to suit their own needs. Similarly, insights from the ontological turn, including new materialist perspectives, assemblage theory, and ruination studies, emphasize the dynamic and ever-changing nature of space as it is coproduced by relationships between humans, other-than-human entities, time and materials. In this presentation, we combine insights from the spatial and ontological turns to analyze one specific assemblage at the archaeological site of Punta Laguna, in the Yucatán peninsula of Mexico. Architectural and artifactual data suggest that Late Preclassic Maya peoples initially constructed a mound, dubbed Jalapeño, to serve as a temple. Yet Postclassic peoples modified this mound into a domestic locus of fishing net manufacture, and transformed existing ceramic sherds into net sinkers: Project members recovered such net sinkers in association with a spindle whorl, obsidian blades, and utilitarian Postclassic ceramics. How then do excavations associated with Jalapeño assemblage speak to broader understandings of Postclassic Maya domestic spaces, Postclassic Maya fishing net manufacture, and architectural classification more generally?

Kurnick, Sarah [274] see Fladd, Samantha

Kurota, Alexander [212] see Critz, Tuesday

Kusimba, Chapurukha [81] see Atogu, Michael

Kusimba, Sibel [81] see Atogu, Michael

Kuxhausen DeRose, Katrina (University of California Los Angeles)

[214] *Provenance under the Microscope: Materials Analysis and Ethical Practice*

Materials analysis is an increasingly central, and sometimes controversial method in provenance research. Scientific investigations can offer data about an object's history that archival records cannot, including chronology, manufacturing techniques, raw material sources, and pathways of circulation. However, materials analysis also raises questions about consent and authority to permit examination or sampling, especially when the process is destructive. The community of origin may regard invasive testing as a violation of object integrity, while academic institutions may prioritize knowledge production. This paper examines these tensions through case studies from UCLA's Waystation Initiative, where I received training in materials analysis to deepen my understanding of its technical capacities and limits, and to critically engage with its ethical dimensions. A wedjat eye plaque, erroneously tagged as "20th century," illustrates the challenges of using scientific methods like pXRF, XRD, or metallography to determine a modern or ancient manufacture date and the ethical stakes of authentication. A belt buckle with a decorated glass inlay, purported to be from "Lebanon," further highlights how materials analysis like pXRF or XRD may clarify provenance while also complicating restitution. Materials analysis must not be approached as neutral evidence but as a practice shaped by institutional responsibility and ethics.

Kvamme, Kenneth (University of Arkansas)

[336] *Quantitative Characteristics of the Spatial Structure of Percussion Flaking Debris Scatters*

The structure of open-air lithic scatters has been likened to a "fried egg," with more material centrally located and density falling-off with distance. Yet, beyond this observation, the high degree of spatial structure inherent to flaking debris scatters has been surprisingly neglected. Using experimental and archaeological debitage scatters and R language software, the exponential family of probability distributions is shown to closely model flake dispersal patterns, including flake size distributions, with correlations between observed and expected outcomes frequently exceeding $r = 0.95$. With smaller flakes generally located centrally, as size increases flakes tend to disperse more widely. This phenomenon forces other patterns: cortex-bearing flakes, which correlate with larger sizes, tend to spread farther. These patterns hold with different lithic material types, but the extent of dispersal varies with coarser-grained materials spreading more widely than vitreous stone types. Using experimental data these tendencies hold under various hammer types and stances (standing, squatting), but all affect dispersal range. Potentially, knapper stance, facing, and left- or right-handedness may be inferred from scatter mappings. Many of these patterns persist in palimpsests of multiple flaking episodes as shown through computer simulation and by actual surface mappings of archaeological distributions in a Rocky Mountain high desert landscape.

Kwak, Seungki (Kyungpook National University), Gui-Hyung Kang (Mokpo National University Museum), and Gyoung-Ah Lee

[220] *From the Field to the Table: Procuring, Cooking, and Serving in Farming-Fishing Settlements at Gungokri (2400–1600 BP) in Southwestern Korea*

From the Early Iron Age to the Three Kingdoms period, elevated technological innovation and cultural interactions spurred social dynamics at the dawn of the historical era in Korea. The Gungokri site, located at the southern tip, represents this transition vividly. Trading with other entities in Korea as well as in China and Japan was part of the elite strategy to gain fame and authority. Farming became more productive with iron plowing tools, contributing to everyday meals, rituals, and tribulations in the later period. Well-preserved organic remains in shell middens represent that fishing and shellfishing continued to play a key role in food supply. Vessels and food preparing equipment at Gungokri diversified through time, representing developing culinary art. All kinds of miniature pottery at Gungokri may indicate ritualistic practice of food offering. Particularly, a miniature clay oven and indoor oven facilities indicate the importance of cooking in

rituals and the improvement of cooking through the Proto-Three Kingdoms and Three Kingdoms periods. This presentation aims to capture the changing food procuring and culinary practice and to understand how foodways impact social changes and vice versa. We will examine food residues from cooking and serving vessels based on both archaeobotanical and isotopic signatures.

Kyorlenski, Georgi (Denver Art Museum)

[207] *Liminal Figures: Gender and Denver Art Museum's Inca Anthropomorphic and Camelid Figurines*

Ancestral Andean peoples understood the world as constituted by sets of binary, reciprocal, and complementary opposites that sought to come together in order to form harmonious wholes. Gender was one aspect of this dualistic view. While some (e.g., *apu* and *pachamama*) had fixed gender, most other things were free to assume any gender identity to enter into a complementary, harmonious relationship with an opposite. The Inca understood this concept was critical to the Andean worldview and used it in their imperial expansion. Tahuantinsuyu, too, switched gender roles in its relationship with conquered communities to legitimize their rule by claiming it was a happy union of two opposites. Beyond gender dynamism, the rigid binary is challenged as Andean dualism placed the greatest importance on the very merging of two things that formed a whole. Thus, the most potent entities occupied the liminal space at the very point of merger. This paper examines camelid and anthropomorphic Inca figurines from the Denver Art Museum's collection that exhibit both gender identities to highlight the role of gender in the Inca world. As materiality is a critical component of their identity, we will also present XRF data on the chemical composition of the metal figurines.

LaBelle, Jason (Colorado State University)

[348] *Folsom on the Edge: Exploring Interaction, Adaptation, and Biogeography in North America's Late Pleistocene*

The Folsom complex is well known in the Great Plains, the Rocky Mountains, and the Southwest of North America. Over the past century, archaeologists in this core area have excavated and dated many bison kills and camps. While smaller quantities of Folsom tools have been documented on the edges of this core, these peripheral areas have received limited discussion. In this introductory symposium paper, I introduce factors potentially producing this spatial pattern. It could relate to the Folsom culture itself, with tool distribution linked to exploration, migration, or trade across territorial boundaries. Another possibility is that the marginal pattern is related to biogeography, where Folsom technology is a functional adaptation for hunting bison, thus determining the distribution of Folsom tools. Finally, the spatial pattern might be a result of sampling bias, where some areas have been more extensively investigated than others, especially in places where Late Pleistocene deposits are exposed near the surface. Exploring this variation is essential to better understanding what the Folsom record represents from cultural, behavioral, and sampling perspectives.

Lacoste Jeanson, Alizé (Universidad Nacional Autónoma de México), Josué Lozada (Instituto Nacional de Antropología e Historia), Ileana Echauri (Instituto Nacional de Antropología e Historia), and Luis Fernando Núñez Enríquez (Escuela Nacional de Arqueología e Historia)

[161] *Mortuary Spaces and Ritual Cycles during the Classic Maya: Yaxchilán-Pa'Chan and Palenque-Lakamha'*

This communication examines how mortuary spaces materialized relationships between bodies, architecture, and cosmology at two major Classic Maya sites: Yaxchilán-Pa'Chan and Palenque-Lakamha'. At Yaxchilán, osteobiographical and archaeothanatological analysis of 52 individuals shows patterned distributions linked to longevity, skeletal wear, and cultural practices of body modification. These findings suggest that certain structures functioned as terminal residences—architectural loci where the dead embodied remembered life trajectories and remained present as seeds for future renewal. At Palenque-Lakamha', analysis of burials of the central area and ethnoarchaeological data reveals that other terminal residences, or mausoleums, such as the Temple of the Inscriptions and Temple XIII may have functioned as humanized sacred mountains and portals to the underworld. Here again, those interred were not passive remains but figures whose embodied presence sustained cosmological cycles. Practices such as reopenings, sequential depositions, and prolonged interaction with the dead reinforced their mediating role between celestial, terrestrial, and chthonic planes. By bringing these cases into dialogue, we want to emphasize how mortuary architecture of the Classic Maya in Chiapas encased not only bodies but living presences that animated ritual, memory, and cosmic balance.

Lafayette, Linsie (Archaeological Conservancy)

[23] *Site Preservation on Private Land*

In the United States, archaeological resources on private land are generally considered the private property of the landowner, leaving them vulnerable to development, agricultural activities, or looting. As a nonprofit, the Archaeological Conservancy acquires private land with significant archaeological sites that are at-risk of development or vandalism through donation or purchase. This presentation provides an overview of the Conservancy and highlights several preserves in the western region including how they became part of our assemblage of protected sites.

Laffoon, Jason [221] see Michaelis, Tamara

Lai, Zoe, and Chris Merritt (Utah State Historic Preservation Office)

[30] *Tai Shan to Terrace: Understanding the Diet of Chinese Railroad Workers in Terrace, Utah*

This paper studies the diets of nineteenth-century Chinese railroad workers at the Central Pacific Railroad's town of Terrace, Utah. Using newly found and categorized archaeological evidence—such as fish bones and botanical remains—from excavations in 2025, the research reconstructs the provisions that the workers had and how these resources reflected and compared their lives between contemporary railroad settlements. This project demonstrates how cultural eating habits, like transportation methods, transpacific trade, and adaptation to new lifestyles and environment can give deeper insight on the daily life and experiences of Chinese workers in the United States.

Lalo Jacinto, Gabriel [157] see Hernandez, Isabella

Lalo Jacinto, Gabriel [157] see Paris, Elizabeth

Lam, WengCheong (Chinese University of Hong Kong)

[209] *Beyond the Periphery: Reenvisioning Lingnan and the Central Plains in Han Networks through Bronzes*

Lingnan, located at the southern frontier of the Han empire, has often been characterized as a passive periphery, positioned only at the receiving end of material flows from the core. Yet the diversity and quantity of artifacts, particularly bronzes, challenge this conventional view. This paper combines network analysis with recent metallurgical studies to reassess Lingnan's place within imperial networks. Network analysis of bronze distributions identifies a “jumping” linkage, in which Lingnan centers were directly connected to major northern metropolitan hubs while bypassing other centers in between. Metallurgical results further reveal significant variation between Lingnan bronzes and those from Hunan, especially during the Eastern Han period, suggesting that bronze production and circulation in Lingnan followed distinctive trajectories rather than merely replicating neighboring practices. Taken together, these findings complicate the traditional “down-the-line” delivery model of core-to-periphery diffusion. Instead, they indicate a more dynamic and complex pattern, where Lingnan maintained direct and sometimes preferential ties with the central core. By highlighting both distributional and technological dimensions, this study repositions Lingnan as an active participant in the Han Empire's networks, challenging assumptions about the passive role of frontiers and offering a new perspective on center–frontier interactions in early imperial China.

Lambers, Karsten (Augsburg University)

[340] *Geospatial Approaches to Geoglyph Research: The Potential of Predictive Modeling and Remote Sensing*

Geoglyphs are a distinctive element of the archaeological record along the western coast of the Americas. Yet we are only beginning to understand how widespread this phenomenon was, as previously unknown geoglyph sites continue to be reported from California to Chile. Despite recent progress in geoglyph recording and mapping, there is still much unrealized potential in applying current geospatial approaches to predict, detect, and record the location of geoglyph sites. Based on a review of recent research in archaeological predictive modeling, remote sensing, and surveying, this paper presents new perspectives for geoglyph research aimed at creating a more comprehensive record of existing geoglyph sites as a basis for analysis and interpretation, as well as preservation and management. While automated approaches to site detection in remote sensing data have recently entered the realm of geoglyph research, predictive modeling is still underused despite well-documented patterns of geoglyph relationships to their natural and cultural environments. Combined geospatial approaches, in which remote sensing is used to test modeled predictions of geoglyph site locations, seem especially promising. A fundamental requirement for the success of these

techniques is an Open Science framework in which archaeological, geospatial, and environmental data are shared, combined and reused freely.

Lambert, Christine (PanGIS Inc.)

[90] *Exploring the Use of Forensic Canines in the Detection of Late Precontact (1000–300 BP) Cremains for Applications in Archaeology*

Cultural resource management (CRM) projects often encounter buried human cremains during excavation within or adjacent to cultural sites. Archaeologists use several remote sensing methods to locate intact burials, but these methods cannot identify scattered and fragmented cremains. Historic Human Remains Detection (HHRD) dogs can noninvasively detect the scent of human cremains, but pinpointing the exact location of the bone fragments is not always possible. In this study, the Institute of Canine Forensics (ICF) conducted a blind search in areas positive for human cremains, as confirmed by archaeological site records, excavation during a CRM project, ethnographic accounts, and prior ICF dog alerts. I investigate how the dogs' alert behaviors and the handlers' interpretations of those behaviors can help us visually depict scent patterns in areas containing cremains. Overlapping dog alerts suggest a high likelihood of accurate scent detection, even when archaeologists fail to identify individual bone fragments. Combined with additional lines of evidence, overlapping alerts from multiple dogs and surveys aid in the identification of cremation sites and their general context. Results of this study will allow archaeologists to increase the probability of identifying and avoiding sensitive Native American cremation sites when incorporating forensic canine surveys into CRM project designs.

Lamoureux-St-Hilaire, Maxime

[87] *Fasting from Digging, Slowing Down for Community Engagement*

We archaeologists love to dig. Thanks to methodological shifts broadly credited to postprocessual thinking and the likes of Hodder, McAnany, and Atalay, we are also learning to appreciate the importance of careful community engagement. This presentation builds on lessons from decades of community-engaged archaeology and loops in a recent call—by scholars like Caraher and Flewellen—to further slow down the archaeological process. Every heritage community is distinctly related to its cultural landscape. I first advocate for archaeologists to practice ethnography to get to know the heritage communities with whom they work for at least a few years before even beginning to dig. And yes, this does mean pausing formal excavations, which can be challenging for our archaeological appetite. But the advantages of slow archaeology are truly wonderful. I then summarize the positive outcomes of the Dolores Slow Archaeology Program that, after four years of ethnographic fieldwork, has built a solid community foundation to pave the way for a sound, caring, and sustainable archaeological project. Finally, our role as archaeologists is here reframed through the lens of ethnoarchaeology—suggesting we should all be prepared to fully harness the tools of cultural anthropology for the betterment of our discipline.

Landau, Kristin (Chronicle Heritage), Christopher Hernandez (Loyola University, Chicago), Adalid Martinez Perdomo, Fredy Rodriguez Mejia, and Londin Valasquez

[352] *Proyecto ConSapos: Collaborative Archaeology and Heritage Conservation at Los Sapos, Honduras*

The Proyecto Antropológico de la Conservación de Los Sapos (Proyecto ConSapos) explores innovative approaches to archaeological research, conservation, and community collaboration at the UNESCO World Heritage site of Copan, in western Honduras. Los Sapos is a carved rock outcrop associated with ritual and identity among Chortí communities past and present. Building on earlier archaeological work in the Copan region (2011–2016), Proyecto ConSapos has advanced through three phases: (1) documenting local interpretations of Los Sapos through interviews and a community workshop, (2) targeted excavations to recover contextual data, and (3) advanced digital recording using photogrammetry and terrestrial lidar, generating high-resolution 3D models for research and public dissemination. Our findings reveal multiple cultural understandings of the site, ranging from associations with fertility and childbirth to ritual sacrifice, while also identifying new evidence on the geological and material basis of the carvings. We have collaborative developed conservation measures with Indigenous residents of the La Pintada and San Rafael communities, including protective fencing, visitor walking pathways, and sustainable community-led stewardship. By combining archaeological science, digital heritage methods, and local knowledge, Proyecto ConSapos

demonstrates how heritage conservation can function as a participatory and sustainable practice, ensuring both academic insights and meaningful benefits for descendant communities.

Landau, Kristin [283] see Fovenyessy, Stephanie

Langdale, Jennifer [105] see Taylor, Samantha

Langlais, Mathieu [93] see Bocquel, Manon

Langlais, Mathieu [93] see Delvigne, Vincent

Langlie, BrieAnna [204] see Angell, Emma

Langlie, BrieAnna [213] see Kohut, Lauren

Lanoë, François (University of Arkansas), Joshua Reuther, and Gerad Smith (University of Alaska)

[313] *Interior Alaska Lifeways in the Waning Early-Middle Holocene Grasslands*

The Early–Middle Holocene transition (~9–7 cal kyr BP) in interior Alaska sees the gradual replacement of an open, steppe-like habitat, by the boreal forest. In this paper we explore how people responded to this major environmental change from the perspective of the Hollembaek's Hill and North Gerstle Point sites, located near Delta Junction. Zooarchaeological data show the continued dietary importance of elk, waterfowl, and salmon, in line with prior subsistence practices. We discuss how these data may reflect adaptive responses to environmental pressures and/or deliberate cultural choices.

Lansche, J. (Indiana University)

[212] *Life Elevated: Ancestral Pueblo Towers in Utah's Fremont Frontier*

Fremont occupations in the northern periphery of the American Southwest have long been challenged by scholars, who debate whether to define them as horticulturalist communities integrated into the broader Ancestral Pueblo cultural matrix or as hunter-gatherer groups more akin to Great Basin subsistence models. Decades of shifting definitions have left Fremont research both internally fragmented and largely overlooked. The result is a topic that remains mired in vague subregional variations across the Colorado Plateau, many corners of which remain disproportionately understudied. While the Fremont horizon is no doubt a permeable cultural membrane that absorbed traits from both farmers and hunter-gatherer groups, recent scholarship has returned to earlier interpretations of this northern periphery as a productive frontier rooted in and contributory to the continuous Ancestral Pueblo world. This paper examines the phenomena of masonry tower sites in prehistoric localities north and east of the Abajo Range in Beef Basin and Alkali Ridge, and along the Colorado River and Green River tributaries of eastern Utah. Their distribution and features highlight the agency and adaptations of these enigmatic structures, which played a significant role in sustaining distinctly Pueblo themes that define the Ancestral Pueblo cultural matrix in the Southwest.

Lantes-Suarez, Oscar [272] see Fábregas Valcarce, Ramón

Lantow, Vivian (University of Florida), and Gabriel Prieto (University of Florida)

[45] *Beyond Bone: Featherwork, Mass Sacrifice, and Soft-Tissue Analysis*

Perishable media, especially feathers, have remained understudied. As preserved soft tissue, feathers provide rare but crucial evidence for reconstructing ritual and social practices. Excavated from a Chimú mass sacrifice site (2018), the collection of featherwork at Pampa la Cruz (PLC), Huanchaco, Peru, provides an opportunity for object-centered analysis of feather use, techniques, and ritual meaning beyond osseous remains. The PLC featherwork can be divided into three categories: headdresses, tabards, and plumes. Headdresses, constructed with layered feathers and plant materials, signified authority and identity. Tabards incorporated densely attached feathers, creating vivid surfaces designed for ceremonial display. Plumes, lighter and more flexible, emphasized movement and spectacle during performance. These technical distinctions reflect both functional and symbolic considerations, while underscoring the skilled labor of Chimú feather crafters. Particularly significant in the Huanchaco collection is the predominance of macaw feathers. Archaeological

evidence suggests their close association with mass sacrifice rituals involving children and young adult females between CE 1220 and 1300/1350. Their vibrant coloration, requiring long-distance procurement, imbued them with symbolic potency, linking feathers to mass sacrificial ceremonies. By foregrounding feathers as preserved animal tissue, this study demonstrates how analysis of soft, non-osseous remains illuminates cultural values, ritual performance, and interregional exchange within the Chimú world.

Lara Bolaños, Guillermo [161] see Schnell, Joshua

Lara Maldonado, Isabel, Samantha Lattin (Idaho State University), Jules Churba-Pyzer, Spencer Moore (Idaho State University), and Rachel Sutherland

[114] *Who Receives a Face? Digital Facial Approximation for Individuals of Unknown Origin*

Historically, Digital Facial Approximations (DFA) have been reserved for individuals of cultural renown or retroactively defined “importance.” In contrast, individuals of lesser social visibility, particularly those represented in anatomical skeletal collections at institutions of higher education, have rarely received the same investment of time or resources in approximating their physical appearance. This pattern reflects the priorities of historians and bioarchaeologists, who have typically dedicated DFA efforts to noteworthy figures due to limited resources, heightened public interest, and the availability of historical or cultural narratives surrounding those individuals. This project challenges that precedent by applying established methodologies to create facial approximations for individuals of unknown origin housed at Idaho State University. Cranial measurements and morphology are used to develop biological estimates that guide the digital sculpting process, during which soft tissue depth markers are applied to construct the facial approximation. By extending DFA to individuals of unknown origin, this project highlights the educational value of humanizing teaching collections while underscoring the ethical responsibility to acknowledge and care for all individuals within skeletal collections, not only those deemed historically significant.

Larios, Jennifer (University of Michigan)

[94] *Post-collapse Commoner Communities at Jalieza, Oaxaca, Mexico*

This paper will outline the results of three seasons of excavation at Cerro Tecolote, which is located within the greater Jalieza archaeological site in the Valley of Oaxaca. As the Zapotec State collapsed, the Valley of Oaxaca underwent major settlement reorganization largely marked by a reduction in urbanization. The settlement at Cerro Tecolote, Jalieza, was one of the largest settlements, if not the largest settlement in the Valley of Oaxaca in the immediate post-collapse era. This paper seeks to address why Jalieza was able to maintain a relatively large and seemingly interdependent commoner community in the Valley of Oaxaca during an era marked by decentralization and a decline in urbanization.

Larkin, Karin (University of Colorado Colorado Springs), and Fawn-Amber Montoya (James Madison University)

[169] *Community-Engaged Scholarship at the Ludlow Tent Colony National Historic Monument*

While archaeologists have been conducting community engaged scholarship at the Ludlow Massacre Tent Colony site for decades, recent work revealed new insights into community memorial activities over time necessitating updated interpretive materials. The site commemorates a battle between striking coal miners and the Colorado National Guard which culminated in the destruction of the tent colony by fire. The event resulted in the deaths of dozens of people including two women and 11 children who were killed in a cellar. The United Mine Workers of America (UMWA) erected a monument and preserved that cellar sometime after 1918. Recent stabilization work on the cellar revealed previously unknown information sparking a larger conversation about making improvements to the visitor experience at the site. The UMWA has long desired updated and expanded interpretation and improved facilities. A recent NPS American Battlefield Protection Program grant has allowed us to engage a wide variety of stakeholders in a master planning process for these improvements. This presentation addresses that process including focus groups with local and descendant communities, oral histories with lineal descendants, and collaboration among universities, unions, historic preservation specialists, and landscape architecture firms. Here we discuss our process, challenges, and successes.

Larreina, David [339] see Maldonado, Blanca

Larrick, Dakota (University of Arizona, Laboratory of Tree-Ring Research)**[165]** *Paquimé's Timber Industry in Context: Innovation and Tradition in the Southwest*

In 1966, Stuart Scott produced the first dendroarchaeological study in Mexico by constructing a multi-century tree-ring chronology from beams collected at Paquimé (Casas Grandes) in northwest Chihuahua. Since Charles Di Peso's eight-volume excavation report on the site, Paquimé has become a major focus of Southwest archaeology, renowned for its monumental adobe architecture, elaborate ceramic traditions, and parallels with Ancestral Puebloan centers such as Chaco Canyon. Research has since explored Paquimé's exchange networks, ideology, hierarchy, ritual, genetics, and diet, yet the role of wood in Paquiméan life remains largely overlooked. Scott noted that the shaping of large timbers at Paquimé was "previously unknown" in the prehispanic Southwest, a claim that warrants reexamination in light of six decades of advances in dendrochronology and timber technology studies. Was timber rounding at Paquimé an isolated innovation, or part of broader technological traditions across northwest Mexico? Addressing this requires reconstructing Paquimé's timber industry: which species were selected, from what landscapes, and with what harvesting, transport, and shaping practices? How were timbers integrated into architecture, and did wood carry meanings beyond structural utility? This paper reconsiders Paquimé's place within regional timber economies and the cultural significance of its woodworking practices.

Larsen, Zachary [35] see Hutson, Scott

Larson, Evan (University of Wisconsin-Platteville)**[333]** *Fires, Canoes, and Wilderness: Stories of Indigenous Land Tenure in the Great Lakes Region Written in the Rings of Trees*

The relationships among people, fire, and the land have been focal points of archaeological and geographic research across North America for decades, with important implications for both understanding the past and for living as part of fire-prone and fire-dependent ecosystems. Recognition of Indigenous Fire Stewardship as a key factor in the fire regimes and forest systems of western North America has increased substantially in recent years and is helping to guide efforts to address what is commonly referred to as the Wildfire Crisis. An emerging collaboration of Indigenous and non-Indigenous researchers is connecting Indigenous Knowledge with a network of culturally modified trees and tree-ring-based fire history sites to expand awareness that similar relationships fundamentally shaped the renowned pineries of the Great Lakes region. In particular, the role of fire in supporting harvests of many important plants and medicines, including blueberries, is increasingly linked to the iconic stands of red pine (*Pinus resinosa*) found throughout the region that are often used to inspire Western notions of wilderness. The lessons learned from this work are helping to inspire and shape efforts to restore fire to Great Lakes landscapes in support of just, diverse, and resilient communities.

Larson, Kara (University of Michigan)**[347]** *Breaking the Direct versus Indirect Binary: Rethinking Urban Provisioning in the Southern Levant*

Provisioning models of early cities in the Southern Levant are often framed in a binary: were urban populations self-sufficient (direct provisioning), or were they dependent on external rural specialists (indirect provisioning)? While useful as heuristic tools, these categories obscure the lived realities of households and communities that actively shaped foodways within early urban contexts. This paper proposes new, more nuanced provisioning models that move beyond the direct/indirect dichotomy by centering human agency and intra-site variation. Drawing on faunal, isotopic, and spatial data from Tell el-Hesi, an Early Bronze Age II–III urban locale, I examine how households, extended families, and neighborhoods negotiated livestock herding, processing, and distribution in ways that resist existing top-down frameworks. These multiscale perspectives reveal hybrid strategies, blending self-sufficiency, exchange, and specialization, that better capture the diversity of early urban foodways. By reframing provisioning as a dynamic process shaped by localized decisions and actor-based practices, this paper offers new models that foreground variability and agency, highlighting the active role of communities in shaping how early cities were fed.

Larson, Tara (Eastern New Mexico University)**[305]** *The Stolle Mammoth: Zooarchaeological, Isotopic, and Paleocological Insights into a Clovis-Era Mammoth*

from the Southern High Plains

The Stolle Mammoth, a Clovis-aged specimen recovered in 1977 from a playa basin on the Southern High Plains of eastern New Mexico, offers a rare opportunity to reassess human-mammoth interactions in a region with limited archaeological data. Despite early indications of possible human involvement—including missing tusks, a disarticulated and absent hind limb, a fractured cranium showing evidence of green bone breakage, and the presence of nearby caliche boulders, the remains have never undergone comprehensive analysis. Geoarchaeologist Vance Haynes Jr. has recommended further investigation into possible cut marks observed on the bone surfaces, suggesting potential cultural modification. This study presents new zooarchaeological and isotopic data from the Stolle Mammoth, including taphonomic examination of bone surface modifications and ancient DNA and isotopic signatures. These findings shed light on potential cultural activity at the site and reconstruct aspects of the mammoth's life history, mobility, and ecological context. Comparative analysis with other Clovis-associated mammoth sites contributes to broader interpretations of Paleoindian subsistence strategies, herd behavior, and environmental adaptation during the late Pleistocene. The Stolle Mammoth provides a unique lens through which to explore the intersection of human behavior and megafaunal ecology on the Southern High Plains.

Laruelle Aranguiz, Katarin, Lisa Overholtzer (McGill University), and Samantha Nadel

[97] *Entangled Materials, Techniques, and Technologies: Maguey Cloth and Paper and Cochineal Dye and Paint in Colonial Tlaxcala*

In 1552, the Indigenous men of the Tlaxcalan cabildo debated whether the account they were commissioning, which came to be known as the *Lienzo de Tlaxcala* and which demanded the king of Spain recognize privileges they earned as conquistadors, should be painted on cloth or native paper. While we do not know the content of this discussion, it points to the existence of an overlap in technologies and materials, and challenges our dichotomous understanding of the crafts of textiles and codices. This paper interrogates this scholarly ontological division, drawing on recent archaeological finds of what would be called multi-crafting in an early colonial household context in Tlaxcala; this includes material traces of the production of maguey fabric and paper, and of cochineal that could be used to dye or paint either substrate a range of colors. We put forward an alternative understanding of the mineral, vegetal, animal, and human matter in action in this craft production, following Barad's (2007) agential realism and Maffie's (2013) arguments for ancient Nahua process metaphysics. Studying the materials and processes of making textiles and codices in tandem, tracing emic overlaps in both products, demonstrates the relevance of these traditionally separate research subjects for one another.

Lasaponara, Rosa [340] see Masini, Nicola

Lasso, Carlos [276] see Scaramelli, Kay

Lateef, Shaheen (California State University, San Bernardino)

[124] *Foraging, Farming, or Both? A Comparative Analysis of Agricultural Practices in California Deserts*

The goal of this study is to conduct a comparative analysis that will address questions pertaining to agricultural strategies in the California Deserts during the late Holocene. Questions such as: What groups in the desert regions of California practiced agriculture and to what extent? What were the external factors that led to this subsistence strategy? I will answer these questions by analyzing groups residing along the Colorado River, the Owens Valley, and the Mojave Desert. I will compare known agricultural knowledge, cultural practices, and archaeological records from both the Mojave and Paiute tribes and evaluate several factors that led to those strategies. The major factors I will be examining consist of annual climate, water sources, trade networks, and natural crop growth and utilization. The purpose of this study is to fill the vacancy of published research involving the Mojave Desert and other desert regions as well as provide a more cohesive understanding of how agriculture was adopted and why.

Lathrop, Molly

[51] *The Ideological Significance of Ancient Maya Art in Painted Cave, Belize*

Throughout the Maya Lowlands, archaeologists have found considerable material evidence connecting subterranean spaces to ancient ideologies. One type of evidence, which recently has not received much research attention, is prehistoric Maya cave art. Indeed, since the 1995 publication of Andrea Stone's *Images of the Underworld*, there has been a relative dearth of investigations focusing on the significance of ancient Maya art in cave contexts. In an effort to address this situation, this poster presents a preliminary description of ancient Maya art that we recorded in Painted Cave, Belize, it presents the results of absolute and relative dating of associated organic remains, and it examines ethnographic and ethnohistoric information to determine what potential ritual practices are suggested by the material culture in the cave contexts. Additionally, we describe the various approaches used to record and analyze the possible hieroglyphic inscription and jaguar image painted on the cave walls, and we discuss the ideological significance of these images within the context of Maya cave rituals and religious beliefs. Applying multidisciplinary approaches to our study of ancient Maya cave use and the association between subterranean spaces and ritual practices ultimately contributes to the further development of a systematic approach in Maya cave archaeology.

Latorre, Claudio (Pontificia Universidad Católica de Chile), Gonzalo Macaya (Pontificia Universidad Católica de Chile, Santiago), Chris Harrod (School of Biodiversity, One Health & Veterinary Medicine, University of Glasgow, Scotland, UK), Susana Monsalve (Universidad de Tarapacá, Arica, Chile), and Calogero Santoro (Universidad de Tarapacá)

[263] *Hunter-Gatherer Expansion and Collapse Linked to Large Changes in Upwelling along Coastal Northern Chile*
We present a decade of research using shell middens from northern Chile to record past changes in coastal upwelling and its impacts on human ecology and population size. Found throughout coastal northernmost Chile, these shell middens span more than 9,000 years, are extraordinarily well-preserved, and testify to the almost continuous presence of Archaic coastal hunter-gatherers who thrived along this hyperarid coast. Shell middens are also an opportunity to use biogeochemical and ecological approaches to extract past environmental records of upwelling. Radiocarbon dating from multiple shell middens yielded estimates of marine reservoir departures from the global marine ^{14}C calibration curve (ΔR). Departures in ΔR are due to shifts in water masses with different apparent ^{14}C ages linked to ocean circulation. Stable nitrogen isotopes ($\delta^{15}\text{N}$) from sessile bivalves (mytilids) can be used to track upwelling intensity. Shellfish consumed by hunter-gatherers reveals major dietary shifts. Our combined record shows stable upwelling during the Early and Late Holocene, but strong millennial-scale environmental fluctuations occurred during the Middle to Late Holocene. Such variability is linked to changes in the long-term behavior of El Niño-Southern Oscillation (ENSO) and the strength of the South Pacific High (SPH) and had profound consequences for prehistoric coastal populations.

Lattin, Samantha [114] see Lara Maldonado, Isabel

Lau, Hannah (Hamilton College), Lucas Proctor (Dartmouth College), Veli Bakhshaliyev (Azerbaijan National Academy of Sciences), and Hilary Gopnik (Monash University)

[314] *Understanding the Reshaping of Territoriality in Bronze-Iron Age South Caucasus through Zooarchaeological and Paleoethnobotanical Remains*

The lives of herders are closely intertwined with the animals they herd; they determine their animals' movements, but their mobility is, in turn, structured by the needs of the animals in their flocks. Among communities in Middle Bronze to Early Iron Age (ca. 2000–900 cal BCE) South Caucasus this close relationship had more than economic significance—it also shaped social, political, and ritual life. Excavations from the settlement of Qizqala and adjacent kurgan burials provide important insights into the agropastoral economy of inhabitants of the Şərur Plain in the Autonomous Republic of Naxçıvan, Azerbaijan. Using biogeochemical data from animal remains in tandem with paleoethnobotanical analyses we explore a major social transition of this period: the shift toward a form of mobility tied to incipient polities in the Late Bronze Age facilitated by the introduction of a new crop and framed by a new sense of territoriality.

Lau-Ozawa, Koji (UCLA)

[219] *Community Research and Extant Collections: Understanding Santa Barbara's Asian American Neighborhoods*

Legacy collections pose particular challenges for archaeologists in attempts to piece together past excavation methodologies, rectify paperwork, contend with curation challenges and reengage with diverse communities decades after projects took place. However, such collections can hold important information about past communities and ignite new conversations. This paper discusses a collection of materials related to the Nihonmachi neighborhood of Santa Barbara. Once a thriving enclave of Japanese Americans, Nihonmachi stood on the former site of the El Presidio de Santa Barbara and across the street from the city's Chinese American neighborhood. With the mass removal and incarceration of Japanese Americans during World War II, Nihonmachi never recovered and most of the buildings associated with it were demolished. From the mid-1960s, a series of archaeological excavations took place at the site, focused on locating and recording remains connected to the Spanish-era Presidio but also encountering features connected to Nihonmachi. This paper looks the legacy of these collections alongside ongoing efforts to research the history of Nihonmachi and Asian American communities more broadly in Santa Barbara while engaging in community-based research paradigms.

Laughter, Saphira [127] see Crockett, Cenetria

Lavin, Michael [22] see Derry, Emma

LaViolette, Adria (University of Virginia), and Rhiannon Stephens

[357] *Women, Production, and Exchange in Swahili Archaeology*

Abstract: In this paper we explore how we might think in new ways about the relationship between women, production, and exchange, and the power relations that might arise from and sustain such interactions on the Swahili coast, 600–1600 CE. Scholars of coastal archaeology have quite confidently imagined the roles of Swahili men actively embodying pillars of Swahili society, as fishers, long-distance traders, architects, and Islamic leadership, among others. For various and all too familiar reasons, archaeologists of the coast have tended to see women in a different register, despite decades of bold work in archaeology, history, and related disciplines on women's roles elsewhere. Women are often more indistinctly imagined as contributing to subsistence and cuisine, some craft work, and relegated to certain architectural spaces. As part of our ongoing collaboration on the intersection of women's roles, subsistence, and power, we focus here on women and craft production, arguing that the latter's relationship with trade and exchange may have been one source of female power at the center of Swahili society.

Law, Randall [162] see Kenoyer, Jonathan

Lawler, Brooks (Department of the Air Force)

[74] *Acknowledging Traditional Athabascan Place-names on Eielson Air Force Base, Alaska*

Eielson Air Force Base manages over 20,000 acres in the Tanana Valley, Alaska. The installation is on traditional Chena and Salcheeg Athabascan Band lands. As such, there are several landscape features on the installation with documented Tanana Athabascan Dene place-names. Athabascan place-names often refer to streams, lakes, and prominent landforms, many of which are estimated to represent the "earliest historical linguistic demonstration of resilient place-names from one language family that are fully etymologizable and transparent in their meanings" (Kari 2019). Place-names are indicative of past land use and significant locations that not only tie the federally recognized tribes in the Tanana Valley to the lands managed by Eielson but also inform archaeological survey strategies that are incorporated into Eielson's historic preservation program. In 2025, Eielson AFB received a National Public Lands Day grant to design Athabascan place-name signs for locations on the installation in consultation with federally recognized tribes, resulting in an educational experience acknowledging and preservation of locations with historic place-names.

Lawton, William [198] see Orr, Andrew

Le Bourdonnec, François-Xavier [93] see Sevin, Lucille

Le Bourdonnec, François-Xavier [93] see Spinelli Sanchez, Océane

Le Guirriec, Julien [93] see Sánchez de la Torre, Marta

Leard, Daniel [23] see Leonard, Daniel

Lebenzon, Roxanne [347] see Munro, Natalie

LeBlanc, Steven [210] see Sedig, Jakob

Leckman, Phillip (Statistical Research Inc.), Andrew Saiz (Statistical Research Inc.), and Bradley Vierra

[115] *Projectile Point Classification in New Mexico Part 2: 13,000 Years of Lithic Source Selection*

Projectile points are among the most common artifacts used as temporal markers in the American Southwest. Most of the recorded archaeological sites in New Mexico consist of lithic scatters, but currently there are no standardized treatments of the lithic sources used to produce them. The range of technological variation in raw material selection of projectile points presents challenges to archaeologists who seek to correctly identify specific point types and tie them to their associated time periods. The correct identification of lithic sources aids the development of recommendations and evaluating site eligibility for inclusion on the National and State Registers of Historic Places. This poster summarizes the range of raw material sources used for projectile points resulting from Bradley J. Vierra's collaborative investigations with colleagues from across New Mexico. The authors celebrate the electronic publication of a monograph that provides detailed guidance, type descriptions, and illustrations needed to standardize identifications and increase the reliability of identifying complex point types and materials ranging in age from Paleoindian to historic times. The project was brought to completion through a Cooperative Ecosystem Studies Unit assistance agreement uniting efforts of the New Mexico Bureau of Land Management, Statistical Research Inc., and New Mexico State University.

Leckman, Phillip [49] see Heckman, Robert

Lee, Aidan (University of California, Santa Barbara), and Venicia Slotten (University of California, Santa Barbara)

[81] *Morphological Differences and the Effects of Carbonization on Theobroma cacao Seeds in Mesoamerica*

It is well established that cacao (*Theobroma cacao*) was a significant plant for many precolumbian cultures of the Americas. Cacao's use went beyond just food consumption, playing an integral role in spiritual practices as well as social and economic systems. Cacao seeds were specifically valued among Mesoamerican cultures, thus archaeologists should be well prepared to understand the condition of the seeds when recovered through macrobotanical investigations. While direct archaeological evidence for cacao seeds is rare, this study aims to understand the formation processes that the seeds may undergo prior to recovery in order to directly compare with preserved archaeological material. The authors analyzed a collection of modern cacao seeds from Mesoamerica in order to (1) identify any morphological differences between the seeds of Mesoamerican and South American cacao varieties and (2) document the extent of distortion that may occur in different preservation conditions, especially carbonization.

Lee, Benno, Esteban Rangel (University of New Mexico), Gavin Schorr (University of New Mexico), Sebastian Ward (University of New Mexico), and Saige Young (University of New Mexico)

[295] *Spatial Analysis and Demographics: Potential Insights into Burial Trends in Lowland Maya Rockshelter Gravesites*

Burials at the rockshelter sites Mayahak Cab Pek and Saki Tzul in southern Belize have previously shown few statistical demographic trends beyond the respective sites' significance as burial locations. By using spatial and cluster analysis to map burial locations, combined with demographics and other variables, we can explore possible patterns in site use. Site reports and paper maps have been digitized, georeferenced, and composited into larger 3D models showing the relative locations and burial information associated with each deposit. Variables include demographic, depositional, architectural, and artifact data. Isotopic, osteological, and dental analyses inform demographic variables which include: gender, age, lifestyle/diet, and genetic haplotype. The sample group represents a diverse demographic range surveying data from 80 individuals who lived between

9.7–3.5 kya. Mapping these burials with respect to these variables enables us to visualize potential spatial and temporal patterns. No apparent patterns are observable beyond the preferred general locations for burial in separate time periods.

Lee, Cameron (University of Missouri-Columbia)

[318] *The Rancho Moreno Field School: An Example of State, Student, and Steward Collaboration*

Many efforts have been made in recent years to bridge the gap between professional archaeology and avocationalists, landowners, and responsible artifact collectors. This presentation will highlight the creation and execution of one such effort, the Rancho Moreno Archaeological Field School through the University of Missouri. This field school was built from the relationship between Dr. Sherman Johns and the Moreno family after Dr. Johns conducted phase I cultural resource surveys of their ranch property for the Missouri Department of Natural Resources in 2023. Organizing this field school unified a number of goals including the expansion of knowledge of prehistoric and historic life along the James River, providing students with hands-on lessons in phase I–III surveys and CRM practices, involving the landowners in the survey and artifact identifying processes, and fostering a long-term partnership between Rancho Moreno and the University of Missouri Anthropology Department. By studying the Morenos' collection of projectile points and historic artifacts, students learned how valuable private collections and landowner knowledge can be to the archaeological record. The example made by this collaboration shows how years of new research opportunities can be created when professional and student archaeologists work together with Responsible Resource Stewards.

Lee, Craig (Montana State University)

[211] *Engineered Landscapes and Ice Patch Ecologies: Indigenous Hunting Systems in the Greater Yellowstone*

Indigenous peoples of the Greater Yellowstone created managed socioecological systems through high-altitude (3,000+ m) intercept hunting of Bighorn sheep (*Ovis canadensis*) and other species. The archaeology of ice patches and adjacent spaces, e.g., stone cairns and hunting blinds, reflects structured, long-term engagement with prey behavior sensitive to terrain and snowpack. Ironically, climate change enables archaeological visibility: we observe ancient ecological practices because the ice that preserved them is vanishing. By returning to and reinforcing these spaces across generations, Native Americans co-constructed a cultural-ecological niche that persisted over millennia (Traditional Ecological Knowledge/TEK). On valley floors, large-scale driveline complexes for bison (*Bison bison*) and possibly other species also reflect engineering strategies rooted in deep ecological knowledge. These practices demonstrate predictive, spatially fixed, multigenerational forms of low-intensity animal management. They underscore how mobility, memory, and infrastructure shaped enduring patterns of human–animal interaction in the Rocky Mountain Front. These engineered landscapes are the product of long-term interaction and encode the TEK of Indigenous communities. Their archaeological visibility offers an opportunity to align modern wildlife management with deeply rooted stewardship traditions to sustain keystone species.

Lee, Craig [305] see Phillips, Amy

Lee, Gyoung-Ah [220] see Kwak, Seungki

Lee, Hui Kyung

[220] *Foodways, Elite Identity, and Pottery Offering in Elite Burials of Early Baekje in Korea (300–475 CE): A Case Study of Gamildong Cemetery*

The Gamildong site, located near the Baekje Dynasty capital, has yielded 52 horizontal-entrance stone-chamber tombs, providing critical data to understand the elite mortuary practice during the Hanseong period of early Baekje. This study focuses on pottery offering at Gamildong, finding three distinctive patterns. First, the most common burial good is the straight-rimmed, short-necked jars called the “jikgu-dangyeongho.” As a prestigious vessel of the Hanseong period, Jikgu-dangyeongho mainly appeared within the Baekje-controlled territory, representing the elite identity. Second, only a small number of vessels have been found in most tombs, and prestige goods are also limited. This suggests that luxury was deliberately restrained. Third, the pottery compositions in burials shifted from a pairing of Jikgu-dangyeongho with short-necked storage jars to

with serving bowls. Bowls tend to associate with a broad range of pottery types, particularly decorated jikgu-dangyeongho and miniature clay stoves. Throughout the Hanseong period, pottery types became diversified, reflecting the sophistication of elite food culture. Offering of serving and miniature vessels reflects the intricate interplay of foodways, elite identity, and mortuary rituals in early Baekje.

Lee, Jocelyn

[256] *Rural Spaces and Making Places: A Countermap of the Chinese Diaspora in Oregon*

Contributions of Chinese immigrants in rural America has slowly gained recognition in the last decade thanks to the research conducted by archaeologists, Asian Americanists, and historians. The Oregon Chinese Diaspora Project in particular has highlighted much of this history, showcasing the different roles Chinese immigrants have taken across the rural landscape, such as miners, railroad workers, cannery workers, cowboys, ranchers, and others. These histories, while not always well-known to the larger Chinese American communities in Oregon, are slowly gaining popularity as more Chinese Americans become involved in this project by adding to the narrative their own understandings of rural Oregon both in the past and the present. This paper will discuss the findings of a countermapping project in Oregon that combines the voices of Chinese Americans with archaeological data. In particular, this paper will highlight the importance of Chinese American contributions to rural Oregon, while simultaneously illustrating how these same spaces of historical significance have and continue to exclude them in the present. Despite the exclusion, Chinese Americans have created important places across the rural Oregon landscape that continue to have an impact well into the contemporary period.

Lee, Lisa (Institute for Canine Forensics)

[90] *Key Factors to Consider when Selecting a Human Remains Detection Dog Resource for Archaeological Work*

The use of detection dogs in archaeology is growing rapidly, with more practitioners offering their services than ever before. But how can you determine whether a canine team has the necessary skills and expertise to support archaeological surveys? This paper presents practical methods to assess the suitability of canine teams for archaeological work, including key questions to ask, documentation to request, and approaches for evaluating responses. It also outlines expected deliverables from HHRD dog teams. Attendees will gain clear, actionable tools to identify appropriate canine partners and improve the outcomes of their investigations.

Lee, Lori (Flagler College)

[226] *Mobility and Mobilization of Freedom in Spanish St. Augustine*

Control over mobility was a central facet of oppression during enslavement. Africans, Indigenous peoples, and Europeans navigated the complex dynamics of control and freedom through bodily autonomy and the mobilization of resources across local and regional landscapes. This essay examines the movements of Black and Indigenous communities within these colonial spaces, focusing on the creation of Fort Mose—the first legally sanctioned free Black community in what would later become the United States. Located just two miles north of Spanish St. Augustine, Fort Mose was situated near an Indigenous mission. The existence of this free community paralleled an era of African enslavement within St. Augustine, highlighting a contrast between freedom and bondage. Through an analysis of maps, historical accounts, and archaeological evidence, this essay explores the complex relationship between mobility and degrees of freedom, offering insight into how movement shaped the lives of Black and Indigenous people in Spanish colonial landscape.

Lee, Sim, and John Pedersen

[43] *The Learner's Maya Glyph Guide (LMGG, at <https://mayaglyphs.org>): A Central Resource for Intermediate and Advanced Learners of Maya Glyphs*

LMGG is a free website consolidating a substantial body of Maya epigraphic information in a single place. It is designed for learners who have exhausted the few introductory works and wish to continue expanding their knowledge, though researchers have also found it valuable. The information it holds is otherwise scattered across a multitude of academic works, recorded lectures, and documentaries. It is a web version of extensive notes—organized around individual Maya glyphs, words, and phrases—that Sim Lee has compiled and continues to develop. They include thousands of carefully curated examples of glyph forms that, along with structured commentary, aim to help learners identify and distinguish glyphs in their many forms. LMGG's

technology features include website infrastructure; a computed grid “index” to the notes on syllabograms, logograms, calendar-related glyphs, and phrases; automatic in-place links to all available works cited; relating the glyph entries to the two major Maya glyph classification systems (MHD and Bonn/Thompson) and the latter to each other; the ability to sort the glyph data in various ways; convenient presentation of transliteration-translations of selected real-world inscriptions; and providing a reasonable automated translation to Spanish (e.g., not translating logogram name CHUM to AMIGO).

Lee, Yoonji

[220] *The Social Implications of the Introduction of Continental Cereals into the Shimabara Peninsula in Japan (ca. 900–700 BCE)*

The transition from the Jomon to Yayoi represents the dynamic period when new material cultures and technology were introduced from several regions, and indigenous cultures interacted with newcomers. This transition also marks significant changes in foodways and pottery types, showing both traditional indigenous items and introduced ones. The Shimabara Peninsula in northwestern Kyushu foreshadows this transition. This presentation focuses on what societal shift can be reflected from the changes in foodways in Shimabara during this transitional period (900–800 cal BP). Most pottery contains plant fibers as tempers, often including seeds and stems. By observing grain impressions on pottery surface, this study identified the shift in the preference of plant resources. Final Jomon vessels reveal indigenous edible plants, including beefsteak plant, Japanese prickly ash, and soybean. Several sites in Shimabara show the introduction of the pottery type with notched appliqué on the rim from Setouchi region in southeastern Kyushu. This introduction also coincides with the appearance of introduced domesticated crops, such as foxtail millet, broomcorn millet, and rice, as seen in grain impressions on the Initial Yayoi type pottery called Yamanotera. Based on this observation, this study explores the social implications with the agricultural spread.

Lefebvre, Karine [224] see Manin, Aurelie

LeFebvre, Michelle (University of Florida), Christina Giovas (Simon Fraser University), Diane Wallman (University of South Florida), and Alexis Mychajliw (Middlebury College)

[271] *The Long Anthropocene: A Critical Reflection on the Baseline Concept in Island Zooarchaeology*

The baseline concept is often cited as a point of intersection or coalescence among archaeology, historical ecology, and conservation. Within the context of the Anthropocene, this concept is perhaps more important than ever to understanding the long-term links between people, culture, biodiversity, environments, and change through time. Baselines are especially important because of their relevance for conservation applications in the present. Focusing on the insular Caribbean, we take a critical, self-reflective approach to the baseline concept in island zooarchaeology to examine how researchers may more effectively leverage the archaeofaunal record to support biodiversity conservation and/or cultural heritage preservation. Through specific Caribbean case studies, we challenge the assumptions, construction, and conceptualization of baselines with particular attention to long-term temporal scales and cross-cultural analysis. Ultimately, we demonstrate how (zoo)archaeology can serve as an interdisciplinary cornerstone for critically engaging “baselines” within contemporary challenges in island conservation.

Lehr, Juniper, Laura Garcia, Elizabeth Sobel (Missouri State University), and Jonas Leon

[124] *Resilient Landscapes, Collaborative Practices: Indigenous Archaeology in the 2025 Foothill College Pambamarca Archaeology Project*

Situated in a landscape long associated with resistance to imperial powers—from the Inka and Spanish to multinational corporations—the project engaged students with questions of resilience, identity, and sovereignty in the paramo from the lens of community/Indigenous archaeology. The poster will present program structure, methods, and outcomes, with particular attention to the evolving partnership with the local Cangahua community. Continuing its dual mission of archaeological research and community engagement in the Ecuadorian highlands, this year’s program emphasized collaboration with residents of Cangahua and surrounding provinces to implement a model of public archaeology grounded in reciprocity and co-creation. In addition to community-based initiatives, the field school provided intensive training in archaeological field and laboratory methods. Students received instruction in survey, data recording,

photography, and mapping, followed by laboratory experience in ceramic typology and cataloguing of previously excavated artifacts—all of which was provided to the Ecuadorian government as a collaborative relationship for cultural and heritage advocacy. The individual contribution of self-directed “community legacy” projects for each student at the closing of the program reflected the program’s ethos around the divergence of archaeology as destructive academia, to a model of restorative scholarship and historical reverence.

Lei, Avajane [301] see Ng, Laura

Lei, Jie

[106] *Jade Cong and the Negotiation of Status: Social Mobility in Late Shang China*

This article examines jade *cong* in the Late Shang capital of Anyang (Yinxu) through a *longue durée* approach, identifying this period as a pivotal moment in the adoption of jade *cong* within the Central Plains. Based on the first systematic typology of Anyang jade *cong*, the study combines artifact classification with mortuary hierarchy to trace patterns of social mobility and material transmission. It argues that jade *cong* circulation followed a dual path: first introduced from highland “peripheries” to the Shang political center, then diffused downward across social ranks. While large, high-square forms remained confined to royal contexts, smaller and simplified variants appeared in non-elite burials. This pattern reflects both elite strategies of ritual legitimization and the appropriation of symbolic forms by non-elite and non-Central Plains groups. The findings offer a bottom-up perspective that challenges conventional top-down models, showing how peripheral and lower-status communities asserted agency within the political and ritual landscape of Bronze Age China.

Leight, Megan (West Virginia University)

[43] *Artful Algorithms: Segmenting Maya Hieroglyphs and Building a New AI Detection Model*

Artificial intelligence (AI) technologies have opened new frontiers in the study of ancient scripts, including Maya hieroglyphics. This project aims to develop an AI model capable of recognizing and segmenting hieroglyphic blocks. The objective is to train the AI model to identify and isolate regions of interest within scanned images of vessels focusing on individual text blocks, the integral components of Maya writing. To improve the accuracy and precision of the model, the project employs a combination of manual annotation and rigorous examination to produce a high-quality dataset. The model is rigorously evaluated using an Intersectional Reunion metric, which compares the results of the model’s segmentation against the manually annotated data, ensuring the model’s output is accurate and consistent with human expertise, helping identify areas for improvement. The model is refined based on these evaluations, with the goal of maximizing its ability to segment blocks accurately while minimizing errors. The project relies on experts in Maya art history and linguistic anthropology working with computer scientists to investigate the complexities of Maya hieroglyph recognition and segmentation. We aim to leverage these AI innovations to critically examine the potential and challenges of using AI for the decipherment of Maya script.

Leiva, Jennifer (California State University, Los Angeles), Enah Fonseca Ibarra (INAH), Amira Ainis (California State University, Los Angeles), Fiorella Fenoglio (Centro INAH Querétaro, Mexico), and Gregorio Pacheco (CalNAGPRA/NAGPRA Repatriation Coordinator, California State University, Los Angeles)

[276] *Rock Art Landscapes: 3D Photogrammetry and pXRF Analysis across Five Sites in Northern Baja California, Mexico*

We present results of portable X-ray fluorescence (pXRF) spectrometry and structure from motion (SfM) photogrammetry to document and compare elemental pigment composition and stylistic variation across five rock art sites in northern Baja California, located along shifting biogeographic, cultural, and stylistic boundaries. Three sites fall within the Northern Abstract stylistic boundary, one is within La Rumorosa stylistic boundary, and one site is in a transitional zone that includes features of both Northern Abstract and Great Mural styles. Fewer than 10% of recorded rock art sites in the state of Baja California contain both petroglyphs and pictographs, including the five sites examined here. This research presents the first elemental analysis of Northern Abstract pictographs, enabling comparisons of elemental pigment compositions with those of La Rumorosa, and Great Mural styles. SfM photogrammetry provides high-resolution

documentation, supporting detailed analysis of panel composition, motif distribution, and landscape placement. By integrating geochemical, spatial, and visual analysis, this study assesses how material choices, pigment sources and technologies, and site placement may reflect broader ecological and cultural dynamics. Our findings contribute to interdisciplinary rock art research, offering a framework for analyzing rock art sites within cultural landscapes at the intersection of shifting biogeographic and cultural boundaries.

Lenoir, Makenna (University of Florida)

[200] *Coastal Faunal Harvest: Zooarchaeological Analyses at Jupiter Inlet I, Florida*

This poster presents research on human-environment interactions at the coastal civic-ceremonial center of Jupiter Inlet I (8PB34a), located in southeast Florida at the mouth of the Loxahatchee River. This pilot study assesses trends in vertebrate faunal diversity and abundance during the terminal part of the East Okeechobee I period (750 BCE–800 CE) and early part of the East Okeechobee II period (800–1000 CE), during the transition from the Buck Key Low to La Costa High. The vertebrate data from this analysis is synthesized with invertebrate data from previous studies to more holistically explore the use of various marine, estuarine, and riverine habitats by the past peoples of Jupiter Inlet I. As one of the first systematic vertebrate zooarchaeological studies for the site, this research contributes to current archaeological interpretations of Indigenous faunal harvest for the area, as well as fosters a partnership between Palm Beach County and the Florida Museum.

Lentz, David (University of Cincinnati), Stephanie Meyers, Armando Anaya Hernández (Universidad Autónoma de Campeche), and Alberto Flores Colin (Universidad Autónoma de Campeche)

[35] *Insights into Land Management and Agricultural Practices of the Ancient Maya: A Tribute to Nick Dunning*

The purpose of this study was to establish a greater understanding of the interaction between the ancient Maya of the Elevated Interior Region and their surrounding environment. Of particular interest has been the forest resources required to build and sustain their great cities and the nature and complexity of the water management systems in the site core of each polity, in particular Tikal, Yaxnohcah, and Calakmul. The primary theoretical question addressed in this study focuses on the lingering concern of how the ancient Maya were able to sustain large populations in the midst of a tropical forest environment. Related to this is the question of how agricultural intensification was achieved and how other essential resources, such as forest products and water, were managed. Moreover, our study focused on the development of irrigation systems as they contributed to agricultural activity, forest clearance, and exploitation of seasonal wetlands. All of these activities were essential components of an initially sustainable land-use strategy that eventually failed to meet the demands of an escalating population. This spiraling disconnect with sound ecological principles likely contributed to the abandonment of several major centers at the close of the Late Classic period.

Leon, Jonas [124] see Lehr, Juniper

Leonard, Daniel (HDR), Beniamino Volta, Michael Connolly, Daniel Leard (HDR Inc.), and Eric Nocerino (Vandenberg Space Force Base)

[23] *Recent Investigations at the Chumash Village of Lospe, Vandenberg Space Force Base: Long-Term Occupation and Landscape Use on California's Central Coast*

Vandenberg Space Force Base, in northern Santa Barbara County, is home to some of the earliest known mainland archaeological sites on California's Central Coast, as well as several Native American villages that persisted well into Euro-American contact. Between 2021 and 2024, the United States Air Force sponsored archaeological investigations focused on the Chumash village of Lospe, including data recovery and a cultural landscape study. Excavations at Lospe's shell mound revealed dense midden deposits evidencing intervals of human activity over a period of 9,000 years, with radiocarbon dates spanning from the Early Holocene to the Mission period. Landscape modeling and comparative investigations in the Dairy Basin watershed, directly inland from Lospe, provide insight into shifting settlement patterns, particularly during the Early and Middle periods. The assemblage from two separate site areas at Lospe reflects trends in domestic activity, subsistence strategies, trade, and sociopolitical developments leading up to European contact. Mission

records and material culture provide overlapping lines of evidence related to interaction with Mission La Purísima Concepción and the eventual abandonment of the village in the early 1800s. These investigations contribute to a deeper understanding of ancestral Chumash occupation and shifting patterns of landscape use on California's Central Coast.

Leonard, Kathryn (Arizona State Historic Preservation Office)

[37] *"If You Fail to Plan, You Plan to Fail": An SHPO's Perspective on the Need for Integrated Resources Planning with Tribal Governments*

As the United States celebrates the 250th year of its founding, Benjamin Franklin's famous quote can perhaps gain new relevance to contemporary audiences. Arizona SHPO, Kathryn Leonard, reflects on Arizona's current statewide historic preservation planning process and the identification of integrated approaches to the management of tribal heritage on public lands as one of seven priorities that have emerged in the planning process. In establishing well-defined goals, objectives' and pathways of responsibility and communication with sovereign tribal nations, federal, state' and municipal land managers have an opportunity to forge a new paradigm for tribal engagement in natural and cultural resource management. Ms. Leonard explores the means by which land-use planning that integrates traditional ecological knowledge, western climate science, and contemporary infrastructure priorities can lay the foundations for **meaningful** shared stewardship of public lands, both conceptually and in practice.

Lesage, Charles-Antoine [49] see Birch, Jennifer

Leslie, David (TerraSearch Geophysical LLC), and David Givens (TerraSearch Geophysical LLC)

[46] *Through the Looking Glass: "Archaeologist First, Geophysicist Second" Approaches to Identifying Features, Landforms, and Sites*

Geophysical specialists have long been an important component of the archaeological tool kit and have been embedded with site-wide analyses over the last 50 years of archaeological practice. By necessity, many of these specialists were geophysicists first, and their archaeological knowledge was limited. Advances in geophysical technologies, field collection strategies, and the widescale application of these techniques over the past 20 years have created a need for well-trained geophysicists within our field and resulted in many archaeologists specializing in these techniques. Here, we explore the relationship between geophysics and archaeology, the challenges archaeologists have with interpreting the squiggly black lines provided by specialists, and the inherent uncertainty of remotely sensed data. Combining relevant technologies and field methods with an "archaeologist first, geophysicist second" approach can provide archaeologists with *readable* and *clear* results that can guide excavations or, in some cases, supplant them. Here, we provide case studies of historical and precontact indigenous archaeological sites, where multiple geophysical approaches were key to not only guiding archaeological excavations but aided directly in the interpretation of site-wide analyses.

Leventhal, Alan (Muwekma Ohlone Tribe of the San Francisco Bay Area), and Charlene Nijmeh (Muwekma Ohlone Tribe of the San Francisco Bay Area)

[268] *The Muwekma Ohlone Tribe and the Discovery of our Ancestral Heritage Site CA-SCL-1070/H*

On May 13, 2021, the Native American Heritage Commission designated the Muwekma Ohlone Tribe as the Most Likely Descendant Tribe for the treatment of our ancestral human remains discovered at CA-SCL-1070/H. Monitoring and data recovery efforts carried out by Muwékma Ohlone Tribe in collaboration with Kleinfelder. This collaborative effort revealed prehistoric cultural constituents including isolated prehistoric artifacts, two thermal features, and 41 individuals. As the only BIA documented previously federally recognized Ohlone Indian Tribe of the SF Bay Area, the Muwekma MLD, issued the Tribe's recommendations that included AMS dating, aDNA, Stable Isotope and other bio-related studies. These ongoing test results demonstrate there is much to be learned about our early ancestors living in the Santa Clara Valley before the formation of the San Francisco Bay. This project represents a prime example of a collaborative archaeological study in the San Francisco Bay Area by the Muwekma Ohlone Tribal leadership joined by an interdisciplinary team of bioarchaeological researchers. As a result of those early dates dating to the terminal end of the Pleistocene and the start of the early Holocene, Muwekma decided to name the site Mánni Húyyú Muwékma

Yatış Tünneşte, which means “Place Where the Ancient People Are Buried Site.”

Leventhal, Alan [268] see Bartelink, Eric
 Leventhal, Alan [268] see Burns, Gregory
 Leventhal, Alan [268] see Canzonieri, Christopher
 Leventhal, Alan [268] see Eerkens, Jelmer
 Leventhal, Alan [268] see Greenwald, Alexandra
 Leventhal, Alan [268] see Kievman, Hayley

Leventhal, Richard (University of Pennsylvania Museum of Archaeology and Anthropology)

[87] *Cultural Heritage in the Maya Region: Knowledge and Preservation*

Patricia McAnany, for whom this SAA session is dedicated, was and continues to be a leader in the definition and integration of heritage into the study of the ancient Maya world. McAnany has emphasized the need to bring living Maya people into the conversation about the study of and preservation of ancient Maya sites within the twenty-first century. Within this paper, I want to start with the ideas and frameworks presented by McAnany. But then I want to amplify what she says and move beyond that context into a realm where the concepts of importance and preservation are framed by descendant communities. This new context does not eliminate archaeology or archaeologists but rather positions them as participants in the creation of knowledge rather than the primary framers of that knowledge.

Levin, Maureece (University of Arkansas at Little Rock), Katherine Seikel (Environmental Research Group), Gavi Segal (Virginia Commonwealth University), and Natalie Wages (Texas A&M University)

[333] *Cultivating the Anthropogenic Landscapes of Micronesia: New Research from Lohd, Madolenihmw, Pohnpei*

The island of Pohnpei, Micronesia, has been home to human communities for 2,000 years, who have transformed the island to cultivate introduced plants that are part of the Malayo-Oceanic agricultural complex. Recent lidar studies have revealed the extent to which the island has been shaped by anthropogenic terracing and mounding. Guided by lidar data and informed by terrestrial survey and archaeobotanical study, this project takes a multiscale approach to understanding how Pohnpeians structured their agricultural landscapes in the past, and how this has changed through time. Here, we present results from the 2025 field season in Lohd, Madolenihmw, located in the south of the island, where there is extensive evidence of large, intentionally constructed mounds. Botanical remains provide evidence of burning practices and intensive modification.

Levine, Marc (University of Oklahoma)

[97] *Making Malacates: Ethnoarchaeological Research with Traditional Spindle-Whorl Producers of Coastal Oaxaca, Mexico*

Coastal Oaxaca is among the few regions of Mexico where Indigenous communities preserve a full range of traditional cotton textile production techniques. This includes cultivating native cotton, hand-spinning thread, sourcing local dyes, and weaving on the back-strap loom. Scholars often focus on weaving and the finished products of such labor, including *huipiles* bearing spectacular and colorful designs. Less attention, however, has been paid to the process of spinning cotton thread and the spindle-whorls, or *malacates*, utilized for this purpose. This paper reports recent research with the remaining *malacate* makers of Jamiltepec, Oaxaca, who continue to use traditional materials and techniques. This project seeks to determine how ethnoarchaeological research with spindle-whorl makers and cotton spinners can yield insights for interpreting *malacate* patterns in the archaeological record. This has significant potential to deepen our understanding of textile production at sites like Late Postclassic Tututepec, where *malacates* are nearly ubiquitous across the site and found in high frequencies in excavated household contexts. Indeed, cotton thread production was likely key to Tututepec's economic success and political prominence. Finally, this study seeks to document the traditional process of making *malacates* in coastal Oaxaca, which is in danger of being lost.

Levine, Marc [94] see Hepp, Guy

Levine, Mary Ann (Franklin and Marshall College)**[339]** *Indigenous Teaching Partnerships in the College Classroom*

Franklin and Marshall College is the recent recipient of a three-year Mellon Foundation Humanities for All Times research, teaching, and regional engagement grant. Through this grant, F&M seeks to grapple with its complex history and to account for and be accountable to diverse stakeholders in our community in Lancaster, PA. The grant's first year explored "Indigeneity, Settler Colonialism, and the Land Question," including support for courses team taught by Indigenous community partners and F&M faculty. In the fall of 2024 I co-taught Indigenous Histories in Lancaster with Jess McPherson and MaryAnn Robins, members of Circle Legacy Center, a Lancaster-based nonprofit dedicated to supporting and empowering Native Americans. This paper discusses the incorporation of Indigenous voices, knowledge, and perspectives in teaching archaeology. A primary focus of this paper is an exploration of consultative and collaborative approaches to teaching archaeology.

Levy, Jay [182] see Quinn, James

Lewis, Annabelle (University of Colorado Boulder)**[196]** *Reconstructing Upstate New York's Historic Cemetery Landscapes Using Photography*

In cemeteries with long use histories, the use of space and cultivation of aesthetic landscapes are ongoing processes. Understanding the development of these landscapes can reveal shifts in cultural values and associated mortuary practices, deepening knowledge of life in the past. American attitudes toward death, the natural world, and appropriate methods of mortuary commemoration changed greatly over the course of the nineteenth century; developing a method to better visualize how these changes impacted the creation and maintenance of cemetery sites is important for understanding how past people experienced these significant places. This poster combines photography and geospatial methods to visualize the development of historic cemetery landscapes over time in Madison County, New York. It can be challenging to relate contemporary site landscapes to their historical counterparts, due to factors such as growth of plant life, development, or deterioration of landmarks. Some methods for conceptualizing past landscapes and viewsheds exist but are not without their shortcomings; this poster makes use of photographs and photo-editing technology alongside ArcGIS mapping to offer an alternative approach, creating visual timelines of the peopling of cemetery sites from prominent points of view to generate experiential, shifting viewsheds capable of demonstrating change and growth of site landscapes.

Lewis, Annabelle [196] see Taylor, Sarah

Lewis, Brandon [62] see Ahdoot, Gabrielle

Lewis, Brandon [223] see Snead, Aidan

Lewis, David [333] see Coughlan, Michael

Lewis, David [333] see Maple, Miranda

Lewis, Jamie [184] see Doyle, Anna

Lewis, Jamie [218] see Smith, Catherine

Lewis, Michael (Confed. Tribes of Grand Ronde), Dustin Hawks (Confed. Tribes of Grand Ronde), Jeremy Johnson (Confed. Tribes of Grand Ronde), and Briece Edwards (Confed. Tribes of Grand Ronde)

[183] *Democratizing Digital Archaeology at tumwata Village (Oregon City)*

The stratigraphy of soils and cultural contexts of urban archaeology is a challenge for the cultural resource managers responsible for their recording and presentation due to compressed timelines, small areas of subsurface exposure, and complex depositional sequences. In this paper, we present results from recent compliance driven projects at tumwata Village in Oregon City that integrate drone and tablet-based lidar and photogrammetry captured with high-resolution GPS recording. The result is a system intended to rapidly capture subsurface stratigraphy, constructed features, and archaeological objects in near real-time. Through

use of common field methodologies, we show that such high precision digital recording is possible in a commercial (contracted) setting and can be brought to a price point affordable for municipal governments, academic departments, and cultural resource management firms.

Lewis, Michael [227] see Johnson, Jeremy

Lewis, Patrick [295] see Miller, Jesika

Li, Bo [228] see Ames, Christopher

Li, Guangze (School of Archaeology, Jilin University, China)

[150] *Reassessing the Role of Hand-Axes in Middle Pleistocene Lithic Assemblages in the Qinling Mountains Region: From a Functional Perspective*

The Qinling Mountains Region is a key area for exploring Middle Pleistocene hominin dispersal and adaptive history. The typical hand axes, picks, and associated lithic assemblages provide crucial materials for investigating the landscape of Middle Pleistocene hominin lithic industries in East Asia. The lithic assemblages observed at Middle Pleistocene sites in this region differ from those in Africa, Europe, and other areas. To better understand the behavioral characteristics and cognitive patterns of hominins in manufacturing and using lithic artifacts, this study designs experimental archaeological research from a functional perspective, covering raw material procurement, manufacturing techniques, and the usage patterns and functions of lithic artifacts. It aims to reveal the role of artifacts like hand axes in lithic assemblages and explore their relationship with the Acheulean.

Li, Hao [336] see Xiao, Peiyuan

Li, Jingbo

[179] *Tracing Ancient Soy Fermentation Practices: Microfossil and Experimental Approaches*

Despite the important role of fermented soybean products such as *doujiang* (soy paste) in East Asian culinary traditions, direct archaeological identification of these foods remains elusive. One major challenge is the microfossil invisibility of soybean remains. This research addresses this gap by exploring microfossil remains associated with soybean fermentation through experimental and ethnographic studies. We present microscopic observations of modern fermented soybean products, including *miso* and fermented tofu paste, to examine the preservation and morphology of starch granules, phytoliths, and fungal remains. Preliminary findings suggest that certain microfossil assemblages may serve as proxies for soybean fermentation. This research provides new insights into how fermented legumes can be recognized archaeologically and highlights the need to develop more robust reference frameworks for identifying ancient soy-based food practices.

Li, Jun [163] see d'Alpoim Guedes, Jade

Li, Li [85] see Abdolazadeh, Aylar

Li, Tao (Wuhan University)

[220] *Manufacture and Use of Fiber-Tempered Cooking Pots at Zoumaling: A Phytolithic Perspective*

Fiber-tempered pottery is characterized by the intentional addition of plant matter as a primary tempering agent. The incorporation of plant fibers improves clay workability, reduces shrinkage and cracking during the drying phase, and enhances thermal shock resistance during firing. It is important to note that the adoption of this technique was not solely driven by technical optimization. Decisions were also influenced by resource availability and deeply embedded cultural traditions. This study focuses on the Zoumaling site, an important Late Neolithic walled settlement in the middle Yangtze River Valley. The site has yielded a significant assemblage of fiber-tempered pottery, which was predominantly used for cooking. A diachronic decline in its frequency suggests a shift in technological preference or resource use over time. Preliminary analysis indicated the use of rice processing waste, specifically leaves and husks, as temper. To address these limitations, this research employs phytolith analysis on 32 pottery fragments from Zoumaling. This method

enables both taxonomic identification of the plant temper and quantitative comparison between samples. The objectives are to reveal the manufacture of fiber-tempered pottery at the site and to elucidate the complex relationships between ceramic production technology, vessel function, and their socioeconomic context.

Li, Yue (Yale University), and Lily Jackson (Yale University)

[51] *Standardized Color Reproduction Techniques in Archaeological Assemblages: A Case Study of Ochre Streak Color Analysis from the Kasitu Valley, Northern Malawi*

Color reproduction methods in general refer to techniques that ensure colors appear as close as possible to the original, maintaining consistency across different devices and lighting conditions. It involves factors including color calibration, color spaces, and the characteristics of the output device. Color should be optimized when it serves as the primary diagnostic attribute and a critical research datum of specimens requiring faithful documentation. This study applies a standardized color reproduction workflow, including a customized ICC profile, to digitize the streak tiles made from ochre sensu lato specimens recovered from multiple sites in Kasitu Valley, Northern Malawi. The digitization practices enhance the quality of the color analysis based on the streak color data, providing valuable insights into understanding the cultural preferences surrounding color across time and space among the ancient population in this region.

Li, Yue [296] see Ru, Huiwen

Li, Zhipeng (Laboratory for Archaeological Science, CASS)

[65] *Subsistence Economy and Resources Supply of Settlements in the Central Plains during the Early Bronze Age of China: A Social Archaeological and Economic Perspective*

This study focuses on the subsistence economy and resource supply of the Central Plains region during the Erlitou Culture, the early Bronze Age of China. Scholars classify Erlitou Culture settlements into four levels based on scale, connotation, etc. For animal resource utilization, capitals and subcentral settlements have more diverse animal resources. Domestic animal species vary, and large-scale settlements have more complex utilization of wild animals. In terms of utilization methods, there are differences in sheep raising and cattle using among different-level settlements. Regarding plant resources, high-level settlements have more abundant crop remains. Rice and soybeans show different importance in various settlements, potentially related to “political” factors. The changes in the subsistence economy result from multiple factors. Environmental changes led to population growth and increased demand for food, promoting large-scale reclamation. Cultural exchanges spread crop and livestock varieties. Settlement-level differentiation is also significant, with distinct differences in the quantity and utilization of animal and plant resources between central and general settlements. Overall, the formation of the settlement subsistence form is influenced by natural, cultural, economic and social factors.

Liao, Jingwen (Leiden University)

[258] *From Symbol to Reality: Agricultural Practices and Imperial Order in the Guanzhong Basin during the Han Dynasty*

This study takes the concept of *Jiahe* (auspicious grains) as its theoretical starting point and examines the interaction between agricultural practices and imperial order in the core political regions of the Han Dynasty. First, by analyzing the distribution of staple crops in model granaries, along with the cultural roles of non-staple crops, the study reveals crop preferences and consumption patterns in the Guanzhong Basin during the Han Dynasty. Second, carbon and nitrogen stable isotope analyses of millet remains from the Late Neolithic to the Han Dynasty reconstruct a 3,000-year history of dryland farmland management. The results indicate that the agricultural abundance symbolized by *Jiahe* in the Han Dynasty was not only an idea but was supported by a concrete framework that included diversified crop systems, farmland management strategies, storage facilities, and taxation policies. Through model granaries and ink inscriptions found in tombs, this concept was projected into funerary contexts, presenting an idealized vision of agricultural prosperity. By integrating archaeobotanical data, ancient texts, and funerary culture, this study provides new insights into the relationship between the early imperial state and agriculture.

Liao, Yating (University of Toronto)

[248] *Jade Networks and Social Exchange in Neolithic and Bronze Age Northwestern China: A Social and Actor-*

Network Approach

Northwestern China—including modern Gansu, Qinghai, Ningxia, and parts of Shaanxi, Xinjiang, and Inner Mongolia—was a crucial crossroads in prehistory, linking the Central Plains, the Eurasian steppe, and adjacent regions. This corridor facilitated the movement of goods, technologies, and ideas, such as wheat, barley, sheep, and goats, as well as ceramic styles, metalworking techniques, and innovations like horses and chariots. Within these exchanges, jade played a distinctive role that remains underexplored in current scholarship. This paper investigates the formation and dynamics of jade networks in early northwestern China, with emphasis on the Qijia period (ca. 2300–1600 BC). Utilizing social network analysis (SNA) alongside Actor-Network Theory (ANT), the research examines how jade artifacts, particularly *bi*-disks and turquoise beads and tubes, functioned as both material goods and active participants in social and economic exchanges. SNA maps jade distributions across key sites, applying centrality measures to identify pivotal hubs, while ANT highlights how these objects mediated interaction and authority. By integrating these approaches, the study offers new perspectives on the role of jade in structuring prehistoric connectivity and the organization of early complex societies.

Liard, Aurelie (Université Côte d'Azur, CNRS UMR 7264-CEPAM), Ted Goebel, Kelly Graf (University of Kansas), Bryan Hockett (University of Nevada, Reno), and Rhode Dave (Desert Research Institute)

[165] *Making Fire in the Desert: Woody Fuel Resource Management at Bonneville Estates Rockshelter (Nevada, USA) during the Paleoindigenous and the Early Archaic Periods (13k–4.8k cal BP)*

Although it is largely absent from the archaeological record, wood has long played a key role in the economies of ancient humans. Wood charcoal, on the other hand, has a significantly higher preservation potential due to its amorphous nature and is thus at many sites the only way to access ancient humans-wood relationships. In fact, although archaeo-anthracological deposits mostly result from firewood management practices, they nonetheless deliver essential knowledge about past wood use and pyrotechnology. A compelling example is that of the Bonneville Estates Rockshelter (BER, Nevada), where anthracological studies have documented long-term local/regional vegetation dynamics and firewood use (13k–5k cal BP). The study revealed that BER's occupants relied mainly on artemisia (sagebrush) and ephedra (Mormon tea) firewood. Sagebrush dominates during less arid episodes, while Mormon tea thrives during episodes of intense drought. The intense usage of Mormon tea during specific phases of the Early Archaic suggests that this taxon was more frequent in the past but also more valued as fuel than today. More generally, our study shows that specific species were targeted because of their heating properties but also that firewood collection strategies and territories varied according to environmental change and human occupation intensity.

Lieb, Brad [81] see VanDerwarker, Amber

Lieberman, Leigh Anne [335] see Kansa, Eric

Liebmann, Matthew [301] see Roos, Christopher

Lierenz, Julie

[227] *Defined by Destruction: Re-centering Discussions on the Significance of Pickawillany*

The mid-eighteenth century in North America was characterized in part by mounting tensions between the French and British as both powers continued to expand their colonial territories westwards. Pickawillany (33MI13) was a Myaamia settlement located within this new western frontier at the confluence of the Great Miami River and the Loramie Creek in western Ohio. The site quickly became a prominent center for trade, and by 1751 Pickawillany had become the largest Indigenous settlement in Eastern North America. Despite this significance, the majority of literature discussing Pickawillany does not focus on the Myaamia occupation of the site but instead focuses on its destruction in 1752 by French allied forces. The narrow focus of this existing literature presents an incomplete and skewed narrative of the site. This paper represents the first step in a larger archaeological project working to expand our understanding of Pickawillany beyond its role in colonial conflicts. Here I present a preliminary analysis of materials previously excavated from Pickawillany to

highlight how archaeological research can be used to expand our understanding of the site beyond the day of its destruction and ultimately re-center discussions of this site around Indigenous agency and lived experience.

Lim, Sangtaek

[220] *Brewing, Drinking, and Rituals in Ancient Korea (8000 BCE–800 CE): An Interdisciplinary Approach to Alcohol Production*

This study seeks to elucidate the concrete practice of ritual by identifying alcoholic beverages as indispensable components of ceremonial life through archaeoscientific investigation. To this end, pottery samples spanning the prehistoric to ancient periods of Korea were subjected to starch analysis, fungal metagenomic sequencing, biochemical assays, and phytolith analysis in order to recover material evidence for brewing and consumption practices. This constitutes the first systematic application of such methodologies to Korean archaeological materials. The results provide a critical point of departure for advancing the study of ritual in prehistoric and ancient Korea by embedding it within the materiality of alcohol production and use. This research may contribute to building a more nuanced comparative framework for understanding the role of alcohol in ritual practice by expanding case studies of alcohol use beyond European and Chinese cases.

Lin, Chien-Hsiang [84] see Chew, Zi-Qi

Lin, Kuei-chen (Institute of History & Philology), Rowan Flad (Harvard University), Zhiqing Zhou (Chengdu Institute of Cultural Relics and Archaeology), Tao Xie (Chengdu Institute of Cultural Relics and Archaeology), and Zhanfeng Yang (Chengdu Institute of Cultural Relics and Archaeology)

[261] *Tracing Elephants: Multiple Dimensions of Elephant Remains in Ancient Sichuan*

This study examines the multifaceted roles of elephants and their varied relationships with humans in ancient Sichuan. Focusing on elephant remains and associated objects unearthed on the Chengdu Plain from the Neolithic through the third and second millennia BCE, it explores how these materials were employed in different cultural contexts, ranging from unworked materials to elaborate artifacts. Notable discoveries include concentrations of raw ivory at Sanxingdui and Jinsha, as well as ornaments crafted from elephant remains interred in Neolithic graves, which likely signified significant ritual occasions and markers of special social status. Yet the comparative scarcity of complete elephant skeletons raises questions about the provenance of these animals and how ancient societies acquired and managed such resources. Their frequent association with other wild animals and highly valued materials further underscores their elevated cultural importance. Furthermore, the acquisition of ivory linked the communities to wider exchange networks and cultural spheres. Ultimately, this study seeks to illuminate the changing cultural values and social implications of elephant remains in ancient Sichuan.

Lincoln, Hollie [278] see Meaux, Amanda

Lincoln, Piper

[202] *Venus Figurines: An Exploration of Heirlooms, Art Trends, and Women's Associations in the Stone Age*

Venus figurines have been a subject of inquiry since their appearance in nineteenth-century archaeological excavations. With this lengthy history of investigation, there have been numerous problematic hypotheses that have plagued the topic. The goal of this poster is to display these existing ideas and explain how they are harmful in the study of these figurines, while also exploring new ways of thinking with deeper context. Venus figurines from Paleolithic and Neolithic Europe, as well as the Neolithic occurrences of a similar form in the Near East, will build the sample from which these ideas will be backed. I plan to explore multiple lines of thought to fill in the gaps of existing literature: the possibility of these figures being heirloom objects/ideas, the idea of the convergent evolution of art trends, associations with Stone Age women and plant processing, and an exploration of the figures' roles in Paleolithic and Neolithic European society. As this paper explores these topics and finds that the occurrences of Venus figurines are not an example of heirloom objects but the convergent evolution of art trends, what do these icons represent, and what do they say about the women in the societies that created them?

Lindhé, Cecilia (University of Gothenburg)**[159]** *Maritime Memoria: Navigating Bronze Age Rock Art*

Scandinavian rock art, generally attributed to the Nordic Bronze Age (1700–500 BC), is strongly connected to prehistoric coastlines, with many sites etched into bays and fjords near the water. These images evoke maritime practices central to long-distance trade and naval warfare, situating rock art within the lived experience of seafaring communities. This paper argues that rock art functioned as a mnemonic device for seafarers, supporting the memorization and rehearsal of skills required to navigate treacherous waters. Drawing on ancient rhetorical concepts—*memoria* (artificial memory), *ekphrasis* (to tell in full), and *ductus* (directed movement)—I suggest that rock art sites were designed to instruct through embodied movement across the landscape. By engaging with and traversing these sites, participants may have built visual memories that directly informed their actions at sea. Applying rhetorical theory to rock art allows us to reconsider its directional and performative functions in the landscape, shifting focus from isolated images to the connective patterns between image clusters and their topographic settings. This approach opens new perspectives on how Bronze Age communities integrated art, movement, and memory in maritime practice.

Lindsay, Gabriel (Binghamton University)**[81]** *From EAC to Three Sisters and Back: Plant Use in the Upper Susquehanna Valley*

This project consists of macrobotanical analysis of carbonized plant remains from a Late Woodland site in Tioga County, New York. This site, located on a terrace of the Upper Susquehanna Valley (USV) contains both maize and Eastern Agricultural Complex (EAC) crops, and likely functioned as a food production site within a larger settlement hierarchy. This study of a site located on the southern edge of the developing Iroquoian agricultural world of the Late Woodland period provides insight into both the development of an innovative agricultural system based on maize and the preservation of older existing foodways rooted in the EAC. The development of the maize-based Three Sisters agricultural system is well attested to in both the historical literature and archaeological record for the USV and wider geographic region. However, the role of EAC and other plant resources after the adoption of maize are more poorly understood. This research examines the coexistence of domesticated maize with domesticated, cultivated, and gathered EAC crops within one highly productive agricultural site, and will contribute to our increasingly nuanced understanding of the role of agriculture, human-plant relationships, and foodways in Indigenous communities in the USV.

Linford, Samantha (Los Alamos National Laboratory), and Kelsey Reese (Los Alamos National Laboratory)**[198]** *Cultural Resource Compliance at Los Alamos National Laboratory*

Los Alamos National Laboratory is currently experiencing a period of unprecedented expansion to support mission growth. While the expansion plans have the potential to impact the thousands of archaeological sites managed by the laboratory, the Cultural Resources Program works diligently with projects throughout the conceptual, design, and execution phases to ensure the avoidance of adverse impacts to cultural resources. While most of our work is driven by the Section 106 process, early collaboration allows time for our program to perform larger-scale survey and inventory efforts around planned project areas to potentially identify unrecorded resources, update recorded resources, or even provide alternative locations for the project altogether. The management recommendations we make to projects are further informed by our engagement with stakeholders, particularly through informal meetings between our program and neighboring Pueblo communities. This poster presents several successful projects that have developed creative solutions that prioritize avoiding archaeological sites, and others that have engaged Tribal communities during project planning phases.

Ling, Johan (University of Gothenburg)**[159]** *Maritime Mode of Production and Secret Societies: Bronze Age Metal Exchange between Scandinavia and Wales*

Isotopic evidence shows that one-third of the copper used in Scandinavia between 1700 and 1400 BC derived from the Great Orme mine in Wales, against an overall demand of about two tons. Such sustained flows of metal across the North Sea raise questions not only of logistics but of the social institutions that enabled

them. This paper addresses the problem by applying the concept of the Maritime Mode of Production to Bronze Age Scandinavia. In this framework, maritime warriors and chiefs consolidated power by controlling boats and expeditions, fusing agropastoral surpluses with long-distance sea ventures. Central to this system were maritime sodalities with actions similar to “secret societies,” institutions well known cross-culturally for coordinating long-distance trade, preserving esoteric navigational knowledge, and cementing alliances through ritual and gift exchange. Such groups allowed Scandinavian seafarers to access distant resources and integrate Wales into a wider North Atlantic arena of interaction. Scandinavian rock art depictions of boat fleets suggest that these voyages embodied more than transport—they articulated collective identity and solidarity, while the movement of metals carried material as well as symbolic significance. Ultimately, Bronze Age seaways emerge as cultural landscapes as much as trade routes, where power, memory, and value were continually forged.

Linggi, Wyatt [55] see De Leon, Abigail

Lingle, Ashley (University of York), Danielle Riebe (University of Georgia), William Ridge, Jerrod Seifert (University of Oslo), and Attila Gyucha (University of Georgia)

[343] *Blurring Expertise: Participatory Heritage Making and Conservation Ethics at Vésztő-Mágor, Hungary*
This paper explores the evolving dynamics of heritage making at the Vésztő-Mágor archaeological site in Hungary, focusing on the intentional blurring of traditional expertise boundaries. Drawing on ongoing conservation work by the Time Will Tell Conservation and Exhibition Program, the project prioritizes cyclical participation and collaborative knowledge exchange between archaeologists, conservators, local actors, and volunteers. Rooted in conservation ethics and informed by the principles of dual professionalism, the initiative challenges conventional hierarchies of authority in heritage practice. It examines how archaeological interventions and site conservation are reimagined through participatory methodologies, where actors of varying professional backgrounds co-create narratives, decisions, and techniques. By fostering sustained engagement and iterative dialogue, the project demonstrates how shared expertise enhances the authenticity, resilience, and relevance of heritage processes. This paper critically reflects on the opportunities and tensions of this approach, highlighting how participatory frameworks can empower communities and unsettle disciplinary conventions. Through the initiative at Vésztő-Mágor, we argue for a model of heritage making that is ethically grounded, socially inclusive, and responsive to context, one in which knowledge is not simply transferred but mutually constituted over time. This work contributes to broader discussions on the future of archaeological practice and the democratization of conservation practice.

Lira-Lopez, Yamile (Universidad Veracruzana)

[86] *El Tajín y sus áreas de interacción cultural a partir de la cerámica y arquitectura*

El Tajín ha sido un asentamiento prehispánico el cual sobresale culturalmente por su particular estilo arquitectónico y por la gran cantidad de materiales cerámicos, principalmente vasijas. Con una temporalidad relativamente corta, estimada entre 800 y 1150 años después de la era, vemos materiales cerámicos que reflejan lo que defino como “cultura Tajín”, y cerámicas de la Costa Central de Veracruz y de Tabasco ubicadas en el periodo Posclásico. De manera que tenemos tres grupos principales de cerámica los cuales se pretende buscar, hasta dónde se han podido identificar, dentro y fuera de la región de El Tajín proponiendo una interacción cultural (más que una interacción política) a nivel regional y hacia áreas culturales mas alejadas. De igual manera se analiza si el estilo arquitectónico permite identificar esa interacción a regiones más alejadas como en la región del valle de Maltrata donde vemos una representación arquitectónica en el Monolito de Maltrata, Veracruz.

Liu, Chin-hsin (California State University Northridge)

[48] *Teaching Ethics Concerning Human Skeletal Remains*

Ethical considerations and best practices in anthropology, particularly regarding human skeletal remains, are increasingly urgent aspects in anthropology education, considering their far-reaching impacts (negative and positive) beyond academic research and the immediate stakeholders. This presentation draws examples from an undergraduate capstone seminar in anthropology designed to engage students in nuanced and critical considerations of ethical issues regarding human skeletal remains in archaeological and biological

anthropological contexts. The goal was for students to devise appropriate solutions that are responsible and equitable for stakeholders and the general public. Grounded by codes of conduct and scholarly publications, students brainstormed and showcased their perspectives in debates and presentations on topics such as Cal/NAGPRA, display and use of human remains in varied settings, stakeholder interactions, international research ethics, data sovereignty, and digital/media ethics. Pedagogical approaches utilized, assignment design, students' experience from the instructor's perspective, lessons learned, and the need for an ethics course in an anthropology curriculum will also be discussed.

Liu, Jiun-Yu

[217] *Resilience and Settlement Strategies in a Disaster-Prone Landscape: The Blihun Hanben Site in Eastern Taiwan*

The Blihun Hanben site, located at the river-coast junction of northeastern Taiwan, provides a rare case to examine long-term human settlement in a disaster-prone environment. Stratigraphic and architectural evidence reveal repeated cycles of occupation, disruption by floods and debris flows, and subsequent reoccupation from ca. 2000–1000 BP. In the earlier L6 layer (ca. 2000–1600 BP), households were arranged with stone revetments, drainage channels, and hearths, forming an integrated settlement system. A massive debris flow event buried this community, yet inhabitants quickly reorganized domestic units in adjacent areas, maintaining similar construction techniques and water management practices. In the later L4 layer (ca. 1600–1000 BP), over 100 postholes and extensive iron-working debris indicate both large-scale domestic activities and the emergence of advanced metallurgical production. Despite recurring mud floods with debris, inhabitants adapted by dispersing settlement units and continuously repairing drainage structures. This case demonstrates how ancient communities balanced persistence and adaptation in high-risk landscapes. By situating disaster responses within broader discussions of mobility and settlement strategies, the Blihun Hanben site serves as an important locus for archaeological research on environmental challenges, technological choices, and human resilience.

Liu, Li (East Asian Languages and Cultures)

[220] *Symbols and Early Writing of Alcohol in China from the Neolithic to the Shang*

This paper examines two forms of symbolic representation of alcohol in ancient China. The first focuses on marks and symbols on Neolithic pottery vessels that may have been linked to alcohol production and consumption. The second explores the earliest written characters for alcohol as recorded in Shang dynasty oracle-bone inscriptions. Together, these cases provide insights into the cultural significance, possible meanings, and origins of alcohol-related symbolism and writing in early Chinese society.

Liu, Rose Ting-Yi (University of Toronto)

[261] *Steppe Artifacts in Queen Fu Hao's Grave, ca. 1200 BCE: Exotic Collection or Memory from Home?*

In Shang dynasty China, oracle bone inscriptions record frequent conflicts and alliances with foreign polities, archaeological findings of skeletal and material remains that have possibly traveled long distances also suggest an established network between Shang and surrounding polities. This paper looks at objects of foreign origin found in Shang royal burials, especially that from Fu Hao's grave, to examine questions of mobility, interaction, and connectedness in and around Late Shang China. Fu Hao was a queen of King Wuding (thirteenth century BCE). Her grave yielded nearly 2,000 artifacts, including bronzes, jades, weapons, hairpins, and carved bone vessels. Among these artifacts, several steppe-associated bronze objects have prompted archaeologists to hypothesize that they might suggest Fu Hao's place of origin from the Steppe. Are these objects exotic collectables to mark the owner's elite status, or do they reflect the owner's identity from a far-away place and a practice of long-distance exogamous marriage alliance during the time? This paper examines Fu Hao's burial and grave goods with cross-references to Bronze Age Steppe burials to investigate the meaning of foreign objects found in the possession of Shang elites and movement of people and things during this time.

Liu, Xinyi [305] see Jiang, Han

Liu, Xu [220] see Chen, Xuexiang

Liu, Yan

[275] *Daily Practice, Ritual Activity, and the Construction of Social Power: A Research on the Space of Yuchisi*

Settlement in Late Neolithic China

This article applies practice theory and spatial analysis methods to research on the ways in which power was constructed at the Yuchisi site during the Late Dawenkou Culture (2800–2600 BC), focusing on the spatial patterns of daily practices and ritual activities as well as the social meanings of material culture. Food preparation and consumption, along with feasting rituals, were the most important daily and ritual activities at the Yuchisi site. Through repeated practice of the shared routines of daily practice, gender and ancestral relations, and the social etiquette, Yuchisi society internalized unequal social relations. This is reflected in the distinctive distribution of artifacts within houses, with prestige items such as Dakouzun vessels being unevenly distributed across the settlement. During feasting rituals, the elites of Yuchisi controlled bodily experiences and modes of action through fermented alcoholic beverages and social etiquette, legitimizing social power by drawing on cultural traditions and ideology. At the same time, they displayed social identity and enhanced prestige through the production, circulation, and allocation of prestige goods, thereby achieving the construction of social power.

Liu, Yi-Chang**[217]** *Challenges in the Preservation and Research of Archaeological Sites in Taiwan*

Taiwan is located at the intersection of the Eurasian and Philippine Sea tectonic plates, where geological and geomorphological changes are highly dynamic. These natural processes pose significant challenges to the preservation and study of archaeological sites. This paper examines the impact of geological disasters on site integrity based on comprehensive surveys of archaeological localities across Taiwan. Issues such as earthquakes, landslides, floods, and coastal erosion are shown to have disrupted site contexts, altered stratigraphy, and threatened cultural heritage preservation. The analysis highlights both the scale and patterns of these disturbances, as well as their consequences for archaeological interpretation. Finally, strategies for mitigation and site management are discussed, including interdisciplinary approaches that integrate archaeology with geology, disaster science, and cultural resource management. By addressing the interplay between environmental instability and archaeological practice, this study provides insights into the preservation of cultural heritage in one of the most tectonically active regions of the world.

Livingood, Patrick [301] see Hammerstedt, Scott

Liwosz, Chester**[38]** *Improvise, Adapt, or Double-Down: Orthodoxy-Plasticity Tension in Ideational Ethology*

Religious ideologies encode adaptively advantageous behaviors as cultural practices. Suitably advantageous ideas will be reflected in material patterns, visual culture, and oral traditions. While broadly behavioral (and thus cognitive) plasticity defines the general human ecological niche, abundant cases exhibit revivalist intensification of orthodox practices in response to existential threats like ecological crises. The paradox suggests that while flexibility typically yields better long-term outcomes, humans often exacerbate circumstances on a traditionalist gambit that may be maladaptive in newly changed circumstances. To examine this tension between conservative intensification versus behavioral plasticity, this study samples an array of regions, periods, and events to tally evidence of both responses, noting religious views and practices these responses reflect. This examination models distinguishing orthodoxy from plasticity through synthesizing evidence from archaeological materials, iconography, acoustics, and oral traditions. Cases are then situated within their social and environmental contexts to estimate the scale of each response by cultural groups, and to the extent possible by whom within each. Rather than resolving the paradox, this model systematizes a means to elucidate individual and collective responses to stress, chronicles the orthodoxy-plasticity interplay, and suggests how cognitive processes resulting in observable behavioral plasticity can be identified in an archaeology of religions.

Llamazares, Javier [272] see Rodriguez-Rellan, Carlos

Lloyd, Hazel [84] see Smith, Derek

Loaiza, Nicolás [311] see Fajardo, Sebastian

Lobos, Francisca [205] see Mansilla, Luis Felipe

Locker, Angelina [83] see Baker, Lilian

Lockett-Harris, Joshua (University of Calgary), Kathryn Reese-Taylor (University of Calgary), Felix Kupprat, Armando Anaya Hernández (Universidad Autónoma de Campeche), and Debra Walker

[277] *Construction Chronology of the Central Brisa E-Group, Yaxnohcah, Campeche, Mexico*

Ancient Maya E-Groups—as loci of sociopolitical continuity, sociocultural change, and social memory—anchored the growth and development of lowland Maya cities across millennia of urban development, ca. 1000 BCE–900 CE. Often centrally located, they represent the earliest and longest-lasting formalized lowland architectural arrangements. These solar-oriented plaza-pyramid complexes each had unique developmental histories, but shared similar layouts, with a western pyramid facing across an open plaza toward a long platform surmounted by a smaller eastern pyramid(s). Recent archaeological investigations of the central Brisa E-Group at Yaxnohcah documented a two-millennia-plus (1000 BCE–1250 CE) construction and occupation chronology, with architectural renovations and/or ritual events witnessed in nearly every major period. This demonstrates that the construction, maintenance, and elaboration of its central E-Group-style plaza-pyramid complex was integral to the multimillennial development of sociopolitical complexity and urbanism at Yaxnohcah. This poster presents the documented sequence from the central E-Group of Yaxnohcah, to identify important moments of material and sociopolitical transformation and continuity.

Lockett-Harris, Joshua [55] see Farquharson, Kyle

Lockhart, Jami [156] see Kennedy, Jason

Loendorf, Lawrence (Sacred Sites Research Inc.)

[38] *Tobacco Symbols and Rock Art*

In southeastern New Mexico, most painted triangle motifs—often seen as symbolic gourds for votive use among Uto-Aztecan speakers—appear at sites with tobacco growing nearby. Similar triangle patterns and other tobacco imagery are found at tobacco-related sites in Nevada and Montana. The Montana sites have equilateral crosses, quartered circles, rayed circles, and other circular forms that represent tobacco seeds. These can be found in vertical series where they are related to tobacco. The various symbols make it clear that tobacco is a key ritual plant at rock art sites.

Lofaro, Ellen [184] see Garland, Carey

Loffler, German

[124] *Archaeological Legacies: Correlating Population, Academic Training, Cultural Heritage Infrastructure, and CRM Practice in California*

This poster examines the intersections of academic institutions, archaeological infrastructure, tribal distribution, and cultural resource management in California. The study was prompted by the 2024 closure of Fresno City College's Museum of Anthropology and Archaeological Curation Facility (MOAACF), following the passage of Assembly Bill 389 in late 2023. Using ethnographic synthesis and statistical analysis, I identify correlations among population size, tribal presence, academic institutions, cultural heritage infrastructure, and the CRM landscape in California. Correlations between these institutions suggest mutually reinforcing relations but also suggest there are limited CRM-training opportunities in California colleges. This underscores the need for more sustainable and systematic approaches to how archaeologists are trained for professional practice.

Loffler, German [50] see Rhames, Brendan

Loftus, Shannon (University of Leicester)

[347] *Basalt, Bison, and Behavior: Rethinking Human-Animal Relationships in the Eastern Snake River Plain*

Understanding human-animal relationships benefit from Optimal Foraging Theory (OFT), which provides valuable insights into subsistence strategies. However, an integrated framework combining Location Theory, Landscape Theory, Literal Niche Construction (deliberate physical environmental modifications), Sensory Ecology, and Animal Agency extend beyond OFT's cost-benefit focus, capturing relational and ecological complexity. These interdisciplinary perspectives reframe animals as co-participants in shared landscapes, revealing mutual influences within dynamic ecological systems. The Lake Terretton Basin, within the Eastern Snake River Plain's lava fields, exemplifies these dynamics. Ongoing research at a Terminal Pleistocene site with Folsom artifacts and *Bison* spp. faunal assemblage reveals strategic human engagement with rugged terrain and bison movement. Bison, navigating fractured basalt and seasonal foraging patterns, followed pathways through lava flows that may have abruptly changed, creating dynamic but not always predictable routes. These pathways formed cultural infrastructure guiding human mobility, concealment, and hunting architecture. As ecological agents, bison shaped human camping and hunting strategies, including hunting architecture, through terrain-driven behaviors. These reciprocal adaptations fostered synergistic ecological and cultural outcomes, emergent from shared landscapes, reflecting deeply entangled histories and offering a nuanced understanding of human-animal interactions.

Logvin, Andrei [315] see Berner, Jack

Lohse, Jon (Terracon Consultants; Gault School of Archaeological Research), David Kilby (Texas State University), and Caitlin Doherty (Center for the Study of the First Americans, Texas A&M University)

[41] *Terminal Pleistocene Cultural Complexes in North, Central, and South America*

Understanding the relationship among early technocomplexes in the Americas is of perennial interest and is critical for understanding the expansion of human populations throughout both continents. In this paper we compare what is known of Terminal Pleistocene cultural traits in the Western Hemisphere. Drawing broadly from the archaeological records of North and South America, we evaluate Clovis and Fishtail technologies, respectively, alongside other documented traditions that are believed to characterize these widespread cultural complexes. For the Central American land bridge, we look to site records for the same general time period, from approximately 13,000 to 12,200. Data from August Pine Ridge in northern Belize, in particular, reveal evidence for both Fishtail and Clovis behaviors but also for important differences that reflect how early inhabitants settled into this landscape. This high-level overview is intended to help archaeologists better understand peopling processes as they occurred in these three study areas.

Lohse, Jon [41] see Doherty, Caitlin

Lohse, Jon [41] see McBride, Mike

Lohse, Jon [41] see Pagano, Victoria

Long, Holly, and José Peña (Logan Simpson)

[282] *Missing Skulls: Preliminary Thoughts on Burials at CuzCuz, Huarmey, Peru*

Approximately 30%–40% of burials excavated at CuzCuz in Huarmey, Peru, between seasons 2023–2025 were missing skulls. Other coastal Peruvian cultures removed skulls for ancestral veneration or trophy heads. However, such remains demonstrated cut marks on the crania, cut marks on the cervical vertebrae, removal of hands and feet, commingled burials, and secondary burials, evidence not seen in the burials at CuzCuz. The removal of skulls from some of the burials at CuzCuz could be explained by the position of the remains (wrapped upright rather than supine), allowing looters to access the skulls, but other burials retained their anatomical position and were found without their skulls. Only one set of remains was found with a ceramic pot wrapped in textile as a replacement for the crania, likely representing more of an individual choice rather than a pattern. Though this behavior of infrequent skull removal is consistent with the varied individual burial practices found within the same time period at CuzCuz, the reason for removing the skulls is still unclear.

***This presentation will include images of human remains.

Longstaffe, Matthew (University of Calgary), Armando Anaya Hernández (Universidad Autónoma de Campeche), Felix Kupprat, Kathryn Reese-Taylor (University of Calgary), and

Debra Walker**[341] *Classic Period Marketplace Investigations in the Bajo El Laberinto Region, Campeche***

Marketplaces were central to the socioeconomic fabric of many Maya urban centers, serving not only as hubs of exchange and distribution but also as dynamic arenas of social interaction. Recent research by the Bajo El Laberinto Archaeological Project provides emerging evidence to suggest a robust, multiscalar market system in southern Campeche, pivotal for structuring socioeconomic life during the Middle to Late Classic periods (ca. 400–850). In this region, marketplaces took diverse institutional forms, ranging from relatively small neighborhood-built market plazas at Yaxnohcah, to complex nested compounds in key locations across the region, and to the expansive Chi'knaahb complex in the heart of Calakmul's urban core. Drawing on multiple lines of evidence, including lidar, excavations in market and household contexts, and material analyses, this paper will offer preliminary observations regarding this variability, with implications for understanding the diversity of pathways to economic complexity in urban centers in the Bajo El Labertino region and beyond.

Longstaffe, Matthew [36] see Reese-Taylor, Kathryn

Look, Cory (Farmingdale State College, SUNY), Matthew A. Brown (Farmingdale State College, SUNY), and Reg Murphy (Museum of Antigua and Barbuda)
[324] *Anthrosol Formation and Mortuary Landscape Modification at Indian Creek, Antigua*

Columbian settlement on Antigua, through integrated portable XRF analysis and archaeological excavation. The site contains well-preserved burial contexts located outside a ringed midden area, associated with unusual soil chemistry patterns suggesting intentional landscape modification around mortuary areas. Systematic soil sampling revealed distinct chemical signatures in burial-associated contexts. High calcium concentrations (>500,000 ppm) in specific stratigraphic layers indicate deliberate shell processing, while phosphorus distributions suggest organized spatial management. The central area shows systematically depleted phosphorus levels and reduced artifact densities, indicating maintenance activities that developed as the ring formation evolved. Shell substrate analysis reveals Ca/Fe ratios exceeding 5.0 in processed contexts versus <1.0 in natural deposits, suggesting thermal processing. Elemental analysis indicates shells were prepared and cleaned prior to processing. These thick substrate layers show spatial association with burials outside the midden ring, near structural elements including foundations and protective walls. Contact period ethnohistoric accounts document burning practices in effigy during Caribbean mortuary ceremonies. The lime mortar-like substrate may represent by-products of ceremonial burning rather than intentional construction material, though deliberate production cannot be ruled out. This work challenges previous village organization interpretations and demonstrates soil chemistry's potential for revealing complex mortuary practices.

Look, Cory [324] see Brown, Matthew A.

Looper, Matthew [85] see Moot, Dana

Looper, Matthew [43] see Munson, Jessica

Lopez, Dayanira (University of Nevada,)**[282] *Mortuary Diversity as Collective Practice: Evaluating the Identities of the Maya of Palenque***

Excavations of the Classic Maya city of Lakamha', known today as Palenque, continue to make important contributions to Maya archaeology. Interest in mortuary analyses in Palenque began with the extensive study of the royal tombs of K'inich Janab Pakal and his wife, La Reina Roja. However, less frequently discussed are the diverse burial practices of the neighborhoods outside of the main plaza. Mortuary analysis in archaeology provides opportunities for reconstructions of common cultural practices related to life and death, with contributions from bioarchaeology in reconstructing individual and community identities. This presentation will highlight various mortuary practices of the surrounding neighborhoods of Palenque to demonstrate (1) a shared Palencano identity as reflected by observed collective burial patterns (e.g., body positionality and directionality of the skull) and (2) the construction of diverse identities that may be reflective of community status. Mortuary diversity observed in Palenque thus far include ancestors buried in mausoleums or like structures, non-domestic buildings, patios (often with multiple individuals and various reentry events),

middens, and other outliers, for example. To make these interpretations, various lines of mortuary data, including skeletal and archaeological, will be reviewed and presented. This presentation will include images of human remains.

Lopez, Fermin (Pueblo of Pojoaque), and Megan Hardie (University of Colorado Boulder)

[184] *Carrying Ancestors Home: Descendant-Directed Repatriation and Bioarchaeology in Restoring Ancestral Stories and Relations with the Pueblo of Pojoaque*

Emanating from a long-term partnership with tribal members, anthropologists from the University of Colorado Boulder are working with tribal leadership of the Pueblo of Pojoaque on the repatriation of Ancestors located at various American institutions. This collaboration has included osteological assessments and repatriations of Ancestors directly associated with deep historic villages surrounding present-day Pojoaque. Tribal leadership supports the sharing of these projects through collaborative publications and presentations. We detail how we performed Indigenous-centered repatriation while learning from the Ancestors we carry home. This repatriation involved an Ancestor taken over 70 years ago and transported between several institutions and states before their return to Pojoaque. In a four-day trip, tribal members, consulted osteologists, and representatives of San Diego State University completed a successful repatriation that braided bioarchaeological and traditional practices, centering the understandings of tribal members while communicating with and caring for the Ancestor. In our journey together, we were able to learn from this Ancestor and about the continued ways in which archaeological pasts continue to impact Ancestors and descendants today. It is through informed, involved relationships between anthropologists and community members that repatriation can be performed with cultural competence and benefit to tribes.

Lopez, Fermin [199] see Berestyuk, Margaret

Lopez, Fermin [34] see Hardie, Megan

Lopez, Luis [301] see Ng, Laura

Lopez, Manuel [263] see Gil, Adolfo

Lopez, Val [219] see Reddy, Seetha

López Bravo, Roberto [161] see Gallaga, Emiliano

López Bravo, Roberto [157] see Hernandez, Isabella

López Bravo, Roberto [157] see Paris, Elizabeth

López Bravo, Roberto [24] see Serafin, Stanley

López-Hernández, Haydeé (Instituto Nacional de Antropología e Historia)

[260] *Objects, Display Cases, and Identities: The Exhibitions of the National Museum in the Early Decades of Twentieth-Century Mexico*

The selection and arrangement of objects in the museum's display cases and halls reflects part of the efforts of anthropology and archaeology to define the identity of societies through a few material features. In this sense, museum exhibitions represent a complex construction of the relationship between the past and the present. Furthermore, such assumptions are dynamic and reveal tensions within disciplines and institutions. In the case of the National Museum of Mexico, the prehispanic past and the Indigenous present were not always represented with a direct connection, as is currently demonstrated by the two superimposed floors of the National Museum of Anthropology in Chapultepec. In the early decades of the twentieth century, the halls of the Ethnography Department did not have a direct relationship with the archaeology department; they even oscillated between the display of objects of supposedly Indigenous or mestizo, national, or universal origins. In this way, the objects constantly moved through the halls and cellars, outlining different identity configurations in the most important museum in the country.

López Puértolas, Carlos

[164] *Technologies of Color: Pigment Production and Pictorial Practices in Teopanazco*

Teotihuacan, the metropolis that dominated central Mesoamerica during the Classic period (ca. 100/150–650 CE), was a major hub for the production and circulation of raw materials and crafted goods. Among these, pigments and other pictorial materials held a central place, as color permeated ritual, social, and economic practices. Within this broader setting, the neighborhood center of Teopancazco provides a key case for exploring pigment production and color use. This paper presents the first integrated study of pigment technologies at Teopancazco, based on archaeometric analyses of pigment nodules and painted pottery fragments. The results reveal technological continuity in pigment preparation and application over more than three centuries, indicating the presence of specialized craft knowledge. Analytical data identify cinnabar and hematite for reds, malachite and other minerals for green pigments, charcoal for black and bluish gray, and iron oxides such as goethite for yellow. These results show a diverse palette of mineral pigments with differences in raw material mixtures, color use, and application techniques between painted pottery and other media.

López Puértolas, Carlos [310] see Mitrani, Alejandro

Lopez Ramos, Angelica (Zona Arqueológica Caral 003/ Ministerio de Cultura del Perú), Miguel Valqui Güimack (Zona Arqueológica Caral 003/ Ministerio de Cultura del Perú), Jose Alva Nuñez (Zona Arqueológica Caral 003/ Ministerio de Cultura del Perú), Tatiana Abad Lezama (Zona Arqueológica Caral 003/ Ministerio de Cultura del Perú), and Luis Vallejos Martínez (Zona Arqueológica Caral 003/ Ministerio de Cultura del Perú)

[342] *El aprovechamiento de recursos marinos en el litoral del valle bajo de Casma, Perú: Un estudio arqueomalacológico y arqueoictiológico en Bahía Seca y Pampa de las Llamas–Moxeke durante el Periodo Formativo Temprano (1800-1200 aC)*

El estudio arqueomalacológico y arqueoictiológico de la presente investigación se basa en el análisis del material recuperado durante las excavaciones arqueológicas estratificadas realizadas en Pampa de las Llamas-Moxeke, (temporada 2022) y en Bahía seca (temporada 2024). Durante el Periodo Formativo Temprano, Bahía Seca funcionó como un centro administrativo atípico de Pampa de las Llamas-Moxeke encargado de administrar el sistema de intercambio de productos entre los sitios del litoral. El estudio tiene como objetivo general, identificar las características taxonómicas y ecológicas de los moluscos a fin de entender el rol que cumplieron en la dieta alimenticia de los habitantes de ambos sitios; Además de comparar los recursos marinos a los que accedieron, determine si el registro arqueológico refleja similitudes o por lo contrario si existió un acceso diferenciado entre ambos sitios. Para ello, se empleó un análisis que comprendió 5 etapas: recolección, selección, identificación taxonómica, estimadores de abundancia y análisis biométricos. Los resultados obtenidos permitieron revelar las especies marinas con mayor grado de explotación designadas para el consumo alimenticio de los habitantes, así como también los biotopos ecológicos, y sus respectivos hábitats. Se identificaron las estrategias de pesca y recolección, la selección intencional en base a los tamaños y su estacionalidad.

Lopez Ramos, Angelica [60] see Alva Nuñez, Jose

Lopez Ramos, Angelica [285] see Vallejos Martínez, Luis

Lopez Varela, Sandra (Universidad Nacional Autónoma de México)

[53] *Shattering the Mold: Why Defying the Establishment Still Left Maya Potters in the Shadows*

In the 1990s, Maya archaeology debated the origins of ceramics and the settlement of communities, prompted by inaccuracies in radiocarbon dating at the Cuello site and the resemblance of its earliest pottery, dated to 2500 BC, to other Middle Formative ceramics. Into this contentious climate, I analyzed pottery from K'axob using the type:variety system, the customary approach, though with hesitation, to establish a spatial and chronological framework to re-create this Maya village. Thirty years later, much remains unchanged. Maya ceramic studies continue to build chronologies and pottery network distributions using the system, adding scarce petrographic INAA and XRF studies and spatial technologies. Defying established methods with characterization studies shattered the mold; ostracism followed, not without reward, as discussed here. Rigorous radiocarbon analysis demonstrated that Middle Formative pottery from K'axob (800–400 BC) shared characteristics with Cuello's earliest pottery and other contemporary pottery collections across

Mesoamerica, resolving the debate. Moreover, excavations in 1995 revealed a pottery production area, including double- and single-chambered kilns, providing the unique opportunity to reconstruct the *chaîne opératoire* of pottery making, and to acknowledge the potters, whose skills and labor remain long overshadowed by an archaeology more invested in being right than in those who made the pots.

Lopiparo, Jeanne (Rhodes College)

[168] *Where the Bodies Are Buried: A 30-Year Conversation*

In one way or another, I have spent an inordinate amount of time talking about death with Rosemary Joyce over the past three decades, which in any other profession might seem creepy. In ours, fleeting mortality and impermanence is counterbalanced by continuity and transformation in the perpetuation of life, as we meticulously deconstruct and reconstruct the material traces of lives commingled and deposited (and censed, burned, smashed, exhumed, and commemorated) across space and through time. In the Ulúa Valley, Honduras, the things that people made and that made them—that they crafted, consumed, shared, and destroyed—provide a vivid record of the material and immaterial relations that constituted social worlds comprised of interconnected, heterarchical networks at different spatial and temporal scales. From household groups to large centers, sites that were occupied over centuries represent a kind of horizontal monumentality commemorating the accumulated traces of the lives their inhabitants built and shared across generations. As I reflect on our collaborations synthesizing decades of independent and shared research in Honduras, I consider how the breadth and depth of these conversations form but one horizontal monument to Rosemary's legacy in a network connecting the participants in this session and beyond.

Lorentzen, Brita [49] see Birch, Jennifer

Lorenzi, Varenka [54] see Acosta, Daryll

Losco, Ashley (Rincon Consultants), Katherine Cleveland (ESA), Amy MacKinnon (California High-Speed Rail Authority), and Michelle Anderson (Rincon Consultants Inc.)

[334] *Forestiére Underground Gardens: Preserving Subterranean History through Interdisciplinary Methods*

Multiple built environment resources within Construction Package 1 of California High-Speed Rail have been identified for mitigation and protection. Of them, the Forestiére Underground Gardens offers a unique intersection of architectural history and archaeology in Fresno. Due to their subterranean construction, the Forestiére Underground Gardens required specialized built environment and archaeological collaborative expertise for study and preservation. The Forestiére Underground Gardens were listed in the NRHP in 1977 and were designated a California Historical Landmark in 1978. The gardens consist of underground passages, rooms, ponds, and gardens that were excavated by Sicilian immigrant Baldasare Forestiére between 1906 and 1946. The property is significant under Criterion C in the areas of environmental design and folk art that unite Old and New World construction techniques. The property is also eligible under Criterion D for the property's potential to yield information important to the fields of architecture and environmental design. This presentation will relay the fascinating history of this resource, its connection to Fresno's cultural heritage, and the integration of built environment and archaeological methods employed for researching the resource and minimizing project-related effects, ranging from ground-penetrating radar to vibration monitoring.

Losey, Robert (University of Alberta), and Tatiana Nomokonova (University of Saskatchewan)

[31] *Exploring the Use of Computed Tomography (CT) Scanning in Age Estimation of Archaeological Caribou Remains*

Reliable methods for estimating age at death are essential for assessing how people interacted with cervids in the past. For example, age estimations are useful for understanding prey selection in hunted populations. With domestic animals, such information can be informative in interpreting herd management practices. For archaeological caribou and reindeer (*Rangifer*) remains, ageing methods typically rely on visual assessments of tooth eruption and wear. In wildlife biology, the study of cementum annulation is most common. Both sets of methods have their limitations and drawbacks. Tooth wear rates can be influenced by numerous factors, which may sometimes lead to imprecise age estimates. Cementum annulation methods are typically more

precise. However, these require destructive thin-sectioning, and annulation structure visibility can be poor, particularly in ancient, weathered specimens. Using a set of known-age caribou mandibles, we are developing an age estimation method for *Rangifer* that circumvents these challenges. Specifically, computed tomography (CT) scanning is used to visualize the cross-sectional areas of cementum, dentine, and pulp cavity in caribou molar roots. The ratios of these structures are then used to estimate age at death. This approach is largely nondestructive and can be used on teeth without removing them from their alveoli.

Lothrop, Jonathan [93] see Kitchel, Nathaniel

Louderback, Lisbeth (Natural History Museum of Utah, University of Utah)

[95] *Ancient Transport and Use of the Four Corners Potato (*Solanum jamesii*) across the Colorado Plateau*

In western North America the natural distributions of plant and animal species have largely determined the availability of food resources for ancient foragers. Local transport of foods, most often less than 50 km distance, seem to be evident throughout most of the Holocene archaeological record, owing to the general abundance of food in the landscape. Evidence for long-distance movement of foods, however, is less common. The costs of long-distance transport have often been shown to outweigh the benefits, especially with foods that are calorie-poor, difficult to transport, and readily spoil in the process. High moisture content, processing requirements, bulkiness, nutritional degradation, and consumption by travelers diminish utility and value over extended distances and prolonged journeys. High-value resources with spiritual, social, political, or medicinal properties, as well as having food potential, might have been an exception. This paper discusses genetic and starch granule evidence for ancient transport and use of the Four Corners potato (*Solanum jamesii*) across the Colorado Plateau.

Loughlin, Michael [312] see Pool, Christopher

Love, Sarah (University of Georgia)

[249] *Municipal Ordinances as a Model for Community-Centered Heritage Management*

Federal cultural resource frameworks such as the National Historic Preservation Act (NHPA) and National Environmental Policy Act (NEPA) have shaped archaeological resource management in the United States for decades. While effective in establishing procedural safeguards, their scope is restricted to projects with a federal nexus, leaving many heritage resources beyond federal jurisdiction. Implementation has also become increasingly administrative, emphasizing compliance over meaningful public engagement. As a result, archaeology often struggles to demonstrate direct benefit to local communities. Municipal archaeology ordinances offer a promising supplement by embedding archaeological review within city planning and permitting processes. These programs may be more responsive to local heritage values, provide visible public benefits, and integrate archaeology into broader civic goals. Yet they remain underexamined in archaeological scholarship. This paper introduces a dissertation project that investigates what makes municipal ordinances effective, how they can supplement limitations of federal frameworks, and whether conditions for success exist in the City of Atlanta. Case studies from St. Augustine, Philadelphia, and Phoenix will be analyzed through policy review, staff interviews, and structured cross-case evaluation. By situating municipal programs within public archaeology and critical heritage studies, this research highlights local governance as a pathway for community-centered heritage protection.

Lovell, Juliette, Jun Sunseri (UC Berkeley), and Shelby Medina

[301] *Piecing Together Persistence: A Deep-Time Analysis of Fragmentary Bone at Ghost Ranch*

The rockshelter at Ghost Ranch in northern New Mexico is a site of consistent human habitation that preserves a diverse blend of culinary art practices and human-animal interactions at the intersection of multiple cultures, geographies, and biomes. The material evidence from GR2 spans nearly 5,000 years of human history in the Piedra Lumbre Basin, offering a unique insight into continuity and change over the *longue durée*. A multidisciplinary and institutionally diverse group of scholars has undertaken the first comprehensive analysis of faunal remains from decades of excavations at GR2. This poster highlights the extraordinary zooarchaeology of Ghost Ranch, answering the question, "What happens to a persistent place when multiple communities converge there over time?"

Lovis, William (Michigan State University), and José Capriles (Pennsylvania State University)**[218]** *Michigan State University Return of Fifteenth-Century Mummified Human Remains to the Plurinational State of Bolivia*

In 1890 the US Consul to Chile, Hon. William B. McCreery from Flint, Michigan, sent the gift of an “exhibit” to the nascent museum at Michigan Agricultural College (MAC)—the mummified remains of a young girl reputed to be Inca, from a *chullpa* stone tomb south of La Paz, Bolivia. She came with accoutrements including pouches with maize kernels, bean pods, and coca leaves, bundles of kapok fiber, a gourd, leather objects, a small ceramic jar, and other items. The young lady remained on display until early in the 1980s, when the ethics of public human remains presentation altered dramatically. She was then placed into storage for almost 40 years. With no chance of exhibition, little research interest (and many questions about the spatial and temporal provenience and integrity of the entire assemblage), and only marginally adequate storage facilities for mummified remains, the young girl and her trousseau were repatriated to the PluriNational State of Bolivia in January 2019, after 139 years. This is the story of the trials and tribulations that led to her documentation and successful repatriation. *****This presentation will include images of human remains.**

Lowe, Lynne (UNAM), and Carlos Alvarez (UNAM)**[205]** *Adorno e identidad: Los bienes de intercambio en las tierras altas de Chiapas durante el periodo Posclásico Tardío*

Las excavaciones arqueológicas llevadas a cabo en el sitio Cimientes de Las Margaritas, en las tierras altas orientales de Chiapas, han identificado la utilización de diversos elementos de atavío o adorno personal que pudieron funcionar como marcadores de status o identidad durante el periodo Posclásico Tardío. En esta época se produjo en la región un paulatino aumento demográfico y una nueva centralización del poder, asociada al restablecimiento de las redes de intercambio a larga distancia; ello permitió la obtención de materiales importados, como conchas marinas, obsidiana verde, ámbar o artefactos de cobre. Los usos ornamentales de los artefactos recuperados en diferentes zonas del asentamiento, entre ellos narigueras, cuentas para collares y pulseras, pendientes, anillos y cascabeles, pueden considerarse como indicadores de las relaciones sociales o simbólicas establecidas al interior de la comunidad, así como de la importancia del acceso a diversos bienes de intercambio que llegaban al Altiplano maya en el momento de la Conquista española.

Lowenthal, Grace (Eastern New Mexico University)**[72]** *Agate Basin Lithic Assemblage at Blackwater Draw: Stylistic and Metric Analysis*

My study presents the first detailed metric and stylistic analysis of Agate Basin projectile points recovered from Blackwater Draw Locality No. 1, in eastern New Mexico. Long recognized for its Clovis and Folsom deposits, BWD has also yielded 12 Agate Basin points, including 10 complete specimens from the 1966 excavations and two fragments recovered in recent years. These materials suggest the known southernmost extent of the Agate Basin complex, a Paleoindian tradition primarily documented across the northern and central High Plains, settles in New Mexico. Using a comparative typological framework, my research records and evaluates point attributes, including length, width, thickness, and flaking characteristics, and compares them to points from the Agate Basin Type site, Hell Gap, the Frazier site, and Beacon Island. The analysis addresses whether the BWD points fall within established Agate Basin variability or represent regional adaptations. Findings contribute to broader discussions about technological continuity, mobility, and site use at the southern margins of the Agate Basin Culture.

Lowman, Christopher**[48]** *Lessons with Lara Croft: Teaching Archaeology with Tomb Raider*

How does the fantasy of archaeology shape interest in learning about the real discipline? Video games like *Tomb Raider* have shaped a generation's conception of archaeology as an action-adventure with mystical artifacts in ancient ruins, seemingly with little relation to science or ethics. Despite this, the franchise of video games, movies, and thousands of custom game levels created by fans remains popular 30 years after its initial release. Critiquing Lara Croft in a college classroom helps students learn to reject archaeological myths in

popular media. However, engaging more seriously with the game and its many players offers a double pedagogical opportunity (1) to recognize how the research of game designers into art, museum collections, and excavations has shaped players' interest in learning about actual archaeology; and (2) to experiment with custom level creation as a tool to teach players the archaeological basis of a game they already love. This poster will explore creative pedagogy in both these areas through interviews, game reviews, classroom activities, and public outreach events based on *Lara Croft* and *Tomb Raider*.

Lowry, Justin (SUNY Plattsburgh), and TJ Miner

[299] *Mesoamerican Pathways: Theoretical Approach with a Case Study from Central America*

Here we explore the use of GIS in archaeology to map the movements of ancient peoples. Least-cost pathway (LCP) research uses GIS to identify the most cost-effective route between two points by using surface data to analyze a cost surface. LCP research is used in archaeology to map ancient migration patterns, trade routes, and other forms of population movement. However, LCP research has also demonstrated its own obstacles, blind spots, and inefficiencies. There are many cases in which the most "efficient" route was not the one ultimately chosen by archaic populations. While an algorithm based on the most cost-effective routes can be used in certain cases, it may be better to use a more holistic method that takes cultural and individual preferences into account and is used in network models and more plural pathway analyses. By using Southern Mesoamerica as a case study, we can attempt to reconstruct ancient pathways by supplementing geographic surface data with social, economic, and political factors in order to more accurately map and understand complex trade networks between and among sites. As GIS and LCP research become more frequently used by archaeologists, combining surface data with accompanying human factors will generate increasingly fruitful results.

Lowry, Sarah (New South Associates Inc.), and Howard Cyr (New South Associates)

[46] *Outside of the Town and between the Hurricanes: Finding the Port Tampa Cemetery (8H115899) Using Ground-Penetrating Radar and Geoarchaeology to Reconstruct the Historic Landscape*

The Port Tampa Cemetery was used by Port Tampa's poor and marginalized in the early twentieth century but was lost to the community by the mid-century. Between 2023 and 2025, NSA found the Port Tampa Cemetery within a 138-acre search area using multichannel ground-penetrating radar (GPR), archival research, and targeted geocore deep testing. Buried beneath 1 m of sediment, the cemetery had no visible markers and much of the search area had been graded and planted with grass. After the cemetery was mapped and delineated, geocore locations were strategically plotted to bisect the cemetery grounds while avoiding burials. Cores were analyzed in conjunction with the GPR and historic climate research to identify a depositional sequence that contradicted previous hypotheses about the landform and its formation processes. Together, these methods helped reconstruct the historic landform and reveal burial patterns within the cemetery. They also offer a methodological approach for interpreting historic landforms in coastal areas.

Loyola, Rodrigo (Instituto de Investigaciones Arqueológicas y Museo (IIAM)-Universidad Católica del Norte), and Jacques Pelegrin (CNRS-UMR 8068, Université Paris Nanterre)

[41] *Levels of Know-How in Projectile Point Production among Archaic Hunter-Gatherers: Three Case Studies from the Atacama Highlands*

Projectile points and knives, in some regions, represent one of the most distinctive components of South American bifacial lithic industries. Their diversity reflects not only variations in design but also the manufacturing practices of past societies. At a finer scale, two key factors explain much of their apparent variability within a given collection: the technical state at which a piece was discarded and the degree of technical competence—or know-how—of its knapper. In this study, we examine the bifacial industries from three Archaic period sites (10,500–5500 cal BP) in the highlands of the Atacama Desert, with the aim of identifying different levels of know-how. Drawing on J. Pelegrin's psycho-technological and experimental framework, we understand knapping as a gradual learning process that unfolds across two domains: motor know-how, linked to the mastery of technical gestures, and ideational know-how, associated with critical evaluation and the anticipation of alternative solutions. Based on this distinction, and following an analysis of the technical state, bifacial points were classified into three progressive levels—novice, apprentice, and proficient knappers—according to diagnostic technical criteria. The differential distribution of these levels

across the sites provides new insights into the social composition and mobility of hunter-gatherer groups.

Lozada, Josuhé (Instituto Nacional de Antropología e Historia), and Yuko Shiratori

[161] *Obsidian Sourcing Analysis by X-Ray Fluorescence (XRF) of the Artifacts Located in Iglesia Vieja, Chiapas*

This work presents the sourcing analysis of a group of 80 obsidian samples recovered during the archaeological excavations at the site of Iglesia Vieja, located on the coast of Chiapas. In the laboratory was made the analysis of X-ray fluorescence of this lithic set that consists of flakes, knives, projectile points, cores, scrapers, and bifacials in order to know the chemical composition of each one of the lithic artifacts and subsequently compare them with obsidian from deposits that were systematically sampled. The results reveal strong relations between the coast of Chiapas and the Central Highlands of Mexico, by identifying the deposits of Pachuca, Otumba, Zaragoza, and Pico de Orizaba to a lesser degree, with the Guatemalan Highlands, given the presence of obsidians from El Chayal, Ixtepeque, and San Martín Jilotepeque.

Lozada, Josuhé [161] see Lacoste Jeanson, Alizé

Lozano, Jacob (Texas State University)

[38] *The Muses of the Maya: Quadruple Flutes, Breath of the Divine, and Winds of Exchange*

Music in the Maya world was not merely sound but a cosmological force—an audible embodiment of breath, soul, and wind that bridged the human and divine. For the ancient Maya, the act of producing music was simultaneously a ritual invocation and a means of situating communities within broader networks of power and belief. This paper focuses on the quadruple flute to explore the intersection of music, politics, and cosmology in Classic period society. Drawing on both iconographic depictions and archaeological evidence, I examine how the quadruple flute functioned as more than a sonic tool. Its design and performance qualities evoked the elemental forces of wind and breath, while its contexts of use tied it directly to ritual practice and political identity. Beyond the Maya region, connections to Teotihuacan and Gulf Coast traditions reveal how this instrument circulated as a portable marker of cultural exchange, embodying shifting relationships of authority, affiliation, and artistic tradition. By situating the quadruple flute within these overlapping spheres, this study argues that musical instruments were not peripheral to Maya life but central to the negotiation of identity, ritual continuity, and cross-cultural interaction across ancient Mesoamerica.

Lozano, Stephanie (University of California Riverside)

[193] *Chahk, Water Jars, and Aquatic Rituals in Maya Iconography*

The Maya rain entity Chahk and his relationship with water was of vital importance to the ancient Maya from the Preclassic to the Postclassic periods. Chahk is usually depicted with an inverted water jar on his chest containing the glyph akb'al, which occurred throughout the Classic period. In addition, Maya rulers would personify Chahk in their monuments as they would carry these inverted water vessels, which may have been linked to aquatic rituals performed by Chahk. Additionally, inverted water jars often appear in Maya inscriptions as a title linked to nominal phrases of high-ranking women of the Classic period. Therefore, this paper will study the presence of water jars in Maya iconography and their links to aquatic rituals throughout the Classic period. In addition, this research will also analyze and compare the iconography of water jar ritual use in other Mesoamerican areas.

Lubinski, Patrick (Central Washington University), and Virginia Butler (Portland State University)

[158] *Evaluating Evidence for Late Pleistocene Fishing at Paisley Caves*

R. Lee Lyman's *Vertebrate Taphonomy* was foundational for zooarchaeological research for us and many others. The fauna from southeast Oregon's Paisley Caves, with its excellent preservation and antiquity, was ideal for applying some of Lyman's ideas. Excavations revealed over 15,000 years of deposits. An examination of fish remains from six 1 × 1 m units revealed ~3,500 specimens, mostly from the Pleistocene deposits when the lakeshore was closest. Using age-depth modeling, Pleistocene specimens were separated into an older Bølling/Allerød time unit, and a younger, Younger Dryas time unit. Given evidence of ingestion, the fish in both were obtained by predators. Estimated live fish lengths eliminate owls and bears, leaving diurnal raptors, felids, canids, and humans. Taphonomic history differs: the younger time unit is characterized by a lower

accumulation rate, more signs of ingestion, higher proportions of fin elements, and larger estimated live length. This time unit also is associated with cut-marked mammal bones, fishing artifacts, and numerous unequivocal artifacts, and we interpret the fish remains as anthropogenic. The origin of the much larger Bølling/Allerød fish sample, with few associated artifacts, is ambiguous. Future analysis of fauna from human coprolites would help resolve this ambiguity.

Lucet, Genevieve [331] see Alvarado, Claudia

Lucido, Jennifer (CSU Monterey Bay / National University)

[149] *Teaching Anthropology in the Post-Pandemic Era of Higher Education: Faculty Perspectives on Pedagogy and Assessment Using Educational Technology*

This dissertation study examines how anthropology faculty implement educational technology and online instruction in the post-COVID-19 era of higher education. While digital tools such as learning management systems and video conferencing platforms offer opportunities for accessibility, engagement, and flexibility, successful integration depends on faculty pedagogical knowledge, technological skills, and digital literacy. The COVID-19 pandemic accelerated the widespread adoption of online teaching but also exposed challenges, inconsistencies, and inequities in instructional strategies and learning activities. This case study investigates how anthropology faculty in California's public university system have adapted instructional practices, engagement strategies, and use of course technologies in their undergraduate teaching since COVID-19. Data sources include questionnaires, semi-structured interviews, observation of online courses, and archival course materials. Findings will provide insight into how faculty perceive their pedagogy for effective technology use, identify barriers and opportunities in digital teaching, and inform best practices for designing engaging online learning environments.

Lund, Nathan

[300] *An Ethnoarchaeological Approach to Tab'al in Guatemala*

The Guatemalan Highlands contain numerous places of offering called Tab'al in the K'iche' language. These places are visited and used by Ajq'ijab', Christians, and spiritualists today. Access and use of the Tab'al have been complicated by territorial conflict among various groups living in the highlands. Examining the Tab'al using traditional archaeological methods of survey and excavation would be impractical, offensive, and create suspicion among the local community. In this poster, I explain how I solved this problem using a combination of streamlined ethnoarchaeological surveys and noninvasive archaeological methods to record these sensitive sites. This approach built trust with the Ajq'ijab and other members of the community and proved instrumental in my ability to record oral histories, site locations, and narratives regarding their historical use of the Tab'al. This effort has also fostered increased community engagement in the preservation of these sites. Furthermore, the application of noninvasive archaeological methods, including terrestrial photogrammetry and geospatial data collection, provided crucial context to the oral traditions I documented. My initial findings indicate the importance of integrating archaeological and ethnographic methodologies to enhance our understanding of Tab'al functions and enduring significance on the landscape and within the communities who continue to use them today.

Lupo, Karen [157] see Edwards, Nicolette

Luthra, Alisa (University of Florida)

[279] *Vertebrate Harvest and Environmental Change at a Woodland Period Civic Ceremonial Center: Zooarchaeological Results from the Spring Warrior Complex (8TA154), Florida*

This poster presents zooarchaeological findings of vertebrate assemblages from midden contexts of the Spring Warrior Complex (8TA154), a Middle to Late Woodland period (200–1000 CE) civic-ceremonial center within the Big Bend region of Florida. Previous research at contemporaneous ceremonial centers have demonstrated changes in human activity co-occurring with regional climactic shifts, particularly with the onset of the Vandal Minimum (~600 CE) that is hypothesized to have brought cooler and drier conditions to this region. By assessing trends in vertebrate faunal diversity and abundances in tandem with radiocarbon dating, this research establishes trends in faunal harvest and subsistence practices at this site as related to Indigenous

hunting, fishing, and foraging techniques and as contextualized against a backdrop of changing climate. In particular, analysis demonstrates trade-offs in the abundances of key terrestrial and marine taxa (e.g., white-tailed deer, marine and freshwater turtles), indicating potential changes in habitats targeted for harvest.

Luzuriaga, Simón

[183] *Warfare and Resistance in Late Prehispanic Loja, Ecuador: A Survey of Inca Hillforts*

This project documented a scarcely studied defensive complex located in the region of Loja, Southern Ecuador. So far, it seems like the complex is composed of around 30 hillforts, or *pucarás*, many of which were previously unreported. Even though no diagnostic artifacts have been found so far, the building style suggests that they are Inca structures. They have been identified through means of satellite-based survey, followed by a field survey. However, further exploration will be necessary to rule out the existence of more hillforts hidden in forested areas. The positioning of the complex around a mountain passage that goes across the Eastern Andean cordillera into the upper amazon hints that the purpose of the complex was to stop the violent incursions carried out by Amazonian people. In this regard, the Spanish chronicles mention violent encounter with the Bracamoro people of the Chinchipe River valley. Bracamoro incursions into the Andean highlands are reported as well as Inca incursions into the upper amazon.

Luzzadder-Beach, Sheryl (University of Texas at Austin), Fred Valdez Jr. (University of Texas at Austin), Vernon Scarborough (University of Cincinnati), and Timothy Beach (University of Texas at Austin)

[35] *Bridging Bajos and Conquering Karst with Nicholas Dunning*

One major focus of Nicholas Dunning's archaeological and geoscience research is the relationship of human settlement to fluvio-karst sink features known as a *bajos*, among other Mayan and geomorphic names. *Bajos* are low-lying depressions that tend to hold water seasonally and are internally draining, some of which may be closed or endorheic basins. Many internally draining karstic (limestone) valleys across the Maya Lowlands have these depressions, with a rich assortment of Maya settlement, resource management features, and other infrastructure. Within these basins sediments and water accumulate, creating distinct soil and wetland environments of many kinds. Dunning and others hypothesized that human transformation and use of these features was an impactful environmental change in the precolumbian Neotropics. Our paper will focus on the evolution and contributions of Nick's geoarchaeological and paleoecological research derived from these humble *bajos* in the Maya Lowlands. We trace this work from his early NSF grant on the "*Bajos of Belize*" and our papers "*Soil Erosion, Slope Management, and Ancient Terracing*" and "*Arising from the Bajos*," to his other investigations in sites such as the Bajo de Azúcar and the Aklache in Guatemala, and the Bajo El Laberinto in Mexico.

Luzzadder-Beach, Sheryl [35] see Beach, Timothy

Luzzadder-Beach, Sheryl [35] see Cook, Duncan

Luzzadder-Beach, Sheryl [35] see Smith, Byron

Lyman, R. Lee (University of Missouri Columbia), and Erik Otárola-Castillo (Purdue University)

[319] *Typological Creep in Archaeological Systematics*

Throughout the twentieth century North American archaeologists have identified artifact types as sets of formally similar specimens within a collection. A result of this protocol was recognized by Philip Phillips, James Ford, and James Griffin in 1952 when they described what we refer to as "typological creep." Assuming variability in artifact form is continuous, as in a lineage, defining a type as an average specimen, and taking the average from an initial sample, typological creep is a predictable outcome of increasing sample size that changes the average. To evaluate whether typological creep is predictable, we simulated a 100-generation lineage of continuously variable projectile point form driven by drift. Comparison of four-generation samples drawn from the lineage and having four-generation gaps between samples produced populations the principal components of which indicate distinct artifact types. Filling the morphological gaps between drawn samples results in typological creep.

Lynch, Elizabeth (Eastern New Mexico University)

[127] *Teaching with Pixels: Digital Archaeology Methods and Theory Using Curated Datasets from the Hell Gap*

National Historic Landmark, Guernsey, Wyoming

Digital archaeology practice and theory are evolving at rates difficult to match in the classroom and field schools tasked with training the next generation of archaeologists. Nonetheless, two National Historic Landmarks, Blackwater Draw, Portales, NM, and Hell Gap, Wyoming, have embraced the digital age in unique ways that blend field school trials with classroom teaching. My poster focuses on the author's experiences with the Hell Gap field-to-classroom journey. Over the course of several years, the author was encouraged to collect digital datasets at several areas within the broader Hell Gap archaeological site by Mary Lou Larson and Marcel Kornfeld. Locality I excavations, trenching, and profiles were the primary data gathering areas, but we were able to push the limits of close-range photogrammetry and 360° site recording at the "tipi ring locality" and the site writ large. Photographs were curated for classroom use and long-term storage. The goal was to teach best practices in 3D modeling, curation, and visualization to archaeologists. The data also provide opportunities for students of archaeology to develop outreach products. This poster discusses the datasets and curation and storage processes, summarizes how the data can be used in the classroom, and muses on future possibilities.

Lynn, Gobbi (Cal State University Long Beach)

[214] *Expanding Restitution: Exploring the Voluntary Return of Contemporary Cultural Objects to Living Communities*
In recent decades, conversations and policies around the stewardship, ownership, and restitution of international archaeological and ethnographic objects have seen significant advances. However, for contemporary cultural objects that may not be historically significant but are important to communities of origin, there are no existing frameworks for how they should be handled. As institutions continue to embrace policies that seek to decolonize curatorial practices, I argue that attention should be given to discussions of stewardship and restitution of these more modern objects. Using my own work with the initial steps of the voluntary return of contemporary statues used in altars and rituals in the mountainous regions of the Mexican states of Morelos and Guerrero as a case study, I explore (1) the process of identifying stakeholders within these communities, (2) the responses of community members to the conversation of returning these objects, and (3) the overall outcome and impact of this practice on the related communities. In doing so, I aim to highlight the importance of expanding the scope of what is considered in policies of shared stewardship and return, as well as outline steps that future projects can build on to expand this field of inquiry.

Lyons, Elizaveta (University of Pennsylvania), and B. Turner (Arizona State University)**[355]** *The Absence of a Millennial Population Rebound in the Central Maya Lowlands*

The central Maya lowlands (CML) region displays a globally uncommon demographic history—a sudden abandonment during the Terminal Classic period in the ninth century CE and a growth in population in the northern lowlands, followed by the absence of a millennial population rebound in the CML from its former occupational peak. This paper postulates why the previously well-populated CML failed to regain substantial occupation during the subsequent 700–800 years before Spanish conquest of the Maya realm. Considering stressful human-environmental conditions, shifts in trade routes, political turmoil between polities, and long-term sparsity of occupation in the CML, we examine push-pull factors that affected Postclassic Maya population geography. These factors include population pressures, environmental hazards, resource conditions, and livelihood standards that varied between the Classic and Postclassic periods. The advantages that the CML maintained before Postclassic times, chiefly superior environmental conditions for agriculture, were insufficient pull factors given the low levels of push factors in the northern and coastal lowlands. Additionally, we discuss how recent perspectives on the roles of Terminal Classic environmental instability and political tensions may alter our understanding of this narrative. We encourage new analytic approaches to address this under-treated problem, including consideration of nonmaterial, sociocultural and political factors.

Lyons, Mike (German Archaeological Institute; University of Bonn)**[308]** *Exchange Networks and Social Complexity in Northeastern Honduras: A Regional Perspective*

The economic lives of the prehispanic inhabitants of northeast Honduras remain poorly understood. To address this gap, this study examines various scales of interaction, including local exchange practices between settlements, as well as import strategies from their more distant Mesoamerican neighbors. Over the past several years, we have conducted surveys throughout the Aguan Valley, Cordillera Nombre de Dios, north

coast, and Bay Islands seeking to identify new settlement sites and refine our understanding of those already known. During this process, cultural material, including ceramic and obsidian, was collected and subjected to geochemical analysis to determine provenance and patterns of movement. Results show multiple levels of interaction that shed light not only on economic practices but also broader aspects of social organization. Ceramic exchange networks appear to indicate a lack of centralized control of production and distribution, whereas obsidian import appears to have been highly directed, with a preference for high-quality obsidians in larger, more affluent settlements of the hinterland valleys and low-quality material found among the smaller coastal communities. The work indicates a level of complexity in which certain commodities received little managerial attention from elites, while others were highly controlled and directed.

Lyons, Scott

[150] *Ethnoarchaeology of Traditional Ironworking in Japan: Raw Materials and Forge Slags*

By-products of smithing activities called forge slags are common archaeological residues of ironworking and can provide a wealth of information about the metalworking activities conducted at a site. Analyses of contemporary forge slags along with the technical processes and raw material inputs into smithing have revealed useful connections between smiths' work processes and their resultant forge slags. A major challenge in archaeological applications of this work is differences in raw material between modern industrial alloys and those used in the deeper past, which among other differences, generally contained significant slag inclusions. Licensed traditional sword smiths in Japan use iron and steel smelted in a bloomery-style furnace, which is a close analog for much historic and prehistoric iron raw material. Accordingly, these smiths maintain proficiency with traditional techniques adapted to this raw material throughout the *chaîne opératoire*. This project, in collaboration with licensed Japanese sword smiths, closely documents the links between raw materials, work processes, and forge slags in this context, and particularly the contributions of smelting slag inclusions to forge slags associated with different stages of the sword smithing *chaîne opératoire*. Resulting data will inform future analyses of archaeological forge slags in a variety of contexts.

Lyu, Xueyan (University of Chicago)

[261] *Willing Imitation, Hybridity, and Local Practice: Reassessing the Chengyang Bronze Group in the Hanzhong Basin, China*

The discovery of more than 700 bronzes in 33 caches from Chenggu and Yangxian counties—known as the Chengyang Bronze Group—has often been interpreted through narratives of Shang expansion and core–periphery diffusion. Prior studies emphasize typological and stylistic hybridity linking these bronzes to Anyang, Sanxingdui, and the Middle Yangtze, framing them as products of passive acculturation or peripheral imitation. This paper reconsiders the assemblages of the Hanzhong Basin by combining stylistic, metallurgical, and contextual analyses. It argues that the imitation of “exotic” Shang-style vessels was not mechanical reproduction but a form of willing imitation, through which local groups appropriated external forms to construct their own social identities and ritual practices. The Chengyang bronzes diverge significantly from Anyang's ritual combinations and depositional contexts. Rather than being absorbed into Shang elite ideology, imported and imitated vessels were reinterpreted within local systems of meaning. This pattern highlights the selective adoption and transformation of external styles, reflecting agency rather than dependence. By situating the Chengyang finds within debates on imitation, hybridity, and artifact agency, this study reframes the Hanzhong Basin not as a passive periphery but as a dynamic frontier where cultural encounters were actively negotiated and imbued with new significance.

Ma, Mitchell

[204] *Early Agricultural Development in North China: A Longue Durée Approach*

This paper examines long-term human–plant interactions in North China, focusing on Shandong and Shaanxi Provinces from the Early Neolithic (ca. 8000 BCE) through the Qin–Han period (221 BCE–220 CE). Drawing on macrobotanical datasets from more than 50 archaeological sites, it provides a comparative synthesis of agricultural trajectories in these regions. Using a *longue durée* framework, the study explores how crop adoption, subsistence strategies, and land-use practices shifted in response to local environments, cultural traditions, and broader sociopolitical transformations. Early agricultural systems were both products of human agency and expressions of adaptive resilience. Cereal cultivation began as a subsidiary to broad-

spectrum diets in the Early Neolithic. Initially limited, it gradually became more central and, once consolidated, proved remarkably resilient to disruption. Regional variation highlights the importance of local adaptation. In Shandong, inland sites emphasized millets with relatively low species diversity, while coastal sites reveal greater diversity and stronger reliance on rice. In Shaanxi, sites in the Guanzhong region similarly show reduced diversity and a heavy dependence on foxtail millet, whereas in the drier north, broomcorn millet persisted longer. Together, these case studies underscore the value of archaeobotanical synthesis for understanding resilience, niche construction, and socioecological change in early China.

Ma, Renjie (Peking University)

[261] *Lead and Tin Resources in the Shang Dynasty: Spatiotemporal Evolution and Provenance Study*

This study presents findings on the spatiotemporal evolution and provenance of Shang Dynasty lead and tin resources. Results show cross-regional synchronicity in the use of highly radiogenic lead, suggesting a shared origin. Tin isotope analysis reveals a shift in exploitation from the Nanling tin belt in the Middle Shang to the Greater Khingan tin belt in the Late Shang. These changes indicate that a “JinDao XiHang” may have emerged by the Middle Shang and that Greater Khingan tin was likely integrated into the Yinxu bronze industry.

Mabry, Jonathan [88] see Sanchez Miranda, Guadalupe

Mabry, Jonathan [88] see Worthey, Kayla

Macaya, Gonzalo [263] see Latorre, Claudio

MacDonald, Brandi [93] see Kitchel, Nathaniel

MacDonald, Brandi [209] see Pallas, Caitlyn

Macdonald, Christina [50] see Hill, Brittany

Macdonald, Danielle [299] see Henning, Savanna

Macdonald, Danielle [226] see Maher, Lisa

Macdonald, Faith (University of Georgia)

[347] *Fixed Strategies or Concealed Variation: Reframing Herd Management in Aragon, Spain, between Late Antiquity and the Medieval Period*

Specialized animal husbandry, particularly sheep transhumance, was a critical productive activity in Aragon and Castile, Spain, between 1200 and 1800 CE, managed by national herding organizations. However, not much is definitively known about how herds were composed or managed in the preceding period between 400 and 1200 CE and later practices have been projected back uncritically. Recent ethnoarchaeological and pastoral research has demonstrated that variation in productive goals and practice within animal husbandry are common in response to socioecological pressures, such as changes in climate, economic incentives, and sociopolitical institutions. These insights have yet to be applied in a cohesive framework to understand how changes in herd management strategies may relate to the shifts in politics, economy, and climate that occurred in Spain between 400 and 1200 CE. With this in mind, I propose a new framework for using zooarchaeological evidence to investigate herd management strategies, connect these strategies to productive goals, and infer what factors did or did not influence shifts in practice. This framework would allow for comparison between the past and present to address how herders decide what to do in an uncertain world and offer insights into what socioecological factors may be most influential.

Macedo Córdova, Fernanda [161] see Schnell, Joshua

MacFarland, Kathryn (Arizona State Museum)

[207] *When Worlds Collide: Preparing Archaeological Legacy Collections for Modern Research Needs*

Preparation of archaeological collections resulting from past large-scale archaeological field school excavations for curation presents challenges requiring strategies akin to forensic reconstruction of archaeological research. Interest in a collection like that resulting from the University of Arizona field school

at Grasshopper Pueblo, AZ P:14:1 (ASM), and curated at Arizona State Museum (ASM), stems from a variety of research, legal (e.g., repatriation), and curation-driven needs. In response to these needs, curation facilities like ASM continually work to make these collections physically and intellectually accessible for all stakeholders. The research a curation facility undertakes to essentially reconstruct the terminological and conceptual approach to excavation is typically an under-reported aspect of the long-term life history of a collection and is something that deserves more exposure. The reconstruction of an excavation dataset generated from a site like Grasshopper Pueblo will require reconnecting information recorded on, for example, original artifact bags, field and analysis forms, reports, and field journals. This rehabilitation work usually results in the compilation of databases that are used for modern research needs and making data as FAIR as possible. Collections like Grasshopper also contain irreplaceable information about past approaches to excavation, allowing us to preserve the record of archaeological practice.

Machacuay Romero, Marco [267] see Valqui Güimack, Miguel

Macier, Gregory (CSU Northridge)

[91] *Disabled Experiences in the Museum Spaces of Los Angeles*

A key vector of public archaeology is outreach through museums. Though, museums, much like the wider field of archaeology, have a long way to go as to not alienate disabled persons. This alienation tends to happen due to a lack of understanding on the part of museums as to how disabled patrons negotiate with exhibits and the museum as a whole. To understand this issue I as a disabled museum patron have conducted a series of autoethnographies, a survey, and key informant interviews. Thereby emphasizing disabled voices and expertise in this issue. Through my own experience. I found that much of the changes needed to make a place welcoming for disabled patrons goes beyond just ADA compliance, and even into the content of disabled focused programming such as audio tours. In this paper I will discuss my findings and make the case that museums need to more keenly evaluate how they interface with disabled patrons. I argue that museums will improve by recognizing and listening to disabled persons, the experts in negotiating inaccessibility. I will end this presentation by sharing insights on strategies for strengthening the accessibility of museums for members of the disabled and general public.

Mackie, Madeline (Michigan State University)

[200] *Excavation Methods Impact on the Visibility of Butchery at Proboscidean Sites*

How frequently Clovis foragers hunted proboscideans has long been a key question for understanding life at the end of the Ice Age. As a result, the list of proposed and widely accepted megafauna butchery sites has been scrutinized, questioned, and revised by researchers for at least 40 years. However, little attention has been paid to how excavation methods can shape the visibility and composition of lithic assemblages at butchery sites. Here I look at the record of accepted and proposed proboscidean kill sites with a specific focus on understanding how excavation methods and reporting affect the visibility of lithic assemblages and, as a result, interpretations of human presence. Failing to consider methodological bias could result in the rejection of sites that are actual butchery sites, resulting in misinterpretations of the Pleistocene hunting record. This research has implications for our reconstructions of Clovis lifeways including diet breadth, mobility, and human-environment interactions.

Mackie, Madeline [148] see Rockwell, Heather

Mackie, Madeline [229] see Surovell, Todd

MacKinnon, Amy [334] see Atherton, Heather

MacKinnon, Amy [334] see Burns, William

MacKinnon, Amy [334] see Carwin, Eleni

MacKinnon, Amy [334] see Harvey, Amanda

MacKinnon, Amy [334] see Losco, Ashley

MacKinnon, Amy [334] see Newcomb, Alyssa

MacLellan, Jessica (Wake Forest University), Melina García Hernández, and Alfredo Saucedo (SUNY-Albany)

[312] *Monumental Architecture and the Transition to Sedentary Life: Results of the Suchilapan Archaeological Project, Veracruz*

The Suchilapan Archaeological Project investigates the relationship between the development of monumental architecture and the transition to sedentary life in Formative (Preclassic) period Mesoamerica (ca. 2000 BC–AD 300). Thanks to low-resolution lidar data published by the Mexican government, several formal, calendrically oriented, earthen complexes called Veracruz Ceremonial (VC) centers were recently recognized, clustered along the Coatzacoalcos River in the Olmec area of southern Veracruz, Mexico, upstream of San Lorenzo. (A high-resolution lidar map of the region by NCALM is in progress.) Through excavation, radiocarbon dating, and ceramic analysis, we are building a chronology of these early ceremonial centers. We also seek to estimate levels of residential mobility throughout the sites' occupations. In this presentation, we report the results of our research during 2024 and 2025. Paleobotanical data related to diet and subsistence will be presented elsewhere in this symposium. The Suchilapan Archaeological Project contributes to a broader understanding of the origins of Mesoamerica as a cultural area, including the relationship between the Olmec and Preclassic Maya.

MacLeod, Kierra**[112] *Evaluating Data Hygiene in State-Run Archaeological Databases: Strengths, Weaknesses, and the Role of Emerging AI Tools***

State-managed archaeological databases are central to research, compliance, and heritage management, yet their reliability remains underexamined. This research evaluates the accuracy, consistency, and reusability of databases such as MEDUSA (Maryland), CHRIS (Delaware), and VCHRIS (Virginia) through a systematic data hygiene checklist. The checklist assesses key metadata fields, standardized formats, documentation of excavation methods, and completeness of contextual information. By applying this framework, both strengths and weaknesses of these repositories are identified, highlighting how well they preserve archaeological knowledge and support secondary research. Preliminary findings reveal significant variation across states, while some databases maintain robust metadata standards and detailed excavation records, others suffer from missing contextual information, inconsistent formatting, or limited accessibility. These gaps reduce comparability and threaten long-term usability, contributing to the broader "curation crisis." Recent scholarship highlights that the curation crisis extends beyond archaeology, with archivists and librarians facing similar underfunding and backlogs. Initiatives like JSTOR's AI tool Seeklight, designed to assist with metadata creation and backlog reduction, offer a potential model for archaeological repositories. Incorporating such tools alongside human expertise may help mitigate chronic staffing shortages, improve data hygiene, and ensure that digital archaeological records remain discoverable and reusable for future research.

Macmillan, Vincent [335] see Ciomek, Katarzyna

Macmillan, Vincent [276] see Palonka, Radoslaw

Macrae, Scott (University of Central Florida), Jeffrey Brzezinski (University of Central Florida), Rodrigo Guzman (University of Central Florida), Daniel Pierce (Missouri State University), and Karla Cardona (University of Central Florida)**[99] *Lidar vs. Reality: Ground-Truthing the Mirador Landscape***

Over the past two decades, the incorporation of lidar into the archaeological tool kit has dramatically transformed our understanding of ancient landscapes, the people who inhabited them, and the distribution and density of cultural features. As lidar coverage and accessibility have expanded exponentially, so too has the need to assess the accuracy of its interpretations. Ground-truthing, corroborating lidar data with the archaeological record, has gained increasing attention as a critical methodological step. This case study focuses on the Mirador landscape, including the major archaeological sites of El Mirador and Nakbe. Over two years of fieldwork, a full coverage ground survey covering 45.25 km² was conducted, testing over 12,000 archaeological and natural features identified within a broader 512 km² lidar-based survey. We present the results to evaluate the fidelity of lidar in defining archaeological features and the confidence with which archaeologists can identify these features. Results are analyzed in relation to variables such as vegetation cover, topography, and lidar point-return density.

Macrae, Scott [99] see Brzezinski, Jeffrey

Macrae, Scott [99] see Callaghan, Michael

Macrae, Scott [99] see Clark, Jessica
 Macrae, Scott [99] see Guzman, Rodrigo
 Macrae, Scott [99] see Micheletti, George

Macri, Martha (University of California, Davis)

[43] *Classic Maya Retrospective Dates: Evidence for Written Preclassic Histories*

Evidence continues to accumulate that the ancient Maya were recording political/historical information far earlier than the appearance of the fully developed logo-syllabic script found on Classic monuments (250–900 CE). The texts typically begin with a dedicatory date close to the time of the composition of the text, and include dates of various events of ritual or historical importance. In some cases the texts list dates well before the dedicatory date, sometimes prior to the beginning of the Classic period. The earliest dates have not been considered historical, but references to a mythological past. A careful examination of retrospective dates (long counts with corresponding Gregorian dates) listed in the Maya Hieroglyphic Database (Looper and Macri 2026) suggests that the early dates are indeed historical. They point to the existence of accurate records maintained by polities well before the beginning of the Classic period. These texts would have contained long count and calendar round dates, signs for events, personal names, and toponyms. Painted on perishable media, their existence can be inferred from a careful study of later texts.

Maddox, Michael (Yale University)

[186] *Compositional Analysis of Utilitarian Ceramics at La Milpa in Northwestern Belize: Understanding Household Production and Consumption Using pXRF*

In the last decade much work has done much to acknowledge the presence of market-based exchanges in ancient Maya society and the role of commoners in the production of commodities such as uniform chert bifaces, ceramics, and burned lime among others. However, this work has not advanced discussions of social stratification beyond binary notions of elites and commoners with separate spheres of exchange composed of prestige and utilitarian goods. This paper argues that the social and economic decision-making processes of individual households is central to the formation of larger communities at the Late Preclassic to Late/Terminal Classic city of La Milpa (400 BCE to 900 CE). The extent to which households participated in these exchanges is considered through compositional variation in utilitarian ceramics to suggest that differential patterns of production and consumption have an important role in community formation over time.

Madella, Marco [311] see Fajardo, Sebastian

Mader, Christian (University of Bonn), and Markus Reindel (German Archaeological Institute)

[340] *From Rock Art to Plain Art: Development and Use of the Palpa Geoglyphs, Peru*

The prehispanic geoglyphs (800 BCE–620 CE) in the southern Peruvian Palpa region, which are part of the larger Nasca geoglyph complex, have been thoroughly documented and studied over the last few decades using various spatial analysis techniques. In this paper, we discuss the development and uses of the Palpa geoglyphs, focusing on two hypotheses in particular. The first is that the geoglyphs evolved from petroglyphs (1800–160 BCE) into geoglyphs on slopes (800–160 BCE, Paracas culture), and then into geoglyphs on the plain (160 BCE–620 CE, Nasca culture). They increased in size over time. The second hypothesis is that the geoglyphs not only served as important markers of a sociocultural landscape, but also as landmarks in relation to exchange along llama caravan routes, as suggested for other geoglyph complexes, particularly in the Atacama desert in northern Chile. We discuss these hypotheses in the environmental, economic, and sociocultural context of the Paracas and Nasca archaeological cultures. Our observations show that, just as the ancient geoglyphs and lines formed complex networks, so did their many related functions and meanings.

Maeda, Hitoki (Okayama University)

[165] *Tree-Ring Analysis of Wooden Artifacts from the Odoi Moat Surrounding the Early Modern Capital City of Kyoto, Japan*

The Odoi is a defensive structure consisting of an earthen mound and moat that surrounded the early modern capital of Kyoto and played a significant role in the city's development. Historical records imply that the Odoi was used from the late sixteenth century to the mid to late seventeenth century. However, most of

the structure has been lost or remains buried beneath the modern city, limiting direct archaeological investigation. Recent archaeological excavations at the site of the Odoi moat have uncovered several wooden artifacts, such as portable wooden containers and wooden slips, providing new evidence regarding construction date and resource use. In this study, tree-ring analysis was conducted on the recovered wooden materials to determine the precise construction date of the Odoi. The results also contribute to a brief discussion of wood utilization practices during that period.

Maeir, Aren [353] see Ramrekha, Marc

Maese-Mora, Alejandra

[149] *Student Curatorship In University Museums: Archaeological Practice beyond the Field*
[WITHDRAWN]

Magnetek, MoHagani (University of Alaska Fairbanks)

[313] *Terraformation and Winter Survival: Historical Archaeology of the Alaska Canada Highway Construction Project during World War II*

The attack on Pearl Harbor in December 1941 highlighted the necessity for strategic military routes linking the contiguous United States to the Arctic region; the US government mobilized four US Army Corps of Engineers regiments comprising approximately 10,000 troops to blaze trails and construct the 1,700-mile highway referred to as the Pioneer Road from Delta Junction, Alaska, to Dawson Creek, British Columbia. A massive undertaking, soldiers of the 97th Regiment plowed through the rugged terrain of the indigenous Athabaskan lands of central Alaska while confronting mosquitoes and enduring 24 hours of daylight during the summer. After the completion of the highway on October 28, 1942, the 97th Regiment was ordered to remain in Alaska to keep the newly constructed bridges and roads clear of snow and ice during one of the harshest winters in Alaska's recorded history. Historical archaeological findings at 49-TNX-00252, the historic district near the Robertson River Bridge, presented evidence of soldiers' adaptation to the environment through platformed tents, insulated wooden structures, and the reuse of World War I and Alaska Gold Rush-era equipment.

Magoon, Dane (University of Leicester)

[77] *Ejection Seat Landing Sites within the Vietnam War Battlescape: A Case Study from Xepon District, Lao People's Democratic Republic (Resolved Case REFNO 1279)*

Ejection and ejection seat landing sites associated with the Vietnam War conflict present unique challenges to DPAA and DPAA partner researchers. Compared to aircraft crash sites, these sites are small and often ephemeral with regard to overall footprint and material signature. In addition, different types of aircraft were equipped with different types of ejection systems, including ejection seats and extraction systems, each with a potentially unique material signature, and the site assemblages are typically comprised of issued life support equipment and personal evidentiary items. This poster provides a summary overview of this site type while providing focus on a single case example and their potential challenges: resolved REFNO 1279, which involved the loss of an RF-4C aircraft over Laos on September 17, 1968. The ejection seat landing site for this loss incident was excavated and closed in January and February of 2015, during the course of the 15-2LA joint field activity.

Mahan, Chase (University of Wyoming)

[348] *Late Pleistocene Toolstone Conveyance in the Great Divide Basin, Wyoming*

Presented here is a study of artifacts found in Paleoindian contexts from the Great Divide Paleoindian sites (Great Divide Basin, Wyoming) to evaluate mobility patterns in the Intermountain West. This study builds on our understanding of Paleoindian lifeways in a poorly understood region during the Late Pleistocene. A comprehensive compilation of Eocene geology, toolstone from archaeological sites across the region, and obsidian sourcing using pXRF demonstrates a reliance on abundant raw material from the upper Green River Basin, and partially establishes a Folsom mobility pattern with the Yellowstone Plateau. Furthermore, this study provides evidence for a disparately documented Folsom presence in western Wyoming and supports long held notions of Paleoindians regularly transporting lithic raw materials great distances.

Maher, Lisa (University of California, Berkeley), and Danielle Macdonald (University of Tulsa)**[226]** *Navigating Landscapes and Seascapes: Comparing Epipaleolithic Hunter-Gatherers of the Levant and Early Cyprus*

Epipaleolithic hunter-gatherers in Southwest Asia (ca. 23,000–11,500 BP), exemplified by sites like Kharaneh IV in eastern Jordan, demonstrate increasingly complex settlement patterns, resource management, and landscape use. Situated in an ecotonal setting of wetlands and adjacent grasslands, Kharaneh IV reveals long-term, multi-seasonal occupation supported by rich marsh environments. These wetlands offered stable food and material resources, enabling sustained habitation, experimentation with plant and animal exploitation, and dense social networks reflected in site architecture and material culture. In contrast, the earliest seafaring hunter-gatherers arriving in Cyprus represent a different, yet equally dynamic, adaptation. Though the island's Epipaleolithic record remains sparse, new evidence from the Ancient Seafaring Explorers of Cyprus (ASEC) project suggests that both coastal and inland areas were used by mobile groups skilled in navigation, technological innovation, and landscape learning. Unlike the wetland-focused settlements of the inland Levant, Cyprus required novel approaches to resource procurement, mobility, and social connectivity. By comparing these two regions, this paper explores how environmental context, mobility strategies, and subsistence choices shaped early lifeways in mainland versus island settings—offering new insights into the diversity and adaptability of Epipaleolithic hunter-gatherers across Southwest Asia and the eastern Mediterranean.

Maher, Lisa [299] see Henning, Savanna

Mainland, Ingrid [356] see Clark, Jackson

Maki, David (Archaeo-Physics LLC), Nurit Finn (Wapsi Valley Archaeology Inc.), and Daniel Finn-Kandel (Wapsi Valley Archaeology Inc.)**[228]** *An Environmental Magnetism Analysis of Soils and Artifacts from a Bell-Shaped Earth Oven, Site 13PK61, Polk County, Iowa*

Site 13PK61 is located at the confluence of the Des Moines and Raccoon rivers in the City of Des Moines, Polk County, Iowa. Phase III data recovery within portions of the site resulted in the documentation of hundreds of archaeological features and tens of thousands of artifacts, including materials associated with the early history of the City of Des Moines dating to the mid to late nineteenth century, Fort Des Moines No. 2, a US Army Post dating to 1843–1846, and in deeper strata, a precolonial Native-American settlement. Six bell-shaped pit features associated with the Native-American occupation were documented during excavation. Two of the pits had evidence of burning at lower levels and recovered artifacts suggested the pits were used as earth ovens for cooking and the firing of ceramics. This paper will present results of a magnetic analysis of soils and artifacts from one of the earth ovens. Techniques of environmental magnetism were used to provide a better understanding of strata within the feature, feature function, formation processes, and postdepositional history. Additionally, stepwise experimental heating was combined with magnetic analysis to explore the peak firing temperatures and ambient oxygen conditions present within the earth oven.

Maki, David [16] see Brosowske, Scott

Maksudov, Farhod [315] see Jo, Mirae

Makulbekova, Madina [339] see Erdman, Katherine

Malarchik, Diana, Jelmer Eerkens (University of California, Davis), Eric Bartelink (California State University, Chico), and Colleen Milligan (California State University, Chico)**[221]** *Industrializing Motherhood: Isotopic Analysis of Weaning Patterns from Nineteenth-Century Immigrants Buried in San Francisco, CA*

The nineteenth century was a turning point in California; it saw the end of the Spanish Mission system, the Gold Rush, exponential growth in population, and major urbanization. San Francisco grew from a small port city of 3,000 in 1849 to the nation's tenth largest city by 1870 with over 150,000 people. This massive growth

created an economy that required women's labor outside of the home, which brought about the need for artificial feeding of infants. While most historical studies focus on changes at the community level, we focus on the individual. We use isotopic analysis in serial samples of first molars (which grow from birth to age 10) to examine dietary and weaning behavior in immigrants who died between 1850 and 1900 in San Francisco, CA. Results show that while individuals died as adults they show little or no signatures of breastfeeding, suggesting mothers were unable to invest time or resources toward breastfeeding and developed innovative ways to feed their infants. In short, changes in women's labor that occurred with industrialization affected not only their lives, but lives of their children as well.

Maldonado, Blanca (El Colegio de Michoacán), David Larreina, Luis Velázquez, Andres Francisco Sanchez Guerrero (El Colegio de Michoacán), and Nelly Mendez

[339] *Student Involvement in the Jicalán Viejo Archaeological Project as a Research-Based Teaching Strategy: A Case Study from Michoacán, Mexico*

Fieldwork in its various forms is usually accepted as a matter-of-course in the education of archaeology students. Student involvement in archaeological projects offers invaluable real-world experience, allowing them to participate in fieldwork and laboratory work, fostering critical thinking, and providing a practical link between theory and practice. The archaeological project "Preindustrial Mining and Metallurgy in Mexico: Research on Copper Smelting in Michoacán," which focuses on interdisciplinary research at the Postclassic and colonial site of Jicalán Viejo, has served as a teaching laboratory and platform for investigation, incorporating students and researchers into the project. The present paper presents an update of the recent archaeology completed in the Jicalán Viejo project, and highlights several derived student research projects.

Maldonado Vite, María (INAH Centro Veracruz)

[86] *La Huasteca durante y después de Tajín*

El Tajín fue la entidad política más importante del norte de la Costa del Golfo, llegando su influencia a zonas tan lejanas como Rio Verde y la Sierra Gorda; sin embargo, sus vecinos inmediatos fueron los huastecos, teniendo un gran debate antaño acerca de la frontera entre huastecos y totonacos, asumiendo que Tajín era totonaco; incluso hay quien propone que Tajín fue fundado por los huastecos. Las investigaciones recientes en extensas áreas entre los ríos Cazones y Pánuco, nos permiten tener nuevas perspectivas acerca de las interacciones entre Tajín y los huastecos, no solo como simples vecinos, sino como subordinados e incluso como aliados. Posterior a la caída de la gran urbe, los huastecos fueron los herederos políticos de la región que se transformó culturalmente con la llegada de nuevos grupos.

Maldonado Vite, María [302] see Acosta Ramírez, Karla

Malerba, Amanda, Christopher Kiahtipes (University of South Florida), Kendal Jackson (University of South Florida), John Arthur (University of South Florida St. Petersburg), and Kathryn Arthur (University of South Florida)

[200] *Landscapes of Resilience: Late Holocene Vegetation History of the Gamo Highlands, Ethiopia*

Modern biomes are a complex product of current environmental conditions that are expressed differently depending on the history of individual locations on the landscape. Plant microfossils recovered from sedimentary records provide a proxy for tracking vegetation responses to global climatic conditions as well as local management practices. Using fossil pollen and sedimentary data sampled from multiple shallow wetlands in the Gamo Highlands of Ethiopia, we describe vegetation responses to Late Holocene cultural and climatic change. These deep and relatively recent deposits provide an opportunity to evaluate historic landform evolution and vegetation change at a fine chronological and spatial resolution. Our data provides a well-resolved and spatially distributed record of vegetation change suitable to establish the timing of major fluctuations in forest composition and extent. These records compliment anthropological and archaeological work done in the region focused on how conflicts stemming from the Atlantic slave trade or postcolonial political reorganization have shaped conservation and management of local forested environments.

Malhi, Ripan, and Alida de Flamingh

[268] *Human Paleogenomics Research in Western North America*

Genome wide studies of Ancestors using community collaborative approaches are rare in North America and only a few have been published. Here we review these studies to learn about the genomic structure of Indigenous peoples of North America prior to European contact and practices of paleogenomic research that adhere to principles of Indigenous Data Sovereignty. Following this review, we show how human paleogenomics research at Mánni Húyyú Muwékma Yatiš Túnnešte-tka (CA-SCL-1070) in Northern California will complement previous paleogenomic studies and provide knowledge useful to descendants and scholars.

Malhi, Ripan [335] see Diaz, Joshua

Malik, Mustafa (University of California, Davis), Jelmer Eerkens (University of California, Davis), Christyann Darwent (University of California, Davis), Josie Twigg (Kleinfelder Inc.), and Shelby Brown (Amah Mutsun Tribal Band of Mission San Juan Bautista)

[56] *Insights from a Recently Discovered Precontact Dog Burial on the San Francisco Peninsula*

The majority of Indigenous North American dog breeds, descended from those which migrated into the Americas alongside humans, have gone extinct. Archaeological analyses of precontact dogs are an important line of research for both Indigenous groups and archaeologists. In collaboration with the state-appointed Most Likely Descendant tribe, this poster presents analyses from a recently discovered precontact dog burial from a site on the San Francisco Peninsula. Osteology provides insight into health and age, a radiocarbon date establishes the archaeological age, and stable isotopes estimate diet. We compare results from this dog with others previously studied in the region. We also compare isotopic data from the dog with a sample of other fauna from the site to create a paleodietary context, with particular interest in whether the dog was eating more or less marine protein than wild canids (such as coyotes) and other precontact dogs. Results add to a growing archaeological understanding of the relationship between Indigenous dogs and humans in the Bay Area, and more generally, small-scale hunter-gatherer groups globally. Although the author list is limited to five, we acknowledge collaborators Chris Canzonieri, Kaityln Stiles, Rachel Gordon, and Alyssa Gelinas, who also participated in various phases of the research.

Malinger, Connor [55] see De Leon, Abigail

Mallol, Carolina [170] see Egüez, Natalia

Mallory, Riley (Penn State University)

[352] *Documentary Filmmaking and Visual Anthropology at the Maya Site of San Bartolo*

The Preclassic Maya site of San Bartolo in the Petén region of Guatemala displays the oldest artwork in the Maya world: ancient in situ mural paintings. These detailed masterpieces depict a Maya cosmivision and local flora and fauna. For over 20 years, archaeological investigations have been conducted at the site. Most recently, through a combination of visual media and archaeology, the project produced a short documentary as a means of science communication and providing a new way of understanding the Maya Forest. Three years of work under the “Murals in Landscape” initiative resulted in *The San Bartolo Murals*, a film coproduced with the San Bartolo project directors Heather Hurst and Boris Beltrán. The film explores the history of the site, its mural paintings, and current research objectives. It is a testament to the power of documentary filmmaking techniques in an archaeological context. Anthropologists may share their work more widely with the world outside academia, increasing education on the past and fighting disinformation. The San Bartolo Project includes both filmmaking and ecological research through collaborative camera trap photography in its research process. By combining archaeology and visual anthropology, we share a more comprehensive, ethically grounded, and interdisciplinary account of the Maya landscape.

Maloney, Jillian [271] see Gusick, Amy

Mamani, Manuel [204] see Angell, Emma

Mamani, Manuel [213] see Velasco, Matthew

Mamani Arias, Nelson [40] see Mouquet, Arthur

Mandel, Rolfe [155] see Blecha, Erika

Mandel, Rolfe [249] see Holcomb, Justin

Manfredi, Sophie (University of California, Berkeley)

[204] *Early Inquiries into Subsistence Diversification during the Jomon Period in Hokkaido, Japan*

Japan's northernmost Island, Hokkaido, has undergone a somewhat different cultural and historical trajectory than other islands in the Japanese archipelago. This divergence is considered to have occurred alongside the introduction of rice agriculture to Kyushu at the end of the Jomon period (~15,000–2500 cal BP) and the beginning of the Yayoi period (~2500–1750 cal BP). Since rice agriculture was not adopted in Hokkaido, the Jomon period in that region is thought to have continued for around a thousand years longer (~15,000–1300 cal BP) than on the mainland before another, indigenous, culture emerged. This presentation examines paleoethnobotanical data from several Japanese site reports to view how subsistence may have changed in the context of a rapidly changing region. This presentation represents early inquiries into how forest management may have played a part in the subsistence strategies of northern Japan and how consistent exploitation of certain taxa may have been a large part of a diverse subsistence base.

Manin, Aurelie (CNRS-Paris I Panthéon-Sorbonne), María José Negrete (Posgrado Estudios Mesoamericanos), and Karine Lefebvre (Universidad Nacional Autónoma de México)

[224] *Last Meal of the Inn or Last Killing of the Slaughterhouse? Disentangling the Bones of an Early Seventeenth-Century Cattle Exploitation Site in Northern Michoacán*

Although they were inhabited by a diversity of mobile indigenous groups, the plains that lay north of the former Mesoamerican area were seen by the settlers as vast empty lands to be occupied and exploited. In the first decades of the colonization of New Spain, livestock (cattle in particular) was left roaming in these areas to reproduce and multiply. While historic sources provide forceful testimonies of the emergence of this wealth, archaeological—that is to say material—evidence of it is scarce. Here we present the results of the interdisciplinary analysis of a unique building, located on the southern bank of the Lerma river. Despite its isolated position, with no villages or towns in the vicinity, thousands of animal bones, mostly from cattle, were found on the floors of this building. Crossing information from the zooarchaeological study as well as the spatial distribution of the specimens, but also historical documents related to this specific area (e.g., notarial acts), we retrace the history of these bones to better understand the activities that led to their accumulation. In addition, we discuss the ecological implications of this extensive livestock farming.

Mann, Rob (Boise State University)

[275] *The Boy in the Wall: Investigating a Possible Ritual Concealment from the Baker-Johnson-Pickett Farmstead (12HI842) in Hamilton County, Indiana*

In 2022 archaeologists and historians with Weintraut & Associates Inc. (W&A) conducted archaeological investigations at the Baker-Johnson-Pickett Farmstead site (12HI842), a nineteenth- and twentieth-century farmstead located in Hamilton County, Indiana. As part of the mitigative measures for the site, the Baker-Johnson-Pickett house was dismantled, transported to an off-site location, and reconstructed. During the house deconstruction process, workers alerted W&A personnel to several items that were found sealed within the walls of the structure. A total of 34 specimens were recovered from within the walls. These include shoe fragments and other leather objects, clothing fragments, ceramic objects, wooden objects, glass vessels and shards, and paper fragments. Incredibly, this assemblage also includes a daguerreotype housed within a wooden case. The image is of a young man, identified as Benjamin Franklin Rogers (b. 1839). Also within the case are two pieces of dark red and black striped cloth and two small, braided locks of hair, presumably belonging to Rogers. In this paper I propose that these objects represent an act of ritual concealment. I attempt to understand the meaning of these objects within the timelines and known historical circumstances associated with the Baker-Johnson and Rogers families, including their shared Quaker heritage.

Manney, Shelby [74] see Heilen, Michael

Manney, Shelby [74] see Nicholson, Christopher

Manrique, Mayra [307] see Ruvalcaba Sil, Jose Luis

Mansilla, Luis Felipe (Museo Arqueológico de La Serena), Paloma Salas (Universidad de Chile), Francisca Lobos, and Felipe Armstrong (Museo Chileno de Arte Precolombino)

[205] *Materializing the Body: Vessels, Figurines, and Rock Art in the Diaguita Culture (North-Central Chile)*

Throughout their historical trajectories, prehispanic communities from north-central Chile produced bodies on different media as vessels, rock art, and clay figurines that articulate a sociohistorical entity defined as the Diaguita culture (ca. 1000–1530 CE). This period marks the consolidation of sedentary and agricultural lifeways, along with the spatial segregation between domestic contexts and public spaces. Clay and stone bodies became central elements in these settings, functioning both as key media for congregation and social reproduction of Diaguita communities, and as components of domestic settlements where everyday life unfolded. These dynamics of differential materialities and circulation give rise to a multimodality of the bodyscape. Through systematic comparisons of the compositional features of bodies in rock art, pottery, and figurines, we examine how these multiple bodyscapes are displayed within a single Diaguita bodyworld. Our discussion contributes to understanding the heterogeneity in the construction and exhibition of the body, and the potential internal and external tensions embedded in this diversity. These findings resonate with broader expressions of diversity in Diaguita practices, such as burial patterns.

Manzanilla, Linda (UNAM)

[164] *Introduction: The Organization of a Multiethnic Neighborhood Center of Teotihuacan: Teopanazco*

In Teotihuacan, the neighborhoods were the most dynamic social units; they were competitive and entrepreneurial organizations, each with a corridor of ally sites. Each had a center where attached workers participated in the construction, craft production, and movement of goods through the caravan system organized by the intermediate elite that managed it. Teopanazco, south of the Ciudadela, was studied by an interdisciplinary, long-lasting project that started in 1997. It was a neighborhood center with economic, social, and symbolic ties to Veracruz in the Gulf Coast. Some of the workers were local; others came from the corridor of ally sites in Tlaxcala, Puebla, and Hidalgo; and still others came from the Gulf Coast. Most of the workers were fed with daily rations of maize, and domestic animals were also fed with maize. The activity markers in the buried individuals suggest hard work devoted to sewing, painting, fiber softening, diving in cold waters, and carrying heavy weights with a *mecapal*. From Nautla came 14 varieties of fish, crocodile, and crabs, as well as cotton clothes; volcanic glass from Altotonga for the stucco floors; orange-lacquered pottery from the Mixtequilla-2 source; and vessels from Puebla, Tlaxcala, Michoacán, and Guerrero-Morelos. *****This presentation will include images of human remains.**

Maple, Miranda, and David Lewis (Oregon State University)

[333] *The Importance of Plant Survey Implementation in CRM*

Typically, archaeologists, whether regional or consultants, have little collaboration with Tribal Nations addressing the significance and methods of identifying culturally significant plants. Neither state nor federal laws specifically label plants as culturally significant, despite the importance to Tribal Nations. My research explores the perspectives of CRM focused archaeologists and provides evidence that suggests a change in current practices regarding the identification of culturally significant plants in collaboration with Tribal Nations will be beneficial to CRM. In this research, I identify the benefits of adding botanical surveys to the field methods used by CRM firms along the Plateau region. I identify gaps in training, methodologies, and practical knowledge that private, state, and federal firms have in identifying culturally significant foods using mixed methodologies including participant observation, survey response, and expert interviews. I then address how the importance of culturally significant botanical identification contributes to a more complete archaeological record of sites and what current laws are actively protecting culturally significant plants today.

Marcel, Maria [74] see Nicholson, Christopher

Marccone, Giancarlo (Universidad de Ingeniería y Tecnología [UTEC])

[212] *Ni Chicha Ni Limonada: Navigating Overlapping Forces of Ecologies, Identities, and Empires in the Lower Cañete Valley on the Central Coast of Peru*

This paper examines the lower Cañete Valley on the central coast of Peru as a frontier zone where the dynamics of interaction, negotiation, and adaptation among local, regional, and imperial actors can be

reconstructed. The archaeological site of El Guarco illustrates how fluid spaces of contact articulated Chincha and Ychsma traditions, later reconfigured by Inca imperial presence during a period of climatic disturbance. Evidence of architectural transformations—from public to domestic forms—as well as the coexistence of heterogeneous material styles, reveals daily practices of negotiation in which households, elites, and institutions simultaneously participated. By foregrounding the agency of intermediate groups, domestic strategies, and productive activities, this research frames Cañete as a frontier that was both contested and co-constructed. El Guarco highlights how local elites and communities developed strategies balancing economics, symbolic architecture, and ritual practices to negotiate their position between larger coastal polities and the expanding Inca state. This underscores the importance of understanding frontiers as dynamic, multidirectional processes, where imperial, regional, and local adaptations produced outcomes that cannot be reduced to diffusionist or dichotomous models. The “last fishing lords” of El Guarco navigated overlapping forces of ecologies, identities, and empires—embodying the frontier as a space of resilience and transformation.

Marcucci, Samuel, and John Kelly (Public Archaeology Laboratory Inc.)

[284] *The Fox Creek Phase in Interior Massachusetts: Data from a Middle Woodland Site in the Blackstone River Drainage*

Recent archaeological investigations identified and mitigated a portion of the Broad Meadow Brook site in Worcester, Massachusetts. The investigations at the site, which is located along a branch of Broad Meadow Brook in the Blackstone River Drainage, indicated that it was occupied during the Fox Creek phase of the Middle Woodland period. The Fox Creek phase is one of the earliest phases of the Middle Woodland and generally dates from circa 1600 to 1250 BP. The majority of recorded Fox Creek sites in New England are on the coast, and the Broad Meadow Brook site represents one of the few Fox Creek sites identified in the interior of Massachusetts. Data from the site has offered unique insights into Fox Creek groups in the Blackstone drainage, including their selection and acquisition of stone raw materials for tool production and their decoration and use of pottery vessels. The latter may have implications regarding long-distance trade networks and exchange.

Marean, Curtis [336] see Murray, John

Marengo Camacho, Nelda Issa (Boundary End Archaeology Research Center/UNM), María José Con (INAH-Quintana Roo), Dylan Clark (North Carolina Office of State Archaeology), Gabrielle Vail, and David Stuart (University of Texas at Austin)

[112] *Coba: Over 50 Years of Archaeological Investigation*

The Boundary End Archaeology Research Center (BEARC) is a nonprofit organization, special collections library, and cultural center that curates much of the George E. Stuart research archive. Since 2024, the BEARC has been assembling an exhibition in collaboration with the National Institute of Anthropology and History of Mexico (INAH), featuring original photographs, drawings, and material culture from the first systematic archaeological research project at the monumental Maya city of Cobá conducted in 1974. Among the researchers involved in the pioneering studies of architecture, archaeology, and hieroglyphic inscriptions at this important site were anthropologists George and Gene Stuart of the National Geographic Society, who brought their young family with them into the field. Using material from the BEARC library, visitors are transported through five decades of research that helped lay the groundwork for current knowledge of this Classic Maya kingdom. After visiting museums in the USA and Mexico, the exhibition will return to the Yucatecan village of Cobá where the photographs will be permanently curated. This poster presents our approach to developing the exhibition, including archival research, collaboration, and conversations with local community leaders and original project participants, which have enriched the archaeological investigation and created new spaces for public engagement.

Margaris, Amy (Oberlin College)

[218] *NAGPRA and Not: Two Case Studies from Oceania*

In the nineteenth century, Christian missionaries and teachers from Oberlin College traveled throughout the Central Pacific Islands, many sending back collected “specimens” for their alma mater’s natural history cabinet. These include an *iwi kupuna* (ancestral bone) that the college repatriated under NAGPRA to Hawai‘i

in 2023, and numerous cultural items from the Nation of Kiribati including coconut fiber armor, weaponry, and dance skirts. The rising sea waters that threaten Kiribati today underscore the ongoing importance of cultural heritage items to the nation yet complicate their possible return. In this presentation I apply a shared set of reporterly questions (who, what, why, etc.) to the Hawai'i and (ongoing) Kiribati cases in order to draw out some of the legal, ethical, professional, and practical considerations that can arise in NAGPRA-mandated versus voluntary-return deliberations, from both source community and university perspectives.

Marguccio, Aurora [200] see Ritchison, Brandon

Marguet, Louis [93] see Sevin, Lucille

Marini, Silvia [81] see Carmody, Stephen

Marken, Damien, Rachel Horowitz (Washington State University), Emily Bertin, David Rafael McCormick Alcorta (Mohegan Tribal Historic Preservation Office), and Marielos Cuyan (Proyecto Arqueológico Waka')

[293] *Crafting the Economy: A Survey of Crafting Activities at El Perú-Waka', Guatemala*

Until recently, commercialized aspects of Classic Lowland Maya economies have been largely underplayed or ignored. Yet even with the wide recognition of the prevalence of marketplace exchange and the commercialization production of certain goods, many cross-cultural studies continue to suggest that Classic Maya governance must have been highly autocratic, even as increased commercialization is associated with more collective forms of governance. This paper will survey the archaeological evidence of crafting activities at the Classic Maya city of El Perú-Waka', Guatemala, with an emphasis on production contexts. While dynasts and elites controlled some aspects and contexts of crafting, like in most Lowland cities commoner Waka' households concomitantly engaged in a range of crafting activities at differing scales and intensity. This research continues the ongoing archaeological reassessment of Lowland Maya economies, as well as how those economies can inform the nature of Maya governance.

Marken, Damien [36] see Eppich, Keith

Markert, Patricia

[34] *"We Called It Old Town": Reflecting on Eight Years of Community-Based Archaeology in D'Hanis, TX, from Rock Ruins to Virtual Space*

Work with communities takes archaeology in unexpected directions. In 2018, I began the Old D'Hanis Archaeological Mapping Project, a community-based project that examines how migrants and their descendants engaged in placemaking following nineteenth- and twentieth-century migrations (Alsatian, German, and Mexican) to the small town of D'Hanis, TX. At the outset of the project, it would have been difficult to conceive of the paths the research would take over the next several years, from stories told while standing in the ruins of "Old Town"—as those who grew up there call it—to developing a virtual archaeology game with computer science students in Canada. This paper traces several of these paths and the generative ways that working with communities, students, and others transforms and enriches the trajectory of archaeological work. Drawing on moments from fieldwork and its outcomes, I reflect on the challenges, the moments of shared discovery and occasional grief, and the ways that being in community shapes methods, questions, and relationships over the course of a project.

Marques, Sophia (University of Virginia)

[55] *Updates from the Valle de Mairana*

Bolivia's *valles cruceños* are ecologically transitional between the Andes and the Amazon; when this area became part of the southeastern reaches of the Inka empire, a political boundary was forged across this ecological frontier zone. This research focuses on the large, agriculturally productive valley of Mairana and the nearby Inka regional center of Samaipata. To address Inka occupation and daily life, this poster compares two habitational mounds, both proximal to monumental Inka sites and both occupied prior to Inka presence. Site M-40 is situated in the heart of Mairana, 1 km south of an Inka grain processing site. Sector 10 is an

architectural complex at the western edge of the Inka center of Samaipata. This poster presents data from recent excavations (M-40) and from legacy museum collections (sector 10). Ceramic attribute analysis constitutes the majority of directly comparable data. Attributes including shape, size, style, paste, and production methods allow for the inference of the functions and origins of ceramics, which in turn give insight into activity areas and regional connections. Preliminary results indicate that although different activities occurred at each site, both were tied into long-distance networks of exchange throughout successive periods of occupation prior to Inka presence.

Marr, TruettKoden

[111] *Fault Lines and Foundations: Tectonic Influences on the Emergence of Agriculture in the Near East*

This project explores the spatial relationship between ancient human settlement patterns and regional fault systems across the Near East, spanning from the Paleolithic through the Chalcolithic periods. The Near East has long been recognized as a cradle of human innovation and social complexity, where environmental conditions and geologic processes have intersected with cultural developments. While previous research has emphasized climate, topography, and resource availability as major factors influencing settlement distribution, this study investigates the underexamined role of tectonic activity—specifically, proximity to fault zones—as a possible structuring force in early human occupation and land use. Using published settlement data, this study analyzes settlement density and location in relation to mapped fault lines, considering variables such as fault type, activity level, and terrain. The results raise questions about the interplay between seismic risk, water availability, soil nutrient content, and landscape accessibility. By integrating archaeological and geologic data at a regional scale, this research contributes to a more nuanced understanding of how deep-time earth processes may have shaped later human decision-making in the early Holocene Near East.

Marrero Rosado, Jose (University of California, Berkeley)

[42] *Life after Death: Human Intervention and Postdepositional Trajectories of Skeletal Remains from Historical San Juan, Puerto Rico*

In Western contexts, an individual's place of interment is typically conceived as final, a sacred and immutable locus of eternal rest. In practice, however, human burials are rarely static; embedded within landscapes, they are subject to perpetual flux, shaped by natural forces and human intervention. Illuminating the role of human intervention, this paper examines a forgotten annex of the Santa María Magdalena de Pazzi Cemetery in San Juan, Puerto Rico. Drawing on archival sources and archaeological evidence, I explore the ways in which cultural, religious, political, and health pressures have shaped this space over the past two centuries. Once an epidemic mass grave, later a wartime grave, subsequently a common burial ground, and ultimately a repository for cemetery debris and disinterred remains, this annex offers a rare vantage point from which to interrogate the entangled biographies of the dead beyond their initial deposition. By extending a life-course approach into the post-burial realm, we not only re-humanize skeletal material down to the level of fragmented bone dust but also illuminate the complex historical processes through which both individuals and communities have been continuously reconstituted within this perpetually shifting assemblage. *****This presentation will include images of human remains.**

Marrinan, Rochelle (Florida State University), Lynne Sullivan, and Nancy White (University of South Florida)

[208] *Cheryl Claassen, a Grit-Tempered Woman*

Cheryl Claassen was too young to include in our book *Grit-Tempered*, about pioneering women archaeologists in the southeastern United States. But she wrote a chapter—on Black women digging!—and 25 years later certainly qualifies for this and many other honors. Besides dealing with enormous sexism and additional burdens from grad school onward, she has faced the challenges of working in hugely diverse areas of archaeology from faunal remains to interpretations of ancient ritual in the USA as well as Mexico. In *Women in Archaeology*, she was among the first to examine the conditions of women in archaeological practice. She has also contributed to other areas of social science, as seen in her book *Whistling Women*. We recount “Cheryl stories” to demonstrate her wide-ranging accomplishments.

Marsh, Gabrielle [337] see Brown, Matthew Tyler

Marshall, Amanda (Kleanza Consulting Ltd.), Suzanne Carruthers (Kleanza Consulting Ltd.), Candice Wilson (Haisla Nation), Kelly Steele (Might For Right Productions), and Kathleen Sullivan (Canadian Conservation Institute)

[343] *The Minette Bay Story: Reframing Archaeological Practice through an Indigenous-Led Collaboration*

The Minette Bay Archaeological Project, conducted in the unceded territory of the Haisla Nation, exemplifies a transformative model for community-engaged archaeology. Initiated in response to industrial development in Kitimat, BC, the project uncovered 20 waterlogged wooden fish weir features—exceptionally preserved and radiocarbon dated to a span of over 2,500 years—affirming a long-term Haisla occupation and supporting Aboriginal Rights and Title claims. In partnership with the Haisla Nation, Kleanza Consulting, the Canadian Conservation Institute, UBC, and the Exploration Place Museum, the project advanced a conservation strategy rooted in Indigenous knowledge systems while meeting provincial and federal standards for wet-site mitigation. This initiative critiques the limitations of conventional CRM reporting, which often marginalizes Indigenous stakeholders through inaccessible formats and procedural assumptions of consent. By integrating documentary film and curriculum development, the project reimagines archaeological dissemination as a community-centered, multimodal practice. The Minette Bay Story offers a replicable framework for ethical engagement, demonstrating how collaborative methodologies can challenge colonial legacies and foster equitable heritage stewardship across institutional boundaries.

Marshall, Bianca

[214] *Provenance in Transit: Reconstructing the Provenance of Two French Stone Tools*

This study examines two flint stone tools from France that likely date to the Neolithic period, formerly held in a private collection in Los Angeles before arriving at the Waystation Initiative at UCLA. The project builds on two approaches to reconstruct the provenance of these objects: (1) tracing their transnational movement from the likely find site and (2) examining their circulation through the art market into private collections. Methodologically, the research cross-references geographic data from archaeological maps with published excavation reports, regional surveys, and comparative typologies in order to geolocate the objects and situate them within their prehistoric contexts. Strong attention is also given to the labeling and documentation attached to the tools, which offer partial clues about their collection history while also revealing gaps in its archival record. Beyond reconstructing provenance, this study highlights the broader challenges inherent in researching artifacts with incomplete or undocumented collection histories, particularly when they emerge from private or commercial circulation. It also considers the ethical and practical dimensions of stewardship, including the potential role of voluntary returns to countries of origin.

Marston, John [314] see Meiggs, David

Martel, Aiyana, Nathan Chan (California State University, Long Beach), and Samuel Oliver (California State University, Long Beach)

[54] *The Application of Biomarkers in Tracking Correlation between Historic Events and Population Change at the Port of Lechaion in Ancient Corinth, Greece*

Biomarkers, such as fecal stanols and bile acids, provide insights to past population trends in archaeological contexts. In this study we analyzed sediment samples from the abandoned port of Lechaion in Ancient Corinth, Greece, to see if population trends inferred from changing biomarker concentrations correlate with historical records of harbor activity. Lechaion was a highly active and thriving center for trading and commerce in the Mediterranean until its abandonment in the sixth century CE. Activities at Lechaion were punctuated by temporary periods of disuse from warfare and natural disasters, providing a dynamic demographic setting for biomarker analysis. This study investigates the timing and magnitude of population fluctuations at Lechaion and further cements the potential of biomarkers from sediment samples to track ancient population change.

Martens, Vibeke Vandrup (NIKU-Norwegian Institute for Cultural Heritage Research)

[323] *How to Move from Reactive to Proactive?*

To meet current and predicted impacts of climate change, archaeological responses must be updated. We need proactive rather than reactive heritage management systems. That requires holistic and interdisciplinary

approaches, which include local and traditional knowledge and expertise, and learning from past handling of environmental changes and crises. Although climate change is global, local adaptation and solutions are a necessity, to ensure the survival of archaeological heritage sites. How can we work toward sustainable solutions that are applicable on different heritage site types, from different time periods, under different threats? Archaeologists in research, teaching, and heritage management will need to work in close cooperation with other sciences, particularly those working in nature preservation. This paper will approach different threat types and suggest different possible solutions.

Marticorena, Alicia [302] see Andrade, Pedro

Martin, Erik (Far Western Anthropological Research Group), and Daron Duke (Far Western Anthropological Research Group)

[319] *Variability and Scale in Great Basin Western Stemmed Point Typologies*

Contemporary projectile point research employs a range of complex analytical tools in conjunction with high-quality datasets that are far advanced from those used to develop initial regional typologies in North America. Fundamental to this process, both in the past and today, is the identification of ranges within morphological, spatial, and temporal data recognized to comprise a particular form within a typology. The increasingly high resolution of these analyses requires researchers to consider the scale and interpretation at which particular forms are identified. Long known for their extreme morphological variability, we review prevailing typologies describing Paleoindian Western Stemmed points of the Great Basin and the presupposition of idealized morphological groups. We examine the balance between morphological specificity and the technological tolerances that define variability among Western Stemmed points. Functional and technological interpretations of Western Stemmed points at alternative scales may provide additional interpretive value for understanding the emergence, persistence, and variation of this technology across the Great Basin. We advocate that both approaches are useful and necessary to better understand past hunting technology and foraging behavior, while still harnessing the temporally diagnostic potential of these artifacts in otherwise poorly dated contexts.

Martin, Fabiana María (CEHA, UMAG), Flavia Morello Repetto (Universidad de Magallanes), Dominique Todisco (CNRS, University of Rouen-Normandy, France), Amelie Quiquerez (Université de Bourgogne), and Luis Borrero (CONICET & Universidad de Buenos Aires)

[279] *Pleistocene Fauna at Cerro Sota Cave, Pali Aike Volcanic Field, Chile*

Cerro Sota Cave is one of the least-known sites excavated by Junius Bird during his epic 1930s excavations in Patagonia. It was originally considered as one of the sites offering evidence of association of humans and Pleistocene fauna. Chronological work changed that, showing that human remains were deposited during the Late Holocene. We recently studied faunal and lithic remains recovered by Bird, stored at the American Museum of Natural History, New York. We also re-excavated the site trying to improve the contextual and sedimentary information. We will present some of our preliminary results

Martin, Fabiana María [58] see Morello Repetto, Flavia

Martin, Nicholas [160] see Gauthier, Nicolas

Martin, Simon (University of Pennsylvania)

[92] *Iconicity and Abstraction in Maya Glyphs*

The origins of signs in most writing systems lie within iconicity—which is to say, efforts at depictive representation—but then follow a unidirectional process of abstraction and reanalysis. Such developments ultimately obliterate those beginnings to create a graphic domain that is fully their own. By contrast, hieroglyphic systems such as Egyptian, Luvian, and of course Maya preserve strong connections to the wider conceptual and aesthetic dimensions of their art. More specifically, they preserve pictographic signs that continue to exploit iconicity for its semantic content. However, this outline description ignores much more nuanced processes in which individual signs follow their own divergent trajectories, some retaining a literalism that can be appreciated by any human eye, while others take the route that generates meaning by

convention rather than resemblance. This paper honors David Stuart's unparalleled contributions to the understanding of Maya hieroglyphic writing by revisiting these different pathways, exploring how Maya scribes played with the traditions they inherited from their teachers to both innovate and preserve its rules and conventions.

Martinet, Adrien (German Archaeological Institute; University of Leiden)

[308] *The Southern Connection: Characterizing Northeastern Honduras's Late Formative Betulia Phase and Its Integration into Broader Central American Interaction Networks*

Late Formative (ca. 400 BCE–300 CE) communities of the Central American Pacific Coast and the Southern Maya Region shared conspicuous material similarities: jade artifacts, stone scepters and seats, and Usulután-style serving vessels. Newly excavated assemblages from northeastern Honduras display similar jade jewelry and ceramic varieties—including Usulután, suggesting that this region participated in wider Central American interaction networks during the Late Formative, locally represented by the Betulia phase. While similarities to southern Mesoamerica stand out, the assemblages' relationship with the Isthmo-Colombian Area to the south remains unclear. The Betulia phase assemblage significantly departs from later ceramic traditions from the Selin phase (300–1000 CE, Classic equivalent), or the Cocal phase (1000–1500 CE, Postclassic equivalent). It has been postulated that Selin and Cocal phase communities of northeastern Honduras displayed cultural ties to regions to the south, in Nicaragua, Costa Rica, and Panama. The possibility of a comparable relationship during the Betulia phase hasn't been explored yet. This paper will investigate this potential "southern connection" by comparing Betulia phase ceramic assemblages with those from other contemporary contexts from the Isthmo-Colombian Area in order to understand northeastern Honduras's relationship with its southern neighbors during the Late Formative.

Martinez, Desiree [335] see Gupta, Neha

Martinez, Desiree [335] see Ryan, Susan

Martinez, Eva (Universidad Nacional Autónoma de Honduras)

[168] *Rethinking the Periphery: Rosemary Joyce and the Centering of Honduran Archaeology*

It is an honor to participate in this session that celebrates the career of Rosemary Joyce, whose retirement marks the end of a teaching phase but not of her influence on archaeological theory and practice. Her impact extends to those of us who have had the privilege of learning from her through her writings, lectures, and conversations. Joyce has continually invited us to question what tends to be taken as a given. Without a doubt, her work in Honduras has transformed how we understand the region—not through the singular lens of Mesoamerica and Mesoamericanists, nor from a merely peripheral or subordinate position, but as a region as itself, understood from within, with its own particularities and connections. Her legacy in social archaeology is academic, critical, deeply respectful, and transformative. Rosemary has been an intellectual guide whose theoretical contributions and profound humanism have shaped the way we do archaeology and how we teach it; constantly inviting us to rethink the ways in which we relate to the past, to materiality, and to both ancient and present-day communities. My presentation will focus on Joyce's contributions to the holistic protection of Honduras's archaeological heritage, and her transformative approach to a real Honduran archaeology.

Martinez, Marissa [54] see Oliver, Samuel

Martinez, Valentina [84] see Herdt, Reagan

Martinez, Winnie [302] see Socha, Dagmara

Martínez González, Javier [51] see Servin Rosas, Claudia Margarita

Martínez-Méndez, Luis [210] see Somerville, Andrew

Martinez Mora, Estela, and Patricia Olga Hernández Espinoza (Centro INAH Sonora)

[25] *Social Disruption, Political Crisis, and Health: Tamtoc toward the End of the Postclassic Period*

In the mid-thirteenth century, the Mexica were seeking to expand their empire, and the Huasteca region was an attractive target, as it boasted fertile lands, hunting opportunities, and the production of fine cotton blankets and tropical bird feathers. Thus, in 1454, under the rule of Moctezuma I, the conquest of this territory began. The siege of the Huasteca was a long and complex process, as the Huastecs were never completely dominated by the Mexica, which generated constant wars and rebellions in the region for approximately 70 years. Furthermore, the expansion of the Mexica Empire overlapped with the wars the region waged with the Chichimeca tribes, so the Teenek peoples maintained constant warlike conflicts, defending their territory and significant aspects of their worldview. This undoubtedly influenced the living conditions of the inhabitants of the Tampaón River region.

Martínez Perdomo, Adalid [352] see Landau, Kristin

Martínez-Polanco, María (Universidad Nacional de Colombia)

[31] *A Dwarf Deer's Tale from Preceramic Times: Evidence from Pedro González Island, Central Pacific Panama*
Pedro González Island (14.9 km²), part of the Pearl Islands in Pacific Panama, preserves a remarkable case of insular dwarfism and human–faunal interaction. Excavations at the Preceramic site of Playa Don Bernardo (PdB), dated to 6060–5620 cal yr BP, revealed the remains of a now-extinct dwarf brocket deer (<10 kg), intensively exploited by early human inhabitants. Taphonomic analyses demonstrate direct human processing, including cut marks, thermal alteration, tooth impressions, and systematic bone breakage. Morphological evidence shows clear signs of insular adaptation: reduced body size, carpal bone fusion, and distinct molar morphologies. Linear measurements of lower third molars (m3) place the PdB deer between *Pudu* and *Mazama* in morphospace, while 3D geometric morphometrics of the humerus reveal evidence of functional adaptation. Isotopic and dental wear analyses indicate a gradual dietary shift from browsing to mixed feeding, likely driven by anthropogenic vegetation clearance over approximately 450 years. Comparative studies with extant *Mazama*, *Odocoileus*, and *Passalites* species highlight evolutionary divergence shaped by ecological constraints. This multiproxy approach underscores the complex interplay between isolation, environmental transformation, and human impact in shaping insular mammal populations. The extinction of this unique lineage during the Preceramic period reflects the fragility of island ecosystems under sustained anthropogenic pressure.

Martínez-Tagüeña, Natalia (Universidad Autónoma del Estado de Morelos), Maren Hopkins, and Kelsey Hanson (University of Texas at Arlington)

[26] *Envisioning Transformative Pathways in Clay Procurement: From Researcher Reflections to Community Coproduction*

This presentation explores how collaborative research on clay procurement has begun to transform the perspectives of participating researchers, and how these insights can be extended into meaningful engagement with local communities. In this project, scholars reflected on their assumptions regarding clay sourcing and provenance studies. Through participatory approaches—such as expectation-use mapping and narrative exchanges—researchers engaged in participatory learning that shifted their understanding of clay procurement from relying on previous assumptions to developing new perspectives, thus weaving technical knowledge with local knowledge to better understand topics like agency, mastery of craft, innovation, and scale variability, among others. Therefore, framed through the lens of transformative learning, these reflections show how researchers moved beyond adjusting practices (single-loop) or strategies (double-loop) to rethinking the underlying values and purposes that guide their work. Building on this transformation, the paper outlines a proposal for community-centered engagement. Strategies include returning provenance results through visual and narrative formats and the co-creation of maps. This dual perspective—documenting researcher learning while envisioning its extension to local stakeholders—demonstrates the potential of clay procurement studies to serve as a bridge between archaeology, community well-being, and sustainability.

Martínez-Tagüeña, Natalia [88] see Worthey, Kayla

Martínez-Varea, Carmen [195] see Henry, Aureade

Martínez-Yrizar, Diana (Universidad Nacional Autónoma de México [UNAM]), Carmen Adriano-Morán (Universidad Nacional Autónoma de México [UNAM]), and Emilio Ibarra (UNAM)

[164] *De lo cotidiano y lo sagrado: Las plantas y sus usos en Teopancazco*

En la década de los noventa se planteó el interés de estudiar el sitio de Teopancazco de forma extensiva e interdisciplinaria, para lo cual se inició el proyecto “Teotihuacan: Elite y gobierno” bajo la dirección de la Dra. Manzanilla. Entre los objetivos del proyecto se propuso estudiar la forma de vida de la elite Teotihuacana, mediante el estudio de las actividades desarrolladas en sus espacios habitacionales (Manzanilla 2012). Durante el proceso de excavación se hizo una toma sistemática de muestras de los cuartos y los diferentes contextos encontrados, tanto de las áreas de actividad como de los rellenos, para el análisis de materiales botánicos (semillas, madera, fibras y polen). Los objetivos de este trabajo son presentar los resultados y la interpretación de los usos e importancia de las plantas, en ciertas áreas de actividad de tres de los sectores funcionales: ritual, cocinas- almacenes y residencial tardío. Entre los materiales recuperados se identificaron plantas alimenticias como maíz, frijol, chía y tuna. Asimismo, plantas empleadas para la cestería y tejido como el algodón y materiales para la construcción (pino). La integración de datos indica que los mismos tipos de plantas se aprovecharon en diferentes actividades en los sectores antes mencionados.

Martínez-Yrizar, Diana [310] see Ge, Yun

Martini, Sarah (Yale University)

[267] *Between “Moist Lowlands” and “Maritime Oases”: Marine Fauna, Interaction Networks, and the MFAC Revisited in Piura, Far Northern Peru*

A basic tenant of Moseley’s Maritime Foundations of Andean Civilization (MFAC) is that local relationships between environments and people are key to explaining cultural developments on South America’s Pacific coast through different “adaptive scenarios.” As part of the “maritime-oases” scenario, MFAC was applied to the (south/)central Andean coast, whereas he identified a different, “tropical forest” scenario for the wetter north Andean coast. Other scholars further developed these ideas to identify interwoven differences in subsistence strategies, exchange networks, and political integration in the two regions. In this paper, I compare assumptions, uses, and outcomes of these two scenarios. I focus on Piura in far northern Peru, where the mosaic of arid and humid ecoregions represents an excellent testing ground for variability in how the ocean was involved in the development of ancient communities. I contextualize new data on the multifaceted use and importance of marine fauna at the inland site Las Pampas de Panecillo (410 BCE–100 CE) through a consideration of maritime exploitation and ocean-community entanglements in the region through time. Finally, I point to new areas and open questions that could help us understand the complex relationships between changing environments and changing peoples in this historically understudied region.

Martirosyan-Olshansky, Kristine [353] see Gaggioli, Amanda

Martisius, Naomi, and Jill Eubanks

[296] *The Potential Use of Abalone as Scoops for Hopper Mortars during the Late Period along the Big Sur Coast*
In Monterey County, California, after the 2024 Regent’s Slide hillside collapse endangered archaeological site CA-MNT-479, emergency data recovery excavations were undertaken. The recovered assemblage includes modified stone, bone, and shell artifacts; flaked and ground stone material; fauna; and archaeobotanical remains. Abalone (*Haliotis* sp.) shells were an important resource at the site and were used to make pendants and containers. Many of the black abalone shells recovered from MNT-479 were ground along their edges, indicating possible use. These modified abalone shells fall within a mid-range size category (2–5 inches), and their shape and size match with the cross-sections (2.9–5.2 inches) of the stone hopper mortar cups also recovered from MNT-479. These findings suggest that the black abalone shells were used as scoops in the hopper mortars. To test this hypothesis, we used unmodified modern black abalone shells to remove acorn flour from an experimentally produced stone mortar. While tests were conducted, the abalone shell edges were examined under microscopy. The wear patterns observed on the test shells were then compared to the MNT-479 archaeological specimens. We conclude with a discussion of abalone as a versatile resource along the Big Sur Coast for the Esselen and Salinan language groups.

Marwick, Ben [217] see Carter, Alison

Marwick, Ben [336] see Falcucci, Armando

Marwick, Ben [336] see Xiao, Peiyuan

Marymor, Amy (Bay Area Rock Art Research Association)

[340] *An Overview of Intaglios and Other Ground Figures in the North American Deserts of California, Nevada, and Arizona*

This presentation provides a literature review of geoglyphs, intaglios, and other ground figures that are located throughout the arid regions of the southwestern United States. The Blythe intaglios were noticed by George Palmer from an airplane in 1932 and featured in *National Geographic* magazine in 1952, capturing the interest of the general public. More examples of geoglyphs continued to be recorded, studied, and recognized as a significant part of the region's cultural history that connects present-day Indigenous people to their traditional narratives. Early surveys and documentation evolved over time to include data driven studies, ethnographies, and collaboration with Indigenous peoples. Geoglyphs are an integral part of a living cultural landscape. Ethnographic perspectives from descendant communities living in the Sonoran, Colorado, and Mojave Deserts including the Mohave, Quechan (Yuma), Akimel O'odham (Pima), and Pee-Posh (Maricopa) are discussed. The aim of this paper's interdisciplinary approach is to foster a holistic understanding of an irreplaceable cultural heritage, emphasizing the critical need for collaborative conservation with these communities and the preservation of these sites.

Masini, Nicola (CNR – Institute of Heritage Science, Potenza, Italy), Angel Sanchez (Centro de Investigaciones Arqueológicas Precolombinas, Lima, Peru), Nicodemo Abate (CNR – Institute of Heritage Science, Potenza, Italy), Gabriele Ciccone (CNR – Institute of Heritage Science, Potenza, Italy), and Rosa Lasaponara (CNR – IMAA, Potenza, Italy)

[340] *A UAV-Based Multi-sensor Approach for the Documentation and Conservation of Casma Valley Geoglyphs*
Recent research has revealed a previously undocumented concentration of geoglyphs in the middle valley of the Casma River, Peru. Initially recorded with conventional drone photography, these geoglyphs are now being documented using drones equipped with thermal, lidar, and multispectral cameras. This multi-sensor approach aims to generate a more comprehensive dataset to improve both documentation and interpretation. The study began in areas where geoglyphs have been damaged by informal mining and agricultural expansion, with the goal of enhancing their identification and analysis. Sensors were operated from morning to dusk to assess performance under varying light, temperature, and wind conditions. This methodology is particularly relevant for geoglyphs at imminent risk of disappearance, where urgent conservation measures are required. Multi-sensor records not only enable more accurate documentation but also provide essential data to guide conservation strategies and potential restoration. In this context, the critical condition of many geoglyphs compels researchers to adopt the most advanced technologies to preserve this unique cultural heritage. The results demonstrate that integrating multiple aerial sensors enhances the detection of threatened archaeological features and represents a fundamental tool for their long-term safeguarding.

Mason, Natalie [155] see Powis, Terry

Mason, Sarah [149] see Sterner, Katherine

Massiatt, Richard [268] see Stiles, Kaitlyn

Massigoge, Agustina [72] see Borrero, Luis

Masson, Marilyn (University at Albany SUNY), Timothy Hare (Morehead State University), and Bradley Russell (University at Albany SUNY)

[338] *The Greater Mayapan Mapping Project*

This paper emphasizes new methods employed in survey and mapping to document social organization through house group analysis in the Greater Mayapan study area. Ongoing analysis of airborne laser scanning (ALS/lidar) data from a 40 km² area within and beyond Mayapan's city wall reveals the extent and characteristics of peripheral settlement through time in the study area. Of particular importance are changes from the Terminal Classic through Postclassic periods, spanning a transformation during the twelfth century AD of a minor rural settlement (Tichac) to a primate urban regional center (Mayapan). Methodological approaches include pedestrian survey and detailed mapping and excavations, documenting pedestrian streets through the urban zone, and analyzing the spatial associations of minor centers and water sources (cenotes). Results emphasize the importance of Mayapan's periphery for urban sustainability. For both periods, landscape modification was extensive, especially in the terraforming of natural hillocks (*atillos*) into domestic platforms, which exhibit a range of interesting variants.

Masson, Marilyn [36] see Hare, Timothy

Masur, Lindi (McMaster University), Heather George (Woodland Cultural Centre), Tara Froman (Woodland Cultural Centre), Aiysha Hussain (McMaster University), and Emma Jepson (McMaster University)

[91] *Rooting Partnership and Growing Skills: Collaborative Knowledge Production through Paleoethnobotanical Analysis of Legacy Collections at the Woodland Cultural Centre, Six Nations of the Grand River Territory, Dish with One Spoon*

This paper presents preliminary results of starch grain analysis of ceramic residues from the Middleport site in southern Ontario. Located on the Six Nations of the Grand River territory, Middleport is a type site for a regional subphase characterized by ceramic assemblages dated to the fourteenth century AD. Our findings indicate a diverse array of wild plants complemented a diet oriented toward the Three Sisters (maize, beans, and squash). Our results also illustrate the potential value in analyzing archaeological legacy collections in starch grain research, and in parallel, showcase some methodological limitations and interpretive challenges inherent in the study of well-handled collections. This research is the result of a partnership between academic archaeologists and the Woodland Cultural Centre, an Indigenous-managed Haudenosaunee museum and gallery space at the former Mohawk Institute Residential School. Here, we also outline the development and directions of our collaboration, which more broadly encompasses building partner and community relationships by providing collections management support, youth paleoethnobotany training, and the co-creation of archaeological narratives for the revitalization of exhibit spaces. We highlight the importance of archaeological work with community and Indigenous institution-driven research design, as well as knowledge coproduction that results in public-facing narratives.

Matadamas-Gomora, Diego [193] see Murakami, Tatsuya

Mataloto, Rui [62] see Ahdoot, Gabrielle

Matau, Florica (Alexandru Ioan Cuza University of Iasi)

[209] *Change and Continuity in the Cucuteni Pottery Technology*

In the eastern part of modern Europe, the Cucuteni culture (approx. 4525/4500–3350 cal BC), part of the last Chalcolithic civilization Ariuşd (Erösd, in Hungarian) – Cucuteni – Trypillia (Tripolye, in Russian), developed an enriched and diversified visual identity expanding from the forested valleys of Transylvania, in the eastern Carpathians, to the plains of eastern Ukraine as far as the Dniepr valley. This study aims to reconstruct and evaluate the production process of pottery during the Cucuteni A and Cucuteni B phases of the Chalcolithic Cucuteni-Trypillia civilization. We used optical microscopy (OM), X-ray diffraction (XRPD), and scanning electron microscopy coupled with energy-dispersive X-ray spectrometry (SEM-EDX) analysis to determine the mineral components, thermal transformations, and microstructural features of the pottery. Our findings revealed that the pottery was made using highly processed raw materials and fired in complex kiln structures that produced mostly uniform light reddish hues. The pottery samples provided valuable insights into the daily life and artistic handicrafts of the Chalcolithic Cucuteni-Trypillia civilization.

Mather, David (MN State Historic Preservation Office)

[249] *Quick Nomination of a Shell Midden Site to the National Register of Historic Places: Assessing Significance and Integrity amid a Disaster Response*

Recently in Minnesota, the shell midden site Tukihasan Oyanke / Winter Shell site (21CR189) went from initial inventory to listing in the National Register of Historic Places in the bureaucratically short span of nine months. Discovery and investigation of the site occurred following its exposure in a flood event, in a multi-organization effort led by the Minnesota Historical Society. The quick nomination was possible because the site's significance and integrity were immediately apparent, with 26 species of freshwater mussels, diagnostic Late Woodland ceramics, pipestone, lithic debitage, animal bone, and charred plant remains, amid patterned fire-cracked rock and mussel processing features. The effort was aided by a previously existing Multiple Property Documentation Form on the Woodland Tradition in Minnesota, which outlined historic contexts, property types (including "resource procurement and processing sites"), and registration requirements. We sought the historical designation to support future efforts to monitor and stabilize the site through official recognition that it is "worthy of preservation." The site was listed in the NRHP on August 20, 2025, under Criterion D at the statewide level of significance, in the areas of American Indian heritage and archaeology.

Mathews, Jennifer (Trinity University)

[338] *In Recalling Things Past, I Strengthen My Heart: Bill Ringle Imagining Colonial Yucatán*

While certainly not his primary area of interest, Bill Ringle's anthropological imagination compelled him to examine archaeological challenges and theoretical debates of the colonial era. He was particularly concerned with highlighting Indigenous Maya agency, views, and reactions to Spanish colonial incursions, policies, and their attempts at cultural erasure. This paper will highlight two such examples. First, I will discuss Ringle's analysis of personal narratives written by early sixteenth-century *batab'ob* (chiefs) from small towns in Yucatán. In particular, he examined the proclamations of Indigenous leaders as they navigated their legitimacy within the context of conquest, and their intentional rhetorical language that urged resistance to Spanish domination and the adoption of Christianity. Second, I will highlight Bill's excavation and analysis of a colonial chapel located within the archaeological site of Ek Balam. Although investigations into the historical records tied the chapel to the 1579 *Relación*, the structure's distance from Valladolid meant that it was likely the only Spanish presence within the Ek Balam community. Bill was interested to see if the chapel reflected a Spanish presence and how that compared with the surrounding Maya residential structures. I will then finish with an appreciation for his intellectual curiosity, well-rounded research approaches, and collegiality.

Mathiowetz, Michael (Getty Research Institute)

[317] *Looting Casas Grandes: Articulating US/Mexico Borderlands Archaeology, Indigenous Oral Histories, and Provenance Research on Orphaned Objects in Museum Collections*

Medio period Casas Grandes (AD 1200–1450) sites in the US/Mexico Borderlands were heavily looted over the past 100+ years. Following the 1958–1961 excavations at Paquimé, the production of forgeries developed alongside the Mata Ortiz art pottery tradition. Two seminal studies on provenance, looting, and replication/forgeries of Casas Grandes ceramics tied these latter phenomena to the development of railways, haciendas, mining, and the burgeoning interests of museums and collectors (Kelley et al. 2011; Silva 2012). Building on this work, I examine case studies of Casas Grandes ceramics acquired in the late nineteenth to early twentieth century by various museums and individuals. While scholars question the reliability of iconographic interpretations that occasionally include vessels without provenance in museums, critical analyses of scientifically excavated objects, orphaned objects in museums, and robust archival research can shed light on Casas Grandes cosmology and political-religious organization. I explore the ethical imperative of studying orphaned Casas Grandes vessels in museums that were collected prior to the 1960s-era forgery epidemic, which provides material support to Puebloan oral histories relating cultural connections to (and historical territoriality with) the Casas Grandes region. In service of descendant communities, such analyses can bolster NAGPRA repatriation claims while salvaging the past from looters and looted objects.

Mathison, Erin

[228] *A Multiproxy Geoarchaeological Analysis of Sediment Cores from the Spring Lake Site (41HY160), San*

Marcos, Texas

The Spring Lake site, situated in Central Texas, is located at the headwaters of the San Marcos River in an ecotone between the Edwards Plateau uplift and the Blackland Prairie of the Gulf Coastal Plains. Previous archaeological investigations have revealed evidence for continuous human use of the site from the Late Pleistocene to historic periods preserved in complex stratigraphy across the river's floodplain. To understand the integrity and nature of these sediments, previous geoarchaeological work has concentrated on the stratigraphy near the headwaters; however, significantly less work has been performed in the northeast area of the site. This paper presents the results of geoarchaeological analyses performed on sediments sampled from six curated cores extracted from deposits around Spring Lake in 2004 and 2021. The goal of laboratory analyses was to characterize stratigraphy at the site and understand the relationship between strata in the northeast versus that of the headwaters. Utilizing data generated by particle size, loss-on-ignition, magnetic susceptibility, and elemental analyses, a model of site stratigraphy between the headwaters and the northeast was generated consisting of nine distinct stratigraphic units across a southwest-to-northeast transect of the San Marcos River Valley.

Mathwich, Nicole (San Diego State University), and Cordelia Sonnenschein

[224] *What Modern Ranching Forgot: Lessons from Colonial Multispecies Herding in Sonora*

The modern economic pressures of late capitalism have favored specialization to foster mass production of livestock for regional and international markets. In the northern borderlands of eighteenth-century New Spain in what is today Sonora and Arizona, however, a different mode of animal husbandry held dominance until the late nineteenth century. Spanish mission residents managed sheep, cattle, goats, horses, and mules together, and each species possessed their own water, labor, and pasturage needs in the cyclical aridity of the Sonoran Desert. Today, many of these local traditions have disappeared, but in the pursuit of greater ecological and economic sustainability, modern ranchers are beginning to experiment with multispecies herds. I reconstruct these practices using historical records, faunal data, and rangeland studies. I examine historical and zooarchaeological data alongside modern recommendations to estimate the watering and pasturage needs of multispecies herds. I review the reported proportions of each species in four mission districts in northern Sonora and assess how effective these historical ratios were in reducing disease and maintaining pasture quality based on modern rangeland studies. Integrating archival, zooarchaeological, and ecological data helps to reconstruct these complex herding systems and challenge assumptions about efficiency and sustainability in Spanish Borderlands economies.

Mathwich, Nicole [124] see Furtado, Anthony

Matsulavage, Matt [112] see Fox, Griffin

Matsumoto, Mallory (University of Texas at Austin)

[92] *Crowning Authority at Piedras Negras and Palenque: Ko'haw Rituals in Classic Maya Text, Image, and Practice*

Hieroglyphic records from across the Classic Maya (250–925 CE) lowlands document cases of dynastic representatives traveling to foreign, sometimes very distant polities to participate in a joint ritual performance. These texts imply that ritual was a force for mobilizing people and ideas across the region, though only in a few instances do they provide enough historical information to reconstruct specific interactions and to draw inferences about the encounters' influence on local dynastic identity, individual biographies, and scribal-artistic practice. This presentation addresses one such case, centered on an unusual shell-plated helmet (*ko'haw*) that was introduced to the western Maya lowlands from distant Teotihuacan in central Mexico. Initially adopted as an emblem of affiliation with the prestigious, foreign center, the Teotihuacano headgear was eventually adapted by Maya kings in the western lowlands to symbolize intra-Maya hierarchical relations—between polities, within a kingdom, or in dynastic succession. The artifact's semantic transformation coincided with its physical and symbolic dissemination, as artisans produced their own versions of the helmet locally and scribes innovated hieroglyphic spellings for denoting the object in text.

Matsumoto, Mallory [161] see Golden, Charles

Mattana, Sara [257] see Buti, David

Matthew, Laura (Marquette University)

[97] *Dressing in Tumultuous Times: Clothes as Mesoamerican Merchandise ca. 1600*

The end of the sixteenth century was a precarious time, as local populations collapsed and Spanish colonialism intensified. How should we interpret the clothing Mesoamericans bought, sold, and wore during this period? Historians have mostly approached this question through the lens of emerging, hybrid identities. Some have celebrated subaltern creativity or more subtly, the power of reflexive, everyday actions in this process. Others have lamented the adoption or emulation of foreign styles as an expression of colonial power and an indication of cultural loss. This paper broadens the temporal scope, bringing archaeology into conversation with an unusual genre of documents—the inventories of petty Spanish merchants—to reconsider colonial-era Mesoamerican clothing marketed along the northern Pacific coast of Central America. Popular items such as *huipiles*, *cabezones*, and *escapapules* reveal both change and continuity along long-standing trade routes, and suggest at the most micro-historical level some of the ways people experienced this disastrous era.

Matzek, Nina [163] see Antolin, Ferran

Mavrolas, Nick [269] see Montalvo, Lisa

May, Jamie [22] see Derry, Emma

May, Rossana (Kaxil Kiuc A.C.), and Tomás Gallareta Negrón (INAH Yucatán)

[338] *Imaging the Hill Country of Yucatán: Bill Ringle's Lidar Survey and Mapping*

Bill Ringle made several major contributions for understanding the ancient Maya living in the Hill Country of Yucatán, Mexico. With over 40 years in the field, Bill became an expert surveyor. His maps were besides very accurate, beautiful pieces of work. This became even more evident when he started using GIS and lidar imagery. In this presentation the authors will illustrate, using Bill's maps and images, several of his interpretations about the regional landscape, the extent and importance of early settlements in the region, as well as the basic forms and functions of several types and groups of structures for understanding the social and political organization of the ancient Maya living in the Valley of Yaxhom and the District of Bolonchén.

Maycotte, Ernesto (Terracon)

[281] *Rose Hill Burial Park: Archival Research on an Early Twentieth-Century Cemetery in New Orleans*

In 1917, the Rose Hill Burial Park (RHBP) was established in the Gentilly District, in a sparsely populated area on the northern periphery of New Orleans. The RHBP operated for 13 years and was not very successful in attracting burial plot buyers. It closed in 1930, and in 1931 the property was sold. Shortly after, a university was constructed on most of the land previously occupied by the RHBP. A small portion of that land, however, has remained undeveloped until the present. Recently, a project to develop it was proposed, triggering the need for a cultural resources investigation. During initial background research, the RHBP was identified in one contemporary map. However, it is not depicted in any previous or subsequent maps reviewed, leading to initial speculation on whether the RHBP was opened or only planned out. As the area is heavily forested and partially inundated, traditional geophysical methods to identify unmarked graves were not feasible. A limited pedestrian survey failed to identify any graves. This poster discusses the methodology employed to document the RHBP, including archival research showing the RHBP contained several interments, and the documents attesting to the removal of all bodies before the land was sold.

Mayfield, Alex [283] see Sain, Douglas

Mayhew, Caitlynn [335] see Watts, Joshua

Maynard, Madison [293] see Tripoli, Simone

Mayo, Christopher [124] see Finley, Whitney

Mayo Torne, Carlos [272] see Mayo Torné, Julia

Mayo Torné, Julia (Fundación El Caño), Carlos Mayo Torne (Fundación El Caño), Alexa Hancock (Researcher), and Abdiel González (Student)

[272] *Local Metallurgy and Interregional Interactions in the Mortuary Goldwork of El Caño (750–1100 CE), Panama*

This study presents the results of stylistic, technological, and pXRF analyses conducted on a funerary assemblage of goldwork recently discovered at the archaeological site of El Caño, Panama, as well as on gold artifacts recovered from the Sacred Cenote of Chichen Itza, Northern Yucatec Maya subregion (900–1200 CE). The research forms part of a broader project aimed at understanding the circulation networks that enabled the movement of these objects and the social dynamics underlying such interactions. The presence of foreign items in the tombs of El Caño and Chichen Itza provides clear evidence for the circulation of prestige goods through interregional networks that connected Panama with the northern Andes, the coast of Ecuador, and Mesoamerica. This phenomenon reinforces the interpretation that certain mortuary objects played a fundamental role as markers of status and political legitimacy, transcending the local sphere to become embedded in a wider dynamic of interregional interaction. Ultimately, the inclusion of a foreign object in the funerary context can—and should—be understood as a political or ritual strategy intended to enhance the social prestige of the deceased and his lineage.

Mazza, Alba, Calvin Mires (Marine Imaging Technologies), and Evan Kovacs

[77] *DPAA Partnership and Innovation Search and Recovery in the Philippines: A Submerged OA-10A Catalina in Culasi*

The United States Defense POW/MIA Accounting Agency (DPAA) estimate that ca. 11,300 Missing in Action personnel are currently unaccounted for in the Philippines. Of these losses 4,000–5,000 are located underwater. This poster presents preliminary results of three years of work conducted by DPAA's partner Marine Imaging Technologies (MIT) on a Catalina aircraft with three service members currently unaccounted for. MIT conducted three missions on the site from 2023 to 2025. The team was able to locate the site by interviewing local residents who provided essential information and support—and performing a side-scan sonar (SSS), magnetometer, and multibeam investigation. Excavation operations were conducted via Closed Circuit Rebreather (CCR) diving, underwater dredging metal detecting, and topside wet screening stations. This poster aims to illustrate methodological approach, investigation, and recovery results with a focus on the remote sensing, diving, and excavation.

McBride, Mike (Gault School of Archaeological Research), Jon Lohse (Terracon Consultants; Gault School of Archaeological Research), Victoria Pagano, and Sebastien Perrot-Minnot

[41] *Early Bifaces from August Pine Ridge*

Ongoing research at August Pine Ridge, northern Belize, is documenting a large area of Preceramic occupation beginning at least around Clovis times, ca. 13,000 years ago, and extending throughout the Archaic until the appearance of settled Maya villages around 3,000 years ago. Our record of complex biface types and technologies spans from the Terminal Pleistocene into the Early Holocene and reflects early movements up and down the Central American land bridge by Clovis and Fishtail culture bearers, as well as the development of regionalized traditions and practices. Based on changes in biface form and based on comparative analyses, the geographic expanse of external influences appears to have diminished from thousands to only hundreds of kilometers, or less, by around 10,000 years ago. This paper presents this general sequence as we currently understand it and discusses implications for how we understand the Peopling process in Central America and subsequent emergence of regionally grounded cultural traditions.

McBride, Mike [41] see Pagano, Victoria

McCafferty, Geoffrey (University of Calgary)

[316] *Comal, Ye Faithful: Innovative Foodways of the Olmeca-Xicallanca of Epiclassic and Early Postclassic Cholula*

The great Mexican historian Wigberto Jimenez Moreno presented the historic Olmec as being “enigmatic” based on ethnohistorical sources. Archaeological research in recent decades has illuminated that enigma, closing the chronological gap created by archaeologists of the 1970s to demonstrate continuity between the Classic and Late Postclassic periods at the urban mecca of Cholula. In this paper I will discuss innovative aspects of Olmeca-Xicallanca foodways that characterize the cultural break following the Classic period. Foodways, relating to both ingredients and consumption practices, are widely recognized as one of the best sources for inferring archaeological ethnicity. New vessel forms such as comales and stamp-bottom bowls imply the introduction of new forms of food preparation. The dramatic increase in vessel forms suggest a greater diversity in consumption practices. And the introduction of beautiful polychrome decoration indicates greater investment in ceramic production as well as symbolic significance in the social interaction of feasting.

McCafferty, Geoffrey [316] see McCafferty, Sharisse

McCafferty, Sharisse (University of Kentucky), and Geoffrey McCafferty (University of Calgary)

[316] *The Social Memory of Olmeca-Xicallanca Coastal Origins on Cholula Pottery*

Postclassic pottery of Cholula presents vivid images of natural and supernatural themes. Curiously, zoomorphic depictions portrayed by Cholula artists occasionally represent animals with coastal origins, such as sea birds and octopuses. Why? In this paper we argue that these maritime species relate to the Gulf Coast origins of the Olmeca-Xicallanca as a form of social memory. For example, the anhinga and cormorant are known as snake-birds because of the way their long necks seem to undulate through the water in a serpentine fashion suggestive of the feathered serpent.

McCarthy, Andrew (College of Southern Nevada)

[150] *Experimental Neolithic Cooking in Cyprus: Large-Scale Feasting versus Domestic Cooking*

Prasteio Mesorotsos in Cyprus was first visited in the Epipaleolithic period and continued to be visited throughout the Neolithic, during which time a permanent settlement was established. The longevity of this site provides an opportunity to uncover the social habits of an emerging sedentary community and how they interacted with other groups in the landscape. Two cooking installations from the Neolithic period have been excavated at separate locations, each representing a different aspect of early sedentism. A large (3 m diameter) pit oven found in a public area of the site would have been used for intercommunity feasts that likely served as a place of congregation in the region, at a time when negotiations of heterogeneity and territoriality were important new factors. A contemporary but much smaller (1 m diameter) domed oven was found adjacent to a pit house structure, and likely represents domestic-scale cooking for use by the local inhabitants. Experimental reconstructions of both of these ovens have been carried out, providing insights into the everyday habits of the first Neolithic residents of Cyprus, as well as how sedentary communities established connections to their neighbors in a newly emerging Neolithic landscape.

McCartin, Madison (University of California, Davis), Teresa Steele (University of California, Davis), Masami Izuho (Tokyo Metropolitan University), Byambaa Gunchinsuren (Mongolian Academy of Sciences), and Nicolas Zwyns (UMR 5199, Université de Bordeaux, France)

[170] *Maximizing Fragmentary Fauna: Preliminary Zooarchaeological Analyses at the Paleolithic Site of Tolbor-17 (Mongolia)*

The open-air site of Tolbor-17 (T17), located in northern Mongolia, contains one of few faunal assemblages in the region associated with the Early Upper Paleolithic (~45–30 ka cal BP). These groups represent some of the first human (*Homo sapiens*) inhabitants of northern Asia, about whom much is still unknown, including the adaptive strategies that facilitated their success at the geographic margins of hominin dispersal. This paper presents the preliminary analysis of the T17 faunal assemblage, a valuable source of data on early human subsistence practices, which may ultimately provide insights on hominin adaptation and dispersal as a whole. However, the T17 assemblage presents a few key challenges: (1) the small sample size ($n = 759$), (2) poor surface preservation, and (3) a high degree of fragmentation. These and other challenges obscure signals of human behavior, making research questions difficult to address. This paper presents these challenges and their nuances, providing some potential solutions to maximizing the value of small, heavily modified, and/or fragmentary assemblages.

McCartin, Madison [209] see Elster, Eli

McClung de Tapia, Emily [310] see Ge, Yun

McClure, Sarah (UC Santa Barbara)

[95] *The Persistence of Hunting in Neolithic Mediterranean Economies: A Problem, Challenge, or Opportunity for Human Behavioral Ecology?*

The persistence of hunting in Neolithic Mediterranean economies has long been viewed as an anomaly in the context of emerging farming systems. Zooarchaeological data from Adriatic and western Mediterranean sites complicate this narrative, demonstrating that wild taxa, especially deer and hares, remained significant alongside the dominance of sheep, goat, and cattle. Drawing on case studies from archaeological sites in these regions, this presentation examines the integration of opportunistic hunting, targeted deer procurement, and “garden hunting” associated with crop protection into predominantly agropastoral subsistence systems. Comparative faunal analyses—including taxonomic abundances and mortality profiles—highlight how these practices complicate narratives of subsistence stability, time management, risk buffering, and labor scheduling in Neolithic communities. Framed within human behavioral ecology, these findings raise the question of whether hunting should be considered a problem for models of agricultural transition, a challenge to assumptions of economic specialization, or an opportunity to refine our understanding of adaptive strategies. I argue that hunting was not vestigial but a flexible, context-dependent practice that addressed seasonal scheduling, risk buffering, and time-allocation challenges, illuminating the complexity of Neolithic economies. These findings underscore the opportunities and contributions of situating early farming societies within broader models of human behavioral ecology.

McClure, Sarah [279] see Aspengren, Signe

McClure, Sarah [347] see Stehr, Katy

McCole, Joshua

[349] *Monuments of Mollusks: Mangrove Lagoon Species Form a Solid Foundation for Social Experiments from AD 300 to 1000 at the Selin Farm Site, Northeastern Honduras*

The Selin period in northeastern Honduras saw significant cultural change, particularly at the type-site of Selin Farm (AD 300–1000). Several centuries of increasing complexity, including a population boom around AD 600, came to an abrupt, as-yet unexplained end with population dispersal occurring around AD 900. This political experimentation occurred on a foundation of shellfish—both literally, with shellfish used as building materials in monumental mounds, and figuratively, with shellfish forming a consistent food source. A shift from clams (especially *Anomalocardia flexuosa* and *Protothaca granulata*) to oyster (*Crassostrea rhizophorae*) and conch (*Melongena melongena*) suggests a significant change in nearshore ecology, likely marking the development of nearby Guaimoreto Lagoon into an ecologically productive mangrove lagoon. The population boom and later collapse at the site, however, occur against a backdrop of ecological consistency in both species frequency and shell size. We find no indication that either climate change or human overharvest had a measurable effect on shellfish populations, in spite of significant growth at the site and the coincidence of the Medieval Climatic Anomaly with population dispersal.

McCool, Jon-Paul (1985)

[35] *Settlement Timing and Environment through the Early to Mid-Holocene at Sabaloka, Sudan*

The Nile’s Holocene flood history represents a critical control on floodplain morphology, sediment storage, and the spatial distribution of habitable terrain. Geomorphic and stratigraphic records from the Sabaloka Mountains at the Sixth Cataract document extreme flood stages at ~10.5–10.2 and ~9.5 ka, with paleostage indicators demonstrating water surface elevations well above the modern floodplain. These reconstructions of flood magnitude and extent provide a geomorphological explanation for the absence of early Holocene (11.0–9.0 ka) archaeological sites between the Blue–White Nile confluence and the Atbara junction: settlement surfaces were likely inundated or rendered unstable by frequent overbank flooding and lateral channel migration. Paleohydrologic reconstructions suggest that only after ~9.0 ka, when sustained flood

reduction lowered stage heights and stabilized valley-floor environments, did conditions permit more permanent Mesolithic occupation within the Nile corridor. These findings highlight the need to model paleoflood extents and river dynamics to better constrain human–environment interactions, and they demonstrate that early Holocene settlements must be sought in higher-elevation geomorphic settings beyond the modern river belt.

McCool, Weston (California Polytechnic State University), Brian Coddig (University of Utah), and Douglas Kennett (University of California Santa Barbara)

[95] *The Behavioral Ecology of Early Cities: Agricultural Infrastructure, Aggregation, and Inequality*

Twenty years ago, Kennett and Winterhalder's *Behavioral Ecology and the Transition to Agriculture* laid the foundation for understanding how evolutionary ecological principles help explain the adoption and consequences of farming. Since then, Behavioral Ecology (BE) has been applied to a wide range of agricultural phenomena, from subsistence choices to demographic transitions. In this presentation, I extend this tradition by using BE models to explore the rise of early cities using the Classic Maya Lowlands as a case study. Early urbanism presents a paradox: farmers incur significant costs when they aggregate—including reduced autonomy, exposure to disease, and increased travel costs—yet large, aggregate settlements repeatedly emerged. I argue that this paradox can be resolved by recognizing how agricultural infrastructure activates latent economies of scale. Drawing on population ecology, I show that when intensification reaches thresholds that unlock positive density dependence, the benefits of aggregation can outweigh the costs. I also suggest this process may be accelerated during intervals of adverse climate or social conflict. Under these conditions, sustained population growth and aggregation become not only possible but likely. Moreover, as cities emerge, established residents territorialize resources in ways that increase stratification, leading to the coevolution of urbanism and institutionalized inequality.

McCool, Weston [95] see Vernon, Kenneth

McCord, Skye (Northern Illinois University)

[202] *An Etruscan Life and Death: 2025 Findings from Valle Gianni*

Valle Gianni is an archaeological site located in Gradoli, Italy, a small town located near Lake Bolsena. The site has been inhabited from prehistoric times to the medieval period, and numerous Pre-Roman, Roman, and medieval archaeological sites surround the area. The Northwest Bolsena Project, conducted by Dr. Kathryn Jasper and Dr. Lea Cline from Illinois State University, has been excavating Valle Gianni for many years as an archaeological field school. In the summer of 2025, Skye McCord attended the Valle Gianni field school and participated in hands-on lessons on archaeological fieldwork and artifact restoration, while also conducting research for their senior thesis. McCord's thesis is focused on Etruscan archaeology and new findings from Valle Gianni. These include Etruscan tombs located on the dig site, foundation stones and a column attributed to an Etruscan temple, and an exploration of the mixed habitation and cultural sharing between Etruscan and Roman inhabitants. Further investigation into other potential tomb openings on the site will be done through lidar mapping and comparison to other Etruscan tomb systems nearby. This fieldwork was generously supported by the Etruscan Foundation's Fieldwork Fellowship and the Archaeological Institute of America's American School of Prehistoric Research Scholarship.

McCormick, Michael [327] see Moses, Victoria

McCormick Alcorta, David Rafael (Mohegan Tribal Historic Preservation Office), Kay Hansbrough (Mohegan Tribal Historic Preservation Office), William Poniros (Connecticut College), Dennis Delaney (Connecticut College), and Stanely Chrzanowski (Central Connecticut State University)

[229] *It Takes All Kinds! (Trouble with) Typology, Temporality, and THPO Donations*

Typologies form the foundation of lithic studies forming the basis of regional chronologies. As a classificatory tool they allow us to date sites that have no other diagnostic artifacts. Although the word “typology” suggests a system with discreet categories, point forms occur along a continuum. Furthermore, most artifacts we encounter, whether in the field or lab, are objects of discard analyzed after the end of their use-lives.

Attrition affects the morphology of points and can change metrics to more closely fit the “typology” of another point form. This paper discusses the process of working with donations that have variable provenience information at the Mohegan THPO office. Although such collections are of limited analytical value, they are useful for generating comparative collections and as teaching tools.

McCormick Alcorta, David Rafael [293] see Marken, Damien

McCormick Alcorta, David Rafael [182] see Quinn, James

McCoy, Mark [77] see Sangamnerkar, Sayali

McCracken, Megan [77] see Sibilia, Ella

McCuaig, Julia (University of Michigan Museum of Anthropological Archaeology), Matthew Teeter (Trent University), Adrián González Gómez de Agüero (University of California), and Paul Szpak (Trent University)

[305] *Does Charring Affect New World Crop Stable Isotope Values? An Experimental Study Investigating Desiccated versus Charred Plant Remains*

Macrobotanical remains are found archaeologically either as desiccated (dried) or charred (burnt). Researchers have questioned if there is a difference isotopically between the two states of preserved macrobotanicals, with some suggesting that there is a difference in the $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ isotopic values. However, the majority of these studies focus on Eurasian crops, especially those of the C_3 pathway. To our knowledge, the difference between desiccated and charred remains of North and South American crops has not been thoroughly tested, especially between C_3 versus C_4 pathways. In this study, we experimentally charred North and South American crop staples, such as corn, avocado, and legumes. We charred each seed at 4-, 8-, and 24-hour intervals at varying temperatures between 230 and 500°C. Each seed was then analyzed for $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$, comparing the isotopic and elemental compositions to their desiccated counterparts. The results of this study will allow archaeologists to assess if the application of an offset is needed to allow for comparable results between desiccated and charred plant remains. It will also determine if separate offsets are needed for the different photosynthetic pathways between desiccated and charred remains, and if one pathway creates a larger offset over the other.

McDermott, Michael, Rianna Bowen (Cal Poly Humboldt-Cultural Resources Facility), Byron Ashley Smith (Cal Poly Humboldt), and Marisol Cortes-Rincon

[124] *High-Resolution Monitoring of Coastal Archaeological Site Erosion: A Remote Sensing Case Study from Northwestern California*

This project presents a case study for the integration of unmanned aerial vehicle (UAV)–based light detection and ranging (lidar) datasets, publicly available manned aircraft lidar datasets, and ground-penetrating radar (GPR) for high-resolution documentation and risk assessment of precontact coastal archaeological sites endangered by climate-driven erosion in Northern California. Conducted in collaboration with local tribes and the Bureau of Land Management (BLM), this research compares legacy fixed-wing lidar with multiyear UAV lidar to identify bluff retreat and coastal change. Integration of GPR data with lidar datasets helps to identify and digitally preserve cultural layers and creates a baseline for future erosion. This allows for a comprehensive evaluation of cultural feature integrity in relation to geomorphic instability. This study’s methodology offers a scalable and replicable approach for cultural site documentation and future monitoring in dynamic coastal zones. Combined, these datasets create a comprehensive digital model for current and future bluff retreat monitoring.

McDermott, Michael [181] see Volpe, Hannah

McDonald, Brynna [300] see Gilmore, Zackary

McDonald, Holli (University of Montana), Meradeth Snow (University of Montana), and Lacy Hazelwood (University of Montana)

[292] *Childhood in the Casas Grandes Archaeological Zone: A Bioarchaeological Study of Subadults at Paquimé and Convento*

In the Casas Grandes Archaeological Zone of northwest Mexico lie the archaeological sites of Convento and Paquimé, occupied between AD 700 and 1450. Following initial excavations, at least 652 burials were recovered from the sites, with nearly half of those identified as subadults. Convento, which predates the florescence of the nearby Paquimé, provides a comparatively homogenous burial program, architectural styles, and material culture, while Paquimé exhibits a plethora of burial typologies, specialized architecture, and material culture. The sites have been the subject of vast anthropological intrigue, yet no comprehensive studies of the subadults have been undertaken until now. This report presents the findings of two years of bioarchaeological skeletal analyses undertaken in Casas Grandes, combined with ancient DNA findings, isotopic data, and the contextual information recorded for each subadult individual. This is the most comprehensive examination of the lives and deaths of children in the Casas Grandes region. With these data, demographic trends regarding burial type, age at death, locality status, pathological anomalies, trauma, and many others become available to understand how life (and death) may have changed across time and space in the region. ***This presentation will include images of human remains.

McDonald, Holli [25] see Giovannangelo, Victoria

McDonald, Holli [62] see Hazelwood, Lacy

McDonough, Katelyn (University of Oregon), Geoffrey Smith (University of Nevada, Reno), Dennis Jenkins (Museum of Nat. & Cult. History), Justin Holcomb (Kansas Geological Survey, University of Kansas), and Bryan Hockett (University of Nevada, Reno)

[72] *Initial Insights on Late Pleistocene and Early Holocene Lifeways at Connley Cave 6, Oregon*

Recent interdisciplinary work at the Connley Caves in central Oregon is providing new perspectives on Indigenous lifeways over the past 13,000 years. Excavations by Stephen Bedwell in the 1960s identified Western Stemmed Tradition points and charcoal radiocarbon dated to the Pleistocene, but due to contextual concerns, outstanding questions remain about cultural and ecological histories. Beginning in 2014 with the University of Oregon and continuing between 2021 and 2024 in partnership with the University of Nevada, Reno, new excavations at Connley Cave 6 have been conducted. Preliminary results from Pleistocene and Early Holocene layers include updated geochronological data, lithic technologies, and faunal remains. These findings offer new insights into technology, foodways, pluvial lake histories, and human resilience during major environmental shifts at the end of the Pleistocene.

McDonough, Katelyn [333] see Derr, Kelly

McDonough, Katelyn [319] see Rosencrance, Richie

McDuffie, Lori [112] see Quigley, Gabrielle

McEnaney, Lillia [114] see Fowles, Severin

McFarlin, Jamie [313] see Doering, Briana

McGaughey, Breanna [24] see Serafin, Stanley

McGeough, Kevin [193] see Porter, Benjamin

McGeough, Kevin [193] see Weitzel, Jordan

McGloughlin, Nicole [45] see Parker, Glendon

McGovern, Allison (Brookhaven National Lab)

[198] *Economic and Ecological Intersections In the Midden: Nineteenth-Century Tenant Foodways at the WJ Weeks*

Archaeological Site

Brookhaven National Laboratory sits within the Long Island pine barrens—an environmental misnomer that has led the landscape to be often imagined as ecologically and culturally “barren.” Indeed, the broader Long Island pine barrens landscape is part of an ecological network that supported Indigenous lifeways in the pre- and postcontact periods and was exploited heavily under settler control. This study examines the lifeways of mid-nineteenth-century tenant farmers through archaeological research at the WJ Weeks site (also called the Yellow House). Ceramics and faunal remains from the site are analyzed alongside archival sources that reveal the socioeconomic constraints faced by tenants of the Yellow House and the materiality of social stratification between laborers and landowners. They also illustrate the economic and ecological networks within Long Island’s historic pine barrens. This presentation features research conducted by SULI intern Sarah Robertson and supports the Department of Energy’s stewardship and documentation of Brookhaven’s cultural resources.

McGuire, Kelly (Far Western Anthropological)

[167] *Native American Influence on the Precontact Distribution of Desert Tortoise (*Gopherus agassizii*) in the Mojave Desert*

A comprehensive review of 265 archaeological sites located in the northwest Mojave Desert that contain faunal remains reveals a significantly reduced range of desert tortoise prior to Euro-American colonization and settlement in the mid-nineteenth century. We argue that the expansion of desert tortoise into its contemporary range resulted from the release of predation pressure wrought by the breakdown of traditional Indigenous hunting that occurred during this time. The desert tortoise was listed as Threatened in 1990 by the US Department of the Interior and is still considered in danger of going extinct. There are many implications of these results for ongoing management and recovery efforts associated with this species. Finally, this study underscores the importance of archaeological data for understanding past Indigenous ecological legacies and how they can inform our understanding of the natural world as it is today.

McIntosh, Susan (Rice University)

[322] *Brian Fagan’s Legacy as a Field Archaeologist, Museum Curator, and Mentor: 1959–1980*

This contribution focuses on Brian Fagan’s early contributions to archaeological field research in Zambia during his tenure from 1959 to 1965 as Keeper of Prehistory at the Livingstone Museum in then Northern Rhodesia. His meticulous excavations in southern Zambia were foundational to the study of Iron Age societies in the country, and his careful curation of excavated material following documentation and storage procedures implemented by Desmond Clark helped ensure the continuing value of the museum’s collections for ongoing study and research. The collections and the sites he originally excavated have attracted a new generation of archaeologists during the past decade. Fagan’s early writing on Zambian archaeology and history already exemplified the clarity of language and evidence-based narratives that were the hallmark of his later trade books. As my mentor and dissertation advisor, he was relentless in pointing out unnecessary verbiage, jargon, or muddled argumentation in my writing, admonitions that continue to influence how I write and think.

McKay, Melissa [114] see Fulton, Kara

McKee, Brian (Logan Simpson), Katherine Cera, and Jeffrey Ferguson (University of Missouri)

[201] *Sourcing Obsidian from Sites in Eastern El Salvador*

Obsidian artifacts have been recovered from numerous sites throughout El Salvador. No sources of tool grade obsidian have been identified in El Salvador, but high-quality obsidian sources are present in the neighboring countries of Guatemala and Honduras. To date, all obsidian analyzed from Salvadoran sites has come from Guatemalan sources, including El Chayal, Ixtepeque, and San Martín Jilotepeque. No Salvadoran artifacts have been linked to Honduran sources. Only one sourcing study has analyzed obsidian artifacts recovered from eastern El Salvador, which examined obsidian from the site of Quelepa. This poster examines previous sourcing studies and presents the results from a small X-ray fluorescence sourcing study conducted on obsidian recovered from two sites in Morazán in northeastern El Salvador. These sites are much closer to the Honduran La Esperanza source than to the Guatemalan sources that are widely represented in

Salvadoran sites. The study examines possible routes of distribution as well as cultural contacts that may be involved in that distribution.

McKeeby, Zachary [162] see Fleisher, Jeffrey

McKenzie, Emily (University of California, Berkeley), and Christine Hastorf (University of California, Berkeley)

[306] *Macrobotanical Recovery and Outcomes on the Taraco Archaeological Project, 2022–2024*

During the 2022–2024 field seasons, the Taraco Archaeological Project employed a multidimensional strategy for the recovery of macrobotanical plant remains to increase the representation of more plant parts recovered. This presentation first presents the comparison of flotation and dry screening techniques on the Taraco Peninsula to process sediment samples across a multiyear project. A description of a novel solar-powered mechanized flotation system is given, along with an examination of its rate of recovery, advantages, and constraints as compared with a gasoline-powered SMAP system. Finally, a comparative analysis of flotation and dry screen recovery methods is presented, with a particular emphasis on implication for the recovery of fragile macrobotanical remains, including parenchymatous tissues.

McKenzie, Emily [306] see Hastorf, Christine

McKenzie, Sharrah [227] see Johnson, Jeremy

McKeown, Ashley [22] see Derry, Emma

McKillop, Heather (LSU), and E. Cory Sills (University of Texas at Tyler)

[36] *Salt Cakes and Dried Fish: The Archaeology of Residential Household Groups at the Paynes Creek Salt Works, Belize*

Dried fish and fish sauce are common commodities produced along coasts and traded inland in ancient Rome and China and popular today in Asian cuisine. Salted fish provide dietary protein, preserve fish for later use, and diversify the household economy and exports, all good risk management. Research at 70 mapped sites at the Paynes Creek Salt Works, Belize, presents challenges since the ancient Maya sites are underwater and invisible in the modern landscape. The highly organic peat below the sea floor spectacularly preserved 4,042 mapped wooden building posts, but destroyed bone, microfossils, and calcium carbonate temper in pottery. We discuss our 2018–2024 NSF project “Labor Organization in a Traditional Complex Society” that focused on the organization and control of salt production. The patterns of wood posts and artifacts revealed dedicated salt kitchens for boiling brine in pots over fires and separate residences. We identified surplus household production at residential household groups for inland trade and without embedded inland overseers. Concentrations of formal chert tools, along with use-wear analysis by Kazuo Aoyama and other evidence, indicate fish were salt dried. This diversified the household economy and broadened opportunities for trade.

McKillop, Heather [278] see Broussard, Alex

McKillop, Heather [165] see Foster, Cheryl

McKillop, Heather [278] see Meaux, Amanda

McKillop, Heather [304] see Miller, Sarah Nicole

McKillop, Heather [36] see Sills, E. Cory

McKillop, Heather [179] see Winkelman, Benjamin

McKinney, Madelyn (Michigan State University), Andrew Kracinski, Jerielle Cartales (Michigan State University Forensic Anthropology Lab), and Samantha Ellens (Michigan State University)

[179] *X-Radiography and Its Applicability to MSU's Campus Archaeology Program*

Founded in 2007, Michigan State University's (MSU) Campus Archaeology Program (CAP) aims to discover and preserve the cultural heritage of this historic university and the myriad pre-university sites existing on its campus. Inspired by a guide created by the Maryland Archaeological Conservatory (MAC) Laboratory

(Cofield and Doub 2020), CAP fellows began exploring the potential of utilizing X-radiography to more accurately identify ferrous metal artifacts, discover their material composition, and improve their interpretive potential. The goals of doing so were threefold: (1) to assess the accessibility of X-ray machines on campus, (2) train archaeology graduate students in the employment of X-radiography laboratory techniques, and (3) determine the applicability of X-radiography in the identification, accessioning, and deaccessioning of artifacts excavated by CAP on MSU's campus.

McKinney, Taylor, and Gus Adamson (USACE)

[74] *Mapping the Future of Preservation: Proactive Preservation through Policy, Data, and Consultation*

Cultural resources are increasingly at risk from natural hazards, development, and land-use pressures, yet management practices often remain reactive. This poster highlights how Historic Property Management Plans (HPMPs), a pilot ESRI-based cultural resources geodatabase, and the US Army Corps of Engineers Tribal Consultation Policy can be combined to build proactive preservation systems. HPMPs provide the framework by establishing adaptive management strategies, consultation procedures, and consistent responsibilities across projects. The pilot geodatabase serves as the tool, transforming HPMPs from static documents into dynamic, spatially informed systems that integrate cultural and historical data. The USACE Tribal Consultation Policy supplies the principal, grounding management in early, frequent, and meaningful government-to-government consultation with Tribal Nations. Together, these components demonstrate the potential of linking data management with policy and consultation to shift preservation practices from reactive to proactive. While the geodatabase remains in a pilot phase, it already illustrates how uniting policy, tools, and consultation can strengthen resilience, support long-term preservation, and ensure consultation remains meaningful and effective.

McKnight, Justine [204] see Finn-Kandel, Daniel

McMahon, Patricia (New South Associates Inc.), J.W. Joseph (New South Associates Inc.), and June Weber (New South Associates Inc.)

[251] *Forged in the Courts, Fired in the Factory: Convict Labor and Chattahoochee Brick Factory*

The Chattahoochee Brick Factory was instrumental in the history of Atlanta, as the city pivoted to brick architecture in the second half of the nineteenth century in the aftermath of Sherman's burning of Atlanta. That rebuilding was influenced by James English, a former Confederate captain who became a prominent businessman, mayor, and then police commissioner of the city. English acquired shares and became president of the Chattahoochee Brick Factory in 1885. One of the largest brick factories in the South, Chattahoochee Brick engaged leased convict labor to conduct the demanding work of the factory. The convicts lived in barracks on the site and were guarded by armed guards, who only did not carry weapons when they were guarding work at the kilns, where the heat was so intense that it could cause bullets to explode. Working sun-up to sun-down six days a week, some convicts did not survive their tenure and were buried at the factory. This paper reviews the archaeology and landscape of the Chattahoochee Brick Factory, work conducted as part of the City of Atlanta's plans to design the property as a park and memorial to the lives and deaths of the predominantly African American convict labor.

McMahon, Patricia [251] see Weber, June

McNeil, Cameron (Lehman College and the Graduate Center, CUNY)

[44] *The Palynology of Ritual and Environmental Samples from the Copan Valley, Honduras: Finding Fragrance, Color, and Environmental Context in Microbotanical Remains*

Clues to the identity of flowers depicted in Copan's iconography lie preserved on the floors of tombs and temples at Copan. These ancient interiors are predominantly stuccoed white and then painted red. The temples, in particular, contain few artifacts to tell us what the interiors looked like during their period of use. The identification of pollen grains found in these spaces provides information on their botanical adornments (adding green, white, and yellow to the ritual spectacle), as well as of the fragrances that imbued them. Interpretations of these ecofacts were further enhanced through the analysis of data from local ponds. As will be discussed in this paper, the floral adornments of Copan were intertwined with religious belief-systems,

many of which were pan-Mesoamerican.

McNutt, Ryan (Georgia Southern University), Camilla Damlund (Journal of Conflict Archaeology), Robbie Jorge (Georgia Southern University), and Whitley Gatch (Yale University)

[251] *Officer Country: Differential Access, Differential Survival?*

Power and inequality in internment camps has been explored thoroughly within archaeologies of conflict and internment. However, it has largely focused on the dynamics between ingroups/outgroups—guards and internees, and power differentials between the panopticon system of the dominant over the subaltern. This paper, however, explores *intergroup* aspects of power and inequality *among* internees. Specifically, between officer and enlisted prisoners of war interned at Camp Lawton, a Confederate camp for federal prisoners of war in southeastern Georgia, which was occupied for approximately three months in the latter half of 1864. While theoretically Confederate and Union prisoner of war camps interned officers and enlisted separately, evidence from primary sources and archaeology clearly indicates that they were actually often interned together in the same stockades. Evidence from excavations in spring 2025 will demonstrate this co-internment and the clearly differential levels of possession of material culture allowed inside the prison. Within the shadow economy of illicit trade that took place inside the prison, against a backdrop of starvation rations, disease, and exposure, it will be demonstrated that class systems of rank and inequality continued within the prison, likely contributing to a higher chance of survival for officers versus enlisted.

McPherson, Kayla

[201] *Piecing Together the Past: Mapping Cypriot Pottery in Hittite Archaeological Contexts to Analyze Patterns of Trade and Exchange*

The Hittite Empire was one of the first major civilizations from southwest Asia from 1600 BCE to 1180 BCE, and a major player in the ancient Mediterranean. Understanding how connections and powers interacted in the ancient Mediterranean can be better understood by looking at patterns of trade and exchange. This project aims to identify patterns of trade and exchange with the Hittite Empire and Cyprus by identifying the absence or presence of Cypriot pottery at Hittite sites, using published sources. How Cypriot pottery was circulated throughout the Hittite Empire is key for understanding economics and political connections in the ancient world. To visualize this data, I used QGIS to create a map of distribution of Cypriot pottery in the Hittite Empire by absence/presence and throughout time in order to identify spatial correlations between sites, monumental architecture, religious temples, administrative function, access to trade routes, and site size. There was no clear correlation between the presence of Cypriot pottery and any of these factors. The only factor that showed correlation was proximity to the coast near Cyprus. Overall, this could suggest that Cypriot pottery may not have been considered a valued good that people needed or strongly wanted to have.

McRostie, Virginia [165] see Vidal-Elgueta, Alejandra

Meachen, Julie [195] see Hockett, Bryan

Meadow, Richard [45] see James, Nathaniel

Means, Bernard (Virtual Curation Laboratory @VCU), and Brooklyn Griffin (Virtual Curation Laboratory @ VCU)

[169] *A Peaceful Rest Shattered: 3D Scanning as a Tool to Highlight Richmond's Neglected Historic African American Cemeteries*

The Richmond Cemetery Collaboratory's mission is to document and support African American history and culture through the region's cemeteries. Community partners, including the Friends of East End Cemetery and the Woodland Restoration Foundation, as well as the Descendants Council of Greater Richmond, work with students, faculty, and staff from the University of Richmond and Virginia Commonwealth University (VCU) "to produce place-based knowledge . . . [to] restore the commemorative functions of historic African American cemeteries and to recognize the stories of the people buried therein." This paper discusses faculty

and students working in the Virtual Curation Laboratory at VCU, an active member of the Richmond Cemetery Collaboratory, to use 3D scanning to document the condition of grave markers and their epitaphs. These 3D scans are integrated into the Collaboratory's mapping and archival efforts, shared online, and visualized through 3D printing.

Meanwell, Jennifer (MIT), Benjamin Sabatini (MIT), Elizabeth Paris (University of Calgary), Carlos Peraza Lope (Centro INAH-Yucatán), and Michael Tarkanian (MIT)

[266] *Reconstructing Metalworking Processes Using X-Ray Computed Tomography on Metallurgical Ceramics from Mayapan, Mexico*

Maya metalworkers at the Postclassic period capital of Mayapan created hundreds of copper and copper alloy artifacts, most commonly bells. Cast using the lost-wax technique in a multistep process, these bells required Maya metalsmiths to create and utilize a variety of metallurgical ceramics, including tuyere tips, molds, and crucibles. Investigations of these metallurgical ceramics through traditional methods, such as X-ray fluorescence, scanning electron microscopy, and petrography, have documented their properties; however, lingering questions remain regarding the prevalence and distribution of internal copper fragments and the localized vitrification of their surfaces. The extent of vitrification provides important information on their role in the metal-making process. In this paper, we present new insights into the production and use of these metallurgical ceramics through X-ray Computed Tomography (XCT). The scans reveal the extent of copper droplets within the fabrics, as well as providing a clearer visualization of vitrified areas, allowing for a preliminary understanding of the orientation of these metallurgical ceramics within the furnace and their variable exposure to heat.

Meanwell, Jennifer [157] see Hernandez, Isabella

Meaux, Amanda, Heather McKillop (LSU), Hollie Lincoln (Louisiana State University), Cheryl Foster (Louisiana State University), and E. Cory Sills (University of Texas at Tyler)

[278] *Desalinating Pottery Sherds in the Lab and the Field from Paynes Creek Salt Works, Belize*

A significant problem at the Paynes Creek Salt Works is that over the course of multiple field seasons, saltwater-saturated pottery has presented conservation problems when removed from the water because it dries, cracks, and is destroyed. Experiments in desalination were carried out in the lab on selected pottery that had been wrapped in cling wrap and exported wet to LSU. Our testing with a salinity probe indicated most salt was gone within two weeks of soaking in fresh water. Here we report in variation in soaking times for different pottery types, including coarse sand-tempered briquetage, ash-tempered Belize Red, and calcite-tempered Warrie Red. We also report on the condition of pottery exported to LSU that had not been desalinated. The goal is to refine conservation of pottery in the field for the ongoing Underwater Maya Project.

Medin, Dušan (University of Donja Gorica, Faculty for Culture and Tourism)

[91] *Internationalizing Archaeology in Montenegro: A Long Tradition of Collaboration with Foreign Scholars*

The history of archaeology in Montenegro is inseparable from international engagement. The very first archaeological excavations on Montenegrin territory were conducted by foreign scholars, whose pioneering work laid the foundations for the discipline. Coming from Europe and abroad, these archaeologists brought with them methodologies, networks, and academic traditions that helped establish archaeology as a recognized field of study in Montenegro. This orientation to foreigners continued throughout the twentieth century. During the Yugoslav period, Montenegrin sites were investigated primarily by archaeologists from other republics, supported by their universities and research institutes. These collaborations provided expertise and institutional infrastructure, fostering the professionalization of archaeological research in Montenegro and embedding it within wider regional currents. Today, the international dimension remains central. Archaeologists and institutions from across Europe and North America regularly participate in projects in Montenegro, both on land and underwater. Such initiatives not only advance scientific knowledge and heritage preservation but also create long-term partnerships, training opportunities, and cultural exchange. By tracing this trajectory from the first foreign-led excavations to present-day collaborations, our paper argues that international engagement has been, and continues to be, a defining feature of Montenegrin

archaeology—strengthening its capacity, visibility, and integration within the broader Mediterranean and European context.

Medina, Ishmael (University of Utah), Kenneth Vernon (Scientific Computing and Imaging Institute), Jerry Spangler (Colorado Plateau Archaeological Alliance), Kurt Wilson (Lawrence University), and Brian Coddling (University of Utah)

[95] *Socioenvironmental-Driven Shifts on the Northern Maize Farming Frontier: A Machine-Learning Approach*

For decades, archaeologists have been interested in understanding *how* and *why* maize farming was adopted in the Southwest, especially at its northern reaches where the climate made cultivation of a tropical grass challenging. However, to fully answer these questions, we must first quantify and identify *where* maize farming was suitable. Here, we examine the radiocarbon-dated maize farming record in Utah relative to paleoclimatic records with a novel machine-learning approach to investigate how climate shifts the maize farming niche from the first record evidence of subsistence maize agriculture (ca. 3200 BP) to its abandonment (ca. 600 BP). Results suggest that Indigenous maize farmers shifted settlements adaptively in response to climate and population density. This supports predictions from ideal distribution models, where increasing competition encouraged farmers to settle in less suitable habitats, even accounting for climatic change. The results from the observed environmental and demographic patterns help explain the spread, and demise, of Indigenous maize farming at its northwestern limit.

Medina, Ishmael [95] see Coddling, Brian

Medina, Shelby, Nico Tripcevich (Archaeological Research Facility), and Maftuna Xomidjonova (National Center of Archeology in Uzbekistan)

[315] *Magnetometry Survey at Tugunbulak*

A fortified highland settlement and iron-producing site at over 2,000 m asl, Tugunbulak is a good setting for geophysical exploration of human environmental interaction across the landscape. A team of Berkeley archaeologists were invited to join the 2025 excavation led by Washington University in St. Louis and the National Center of Archaeology in Uzbekistan to conduct a gradiometer survey in undefined areas of the site previously identified in a UAV lidar survey. Magnetometry was employed to prospect within three sectors and covered over 5 ha of ground to reveal extensive structures and terracing beneath active, modern agricultural fields and ancient mounds. A scan of Mound A prior to excavation was compared with photogrammetric models of each level feature to determine the depth, detail, and accuracy of the Bartington 601-2 in a multicomponent site. Overall, this survey has located new areas of interest for future excavations and highlighted the strengths and weaknesses of magnetometry survey in this and similar contexts.

Medina, Shelby [301] see Lovell, Juliette

Medlin, Ashley, and Heather Smith (Texas State University)

[183] *3D Scanning Stone Points and the Problem with Artifact Variation: Developing Efficient Approaches to Scanning Highly Variable Stone Tool Assemblages*

Archaeologists are increasingly using 3D scanning to document and study stone tool attributes for an array of lithic studies. This methodological approach has often been used in biological anthropology to study variation in the shape of skeletal elements using approaches such as geometric morphometrics. Unlike some skeletal materials, stone tools and the materials from which they are made vary in shape, size, color, opacity, and glassiness, which requires unique settings and scanning environments, the utility of which also varies among types of 3D scanners. This poster describes the results of experiments designed to identify the most effective protocols for making accurate 3D models of stone artifacts with light scanners using nondestructive approaches. Discussion of the results are meant to stimulate conversations focused on developing efficient approaches to generating more accurate high-resolution models of highly variable stone tools.

Medlin, Ashley [319] see Smith, Heather

Medrano, Angelica (Universidad Autónoma de México), and Francisco Montoya (Universidad Autónoma de Zacatecas)

[25] *Estado de salud de los restos momificados del Templo de Santo Domingo de la ciudad de Zacatecas, México, siglos XVIII y XIX*

La ciudad de Zacatecas fue fundada en 1546 por la gran riqueza de yacimientos de plata encontrada por los conquistadores españoles, por lo que durante la época colonial y el México independiente se convirtió en uno de los principales centros mineros, provocando que la ciudad albergará a una población pluricultural con una fuerte estratificación. Entre los espacios funerarios de alto estatus social: empresarios mineros, eclesiásticos, comerciantes, etc., fueron los recintos religiosos como la Catedral y el Templo de Santo Domingo (antigua Compañía de Jesús), este último representa una de las joyas arquitectónicas coloniales de la ciudad. En esta ocasión se darán a conocer los resultados del análisis de los restos momificados rescatados durante la intervención de restauración en el interior del Templo de Santo Domingo, ellos encarnan a una parte de la élite zacatecana de los siglos XVIII-XIX. En algunos individuos —infantes y adultos— se tomaron radiografías para conocer datos concretos como la edad y patologías observables por medio de la imagenología. Entre las enfermedades detectadas incluyen las relacionadas con la salud bucal de los adultos, osteofitosis, traumatismos, deficiencia vitamínicas como la D (diente raquítico) indicando una salud infantil precaria.

Meier, Jacqueline (University of North Florida), and Katie Tardio (Bucknell University)

[202] *Cattle and Canines at the Crossroads: New Zooarchaeological Research at the Athenian Agora*

Our zooarchaeological reanalysis of legacy material from the Athenian Agora uncovered new findings from two fascinating features—the Crossroads Enclosure (J5:2) and adjacent well (J5:1). Excavated from 1971 to 1972, the enclosure was a small shrine across from the Royal Stoa, containing numerous votive offerings and animal remains (ca. 430 BCE). To the north, a well was likely linked to the enclosure (ca. 430 through ~200–190 BCE) and contained similar votives and refuse, including lead tablets and part of a bronze statue. Our initial analysis revealed that faunal remains from the enclosure and well differed. Here, we compare evidence of individual animal life histories through focused demographic, geometric morphometric, and pathological analysis of the well-preserved cattle and dog remains. When combined with the taphonomic results, new patterns emerge that elucidate how ritual and everyday practice impacted the lives of animals, and in turn, animal qualities shaped Agora ritual practice. Animal deposits in the well contained nearly complete dog remains of various sizes and specially managed cattle, indicating some exceptional ritual and cleaning refuse. Our results begin to form a more detailed, multispecies picture of the roles of animals whose remains ultimately reflect an important record of life at the Agora.

Meiggs, David (Rochester Institute of Technology), John Marston (Boston University), Nicole Hultquist (Boston University), Petra Vaiglova (Washington University in St Louis), and Ethan Baxter (Boston College)

[314] *The Organization of Agropastoral Food Systems at Gordion, Central Turkey, through Isotope Analysis of Domestic Plants and Fauna*

Agricultural systems have been deeply embedded in human societies for millennia, and are simultaneously the primary source of economic production and prehistoric human impact on environments. Our project aims to identify the spatial extent of agropastoral practices from the Late Bronze through Middle Iron Ages (ca. 1400–540 BCE) at the archaeological site of Gordion, in central Turkey. We integrate isotopic methods applied to on-site plants and fauna to identify and map the spatial extent of animal grazing and characterize plant cultivation surrounding the urban center of Gordion. Our data allow geographic and seasonal interpretation of past agropastoral activities, and how they changed over time in response to changes in regional political economy, and local environmental and climatic conditions. Our chronological focus explores a cycle of imperial collapse (of the Hittite Empire) and the growth and florescence of a new indigenous state (Phrygia). This presentation will discuss work to date investigating the nature of the agropastoral system at Gordion through time, its environmental impact, and economic implications for landscape change from the practices employed.

Mejía-Martínez, Nabil (Programa de Investigación de la Acrópolis Temprana, University of New Mexico)

[304] Elite Maya Textile Production during the Classic Period (AD 250–900) at Copan, Honduras

During the Classic period (AD 250–900), the Maya state of Copan was characterized by a complex political and social organization. Evidence of textile production during this period is recorded inside and outside Copan's political and urban core. This research presents data on textile-related technology from settlements with diverse social backgrounds across the Copan Valley, dating from the Middle Classic (AD 400–600) to the Early Postclassic periods (AD 900–1100). Metric analysis of textile-related tools such as spindle whorls and bone needles from domestic and special contexts is being used to examine textile production patterns among Copan's different Classic Maya populations. Results have shown that there was no such relationship between the social status of artisans and the production of high-quality cloth, indicating that artisans across the valley had virtually no restrictions on access to high-quality fibers like cotton and feathers, and showed a higher preference for fine, high-quality thread production. However, the social and textile production patterns identified indicate that the purposes of thread and cloth production differed between elite and commoner communities. Those purposes could range from domestic consumption, tribute payment, and other activities that were integral to the political economy of the Copan Maya state.

Mele, Matthew (TXST, SEARCH)**[344] A Geophysical Survey of the Mockingbird Gap Site and Chupadera Draw, Jornada del Muerto, New Mexico, USA**

The Mockingbird Gap site, located in the Jornada del Muerto of central New Mexico, is one of the most artifact-dense Paleoindian localities in North America. Previous investigations have documented over 230 Clovis points and Clovis fragments, representing a perennially occupied campsite. Geoarchaeological coring conducted within Chupadera Draw, a shallow drainage adjacent to Mockingbird Gap, revealed a once deeply incised arroyo with a Clovis-contemporary watercourse at least 10 m below the current ground surface. This project employs a geophysical survey integrating ground-penetrating radar and electrical resistivity to map buried paleo-topography at Mockingbird Gap and Chupadera Draw. A dual-scale methodology combines high-resolution grid survey within artifact loci with broader landscape transects designed to identify terraces, drainage channels, and potential habitation surfaces. Geophysical data is paired with targeted ground truthing and processed in ArcGIS to interpret subsurface features and buried topography. Research goals included the reconstruction of buried geomorphology that shaped Paleoindian occupation(s) and site preservation. By integrating noninvasive remote sensing with traditional archaeological approaches, this research aims to shed light on the landscape context of this unusually extensive campsite, clarify the organization of Clovis activity areas, and provide a foundation for future excavation and interpretation at Mockingbird Gap.

Melendez, Ana (IRES-CONICET/UNCA), and Marcos Quesada (IRES-CONICET/UNCA)**[163] Agricultural Technologies and Climate Variability during the First Millennium CE in the El Alto-Ancasti Highlands (Northwest Argentina)**

During the second half of the first millennium CE, the El Alto-Ancasti highlands (northwest Argentina) were the setting of intense processes of agricultural transformation in a context of marked climatic fluctuations, alternating between prolonged droughts and episodes of extreme rainfall. In this paper, we explore how local communities developed agricultural practices adapted to this environmental uncertainty through systems of micro-catchments and terraces established in different sectors of the sierra, spanning various altitudes and ecotones. We propose that these strategies were not designed exclusively as responses to droughts or torrential rains but rather as technologies aimed at diversifying agroecological spaces in marginal environments, thereby generating adaptive capacity in the face of climatic variability. To support this hypothesis, we integrate multiple lines of evidence: analysis of the construction and spatial distribution of agricultural structures, studies of microremains, soil characteristics, and records of volumetric moisture in agricultural soils. The results of terrace monitoring demonstrate the effectiveness of these configurations in the management of water and soil, providing insights into the relationships between technological innovation, agrobiodiversity, and sustainability in prehispanic mountain agroecosystems.

Melendez, Juan, Emiliano Melgar Tisoc (Templo Mayor Museum), Chloé Andrieu (CNRS), Matthieu Menager (CEMCA), and Reyna Solis

[307] *Tiny but Revealing Imprints of the Past: The Macro- and Microscopic Study of Precolumbian Greenstone Artifacts from Mesoamerica and Costa Rica*

In this presentation, we will present several case studies concerning both visual and traceological analyses carried out on a set of precolumbian greenstone artifacts from Mesoamerica and Costa Rica (e.g., Teotihuacan, Tikal, El Perú-Waka', Kaminaljuyu, Talamanca de Tibas, Loma Corral, and Monte Sele). We will discuss their stylistic traits, crafting pedigree, significance, and in select cases their probable circulation in antiquity. These studies have provided valuable insights into crafting technique traditions and the nature of the raw materials of the modifiers (i.e., tools) used by ancient craftsmen to segment (i.e., cut), abrade, polish, incise, and sometimes, perforate these artifacts. Elucidating these notions of craftsmanship is just the beginning of a different interpretative path that could, we believe, challenge existing paradigms regarding the meaning and trajectory of some of these precious materials.

Melgar Tisoc, Emiliano (Templo Mayor Museum), and Reyna Solis

[164] *The Lapidary Objects from Teopancazco: Identifying Cultural Preferences for Crafting Teotihuacan-Style Pieces and Local Emulations of Teotihuacan-Guerrero Objects*

During the extensive excavations at the neighborhood of Teopancazco in Teotihuacan, archaeologists recovered lapidary objects crafted with different raw materials, some of them from local deposits and others from foreign sourcing areas. In this paper, we will show the archaeometric analysis (UVF, OM, SEM-EDS, and μ Raman) applied to this assemblage to identify their chemical composition, probable provenance, and the characterization of their manufacturing traces. Interestingly, the geological diversity of origin of a great number of pieces did not affect the *chaîne opératoire* employed for crafting them with a remarkable standardized technology. Also, we detected specific relationships and cultural preferences between some types of raw materials, objects, and techniques, such as the trapezoidal inlays and serpentine figurines with Teotihuacan-style attributes, and the bilateral symmetry and proportion of the Teotihuacanoid / Teotihuacan-Guerrero-style figurines, especially those crafted on slate, that could be a local emulation of these pieces from that region. Finally, the temporal and spatial comparison of these lapidary items with other areas at Teotihuacan showed the existence of different mechanisms of production and a multiscale distribution of these goods within this city.

Melgar Tisoc, Emiliano [307] see Espinosa Ramirez, Lizandra

Melgar Tisoc, Emiliano [307] see Melendez, Juan

Melgar Tisoc, Emiliano [164] see Solis, Reyna

Melton, J. Anne, and Gilbert Tostevin (University of Minnesota)

[336] *Are They Different . . . Enough? Quantifying and Contextualizing Measures of Difference among Prehistoric Cultural Groups Using Refitted Core Reduction Sequences at Boker Tachtit (Israel)*

Distinguishing cultural relatedness from independent convergence in lithic technological behavior remains a complicated issue. But, before we can assess the degree to which assemblages are “culturally related,” we must first identify the range of acceptable variability we can expect within a shared cultural environment. Simply put, what is “different” enough to be considered culturally unrelated? Utilizing the rich, high-resolution behavioral data available from the numerous refitted sequences within Layers 1, 2, and 4 at the Initial Upper Paleolithic site of Boker Tachtit (Israel), a simulated sampling distribution of technological variability for a shared cultural environment (i.e., a population of individual knappers’ refitted nodules within a layer) was created. Building on the Behavioral Approach to Cultural Transmission (BACT) quantitative comparative framework, this distribution was produced from 10,000 pairwise comparisons, each of which were between the original complete sample and a randomly generated bootstrapped sample, with each comparison resulting in a measure of difference. With this new quantified range of variability, any results from subsequent BACT comparisons between other assemblages can be contextualized as falling within or outside of the variability expected within a single cultural environment (as modeled at Boker Tachtit).

Menager, Matthieu (CEMCA), Camila Hernandez Murillo (Centre d'étude Mexicaine et Centraméricaine, CEMCA, Avignon Université), Camielsa Prevost (Avignon Université), Chloé

Andrieu (CNRS), and Silvia Salgado (Universidad de Costa Rica)**[307]** *Iron Ore Mirrors Exchanges between the Maya and Costa Rican Areas: From Archaeological to Molecular Analyses*

Iron ore mirrors were essential artifacts for divine Maya kings and high-ranking individuals, notably crafted in the Maya area. Such mirrors have also been found in significant quantities in burial contexts at archaeological sites dating from 300 BCE to 600 CE in Costa Rica. The presence of such prestigious and rare Mesoamerican artifacts in Costa Rica is of great importance for understanding the connections between these two archaeological areas. Within the framework of the MayaCosta project, which combines archaeological research with state-of-the-art analytical sciences, fragments of iron ore mirrors recovered from major Maya sites, together with finds from different sites in Costa Rica, were analyzed in order to assess their production techniques, fabrication materials, and potential origins. The mirrors were characterized by infrared spectroscopy, chromatographic techniques, scanning electron microscopy, and synchrotron X-ray diffraction. The techniques used for their manufacture were elucidated using traceology. These results demonstrate the circulation of elite objects such as iron ore mirrors between the Maya lowlands and lower Central America. In this perspective, mirrors appear not only as technological achievements but also as powerful markers of social distinction and political interaction across cultural frontiers.

Menager, Matthieu [307] see Melendez, Juan

Menaker, Alexander, Douglas Boyd (Stantec), Maria Franklin (University of Texas at Austin), and Howard Clark (Stantec, Descendant Community Member, Bolivar Archeological Project)**[264]** *The Bolivar Archeological Project at the Intersections of History: Collaborative, Public Archaeology along the Chisholm Trail in Bolivar*

This paper presents the Bolivar Archeological Project (BAP), a collaborative, multidisciplinary project that attends to marginalized histories to offer a model for how publicly funded cultural resource management archaeology can incorporate descendant communities and local stakeholders into the fabric of the research design and planning for a state infrastructure project, offering insight into the evolving breadth of regulatory compliance. Set in the shifting rural–urban landscape of Denton County, the BAP is part of a Texas Department of Transportation road improvement project that led to the archaeological and historical investigations of two nineteenth-century sites—a blacksmith shop and hotel—associated with the historic Chisholm Trail. The blacksmith shop belonged to Tom Cook, an African American freedman, whose descendants reside nearby and became active participants in the investigations. Informed by Black feminist archaeologies, the project works at the intersections of local communities and state infrastructure while navigating landscapes of fraught histories and presents to forge a historical archaeology for the twenty-first century. To exemplify the collaborative dimensions of this project, the presentation features project team members, including direct descendant of Tom Cook, Howard Clark, sharing the process of building relationships of trust and co-laboring together.

Menaker, Alexander [277] see Boyd, Douglas

Mendelsohn, Rebecca (Colgate University)**[218]** *Consent, Collaboration, and International Repatriation: A Large-Scale Restitution of Mexican Cultural Heritage from University Museums at Colgate University*

In 2021, the Longyear Museum of Anthropology at Colgate University was first contacted by the Mexican government about the return of archaeological materials in the collection. Over the next three years, university representatives engaged in discussions with officials from the Consulate General of Mexico in New York and the Instituto Nacional de Antropología e Historia to work toward an agreement for voluntary repatriation. Driven by lessons learned from the Longyear team's NAGPRA work, the project emphasized consultation, relationship-building, and seeking consent at each stage of the process. By September 2024, 1,072 pieces from the Longyear Museum of Anthropology and Picker Art Gallery collections were voluntarily restituted to Mexico. A unique arrangement was also reached to maintain over 900 fragmentary pieces on campus as part of an "Ambassador Collection" for teaching. Drawing on the success of a past repatriation to Australia, opportunities were also sought to encourage ongoing learning and cross-cultural collaboration.

This presentation discusses the development of the agreement, some hurdles encountered associated with international repatriation, and lessons learned throughout the process. Ultimately, the presenter concludes that the value of what we gain from such collaborations far exceeds what we “lose” when returning items from the collections.

Mendenhall, Phillip (Carnegie Museum of Natural History/Cultural Heritage Partners)

[169] *Using the Slow Science of Cherokee Gadugi to Understand Past Communities in the Eastern Woodlands: A Case Study of Woodland Period Ceramics, Phylogenetics, and Community Interaction*

The Cherokee concept of Gadugi (SSY), meaning “working together,” is one illustration of the foundational placement of community in Indigenous society and is crucial to understanding how past North American populations constructed their social networks. This presentation will look at how Gadugi is incorporated as a form of contemporary Indigenous involvement during the research process, as well as the fundamental perspective to view how Upper Ohio Valley communities exchanged information during the Early and Middle Woodland periods. Utilizing the methodological approach of cultural phylogenetics, cognitive choices made during the construction of hand-built wares are networked as a form of mutual aid and collective action across Eastern Woodland communities rather than as a single ceramic object for the purposes of economic trade. By taking a community-based perspective on the exchange of knowledge, outdated concepts such as core-to-periphery modeling and regional typologies based on mass-produced wares, can be reimagined to how past, and current, Indigenous communities viewed their world.

Méndez, César (Pontificia Universidad Católica de Chile), and Amalia Nuevo Delaunay (Centro de Investigación en Ecosistemas de la Patagonia)

[41] *Late Pleistocene Bifacial Technology in Central Chile: Assessing Its Variability*

Late Pleistocene occupations in central Chile are notably associated with bifacial technology, particularly with formalized and conspicuous finished specimens. However, a comprehensive understanding requires examining this technology within the broader archaeological contexts and assemblages in which it appears. This paper explores bifacial technology among the earliest inhabitants of central Chile by analyzing assemblages from stratified deposits securely dated to the Late Pleistocene. These contexts include isolated finds, open-air campsites, workshops, prey-processing locations, and cave occupations. The bifacial assemblages range from single specimens to thousands of debitage flakes and fragments. While variability is partly stylistic, it primarily reflects different stages of manufacture and the functional roles of the artifacts. Current data enable modeling the *chaîne opératoire*—from raw material acquisition through manufacture, transport, use, and discard. Nonetheless, certain specimens with unique features remain poorly understood. The onset of the early Holocene marks a shift toward new bifacial forms, shaped by changing hunting strategies and the emergence of nonfunctional attributes in bifacial tips.

Méndez, César [32] see Nuevo Delaunay, Amalia

Mendez, Keith (Pacific Northwest National Laboratory)

[198] *Innovations from the Upper Left: Pacific Northwest National Laboratory Cultural Resources Program*

The Cultural Resources Program at Pacific Northwest National Laboratory has been supporting scientific innovation by managing cultural resources for over 30 years. With two campuses, the main campus in the arid shrub-steppe habitat of the Columbia basin and the marine research campus on the coast of the Olympic peninsula the PNNL cultural resources program is responsible for the management of a diverse collection of cultural resources. This presentation will highlight some of the significant projects and management strategies employed by the program with a focus on meaningful engagement with stakeholders through the framework of Sections 106 and 110 of the National Historic Preservation Act.

Mendez, Nelly [339] see Maldonado, Blanca

Méndez, Víctor [32] see Nuevo Delaunay, Amalia

Méndez-Quirós, Pablo [32] see Vidal-Montero, Estefanía

Mendoza, Rubén (Archives & Archaeology)

[50] *On the Edge of Empire: Archaeology of the Spanish Royal Presidio and Missions of the Monterey Bay, 1995–2025*

Since 1995, archaeological investigations across the Monterey Bay region have transformed our understanding of Spain's northernmost colonial frontier. Beginning with excavations at Mission San Juan Bautista, this program of research has expanded to encompass four missions and the Royal Presidio of Monterey. Guided by the goal of reconstructing architectural histories and material traditions, the projects drew on a broad coalition of participants—archaeology and social science students, service learners, volunteers, and minimum and medium security trustees and fire crews from Salinas Valley State Prison. At Mission San Juan Bautista, excavations uncovered the long-lost chapel of 1797 and the second, earlier quadrangle of 1800. Work at Nuestra Señora de la Soledad revealed no fewer than 18 buried buildings, among them the *cuartel* barracks and the vast Neophyte Plaza of 1810. Investigations at Mission San Carlos Borromeo recovered the missing Serra Library and the provisional chapel of 1782, while excavations at the Spanish Royal Presidio of Monterey identified the Serra Chapel of 1772, the southern perimeter defensive wall and bastion, and the original Baptistry, Sacristy, and Missioner's Quarters of 1770–1771. Together, these findings shed new light on the cultural landscapes, architectural transformations, and contested spaces that defined life on the edge of empire.

Mendoza-Blajos, Olivia, Christyann Darwent (University of California, Davis), Jelmer Eerkens (University of California, Davis), Piper Williams, and Tim Carpenter (ArchaeoMetrics Inc.)

[170] *Osteological and Stable Isotope Analysis of an Historic "Pet Cemetery" in Northern California*

A late nineteenth- to early twentieth-century "pet cemetery" was uncovered during an archaeological mitigation project behind Vacaville, California's Old Town Hall in 2003. As the historic layers were not the focus of interest at the time, the bones were rapidly collected, with minimal documentation, and remained in their field bags for more than 20 years. While precise field documentation is not available, this faunal assemblage still provides an opportunity to ask new questions and apply new methods. We identified at least 20 dogs (11 adult, 9 juvenile), 10 of which were recovered from eight distinct burial pits, and three cats (2 adults, 1 juvenile). Measurements on complete fore- and hind-limbs of 12 dogs were used to estimate shoulder height. Three size clusters emerged, ranging from small lap dogs to a large guard dog. We used stable isotope analysis to examine historic pet-provisioning practices across these size clusters. None of the animals reached advanced age based on their unworn teeth and lack of osteoarthritis, but minor healed fractures and a mild bone infection is noted on at least one dog. This once-abandoned collection sheds new light on the variety of companion animals kept and fed by early residents of Vacaville.

Mendoza-Vega, Jorge [81] see Fedick, Scott

Menéndez, Elsa Damaris [36] see Eppich, Keith

Menéndez Pereda, Alba (University of California, Los Angeles), and Luna Valentin (CCRMA, Stanford University)

[55] *The Sound of a Sacred Uasi: Approaching the Coricancha through Archaeoacoustics*

Sound plays a critical role in the experience of architectural spaces. Architectural acoustics, though traditionally centered on modern built environments, is increasingly applied to investigations of the past—most often in European contexts. As a counterpoint, we turn to the Americas to present what is, to our knowledge, the first architectural acoustic analysis of an enclosed Inca building—a *uasi*. Through the lens of the Coricancha, we examine how sound was curated at the most important sacred center of the Inca Empire. Extant architectural evidence has allowed us to take field acoustic measurements. However, since the architectural fabric of the Coricancha has changed over time, we relied on digital modeling to re-create the complex during Inca times. This digital reconstruction together with the sound measurements taken in situ and analyzed through advanced signal processing techniques provide us with an approximation of the soundscape of the Coricancha during Inca times. This approach offers insight into how this sacred space was sonically experienced. Furthermore, it enables us to holistically address questions of access and privacy at the Inca temple by studying how sound might have propagated at the site.

Meng, Fanxiu (University of Tokyo), and Kazuki Morisaki**[304]** *Bifacial Technology Innovation and Development in Central Japan*

Debates on the coastal hypothesis of the peopling of the Americas have frequently invoked lithic parallels between Japan and North America. To move beyond morphological resemblances, it is necessary to confirm the technological and environmental contexts of Japanese Upper Paleolithic assemblages, which may represent pioneering developments in bifacial technology for the production of projectile points in East Asia. This study examines lithic assemblages from the Sagamino site cluster in central Japan over time, applying a biface-centered technological–typological framework within hunting tool traditions. The typology is constructed from morphological characteristics based on top views and cross-sections, and technological reduction sequences identified through flake scar patterns and refitting analysis. Geometric morphometric analyses are integrated to quantify morphological variation and trace developmental pathways of bifacial technology. This approach provides critical insight into the trajectory of bifacial technology in central Japan during the Late Pleistocene, highlighting locally developed features that begin with shaping through thickening techniques and later advance toward thinning tendency, which may have served as a baseline for subsequent innovation. The study aims to contextualize bifacial traditions in central Japan to establish a foundation for cross-regional comparisons between central Japan, the Paleo-Sakhalin–Hokkaido–Kurile (PSHK) region, and potentially North America.

Merewether, Jamie [166] see Bellorado, Benjamin

Merkel, Kelsi [155] see Powis, Terry

Merrifield, Lyssia [318] see Butler, Virginia

Merrill, Michael**[73]** *Using Neutron Activation Analysis to Study Pottery Sherd Cultural Landscapes in Southern California*

Concentrations of 32 elements in a sample of 56 buff ware pottery sherds from an unpublished 2006 dataset by J. A. Hildebrand, “INAA of Lower Colorado River Buffwares from the Lower Colorado Region,” obtained online from the University of Missouri Research Reactor (MURR) Archaeometry Laboratory Database, were brought forward for analysis. The sherds are from 18 recorded interior southern California desert sites, 14 in Imperial and four in Riverside County. The sherds are classified using Michael Water’s 1982 typology to Patayan I (AD 700–1050), Patayan II (AD 1050–1500), and Patayan III (AD 1500–1900) types and were partitioned into two “temporal” subsets (Patayan I sherds and Patayan II–III sherds). Each subset was analyzed using principal components analysis (PCA) and the Wachter method to evaluate sherd provenance and subgroupings. The study identified two regional pottery sherd cultural landscapes for the Patayan I subset and three regional pottery sherd landscapes for the Patayan II–III subset.

Merriman, Christopher [88] see Birkmann, Joseph

Merritt, Chris [280] see Green, Emma

Merritt, Chris [30] see Lai, Zoe

Merwin, Cecily [167] see Whelan, Carly

Mesia-Montenegro, Christian (Universidad Privada del Norte)**[85]** *Time, Ritual, and Bayesian Reasoning: Charting the Andean Kotosh Religious Tradition*

Bayesian chronological modeling offers new leverage for reassessing the tempo and trajectory of early Andean ritual systems. Here I reevaluate 168 radiocarbon determinations from 16 Late Archaic and Formative sites associated with the Kotosh Religious Tradition (KRT) using an OxCal workflow that combines rigorous sample vetting, outlier modeling, and Monte Carlo–derived Kernel Density Estimation. The resulting high-precision sequences reveal that KRT ceremonial architecture arose virtually simultaneously on Peru’s central coast and in the adjacent highlands by ~ 3600 cal BCE, refuting long-standing diffusionist scenarios that posit a unidirectional spread from one heartland to another. Six statistically robust ritual

phases are defined, each bracketed by $\geq 95\%$ highest-posterior-density intervals. Probability distributions for phase boundaries and interregional offsets indicate recurrent, multidirectional exchange rather than linear succession. This pattern implies a distributed network of communities negotiating a shared but diversely expressed ritual repertoire, rather than a single center exporting an ideological package. Beyond clarifying KRT chronology, the study demonstrates how transparent “chronological hygiene” protocols paired with Bayesian phase-break analysis can resolve fine-grained cultural dynamics in other early complex societies.

Mette, Madelyn [157] see Herbert, Gregory

Metzger, Jamie [42] see Halcrow, Sian

Mex Albornoz, William [161] see Fierro Padilla, Rafael

Meyer, Brett (University of Michigan)

[85] *Virtual Zooarchaeology: Creating a Digital 3D Faunal Reference Collection*

The use of photogrammetry in archaeology has been growing in recent years. Applications include recording excavations, a process that is inherently destructive, as well as digitizing artifacts to enable researchers and the general public to engage with them in novel ways. The application of photogrammetric methods to zooarchaeology has the potential to democratize access to comparative collections which are crucial for identifying the often fragmentary bones recovered from archaeological sites. Unfortunately, these collections are difficult to build and curate. Processing facilities are required to store and process animal carcasses, and pest-free storage space is necessary to house the cleaned specimens. This involves significant financial and logistical hurdles. Many small universities, museums, and cultural resource management (CRM) firms do not have the budgets, staff, or resources to build and house these collections. Instead, their researchers are relegated to using reference guides containing line drawings of bones to make their identifications. While useful, these drawings are a less than ideal reference when identifying fragmentary remains. To solve this issue, the creation and consolidation of open-source 3D databases that can be used by institutions which are unable to afford a comparative collection of their own are necessary.

Meyer, Brett [326] see Densel, Allison

Meyer, Francesca, Katherine Gaddis (University of Nevada, Las Vegas), Marissa Ramsier (Cal Poly Humboldt), and Katarzyna Slusarska (University of Szczecin/Poland)

[89] *Endocranial Lesions: A Paleopathological Study of Late Medieval Skeletal Remains from Żelewo, Poland*

The site of Żelewo is located in a rural area of northwestern Poland, a region historically known as Pomerania. Skeletal remains from the cemetery, dating mostly to the thirteenth–fifteenth centuries, are associated with a nearby Cistercian monastery. Numerous individuals from this site show evidence of endocranial lesions, some marked, providing insights into health and disease in rural medieval Europe. To evaluate potential factors associated with the lesions, we provide a differential diagnosis based on observed endocranial lesion morphology and distribution, taking into account estimated age at death, biological sex, and dental wear—as a proxy for diet, behavior, and stress. Potential confounding factors, including taphonomic damage, are also considered. We also discuss potential connections between social, cultural, economic, and environmental factors related to health and disease. Our findings contribute to the larger understanding of cranial pathology and expands on the limited paleopathological literature on endocranial lesions in bioarchaeological populations. This research contributes to a better understanding of medieval life and health, connecting biological evidence with historical and archaeological context to tell a more complete story of this population. ***This presentation will include images of human remains.

Meyer, Kelton (University of Wyoming)

[348] *Rethinking Folsom Land Use on the Northern Colorado Plateau, USA*

Far western Colorado and east-central Utah are often relegated from core Folsom settlement models because the region lacks deeply stratified deposits, bison bonebeds, and large residential camps. Instead, the northern Colorado Plateau contains a diffuse record of Folsom isolated finds and small sites. The overall

region suffers from low investment in Paleoindian research, but documented patterns suggest an ephemeral hunter-gatherer land-use system during the Younger Dryas Chronozone. If the northern Colorado Plateau was a frontier zone for Folsom groups, then we should expect Folsom technological organization and settlement preferences reflect exploratory processes rather than sustained landscape investments and local familiarity with the region's key resources. In this paper I examine whether these premises hold true by characterizing the spatial distribution of Folsom sites in these far western borderlands. I compare the overall gradient of Folsom occupation intensity in the region using lithic assemblage attributes, including the ratios of finished points and preforms as well as local and exotic raw materials. This analysis provides a formal test of whether the northern Colorado Plateau represents a marginal extension of the broader Folsom settlement system or instead a distinct frontier zone with unique spatial patterns and assemblage variability.

Meyer, Matthew (University of Kentucky)

[316] *Strange Sherds in a Strange Land: Postclassic Interactions between Cholula and the Gulf Coast at San Marcos, Veracruz*

Recent developments in identifying Postclassic (ca. 1000–1521 CE) occupation in the Southern Gulf Lowlands of Veracruz have both expanded knowledge of Postclassic assemblages and raised questions of interregional connections between the Gulf Coast, Puebla, and the Valley of Mexico. While there is clear archaeological and ethnohistorical evidence for connections to the Aztec Empire after 1465, the Early Postclassic has only recently been well defined and any discussion of interaction with centers outside of the Gulf Lowlands is limited. In 1940, archaeologist Philip Drucker conducted fieldwork at San Marcos, a small mound center at the foot of the extinct Cerro el Vigía volcano in the Western Tuxtlas. Drucker's work did not initially identify a Postclassic occupation at San Marcos, but a more recent reanalysis of his data, housed at the Smithsonian, identifies a strong Postclassic occupation. In this paper, I revisit the Postclassic ceramic assemblage from San Marcos to identify evidence of interactions between San Marcos and Cholula by comparing local ceramics to examples from the nearby Tres Zapotes, the more distant Cerro de las Mesas, and Cholula. In doing so, I aim to assess the connections between San Marcos and other regional and extra-regional centers in the Postclassic period.

Meyer-Lorey, Robin (University of California Los Angeles)

[23] *Pa'ashi Archaeological Collaboration: Oral Histories and Paleoclimate in California's Central Valley*

US westward expansion brought mechanized farming and large-scale irrigation to California, resulting in a dramatic transformation of the Central Valley from the largest Indigenous population center in California to vast swathes of intensely modified corporate farmland. Hydrological modeling and paleoclimate data combined with oral histories and community-directed remote sensing set a baseline for understanding large-scale Indigenous ecological management in California's Central Valley prior to European contact. Integrating Tachi Yokut oral traditions with paleo-ecological data contributes to literature on Indigenous Californians' ecological management strategies, including use of fire, water, plant and animal species, and religious practices. Understanding ecological management and climate modification from an Indigenous perspective sets the frame for investigating colonial landscape transformations in the most intensively irrigated and farmed agricultural region on Earth—the largest human alteration of the Earth's surface. Results of this community-centered historical + industrial + landscape archaeology project have implications for climate justice, climate resilience, and water management in California.

Meyers, Maureen (New South Associates)

[307] *Production of Cannel Coal and Shell Objects at a Mississippian Frontier in Southwestern Virginia*

Lapidary activities are known at many large Mississippian sites and have focused on shell and materials like greenstone and hematite. The working of these materials at Mississippian frontiers is less known, particularly the range of materials at frontiers and the different ways in which this production was organized. Additionally, the role of Indigenous belief systems in the choice of materials and end products is not fully understood. This paper examines the working of (white) shell and (black) cannel coal at a frontier Mississippian mound site in southwestern Virginia. These items were important adornments to fiber produced at one specific structure at the site. The location of production materials and areas is identified and discussed as reflective of Indigenous belief systems as well as an efficient manner of production in a region

with sparse labor and materials.

Meyers, Maureen [208] see Colaninno, Carol

Meyers, Maureen [212] see Doubles, Catherine

Meyers, Stephanie [35] see Lentz, David

Meza, Carolina (INAH Centro Morelos), and Mario Córdova (INAH-Morelos)

[331] *Resultados del Salvamento Arqueológico en las regiones de Jojutla y La Tlalnahuá en Morelos, México*

Los trabajos de infraestructura en México son inminentes e inevitables, debido al creciente desarrollo económico y social. Tal situación ha propiciado la destrucción de sitios y contextos arqueológicos enteros, así es que una de las formas de recuperar la mayor cantidad de información posible y de dar a conocer esos asentamientos humanos antiguos son los salvamentos arqueológicos, mediante un proceso de intervención, restauración y publicación de los resultados. Es por ello, que esta presentación hace una síntesis del salvamento arqueológico realizado con motivo de la construcción de la autopista Siglo XXI que atraviesa el estado de Morelos uniendo Puebla y Guerrero. Mediante dicha labor arqueológica se recuperó información importante de 24 sitios arqueológicos pertenecientes a diferentes épocas, y que derivó en la publicación del libro titulado “Jojutla y La Tlalnahuá: Arqueología de los valles morelenses”, en el que participamos varios arqueólogos. Dicha publicación permite al lector conocer los procesos de deposición arqueológica de diversos asentamientos humanos, desde los materiales arqueológicos como ofrendas mortuorias y los estilos constructivos, así como las costumbres funerarias identificadas desde el Preclásico hasta el Posclásico, a lo largo de 60 km correspondientes a la construcción de la carretera. *****This presentation will include images of human remains.**

Meza, Carolina [331] see Helmke, Christophe

Mgeladze, Ana (Free University of Tbilisi), Rusudan Chagelishvili (Georgian National Museum), Tamar Aghapishvili (Georgian National Museum), Ninon Jakeli (Georgian National Museum), and Vincent Delvigne (CNRS)

[93] *Flint Sources in the Kvirila River Basin and Their Exploitation during the Paleolithic (South Caucasus, Georgia)*

The main goal of Stone Age archaeology is to study techno-typological changes of prehistoric societies, subsistence strategies, interactions with environment, migration routes, and dispersals. The South Caucasus, located at the crossroads of Africa and Eurasia, is a region rich in archaeological sites covering the entire Paleolithic sequence. Our unique French–Georgian collaborative petroarchaeological research is based on the identification of siliceous rocks in the Kvirila River basin and the analysis of their prehistoric exploitation. To determine strategies of raw material procurement and use for stone tool production, we conducted comparative analysis with the lithic collection from the classic Middle Paleolithic site of Jruchula Cave. Field surveys documented 73 natural flint outcrops within the Kvirila basin, associated with Cretaceous carbonate rocks, Miocene conglomerates, and Quaternary sediments. Micro/macroscale analysis of these samples identified 15 types. Geological types were then compared with artifacts from Jruchula. Results revealed that Jruchula’s inhabitants used 21 types of flint, only part of which correspond to outcrops within the study area. This demonstrates that raw material procurement extended beyond local geo-resources and involved movement across long distances. The introduction of petroarchaeological methods marks a new stage in Georgian prehistory. South Caucasus provides an ideal setting for innovative interdisciplinary research.

Michael, Amy [216] see Garcia-Putnam, Alex

Michaelis, Tamara, and Jason Laffoon (Faculty of Archaeology, Leiden University)

[221] *Sulfur Isotope Baselines for Mobility Studies in the Caribbean*

Strontium ($^{87}\text{Sr}/^{86}\text{Sr}$) and oxygen ($^{18}\text{O}/^{16}\text{O}$) isotopes are nowadays widely used in mobility studies in the Caribbean. Research questions have addressed small-scale mobility and interactions between different groups within the Caribbean and also include questions about the origins of the early inhabitants of the Caribbean. However, while $^{87}\text{Sr}/^{86}\text{Sr}$ and $\delta^{18}\text{O}$ values can be used to exclude certain areas of origin, the problem arises

that owing to overlap in isotope values in many parts of the Caribbean, it is often not possible to determine a person's exact place of origin. Owing to similar issues of equifinality archaeologists have increasingly explored the inclusion of alternative isotope systems such as sulfur ($^{34}\text{S}/^{32}\text{S}$). In the insular Caribbean, preliminary data from Trinidad has shown that the $\delta^{34}\text{S}$ values of vegetation and fauna reflect distance from the coast. This study examines collagen samples from humans and animals from various archaeological sites across the Caribbean islands on a larger scale. In doing so, $\delta^{34}\text{S}$ baselines are being established for different islands and regions, the influence of geographical and geological factors on the $\delta^{34}\text{S}$ values is being evaluated, and thus the foundation is being laid for more archaeologically informative multi-isotope studies in the Caribbean.

Michel, Piboule [93] see Fernandes, Paul

Micheletti, George (University of Central Florida), Jeffrey Brzezinski (University of Central Florida), Rodrigo Guzman (University of Central Florida), Scott Macrae (University of Central Florida), and Karla Cardona (University of Central Florida)

[99] *Settlement Patterns and Landscape Associations of Two Architectural Archetypes in the El Mirador Region*

Recent analysis of the El Mirador lidar dataset reveals the prevalence of two distinct architectural archetypes: one defined by raised rectilinear platforms and the other by long, range-like structures. Identified across the dataset in the periphery of El Mirador and those of the surrounding major centers, each architectural form not only exhibits a consistent and distinct distribution pattern, but they are also clearly situated within distinct settlement zones across the landscape. This paper presents the results of a spatial analysis exploring the distribution, density, and landscape associations of these two architectural types. Focused on a region characterized by broad karstic uplands, seasonal *bajos*, and low-lying depressions, the study applies nearest neighbor analysis, kernel density, topographic position index (TPI), and hydrological modeling to assess how terrain and resource accessibility may have influenced settlement organization and location. By highlighting the spatial patterning of distinct architectural forms across the landscape, this analysis offers insights into different architectural functions and traditions, social identities, and how these aspects may have shifted over time and in space. In doing so, it contributes to broader discussions on landscape use, settlement pattern dynamics, and the sociopolitical development of the El Mirador region and ancestral Maya lowlands.

Micheletti, George [99] see Brzezinski, Jeffrey

Miciak, Magda [89] see Slusarska, Katarzyna

Miclette, Veronique [282] see Bari, Dawn

Midant-Reynes, Beatrix [93] see Beauvais, Pierre-Antoine

Middleton, Eva (Stanford University)

[103] *Crucian Kallaloo: Cultivating Well-Being via West African Culinary Tradition*

Recent archaeological scholarship has interrogated various plantation rationing and provisioning systems across the colonial-era Caribbean (Odewale 2016, 2019; Reifschneider and Bardolf 2020; Wallman 2020). These studies distinguish St. Croix from other Caribbean islands such as Jamaica, Puerto Rico, and Dominica based on the relative absence of available provisioning grounds designated for St. Croix's enslaved labor force. In the late eighteenth and early nineteenth centuries, mass-scale sugar cane production took up over 90% of the Island's cultivable land, making food insecurity and malnutrition the most significant factors contributing to exceptionally high mortality rates among enslaved Afro-Crucians. As a result, wild plant foraging was integral, not only to meeting nutritional and caloric needs, but to creating culturally significant senses of well-being. This paper asks what we can learn about the cultural transmission of West African plant-based stewing traditions to St Croix through an exploration of the Island's national dish: *Kallaloo* (a hearty stew, traditionally made with wild leafy "Bush" greens, salted meats, seafood, okra, and hot peppers). I argue that archaeology is uniquely positioned to help answer questions about how Afro-Crucians nourished themselves within a system of racialized and manufactured food insecurity, using organic residue analysis of Afro-Cruzan cooking vessels.

Mihal, Cearra [111] see Peltzer, Summer

Millard, Matthew, Robert Thompson (Defense POW/MIA Accounting Agency), Joshua Peck (Defense POW/MIA Accounting Agency), Anthony Hewitt (Defense POW/MIA Accounting Agency), and Katharine Pope (SNA International)

[77] *Landscape Transformations of World War II Battlefields: Using a Transdisciplinary Approach to Understand Their Effects to Aid in Resolving Cases of Missing Service Members on Guadalcanal, Solomon Islands*

DPAA's World War II South Pacific team has developed a transdisciplinary approach to resolving cases of missing service members on Guadalcanal, Solomon Islands. Beginning with archival research and case development in preparation for field investigations and recoveries, this team has worked toward a resolution of cases situated in areas that have experienced, and continue to experience, dramatic anthropogenic and environmental transformations from prewar to the present. Each potential recovery location requires the DPAA to use both traditional and applied adaptive archaeological techniques. The current results indicate that this process proves effective in locating, accessing, and processing sites that deliver case progression and ultimately casualty identification and case resolution. This presentation will utilize case studies to exemplify the importance of using a transdisciplinary approach to understand landscape transformations and their effects on World War II battlefields for case resolution.

Miller, Angel [54] see Acosta, Daryll

Miller, Bethany (NMSU)

[51] *Fremont Standardization and Specialization: A Case Study of Emery Painted Bowls*

Issues surrounding Fremont social identity and social organization permeate Fremont archaeological research. My thesis study aims to better understand the level of cohesion within the Fremont between the regional groups by comparing Emery painted bowl sherds from sites in the proposed production zone to sites outside the production zone. The standardization of exchanged ceramics can be an indication of craft specialization. It suggests that potters were creating an "ideal form" that is being produced for trade. An ideal form suggests that there is some level of cultural cohesion or agreed upon ideas that can indicate a cohesive Fremont identity. I am evaluating this by taking measurements of the general metric data, conducting form analysis, and conducting a design analysis looking for evidence of standardization through consistency and specialization through quality. An oxidation analysis is also being conducted to provide general information about sourcing and consistency of raw materials. Finally, a volumetric porosity analysis will help inform what possible uses the bowls may have served, also looking for evidence of standardization. My study will compare the data and attempt to connect patterns with potential social behaviors by looking for statistically significant changes from the production zone to outside the production zone.

Miller, Bryan (University of Michigan)

[102] *Pastoral Collective Action and the Building of a Steppe Empire*

This paper addresses the social institutions of collective action in labor-pooling, negotiations for herd-sharing contracts, and the management of pastoral movements that facilitated shared uses of resources in early steppe societies. It reviews the archaeological evidence for these practices and outlines the bottom-up nesting of pastoral socioeconomic institutions, managed at each level by local and regional leaders and their lineages, that formed a governing structure that could be asserted top-down by a unified political regime, namely that of the first nomadic empire of the Xiongnu (ca. 200 BCE–100 CE).

Miller, D. Shane [319] see Strawn, James

Miller, G. Logan, and Robert Riordan (Wright State University)

[155] *Bayesian Chronological Analysis of the Moorehead Circle, Fort Ancient, Ohio*

Fort Ancient's Moorehead Circle is one of several post enclosures, or woodhenges, identified within Ohio Hopewell earthen enclosures. The 60 m diameter Moorehead Circle is unique among them due to its complex of features including multiple rings of perimeter posts, a central feature complex of fire-reddened

soil, sand-and-gravel filled trenches that mirror the arc of the outer post rings, a limestone paved entrance, and numerous interior posts. Following a decade of excavations, Riordan identified nine major construction stages based on stratigraphic relationships between the Moorehead Circle's constituent features. In this paper, we present Bayesian chronological analysis of 30 AMS dates associated with these construction stages. Results indicate a rapid modification of the original ground surface prior to the Circle's construction in the second century AD. Analysis supports a relatively short chronology for the construction and use of the central feature complex. The final stage probably dates to the fifth or sixth centuries AD, typically considered the early Late Woodland period. Modeling the construction and use of the Moorehead Circle helps further understand the timing and tempo of Hopewell ceremonialism in the region.

Miller, Hollis [313] see Kennedy, William

Miller, Jake (Northern Arizona University), Mary Grace Reichel, Jaime Awe (Northern Arizona University), and Leszek Pawlowicz (Northern Arizona University)

[115] *Applying Machine Learning in the Analysis of Maya Eccentric Flints from Xunantunich, Belize*

This project demonstrates the applicability and utility of machine learning in the study of artifactual remains from archaeological sites. In this case study, we apply machine learning to the analysis of 236 eccentrics that were recovered in 17 caches across the Maya site of Xunantunich in the Cayo District of Western Belize. Besides introducing a novel and objective approach to the study of prehistoric remains, the machine-learning analysis enables archaeologists to group eccentrics based on diverse attributes that include similarities in shape, color, raw material, and context. Applying machine learning in our analysis of these artifacts also facilitates a level of objectivity that is not possible by subjective visual approaches, expedites the process of analyzing large numbers of objects, and efficiently and accurately identifies patterns in datasets that can further contribute to our understanding of the cultural significance of objects recovered at archaeological sites.

Miller, Jennifer [162] see Heckel, Claire

Miller, Jesika, William Godwin, and Patrick Lewis

[295] *Analysis of Neolithic Tools from Abiar Miggi, Libya*

Abiar Miggi is a Neolithic site near Tarhunah, Libya, where artifacts were recovered from a rockshelter in the 1950s. A preliminary description provided by Neuville in 1956 identified three distinct phases in the material. Neuville retained half of this collection until his death, after which his daughter donated it to Sam Houston State University. Our goal here is to reexamine the donated lithic material from this collection, beginning with the second phase. This phase is characterized by the influence of flint and foreign raw material. We aim to build on Neuville's work and place the Abiar Miggi material into a more contemporary North African Neolithic framework. To better define tool types and ultimately compare them to other phases at Abiar Miggi and regional localities, we measured the length, width, and thickness of each lithic. We then examined this data using general tool categories (e.g., flakes, blades, cores, and scrapers). While significant overlap exists in the tool categories, the groups can be characterized by shape. The collection was found to contain four scrapers, 47 flakes, and 26 cores. We plan to compare this data to the remaining phases at Abiar Miggi, as defined by Neuville, and refine the tool classification.

Miller, Mary (Getty Research Institute)

[92] *Golden Glyphs*

For Samuel K. Lothrop's 1952 Peabody Museum study of the metals recovered by Harvard from the Sacred Cenote at Chichen Itza, Tatiana Proskouriakoff evaluated the glyphs on several of the 17 gold disks that had figural representations, and she deemed them to be pseudo-glyphs, a view that has been maintained despite the subsequent decipherment of Mayan hieroglyphic writing. Because of the repoussé execution of the glyphs in the unique format of metal, they appear in reverse, further challenging interpretation. Nevertheless, aspects of meaning can be extracted from their placement, technique, and the subject of the central portion of the disk. To honor David Stuart in this session, these glyphs will be reconsidered and set into the context of ninth- and tenth-century Mayan writing.

Miller, Mary [260] see Robb, Matthew

Miller, Matt [318] see Powell, Noah

Miller, Sarah (Florida Public Archaeology Network), Rachael Kangas (Florida Public Archaeology Network), Kassie Kemp (Florida Public Archaeology Network), and Mary Furlong Minkoff (Florida Public Archaeology Network)

[339] *Archaeology Education Matures: Lifelong Learning in the Face of Rising Tides and Racism*

The University of West Florida established the Florida Public Archaeology Network (FPAN) in 2005, and for 20 years the staff and volunteers have worked to stem the rapid deterioration of the state's buried past through education and outreach. When established, the main threat was development. At present, many more threats loom to destroy heritage including climate change, racial inequalities, economic impacts, and bureaucratic management delays. One of FPAN's main work areas is education and outreach, alongside assisting local governments and assisting the Florida Division of Historical Resources. FPAN excels at providing educational opportunities for K–12 students and teacher training but also adult workshops. This paper will focus on lifelong learning opportunities offered by FPAN through their Cemetery Resource Protection Training (CRPT) with a focus on preserving historical cemeteries and Heritage Monitoring Scouts (HMS Florida) with a focus on climate change and heritage at risk. Both CRPT and HMS Florida have operated for over 10 years with over 1,000 graduates. The building blocks of these programs will be discussed, as well as the migration from traditional in-person workshops to online Canvas courses for the communities we serve.

Miller, Sarah Nicole, Heather McKillop (LSU), and E. Cory Sills (University of Texas at Tyler)

[304] *Excavations at Ch'oc Ayin, Belize*

Underwater excavations were carried out in Building B at Ch'oc Ayin, one of the Paynes Creek Salt Works in southern Belize to estimate the role of the structure in salt production. Ch'oc Ayin is a Late to Terminal Classic Maya residential household group, with several structures. Wooden posts from pole and thatch buildings were preserved in anaerobic mangrove peat below the sea floor. Underwater excavation of Building B was undertaken by marking an 11 m transect line through the building by sinking a rope along the interior of the building with PVC pipes. The length of the transect was then marked at every meter with PVC pipes. A 1 × 1 m metal grid frame with divisions at the half-meter marks was then placed between each marker to facilitate excavation. Excavated materials were then placed in sandbags and transported off-site for sifting along a pulley system. Transect excavations through Building B revealed an abundance of briquetage, i.e., salt-boiling pottery, at the southern end of the structure. In this poster, the methods we used to excavate a shallow underwater site, the artifacts recovered, and interpretations are discussed. Analyses of artifact data show that Building B was probably a dedicated salt kitchen.

Miller, Sarah Nicole [179] see Winkelman, Benjamin

Miller Wolf, Katherine [292] see Flynn-Arajdal, Yasmine

Miller Wolf, Katherine [112] see Quigley, Gabrielle

Millhauser, John (North Carolina State University), Garrett Silliman (North Carolina State University), Kofi Boone (North Carolina State University), Kate Jones (North Carolina State University), and Jelena Vukomanovic (North Carolina State University)

[323] *Slow-Science Approaches to Assessing Climate-Change Vulnerability at Inland Cultural and Natural Heritage Sites*

Assessing the vulnerability of cultural landscapes to climate change requires interdisciplinary methods and the patient integration of multiple forms of knowledge. This paper presents ongoing research on Mid-Atlantic battlefield park units funded by the National Park Service. Archaeological field assessments at the level of sites and features are combined with cultural landscape analysis, regional climate and land-use modeling, and park archival records. Beyond technical evaluation, the project foregrounds the perspectives of stakeholders including park employees, visitors, and neighbors. The slow process of bringing together diverse disciplines,

datasets, and voices reflects both the complexity of climate change impacts and the ethical imperative to acknowledge cultural heritage as a nonrenewable resource. By framing climate vulnerability assessment as an iterative, collaborative practice, the project demonstrates how “slow science” offers depth, ensuring that management strategies for inland landscapes remain grounded in both local realities and long-term futures.

Milligan, Colleen [282] see Borrayo, Jazmin
 Milligan, Colleen [221] see Malarchik, Diana

Mills, Rebekah (SIPA, Columbia University)

[249] *(Re)constructing the Narrative: Preserving Restored Archaeological Sites in Bulgaria*

Imposing, Brutalist, concrete structures are often synonymous with Communist architecture. However, in the Balkans, concrete was not just used for urban planning but as a reconstruction tool on archaeological sites. In the name of tourism and identity building, archaeological sites appeared to rise from the ground through new reconstruction. While the 1964 Venice Charter may have strict guidelines for reconstruction, it has not prevented its use. Now, heritage managers must deal with the previous, potentially incompatible, effects of reconstruction while still preserving a site. Further, as climate change creates extreme weather events, conflict destroys archaeological sites, and urbanization demands more space, archaeological sites are even more vulnerable to destruction. Reconstruction and rehabilitation continue to be tools in heritage management when disaster strikes. Therefore, archaeological site management must include ways to create sustainable and authentic visitor experiences at previously restored sites while understanding the dangers of creating an artificial site through reconstruction. This presentation will use different archaeological sites in Bulgaria as case studies for the challenges of ensuring the authenticity and sustainability of a site after reconstruction along with ways to develop site engagement without reconstruction.

Milner, George [263] see Kuijt, Ian

Milon, Joshua (University of Oklahoma)

[304] *Analysis of Temper and Decorative Variation of Ceramics from the Clement Site (34MC8)*

The Caddo Area spans parts of modern-day Texas, Louisiana, Arkansas, and Oklahoma. This region is best described as a sphere of interaction in which social and economic ties began to formalize starting in AD 900. This spurred the development of several shared social institutions, customs, and artistic styles that are recognizable in the archaeological record as a distinct Caddo culture. While there are unifying characteristics of Caddo material culture, there is still significant diversity in artifacts across the Caddo Area. Examples of this regional variation can be seen in the divide between the Northern and Southern Caddo. Extensive research has been conducted throughout the Caddo Area, but there are comparatively few studies that have focused on sites in southeastern Oklahoma. This research seeks to expand upon past work by studying variations in tempers and decorative elements of ceramics from the Clement site (34MC8). The primary research objectives are to explore intra-site variation in ceramics excavated at the mounds, house structures, and middens to determine how different parts of the site were utilized. Decorative variation will also be considered for comparisons with other Caddo sites to increase the understanding of interactions between people in southeastern Oklahoma and the broader Caddo Area.

Milton, Emily (Michigan State University), Samantha Brown (CENIEH), Dorothee Drucker (Senckenberg Centre for Human Evolution and Palaeoenvironment, University of Tübingen, Germany), Katherine Moore (UPenn Museum of Archaeology and Anthropology), and Kurt Rademaker (Center for the Study of the First Americans)

[180] *Hold My Deer: 12,000 Years of Forager Subsistence in the High Andes*

Widespread archaeological evidence throughout the Americas suggests people began living in mountainous environments by the Late Pleistocene. We investigate subsistence adaptations and environmental change on the Andean Plateau by applying stable isotope analysis, Zooarchaeology by Mass Spectrometry, and AMS radiocarbon dating to human and faunal remains recovered from the Cuncaicha rockshelter in southern Peru. We present some of the first proteomic (ZooMS) data for the region, alongside new XAD-purified radiocarbon dates and $\delta^{13}\text{C}$, $\delta^{15}\text{N}$, and $\delta^{34}\text{S}$ measurements. Our results, spanning ~12,000 years ago to

present, reveal herbivore niche partitioning, continuity in forager hunting practices, and evidence for modern, human-caused climate change. Our data suggest resource stability supported human adaptation to high-elevation and cold environments. Stable sulfur effectively rules out the possibility of significant marine contributions to Early and Late Holocene human diets and, further, appears to provide a method for investigating the procurement of fauna from diverse hunting ranges.

Milton, Emily [221] see Scaffidi, Beth

Milton, Emily [182] see Todd, Lawrence

Miner, TJ [299] see Lowry, Justin

Minish, Jennifer

[55] *Quantitative Spatial Analysis of Teotihuacan Apartment Compounds*

During the height of Teotihuacan, 100,000 diverse residents lived in 2,300 apartment compounds oriented to the city's orthogonal grid. Although each compound was unique in layout, they all adhered to a common architectural style, room typology, construction chronology, and material composition. I describe a new approach to apartment compounds, based on quantification of the level of standardization and the variation within and between structures. Excavated compounds have been redrawn using formalized conventions to facilitate quantitative analysis. Spaces within each compound were numbered and classified according to a room topology for systematic comparison. I employ ArcGIS mapping and tools, space syntax, depth measurements, and statistical analysis to examine the sizes, access, depth, and spatial configurations of spaces. This method is an innovative strategy to architectural analysis at Teotihuacan that will generate new insights into the social organization and dynamics of the ancient city.

Mink, Kirsten (Idaho State University), Kirsten Kelmelis (University of South Dakota), John Walden (Galen University), Carolyn Freiwald (University of Mississippi), and Claire Ebert (University of Pittsburgh)

[282] *Altering Bodies, Enduring Beliefs: The Who, What, When, and Why of Body Modification in the Belize River Valley during the Classic Period*

Two primary forms of aesthetic body modification observed in skeletal remains are cranial modification and dental modification. The type and prevalence of these modifications become integral to an individual's life history, representing personalized characteristics that may also contribute to the broader mortuary context. Through the study of body modifications, we gain insights into a community's beliefs, rituals, traditional medical knowledge, and even class-specific or period-specific trends. Many scholars have demonstrated that body modification does not consistently correlate with social or political affiliation, it may nonetheless signify an ideological alignment with broader Maya concepts of humanity. This paper draws on multiple lines of evidence to examine socio-demographic regional patterns of cranial and dental modification among Classic period (ca. 250 BC–AD 900) Maya populations in the Belize River Valley. Specifically, it integrates mortuary data, biological profiles, and stable isotope analysis to explore patterns regarding who underwent modification, when these practices occurred, and why individuals may have chosen to alter their bodies. These patterns are then contextualized within broader social, political, and environmental frameworks to better understand their significance in Classic Maya society. ***This presentation will include images of human remains.

Mink, Kirsten [327] see Moore, Spencer

Mink, Kirsten [56] see Sutherland, Rachel

Mink, Philip (UK WS Webb Museum Anthropology), Michael Detisch (University of Kentucky), Farahnosh Yousofi (University of Kentucky), Brent Harrison (University of Kentucky), and Alan Sullivan (University of Cincinnati)

[79] *Statistical Analysis of Geochemical Data of Prehistoric Ceramics from the Upper Basin Region of the Baaj Nwaavjo I'tah Kukveni Grand Canyon National Monument*

This poster builds on previous geochemical analysis of ceramics and other clay artifacts recovered from a late Pueblo II (AD 1070–1080) six-room structure located in the Upper Basin, Region of the Baaj Nwaavjo I'tah

Kukveni, Grand Canyon National Monument. Portable X-ray fluorescence spectroscopy (pXRF) measurements will be compared to microXRF and previously collected wavelength dispersive XRF measurements of the same sample set consisting of Tusayan Grayware and San Francisco Mountain Grayware sherds, as well as some Little Colorado Grayware. Data were compared between techniques and between the cleaned cross-sectional faces of the sherds versus their minimally cleaned surfaces. The resulting data were analyzed for their suitability in sorting sherds into pottery traditions using principal component analysis (PCA) as well as machine-learning techniques, such as decision tree and random forest algorithms. While the cleaned sherd cross-sections provided the clearest compositional separation, variability could also be discerned from minimally modified surfaces. These findings demonstrate that even limited-preparation approaches can produce reliable results, broadening the future sampling universe and expanding the potential for nondestructive analyses of archaeological ceramics.

Minkoff, Mary [339] see Miller, Sarah

Minniti-Nogueras, Sofía (Pontificia Universidad Católica de Chile), Javiera Navarro-González (Pontificia Universidad Católica de Chile), Alejandra Vidal-Elgueta (Pontificia Universidad Católica), Francisca Santana Sagredo (Pontificia Universidad Católica de Chile), and Mauricio Uribe (Universidad de Chile)

[83] *From Prehispanic to Colonial Times: A Paleoparasitological Analysis of Coprolites from Pisagua (Atacama Desert) to Evaluate Human-Nonhuman Interactions*

The transition to the colonial period in the Tarapacá region, northern Chile, was marked by profound transformations in ways of life, accompanied by new productive and technological practices. Coprolites, only recently subjected to systematic study, provide unique insights into diverse subsistence strategies, health conditions, cultural practices, and human-nonhuman interactions. The exceptional preservation conditions of the Atacama Desert make it possible to recover and study these materials in detail. The archaeological site of Pisagua, located on the Atacama Desert coast, is characterized by a long history of human occupation, from prehispanic times through the colonial and Republican periods. Excavations at Pisagua recovered a large number of human and animal coprolites in excellent states of preservation. This study aims to evaluate human-nonhuman interactions through paleoparasitological analysis of coprolites from Pisagua to understand lifeways and their relationship with the environment during this period of change. In doing so, it contributes to knowledge about the long trajectories, continuities, and discontinuities of ecological interactions across this cultural shift and the diverse strategies and practices that shaped daily life.

Minor, Elizabeth (California Polytechnic State University), Sarah Schellinger (Ohio State University), Hannah Herrick (Simon Fraser University), Christopher Sevara (Newcastle University), and Ahmed El-Hassan (Sokhari) (NCAM)

[323] *Designing Responsive Archaeology: Lessons from the Middle Nile Es-Selim R4 Project*

The Es-Selim R4 Archaeology Project demonstrates how imperative it is to address actual global challenges in our work, beginning as an excavation of a Kerma period (2500–1500 BCE) settlement in Sudan's Northern Dongola Reach. Our team built-in community input to our early research design, and residents expressed their strong interest in how the ancient community created resilience strategies for climate instability. Over a 1,000-year transition to hyperarid conditions, the settlement's Nile paleochannel water source dried. Current residents face the similar issues today with drought-flooding cycles and basin salinization. Each team member designed a community-based outreach component, which we would implement in rotation, including ethnographic interviews to document current resilience strategies. Our first three research seasons demonstrated strong community support for this model. Due to political instability, driven by complex interconnections of global issues, we have to transition from field-based research to analysis of museum collections. Priorities in Sudanese archaeology have shifted to damage-control from both environmental and human-driven destruction. The intersectionality of crisis, or polycrisis, that we observe in our project may be a harbinger of future challenges in global archaeology. The project's "slow-science" foundation will hopefully work to sustain resilient and productive partnerships as we move forward.

Mirazon Lahr, Marta [350] see Flicker, Dylan

Mires, Calvin [77] see Mazza, Alba

Miriello, Domenico [164] see Pecci, Alessandra

Miron Marvan, Esteban [168] see Campiani, Arianna

Mirro, Michael [283] see Fovenyessy, Stephanie

Missihoun, Tagnon [292] see Flynn-Arajdal, Yasmine

Mitchell, Douglas [88] see Worthey, Kayla

Mitchell, Juliette (University of St Andrews), Joanna Hambley (SCAPE Trust, University of St. Andrews), and Tom Dawson (SCAPE Trust, University of St. Andrews)

[323] *Community-Centered Coastal Heritage Research in a Changing Climate: Reflections on the SCAPE Trust Approach*

Over the past 25 years, the SCAPE Trust has exemplified a “slow-science” approach, integrating community engagement with the development of a scientific model for assessing coastal erosion susceptibility and future change. This model targets vulnerable coastlines and supports the collection of empirical data on the condition and scale of risk to heritage sites. The longevity and evolution of this work has been made possible through sustained support from Historic Environment Scotland and the University of St Andrews. As climate change, coastal erosion, and the lived experiences of coastal communities become national priorities, SCAPE’s approach offers a valuable framework for addressing these challenges. Our fieldwork focuses on gathering empirical data to understand coastline change in relation to climate dynamics. Recent work in Shetland has included surveys in areas of high erosion risk and community excavations of endangered coastal heritage assets. Through public dialogue, we engage communities in discussions about their coastal heritage and climate change, empowering them to act as stewards of their local environments. This presentation reflects on how our approach has evolved over time and explores the broader requirements for conducting research in this way. It considers the collaborative frameworks necessary to sustain a community-centered, climate-responsive research model.

Mitchell, Spencer (Cal Poly Humboldt), and Douglas Kennett (University of California Santa Barbara)

[285] *Tikal’s Resurgence: Tracing the Final Renovations of Tikal’s Great Temples*

Tikal is perhaps the most recognizable Classic period (250–900 CE) Maya city, with its monumental architecture, elaborately carved monuments, and its soaring six great temples. Within these temples, the Maya incorporated wooden lintels in doorways and vault beams in the corbel arches. AMS ¹⁴C radiocarbon dating offers an exciting avenue to study the latest construction phases of Tikal’s great temples. Recent studies have produced dates that need to be correlated with the hieroglyphic record and previous archaeological investigations of Tikal. Here, we examine the connection between the final renovations of Tikal’s Temples I, II, III, IV, V, and VI and the coronation of Ajaw Jasaw Chan K’awiil I. According to hieroglyphic inscriptions, he revitalized Tikal’s Mutal kingdom following a period of political instability that concluded in 695 CE with the defeat of Calakmul. Cross-referencing the radiocarbon dates of the temple lintels with wider civic core construction activities could provide insight into Tikal’s regional influence and power during this period. These findings correlate with a construction surge within Tikal, based on radiocarbon dates from throughout the urban core. We show that the temples of Tikal underwent intense renovations during the seventh century when the ruling elite were reasserting their power.

Mitrani, Alejandro (LANCIC, Instituto de Física, Universidad Nacional Autónoma de México), Jose Luis Ruvalcaba Sil (Instituto de Física UNAM), Ángela Ejarque Gallardo (Coordinación Nacional de Conservación del Patrimonio Cultural [INAH]), Carlos López Puértolas, and Nawa Sugiyama (University of California-Riverside)

[310] *Material Study of Mural Painting Fragments from Plaza de las Columnas Excavation: A Diachronic Assessment*
Plaza de las Columns Complex excavations conducted by Saburo and Nawa Sugiyama uncovered numerous

mural paintings with diverse iconographic styles and pictorial techniques. In particular, the Maya-style mural fragments were studied extensively using noninvasive methods to determine the pigments and pictorial techniques. In addition, a set of Teotihuacan-style fragments were also studied for comparative purposes. We present a diachronic comparison of pigments and pictorial techniques of the mural paintings using infrared imaging, optical microscopy, and spectroscopic analyses by X-ray fluorescence (XRF) and Fiber Optic Reflectance Spectroscopy (FORS). Early examples include fragments painted directly on mud, corresponding to structure 72B-South, with red, yellow, and bright green colors outlined in black. Other earlier mural fragments that show brilliant green chachihuite symbols were found in the nucleus of Mound 25C. The Maya-style mural fragments were deposited with other Teotihuacan-style mural paintings dated to around AD 400. Finally, late Teotihuacan-style mural paintings from Structure 8, Plaza North of the Sun Pyramid depict scroll-shaped clouds, rain droplets, a possible serpent body, and netted elements. A discussion about the use of pigments, raw materials and pictorial techniques is presented.

Mitrani, Alejandro [262] see Hernández Lara, Luis
 Mitrani, Alejandro [307] see Ruvalcaba Sil, Jose Luis
 Mitrani, Alejandro [51] see Servin Rosas, Claudia Margarita

Mitnik, Alissa [327] see Moses, Victoria

Mizenko, Ella [181] see Godhardt, Ava

Mjema, Elinaza [357] see Alders, Wolfgang

Moes, Emily [81] see Pearson, Osbjorn

Mofidi, Ethan (University of Oklahoma)

[318] *Ethics, Accuracy, and Resilience in Avocational Archaeologist and Collector Collaboration: Case Studies from the Midwest Middle Archaic*

The Calf Creek Horizon (CCH) is a late Middle Archaic cultural expression primarily documented in the south-central Plains and the periphery of the Eastern Woodlands of North America. Avocational archaeologists and collectors have been constantly involved in CCH research, with the first named CCH material culture being documented by an avocationalist. While many advances in understanding have been made due to this presence, there have also been some noticeable drawbacks. These drawbacks include looting, underrepresentation of sites, and the under-documentation of forms of material culture that are not bifaces. Building on many of these relationships, both long-standing and new, is vital for future CCH research. This is made doubly true by the fact that the vast majority of land in the target research area is privately held. But there are many considerations that need to be had that require nuanced discussion and adaptive thinking.

Mogetta, Marcello [209] see Pallas, Caitlyn

Mollenhauer, Jillian (MSU Denver)

[262] *Where Are the Artists in Olmec Art Scholarship?*

The year 2027 marks the 100th anniversary of Hermann Beyer's contribution to the journal *El Mexico Antiguo*, in which he first used the term "Olmec" to connect two ancient sculptures sharing unique stylistic elements. From that point onward, artworks incorporating elements of the Olmec art style have been central to our understanding of Formative Mesoamerica, often viewed as reifying the social systems governing cultural influence, hierarchy, and exchange. Perhaps because of the macroscale at which many of these frameworks are explored and understood, scholars tend to couch the discussion of Olmec art in the abstracting language of "systems" and "complexes." Even the more humanizing studies situate individual works in relation to grand cultural ideologies like "worldview" and "cosmovision." In this paper I suggest that, after nearly 100 years of inquiry into Olmec art, what we are yet missing from scholarly discourse is the presence of the artist. Moreover, the near absence of artists from this field of study has at times resulted in an unnuanced and 2D accounting of Formative art. By refocusing on artists as agentic entities I argue that we can produce a more

refined and granular understanding of art's role in the making of Formative history.

Monroe, J. Cameron (University of California, Santa Cruz)

[103] *"The Kingdom Is like a Pot with Many Holes": Imported Ceramics and Dahomean Taste in the Era of the Transatlantic Slave Trade*

This paper investigates how imported European ceramics were selected and used in the Kingdom of Dahomey during the era of the transatlantic slave trade, emphasizing the critical role of local ceramic traditions in shaping these engagements. Rather than treating imported wares as markers of prestige or passive indicators of external influence, this study draws on Ann Stahl's practice-centered approach to material "taste" to argue that foreign pottery was interpreted and appropriated through embodied, historically grounded frameworks of local production and use. By situating imported ceramics within the long-standing functional logics of local earthenware, the article foregrounds African consumer agency and challenges logocentric narratives that privilege symbolic readings over material practice. Ultimately, this approach highlights how shifting tastes, forged through generations of domestic practice and elite display, mediated the incorporation of Atlantic goods into Dahomean political and social life.

Monsalve, Susana [263] see Latorre, Claudio

Montalvo, Lisa, Nick Mavrolas (Cal Poly Humboldt), and Nick Angeloff (Cal Poly Humboldt)

[269] *The Lady of Crnobuki*

The site at Crnobuki Gradishte is well known for its Hellenistic and Roman archaeological deposits within fortress walls. Artifacts such as coins with figurative imagery on the front and back, ceramics with various styles of surface decoration continue to emerge in abundance, and excavations in 2025 revealed the presence of a discrete Eneolithic component. Our analysis of this component is presented here, including a detailed description of a Venus figurine, lovingly dubbed "The Lady of Crnobuki" and comparative analysis with similar examples of figurines found in the Mediterranean region dated to the Eneolithic period. Beyond the "Lady" a discrete midden deposit is present as well as bedrock features that represent a well-developed habitation area used over a long period of time. Our presentation investigates whether the Eneolithic deposit represents sociopolitical or technological change. Current data suggests Macedonian cultural continuity at this location extends back in time for at least 4,000 years.

Montenegro, Alvaro (Ohio State University), Max Gavazzi (Ohio State University), Cara Ocobock (University of Notre Dame), and Scott Fitzpatrick (University of Oregon)

[159] *Potential Role of Thermoregulatory Energetic Demands on Body Size and Type of Pacific Island Populations*

Micronesia and Polynesia were first inhabited by peoples from the tropical West Pacific. Polynesians have bodies that differ from Micronesian and West Pacific populations by being larger and with traits characteristic of cold-climate groups; a fact credited to biosocial pressures during early colonization oceanic trips. We use a body heat balance model and environmental data to assess how climatic influences the thermoregulatory needs of populations from different Pacific regions. Mostly due to stronger winds, people in Polynesia spend more energy on thermoregulation than those in the West Pacific. Inhabitants of Micronesia are exposed to similar winds but higher temperatures than those in Polynesia, resulting in smaller thermoregulatory demands that are closer to those in the West Pacific. As an increase in body size decreases the energetic requirement for thermoregulation, our findings corroborate the hypothesis that environmental conditions influenced the occurrence of the larger, "cold-adapted" bodies in Polynesia. Our results provide a simple explanation for the presence of "cold-climate" body types in the tropics and suggests that the association between climate and morphology is better done by terms such as "high (or low) heat loss climate body type" than by "cold (or warm) climate body type."

Montero, Gabriela (University of Kentucky), and Mauricio Cuevas (INAH)

[316] *Hybrid Materiality and the Concepts of Culture Contact: A Perspective from the Mixteca-Puebla Ceramics of the ELPB, Southern Veracruz*

Hybridity is a widely used concept for instances of culture contact and colonial encounters. It elucidates how two or more cultural groups get intertwined, often within structures of power, yet without essentializing any

of said groups, leaving behind concepts like acculturation to open more space for complex relations and the way they show up in the archaeological record. When people and ideas of diverse backgrounds act within the same geographic space, it materializes. In prehispanic Mesoamerica, we do not often hear of these concepts of culture contact, as they are commonly simplified within models of economic exchange, migration, or conquest. In this paper, we argue that hybridity and its theoretical-methodological background are useful for prehispanic contexts, through the case study of the Eastern Lower Papaloapan Basin, in southern Veracruz. Specifically, we argue that the Epiclassic and Early Postclassic periods, which are very difficult to find in archaeological contexts of the region, are visible in hybrid ceramics with a Mixteca-Puebla influence that is integrated into the southern Veracruz Classic pottery tradition.

Montero, Gabriela [316] see Cuevas, Mauricio

Montes, Khristin [87] see Clark, Dylan

Montgomery, Kyle [127] see Crockett, Cenetria

Montgomery, Shane (University of Calgary), Armando Anaya Hernández (Universidad Autónoma de Campeche), Alberto Flores Colin (Universidad Autónoma de Campeche), Kathryn Reese-Taylor (University of Calgary), and Debra Walker

[223] *Recent Investigations at the Bajo Island Community of Canche, Calakmul, Mexico*

Ancient populations connected with the paramount Maya center of Calakmul settled and transformed a variety of landscapes over the past several millennia, including small ridges or “islands” of land located within *bajos* (seasonal wetlands). The Canche Group, located 2.5 km east of Calakmul's central precinct and entirely surrounded by formal ditched field agricultural systems, represents one of the best examples of *bajo* island communities within the greater area. While the supremacy of the Calakmul polity has been well documented in both epigraphic and archaeological records, processes of settlement and household development within the region remain underexplored. Moving beyond the monumental core, archaeological investigations in the urban fringes of Calakmul, including those in *bajo* settings such as the Canche Group, continue to aid in a deeper understanding of the complex mechanisms that influenced the growth, prominence, and decline of this powerful center. This paper presents the preliminary findings associated with select residential excavations conducted during the 2025 Proyecto Arqueológico Bajo El Laberinto (PABEL) field season, including information regarding group establishment, expansion, and abandonment; the identification of activity areas through the spatial distributions of artifacts and geochemical analysis; potential craft specialization; and relative social status of Canche's inhabitants.

Montgomery, Shane [44] see Horseman, Grace

Montgomery, Shane [36] see Reese-Taylor, Kathryn

Montgomery, Shimiko

[252] *What the Trees Remember: Tracing Ancestral Settlements through Breadfruit Trees in the Marshall Islands*

Archaeological research in the Marshall Islands faces significant challenges due to the dispersed geography of the atolls and because traditional survey methods can be intrusive to Indigenous communities and their lands and cultural resources. This study explores the potential of using remnant agricultural features, specifically breadfruit trees (*Artocarpus altilis*), to serve as indicators of ancestral settlements. Using high-resolution (<5 cm) remote sensing imagery, I conducted spatial and statistical analyses of breadfruit distribution in relation to known archaeological sites. Findings revealed a strong spatial correlation: six of seven sites were located within 100 m of statistically significant breadfruit clusters exceeding 50 m in length. This work provides a replicable framework for using breadfruit trees as a culturally grounded means of tracing ancestral settlements in the Marshall Islands.

Montoya, Fawn-Amber [169] see Larkin, Karin

Montoya, Francisco [25] see Medrano, Angelica

Monzón, Elvis [163] see Bardolph-Carlsen, Dana
 Monzón, Elvis [60] see Watanave, Aldo

Moon, Dasol (Gyeongju National Research Institute of Cultural Heritage)

[186] *Wolseong and East Asian Palace Networks: Archaeological and Textual Insights*

Recent excavations at Wolseong's District C uncovered a large central building, presumed to be closely related to the character of the site. This study investigates the identity of Wolseong—the royal palace of Silla—through the comparison with ancient East Asia. The spatial layout of District C at Wolseong resembles the palace complexes of Tang, China, and Asuka–Nara, Japan, but also shows unique features. This reveals key aspects of Silla's political and cultural identity. This study first examines Wolseong through recent excavation results along with historical records, and then compares it with ancient palace sites in China and Japan. In particular, it examines how the form and arrangement of major palace halls have changed through interaction. It also aims to clarify the nature of the large building in District C of Wolseong. The study uses comparative analysis with ancient Chinese and Japanese capitals to clarify features unique to Silla's identity. It also reconstructs changes in the layout of the palace and explores the impact of East Asian cultural exchange on the spatial organization of Wolseong. Finally, it contributes to the understanding of East Asian palace systems and how the interactions between ancient states have affected their societies.

Mooney, Dawn [165] see Pinta, Elie

Mooney, Sean (Ayuda Companies), Kenya Beltran (Ayuda Companies), Kelsey Bibb (Ayuda Companies), and Scott Kirk (Auxilio Management Services; University of New Mexico)

[124] *Shipwrecks, Sighting, and Networks: A Study of California's Lighthouses*

While the importance of lighthouses for coastal navigation is an indisputable fact, it is seldom discussed how these modern structures draw from the coastal watch towers of late medieval and Early Modern Europe, and particularly from those that developed in the Mediterranean region. In contrast to the lonely towers of popular culture, lighthouses in places like the San Francisco Bay Area and Los Angeles were built in close proximity to each other. In other localities, they serve as warnings that harbors are not as safe or welcoming as they might appear from the sea. This poster examines the development of lighthouses along the California coast using a kernel density model to explore the relationship between shipwrecks and the establishment of lighthouses as well as a viewshed analysis to investigate the potential for intercoastal communication. It highlights areas of the coast where communication is feasible and showcases areas where there is a break in line of sight. Comparisons are made between the kernel density and viewshed models, with an interpretation of what these findings mean for the development of lighthouses in California and how they relate to patterns seen with the development of watch towers in the Mediterranean.

Mooneyham, Erin, Mark Grote (University of California, Davis), and Catherine West (Boston University)

[170] *Mixed Effect Models for Addressing Challenges in Small Regional Syntheses: A Kodiak Case Study*

Understanding spatiotemporal trends within a region is of great interest to many archaeologists, zooarchaeologists included. In Alaska, many areas have a wealth of zooarchaeological data, both analyzed and unanalyzed, which can facilitate this. However, collections may have been excavated by different groups, been collected using different sampling strategies, analyzed by multiple zooarchaeologists, and have differences in the completeness of identifications. For example, one site may have quantified bird, fish, mammal, and shellfish, while another site may only have quantification for birds. How can we make these sites comparable in order to look for trends within the region? Using a case study from the Kodiak archipelago (Alaska) we demonstrate the power of mixed-effect models in addressing this challenge. Our dataset includes data from 28 faunal analyses from Kodiak, ranging from 112 to 62,042 NISP. A temporal trend in the ratio of fish to mammals, which is theoretically unaffected by potential sampling and/or taxonomic biases of excavators and zooarchaeologists, emerges in these assemblages after adjusting reported ratios for the unique effects of archaeological teams. This case study provides a possible solution to the “beastly challenge” of comparing multiple assemblages in a regional meta-analysis.

Moore, Elizabeth, Myriah Allen (Texas State University), and Jodi Jacobson (CAS Texas State University)**[182] *Historic Ranching and Its Cultural Impact on the Big Bend Region***

Historic ranching along the Rio Grande has been minimally studied and often overlooked by archaeologists. Focus has more often been on the deeper past, Spanish colonialism, the Mexican-American War or other early military forts and defenses, or early trails and roads. When researcher focus has been on agricultural resources, the impact of irrigation along the Rio Grande has been more often investigated. Even the limited ranching focused investigations in the past have primarily examined individual sites, rather than the greater cultural landscape. Archaeological Section 110 Surveys conducted by the Center for Archaeology Studies (CAS) within Big Bend National Park along the Rio Grande in March 2025 identified multiple ranch homesteads and associated sites including marked livestock trails, kid shelters, and other ephemeral sites that help inform what lifeways along the Rio Grande may have been for ranchers in the early twentieth century. These ranching sites can then be compared with others that were recently revisited by CAS during surveys in 2023 for broader consideration. Combined, these recently identified and inventoried historic archaeological sites provide a snapshot into overall landscape use and lifeways of the Big Bend region during the early twentieth century.

Moore, Katherine [180] see Milton, Emily

Moore, Katherine [314] see White, Chantel

Moore, Spencer (Idaho State University), and Kirsten Mink (Idaho State University)**[327] *Uncertain Provenience, Certain Humanity: Bioarchaeological Analyses of a Human Skeletal Collection of Unknown Origin***

The skeletal remains of individuals of unknown origin occupy an uneasy place in collections: their origins uncertain, their identities seldom acknowledged, and their presence often contested. This project examines a group of such remains curated at Idaho State University through a multi-method approach designed to provide an estimate of measurable individualized characteristics and review the responsibilities of stewardship. Analyses include the development of biological profiles (age, sex, population affinity, and stature), strontium ($^{86}\text{S}/^{87}\text{S}$) isotope analysis to estimate geographic origin, and digital facial approximation to estimate recognizable human features. Together, these methods provide intersecting insights: osteological data establish demographic attributes, isotopes reveal potential regions of origin, and facial approximations make individuals accessible beyond skeletal form, countering tendencies toward commodification and objectification. By integrating osteological, chemical, and digital methods, this project demonstrates the value of applying multiple lines of evidence when contextual information is absent. These findings contribute to expanding methodological practice in bioarchaeology while underscoring the importance of engaging with individuals of unknown origin not merely as specimens, but as humans whose study must balance technical insight with ethical responsibility.

Moore, Spencer [114] see Lara Maldonado, Isabel

Moot, Dana (University of Alabama), Alexandre Tokovinine (University of Alabama), and Matthew Looper (California State Univ-Chico)**[85] *Databases and Digital Technologies in Service of the Documentation, Dissemination, and Decipherment of Saxche Orange Polychromes***

This paper discusses painted ceramic vessels tied to the reign of Ajnumsaaj of Naranjo (AD 546–615), an early stage of Saxche Orange Polychrome. Most of the complete examples are looted, while smaller numbers come from excavations at Holmul, La Sufricaya, Tikal, Caracol, and Uaxactun. Some name Ajnumsaaj directly, while others share enough formal traits to be grouped with them. The study relies on digital tools and comparative databases. High-definition photos, photogrammetry, 3D scanning, and digital illustration are used to document vessel form, surface treatment, pigment application, and paleography. These methods also show why revised drawings continue to matter, even when 3D models are available. Comparative material comes from the Maya Hieroglyphic Database, the Corpus of Maya Hieroglyphic Inscriptions, the Kerr Vase Database, the Hellmuth and Hollis photo archives, and the Textdatenbank und Wörterbuch des Klassischen Maya, along with data from

the Smithsonian Maya Ceramics Project, the Holmul Archaeology Project, and private collections. The use of these datasets makes it possible to compare inscriptions and vessel style across sites and media, and to approach questions of production, consistency, and innovation in the Early–Late Classic transition.

Moot, Dana [92] see Tokovinine, Alexandre

Moragas, Natalia [324] see Torras Freixa, Maria

Morales, Carlos [355] see Thompson, Josephine

Moran, Alia (Northern Illinois University), and Dana Bardolph-Carsen (Northern Illinois University)

[247] *Living Archaeology: A Comparative Perspective on How Archaeologists Can Study and Document the Present* Inspired by the lead author's involvement in the "Thais in Illinois Project," which focused on documenting the Thai American immigrant experience in the greater Chicago area to produce an oral history collection, alongside other goals, the intent of this paper is to further explore how archaeological practice can be used to understand everyday issues in the contemporary era. Drawing insights from scholars like Jason de León and Alfredo Gonzalez-Ruibal, among others, we consider applications of theoretical and methodological frameworks of the archaeology of the contemporary, including ethnoarchaeology, to modern-day material culture that historically has been detached from archaeological research. This research relies on community members providing artifacts or knowledge rather than archaeologists "recovering" such things in a traditional sense, allowing us to conduct archaeology of a real-time archive as stories actively unfold in the present. Situating the "Thais in Illinois Project" in conversation alongside other global case studies, our goal is to examine how archaeology can be applied more broadly across time and space as our discipline moves further into the present.

Moran, James [257] see Armitage, Ruth Ann

Morehart, Christopher [156] see Blumenfeld, Dean

Morell-Hart, Shanti (Brown University)

[168] *Unintended Consequences? Durable Legacies of Rosemary Joyce's Scholarship*

The impact of Rosemary Joyce's work across various topics and disciplines cannot be overstated. Years of collaboration and mentorship, alongside a robust and diverse publishing record, have catalyzed rich interpretation in studies far beyond her immediate research domains. In this paper, I first follow the influence of Joyce's scholarship in several fields, as tracked through citations and students. I also trace her impacts on public policy and understandings of Mesoamerican lifeways. I then revisit Joyce's article "Unintended Consequences? Monumentality as a Novel Experience in Formative Mesoamerica" (2004) to consider how these ideas have wound their way into other research projects. I report findings from my own paleoethnobotanical research and show how her interpretative framework has applicability to, and found purchase in, general understandings of foodways. Here, I focus on shifts in relationships between foodways, plant practices, and experiences of cuisine and highlight the agentic capacities of ingredients. I frame these relationships as analogous to those Joyce described in her study of placemaking, construction practices, experiences of monumentality, and the agentic capacities of construction materials. I pay particular attention to her description of "unintended consequences," when considering the itineraries of recipes that both reflected and inspired ancient Maya culinary practice.

Morell-Hart, Shanti [355] see Bazarsky, Alexandra

Morell-Hart, Shanti [161] see Herrera-Parra, E. Moisés

Morell-Hart, Shanti [44] see Horseman, Grace

Morell-Hart, Shanti [161] see Scherer, Andrew

Morello Repetto, Flavia (Universidad de Magallanes), Luis Borrero (CONICET; Universidad de Buenos Aires), Consuelo Huidobro (Universidad Alberto Hurtado), Victor Sierpe (Universidad

de Magallanes; Cape Horn International Center), and Fabiana María Martin (CEHA, UMAG)**[58]** *Fell Cave Lithic Industry: Reassembling an Icon at Southernmost Patagonia, Chile*

This study presents a comprehensive analysis of the lithic materials recovered at Fell Cave between 1936 and 1980, including collections housed at the Instituto de la Patagonia (Punta Arenas, Chile), the Musée du Quai Branly (Paris, France), and the American Museum of Natural History (New York City, USA). The techno-economic methodology employed in this study integrates both Anglo-Saxon and French criteria, offering a multidimensional approach to the record. A total of 4,683 lithic artifacts were examined, and the results enabled the reconstruction of general operational chains, the description of raw material economies, and the technological organization represented throughout the sequence of the archaeological site. This analysis considers the reevaluation of one of the most emblematic sequences of Fuego-Patagonia from the Pleistocene-Holocene transition occupations to the late period. The conclusions attain the general assessment of Fell's Cave periodization, the new dates, and the stratigraphic information from the ongoing research. Funding by grants FONDECYT 1231691, 11200857, and ANID/BASAL FB210018.

Morello Repetto, Flavia [279] see Martin, Fabiana María

Morgan, Brooke (Illinois State Museum)**[218]** *Ninety Years and 10,000 Miles: One Museum's Voluntary Repatriation to Australian Aboriginal Communities*

In 2019, the Illinois State Museum (ISM) returned 42 culturally significant objects to Aranda and Bardi Jawi Aboriginal communities in Australia, the first institution in the world to do so as part of the Australian government's Return of Cultural Heritage Project. The duration from initial contact to physical return was 10 months, an expeditious timeline compared with many NAGPRA consultations. In this case, the lack of overarching international repatriation laws allowed for greater flexibility on the part of government agencies and consulting parties. This paper explores the logistics behind organizing an international repatriation, how the ISM took steps to adhere to culturally sensitive care requests, and the ways in which the repatriation process impacted how museum collections are conceptualized. Moreover, it situates repatriation work within a broader context to illustrate how the decisions of individual institutions can effect change at higher levels, acting as a catalyst for further returns.

Morgan, Reed (Harvard University)**[327]** *Ancient DNA Reveals Genetic Structure of Punic Communities from Coastal and Central Tunisia*

Iron Age Tunisia stood at the center of a connected maritime network stretching across the Mediterranean, both east and west. Traditional archaeological approaches have shown the impact of these contacts on material culture, but major questions remain regarding the demographic changes of the Punic period and the extent of population movement and admixture. Ancient DNA provides a tool to explore these questions. This study presents archaeogenetic analysis of cemeteries from across Tunisia, shedding new light on both chronological and geographic patterns in demography, including shifting connections between North Africa and the Eastern Mediterranean, the differing impacts of migration on coastal and inland regions, and demographic variability between rural and urban sites. Careful interpretation of archaeological and historical context also allows the present study to move beyond generalizations about migration in the *longue durée*, toward an understanding of the intersections between genetic ancestry, kinship, and social identity. Previous studies have published 44 Punic North African genomes from Carthage and Kerkouane; the present study adds 70 new genomes from nine new sites, substantially increasing our geographic and quantitative genetic coverage of a critically understudied region at a time of increasing mobility with the Mediterranean world.

Mori, Hisao [104] see Iizuka, Fumie

Moriarty, Ellen [185] see Moriarty, Matthew

Moriarty, Matthew (Vermont State University), Ellen Moriarty (Vermont State University), River Rozum (Vermont State University), and Owen Edgcomb (Vermont State University)

[185] *Between Some Rocks and a Hard Place: Digitizing and Deconstructing the 1977 Ancient Vermont Exhibit at Vermont State University, Castleton*

The 1977 “Ancient Vermont” Conference at Castleton State College brought together hundreds of participants to discuss theories regarding the cultural affiliation of various stone constructions and other objects thought to represent early Vermont history. Originally conceived as an opportunity to exchange ideas between academic and nonacademic researchers, the conference ultimately provided a prominent venue for the ideas of Barry Fell, who interpreted many items as deriving from various European and North African cultures greatly predating any documented contacts between Old and New World peoples. Although the pseudoscientific nature of Fell’s claims is now well understood, his ideas and collected items continue to be displayed prominently and without commentary in the “Ancient Vermont” Conference exhibit in what is now the Vermont State University-Castleton library. In advance of the conference’s 50th anniversary, we are preparing to reimagine the exhibit, deconstruct its pseudoscientific narrative, debunk its outlandish claims, and provide scientifically oriented explanations for its subject matter. As part of this project we are digitally documenting the collection through the use structured-light and laser 3D scanning technology, with the goal of producing new physical and digital exhibits that can replace the current installation. This poster presents the early results of this work.

Morisaki, Kazuki [304] see Meng, Fanxiu

Morris, Adela

[90] *Locating the Grave of John Snyder: Canine Detection and the Donner Party Story*

On October 5, 1846, after delays caused by the ill-fated Hastings Cutoff, the Donner Party struggled across the Great Basin in their push to reach California before winter snows. Exhausted animals, dwindling rations, and mounting tensions culminated in a violent confrontation on a steep, sandy hill in Nevada. In the fight, teamster John Snyder was fatally stabbed in the lung, becoming the Donner Party’s third death. Diaries recorded that Snyder was buried near the site of the incident but did not give his exact resting place. This paper presents results from an innovative, noninvasive approach to locating Snyder’s grave. Working with trained historical human remains detection dogs, we conducted repeated surveys at the historically documented site. Over multiple years, different dogs and handlers—working blind—have consistently identified the same location as containing a burial. The dogs have added another layer of information to the historic documents. This work demonstrates the value of human remains detection dogs as a noninvasive method for locating unmarked burials, enhancing archaeological investigations and interpretation.

Morris, Deianira (University of Arizona)

[34] *Engaging with Complexity: New Perspectives on Tucson’s Historic Chinese Community Using Legacy Museum Collections*

In the 1960s, the residences that formed the heart of the historic Chinese immigrant community in Tucson were targeted for destruction during urban renewal. Before demolition began, archaeologists from the Arizona State Museum collected millions of artifacts that represented the last remaining material culture of this historic community. Historical narratives of the American west often depict Chinese immigrants as voluntarily segregating themselves from their wider communities. Using porcelain dolls from urban renewal collections, I challenge these narratives by examining intercommunal engagement between Chinese immigrants and other subcommunities in and around Tucson. By examining the role Chinese immigrants played in the circulation of toys in historic Tucson, I examine Chinese-American influence on the economy and culture of Tucson and demonstrate how legacy museum collections can be used to assist descendant communities.

Morris, Jessica (Cal Poly Humboldt-Cultural Resources Facility), Rhea Reichert (Cal Poly Humboldt), Deni Georgiev (Museum National d’Histoire Naturelle, Paris), Aleksandar Vasilevski (Institute for Old Slavic Culture-Prilep), and Engin Nasuh (NI Museum Bitola)

[269] *Stratigraphy and Site Formation in North Macedonia: Integrating Remote Sensing and Environmental Data*
Cal Poly Humboldt, NI Institute and Museum Bitola, and Institute for Old Slavic Culture-Prilep are investigating the site formation processes at Crnobuki Gradishte, a multi-period acropolis near Bitola in North Macedonia. Stratigraphic analysis, supported by soil studies and remote sensing, builds on prior

research to reconstruct complex depositional sequences and landscape transformation. Targeted excavations, informed by high-resolution lidar, photogrammetry, and ground-penetrating radar (GPR), enabled spatial modeling of subsurface features and geomorphological change. Chronological anchors including radiocarbon dates, diagnostic artifacts such as coins and pottery, and historical records span the Archaic period (mid-seventh century BCE) to the Early Roman Empire (ca. 100 CE), highlighting phases of occupation, reuse, and abandonment. Additional research activities using remote sensing and lidar survey methods of five sites in southwestern part of the Republic of North Macedonia (Pelagonia, Mariovo, Prespa, and Ohrid), which demonstrate cultural continuity from antiquity through the Middle Ages to the present. These efforts support the project "Byzantine Monastic Centers in the Republic of North Macedonia: Tradition and Continuity," which examines monastic centers as bearers of culture. Together these integrated studies refine interpretations of site formation, contribute to landscape archaeology, and explore long-term cultural continuity across interconnected historical networks.

Morris, Jessica [269] see Hawkins, Nyah

Morris, John [355] see Fries, Eric

Morrison, Heather (Canyon de Chelly National Monument)

[173] *Portable X-Ray Fluorescence Analysis of Pictographs at Canyon de Chelly National Monument*

Canyon de Chelly National Monument protects some of the densest and most diverse concentrations of pictographs on the Colorado Plateau. This research employed a nondestructive portable X-ray fluorescence (pXRF) device to analyze the elemental composition of six pictograph colors. A specialized qualitative method was applied to determine whether the elemental variations were attributed to the pictograph or the sandstone. The pXRF examination revealed 12 distinct paint mixtures for red, yellow, white, green, black, and orange in 35 pictographs. The presented approach is an effective tool for identifying pictograph coloring agents throughout the Southwest, enhancing public interpretation and improving site management.

Morrow, Giles (McMaster University), Dominique Soutif (École Française d'Extrême-Orient), Adam Wijker (École Française d'Extrême-Orient), Julia Estève (Mahidol University / École Française d'Extrême-Orient), and Socheat Chea (École Française d'Extrême-Orient)

[344] *Drone-Based Lidar Surveys of Prasat Khna and Prasat Trapeang Thnal Svay in Cambodia's Landmine-Affected Regions*

This paper presents the results of 2024 drone-based lidar surveys at the temple complexes of Prasat Khna (PKNA) and Prasat Trapeang Thnal Svay (PTTS) in Preah Vihear Province, northern Cambodia. These sites, established under King Yaśovarman I in the late ninth century CE, lie in heavily forested, landmine-affected areas previously inaccessible to traditional survey methods. Using a Quantum Systems Trinity Pro drone equipped with a Qube 240 lidar sensor, we mapped 6.5 km² of terrain at a high resolution (108 points/m²), revealing extensive urban features obscured by dense vegetation. The surveys uncovered large-scale enclosures, road networks, water management systems, and habitation mounds far beyond the known ritual cores of both sites. At PKNA, the temple complex was shown to comprise less than 5% of a much larger urban system. These findings significantly enhance our understanding of Angkorian period urbanism and demonstrate the transformative potential of drone-based lidar in archaeological research. This method provides a low-cost, noninvasive solution for mapping inaccessible landscapes and offers a scalable model for future work across Southeast Asia, especially in UXO-contaminated regions. The study underscores the value of remote sensing technologies in reconstructing the spatial and sociopolitical organization of ancient cities.

Morrow, Juliet (Arkansas Archeological Survey)

[318] *Modern and Ancient Foragers in the Arkansas Ozarks: A Perspective from the Trout Fishing Capital of the USA*

People told me that when I moved to Arkansas in 1997 to become the station archaeologist for northeast Arkansas, I had some big shoes to fill. Lawrence Claude Billings helped me fill them. At that time, he donated a collection of chipped stone tools to the Arkansas Archeological Survey from sites along the White River in Baxter County, Arkansas and they were transferred to me so that I could learn the regional point sequence. Little did I know that he would also teach me how to fish, hunt and learn the ways of animals, birds and

people who are still living quite similarly to those who lived 12,500 years ago. Although today men fly planes from across the globe into the airport next to the White River, these people today have a gendered division of labor and tools that are akin to Dalton folks, except for the fact that they are made from metal instead of stone. This presentation is a tribute to Dan F. Morse who passed in September but whose legacy allowed for many of the insights that I've had about Dalton and descendant technologies in the Midcontinent.

Morrow, Juliet [156] see Kennedy, Jason

Morrow, Juliet [229] see Worlow, Halee

Mortensen, Justin [275] see Schaafsma, Hoski

Morton, Matthew (Pacific Legacy)

[352] *Reimagining Heritage: Using Game Jams to Disrupt the Archive*

This paper discusses the role community archaeology, archives, and creative modes of digital archaeology play in mobilizing and disrupting the contents of archaeological archives. It uses the Heritage Jam, created by researchers at the University of York, as a living laboratory to study how to disrupt the Avebury Papers Digital Archive. In order to contextualize the study, previous literature and relevant studies are reviewed that creates an overview of the intersection between archives, archaeogaming, and game jams and identifies how they can be effectively used together as a form of heritage outreach. Subsequently, a longitudinal study is presented that covers the observational data gathered at the Heritage Jam, including survey and interview data that followed the Heritage Jam. The study illustrates that the Heritage Jam was successful in the creative mobilization and disruption of the Avebury Papers archive, and that utilizing community cocreation and digital archives offers a unique opportunity at alternative modes of heritage-based outreach. While this study was created using assets and sites based in the United Kingdom, it seeks to apply these methods to future alternative mitigation efforts in the United States.

Moses, Victoria, Alison Barton (Harvard University), Alissa Mitnik (Max Planck Institute for Evolutionary Anthropology), Michael McCormick (Harvard University), and David Reich (Harvard University)

[327] *Ancient Punic DNA and Mediterranean Connections: A Further Investigation into the Aegean Ancestry Component*

The Phoenicians were a seafaring people from the coastal Levant in the eastern Mediterranean who putatively established colonies to the west, including Carthage. In turn, these settlers founded their own sites, referred to as "Punic" colonies. Recent ancient DNA analyses of Punic individuals from areas such as Northern Africa, Sicily, Sardinia, and Spain reveal a surprising lack of Levantine / Near Eastern ancestry but significant portions of ancestry that appears similar to groups from the Aegean region. This presentation shares new analyses on this finding with the goal of identifying if this Aegean-like component more closely represents the Greek mainland, Sicily, or peninsular Italy. This further aids our understanding of the ancestral roots of the Punic people, since the hypothesized Near Eastern ancestry is largely absent. This research uses detection of identical-by-descent (IBD) segments that are shared between closely and distantly related individuals to track connections between Punic peoples and individuals from contemporaneous sites in Italy and Greece. The number and length of these connections and the components of isolated shared DNA segments highlight the complex Aegean-related ancestry among Punic peoples and contribute new insights to our understanding of mobility, colonization, and settlement patterns during this period.

Mosquera Castro, Tania (Universidade de Santiago de Compostela), Hugo Bal-García (Universidade de Santiago de Compostela), Elvira Alonso-Fernández (IPHES; Universitat Rovira i Virgili), Ramón Fábregas Valcarce (Universidade de Santiago de Compostela), and Manuel Vaquero (IPHES; Universitat Rovira i Virgili)

[272] *Traveling Clovers in the Magdalenian: A Decorated Rod from Valdavara (Galicia, Spain)*

The Valdavara cave (Becerreá, Lugo, Galicia) preserves a stratigraphic record that has yielded evidence of Lower/Middle Magdalenian occupations. Among the recovered materials is a set of decorated bone artifacts. One of the latter—a semi-rounded rod—displays engravings on both faces consisting of nonfigurative motifs

commonly referred to as “clovers.” This type of motif is well represented in southern France, albeit rare in the Cantabrian region, and unique in the NW corner of Iberia. We shall address the question of the occurrence of that piece in such an outlying location, examining the distribution of these decorations in depth, focusing on their graphic and symbolic features, so as to explore potential networks or cultural connections between relatively distant regions.

Moss, Jim (University of Michigan Museum of Anthropological Archaeology)

[214] *Colonial Collections and Knowledge Repatriation in the Philippines*

Artists have been moved and inspired by them. Culture bearers have taught us their importance and significance. We have shared physical and digital copies with institutions that serve the communities from which they were taken. The Philippine Collections at the University of Michigan Museum of Anthropological Archaeology are one of the most significant colonial assemblages of Filipino cultural heritage in the United States. Beginning in 1873, University of Michigan faculty and alumni have had an influential and extractive relationship alongside the colonial efforts in the Philippines. Since 2021, museum staff have worked with a group of scholars, librarians, and archivists across campus to navigate the expectations of Philippine cultural and political norms alongside the perspectives of diasporic Filipino communities in the USA. This presentation will discuss our strategies, challenges, and evolving practices in fostering collaborative relationships that support the meaningful repatriation of knowledge and heritage.

Moss, Kelly [213] see Velasco, Matthew

Mouquet, Arthur (Archaïos), Estelle Praet (British Museum), Nelson Mamani Arias, and Javier Ticona Mendoza

[40] *Bridging the Gap: Mediating Archaeology and Approaching Perceptions of Heritage in Puerto Acosta, Bolivia*

The municipality of Puerto Acosta (Bolivia) is located at the crossroads of the lowlands, the puna, and the eastern shore of Lake Titica. Boasting a rich biodiversity and a strategic location close to the Lake and alongside the Huaycho River, the region was shaped by dynamic interactions between humans and their environment since the Archaic. Puerto Acosta is currently facing climate change, a lack of economic opportunities leading to an exodus of young people to cities, and an aging population that tends to adopt scripted behaviors around archaeological sites. As part of the ALTI-plano project, we developed strategies to connect with local priorities, perceptions and potential issues concerning cultural heritage. We aim to create dialogue around our role as archaeologists (with Bolivian and European team members) and the impacts our work could have. This contribution aims at presenting two initiatives developed within ALTI-plano: (1) the activities organized to share our profession to young people in the region, with the aim of demystifying its practice and discussing the importance of heritage and its preservation, (2) the qualitative analysis of interviews undertaken alongside archaeological surveys to explore the relationship communities developed and have with their heritage, whether prehispanic, colonial, or modern.

Mousalu, Marineh (California State University, Los Angeles), Michele Bleuze (California State University, Los Angeles), and James Brady (California State University, Los Angeles)

[24] *Embodiment through Dental Crafting: An Exploration of Dental Modification among Classic Period (AD 250–900) Sacrificial Victims from Midnight Terror Cave*

[WITHDRAWN]

Moyer, Olivia [114] see Jones, Olivia

Mtsetwa, Ezekia (Field Museum of Natural History), Laure Dussubieux (Field Museum of Natural History), Foreman Bandama (Field Museum of Natural History), and Godhi Bvocho (National Museums and Monuments of Zimbabwe)

[162] *Glass Bead Production and Exchange in Iron Age Zimbabwe: Reassessing Local Technologies and Regional Networks*

This paper explores the possibility of glass bead production in Iron Age Zimbabwe, drawing on artifactual evidence curated at the Zimbabwe Museum of Human Sciences. While glass beads are widely recognized in

Zimbabwean archaeological contexts, they have predominantly been interpreted as imported goods. However, the presence of glass production debris in the form of cullet, misfired fragments, and vitrified waste from multiple archaeological sites across the country raises important questions about local or regional production. The study focuses on materials recovered from a range of contexts, including stone-walled sites associated with the Zimbabwe Tradition, which flourished between the eleventh and seventeenth centuries CE. Through analyzing these materials in relation to their archaeological provenance, typology, and technological characteristics, this paper reassesses the potential for in situ glass-working and its role within broader craft production systems. This investigation contributes to a more nuanced understanding of technological practices and exchange networks in Iron Age southern Africa. It challenges the dominant narrative of beads as purely foreign imports and highlights the importance of local agency in shaping material culture. Ultimately, the paper situates Zimbabwe within wider continental conversations on glass technology, innovation, and interaction in the African past.

Mukusha, Lawrence (Ohio State University)

[150] *Ballistics Gel Cannot Be Used as a Perfect Proxy for Meat in Lithic Microwear Experiments Involving Slicing*
Experimental archaeology has benefited from using materials that would not have been available to prehistoric societies to understand certain aspects of their behaviors and technologies. Lithic microwear analysis is one area of archaeology where “modern” materials have not been used in replicative experiments. Oftentimes, in experiments where lithic tools have been used to produce microwear traces that can be compared with the use-wear on ancient tools, experiments have been limited to materials that prehistoric people would have had access to, for example meat, wood and hide. Use of readily available “modern” materials for microwear experiments can be advantageous and avoid ethical questions that have been raised about butchering animals with stone tool replicas. We present one failed attempt to use gel as a proxy for meat in experiments that involve slicing meat to create identifiable meat microwear polish traces. There are notable differences between the visible features of microwear polish resulting from slicing gel and microwear that forms via meat cutting experiments with flaked stone tools.

Mullen, Graham [313] see Corrales, Jillyan

Muller, Antoine (University of Bergen)

[336] *Quantifying Variability in MSA Tool Kits with Computational 3D Analyses*
3D scans of lithics are increasingly being used to analyze variability in the archaeological record. Many of these analyses have helped quantify overall artifact morphology in more detail than possible with traditional analyses. However, lithic artifacts possess much complex shape variability beyond this overall size and shape, including specific techno-typological attributes. These features are mostly visually classified into discrete qualitative categories, but can now be precisely quantified using their volumetric and surficial geometries. Each 3D scan of an artifact is comprised of up to hundreds of thousands of x, y, and z coordinates. The key challenge is to identify, extract, and automatically analyze those that correspond to meaningful techno-morphological attributes. To do so, a suite of 3D computational methods are applied to Middle Stone Age tool kits, with case studies of cores, blanks, points, and scrapers from African and Levantine assemblages. These methods help quantify technological traits like reduction intensity and investment in core preparation, minute variability in the edge angles, curvature, and sinuosity of tool edges, as well as the quantity and intensity of knapping mistakes like aberrant terminations. This variability helps compare the technological skills among different hominin populations as well as reveal diachronic trends in technological investment.

Mullins, Patrick [163] see Bardolph-Carlsen, Dana

Mumary Farto, Pablo [205] see Izquierdo, Ana Luisa

Munoz, Guillermo [226] see Rodriguez, Orlando

Munro, Magdalen, Saranggan Thavakumaran, Willow Curran-Morton, Stefanie Wai (University of Toronto), and Aleska Alaica (University of British Columbia)

[356] *Standardizing at Sicán: Exploring Integrated Approaches and Community-Building in Zooarchaeological Analysis*
Standardization in archaeology has long been an issue of ensuring consistency across researchers. In zooarchaeology, standardization requires common systems of recording data involving a range of different species, fragmentation patterns, taphonomic agents and training stages. Drawing on our experiences at the Sicán Museum in Peru, we examine how experimental situations and database categories can support early career scholars under the guidance of experienced specialists. Our database of the Matrix 101 assemblage incorporated taxonomic, skeletal, life stage, health, and osteometric categories that we considered essential for analyzing the material. This approach allowed us to develop a framework for standardizing the faunal collections we studied. Our paper seeks to discuss the process of identifying faunal remains through a collective approach to address archaeological contexts and potential challenges to standardization in zooarchaeology. This paper emphasizes the value of multiperspectivity and highlights the importance of inclusive spaces where dialogue fosters more comprehensive, consensus-based conclusions. By bringing together a community of zooarchaeologists, we consider effective ways that data is aggregated and re-aggregated for individual scholars and larger-scale comparisons. Overall, this student-led paper aims to reevaluate methods of standardization in zooarchaeology and advocates for a consensus-based approach when it comes to interpreting and evaluating data.

Munro, Magdalen [305] see Curran-Morton, Willow

Munro, Natalie (University of Connecticut), Roxanne Lebenzon (University of Connecticut), Mary Stiner (University of Arizona), and Gunes Duru (Mimar Sinan Fine Arts University)

[347] *Beyond Wild and Domestic: Early Caprine Management in Central Anatolia*

This paper challenges the conventional wild/domestic binary commonly used in models of caprine domestication by examining the variability in human-caprine relationships across Central Anatolia in the Epipaleolithic and Neolithic periods. After presenting the results of a meta-study on caprine body size spanning ~5,000 years, we focus on the Early Neolithic sites of Aşıklı Höyük and Balıklı, highlighting how early human-animal relationships were shaped by local social and ecological contexts. At Aşıklı Höyük, despite their wild morphology, there is clear evidence for sheep and goat herd management. In contrast, contemporaneous Balıklı shows a more ambiguous relationship with caprines, which may reflect a combination of hunting, small-scale management, or animal exchange. This paper highlights the variability in caprine use at these two sites, exploring how the wild/domestic framework oversimplifies complex and flexible human-animal interactions. The findings contribute to a broader understanding of early domestication processes, emphasizing the gradual and socially embedded nature of animal management, and resonate with the session's focus on flexible, relational approaches to animal provisioning.

Munson, Jessica (Lycoming College), and Matthew Looper (California State University-Chico)

[43] *Royal Titles and Ritual Traditions in Classic Maya Monumental Inscriptions*

Hieroglyphic texts dated to the Classic period (ca. 300–900 CE) offer concise historical accounts of the royal dynasties and political affairs of the Maya ruling class. Recorded in their indigenous script, Classic Maya monuments include details about the wars, alliances, royal marriages, ritual ceremonies, and acts of subordination that gave shape to a shifting and fragmented political landscape. Decipherment and epigraphic studies have made significant advances in unraveling these political histories, but tend to concentrate on sites with the most well-preserved and largest number of monuments. Comprehensive cataloguing efforts by the Maya Hieroglyphic Database (MHD) project have created accessible digital resources that enable more systematic analyses to examine patterns of variation across a wider range of texts. This paper highlights two examples using the MHD: (1) we examine the distribution and diversity of royal titles to explore the representation of ancient Maya governance and (2) to evaluate these patterns, we examine the diversity of ritual practices inscribed on monuments as indicators of distinct political strategies. Our results challenge unified models of Classic Maya rulership, and demonstrate how digital technologies combined with a social networks perspective can be used to map dimensions of sociocultural diversity in the Maya world.

Murakami, Tatsuya (Tulane University), Samuel Gagnon-Smith (Tulane University), and Diego Matadamas-Gomora (Tulane University)

[193] *Ritual Practice at Terminal Formative Tlalancaleca and Teotihuacan: Implications for West Mexico-Central Mexico Interactions*

Tlalancaleca was one of the largest settlements in Central Mexico before the rise of Teotihuacan and likely acted as a center for the development of Central Mexican urban traditions whose influence would persist through the Classic and Postclassic periods. Tlalancaleca survived the environmental and social turmoil caused by the Plinian eruption of Popocatepetl around AD 50, and the city continued to expand until it was abandoned around AD 250. Our research at Tlalancaleca has revealed that a new ritual complex, consisting of pecked crosses, canals, and *pocitos* (holes carved into boulders) and associated with rituals of water and fertility, appeared by the Terminal Formative period (100 BC–AD 250). Some of the elements were present at earlier Formative sites, but they coalesce together for the first time at Tlalancaleca. We suggest that this ritual complex was shared with early Teotihuacan and spread further to the west during the Classic period.

Murata, Satoru (University of New Hampshire), Mark Willis (Flinders University), Eleanor Harrison-Buck (University of New Hampshire), and Marieka Brouwer Burg (University of Vermont)

[341] *Mapping the Marketplace at Altun Ha, Belize: A Configurational Analysis*

Configurational studies at sites like Tikal and Chunchucmil offer models for identifying prehispanic Maya markets elsewhere, including Altun Ha in northern Belize. This large Classic Maya center was originally transit mapped by David Pendergast's team over 50 years ago. Beginning in 2022, the Belize River East Archaeology project began remapping the site using more advanced mapping techniques, including drone-mounted lidar to produce a more refined map of the city center and its hinterland settlement. Preliminary results of this mapping effort led to the exciting discovery of Plaza C, which exhibits features characteristic of Maya marketplaces found elsewhere. These include a large open plaza bounded by two elongated gallery-style range structures, a newly identified ballcourt, an associated *aquada* (waterhole), and two prominent *sacbeob* (roadways) entering the northwest and southeast corners of this plaza. Lidar also revealed numerous elevated pathways (*callejuelas*) connecting the surrounding settlement to the marketplace in addition to a water route that appears to connect directly to the coast. The configurational study presented here illustrates how cutting-edge mapping and geospatial technologies are contributing to the identification of markets, their layout and access routes, and the complex organization of an integrated marketplace economy at both the site and regional levels.

Murillo-Barroso, Mercedes (University of Granada), and Mercedes Navero Rosales (University of Granada)

[272] *Mediterranean Exchange Networks in Later Prehistory*

Exotic raw materials such as ivory or amber have aroused an interest since humans began making ornaments. There are many aspects that come into play when assessing the social value of these raw materials: on the one hand, “absolute” aspects such as the material's intrinsic physical qualities, and on the other hand, “relative” aspects, such as their high abundance or scarcity, which can result in these materials having an added value because they are hard to access, exotic, or “exclusive.” In this sense, access to these raw materials could have played an important role in the mechanisms of social differentiation, emulation, and/or competition of social sectors, as well as access and control of flow circuits of these materials, which began to circulate from very early stages. These circuits are known to have taken place in the Mediterranean since early dates in Recent Prehistory. In this context we present new archaeometric advances on sourcing exotic raw materials such as amber, ivory, or ostrich eggs in Western Mediterranean based on FTIR analysis, paleoproteomics, and aDNA of the objects documented in Iberia. We discuss the changes suffered throughout the time in the exchanges circuits and the role played by North Africa.

Muro Ynoñán, Luis (Field Museum of Natural History), Hector Barrera (Pontificia Universidad Católica del Perú), Luis Espinoza Escobar (Universidad Nacional Pedro Ruiz Gallo), and Sabine De Haas (Université Bordeaux Montaigne)

[33] *Reexamining the Origin of Institutionalized Religions from the North Coast of Peru: A Relational Perspective from La Otra Banda, Zaña Valley (2100–1900 BCE)*

Traditional discussions about the emergence of institutionalized religions in the Central Andes continue to

draw on Marxist and neo-evolutionary frameworks that emphasize the role of political and economic power as catalysts of change. Such frameworks, however, have proved insufficient to fully grasp the complexities of religious behavior and its effects throughout history. This paper argues in favor of the use of a relational perspective to examine the emergence of the first cults in northern Peru, a perspective that allows for the integration of archaeological categories with the conditions of the things, bodies, and natural environments that determine their existence. In doing so, this paper examines archaeo-iconographic evidence from the recently discovered site of La Otra Banda, Zaña Valley. Here, performance settings ornamented with an anthropo-zoomorphic mural art suggest that religious behaviors emerged from complex multispecies entanglements. The necessity for humans to master the capabilities of some natural entities likely led to the emergence of shamanistic cults through which given humans acquired other-than-human power. This site has opened a new window into the study of changes in the spiritual life of early communities, changes that are better understood when the onto-epistemic limits of the body are reconceptualized from fluidity and substance.

Murphy, Amy [74] see Falls, Eva

Murphy, Beau (SWCA Environmental Consultants), Andres Troncoso (Universidad de Chile), Frances Hayashida (University of New Mexico), Diego Salazar, and Thibault Saintenoy (Incipit-CSIC)

[284] *A Radiocarbon Chronology of Inka Conquest of Chile: Bayesian Models and Assessment of Data Needs* Radiocarbon (^{14}C) chronologies have begun to appear for parts of the Inka Empire; however, quality data points remain few. Here we review the current ^{14}C assemblage for the area of modern Chile in order to advance a Bayesian chronology for Inka annexation of this region. We screen primarily for measurements from clear Inka-founded contexts, and form these dates into simple Bayesian models by subregion. Useful models for the Arica and Tarapacá areas could not be produced due to a lack of data. Conquest of the Upper Loa River area can be dated around a median date of AD 1421, the semiarid north less precisely to AD 1430, and central Chile to AD 1444, indicating incorporation of central Chile perhaps a generation later than the Upper Loa. Mapping these results along with reliable models from other areas indicates founding of geographically widely disbursed imperial sites in the second and third decades of the fifteenth century, with later expansion episodes in more distant locales. While these models are beginning to show consistent trends, data is still sparse and regional revisions are needed for us to thoroughly sequence imperial expansion and begin to ask more detailed chronological questions of the Inka archaeological record.

Murphy, Hanna (University at Buffalo), Patrick Willett, Jana Anvari, and Eda Andoni

[209] *Investigating Craft Production and Specialization in the Albanian Middle Neolithic Using pXRF: A Preview into Daily Life in the Past*

Portable X-ray fluorescence spectrometry (pXRF) is a nondestructive method that archaeologists are increasingly incorporating into research on craft production. One important class of artifacts that pXRF is beginning to help understand are ceramics. During the Albanian Neolithic, ceramic items were integral to individual and group lifeways, thus contributing to our knowledge of prehistoric decision-making and symbology. Black-burnished ceramics are typical of Middle Neolithic ceramic assemblages. These ceramic items played a significant role in daily life in foodways and serving. Determining how they were manufactured provides insight into the scale of production and potential inequality in Neolithic villages. In this presentation, we discuss the results of pXRF analyses designed to determine the source and organization of production in the Middle Neolithic of the Korça Plain in southeast Albania. This area is rich in Neolithic history, including the Middle Neolithic site of Luadisht. We analyzed ceramic assemblages from this site, as well as from surface collections generated through pedestrian survey in the Korça Plain. We explore variability in geochemistry within and between these assemblages to reconstruct the organization of ceramic production. This case study demonstrates how archaeologists can use pXRF on ceramics to investigate craft specialization and household production in prehistoric communities.

Murphy, Hanna [112] see Fox, Griffin

Murphy, Kaitlin (Texas Tech University), Mara De Gregori (University of California Riverside), Amy Thompson (University of Texas at Austin), and Brett Houk (Texas Tech University)

[341] *Comparing Ancient Maya Residential Artifact Assemblages to Distance from Marketplaces at Chan Chich, Belize*

Studies of precolumbian Maya marketplaces highlight the production and distribution of specific goods from centralized locations. How these goods were distributed to the people, elite and non-elite, rural and urban, is more difficult to evaluate when the research focus is solely at the marketplace. In the Three Rivers adaptive region of northwestern Belize, excavations have confirmed a Late Classic marketplace located at the site core of Chan Chich, where crafters produced and traded lithic and obsidian tools, among other goods. Household excavations occurred at Chan Chich and Ayikal Naob, a district within the Chan Chich polity. In this paper, we compare artifact assemblages from two households near the central marketplace of Chan Chich to those from six residences in a rural neighborhood of the Ayikal Naob district. This neighborhood is nearly 5 km from the Chan Chich marketplace, but its residences likely had access to more local marketplaces at both the district center and in their neighborhood. Our analysis highlights how distance from polity, district, and neighborhood marketplaces affects elite and non-elite access to different material goods at these sites.

Murphy, Kaitlin [36] see Thompson, Amy

Murphy, Reg [324] see Brown, Matthew A.

Murphy, Reg [324] see Look, Cory

Murphy, Shambri (Chronicle Heritage), and Angela Huster (Chronicle Heritage)

[283] *Data Recovery on the Salt River, Phoenix, Arizona*

Chronicle Heritage conducted three adjacent data recovery projects within site AZ T:12:54(ASM), on the south side of the Salt River in Phoenix, Arizona. The results of the projects show that the site consists of an area of canal-irrigated agricultural fields, with scattered field houses and use surfaces. This presentation will synthesize the findings across three projects and the archaeological findings within the site and their implications for Hohokam agriculture and water management along Canal System 2.

Murray, Brendon

[183] *Alto de las Guitarras: Petroglyphs and the Moche-Virú Corridor*

This poster presents the methodology and preliminary data from the Proyecto de Investigación Arqueológica el Corredor Intervalle Moche-Virú (PIAMOV). Least-cost path analysis indicates an inland route between the middle Moche and Virú valleys, with additional access to the Carabamba Plateau. The entire sequence of occupation marks the landscape, including Formative period petroglyphs, Moche architecture, signs of modern commuters and quarrying, and the Chavimochic irrigation system. The primary focus of this project was pedestrian survey, documentation of rock art, and drone mapping and GIS analysis of the collected data. Surface sherd density estimates are used to track demographic shifts in occupation. Utilizing of drone photography, photogrammetry, and scale documentation, the rock art at sites such as Alto de las Guitarras in the Moche Valley and Queneto in the Virú. These sites provide a comparison of the development of rock art practice and population movement on the north coast of Peru.

Murray, John (Arizona State University), Samantha Borges-Eckert (Arizona State University), Jayde Hirniak, Justin Pargeter (New York University; University of Johannesburg), and Curtis Marean (Arizona State University)

[336] *Quantitative Advances in the Study of Silcrete Heat Treatment and Provenance in South Africa Using Machine-Learning Models*

Silcrete was procured and heat-treated by Middle Stone Age humans for over 100,000 years on the south coast of South Africa. However, due to the complexity of silcrete formation, understanding where silcrete was collected and how it is affected by heat treatment are significant areas of research. Here, we aim to address these questions through large-scale experimental datasets that inform machine-learning models. Importantly, these models are built on data from methods that are quantitative and nondestructive. First, we show that surface roughness measurements and color data in combination with machine-learning models can

predict heat treatment strategy at approximately 75% accuracy. We present an updated blind test of this model on silcrete heat-treated using various fuelwoods from South Africa. Second, we test a novel, nondestructive approach to sourcing silcrete that combines geochemistry, silcrete structure, and color data. Both approaches are probabilistic and based on large, quantitative datasets that aim to capture the inter- and intra-source variation in South African silcrete. These results have implications for the study of silcrete artifacts to better understand early human mobility patterns and technological strategies.

Musch, Abigail (Ohio State University)

[114] *From Policy to Practice: NAGPRA in Published Research*

Since the passage of the Native American Graves Protection and Repatriation Act (NAGPRA) in 1990, scholarship has addressed its legal, ethical, and practical implications for archaeology and museum work. This study systematically analyzes NAGPRA related literature to examine how collaboration, consultation, and compliance practices are represented. By coding relevant articles with an analytical framework, I examined case studies, methodological discussions, and journal articles across archaeology, anthropology, and museum studies. In reviewing the articles, I focused on the different actors involved, including tribal nations, archaeologists, and federal agencies. I examined the types of practices emphasized, ranging from paperwork, regulatory compliance, consultation, co-curation, and ceremonies. The analysis considered how Indigenous and non-Indigenous voices were framed and given prominence. Lastly, I looked at trends in authorship and disciplinary perspectives to understand how these issues are approached across fields. By analyzing patterns in the literature, this study provides insight into how NAGPRA has shaped research and curatorial practice over the past 35 years.

Musser-Lopez, Ruth (Archaeological Heritage Association Inc.)

[73] *The Evidence of "Creative Minimization Tools" Associated with a Pacific Paleo-coastal Migration at the Havasu Landing Site, California*

The challenge of demonstrating "creative minimization tools" in the context of a new ecological setting linked to a Pacific paleo-coastal migration to the Americas (see Davis and Madsen 2020) is that lithic cores can be so minimally altered that they are mistaken for eoliths. One approach is to find a site with a clear clustering of similar minimal core modifications and then support these findings with the site's distinct artifacts and related geological features. The Havasu Landing, California, site CA-SBR-1456, served as the basis for an integrated lithic analysis of not just one but over 100 clustered and spatially patterned minimally modified, mostly quartzite, smooth-surfaced, and "hand-sized" river cobbles associated with blade cores, similar to pre-projectile point core types found in East Asia. Additional geological data suggest that the spatial patterning follows a high shoreline of the Lower Colorado River, possibly dating back to the Last Glacial Maximum. Skepticism about the site's age indicates the need for further analysis, including pollen and fossil dating along the potential shoreline.

Myagmar, Erdene [277] see Eng, Jacqueline

Mychajliw, Alexis [271] see LeFebvre, Michelle

Mykhailova, Nataliia [205] see Sedlmayr, Jayc

Nadel, Samantha

[293] *Resilience, Resistance, Coercion: The Identification of Cochineal Production Tools in Archaeological Assemblages in Late Postclassic–Early Colonial Tlaxcala*

The interdisciplinary study of Mesoamerican cochineal production has long suffered from an overreliance on historical documents. Even when focusing on Tlaxcala, one of the regions of Mesoamerica with the strongest historical record, this produces limited and contradictory narratives about cochineal. Archaeological data are therefore well suited to address questions about cochineal production, such as its antiquity in Tlaxcala, the impact of Spanish demand on the industry, and the experiences of the Indigenous commoners who produced it. Through the organic residue analysis of hypothesized cochineal production tools at four domestic contexts in Tlaxcala, this study identified an Indigenous commoner household that produced cochineal during the early

colonial period. This household engaged in multiple kinds of cochineal production that were disfavored by Spanish colonizers, suggesting that they were able to resist Spanish efforts to exercise control over their decision-making. This not only demonstrates the benefit of materials-based analysis of cochineal production but also contributes to broader archaeological studies of Indigenous resistance and resilience under colonial regimes.

Nadel, Samantha [97] see Laruelle Aranguiz, Katarin

Nagaoka, Lisa (University of North Texas)

[158] *Applied Zooarchaeology and Urban Wildlife Management*

Applied zooarchaeology has been used to inform conservation and wildlife management practices. The research supplements or complements those using historic and ecological datasets by extending our understanding of a species' population size and distribution deeper into the past. Applied zooarchaeology could also be helpful in studies of urban species management. Urban ecosystems are spatially patchy and complex, temporally dynamic, and continuously modified by human activities. Additionally, species observations in these contexts are often expedient rather than systematic. Ecologists have only recently started conducting research in urban settings because human behaviors, not just environmental conditions, are significant factors. Thus, archaeological approaches might be more appropriate than ecological ones in these situations. Zooarchaeologists are accustomed to addressing data quality issues, temporal change, spatial diversity, human behavior, and integrating information from multiple disciplines to understand human-environment interactions. I illustrate how skills developed through zooarchaeological research could be used for urban wildlife management by examining the American beaver's expansion into cities. Thus, urban wildlife research could serve as another readily accessible avenue for applied zooarchaeology.

Nahoe, Francisco [218] see Thomas, Jayne-Leigh

Nalamliang, Hal (University of Vermont)

[55] *Stumped: An Examination of Cahokia's Wood-Overexploitation Hypothesis*

Wood is considered to be a key resource that, through overexploitation, may have been a contributing factor in the depopulation of Cahokia at the end of the Mississippian period. This study explores the so-called Wood-Overexploitation Hypothesis originally described by Lopinot and Woods (1993) by examining post mold diameters and structure feature areas from five sites in the American Bottom from the Late Woodland through Late Mississippian periods. Our baseline assumption is that post mold diameters should decrease if wood was being overexploited. Statistical analysis of these two elements reveals a spike in post mold diameters during the Emergent Mississippian period, followed by a steady decrease in the Middle and Late Mississippian periods. We also found that structure feature areas increased in size from the Woodland to Mississippian periods. The data contradict a simple explanation premised solely on changes in average post mold diameters and instead suggest a handful of more nuanced inferences about wood exploitation over time, which will be further explored in this poster.

Napora, Katharine [157] see Balco, William

Nash, Carole (James Madison University)

[323] *Coming Back Around: The Revitalization of Middle Atlantic Archaeology with Slow Science*

A defining characteristic of Middle Atlantic archaeology is the environmental foundation that integrates multiple disciplines to create a context for the cultures of a highly varied geographic region. As the impacts of climate change and the introduction of new technologies transform our discipline, the integration of archaeological knowledge and an understanding of environmental processes reinvigorates our regional tradition of practice. In rethinking the role of environmental archaeology in the Middle Atlantic, some practitioners have adopted a slow-science approach to research, teaching, and community engagement. Projects designed by multidisciplinary teams and local partners address climate change impacts and prioritize community involvement. Undergraduate and graduate students in multiple disciplines are exposed to archaeology as a way of knowing that informs research design and decision-making. This presentation

provides examples of the slow-science approach from coastal and interior settings of the region.

Nash, Donna [278] see Witte, Emilee

Nason, Jana [167] see Azevedo, Terry

Nason, Zachary (SWCA Environmental Consultants)

[182] *Enhancing the Stones: Spatial Organization of Lithic Materials at the Populatic Site in Greater Boston*

The Populatic site (19-NF-665) is a Late Archaic Native American lithic workshop that lies atop an outwash terrace overlooking the Charles River in eastern Massachusetts. The site comprises a historical artifact deposit overlying a Native American encampment and lithic workshop. In 2023, SWCA archaeologists revisited the Populatic site conducting Phase II investigations within the minimally recorded eastern portion of the site, documenting dense concentrations of local and hyper-local lithic raw materials seemingly organized into distinct lithic reduction localities. The quantity of debitage, presence of quartz cobble cortex, and abundance of lithic cores, consisting of quartz, rhyolite, argillite, chert, mudstone, and granite, demonstrate that all stages of lithic reduction were represented at the site. Multiple excavation blocks oriented north-south across the outwash terrace revealed that the southern block produced a high density of lithic debitage and tools, with a significant contrast in raw material usage observed. The western portion of the excavation contained a dense rhyolite assemblage while the eastern portion was predominantly quartz. The Populatic site offers a distinctive opportunity to examine raw material distribution and density within a Late Archaic lithic workshop, suggesting internal differentiation of stone tool usage and reduction techniques.

Nasuh, Engin [269] see Angeloff, Nick

Nasuh, Engin [269] see Morris, Jessica

Natahi, Sélim [337] see Holbrecht, Lucas

Natsuki, Daigo [104] see Iizuka, Fumie

Nava, Samantha

[300] *Stories of Querencia from San Miguel del Bado*

The Merced de San Miguel del Bado, also known as the San Miguel del Vado Land Grant, was established in the late eighteenth century along the Pecos River Valley ("El Valle") downstream from Pecos Pueblo in New Mexico. I conducted oral history interviews with elder members of the Merced as part of an effort to preserve this land grant's history by documenting their stories, places, traditions, and material culture. Through these interviews and guided by their love for this land, their *querencia*, I created a virtual museum exhibit that uses maps, photographs, objects, and audio clips to share their stories about this place.

Navarro-Farr, Olivia [183] see Berenson, Sydney

Navarro-Farr, Olivia [304] see Biondi, Ella

Navarro-González, Javiera [83] see Minniti-Nogueras, Sofía

Naveiro Rosales, Mercedes [272] see Murillo-Barroso, Mercedes

Nayapiltzin, Xoxi [282] see Sommer, Evan

Neeley, Michael (Montana State University)

[301] *The Application of Whole Assemblage Behavioral Indicators to the Natufian of the Southern Levant*

Whole assemblage behavioral indicators (WABI) have been applied to a range of archaeological palimpsests with the aim of assessing patterns in forager mobility. As part of the WABI approach, lithic volumetric density has been a useful marker for identifying assemblages along the curated to expedient continuum. This poster applies the WABI methodology to 18 Natufian assemblages from the southern Levant in which settlement

patterns have been characterized as either large, residentially stable base camps or smaller, transient locales. The goal of this analysis is to compare these assemblages with the expectations generated by the WABI models. Preliminary results indicate that the Natufian assemblages conform to the WABI expectations as they are situated along the curated to expedient continuum. In addition, the residential base camps can be distinguished from transient camps by their shared similar assemblage characteristics.

Neff, Hector [311] see Rankle, Chad

Neff, Nadia (University of New Mexico), Erin Ray (University of New Mexico), Geraldine Busquets-Vass (Centro de Investigación Científica y de Educación Superior de Ensenada, Unidad Académica), Seth Newsome (University of New Mexico), and Keith Prufer (University of New Mexico)

[221] *Tracing Diet Quality and Nutritional Stress Using Amino Acid Isotope Analysis: Insights from a Forager-to-Farmer Transition in Southern Belize*

Studying past diets, diet quality, and nutritional stress in archaeological populations provides critical insight into how selective pressures shaped individual health outcomes. Traditional osteological methods of identifying nutritional states are constrained by their focus on developmental or extreme adult stress and are further complicated by the osteological paradox. $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ Amino Acid Isotope Analysis of bone collagen offers a novel approach to evaluate nutritional stress by assessing an individual's proportion of de novo nonessential amino acid synthesis integrated into skeletal tissues, thereby allowing for the detection of differential physiological stress within populations, likely reflecting chronic nutritional challenges. We present the results of diet quality and physiological stress models applied to a neotropical forager-to-farmer population in southern Belize (9500 to 1200 BP). Preliminary results indicate increased variation in diet quality and nutritional stress after the agricultural transition, likely driven by increased consumption of carbohydrates. By leveraging the macromolecular origins and cycling of carbon and nitrogen in bone collagen using intraindividual level data, this methodology is applicable across diverse dietary contexts, even in the absence of baseline isotopic data. When integrated with archaeological evidence, this approach holds significant potential to illuminate the health consequences of social and environmental selective pressures.

Neff, Nadia [221] see Ray, Erin

Negrete, María José [224] see Manin, Aurelie

Neller, Angela (Wanapum Heritage Center), and Lourdes Henebry-DeLeon (Central Washington University)

[318] *Bringing Forgotten Collector Collections to Light: From Overlooked to Foundational to the Columbia Plateau Archaeological Record*

Hydropower development along the Middle Columbia River inundated landforms and destroyed many habitation sites, erasing large portions of the archaeological record. While the Smithsonian River Basin Survey documented numerous threatened sites, much of the material recovered between 1910 and 1950 came from avocational archaeologists and local collectors. These avocational collections—now held in institutions such as the Wanapum Heritage Center—are an important yet often overlooked archive of regional archaeological knowledge. For many sites, they represent the only surviving record, preserving data essential for reconstructing households, settlement patterns, cultural traditions, and local and regional chronologies. Despite their value, such collections have been historically underutilized by professionals, and many remain unanalyzed. Collections-based research transforms overlooked avocational and professional materials into a clearer record of Middle Columbia and Columbia Plateau history. Integrating avocational data into research can challenge long-held assumptions, address critical gaps in the archaeological record, and strengthen regional histories. Realizing this potential requires building relationships with avocational archaeologists and their families, whose knowledge and collections are vital to bringing these hidden archives into the scholarly record.

Neller, Angela [52] see Childs, S. Terry

Neller, Angela [52] see Tomka, Marybeth

Nelson, Andrew [62] see Oshiro, Janet

Nelson, Ben [210] see Punzo Díaz, José Luis

Nelson-Maney, Shannon [182] see Crowley, Suanna

Neme, Gustavo (IDEVEA/CONICET), Fernando Franchetti (University of Pittsburgh), Eva Peralta (IDEVEA [CONICET; UTN]), Nuria Sugrañes (IDEVEA [CONICET; UTN]), and Adolfo Gil (IDEVEA [CONICET; UTN])

[95] *Ecosystem, Suitability, and the Spread of Maize Farming in Central Western Argentina*

When populations adopt agriculture, we expect a long-term population growth followed by a decline. The more pronounced population declines are expected in regions more suitable for agriculture than those with less suitability for agriculture. We test it in central western Argentina where we propose that the magnitude of boom-bust periods varies with local socioecological conditions, specifically in areas where the suitability for agriculture is higher. We evaluate it using RC-SPD and human bone stable isotope and fauna index results along the last 3000 years cal BP.

Neme, Gustavo [263] see Gil, Adolfo

Nerey, Sarai, Dominique Rissolo (UC San Diego), and Loren Clark (UC San Diego)

[206] *Handprints across the Northern Lowlands: The View from La Gruta de las Caritas, Quintana Roo, Mexico*
[WITHDRAWN]

Nesbitt, Jason [123] see Choi, MinJoo

Neto, Camilo [160] see Correa, Leticia

Neubauer, Fernanda (University of California, Los Angeles)

[70] *Recycling Fire-Cracked Rock: The Challenges Pseudo-artifacts and Lithics with Multiple Typologies Pose to Classification*

Lithics can display complex life histories where a single specimen can exhibit evidence of several typological patterns from use in different types of activities. For example, lithics can be used as hot rocks and recycled for tool production and vice versa. The location of the resulting modification from each activity can help to determine the order of events in an artifact's life history, considering that the last alteration pattern would be visible on top of patterns created by prior activities. Therefore, it is important to integrate an analysis that combines a study of chipped stone, ground stone, and fire-cracked rock (FCR) technologies to investigate the various stages that lithic pieces go through during their life histories. The challenges that recycling (i.e., interaction in a completely new activity) and reuse behaviors pose to lithic typology are discussed through several case studies from the Americas. This paper also explores how heat fractures can create pseudo-artifacts, like pseudo-cores and pseudo-flakes that resemble human-made artifacts, in order to assist in the identification of FCR in contrast to true cores and flakes from lithic reduction.

Neunzig, Samuel, and John Blong (Washington State University)

[179] *From Throw to Bow: Tracing the Transition of Projectile Technology in Precontact Alaska*

The transition from the atlatl to the bow and arrow represents one of the most significant technological shifts in precontact hunting systems, yet the timing and character of this change in Alaska remain poorly defined. While Yukon studies have documented this process through radiocarbon dating and organic material analysis, Alaska's archaeological record particularly high-altitude ice patch sites has received less attention. These sites preserve perishable materials such as wood shafts, sinew bindings, and feather fletching, offering a rare opportunity to study technological choices and hunting practices beyond lithic evidence alone. This study explores the transition from atlatl to bow technology in Alaska by analyzing bone, stone, wood, and other organic remains from Wrangell-St. Elias National Park and other ice patch contexts. Examining the cultural

and functional decisions reflected in hunting tool production, use, and modification in ice patch specific hunting with the bow and atlatl. Addressing questions of what resources were selected for ice patch hunting tools, which technological traits distinguish darts from arrows, and what social, environmental, or demographic factors may have influenced the adoption of the bow and arrow. This project hopes to contribute to broader understandings of hunter-gatherer innovation, resource use, and environmental adaptation in the Subarctic.

Neves, Eduardo [221] see Rubinatto Serrano, Juliana

Newcomb, Alyssa (SJV Environmental Consulting), Amanda Harvey (Rincon Consultants), Heather Atherton (Environmental Science Associates), Abrianna Verduzco (Harris), and Amy MacKinnon (California High-Speed Rail Authority)

[334] *Let Sleeping Cats Lie: A Ritualistic Cat Burial at a Historical Period Archaeological Site in Fresno, California*

An unanticipated discovery of a historical period archaeological site occurred in 2023 during the installation of a waterline on Construction Package 1 (CP 1) for the California High-Speed Rail Project near Belmont Avenue and North Weber Avenue in the City of Fresno, California. Three phases of archaeological testing and data recovery were conducted at the site, called the Belmont & Weber site, in 2023 and 2024. Preliminary archival investigations have yielded little on who may have resided at the site, leaving us to rely almost solely on the archaeological record to tell the story of this part of the city. Occupied from the 1890s to the 1920s, excavations at the site have uncovered thousands of historical period Chinese, Japanese, British, and American artifacts from of seven features, including an intact cat burial. The location of this feature and its association with other surrounding features and artifacts suggests that the cat burial was intentional. This presentation will explore the role of cats in the private rituals of immigrant populations of historical period Fresno and the ritualistic role that cat burials may have fulfilled for its residents.

Newhall, Victoria (UCLA)

[81] *Plants beyond the Royal Core: Preliminary Results from Late Classic Palenque*

This poster presents preliminary paleoethnobotanical results from nonroyal contexts at Palenque during the Late Classic period (500–800 CE). While Palenque is renowned for its royal dynasty and monumental architecture, much less is known about the daily lives of nonroyal residents and their roles in shaping the city's social and economic organization. How did they use plants to prepare food, conduct rituals, make medicines, or craft materials? And how did these practices shape household identity and urban life? Building on ongoing household archaeological research at Palenque, this poster presents plant use beyond the royal core. Analyses of carbonized macrobotanical remains, starch grains, phytoliths, and chemical residues from ceramics provide complementary perspectives on how plants figured in both everyday and ceremonial practices. The preliminary results presented here highlight an emerging picture of diverse plant use across nonroyal spaces, broadening our understanding of Palenque's urban life beyond the city center.

Newman, Sarah [161] see Scherer, Andrew

Newport, Mandy (Texas State University)

[185] *From Canyonlands to Classrooms*

Incorporating archaeology into K–12 education allows students the opportunity to learn about history, geography, and culture through real, tangible examples. By learning through hands-on, inquiry-based discovery, students think critically while making connections across an array of disciplines. This poster will focus on the process of creating an archaeology-based curriculum that will use rock art from the Lower Pecos Canyonlands to teach students basic archaeological practice and iconographic analysis. Archaeology is a tool for learning and not an end in itself in this type of project, and the lessons and units developed in partnership with Project Archaeology and Shumla Archaeological Research and Education Center will make students aware of the importance of rock art beyond itself. Existing classrooms have a difficult time including archaeology in curricula due to limited standardized testing and a lack of teacher education and resources. This poster will focus on how these problems can be overcome and why archaeology should be integrated into the K–12 system to promote better understanding of culture, history, and deeper and more critical

thinking in students.

Newsome, Seth [221] see Neff, Nadia

Newton, Connor

[124] *Using GIS to Understand a Narrative of Strategic Change at California Coastal Fortifications*

Geographic Information Systems provide powerful tools for analyzing complex spatial data and for visualizing how our experience of space has shifted across time. This project applies GIS to the study of California's many coastal fortifications, sites that have experienced multiple phases of military use, from Spanish presidios to American seacoast batteries. Within each period, spatial configurations reflected changing political motivations and evolving strategic objectives. By mapping the placement, orientation, and field of view for these installations, GIS analysis reveals the threats that occupied the military consciousness at different moments in California's history. Spanish presidios were initially positioned not to repel foreign adversaries but to surveil local Indigenous populations and monitor the movement of soldiers prone to desertion. Only later, when English and Russian encroachment became clear, did outward defense gain emphasis. US Army coastal batteries, built from the mid-nineteenth century through the Second World War, were conceived within a doctrine of continuous preparedness for outward attack which emphasized seaborne threats. By visualizing these transformations spatially, this project demonstrates how fortifications encode the narratives of shifting geopolitical anxieties, and how GIS can illuminate the interplay between physical landscapes, strategic priorities, and evolving threat perceptions.

Ng, Laura (Grinnell College), Jorge Salinas, Luis Lopez, Julia Ghorai, and Avajane Lei

[301] *Examining the Burn Layer: The Depositional History of the Rock Springs Chinatown and 1885 Chinese Massacre*

Railroad work and coal mining brought Chinese laborers to rural southwestern Wyoming starting in the 1870s. The Rock Springs Chinatown was constructed by the Union Pacific Coal Company as part of a racialized landscape intended to segregate Chinese immigrant coal miners. At the same time, Chinese laborers were scapegoated for white unemployment, which culminated in the passage of the 1882 Chinese Exclusion Act. Newspapers across the USA emphasized that Chinese laborers were foreigners because they were "heathens" and sent remittances to China. The Chinese laborers in Rock Springs were also resented because they not part of the coal mining union. Within this context, a fight broke out between white and Chinese coal miners in Mine #6 and white miners led a mob that brutally attacked Chinatown and its residents. The mob burnt down most of Chinatown and at least 28 Chinese were murdered. In 2025, the burn layer from the massacre was revealed during excavations of a structure from the original Chinatown. This poster examines the depositional history of the site through the excavation and dating of artifacts from this structure.

Ngo, Elisabeth, and Elic Weitzel (Smithsonian National Museum of Natural History)

[279] *A Prey Model Analysis of Declining Quahog Abundance in the Late Holocene Long Island Sound*

[WITHDRAWN]

Ngo, Elisabeth [157] see Weitzel, Elic

Nguerede, Lucien [157] see Edwards, Nicolette

Nguyen Thi, Hao [293] see Tripoli, Simone

Nhiêu, Âu Ý [217] see Suter, Kai Anne

Ni, Jenny

[47] *Equine Perspectives: Horses in the Plains Biographic Tradition*

Horses are central to the world of Indigenous North American Plains communities. Scholars have predominantly discussed the presence of horses in Plains societies in terms of utility and/or symbolic value to humans. Such anthropocentric perspectives are dominant within Plains Biographic rock art studies that

generally understand depicted horses as mounts or captured loot. These interpretations do not easily map onto Plains conceptions of horses that consider them potent beings in their own right, capable of relating to humans in their own distinct ways. This paper seeks to reexamine Plains Biographic rock art horses through Plains perspectives and understand how this medium illustrates the nuances of the human-horse relationship in Plains societies.

Nicewinter, Jeanette (Northern Virginia Community College)

[257] *The Red and the Black: Color and Iconography on Cajamarca Ceramics*

Fineware ceramics from the Cajamarca region of the north highlands of present-day Peru utilize a limited color palette of earth tones. Reds, browns/blacks, and creams are the most common colors utilized on Cajamarca Cursive style ceramics during the Middle Cajamarca period (ca. 450–900 CE). Despite this limited color palette, Cajamarca ceramic artists appear to have chosen specific colors for certain images, symbols, styles, and motifs. In addition, background and foreground are often clearly delineated by color choice. Therefore, this presentation will consider the meaning of color within the corpus of Cajamarca ceramics primarily during the Middle Cajamarca period. Investigation into the use of these two colors within the positive and negative space of Cajamarca Cursive style ceramics leads to interpretations regarding the iconography and symbolism present on these artworks. The other factors considered include the type of pigment used to create the colors and what perishable materials, including the brushes, might have contributed to the aesthetic of the ceramics. A close look at the use of color in Cajamarca ceramics provides invaluable information about the ideological shape of Cajamarca culture during this time period.

Nicholas, Joel (Hopi Cultural Preservation Office)

[37] *Cultural Resiliency through Archaeology*

Hopi people have spiritual connections to the earth and obligations to serve as environmental stewards. On their travels to the Hopi Mesas, each Hopi clan gained special knowledge and ties to certain places. Hopis intentionally left behind evidence (archaeological sites) as footprints in payment to the earth, Hopis are obligated to revisit our ancestral places and preserve our spiritual connections. WestLand's Tribal Monitoring Program and other CRM companies who employ monitors provide Hopi monitors opportunities to fulfill their covenant through archaeological fieldwork. In this presentation, Joel Nicholas will share how archaeological fieldwork provides Hopi monitors with a sense of place, reaffirms Hopi identity, and revitalizes Hopi traditions. He will use Hopi as a case study for other Tribes to demonstrate how tribal monitoring programs not only advances Tribal perspectives in all aspects of CRM but also provides Tribal members opportunities to steward their ancestral lands, keeps traditions alive through elder and youth sharing, and cultivates future generations of Native practitioners.

Nicholas, Joel [277] see Bernardini, Wesley

Nicholas, Joel [71] see Schachner, Gregson

Nicholas, Linda [102] see Klassen, Sarah

Nicholson, Christopher (Center for Digital Antiquity [tDAR]), Shelby Manney (Arizona National Guard), Maria Marcel (Arizona State University), and Chris Deardeuff (Arizona State University)

[74] *tDAR-MIL: A Centralized Platform for DoD Cultural Resource Archiving and Compliance*

Long-term digital curation directly strengthens the preservation of America's heritage sites and landscapes. This poster details the Digital Archaeological Record–Military Edition (tDAR-MIL) project, a Department of Defense (DoD)–funded initiative to enhance the nationally recognized tDAR repository, designed to meet DoD's digital preservation needs. tDAR-MIL will provide a centralized, secure, and user-friendly platform for archiving, discovering, and reusing data generated through archaeological and historic preservation investigations. The project will adapt the existing tDAR software to include DoD-specific metadata, search filters, and integration tools that support mission planning, environmental analysis, and compliance reporting. By enabling efficient access to appropriate records, tDAR-MIL will improve informed decision-making by supporting preservation actions related to DoD mission readiness, and in alignment with ethical data

stewardship. Implementation of tDAR-MIL will also help reduce duplication of efforts, streamline digital workflows, and lower operational and training costs across installations. The platforms will support transparent and equitable information exchange to strengthen not only the consultation process but also address legal and ethical obligations under federal statutes, while advancing trust and accountability and safeguarding the nation's cultural heritage on DoD installations.

Nicholson, Christopher [335] see Gupta, Neha

Nicholson, Christopher [335] see Ryan, Susan

Nicolas, Richard (University of Wisconsin at Madison)

[209] *Ancient Ceramic Roof Tiles and Early Elite Networks: Petrographic Insights from the Co Loa Settlement in Northern Vietnam*

This paper examines the role of the Co Loa settlement in early regional interaction networks within the Red River Delta, focusing on the production and distribution of ceramic roof tiles as evidence of elite control and emerging statecraft. Co Loa, located in the northern Red River Valley, is widely recognized as a center of political power during the late first millennium BCE (300 BCE–100 BCE), often linked with the early formation of the Vietnamese state. Early archaeological excavations at Co Loa uncovered large-scale earthworks, weapon caches, and architectural features, indicating an organized and hierarchical society. Among the most distinctive finds are ceramic roof tiles, which serve as material markers of elite architecture and political authority. This presentation is based on recent thin-section and petrographic analyses of roof tile fragments excavated at Co Loa, aiming to investigate production techniques, resource procurement, and craft specialization. Mineralogical composition and temper inclusions indicate that roof tile production was dependent on specific clay sources and controlled firing conditions, suggesting coordination by a central elite class. The consistent form and technological uniformity of these tiles point to specialized labor and possibly state-sponsored production.

Nielsen, Charlton [318] see Rowe, Matthew

Nielsen, Christoffer [318] see Rowe, Matthew

Nielsen, Frederick [318] see Rowe, Matthew

Nielsen, Jesper (University of Copenhagen)

[331] *Early Investigations at Chalcatzingo, Morelos: Helga Larsen and Bodil Christensen's Visit to "Cerro de la Cantera" in 1934*

The research history of the spectacular site of Chalcatzingo and its Olmec-style cliff carvings remains poorly investigated. In this paper, I present and discuss a previously undescribed visit to the site in July 1934, just a few months after Eulalia Guzmán had recorded the discovery of the now iconic "El Rey" (or Monument I). In a lengthy letter to Elsie McDougall, Helga Larsen (1891–1938) provides a vivid description of the location and the famous relief, and adds important details to its discovery and meaning to the local inhabitants of the nearby town of Jonacatepec.

Nijmeh, Charlene [268] see Bartelink, Eric

Nijmeh, Charlene [268] see Burns, Gregory

Nijmeh, Charlene [268] see Canzonieri, Christopher

Nijmeh, Charlene [268] see Eerkens, Jelmer

Nijmeh, Charlene [268] see Greenwald, Alexandra

Nijmeh, Charlene [268] see Kievman, Hayley

Nijmeh, Charlene [268] see Leventhal, Alan

Nijmeh, Charlene [268] see Stiles, Kaitlyn

Nina, Hortensia [309] see Jaimes Betancourt, Carla

Nissen, Zachary [199] see Grauer, Kacey

Noah, Lucy (AmaTerra ERG)

[345] *From Destruction to Preservation: An Evaluation of Site Processes in a Reservoir Context in East Texas*

Reservoir lakes are an important to modern infrastructure, providing benefits such as hydroelectric power, flood control, and adaptation to climate change. These lakes are often created by damming existing river systems, resulting in the partial inundation of river basins. This process threatens archaeological sites within river basins, landscapes utilized from the Paleoamerican period through European contact. When these areas are flooded, archaeological data can be damaged; however, under the right conditions, rapid sedimentation after reservoir inundation can also support site preservation in a submerged context. Wright Patman Lake in East Texas exemplifies a reservoir rich in cultural resources that could offer insight into site impacts and potential preservation after inundation. The area has seen continuous human occupation since the Late Pleistocene and contains numerous archaeological sites. By reviewing investigations conducted around the lake from the time of inundation, in the 1950s, to today, we can assess long-term effects of inundation on these sites and improve strategies for cultural resource management. While shoreline surveys around reservoirs are critical, underwater investigations remain underutilized, creating a gap in knowledge regarding known cultural resources and site processes. Integrating underwater archaeological methods is essential to fully understand and protect cultural resources impacted by reservoir development.

Nobles, Valerie [264] see O'Sullivan, Rebecca

Nocerino, Eric [23] see Leonard, Daniel

Noe, Sarah (University of California Santa Barbara), Randy Haas, and Mark Aldenderfer (University of California, Merced)

[211] *Human-Camelid Interactions in the Lake Titicaca Basin: Zooarchaeological, Isotopic, and Genetic Perspectives from the Archaic Period (10.0–3.2 ka)*

Camelids are the only large-bodied domesticates of the Americas and became central to Andean lifeways, yet their earliest history resists easy classification within domestication or pastoralism. In the Lake Titicaca Basin, Archaic period (10.0–3.2 ka) communities engaged with camelids in ways that suggest shifting but still ambiguous relationships between foraging, selective use, and emerging herding. This project integrates faunal, isotopic, microbotanical, and genetic data to examine these interactions. Isotopic and microbotanical results indicate diets dominated by wild C₃ grasses, while genetic evidence reveals high lineage diversity, consistent with a period prior to the demographic bottlenecks linked to intensive herding. Together, these datasets probe whether camelid population histories reflect human influence, ecological dynamics, or their intersection. Situating camelids within this indeterminate space—neither fully wild nor clearly managed—underscores the contingent pathways through which Andean communities shaped animal populations and broadens comparative discussions of how domestication processes emerged across cultural and ecological contexts.

Noël, Stéphane [282] see Bari, Dawn

Noel, Tara (University of Massachusetts, Boston)

[75] *Utilizing Ceramic Attributes to Explore Local Consumption Practices and Relationship Building at an Eighteenth- to Nineteenth-Century Hispanic Rancho in New Mexico*

Primarily focused on the development of Hispanic lifeways in the mid-eighteenth into nineteenth century, this research explores the localized context of El Rancho de las Golondrinas through the analysis of both locally produced and imported ceramics. By using the archaeological data from the ongoing project at LA 127375 (Las Golondrinas, Museum Core), I am interested in understanding where ceramics were coming from, who was making and acquiring them, and how they were utilized within a rancho's daily environment. This requires an emphasis on the Indigenous groups that are the primary producers of local ceramics, thus pointing toward interpretations about the social and economic relationships being built between Hispanic and Indigenous communities. The methodology and results presented in this poster are curated around the visual

observation of physical attributes that include surface treatment, decorative elements, and vessel form, as well as microscopic analysis of paste composition in order to correlate ceramics to evidence of inter-ethnic relationship building. These details about ceramic composition are ultimately material links to systems of exchange as Hispanic communities like those at Las Golondrinas adapted their consumption practices to regional markets and New Mexico became bolstered by trade networks from more external production centers.

Nomokonova, Tatiana [31] see Losey, Robert

Noriega, Aldo [324] see Kellner, Corina

Norman, Lauren [155] see Krus, Anthony

Norman, Neil (William & Mary)

[103] *Approaching Atlantic Dialogues: Nineteenth-Century West African Rhythms, Landscapes, and Materiality at Africatown, Mobile, Alabama*

Much recent attention has been focused on Mobile, Alabama, as the resting place of the *Clotilda*, the last slaver to make the Middle Passage between West Africa and North America. The discovery of the vessel has refocused attention on Africatown, the settlement that *Clotilda* crossing survivors founded for themselves. This paper considers landscapes such as Old Plateau Cemetery, the Peter Lee House site, and Lewis Quarter as spaces that resonate with connections to Coastal West Africa. It argues that the specific life histories of Africatown residents can only be understood in terms of entanglements with the cultural processes, social relations, and political dynamics of West Africa.

Norman, Scotti (Warren Wilson College)

[33] *Huaca, Maria, Apu, Person, Painting: Becoming Huaca during Sixteenth-Century Taki Onqoy (Central Andes, Peru)*

Sixteenth-century Spanish colonialism and forced conversion in the Andes prompted ongoing, long-term shifts in religious practice punctuated by the entanglements of Andean and European ontologies. Indigenous Andean religion, a fluid and relatively unbounded system emerging from relationships between entities, challenged and befuddled Spanish priests and Catholic religion, a comparatively rigid system constricted by specific spaces and performances. As Spanish authorities attempted to force Andean communities to build churches and venerate specific deities, these same communities adopted aspects of Catholicism through their own epistemic frameworks. Specifically, during the sixteenth-century religious revitalization movement known as Taki Onqoy (Quechua: dancing/singing sickness), highland Andean priests became huacas, apus, and Catholic saints through relational transformations during elaborate performances. Inspired by Indigenous scholars, this paper utilizes Spanish documentary records and archaeological investigation from Iglesiaschayoq (Ayacucho, Peru) to explore the way specific relationships between things, materials, people, and entities produced shifting religiosity during the sixteenth and seventeenth centuries. Through new, more flexible interpretations of objects and accounts, this paper aims to contribute to a growing body of methods and theory that begin from a place of fluidity and relations rather than discrete categories imposed by European colonialism.

Norwood, Alexandra (University of Utah), Daniel Green (Harvard University), Briana Pobiner (Smithsonian Institution), and Tyler Faith (University of Utah)

[221] *Recovering Seasonality from Serial Enamel Isotopes Using Inverse Modeling*

Paleo-seasonality remains difficult to extract from archaeological records that are often subject to thousands of years of time averaging. Serial sampling of faunal enamel for isotopic analysis is an increasingly commonly applied method to study paleoseasonality. This approach aims to capture changes in an animal's diet and water sources on the scale of years and sub-annual seasons. However, the enamel mineralization process, which variably compresses, lengthens, and dampens the input isotopic signal during growth, results in measured isotope profiles that do not strongly resemble the input signal and are not immediately interpretable. To address this issue, models of how mineral content of different isotopic compositions is accumulated through time must be

applied through a process called “inverse modeling.” Here, we present a set of models to execute this process, fit to the enamel mineralization patterns of plains zebra (*Equus quagga*). The application of these models to modern zebra data from Ol Pejeta Conservancy (Kenya) demonstrates that they recover a highly accurate seasonality signal from preserved enamel. Furthermore, the parameterization of these models makes them adaptable to any specified mammalian tooth. Consequently, these models significantly expand the existing tool kit for the serial enamel isotope data analysis as a paleoseasonality proxy.

Nova-Baza, Daniela [302] see Andrade, Pedro

Novak, Mario [297] see Caraballo-Santiago, Angelica

Novak, Mario [123] see Osterholtz, Anna

Novorska, Lauren (University of Miami), and Pamela Geller

[346] *The Implications of Soil Microplastic Prevalence: An Archaeological Approach to the Plastic Fertilizer Bead*
Plastics have become a pervasive, interplanetary pollutant. Their degradation into micro- and nano-plastics poses a critical threat to human and environmental health; as these plastics accumulate in soil, air, water, and food, they present threats like none faced before. It will take a global effort to minimize humans’ reliance on plastics. In this study, we use an archaeological approach to extend knowledge about the urea granule. This plastic artifact is more familiarly known as a fertilizer bead, and it is often coated in a synthetic polymer resin. To further transdisciplinary conversations on the long-term implications of plastics on human and environmental health, we examine beads’ prevalence in soils sampled from college campuses across Florida. Soil samples also contained a typological assortment of plastic artifacts (e.g., confetti, fishing line), from which we draw inferences about campus culture more generally. We believe that the recovery of varied plastic artifacts from campus soils can inform mitigation efforts and influence multilevel policies that reduce plastic consumption on college campuses, thereby creating a more sustainable society.

Novotny, Claire (Kenyon College), and Tomás Gallareta Cervera (Kenyon College)

[53] *“There’s always a community”: Patricia A. McAnany and Engaged Archaeology in Northwestern Belize*
If we were to distill Patricia McAnany’s advice into three themes, they would be (1) there’s always a community, (2) partner with local people, and (3) engagement is a practice. These principles guide our engagement work at the Maya site of Chan Chich, in northwestern Belize. Our permit area includes two communities: Chan Chich, home to families working at a lodge, and Sylvester Village, where residents are employed by Gallon Jug ranch and agribusiness. The combined effects of COVID-19 and shifting labor markets hollowed out both villages, resulting in a more transient, loosely rooted population. This mobility challenges traditional notions of “community” in archaeological engagement. To illustrate this, we focus on interviews with the Morales family—originally from El Salvador—whose story reflects broader patterns of political displacement and demographic change across Latin America. Their connection to the archaeological landscape offers insight into how resettled groups view heritage. Additionally, we adapted our engagement strategies to suit a mobile and changing population. This includes designing board games, activity books, and 3D-printed artifacts to make archaeology accessible and interactive, regardless of stability or permanence. Our evolving approach reflects McAnany’s framing of community engagement as an ongoing, responsive practice.

Novotny, Claire [36] see Thompson, Amy

Nowak, Jacqueline (University of California Santa Cruz), and Diane Gifford-Gonzalez (University of California, Santa Cruz)

[279] *When Did Tule Elk and Pronghorn Antelope Disappear from the Monterey Bay? Tracing Ruminant Historical Ecology via Zooarchaeology and Radiocarbon Dating*
Did rarer large ruminant species of the greater Monterey Bay—pronghorn antelope and tule elk—die out before or after the arrival of the Spanish? Analysis of species-identified ruminant remains from 12 sites from the central to northern Monterey Bay identified 320 pronghorn antelope and tule elk specimens and more than 2,800 mule deer specimens. Association of radiocarbon dates, some directly on the ruminant specimens, others associated with charcoal and shell-based radiometric dates, indicate the persistence of tule elk in the

Monterey Bay region into the colonial period, whereas pronghorns seem to have disappeared earlier. This suggests that Indigenous overhunting did not extinguish the elk tule, whereas a combination of precolonial climate change and habitat loss, as well as Native hunting, may have extirpated the pronghorn.

Nowakowski, Lauren (University of Texas at San Antonio), M. Kathryn Brown (UTSA), and Jason Yaeger (UTSA)

[223] *New Investigations at Xunantunich's Group C: Sakbe'ob and Platforms*

Group C at Xunantunich is located at the southern edge of the site's core, just south of the main acropolis, El Castillo. The group consists of eight mapped structures situated on a restricted ridge, enclosed by ditch and berm fortifications. Although previously identified as an atypical residential group, recent research suggests that it functioned as a temporary residence and training space for elite youth. This interpretation is supported by the presence of patolli graffiti in two of the groups range structures, a sweat bath, and a modest patio group to the south that may have served as a residential or servants area. During the 2025 field season, our work focused on clarifying the structural relationships within the core of Group C and investigating an untested structure at its southernmost end. This paper presents previously compiled data alongside recent excavations, with focus on a possible Sakbe and platform structure. These findings contribute to a more nuanced understanding of this unusual group.

Nowell, April (University of Victoria), Keryn Walshe (University of Auckland), Clem Lawrie (Senior Mirning Custodian, Traditional Owner and Native Title Holder), and Anton Munday (Ceduna, 5690, Australia)

[255] *Rising Up: Digital Traces and Performative Indigenous Culture at Koonalda Cave, South Australia*

Indigenous Australian art relies on motifs and figures to visually symbolize a traditional story, myth and/or ritual. Intrinsic to these symbols is a narrated performance that builds the dynamic art. In contrast, digital tracings (tracings drawn in soft sediment covering the walls, ceilings and floors of some limestone caves; also known as finger flutings) have not been considered as visually symbolic expressions of performative art. Using the >30,000 year old site of Koonalda Cave in southern Australia as our case study, we argue that digital tracings also operate within a performative space, with an emphasis on ritual maintenance, the spiritual propagation of a prized food or trade item.

Nowell, April [339] see Gonlin, Nancy

Nuevo Delaunay, Amalia (Centro de Investigación en Ecosistemas de la Patagonia), Daniel Pascual (Pontificia Universidad Católica de Chile), Valentina Quiroga (Pontificia Universidad Católica de Chile), Víctor Méndez (Pontificia Universidad Católica de Chile), and César Méndez (Pontificia Universidad Católica de Chile)

[32] *Littoral Economies and Gathering Practices of Mobile Groups in the Southern Fringe of the Desert, North-Central Chile*

The Pacific coast of Chile was continuously inhabited by mobile groups who extensively exploited littoral resources sustained by nutrient-rich oceanic upwelling. However, the scarcity of fine-grained archaeological records at the local scale limits our understanding of long-term shifts in resource use, particularly from a comparative perspective grounded in multicomponent contexts. Shell middens located on prominent landscape features offer long-duration records shaped by recurrent occupations spanning millennia. In the semiarid environment south of the Atacama Desert (31°50' S, Coquimbo Region), such sites have yielded stratigraphic, chronological, contextual, and assemblage data that illuminate the variability of coastal practices throughout the Holocene. This paper examines the structure of shellfish assemblages and the variability in the size of key taxa to assess changes in selection, processing, and discard behaviors. The analysis is based on dated deposits that provide stratigraphically comparable units across occupations. Notably, the principal shifts in shellfish gathering appear to be driven by decisions related to field processing, which emerges as a central factor in archaeological site formation. These findings carry broader implications for interpreting behavioral dynamics along the north-central Chilean coast and, more broadly, across the Pacific littoral of South America.

Nuevo Delaunay, Amalia [41] see Méndez, César

Núñez, Jose (Universidad Nacional Mayor de San Marcos)**[309] *Building Power through Space: A Space Syntax Analysis of Inca Settlements in the Carabaya Mountains***

This research examines the ways in which the Incas structured space within their settlements in the peripheral regions of the empire, and how these newly established spatial arrangements were articulated in relation to preexisting landscapes. Through the use of space syntax analysis, this study compares the spatial configuration of several settlements in the Carabaya Mountain, in southern Peru. The objective is to shed light on how the Incas employed the control of access routes within their settlements as a means of reinforcing an imperial discourse, thereby transforming space itself into a deliberate strategy of domination. This analysis may be of use for assessing other areas within the Andes

Nunez-Cortes, Yajaira, Ashley Sharpe (Smithsonian Tropical Research Institute), Nicole Smith-Guzmán (Smithsonian Tropical Research Institute), and Geissel Vargas (UNAM, Mexico)**[311] *Diet and Mobility in Ancient Southern Central America***

Past human groups of southern Central America sustained a complex interplay with their surrounding environments, yet we still have limited understanding of the diversity and variation in subsistence practices and residential mobility through time and space. We present preliminary isotopic data (carbon, nitrogen, oxygen, and strontium) for 42 individuals from the current territories of Costa Rica and Panama. We explore diet and mobility variation in terms of (1) changes responding to the establishment of permanent settlements and the need to sustain larger populations; (2) differences in dietary preferences in accordance to the available resources in mountainous, coastal, and island contexts; and (3) variation in mobility ranges through time and in island versus inland contexts. We present results from burials and sites dating to 2,000 years before the arrival of Europeans, to the eve of their arrival. Our results suggest variation within sites, along with a general increase in the consumption of C₄ plants (likely maize) and a limited range of residential mobility.

Núñez Enríquez, Luis Fernando [161] see Lacoste Jeanson, Alizé

Nunez Ocampo, Ruben [161] see Shiratori, Yuko

Nutman, Emily [271] see O'Connor, Sue

Nyamushosho, Robert (Queens College, City University New York)**[162] *Rethinking Bead Studies in the Zimbabwe Culture: Beyond Glass and Provenance***

Bead studies in southern African Iron Age archaeology (CE 200–1900) have largely focused on glass beads, especially in relation to the Zimbabwe culture and its global trade links. These beads, often viewed as exotica, have received significant scholarly attention due to their suitability for geochemical sourcing and typological classification. Consequently, they have become key markers for tracing local, and global entanglements. This emphasis, however, has marginalized beads made from locally available materials such as shell (e.g., ostrich eggshell), bone, stone, and various metals including copper, iron, and gold. Despite frequently co-occurring with glass beads in archaeological contexts, these materials are often overlooked or miscategorized, shell and bone assigned to “Stone Age” foragers, glass and metal to “Iron Age” complexity. In this paper I challenge such binaries, arguing for a more integrated, contextualized approach. Drawing on recent excavations at Zimbabwe culture sites, I examine a diverse bead corpus to reconsider their roles not just as trade items but as objects embedded in daily life. By focusing on contextual assemblages and use patterns, this study rebalances interpretations of bead production, consumption, and meaning. It calls for an inclusive framework recognizing all bead materials as central to identity, value, and social practice.

Nyers, Alex (Northwest Research Obsidian Studies Laboratory), Loren Davis (Oregon State University), Daniel Bean, and Jillian Gantt (Forest Service, Deschutes National Forest)**[319] *Advancing Projectile Point Typology with Biface Morphometric Software***

Projectile point typologies are essential for archaeological interpretation, but traditional methods often rely on manual bounding box measurements that capture only basic dimensions and miss much of the complexity of biface form. New digital approaches to 3D scanning and geometric morphometric (3D GM) analysis of

projectile points open exciting opportunities for archaeological research. Here we present Biface, a web-based application that automates these analyses and connects directly to a virtual archive of scanned specimens, enabling researchers to build comparative samples and conduct reproducible studies. Biface quantifies attributes difficult to impossible to measure by hand such as true edge angles, reentrant geometry, and cross-sectional areas. As a case study, we analyze the Lava Cast Cache (35DS751), a collection of 361 obsidian bifaces from Oregon's Deschutes National Forest. This approach allows us to assess variation within the cache and compare it with experimentally knapped bifaces and assemblages from other sites. The results show how digital archives and automated morphometric tools move beyond the limits of bounding box measures, refine typological frameworks, and provide new perspectives on technological knowledge in biface production.

Oberdier, R. Obi (DDC), and Antonio Beardall (Texas State University)

[169] *Community Archaeology Belize: An Entangled Assemblage of Diverse Parts*

Entanglement Theory offers a framework for viewing archaeological assemblages as more than just artifacts. Living people (including their thoughts, values, and practices), tools like trowels and GPS units, soils and ceramics, permits and funding, plazas and cenotes, and ancient people form a complex web of entanglements. This paper presents the four entanglement categories (human-human, human-thing, thing-human, thing-thing) as an analytical framework for understanding such assemblages in community-engaged scholarship. Drawing on two years of Community Archaeology Belize and previous initiatives in the Cayo District, we show how these elements coalesce. H-H entanglements emerge in teaching archaeological field methods and discussing cultural heritage. H-T entanglements unfold through collaborative artifact processing and recording. T-H entanglements appear as ancient structures and artifacts create icons of cultural heritage and connections. T-T entanglements arise in ceramic comparisons and analyses, taphonomy, and meanings of the presence of some artifacts at these sites. This case demonstrates how entanglement analysis binds disparate parts into a single unit of study, illuminates overlapping temporalities, and empowers local voices to co-define heritage interpretation and management. Attendees will gain practical entanglement vocabulary, concrete steps for integrating collaborative methods, and insights on applying a relational approach to enrich ethical, multiscale archaeology across diverse contexts.

Obregon Cardona, Mauricio [84] see Varela, Carlos

O'Brien, Kaedan [350] see Flicker, Dylan

O'Brien, Meagan (WSP)

[345] *Assessing the Subjectivity of Reporting Soil Characteristics in CRM*

Various resources are typically consulted to determine soil characteristics prior to and during archaeological excavations, including the USDA's Web Soil Survey, the California Soil Resource Lab's SoilWeb, and the Munsell Color System. The determination of soil color and texture is often impacted by the excavators' education level, work experience, geographic familiarity, and perception of color. This research explores the results of soil composition from a Phase I cultural resource management (CRM) survey conducted on a 7-mile transmission line in New England by WVSP Inc. This survey will be used as a case study to evaluate and discuss the subjectivity and inconsistencies of reporting soil characteristics during fieldwork in contrast with nationally reported soil data.

O'Brien, Michael (Texas A&M-San Antonio)

[319] *Projectile Point Types vs. Projectile Point Classes: Still a Fundamental Dichotomy*

Archaeology has a long history of unit construction, although it is clear that many of the units routinely employed for projectile points—type, group, class—are rarely defined explicitly. Most archaeologists have an intuitive feel for what certain units represent and thus bypass clear exposition of how they employ the units and what the units are signifying. This strategy cannot be applied in a situation where change as opposed to transformation is the subject of investigation. Depending on the scale at which we are operating, change might be difficult to measure. Regardless, it must be measured as alterations in the frequencies of analytical (not real) kinds, or what have been termed ideational units. One method of unit construction is paradigmatic

classification, which defines mutually exclusive characters that encompass the range of variation of a specific set of units, each of which is defined by a set of character states. It offers a superior, systematic means of tracking variation at various scales, including morphospace, geographic space, and developmental and functional bias. This paper presents an example of the strength of paradigmatic classification as applied to the spread of Clovis and other fluted Paleoindian projectile points/knives across the eastern United States.

Ochoa-Winemiller, Virginia (New Jersey City University)

[36] *Communities, Artisanship, and Practice in Dzibilchaltun and Eastern Honduras*

This paper examines ancient artisan practices within households in the northern Maya lowlands and eastern Honduras. Household production has been documented throughout the Maya area and beyond, with production scales varying from small-scale domestic consumption to larger workshops crafting goods for elite and ritual ceremonies. In this presentation, I will discuss three cases of household manufacturing. First, I examine shell processing for jewelry and mosaic production from the ancient Maya city of Dzibilchaltun, Mexico, documented in household groups surrounding the Seven Dolls Temple Complex. Second, I analyze the ancient eastern Honduras site of El Chichicaste, a small rural pottery community where crafters produced a distinctive but low-quality style of vessels known as Chichicaste ware. This pottery was primarily traded throughout southern Honduras and northern Nicaragua. Finally, I discuss obsidian blade production at Dos Quebradas, a medium-sized settlement where household production served local needs but incorporated raw materials from foreign sources in central Mexico.

Ocobock, Cara [159] see Montenegro, Alvaro

O'Connell, Delaney (University at Buffalo, SUNY)

[218] *Repatriated and Not Returned*

Repatriation is understood as the act or process of returning someone or something to their country of origin. From the wisdom found in the Native American Graves Protection and Repatriation act (NAGPRA), the return of cultural property and ancestral remains to Indigenous nations has been met with compassion, hesitancy, and misunderstandings. A common misunderstanding is that when a piece of cultural property is repatriated to the Indigenous Nation of origin, that item must be physically returned; this, however, is not the case. This misunderstanding has led to panic in some academic and museum spaces with fears that "collection shelves will be empty." This worry is due to a conception of cultural property rights that has fallen out of favor in political, legal, and Indigenous discourse. Building on the work of political philosopher Anthony Honore, I shall argue that by taking up a "bundle theory" of cultural property rights, museums and academics can better attend the nuances of repatriations, nuances that may not ever entail a physical return. Ultimately, this paper seeks to correct a common misunderstanding of the law (NAGPRA) through the logics of political philosophy about what cultural property rights really mean and what they entail.

O'Connell, Ellen, Caitlin Doherty (Center for the Study of the First Americans, Texas A&M University), Adam Burke (Texas A&M University), and Michael Waters (Center for the Study of the First Americans)

[180] *Twenty Years of Archaeological Research at the Debra L. Friedkin Site, Central Texas*

Twenty years ago, the Center for the Study of the First Americans (CSFA) initiated a 10-year field campaign at the Debra L. Friedkin site in central Texas. Now renowned for producing one of the Western Hemisphere's most secure pre-Clovis contexts, the Friedkin site also boasts a near-continuous 15,000-year record of human occupation. Since fieldwork concluded in 2016, our team of faculty, graduate students, and undergraduate technicians has analyzed more than 2,400 tools and more than 700,000 pieces of debitage. Here, we review the highlights of our recent work on the Friedkin materials.

O'Connell, Ellen [41] see Doherty, Caitlin

O'Connell, James [48] see Herzog, Nicole

O'Connor, Kelly [182] see Crowley, Suanna

O'Connor, Sue (Australian National University), Shimona Kealy (Australian National University), Hendri Kaharudin (Australian National University), and Emily Nutman (Australian National University)

[271] *Strategies for Small Island Living through a Wallacean Lens*

The biogeographic region known as Wallacea is comprised of many thousands of islands. Premodern hominins reached the larger western Wallacean islands of Flores and Sulawesi between ~1 million and 800 ka, but there is little or no evidence that they made use of marine resources. Modern humans settled these same islands, and the island of Timor, between 60 and 45 ka, and their subsistence seems to have included a mix of terrestrial and marine resources. As modern humans moved east through Wallacea to the more faunally depauperate islands, their ability to exploit coastal resources effectively became paramount. The smaller islands in the archipelago posed the greatest challenge; and one that does not appear to have been met until the terminal Pleistocene ~16 ka. Making a living on these islands required advanced maritime technology and networks enabling population mobility. We examine the chronology and evidence for small island living in Wallacea and the strategies adopted for success in this extreme maritime environment.

O'Connor, Sue [165] see Balme, Jane

Oddes, Daniel [353] see Bustos, David

Odell, Molly [313] see Saltonstall, Patrick

Odwale, Alicia (Archaeology Rewritten)

[174] *Decolonizing the Sound of the West: Archaeology, Beyoncé's Cowboy Carter, and the Legacy of Black Cowboys*

The mythology of the American West has long silenced the central role of Black cowboys and Black rural communities, leaving their histories fragmented or erased. Beyoncé's *Cowboy Carter* disrupts that silence, using sound to reclaim space in one of the nation's most enduring cultural narratives. This paper brings the album into dialogue with archaeological research on historic Black towns and the material legacies of Black cowboys to consider how popular music can operate as decolonizing heritage practice. In this way *Cowboy Carter* and Black country music as a whole functions as a sonic archive that parallels archaeological efforts to uncover, interpret, and center Black presence in landscapes often dominated by settler-colonial mythologies. By examining the intersections of music, memory, and material culture, this paper explores how soundscapes can expand archaeological methodologies, challenge dominant narratives of the West, and foreground the ongoing contributions of Black communities to the making of American history.

O'Donnell, Tristan

[228] *The Anatomy of a Thermal Feature*

Like fingerprints, no two features are exactly the same. In New England, archaeological excavations uncover thermal features of all shapes, sizes, ages, compositions, and depths, but what truly denotes a thermal feature? While heat treatment, charcoal, and fire-affected rock are all good indicators, they are not all present all the time. This research explores how various thermal features across New England were made and have settled in the surrounding soils, and explores what information we can draw from them to find out what thermal features are really made of.

Ogburn, Dennis (UNC Charlotte), and Bill Sillar (Institute of Archaeology, UCL)

[79] *pXRF Analysis of Sources of Andesite Building Stones in Inka Royal Estates in the Cusco Region of Peru*

We carried out a project analyzing the sources of building stones used in elite architecture in Inka royal estates around Cusco and the Urubamba Valley from 2011 to 2023. The royal estates included, among others, Juchuy Qosqo, Písaq, Pumacancha, Ollantaytambo, and Chinchero. pXRF was used to nondestructively analyze the chemical compositions of a selection of finely cut andesite building stones at each site, and these were then compared to the compositional data for andesites from major and minor Inka andesite quarries in the region, including Rumiqlolqa, Huaccoto, Cheqoq, and Juchuy Qosqo. The results show that some sites, such as Písaq, used only andesite blocks from local quarries, while others, such as

Ollantaytambo, showed a mix of stones from more distant quarries in addition to locally available material. The patterns point to different modes of mobilizing labor and transporting materials, and also to the preference of using stones from the Rumiqlolqa quarry for special ritual contexts. These differences may be attributed to disparities in geology, preferences of the different rulers associated with these sites, changes in Inka economic organization over time, and the symbolic nature of using stones from certain quarries, or some combination of those considerations.

Ogundiran, Akin (Northwestern University), Aïssata Thiam (Northwestern University), Laure Dussubieux (Field Museum of Natural History), and Akinlolu Ige

[162] *Circulation of Glass Cullet and Glass Crucible in the Yoruba Region (West Africa), 1600–1840: Power Objects for Charm, Memory-Making, and Wellness?*

Archaeological excavations and historical records have uncovered glass cullet and fragments of crucibles in different parts of Yoruba region, especially in Oyo-Ile, Ede-Ile, and Early Osogbo, in 1600–1840 contexts. These discoveries have animated the discussion about glass processing technology in the vicinity where the objects were found. Yet the only convincing site where most of the *chaîne opératoire* of glass production and glass bead processing has been documented is Igbo Olokun Grove in Ile-Ife, and this is dated only to ca. 1100–1400. This paper argues that the later circulation of glass crucibles and cullet across the Yoruba region and other parts of West Africa resulted from their use as objects of power and charm, memory- and place-making, as well as wellness. Using LA-ICP-MS, the chemical profiles of the excavated glass cullet and crucibles are compared with those of excavated glass beads in the same contexts to evaluate this hypothesis.

O'Hara, Rachael

[156] *"Federal Law Prohibits": Prohibition-Era Alcohol Consumption at the Apex Logging Camp, Arizona*

The Saginaw and Manistee Lumber Company operated its Apex logging camp in Northern Arizona from 1928 to 1936. Situated on the Kaibab between the towns of Williams, Flagstaff, and Grand Canyon Village, the extractive industry of lumbering exploded in the 1920s despite economic depressions and dust bowls. Archaeology assemblages of the Apex camp suggest a culture of alcohol consumption and brewing, from wine and whiskey bottles, to beer and hops syrup cans. Due to the broad overlapping of the site's occupation with both state and federal prohibition laws, Apex's ties with legal and illicit alcohol trade stands out in comparison to the strict nature of contemporary company towns. This paper summarizes my thesis research on the material evidence of Prohibition-era alcohol consumption in a logging company town and its interactions with immigration, identity, and culture.

O'Hara, Rachael [34] see Dale, Emily

Okanlawon, David (Syracuse University), and Christopher DeCorse (Syracuse University)

[162] *Drilling Deep: Lithic Beads in Coastal Ghana*

Focusing on archaeological data from coastal Ghana, this paper examines lithic beads in terms of the materials, technology, and chronologies represented. While lithic beads cannot be described as ubiquitous on Ghanaian archaeological sites, they nonetheless occur in many contexts. They exhibit a great deal of temporal and technological diversity, as well as the raw materials represented, ranging from carnelian and granitoid beads dating to the first millennium CE, through the Atlantic period. As with beads made from other materials, establishing the chronologies of lithic bead production is challenging owing to their recovery from poorly dated contexts and the possibility of the continued use of heirloom pieces. This paper provides a preliminary description of the beads represented and possible directions for future research.

Okuda, Yumi (University of California San Diego)

[199] *Pottery as a Pathway to People: Examining the Importance of Identity and Environment through the Evolution of Ceramics at the Hamanaka 2 Site in Rebun Island, Hokkaido, from the Final Jomon to the Historical Ainu Period*

The Hamanaka 2 site is located on the northern side of Rebun Island and ranges from the late Jomon (2500 BCE) to the historical Ainu period (1050 BCE–1850 CE). With the Ainu being officially recognized as indigenous peoples since 2019, I aim to emphasize through the evolution of pottery that the Ainu and their ancestors were quite a diverse group of peoples that have a deep relationship with their coastal environment.

Findings of vessels from the Hamanaka 2 site excavations demonstrates the evolution between social and environmental relationships among these occupational periods. I assert that there is a direct correlation of lifestyle change with pottery design because the vessels needed to accommodate more sedentary subsistence as well as an exposure to a greater variety of cultures through trade networks. Along with this practical function, there is also a deep cultural significance as the designs on the vessels display a steady evolutionary pattern from cord marked in the Jomon culture to rope patterns in the Ainu culture. Decorative elements were added as the society became more sedentary and complex, serving as a foundation for the modern Ainu culture that exists today.

Olajide, Victoria (University of Oregon)

[357] *Revisiting Early Urban Life at Ipole Hill, Obbo Aiyegunle Kwara State, Nigeria (Sixteenth–Nineteenth Centuries)*

The Ipole Hilltop settlement at Obbo Aiyegunle, northern Yorubaland (Nigeria), provides critical insight into frontier urbanism during the Atlantic era (ca. 1450–1900 CE). Situated in the forest–savanna transition zone of northern Yorubaland, Ipole existed during the Oyo imperial expansion, shifting trade networks, and the turbulence of nineteenth-century internecine warfare. This paper, therefore, examines how agricultural change, particularly the adoption of New World crops such as maize and cassava reshaped subsistence strategies, storage, and surplus management. Pottery analysis offers a window into these shifts, tracing how vessel size, form, and function adapted to new foodways, population fluctuation, and craft specialization. By situating Ipole Hill within broader Atlantic-era exchange and transformations, this study highlights the intersection of food systems, material culture, and political economy on the Yoruba frontier, contributing to comparative debates on mobility and exchange in early West African urban contexts.

Oliver, Lisa [198] see Orr, Andrew

Oliver, Samuel (California State University, Long Beach), Ismael Sandoval (California State University Los Angeles), and Marissa Martinez

[54] *At the Periphery of Lechaion, Greece: Preliminary Findings from the 2025 Field Season*

Lechaion Harbor was the major port for the ancient city of Corinth, Greece. Our project investigates an area peripheral to the main harbor settlement to elucidate land use and paleoenvironmental conditions in an as of yet unstudied part of the site. A ground-penetrating radar (GPR) scan from the 2024 field season indicated subsurface features in a field to the east of the main settlement, where we focused excavation during the 2025 season. Our exploratory excavations identified multiple sedimentological contexts within a small area, including shell-rich gravels adjacent to lagoonal clays. We encountered a rocky linear feature 30–50 cm below the surface on the east side of the clays that was not apparent in the GPR scan. This poster explores connections between the two areas of the site and increases our understanding of the Lechaion landscape.

Oliver, Samuel [54] see Martel, Aiyana

Oliver-Bozeman, Aimee [212] see Arakawa, Fumi

Olivier, Gwen

[71] *From Soil to Script: Coding for Geoarchaeological Analysis*

The tRowel package is designed to help geoarchaeologists create clear, publication-ready figures in RStudio. Although RStudio is free and widely used across disciplines, many visualization tools require advanced coding skills that can be a barrier to specialists working with soils and sediments. tRowel addresses this by providing functions designed for geoarchaeological data, including *terraTrend*, *groundTruth*, *paleoPanel*, *munsling*, *loamRanger*, and *clastCluster*. These functions produce figures efficiently without the need for additional licensed software. Importantly, it is the first package to visualize cluster analyses across multiple profiles, allowing geoarchaeologists to recognize and compare geomorphological and paleoenvironmental trends across entire landscapes.

Olivier, Gwen [204] see Goedert, Tristan

Olzbayar, Gankhuyag (Seoul National University), Jangsuk Kim (Korea), Tserendagva Yadmaa (Mongolian Academy of Sciences), and Dalantai Sarantuya (Mongolian Academy of Sciences)

[76] *Returning to the River: Petrographic Insights into a Persistent Cultural Landscape at Ongon Tavan Bulag-5*

In 2023, our research team from Seoul National University and the Mongolian Academy of Sciences surveyed several artifact scatters along the river near Bayandelger Soum, Sukhbaatar Province, Mongolia. This led to the identification of the Ongon Tavan Bulag-5 site, which shows evidence of human activity from the prehistoric to the Xianbei periods. During 2024 test excavations, two tombs, presumed to date to the Xianbei period, were uncovered along with grave goods such as jade and pottery. In Grave I, three burnt charcoal samples from sifted sand inside a pottery vessel were radiocarbon-dated to the third century AD, providing direct chronological evidence. Several test pits excavated around the tombs revealed numerous stone tools that predate the Xianbei period, suggesting earlier settlements and cultural layers. To investigate technological practices and interregional connections, we are conducting a detailed study of 50 pottery sherds recovered from three localities at Ongon Tavan Bulag-5. Petrographic thin-section analysis, complemented by pXRF, is being used to determine raw material sources, manufacturing techniques, and exchange patterns. Focusing on these ceramic datasets, our research highlights the role of pottery production and circulation in shaping the long-term cultural landscape of southeastern Mongolia and deepens our understanding of prehistoric and Xianbei period networks.

Onan, Madelyn, and Thomas Fenn (University of Oklahoma)

[183] *3D Scanning Methodology Developed for Studying Metallurgical Technological Development and Organization in Ancient Africa*

Along the southern fringe of the Sahara in modern Niger, a nomadic community created technical ceramics, i.e., crucibles, for metallurgical production, from ca. 600 to 1400 CE. Our research hypothesizes that if these crucibles exhibit a wide range of morphological variation, this would be indicative of a community effort at production, rather than production by an isolated craftsman or two. To test this hypothesis, we made use of 3D-scanning technology and developed a methodology to scan, at submillimeter resolution, the basic physical parameters of the crucibles. In the laboratory, we conducted two to three scans per crucible, capturing preserved structural data, such as cracks, notches, and clay textures. These 3D models were then imported into Blender software, where we utilized virtual cross-sections at different angles to obtain precise dimensional data for several variables. Preliminary assessment of the breadth of variability among crucible metrics supports our hypothesis of community-engaged metallurgy, while also identifying the effectiveness of the methodology of 3D scanning in archaeological analysis.

Onan, Madelyn [326] see Fenn, Thomas

O'Neal, Heather (UTSA)

[79] *Expanding Obsidian Source Data from the Tom Holcomb Site and Cerro Juanaqueña: Mobility and Procurement in the Late Archaic / Early Agricultural Borderlands*

This obsidian sourcing study allows for direct evaluation of the impact of changing agricultural reliance on landscape use. A comparison is made between obsidian sources utilized at the Tom Holcomb site (LA162023), a Late Archaic period hunter-gatherer site in the Bootheel of southern New Mexico, and those of the nearby Late Archaic period settlement of Cerro Juanaqueña (INAH Chih 366) in northern Chihuahua. The Tom Holcomb site, situated 80 km northwest of Cerro Juanaqueña, is interpreted as a hunter-gatherer base camp occupied between 930 BC and AD 225, while Cerro Juanaqueña represents a large agricultural settlement occupied between 1300 and 1100 BC. A comparison of the obsidian sources used at each location allows inferences regarding mobility and its relationship with agricultural dependence.

O'Neil, Megan (Emory University)

[317] *The Business of Archaeology? How Art Dealers' Records Complement and Complicate the Archaeological Record in Panama*

Documentation in the Stendahl Art Galleries Records illuminates the relationship between the antiquities market and archaeology in Panama from the 1940s to 1960s. This paper studies communications between Earl Stendahl and his family business partners with archaeologists, residents, and government officials who

helped the Stendahls in acquiring or removing objects from Panama. Their correspondence enables reconstruction of the itineraries of looted objects and ones that were excavated by professional and amateur archaeologists. Furthermore, stock books and invoices list when objects came into the gallery, which at times complements information from other archives about particular grave lots and contributes to what is known about the Panamanian archaeological record. This paper also studies how the Stendahls marketed objects; for example, highlighting ones that were excavated from graves and how museums who purchased them promoted this information, showing their interest in provenience, even while also buying looted items without known provenience. Finally, this paper considers how the privileged position of Americans in the Canal Zone and how earlier and contemporaneous practices of archaeologists, including their connections with looters and emphases on the monetary value of gold antiquities, allowed the Stendahls and other dealers to have major success in the Panamanian antiquities market.

Oras, Ester [221] see Suni, Raivo

Oré Menéndez, Gabriela [33] see Hernández Garavito, Carla

Orellana Soto, Michael (University of Colorado Boulder), Fernando Villanea (University of Colorado Boulder), and William Taylor (CU Museum of Natural History)

[211] *The Impact of Genomics on Understanding the Domestication of South American Camelids: New Perspectives and Challenges*

In the Americas the only large ungulates to be domesticated in prehispanic times were South American Camelids (SACs). Their domestication profoundly impacted the development of both ancient and contemporary societies across the Central Andes along with their cultural and economic importance. In the last decades, genetic studies have focused on elucidating the biological relationships between these species by analyzing specific genomic regions and uniparental markers. However, such limited genomic data have restricted our ability to deeply evaluate the demographic history of SACs and the entire genetic and phenotypic impact of their domestication. Recently, the availability of whole-genome sequences from both modern and ancient SACs enables hypothesis testing regarding their evolutionary relationships and the effect of human management and historical events on camelid biology. This review synthesizes the impact of genomics studies on our understanding of SAC domestication, discusses current limitations, and addresses the associated ethical considerations.

Orlikoff, Emily [337] see Brown, Matthew Tyler

Orngard, Charles (Iowa State University), Lawrence Todd (GRSLE Inc.), and Daniel Dalmás (University of Utah)

[72] *Every S.H.O.T. Counts: Hunting Signatures across 12,000 Years*

Projectile points and cartridge casings, though separated by thousands of years, can both be viewed as S.H.O.T.s—Signatures of Hunting Over Time. Each represents the material residue of a hunting event and provides evidence of human interaction with alpine landscapes. Since 2002, the Greybull River Sustainable Landscape Ecology (GRSLE) Project has systematically recorded thousands of projectile points and hundreds of cartridge casings in the high elevations of northwest Wyoming. This poster outlines an exploratory framework for comparing these datasets. GIS will be used to examine their spatial distributions relative to elevation, proximity to resources such as water, and known game migration routes. Analytical approaches such as kernel density mapping, nearest neighbor analysis, and Ripley's K function will be applied to assess clustering and possible associations. Although analysis is ongoing, framing projectile points and cartridges as S.H.O.T.s emphasizes their value as comparable hunting signatures, offering new opportunities to investigate long-term human use of mountain environments.

Oropeza, Manuel (Universidad Nacional Autónoma de México)

[247] *Espionaje, diplomacia y arqueología*

La historia contemporánea se caracteriza por conflictos internacionales auspiciados por jefes de Estado que desean expandir su poder. Para lograrlo, requieren información de los posibles enemigos y para ello, ponen

en marcha un gran número de artilugios, desde la confrontación directa hasta el acopio de secretos de Estado. Uno de estos medios ha sido el espionaje que se encubre de diversas maneras. Me referiré a Lorenzo Boturini, Alexander von Humboldt y Herbert Taylor, y a otros más. Pero concentrándonos en el espionaje y la arqueología, nos referiremos Sylvanus Griswold Morley (1883-1948), ya muy estudiado. Pero ampliaremos nuestra ponencia en el caso de Edward Herbert Thompson (1857-1935), cuyos deudos fueron amparados por el gobierno mexicano para que los objetos dragados del Cenote Sagrado de Chichen Itza, llegaran a manos del Museo Peabody de la Universidad de Harvard por valija diplomática, aunque México había promulgado la Ley de Monumentos Arqueológicos del 11 de mayo de 1896, que limitaba la propiedad de los bienes inmuebles y su exportación fuera del país, de los bienes muebles.

O'Rourke, Daniel [198] see Gierke, Lynn

Orozco, Joseph (BCR Consulting, LLC)

[206] *Hidden in Plain Site: A Reexamination of Understudied Ceremonial Subterranean Features*

The ceremonial use of subterranean features is firmly established in Mesoamerica where large-scale archaeological investigations have identified caves as having religious importance at such sites as Teotihuacan and Xochicalco. However, in the adjacent Chichimec region of northwest Mexico, the use of subterranean features as religious focal points has largely eluded recognition. This is likely the result of archaeological excavations focusing on permanent ceremonial centers rather than the landscape surrounding rancherías and semipermanent settlements of historically nomadic people north of the Mesoamerican border. The inhabitants of rancherías and semipermanent settlements maintain a religion that is centered on an animate earth, with access provided through subterranean features. A reexamination of past archaeological and exploratory studies indicates that subterranean features were an essential component of religion yet went largely ignored as sacred landscape features did not meet the conditions of established religion that was acceptable at the time of the study.

Orr, Andrew (Argonne National Laboratory), Peregrine Gerard-Little (Argonne National Laboratory), Lynn Gierke (Argonne National Laboratory), William Lawton (Peterson Space Force Base), and Lisa Oliver (Schriever Space Force Base)

[198] *A Geographic Information System Approach to Mapping Disturbed Landscapes for Cultural Resource Management: Peterson and Schriever Space Force Bases*

Located on 1,630 and 3,800 acres in the high plains east of Colorado Springs, Peterson and Schriever Space Force Bases (SFBs) have experienced human activity across precontact, historic, and Air Force eras, as well as natural disturbance from watercourses. Both natural and cultural activities have led to ground disturbance that could affect the integrity of cultural deposits. This project employs a GIS approach to delineate land disturbances at Peterson and Schriever SFBs, producing a map illustrating the areas affected and the severity of the disturbances. Land disturbance features were mapped for the entirety of the bases using high-resolution lidar data and historical imagery from before, during, and after base construction. Additionally, a cultural resource model was developed using data from existing precontact and historic sites in the vicinity to provide general guidance on prioritizing survey areas for both bases. The resulting disturbance maps and geospatial data provide a tool for informing Peterson and Schriever SFB's future planning activities and decision-making, including consideration of impacts on cultural resources.

Ortega, Edgar [177] see Hansen, Richard

Ortega-Muñoz, Allan [179] see Cucina, Andrea

Ortiz, Agustín [164] see Pecci, Alessandra

Ortiz, Liz [48] see Harrod, Ryan

Ortiz, Veronica [180] see Biwer, Matthew

Ortiz, Veronica [41] see Rademaker, Kurt

Ortiz-Aguilu, Juan-Jose (Universidad Tecnica de Manabi), Christopher Blair (Stantec), Myrna Cusman Vega (Centro de Estudios Avanzados de Puerto Rico y el Caribe), Raymond Hernandez (Centro de Estudios Avanzados de Puerto Rico y el Caribe), and Aida Pagan Rivera (Centro de Estudios Avanzados de Puerto Rico y el Caribe)

[294] *Engineering the Tropical Highlands: Social Complexity, Labor Investment, and Chronology in the Prehispanic Terraces of Puerto Rico's Central Cordillera*

The agricultural terraces located in the south-central Cordillera region of Puerto Rico are a notable example of premodern landscapes documented on the island. They were identified in the late 1980s and published in 1993 by Ortiz-Aguilú et al. That study estimated the existence of over 150 terraces with 2 m thick dry-stone retaining walls, standing approximately 0.5–3.0 m in height and measuring 20–40 m in length on the south- and southeast-facing slopes of Cerro Planadas in Cayey, Puerto Rico. The original study proposed a prehispanic origin for the terrace construction. While this finding has been noted in the literature (e.g., Curet 1996; Horowitz et al. 2020; Lane et al. 2008; Wyatt 2008), there have been sporadic observations that question the prehispanic origin hypothesis and instead attribute the terraces to later, postcontact colonial communities. This paper revisits the terraces of the Cerro Planadas site through an integrated approach that combines pedestrian survey data, lidar-derived DEMs, hydrological modeling, and GIS-based spatial analysis. We examine the spatial distribution of these structures, propose a construction sequence with estimates of the labor investment required, and conclude with a discussion of the possible social contexts within which these terraces were built.

Ortiz Brito, Alberto (University of Kentucky; Centro INAH Veracruz)

[262] *From the Past to the Present: Cultural Biography of the Hueyapan and Cobata Colossal Heads*

This paper explores the cultural biography of the Hueyapan and Cobata Olmec colossal heads from prehispanic times to the modern era, focusing on the spaces in which they have worked as social agents. The former was erected in the regional center of Tres Zapotes, while the latter was found in the northeastern periphery of its hinterland. Archaeological evidence indicates that they remained as valuable objects during the Epi-Olmec horizon. In the current political division, Tres Zapotes and its hinterland are under the municipal territory of Santiago Tuxtla, Veracruz, making these Olmec monuments and many more archaeological remains part of its cultural heritage. Now, the Cobata head lays on the main plaza of Santiago Tuxtla, and the Hueyapan head is housed in the museum of the peripheral village of Tres Zapotes. This circumstance allows us to examine diachronically the circulation of monumental archaeological objects within a particular landscape, and how they have been used by different groups throughout time. I argue that the monumentality of colossal heads is the main characteristic that has drawn the attention of past and present political leaders in the pursuit of building prestige.

Ortman, Scott [199] see Berestyuk, Margaret

Ortman, Scott [34] see Davis, Kaitlyn

Ortman, Scott [34] see Hardie, Megan

Ortt, Isabel [264] see Blair, Christopher

Osborn, Jo (Texas A&M University)

[267] *Maritime Foundations for Andean Resilience? Specialized Economies and Climatic Challenges in Coastal Peru*

Michael Moseley's *Maritime Foundations for Andean Civilization* (MFAC) model emphasized the pivotal role of marine resources in the emergence of complex societies on the Andean coast. While MFAC focused on productivity and subsistence foundations, the long-term viability of both maritime and agricultural production was repeatedly challenged by variability associated with El Niño-Southern Oscillation (ENSO) cycles. I argue that regional networks of independent, specialized communities exploiting distinct ecological niches created systems of mutual interdependence that buffered against ENSO-driven scarcity. Evidence from Jahuay (200 BC–AD 150), a specialized maritime village whose inhabitants harvested fish, shellfish, seabirds, and marine mammals, illustrates how this complementarity operated in practice. These products were consumed locally and exchanged with inland communities for agricultural goods. Situating Jahuay within MFAC's broader

framework reveals how maritime resources were not only foundational for early political and economic systems but also underpinned long-term resilience strategies in the face of environmental instability.

Osborn, Jo [180] see Grote, Willow

Oseguera Sotomayor, Sandra (UC Berkeley)

[47] *Living Archives of Heritage and Resilience: Agricultural Landscapes in the Zapotec Sierra Norte*

This paper examines the agricultural landscapes of Talea de Castro, Oaxaca, as *living archives* of Zapotec ecological knowledge, multispecies co-becoming, and environmental resilience. Drawing on archaeological, historical, and ethnographic data, this study explores how Zapotec communities, exemplified by Talea de Castro, sustain cultural and ecological continuity through landscape stewardship and *mantenimiento*, a Zapotec ethic of reciprocal care between human and nonhuman actors. Rather than treating agricultural fields as static or purely productive, this paper traces how agricultural practices embody a relational ecology in which community, plants, and soils are deeply interdependent. The adoption of fast-growing maize varieties like *tonamil* in response to drought, the retreat from monoculture, pushed by a turn toward agricultural modernization, after coffee rust infestations, and the preservation of *heirloom* seed diversity through regional exchange networks all reflect Talea de Castro's adaptive responses to socioenvironmental thresholds. These choices are not merely pragmatic but rooted in intergenerational knowledge, mutual aid, and long-standing commitments to landscape care. By framing agricultural landscapes as dynamic archives, this paper contributes to a relational archaeology that centers on Indigenous knowledge, resilience, and collaboration. It also highlights historical ecology as an integrative framework to illuminate the dialectic relationships between people and their environments.

Oshiro, Janet, Sarita Fuentes (Museo Pachacamac-Ministerio de Cultura), Denise Pozzi-Escot (Ministerio de Cultura), and Andrew Nelson (Western University)

[62] *Recent Findings of Funerary Contexts from the End of the Middle Horizon at the Urpiwacha Temple of the Pachacamac Archaeological Sanctuary*

Pachacamac, the most important archaeological complex on the prehispanic central coast of Peru, includes the Urpiwacha Temple (AD 200–600), a monument with successive occupations extending into the Late Horizon (AD 1470–1533). Recent excavations on the temple's southern slope revealed primary funerary contexts dated to the late Middle Horizon (AD 600–1100). This paper presents the initial analysis of the principal findings and human remains of the funerary context, focusing on the characterization of its components and mortuary practices. The results provide new insights into funerary dynamics during a period of sociopolitical transition, highlighting both the variability of ritual treatments and possible interactions between local and foreign traditions.

Osorio, Daniela [93] see Parish, Ryan

Osorio, Daniela [41] see Rademaker, Kurt

Osorio Leon, Jose Francisco [104] see Sobrino, Santiago

Osterholtz, Anna, Mario Novak (Institute for Anthropological Research, Zagreb, Croatia), Lujana Paraman (City Museum of Trogir, Croatia), and Mario Carić (Institute for Anthropological Research, Zagreb, Croatia)

[123] *A Rare Double Burial from Roman Tragurium (Central Dalmatia, Croatia): An Osteobiographical Analysis of Burials 54 and 64*

Over the last two decades, rescue excavations of Roman and Late Roman period cemeteries (2011, 2016, 2020) within the modern town of Trogir (Croatia) revealed the remains of more than 150 burials. Here we present the case study of an adult-infant burial recorded in the 2020 excavations of western part of Tragurium communal necropolis, Burials 54 and 64, dating to the first phase of the communal necropolis sometime between early second and late third century CE. Burial 54 was interred in a rectangular pit (possibly in a wooden coffin), with Burial 64 atop the legs of Burial 54 and covered with a large stone slab. Burial 54 is a middle adult male who experienced at least two instances of trauma—antemortem

cranial depression (CDF) and rib fractures and a large penetrating CDF on the frontal. Burial 64, an infant, exhibits pathological changes consistent with metabolic diseases similar to the majority of other individuals interred in the cemetery who died as infants. Using an osteobiographical approach, we'll discuss these burials individually and as a group, examining the rare double burial in the context of the rest of the cemetery and the region. *****This presentation will include images of human remains.**

Osterholtz, Anna [298] see Ballinger, Madeline

Osterwise, Luna

[201] *From California to Phoenix and Tucson: Abalone*

Haliotis, commonly known as abalone, was one of the few shells the Hohokam traded for that can only be traced back to the coast of California. Other shells such as *Laevicardium*, *Elatium*, and *Glycemeris* were easier to source from the gulf of California due to the warmer climate. Due to this, *Haliotis* can be used as clear indicator of trade with the California coast. This poster examines the frequency of *Haliotis* and other shells native to the coast of California at large Hohokam habitation sites. It also compares frequency at sites in the Phoenix basin to the Tucson basin to see if there is a meaningful difference in frequency of *Haliotis*. The type of shell artifacts produced using *Haliotis* found at the sites is examined. The overall relationship of abalone with Phoenix and Tucson is explored.

O'Sullivan, Rebecca (Stantec), Jonathan Smith (Stantec), Kimberly Hinder (Stantec), Valerie Nobles (Stantec), and Ellen Brady (Stantec)

[264] *"Gone to a Bright Home Where Grief Cannot Come": A View of Cemetery Preservation and Community Engagement at Two Cemeteries in Wake Forest, NC*

In 2025, Stantec was contracted by the town of Wake Forest to conduct ground-penetrating radar (GPR) surveys at two historic African American cemeteries, Olive Branch Cemetery and Friendship Chapel Cemetery, within the town. While GPR has long been a standard method for unmarked grave identification within historic cemeteries, the project also included workshops for both congregations focusing on cemetery preservation and management. Working with the town and through consultation and direction from the associated congregations, Stantec archaeologists worked to develop engaging and instructive public workshops as part of the project. This presentation focuses on the results of the GPR survey work, how those results were integrated into public-facing products for the client, and strategies used to create cemetery preservation workshops that were both informative and engaging for the public. This presentation does not include pictures of human remains but does include images of burial sites and remote sensing data from cemeteries.

Otaola, Clara [263] see Gil, Adolfo

Otárola-Castillo, Erik (Purdue University)

[158] *Building a "Cut Mark Space": Operationalizing Lyman's Multidimensional Framework for BSM Identification*
R. Lee Lyman's work has significantly influenced the study of bone surface modifications (BSM) resulting from butchery. His 1987 framework in *Advances in Archaeological Method and Theory* organized BSM analysis into four dimensions: anatomical location, orientation, morphology, and frequency. He warned of equifinality when these dimensions are treated subjectively, emphasizing the need for criteria to distinguish cultural from noncultural trace evidence and rigorous measurement. His later work in *Quantitative Paleozoology* (2008) reframed quantification itself, defining measurement as the assignment of numerical values to observations based on explicit rules. The approach presented here builds directly on these insights: a rule-based method for operationalizing Lyman's butchery framework. Anatomical location is mapped by assigning each BSM to a canonical animal atlas; morphology is quantified in terms of shape and size, while incorporating orientation and frequency. These variables are integrated into a multidimensional "cut mark space" to evaluate whether new BSMs fall within the distribution of known cut and non-cut examples. This contribution is also personal. Early in my career, after a journal rejection, Lyman encouraged me to persevere, enabling me to publish my first work. His mentorship, through both his writings and his kindness, continues to inspire the work I present here.

Otárola-Castillo, Erik [319] see Knell, Edward
 Otárola-Castillo, Erik [319] see Lyman, R. Lee

Overholtzer, Lisa (McGill University)

[215] *Gender and Power (and the Disruptions of a Tiny Insect) in Colonial Tlaxcala*

Inspired by Rosemary's groundbreaking book *Gender and Power in Ancient Mesoamerica* and by her more recent work on materiality, this presentation uses Indigenous historical and household archaeological lines of evidence to reveal some of the tensions and exercises of power *within* the Indigenous conquistador community in Tlaxcala, Mexico. For their service in the conquest, the Tlaxcalans were exempt from some tribute and given some autonomy in ruling themselves within the Spanish administrative hierarchy. The cabildo (municipal council) of Tlaxcala fought for Indigenous interests within colonial structures, e.g., in resisting forced resettlement or *congregación*. Yet the cabildo itself—filled by elite Indigenous men—was exclusionary. The copious documentation they left behind attests to anxieties about morality and women's changing status, particularly with respect to cochineal, a major export and source of wealth as Indigenous people entered the global economy. The cochineal insect, tiny but teeming with vibrant, stable red colorant, threatened existing status hierarchies. It also, as this presentation will discuss, left traces in the lower status sixteenth century domestic contexts where it was raised, ground, and mixed, offering us a window into household entanglements with cochineal that were more complex and varied than simple production for a European market.

Overholtzer, Lisa [97] see Laruelle Aranguiz, Katarin

Owen, Bruce (Archaeological Research Facility, University of California, Berkeley), and Manuel Perales (Proyecto Qhapaq Ñan-Sede Nacional, Ministerio de Cultura del Perú)

[186] *Excavations at Julcatambo Grande, a Large Wari-like Complex on the Prehispanic Road between Hatun Xauxa and Pachacamac, Peru*

The Wari polity of Middle Horizon Peru (~AD 600–1000), often considered an empire presaging the Inka, was marked by a style of architectural compounds sparsely distributed across much of Peru. The highlands around and north of the upper Mantaro valley are a gap in this distribution, despite their central location. The previously unreported site of Julcatambo Grande, located around 4,000 m asl in puna grassland on the prehispanic road between Hatun Xauxa and the coastal center of Pachacamac, may fill that gap and provide insights into Wari's extension beyond its heartland. Julcatambo Grande is a buried 5.2 ha complex of stone walls forming at least 18 large, agglutinated, rectangular enclosures, some bounded by narrow corridors divided into small cell-like rooms, a pattern reminiscent of some Wari provincial centers, but not exactly like any. Mapping and test excavations revealed evidence both suggestive and ambiguous, but absolutely not Inka. At a minimum, the road predates the Inka, and someone long before them built a substantial complex next to it unlike anything else known in the region. We present radiocarbon dates and obsidian, ceramic, faunal, botanical, and architectural evidence and plan additional work to clarify what happened at Julcatambo Grande in the Middle Horizon.

Owen, Ross (Dudek), Brad Comeau (Dudek), and Zach Windler (Dudek)

[281] *Using USGS Lidar Data to Identify Potential House Pit Features in the Great Basin*

This poster demonstrates the potential of lidar remote sensing for identifying precontact, nonlinear archaeological features in the Great Basin. Using a southern Oregon case study, the project employed publicly available USGS lidar data to locate potential house pit features more efficiently than traditional pedestrian survey alone. LAS files were processed in ArcGIS Pro using the LAS Dataset to Raster tool. Surface points were filtered to create a 1 m resolution Digital Surface Model (DSM), which was visually analyzed for archaeological features. The analysis identified 34 potential features. Of these, six had been previously documented through ground reconnaissance; lidar revealed 28 additional features in adjacent areas. Subsequent pedestrian survey confirmed their archaeological potential. These findings—likely representing early Archaic period occupations—demonstrate the potential for lidar data to assist in identifying nonlinear features in the Great Basin. The methodology supports broader regional identification of

cultural resources and facilitates remote sensing approaches to survey. Future applications may benefit from machine learning to automate feature detection. The lead federal agency is currently determining the nature of the archaeological site discussed in this poster.

Owuor, Patrick Mbullo [247] see Julison, Julie

Oyaneder, Adrián [340] see Valenzuela, Daniela

O'Donnell-Silfverberg, Isabella (University of New Mexico, Albuquerque)

[57] *Farming in the Gallina Area: Exploring Varied Agricultural Strategies in a High-Elevation, Low-Precipitation Environment*

The Gallina culture of northwestern New Mexico subsisted in a high-elevation, low-precipitation environment for several centuries, during the period from 1100 to 1300 CE. The Gallina area is between 6,000 and 9,000 feet asl, receives an average of only 42 cm of rainfall annually, and has an average of only 177 growing degree days. There has been little focused research done on the farming practices of the Gallina people, though a significant part of their subsistence was agriculturally based. Survey within the densely occupied Gallina Canyon has identified a number of agricultural features, such as terraces and grid plots, and the land surrounding the Rio Gallina has numerous locations suitable for irrigated fields. This poster presents the results of recent fieldwork done in Gallina Canyon, using geospatial and geoarchaeological data to analyze the diverse agricultural strategies used by the Gallina people to successfully cultivate within an environment traditionally seen as “marginal” for crop production.

Pace, Veronica, Nicole Smith-Guzmán (Smithsonian Tropical Research Institute), and Ashley Sharpe (Smithsonian Tropical Research Institute)

[311] *Paleopathological and Isotopic Insights into the Lives of Children during Prehispanic and Colonial Periods at Panamá Viejo, Panamá*

The conquest and colonization of the Americas brought profound changes to the daily lives, health, and diets of the populations who inhabited the region. This study looks at the experiences of children and young people at the archaeological site of Panamá Viejo, Panamá, through the analysis of skeletal remains from both the prehispanic (AD 500–1500) and colonial (AD 1500–1671) periods. To address this, the research combined the study of pathological lesions with stable carbon and nitrogen isotope analyses. The skeletal evidence focused on nonspecific indicators of stress such as linear enamel hypoplasia, cribra orbitalia, porotic hyperostosis, and periosteal reactions. Interestingly, these markers appeared at similar frequencies across both time periods, suggesting that overall exposure to physiological stress remained relatively constant. In contrast, isotope evidence from $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$ values in bone collagen points to clear dietary changes. During the prehispanic period and the early decades of European presence, diets relied heavily on maize and marine resources. After around AD 1540, however, a noticeable shift occurred toward increased consumption of C_3 plants and terrestrial animal protein, particularly beef and pork, illustrating the profound transformations in foodways brought about by colonization.

Pacheco, Gregorio [276] see Leiva, Jennifer

Pacheco-Forés, Sofía, Emily Briggs (University of Minnesota Twin Cities), Weiming Ding (University of Minnesota Twin Cities), Xinyuan Zheng (University of Minnesota Twin Cities), and José Luis Punzo Díaz (Instituto Nacional de Antropología e Historia)

[221] *Captives, Transgressors, and Chosen Ones: A Biogeochemical Investigation of Human Sacrifice as a Tool of Empire in the West Mexican Postclassic*

The Tarascan state was a multiethnic empire that emerged during the Postclassic period (1000–1525 CE) in Western Mexico centered on its capital city of Tzintzuntzan in modern-day Michoacán. Despite being a rival to the Aztec Empire and the second largest state in Mesoamerica at the time of the Spanish conquest, relatively little is known about Tarascan imperial strategies. Ethnohistoric sources indicate that Tarascan traditions of human sacrifice played an important role in the sociopolitical and ritual life of the state. These sources suggest that Tarascan practices of ritual violence were polarized between two broad categories—the

sacrifice of foreign war captives and the sacrifice of local community members, and that each of these categories fulfilled a distinct imperial strategic need. We analyze radiogenic strontium ($^{87}\text{Sr}/^{86}\text{Sr}$) isotopes in the paired otic capsules and temporal squama of a sample of sacrificial victims ($n = 10$) recovered from a massive ossuary in Tzintzuntzan's ritual precinct to reconstruct the residential histories of the sacrificial victims to establish whether they were foreign captives or local Tzintzuntzan community members and understand if and how ritual violence was used as a strategy of imperial domination and legitimization in the Tarascan Empire. ***This presentation may contain images of human skeletal remains.

Pacheco Silva, Monica (Instituto de Investigaciones Estéticas UNAM Oaxaca), and Viola Koenig (Altamerikanistik)

[97] *Lienzos as Political Documents: Issues Concerning their Origins, Provenance, and Present-Day Relevance*

Were large-format *lienzos*, such as those of the Coixtlahuaca and Cuauhtinchan groups from Puebla and Oaxaca, already in use before the Spanish conquest, or did this medium emerge as a response to colonial demands, serving the interests of Indigenous nobility and communities? If the latter, what advantages did cotton fabric offer compared to prehispanic support materials such as deerskin or indigenous paper (*amatl*) made from agave or fig tree fibers? What might their possible prototypes have looked like? What kind of model did the *Lienzo de Tlaxcala* of 1519 provide? The unique example of the *Lienzo Seler II / Coixtlahuaca II* provides insight into these unresolved questions. It also demonstrates the significance of such documents for their communities of origin, both at the time of their creation and today. And although it is currently displayed prominently at the new Humboldt Forum in Berlin, attracting large numbers of visitors, the question remains whether this is the appropriate place for it to stay in the future. These *lienzos* were created as political documents, and they remain so to this day.

Pagan Rivera, Aida [294] see Ortiz-Aguilu, Juan-Jose

Pagano, Victoria, Abigail Antinossi (Rice University), Jon Lohse (Terracon Consultants; Gault School of Archaeological Research), and Mike McBride (Gault School of Archaeological Research)

[41] *Early Paleoindian Chipped Stone Material, Flake Technology, and Context at August Pine Ridge, Belize*

This paper presents ongoing analyses aimed at understanding complex biface production reflecting the peopling of the Americas as represented at August Pine Ridge in northern Belize. An overarching goal of this research blends the categorization of raw material types, especially a locally dominant type called "APR Purple" that is understood not to be from the Northern Belize Chert Bearing Zone; flake technology (through an assessment of flake types); and stratigraphic relationships of recovered materials as a means of understanding stone tool production, site integrity, and how these changed from Early Paleoindian through Archaic times. Our analyses include finished specimens, manufacturing failures, discards, and preforms; debitage from excavated contexts probably reflect the local manufacture of all of these reduction stages. Preliminary findings of this integrated approach indicate that the area's sandy deposits, while mixed in many cases, have potential to contain relatively isolable contexts and/or technological assemblages. August Pine Ridge has potential to contribute to the development of a relative chronology for Central America starting in the Terminal Pleistocene and spanning through much of the Holocene.

Pagano, Victoria [280] see Jalbert, Catherine

Pagano, Victoria [41] see McBride, Mike

Paige, Jonathan (New Mexico Consortium), Cindy Hsin-yee Huang (Arizona State University), and Charles Perreault (Arizona State University)

[336] *How Do We Compile Data from Text? Using Codebooks and Machine Learning to Track Three Million Years of Technological Change*

Stone tool technology represents one of the key lines of evidence for hominin behavioral variation spanning the Plio-Pleistocene through the Holocene. However, much of the data archaeologists have accumulated about stone tools are in written prose, and illustrated in figures and diagrams. Fully synthesizing and integrating this work into datasets that can be analyzed statistically requires solving the problem of turning

natural language, with all its contextual meaning and ambiguity, into structured datasets. This has long remained a problem in archaeology. In this presentation we discuss the potential of codebooks and machine-learning models to help ensure consistency in identifying technological concepts discussed in text and describe our work studying changes in technology spanning the past three million years.

Paige, Jonathan [336] see Huang, Cindy Hsin-yee

Paige, Megan, Marissa Ramsier (Cal Poly Humboldt), and Michał Adamczyk (University of Szczecin, Poland; National Museum in Szczecin, Poland)

[89] *Stable Isotope Analysis: Diet and Nutritional Stress in a Late Medieval Population*

Żelewo 1-3 is a late medieval cemetery site located in northwestern Poland, a region formerly known as Pomerania. This study uses stable isotope analysis to investigate dietary patterns and their relationship to health, cultural practices, social status, and indicators of trade networks. We focus on $\delta^{13}\text{C}$ from permanent first molars in a subsample of adults and older adolescents, although additional isotopic evidence is also considered. In particular, we evaluate the potential relative consumption of C_3 and C_4 plants as well as terrestrial and marine protein sources. Preliminary results suggest consistency with the broader region and time period, with signatures evincing a predominant reliance on C_3 resources. We discuss variation in findings with respect to implication for fish consumption given the lakeside environment. For each individual in the sample, osteological data was also collected, with a focus on factors that could elucidate trends in isotopic data and possible nutritional stress. Particular attention was given to linear enamel hypoplasia, porotic hyperostosis, and cribria orbitalia. We discuss how these findings intersect with the isotopic data and trends observed in the larger region. ***This presentation will include images of human remains.

Pailes, Matthew [26] see Ferguson, Jeffrey

Pailes, Matthew [88] see Krug, Andrew

Pailes, Matthew [88] see Sanchez Miranda, Guadalupe

Palka, Joel (Arizona State University), and Molly Corr (Arizona State University)

[161] *Postclassic Maya Household Economies at the Rural Site of Mensabak*

Excavations in Late Postclassic (ca. 1350–1550 CE) Maya households at Mensabak, Chiapas, Mexico, have obtained information on their economy in a rural area. Mensabak was located a few days walk from thriving mercantile systems of Chontal Maya and Aztec *pochteca* merchants in Tabasco, Ch'ol-Lacandon Maya in southeastern Chiapas, and highland Mayas to the south near Ocosingo to Zinacantan in Chiapas. Mensabak Maya participated in regional trade as a rural stopover between these areas, in addition to attracting visitors to its impressive pilgrimage shrine on Red Mountain. This presentation covers recent findings from household archaeology, laboratory analysis, and the documentary record. People came to Mensabak for collective pilgrimage rituals at its mountain of origin, water, and sustenance, while trading for animal skins, feathers, tobacco, copal incense, and other local goods. Mensabak Maya also produced marine shell ornaments and copper bells for the ceremonies, in addition to aquatic and terrestrial foods from modified waterscapes, to bolster their economy. The artifactual evidence points to significant interaction with Chontal Maya and Aztec populations on the plains just to the north due to the vibrant Mensabak ritual economy.

Pallas, Caitlyn (Archaeometry Laboratory at the University of Missouri Research Reactor), Brandi MacDonald (Archaeometry Laboratory, University of Missouri Research Reactor), and Marcello Mogetta (University of Missouri)

[209] *Investigating Large Batches: An Archaeometric Approach for the Characterization of Structural Mortars from Roman Urban Sites*

This paper presents the preliminary results of a collaborative research project centered on the archaeometric investigation of Roman concrete construction at the sites of Gabii and Pompeii, as part of a broader campaign of excavation and study of pluri-stratified monumental foci (the so-called Area Urbana complex and the Sanctuary of Venus, respectively). A range of analytical techniques is being employed to determine the composition, texture, and mineralogy of structural mortars sampled from stratigraphically dated architectural features. We discuss how neutron activation analysis (NAA) can be applied in

combination with other archaeometric techniques to identify technological choices and elucidate their evolution over time (from the second century BCE to the third century CE) and space (the Alban Hills and Somma-Vesuvius catchment areas). By processing the NAA mortar data with multivariate statistics, and then further investigating groupings via microscopy, we were able to reveal previously unknown trends in the mortar composition. The results also demonstrate the extent to which recipes and fabrication methods correlate with structural function. Our presentation will focus on the preliminary results from the NAA and PCA analysis and how such a combination of archaeometric techniques and statistics can be applied in Roman mortar studies.

Palomares, Teresa (Illinois State Archaeological Survey), and Whitney Goodwin (Archaeometry Laboratory at MURR; University of Missouri)

[266] *Portable XRF and INAA Use as a Strategy of Sampling and Sourcing Analysis for Ceramics: The Case Study of Formative Pottery from the Mixteca Alta, Oaxaca*

During the last two decades, portable X-ray fluorescence analysis has been added to the techniques of elemental analysis in the study of archaeological materials, including pottery. However, the analytical performance of pXRF must be examined in comparison to high-sensitivity techniques, such as instrumental neutron activation analysis (INAA). This complementary application, in addition to other archaeological criteria, produces a reliable set of data related to compositions. In this paper, we present the results of combined portable XRF and INAA analyses of 141 Formative pottery sherds from the Tayata site, located in the Mixteca Alta, Oaxaca. Evaluation of data demonstrates that portable (and nondestructive) XRF can help to select a sample for destructive analyses and be used for complementary interpretations. XRF, INAA, analysis of attributes in ceramic collections, and geological information, when combined, are a means to refine local and regional pottery assemblages.

Palomares, Teresa [218] see Krupa, Krystiana

Palonka, Radoslaw (Jagiellonian University in Kraków), Katarzyna Ciomek, Boleslaw Zych (Jagiellonian University in Kraków), Jakub Śliwa (Jagiellonian University in Kraków), and Vincent Macmillan (Bureau of Land Management)

[276] *Digital Documentation and Analysis of Rock Imagery in the Canyons of the Ancients National Monument, Southwestern Colorado*

This paper aims to highlight the application of diverse digital documentation methods used within the Sand Canyon–Castle Rock Archaeological Project. The project is being conducted in southwestern Colorado and focuses on the study of settlement and rock imagery. The rock art is attributed to Ancestral Pueblo culture, historic Ute tribes, as well as Spanish-American settlers. In some cases, these images represent the only evidence of the presence of specific groups in the region due to the natural catastrophic events, including flooding. A crucial component of the research is the use of a range of digital documentation and interpretative methods aimed at both recording and analyzing rock art, as well as its subsequent presentation. The project employs techniques including advanced digital photography, photogrammetry, 3D scanning, and virtual analysis that is carried out using tools such as DStretch, RealityCapture, and other software. Interpretative approaches informed by cultural anthropology are also integrated, including consultations with Indigenous communities. By combining technical documentation with collaborative interpretative frameworks, the project not only records rock art panels in detail but also situates it within broader cultural and historical contexts. This integrated approach provides deeper insights into the significance and role of rock art in the past.

Palonka, Radoslaw [335] see Ciomek, Katarzyna

Palumbo, Scott (College of Lake County)

[311] *Unorthodoxies of Western Pacific Panama*

Were external populations, ideologies, or technologies catalysts for social change? This paper compares the records from two archaeological regions, the Upper Chiriqui Viejo and the Bay of the Dead, to evaluate and critique the assumption that exchange activities underwrote the evolution of incipient complexity.

Palus, Matthew [264] see Torp, Lyle

Panich, Lee (Santa Clara University), and Maia Dedrick (Santa Clara University)

[219] *Alternative Archaeologies of California: Decentering Fieldwork in the Classroom and Community Collaboration*

In this time of great uncertainty about the future of California archaeology—with very real concerns about funding, regulatory contexts, curation, and access—it is more important than ever to engage in research and teaching practices that produce meaningful results for tribes, other descendant communities, and the broader public. Perhaps counterintuitively, part of the solution may be to decenter fieldwork, particularly in strictly academic research and in pedagogical settings where cultural resource management careers are not the primary outcome. Drawing on examples from Santa Clara University, this paper examines how partnerships with the Muwekma Ohlone Tribe and the Ohlone Indian Tribe have refocused attention from the past alone and instead to the present and future of tribal communities. Through the use of multiple lines of evidence—including tribal knowledge, early ethnographic notes, archival documents, and orphaned collections—several collaborative projects are highlighting critical aspects of local heritage and community engagement for a broad range of students, most of whom will not pursue careers in the field of archaeology. These examples show how we can leverage our expertise to provide new ways of teaching and conducting archaeology at the intersection of academia, cultural resource management, and tribal interests.

Pante, Michael [356] see Pobiner, Briana

Papavasiliou, Dimitri

[44] *Ethnoarchaeology and the Microbotanical Signatures of Paleolithic Hearths and Bedding Technology*

This study presents new data on the application of ethnoarchaeology to two persistent challenges in Paleolithic archaeology: determining the function of hearth features and identifying the presence of bedding material in the archaeological record. As part of this dissertation research, nine types of traditional hearth features and three types of traditional bedding practices were documented among the Ogiek, an Indigenous hunter-gatherer community living near the Mau Forest in Kenya, through interviews and participant observation. Archaeological sampling included 84 loose sediment samples and 10 micromorphological blocks collected from hearths and bedding features, encompassing combustion layers, rubified sediment, and bedding-altered soils. These samples are being analyzed using Fourier-transform infrared spectroscopy (FTIR), micromorphology, microcharcoal quantification, and phytolith concentration and identification to investigate how traditional fire-making and bedding practices present in the microarchaeological record. Preliminary observations reveal diverse stratigraphic profiles dependent on the type of feature, including hearths comprising thick layers of ash and clear rubified sedimentary layers as well as discolored sediments beneath bedding comparable to phytolith-rich deposits found at Sibudu Cave, South Africa. By using ethnoarchaeological insights to evaluate microbotanical signatures, this research provides a novel methodological framework for identifying distinct hearth functions and detecting ephemeral bedding material in the Paleolithic record.

Para, Heather (New Mexico State University)

[318] *Bill Birmingham: From Collector to Curator*

Collaborations between museums housing archaeological collections and the collectors and avocational archaeologists in their midst are invaluable and underappreciated. Bill Birmingham's 25-year relationship with the Museum of the Coastal Bend in Victoria, Texas, presents an ideal case study of these kinds of collaborations. Birmingham, a former collector, Texas Archaeological Steward, and avocational archaeologist, has shaped the museum's collection since its inception, both directly through donation, organization, and management of materials, and indirectly by negotiating donations of significant regional collections. For nearly 70 years he has influenced the archaeology (and archaeologists) of Texas as a respected authority on lithic identification, a mentor to professional archaeologists, and an ardent advocate for responsible collection, both within museums and among private collectors. His decades of work with regional institutions epitomize museum/collector collaborations and continue to have a lasting and far-reaching impact.

Paraman, Lujana [123] see Osterholtz, Anna

Parbus, Brett (University of Georgia)**[252] *Multiproxy Histories of Landscape and Settlement Dynamics on Ossabaw Island, Georgia***

Indigenous communities have inhabited and managed the landscapes of the southeastern coast of North America for thousands of years. Decades of archaeological research have culminated in detailed histories of cultural settlement change for coastal regions and barrier islands. These investigations have primarily relied on radiocarbon evidence and material culture chronologies to build models of demographic change and technological development over these millennia. This research project builds on those foundations by incorporating fossil microbotanical and charcoal evidence from pond sediment cores on Ossabaw Island, Georgia, to build a localized paleoenvironmental model for the island, exploring how changes to vegetation communities and fire regimes may have been shaped by Indigenous institutions. I combine paleoenvironmental data from the sediment cores with extant cultural material records, radiocarbon dating, and Bayesian statistical modeling to present a more holistic interpretation of the cultural landscape and refine existing chronologies for the island and the broader coastal region.

Pardo Grau, Cecilia (Universidad del Pacífico), and Thomas Cummins (British Museum)**[214] *Objects in Guano: New Insights into the Archaeological Discovery from Peru's Macabí Islands***

By late 1871, the British Museum had acquired over 30 archaeological objects from the Macabí Islands, located 13 km off Peru's northern coast. These artifacts were recovered from guano deposits by British companies exploiting the resource under a Peru–United Kingdom agreement. The assemblage includes ceramics, textiles, and seashells but is particularly remarkable for a set of wooden sculptures depicting mythological beings, architectural scenes, and naked prisoners bound by ropes. Stylistic features associate the collection with the Moche culture (AD 1–800). Never before studied, the Macabí objects represent an unprecedented contribution to Andean archaeology and to understanding the early formation of Peruvian collections. Their removal to Europe created a significant void in local research on ancient Peruvian cultures. Having traced the trajectory of these objects from their discovery, through their transatlantic voyage, and to their final destinations in various European museums, this conference presents new evidence and reports from guano traders and dealers who witnessed the moment of discovery. Their accounts, revealing details of additional objects and burials found alongside, offer fresh insights into Moche ceremonial practices that may have taken place on the islands during the prehispanic period.

Paredes Medina, Karlo [224] see Figueroa Beltran, Carlos

Paret, Henry [202] see Cogan, Jesse

Pargeter, Justin [336] see Falcucci, Armando

Pargeter, Justin [336] see Murray, John

Pargeter, Justin [170] see Wong, Gillian

Pari Flóres, Rómulo [213] see Velasco, Matthew

Pariona Muñoz, Lizbeth [45] see Garvin Suero, Arianna

Paris, Elizabeth (University of Calgary), Isabella Hernandez (University of Calgary), Roberto López Bravo (Universidad de Ciencias y Artes de Chiapas), and Gabriel Lalo Jacinto (Centro INAH-Chiapas)**[157] *Invertebrates in Central Chiapas Diets***

Invertebrates have historically been under-theorized in dietary studies of ancient Mesoamericans, particularly for inland archaeological sites far from maritime resources. However, for many inland areas, both the archaeological and ethnographic records attest to the dietary and cultural importance of invertebrate species, from the earliest occupants to the present day. In central Chiapas, freshwater snail and clam species harvested from local rivers, including *Pachychilus* sp. and *Nephroniaias* sp. have been reported from a wide range of archaeological sites, and *Pachychilus* sp. is still regularly eaten as a traditional appetizer, with recipes found across a wide range of communities. Additionally, while insect remains are archaeologically elusive,

insects and insect products are regularly documented in traditional diets, including edible chichatana ants (*nucú*), stingless bee honey, wasp larvae, grasshoppers, and others. Increased attention to the diversity of ancient foodways and the range of ingredients in multicomponent dishes, beyond dietary staples, can shed light on the broader nutritional profiles of ancient peoples, and also highlight the potential roles of these complimentary dietary species as a potential source of resiliency when staple crops failed or populations were displaced through sociopolitical turmoil.

Paris, Elizabeth [161] see Gallaga, Emiliano

Paris, Elizabeth [157] see Hernandez, Isabella

Paris, Elizabeth [266] see Meanwell, Jennifer

Paris, Elizabeth [24] see Serafin, Stanley

Parish, Ryan (University of Memphis), Luca Sitzia, Cesar Borie (Universidad de Tarapacá), and Daniela Paz Osorio (Universidad de Tarapacá)

[93] *Exploring Long-Term Chert Source Management Strategies of Ancient Hunter-Gatherers Groups in the Atacama Desert Altiplano, Northern Chile*

The project seeks to understand landscape use and lithic raw material resource management strategies by Late Pleistocene / Holocene hunter-gather groups in the Atacama Desert Altiplano of northern Chile. A greater understanding of the geographic distribution and geologic characteristics of lithic sources directly helps to reconstruct group movement, landscape knowledge, resource selection decisions, and group social networks through exchange or trade. Specifically, the research aims to identify the main sources of lithic raw materials utilized by hunter-gatherers at high altitude Andean wetlands (*bofedales*). Potential toolstone sources were located, sampled, and analyzed using reflectance spectroscopy. The collection of hyperspectral data differentiates the lithic sources and nondestructively analyzes over 2,000 stone artifacts. The project is the first of its kind for the region and adds significant knowledge regarding the mobility and landscape occupation during the Late Pleistocene / Holocene of high-altitude hunter-gatherers of the Atacama Desert Altiplano. The findings provide new key information to understand the long-term social dynamics of hunter-gatherer groups dwelling in high-altitude *bofedales* and salt flats.

Parish, Ryan [93] see Franco, Nora

Park, Jiyoung (Seoul National University)

[102] *Elite Burials and Pottery Exchange in Mahan during the Fourth–Sixth Centuries in Korea*

Bungumyo, a characteristic type of mound burials in the Yeongsan River Basin of southwestern Korea, were constructed mainly during the fourth to sixth centuries for the elite groups of Mahan polities. These burials are interpreted as symbolizing political authority and embodying a shared identity among Mahan elites, as reflected in their common burial structures, burial customs, and associated burial goods. This study investigates the exchange patterns of burial vessels from Bungumyo using portable X-ray fluorescence spectrometry, and compares these with the pattern of utilitarian pottery from contemporary settlement sites. The analysis reveals not only that some vessels were imported from outside the basin, but also that pottery from multiple local production sources within the basin was intermingled within individual burial sites. This pattern contrasts with the clear compositional clustering of utilitarian pottery by settlement and indicates that pottery circulated widely as funerary offerings across the basin. These results suggest that exchanged vessels might have been brought by diverse groups participating in funerary rituals, highlighting the role of Bungumyo as a venue for social interaction and network building among Mahan polities.

Parker, Evan (National Park Service)

[223] *Archaeologies of Value and Inequality among the Middle Preclassic Maya*

The archaeology of value as a theoretical framework has enjoyed a rebirth in recent years, with studies ranging from a focus on commodity value and inalienability, to analyses of the nature of ritual economy and studies of “the good life.” Yet a theory of value can also play an integral role in conceptualizing how and why inequality is manifested in the past. Here, I examine realms of discourse within ancient Maya systems of value, especially during the Middle Preclassic period (1000–350 BC). Domains of value are formulated in diverse

array of discursive social forms and practices, ranging from kinship, quotidian ritual, and practices of daily life, yet they can also be framed by political actors actively engaging in defining what is of value in society. By examining shifts in materialized domains of value at the Middle Preclassic Maya village of Paso del Macho, I offer a new model for tracing the “origins of inequality” that proves flexible in what aspects of social life can be examined, and how they can be studied archaeologically.

Parker, Evan [338] see Seligson, Ken

Parker, Glendon (University of California Davis), Nicole McGloughlin (California Department for Fish and Wildlife), Kyle Burke (University of California, Davis), and Ashley Spicer (California Department for Fish and Wildlife)

[45] *Taxonomic Assays of Fur Hair Using Proteomic Mass Spectrometry*

Hair shafts, pelts, and skins are robust non-osseous tissues that were a major resource for bioarchaeological populations. Unfortunately, morphological analysis of hair shafts often has poor taxonomic resolution and DNA is poorly preserved. Species identification therefore can be a challenge, and information on resource acquisition and allocation neglected. This project describes a systematic discovery workflow to identify hair shaft peptide biomarkers that taxonomically resolve to single-species populations, at least as they are currently configured in public genetic databases. Using a forensic chemical process developed on human hair, hair shafts were cleaned, chemically treated, and enzymatically digested prior to submission on shotgun mass spectrometry. The resulting spectra were bioinformatically processed and number of taxa with resulting peptide sequences in the National Center of Biotechnology Information measured. A single fur hair shaft (20 mm) from three individuals in 45 species was processed in biological triplicates, and 28 species have peptides that resolve taxonomically to a single “species” population. Many have zooarchaeological relevance, including domesticated, prey, and other fur-bearing species. We have expanded the concept to bird feathers. These peptide biomarkers provide a starting point for proteomic assays of taxonomic identification for these and potentially other faunal populations.

Parker, Glendon [268] see Eerkens, Jelmer

Parkinson, Jennifer [356] see Pobiner, Briana

Parks, Virginia [318] see Butler, Virginia

Parmington, Alexander [178] see Guderjan, Thomas

Paron, Tristan (Stantec)

[350] *Pictish Hearths and Norse Homes: The Norse Settlement of the Orkney Islands from the Ninth to Eleventh Centuries*

The Norse arrival in Orkney began as a base for raiding Britain. Yet by the ninth century, a shift began and the Norse started to settle the islands, connecting themselves to the landscape through continuation of Norse traditions and lifeways from Norway but now in Orkney. These methods related to the adaptation of Pictish, Neolithic, and Iron Age sites to Norse perspectives and lifeways—not only to claim the islands but also for the Norse diaspora in Orkney to maintain their traditions in this new homeland. This paper will explore the Norse settlement of the Orkney Islands and its adaptation to Norse lifeways from the ninth to the eleventh century. It will examine how the Norse settled a preoccupied landscape and used it to better claim and legitimize their connection to Orkney. Much of this research is focused at the sites of Buckquoy and Deerness as these sites provide clear insight to the adaption of the Pictish landscape in the wake of Norse settlement from the ninth to eleventh centuries. This research primarily uses archaeological data, with some reference to the Icelandic sagas, to gain insight into the cultural perspectives of the Norse.

Parpal Cabanes, Esther

[168] *The Body as a Field of Signification: Applying Rosemary Joyce’s Insights to the Study of Ancient Maya Art at*

Tonina

Gender expression has always been closely tied to the body, so the portraits provide a powerful medium to explore how femininities and masculinities were conceived in the past. In the 1990s, Rosemary Joyce introduced this approach to Mesoamerican studies by applying the theories of Judith Butler and Thomas Laqueur to the study of the ancient material culture. Joyce argued that bodily interventions, when materialized in art, function as enduring codes or messages about gender and power. These visual codes, like hieroglyphics, can still be deciphered today. Building on Joyce's insights, this project examines the presence of women at the Maya site of Tonina through artistic representations. Our research compares depictions of women in monumental stone art with those found in small-scale ceramic figurines. By contrasting these media, we aim to highlight how gender and power were represented, reproduced, and contested across different social contexts within Classic Maya society. The study is grounded in a feminist and decolonial perspective, which allows us to interrogate dominant narratives and expand the scope of analysis beyond elite contexts.

Parris, Caroline [52] see Tomka, Marybeth

Parsons, Ted (University of Alaska Anchorage)

[183] *Seeking a Replacement for the NextEngine Desktop Scanner*

NextEngine was an inexpensive (\$3,000) desktop scanner, optimized for objects up to approximately 35 × 25 cm. Introduced in 2000, it was not uncommon for academic archaeology departments to use NextEngines. Since the demise of NextEngine Inc. in 2019, support ceased, although Project NextLife's Save Our Scanners (SOS) initiative aims to provide free open-source NextEngine software. While much more expensive and highly precise desktop scanners like the \$25,000+ Artec Spider models are available, the demise of NextEngine left the niche for practical, budget-friendly, entry-level scanners vacant. Now several companies including Creality, Shining 3D, Peel, 3DPrinterPro, and Revopoint offer medium- to low-cost scanners. In 2021 Revopoint began marketing an ever-expanding line of handheld and desktop scanners, with frequently updated hardware and scanning software. Revopoint scanners integrate RGB imagery with infrared depth mapping, and the Revopoint Metro X 3D scanner adds precision-boosting laser functionality, costing \$1,019, with a paired turntable. This poster explores the possibility of replacing a NextEngine scanner with a Revopoint Metro X in our lab, by comparing NextEngine and Metro X scans with each other and with high-quality Agisoft Metashape Professional photogrammetry models of test objects.

Parsons, Ted [48] see Harrod, Ryan

Pascual, Daniel [32] see Nuevo Delaunay, Amalia

Pascual Soto, Arturo (Universidad Nacional Autónoma de México)

[86] *Los últimos señores de El Tajín y el final de su civilización*

La historia del Tajín Chico se encuentra rodeada por circunstancias muy especiales, no solo porque fue la última sede de gobierno de la ciudad, sino porque en sus templos se hicieron enterrar varios de sus últimos gobernantes. En algún momento entre los años 1200 y 1220 dC no pocas de estas grandes sepulturas fueron saqueadas. García Vega (1936) encontró por lo menos una de ellas, vacía y en parte destruida, García Payón (1955) halló dos más y nosotros hemos localizado otra en el Edificio E, esta última enteramente vandalizada. Esta ponencia busca reinterpretar los últimos doscientos años de la historia cultural de El Tajín, procurando entender las circunstancias que determinaron el abandono de la antigua ciudad.

Patania, Ilaria [304] see Xu, Tianrui

Patel, Vidhi [302] see Tykot, Robert

Paterno, Sarah [306] see Capriles, José

Patroni Castillo, Karla (University of California, Santa Cruz, CA), John Verano (Tulane University), and Lars Fehren-Schmitz (UCSC)

[301] *Genomic Insights into Moche Human Sacrifice: North Coast of Peru (AD 300–850)*

Human sacrifice was a central feature of Moche ritual practice, vividly depicted in art and bioarchaeologically documented. The identities and origins of these victims remain debated: some scholars argue they were locals selected through ritual battles resembling *tinku*, while others suggest captives from rival Moche polities or neighboring groups. At Huaca de la Luna (La Libertad, Peru), the southern Moche capital, nearly 100 men were sacrificed and deposited during large-scale rituals, providing a rich context for study. Previous biodistance, isotopic, and mitochondrial DNA analyses offered mixed insights, with evidence for both local and nonlocal individuals. To directly test these hypotheses, we generated genome-wide data from a sacrificial victim recovered from Plaza 3C. Ancient DNA authentication confirmed molecular preservation, and comparative analyses used genomic datasets from ancient and modern South American populations. Results reveal a probable nonlocal origin, providing direct evidence of long-distance movement and complex social dynamics in Moche ritual practice. This study highlights how archaeologically contextualized ancient DNA can illuminate patterns of mobility, interaction, and ritual behavior in precolumbian societies.

Paulsen, Paige (Dartmouth College, Neukom Institute), Carolin Ferwerda (Dartmouth College), and Jesse Casana (Dartmouth College)

[46] *Archaeological Aerial Thermography and Quantitative Approaches to Thermal Flux: A Case Study at Colonial Pemaquid*

The promise of thermography for landscape archaeology has long been recognized by archaeologists but it remains an underutilized method to landscape, mostly due to technical challenges. Based on a recent survey at the Colonial Pemaquid State Historic Site (Maine), this paper presents results of drone-based thermography to explore the potential of quantitative analysis of thermal flux, calculated from repeated thermal imaging, as an approach to characterizing archaeological landscapes. Results highlight the effects of variable atmospheric and environmental conditions and offer a powerful new tool for revealing subsurface archaeological remains using this low-cost, drone-based thermal survey method. The drone thermography survey expands our understanding of the Colonial Pemaquid landscape and offers a case study for testing thermography survey methods, helping to improve the application in future work.

Paulson, Kirsten (SWCA Environmental Consultants), and Dougless Skinner (SWCA Environmental consultants)

[56] *Tin or Dogs? An Evaluation of Tindogs in Idaho*

“Tindogs” are scarcely studied but widely remembered elements of sheep-herding in the inland Northwest. Typically described as strings of tin cans, lids on a wire, or stones rattling in a quart pot, these devices were used by herders to startle/direct sheep, particularly when trained dogs were unavailable. Published references frame the tin dog as a human-operated sound tool used by the shepherd to mimic the auditory presence of a working dog. Oral accounts gathered in Idaho suggest a striking variant: that actual sheepdogs sometimes wore tin dogs, producing sound as they moved through a flock. Though no documentary sources confirm this practice, it aligns with long-standing pastoral traditions of fitting bells to bellwethers or dogs for location and control as documented in oral history. This divergence between the written record and living memory highlights the interpretive value of oral histories and museum collections in reconstructing pastoral soundscapes. In this poster we dive into the history of Basque sheep herding in Idaho and provide evidence of tindogs seen through oral and archaeological histories. We argue that tindogs illustrate how improvisation, sound, and labor substitution converge in the material culture of sheepherding, and offer a new interpretation of these metal objects.

Pavao-Zuckerman, Barnet [82] see Jenks, Kelly

Paweł, Bylina [177] see DeGeorgey, Alex

Pawłowicz, Leszek (Northern Arizona University), Aadarsha Bastola (Northern Arizona University), Kimberly Allison (Northern Arizona University), Alan Hakala (Northern Arizona University)

University), and Nicholas Wiley (Northern Arizona University)**[199]** *New Approaches to Southwest Decorated Ceramic Documentation, Classification, and Analysis*

Southwest US decorated ceramic wares play a key role in determining cultural affiliation, temporal information, and trade relationships. These typologies were primarily defined from the 1930s through the 1960s, and have changed little since then. They were often defined with relatively small numbers of ceramic fragments and vessels, as few as several dozen. Museum collections and field surveys have the potential to increase these numbers dramatically, and improve and refine typology definitions, but the logistics of collecting, documenting, and analyzing large amounts of this data are formidable. We employ machine learning, computer vision, and data visualization methods to address these issues. These include field-ready smartphone apps for collection of sherd images, type classification by machine-learning models, and automated uploading of images/metadata to the cloud; a system for automated photography and documentation of large numbers of sherds; and applications of machine learning to visualize thousands of sherds based on similarities in design characteristics.

Pawlowicz, Leszek [115] see Miller, Jake

Pawlowicz, Matthew, Jeffrey Fleisher (Rice University), and Kathryn de Luna (Georgetown University)**[357]** *Rooted Mobilities: Changing Settlement Patterns and Expanding Social and Economic Links in Central Zambia, Seventh–Fifteenth Centuries CE*

Studies of south-central African prehistory—and Bantu-speaking regions more generally—often discuss mobility, especially migration, as a means to explain how people became sedentary, usually focusing on farming once people were “in place.” Following the “mobilities turn” in archaeology and the social sciences, we question the hard lines thus drawn between mobility and sedentism. Instead, drawing on evidence from archaeological survey and excavations as well as historical linguistics, we use the interplay of rootedness and mobility to explore perhaps the central question of our study region at the margin of the Kafue Floodplain: why did people here make the decision to live in the same locations, generation after generation for hundreds of years, eventually creating meters-tall mound sites through continuous occupation? Especially as it was not a decision they had made upon initially occupying the area, and as it was a decision they ceased making in the fifteenth century? We suggest that new and ongoing practices of mobility, and the possibility of controlling the wealth they offered through new forms of social organization, allowed for the flourishing of these increasingly rooted settlements.

Pawlowicz, Matthew [162] see Fleisher, Jeffrey

Pawlowicz, Matthew [357] see Stone, Abigail

Paya, Tomás (Instituto de las Culturas [UBA-CONICET]), Mara Basile (Instituto de las Culturas [UBA-CONICET]), Luis Coll (Instituto de las Culturas [UBA-CONICET]), and Veronica Williams (Instituto de las Culturas [UBA-CONICET])**[276]** *When the Material Becomes Virtual: Photogrammetry as a Tool for Documenting Rock Art in Northwestern Argentina*

Rock art constitutes a highly emblematic and alluring cultural heritage of long-standing value. The exhaustive documentation and analysis of rock art sites allows us not only to reconstruct narratives and social dynamics of the past but also to contribute to the preservation of these fragile materials, and to bring these often difficult-to-access places more closely to the broader community. Here we share methodological advances in rock art research that we have been conducting in the Calchaquí Valley of northwestern Argentina as part of a systematic regional survey. Our approach uses photogrammetry as a noninvasive tool to document a distinctive pattern of rock carvings known in these Andean regions as “modelos” of prehispanic agricultural landscapes, as well as caves that feature complex, overlapping layers of paintings from different chronological periods. By providing complete, scaled 3D models of the surface of these sculpturally treated rocks and these walls covered in multiple colors, photogrammetric surveying has proven to be a highly effective method for recording sites with rock art, faithfully replicating the details of the motifs, grooves, and strokes. But crucially, it also enables the creation of digital interactive environments with the potential for scientific dissemination of this centuries-old knowledge.

Pearson, Osbjorn (University of New Mexico), Emily Moes (University of Texas at San Antonio), Esteban Rangel (University of New Mexico), Citlali Tierney (University of New Mexico), and Keith Prufer (University of New Mexico)

[81] *No Evidence of a Decline in Stature with Agricultural Intensification in the Maya Mountains of Belize*

The ROOTS project in Belize has recovered well-preserved skeletons from the rockshelters Mayahak Cab Pek and Saki Tzul in the Maya Mountains. These remains span the last 10,000 years, although a majority date to the Classic period. Stature estimates were computed from all available long bones and averaged for individuals. Stature is one of several factors that can shed light on the health and nutrition of past populations. The results show no decline in stature over time for either sex ($n = 14$ females; $n = 9$ males). This refutes a common expectation of decreased stature with the adoption or intensification of agriculture. Stable carbon isotopes for these individuals show a marked increase over time in the consumption of maize (or other C_4 foods), particularly after 5000 BP. The statures of people postdating 2000 BP averaged 162.6 ± 3.6 cm for males ($n = 4$) and 152.9 ± 4.6 cm for females ($n = 10$) (calculated following De Angel and Cisneros's formulas). These correspond to a slightly elevated average stature for males but slightly decreased stature for females compared to previously published stature estimates for Classic period Maya skeletons.

Pecci, Alessandra (University of Barcelona, ERAAUB, IAUB, INSA-UB), Agustín Ortiz (Instituto de Investigaciones Antropológicas), Domenico Miriello (Università della Calabria), Gino Crisci (University of Calabria), and Luis Barba (UNAM)

[164] *Archaeological Floors Reveal Human Activities at Teopanazco, Teotihuacan*

Floors are precious archaeological materials as they preserve key information on the people who built and used them. Thanks to their porosity, they absorb the residues of the substances released or used during the performance of human activities, as demonstrated by the Archaeological Prospection Laboratory of the UNAM in the 1970s. Different building phases and parts of the compound were investigated at Teopanazco (Teotihuacan) as part of the project directed by Dr. Manzanilla. The study carried out at UNAM allowed researchers to appreciate differences in the use of space and evidence the performance of domestic and ritual activities at the site. However, floors can also be studied to understand the creation process, the building technology, and the raw materials used. At Teopanazco, it was possible to focus on the differences between spaces that presented earthen floors and lime plastered floors. The last ones were studied as part of an international collaboration with the University of Calabria (Italy). This study offered the unique occasion to understand the mixing of lime and glass shards to obtain the thin "stucco" layer and identify, for the first time, the provenance of the glass shards and the limestone used in the making of the floors.

Peck, Joshua [77] see Millard, Matthew

Peck, Katherine, and Grant Snitker

[280] *Identifying Glass Manufacturing Marks with Machine Learning*

Determining an archaeological site's age is an important part of site documentation and can be a line of evidence in determining a site's eligibility for inclusion in the National Register of Historic Places. Glass vessels can be powerful tools for dating postindustrial archaeological sites. In particular, bottles associated with the Owens-Illinois Inc. (Owens Bottle Company/O-I) Glass manufacturing company are frequently documented at twentieth-century archaeological sites in North America. Their distinctive makers' marks and date codes can place object manufacture to within less than a decade. In this study, we attempt to train a machine-learning model to recognize and date historic glass bottles, using Owens-Illinois marks as a case study. We discuss our approach to compiling a comprehensive training dataset, image pre-processing, and training dataset augmentation. We also discuss our convolutional neural network (CNN) model training workflow and output model performance. Although Owens-Illinois bottle marks are well-documented and recognizable without the use of machine learning, this case study has implications for this approach's utility for other, less recognizable bottle marks, as well as other temporally sensitive artifacts forms commonly encountered during site documentation.

Pecora, Albert [77] see Burks, Jarrod

Pedersen, John [43] see Lee, Sim

Peeples, Matt (Arizona State University), Kelsey Hanson (University of Texas at Arlington), and Maren Hopkins

[26] *From Clay to Community: Learning through Taskscapes and Social Networks in the World of Juan Quezada*

This paper explores the intersection of taskscapes and social networks as complementary frameworks for understanding individual and collective learning in the context of craft traditions. The concept of the taskscape is focused on exploring the historical and spatial dimensions of activity embedded in landscapes, while social networks reflect how patterns of relationships structure knowledge transmission and interaction. Bringing these perspectives together can reveal how landscape knowledge and social connections provide both affordances and constraints on individual innovation, artistic expression, and learning. To illustrate this approach, we draw on ethnographic work with master potter Juan Quezada, his family, and the broader community of Mata Ortiz, Chihuahua. Quezada's engagement with local clay sources and stylistic experimentation occurred within an everchanging relational field of kin, apprentices, neighbors, competitors, and a global art community whose interactions shaped the flow of techniques and ideas. This example highlights how taskscapes can anchor practices in material environments while networks simultaneously channel opportunities for social learning and recognition. By situating individual creativity at the nexus of landscape engagement and social relations, this framework offers a means of linking microscale practices to broader patterns of cultural transmission and innovation broadly relevant to anthropological investigations of individual and social learning.

Peeples, Matt [26] see Ferguson, Jeffrey

Peeples, Matt [169] see Kroot, Matthew

Peeples, Matt [79] see Powers, Kayla

Pelegrin, Jacques [41] see Loyola, Rodrigo

Pelto, Brendan (Trileaf)

[345] *The Value of Documenting Cell Towers in Urban Environments*

This paper explores telecommunication towers as under-recognized components of industrial heritage, positioning them within the frameworks of landscape and industrial archaeology. While typically viewed as utilitarian infrastructure or visual intrusions, these structures are features of the rise of global connectivity, and the evolution of technological networks. Through case studies of selected tower sites in both urban and rural contexts, this study examines how telecommunication infrastructure shapes and is shaped by the landscape and cultural demands. By applying methodologies from industrial archaeology—such as site analysis, archival research, and material culture study—alongside landscape interpretation, the paper argues for the reevaluation of these towers as meaningful heritage assets.

Pelton, Spencer [229] see Surovell, Todd

Peltzer, Summer (Washington State University), Cearra Mihal (Terracon Consultants Inc.), Sydney James (Arizona State University), and Kari Schmidt (Terracon Consultants Inc.)

[111] *Rethinking Site Functionality at LA 44088*

Small, logistically used sites are commonly identified in the archaeological record as extensions of larger, more permanent habitation sites in the surrounding area. Interpretations of site functionality are often shaped by research at the larger sites, with smaller peripheral sites narrowly categorized based on select features. In the US Southwest, sites with fieldhouses are often thought to be agriculturally based and focused on resource procurement rather than being contextualized within the broader landscape. Temporary habitation sites, characterized by the presence of fieldhouses, have been identified in previous surveys of the Salinas Province in central New Mexico, including at LA 44088. Recent excavations at LA 44088, thought to be a small site associated with Tenabó (LA 200), have revealed a broader range of features with greater temporal depth, prompting the need for a more in-depth interpretation of the site's function. This study examines the intra-site relationships at LA 44088 and contextualizes the site within the Salinas Province

through comparisons with nearby sites using geospatial techniques. We aim to demonstrate how combining geospatial analyses with traditional archaeological methods can enhance our understanding of site use and lead to more nuanced interpretations.

Peña, Alberto [88] see Chiquito, Sofia

Peña, José (Logan Simpson), and Jorge Eduardo Eche Vega

[100] *Late Prehistoric Occupation at El Campanario Site, Huarmey Valley, Peru*

The collapse of the Wari State was accompanied by sociopolitical fragmentation, where local elites sought to reorganize their own political and social structures. This period of reorganization led to changes in the construction and layout of public architecture, as well as in the organization of household activities. Archaeological research conducted at the El Campanario site, encompassing both public architecture and domestic areas, suggests a period of sociopolitical reorganization in the Huarmey Valley at the beginning of the Late Intermediate period (AD 1150–1280). The adobe platform at El Campanario was significantly smaller compared to the large adobe platform built during the Middle Horizon. In addition, the construction of public open areas (patios) served to reinforce political alliances and regulate the domestic economy. During this time period, Casma-style ceramics are manufactured in domestic context along with styles from the central coast, such as Huaura. This production was oriented to both satisfying household needs as well as producing craft goods for the local elite. It is possible that during this period of reorganization, domestic activities were not under the direct control of the local elite; instead, the production of craft goods occurred as part of the household's daily activities.

Peña, José [282] see Long, Holly

Pendas, Olivia [313] see Doering, Briana

Penders, Thomas [198] see Gonzalez Garcia, Jorge

Perales, Manuel [186] see Owen, Bruce

Peralta, Eva [95] see Neme, Gustavo

Peraza Lope, Carlos [266] see Meanwell, Jennifer

Perdrial, Nicolas [79] see Burr, Vivian

Perea Ríos, Ema (Vanderbilt University)

[178] *Archaeological Reconnaissance in the Shunte and Mishollo Region, Upper Amazonia in Peru*

This presentation introduces the initial stage of archaeological reconnaissance in the Shunte and Mishollo Forests, located in the Upper Amazon of Peru, a transitional zone between the Andes and Amazonia. Supported by the Matthew Tobin Cappelletta Archaeological Scholarship, Simon Collier Travel Award, Vanderbilt University, Pontifical Catholic University of Peru, and the Shunte and Mishollo Forests Regional Conservation Area (BOSHUMI), the project represents an initial effort to investigate human environment dynamics in this ecologically and culturally significant area of San Martín. The BOSHUMI preserve offers a unique setting where ecological and cultural heritage converge. As a biodiversity corridor and water source for surrounding communities, it also safeguards archaeological evidence of long-term human occupation. This first phase of fieldwork was designed as a preliminary foundation for broader survey. We combined pedestrian reconnaissance with remote sensing methods, including drone-based photogrammetry and lidar, to establish baseline datasets for identifying areas of archaeological interest. A central component of this phase was collaboration with park rangers and local community members. Their knowledge of the terrain was essential in guiding the survey and shaping research strategies, while the shared use of mapping and remote sensing tools fostered reciprocal learning. These joint efforts lay the groundwork for future investigations.

Pereira, Gregory [178] see Dorison, Antoine

Pereira, Oscar

[205] *Embodied Liminality and Material Memory: Ethnoarchaeological Insights from Ghost Dance Rituals to Contemporary Powwows*

This presentation offers an ethnoarchaeological analysis of Native American performance traditions by examining the embodied, material, and visual dimensions of the Ghost Dance and contemporary powwows. Drawing from archival records, visual ethnography, and ceremonial regalia, the research explores how Indigenous communities express cultural resilience, spiritual transformation, and identity through performance. Framed by multiple anthropological theories, including Turner's liminality, Conquergood's embodied knowledge, and Vizenor's survivance, the study highlights how dance, regalia, and ritual space operate across sensory and symbolic domains. Material culture, such as Ghost Dance shirts and drums, is understood not as static artifact but as dynamic technology for navigating spiritual and political boundaries. By comparing nineteenth-century ceremonial records with contemporary Indigenous performances, the project reveals enduring patterns in how embodied knowledge is transmitted. These insights inform archaeological interpretations of ceremonial landscapes and artifacts by integrating performance theory into material analysis. The study argues for the value of an ethnoarchaeological approach that centers Indigenous epistemologies and ceremonial logics, contributing to broader efforts to decolonize archaeological practice and reinterpret ritual materiality through culturally grounded frameworks.

Peres, Tanya (Florida State University)

[31] *Deer at the Center: Subsistence, Sharing, and Symbolism in Mississippian Foodways*

Deer were central to Mississippian foodways, providing not only critical protein and fat but also hides, antler, and bone for tools and ornamentation. Zooarchaeological data from sites across the American South (ca. AD 1000–1600) reveal deer as the most consistently exploited taxon, even within agricultural societies dependent on maize and garden crops. This paper explores how venison and deer products structured daily meals, seasonal hunts, and large-scale feasting events. Beyond subsistence, hunting and food sharing practices embedded deer within broader social and political relations, where the act of provisioning reinforced cooperation, leadership, and identity. Cervid remains also highlight methodological challenges—such as distinguishing feasting deposits from domestic refuse, or parsing the multiple uses of deer beyond diet—that complicate interpretations of human-cervid interactions. By situating deer at the intersection of subsistence and symbolism, this study demonstrates how Mississippian communities engaged with cervids as both essential food resources and other-than-human beings woven into social and cosmological worlds.

Perez, Christopher [269] see Hawkins, Nyah

Perez, Daniel

[166] *The Role of Style in Community Identity and Group Affiliation: An Archaeological Study of Virgin and Kayenta Branch Ceramics*

This paper presents a survey of the Virgin Branch heartland, within the North American Southwest, through the lens of community identity, group affiliation, and social interaction, between ca. 300 BC and AD 1225. In the context of neighboring Kayenta Branch populations, this paper focuses on the following question: How is Virgin Branch group identity communicated and reflected through expressions of technological and painted designs styles on pottery amid intra- and interregional events and interactions over time? The theoretical framework for this study is informed through consideration of behavioral categories such as exchange, enculturation, and migration, as dependent variables, can be used and expressed through painted design and technological and functional aspects of painted pottery to investigate the independent variable of identity—namely, Virgin Branch group identity. Methodologically, this research uses a hierarchical system of ceramic analysis through which technological and painted design styles are investigated within a statistical framework of diversity and similarity indices, across temporal and spatial contexts. Through the above approach to painted and technological ceramic design styles as proxies for expressions of Virgin Branch group identity, this study investigates the degree to which pottery style can reflect Virgin Branch group identity in the

context of social interactions over time.

Perez, Elizabeth, and Patrick Kirch (University of Hawai'i at Mānoa)

[342] *Temporal Size Changes in Archaeological Fishbone Assemblages from Tikopia, Easter Solomon Islands: Implications for Long-Term Human-Reef Ecosystem Interactions*

This study examines a 3,000-year-long sequence of human-marine interaction and exploitation through the zooarchaeological record of fishbones excavated from sites on the Polynesian Outlier of Tikopia (Solomon Islands). Selected skeletal elements of five taxa (Acanthuridae, Balistidae, *Diodon hystrix*, Holocentridae, and Scaridae cf. *Scarus* spp.) were measured as a proxy for fish size, given the allometric relationships between element size and fish size. All fish vertebrae were also measured. Statistical analysis, including Kruskal–Wallis ANOVA and Dunn's Test, revealed significant temporal size changes in the Acanthuridae, *D. hystrix*, and *Scarus* spp. assemblages but not in the Balistidae or Holocentridae. The Acanthuridae exhibit statistically significant size reductions in the middle phase of Tikopia prehistory, followed by a rebound in size in the late period, a pattern also seen in the total fish vertebrae assemblage. *D. hystrix* and *Scarus* spp. exhibit significant size reductions over time, without a rebound in the late period. Likely drivers of these changes include both natural and human-induced changes to the island's reef ecosystem, as well as the long-term effects of fishing pressure on this small, densely populated island where fish have been the main source of protein for three millennia.

Perez Gomez, Jose Miguel (Universidad Simon Bolivar), and Roger Swidorowicz (Manoa Foundation)

[101] *Uncovering the Canaima Complex: New Lithic Evidence from Southern Venezuela*

This article presents initial findings from an archaeological investigation of lithic tools recovered from the Canaima region in southern Venezuela, located between the Orinoco and Amazon basins. Despite its rich cultural and ecological heritage, the area has received limited archaeological attention until recently, when new efforts uncovered rock art sites and artifacts that reshape our understanding of its prehistoric landscape. Several stone tools, primarily made of jasper, quartz, and sandstone, are linked to regional rock art sites, suggesting a complex cultural environment. Curated by the Universidad Simón Bolívar, and partially preserved in private collections, this research represents their first formal analysis. Initial results indicate that these tools are part of a continuous lithic tradition, perhaps extending from the El Jobo industry to the Canaima Complex. The presence of fishtail (Fell type) points, needlepoints, and plano-convex scrapers suggests a technological continuity, possibly adapted to diverse landscapes over time. The variety in artifact forms and materials indicates diverse subsistence strategies during the Pleistocene-Holocene transition. Additionally, evidence suggests a vast network of cultural exchange, linking this region with northern Venezuela, the Guianas, and the Orinoco and Amazon basins, positioning the Canaima region as a critical hub in South America's prehistoric cultural landscape.

Pérez Jiménez, Juan Carlos [84] see Jiménez Cano, Nayeli

Pérez Reyes, Luis Alejandro, Mario Rivera, and Cecilia Sandoval (Museo Regional de Iquique)

[340] *Geoglifos de Alto Arikulda, tantas miradas como amaneceres: Persistencia del espacio prehispánico sagrado entre abandonos y reutilización*

Presentamos un análisis crítico y de conservación del yacimiento arqueológico de geoglifos de Alto Arikulda, región de Tarapacá, a partir del levantamiento aerofotogramétrico y prospección superficial. A través de cartografía de interpretación arqueológica de alta definición, realizamos una revisita y un ejercicio de análisis, aportando nuevos antecedentes al trabajo pionero realizado en 1987 por los arqueólogos tarapaqueños Chacama y Briones. Este nuevo levantamiento fotogramétrico del yacimiento permitió detectar nuevos geoglifos, en diferentes grados de conservación y contextos: diseños subyacentes al área de asentamiento, superposiciones de diseños de distintos periodos, modificaciones y reconfiguración. El registro exhaustivo de cada roca componente de diseños permitió además identificar estrategias constructivas prehispánicas para la conservación de los geoglifos ubicados en superficies altamente erosionadas por eventos climáticos del desierto. El levantamiento detallado de trazas, rasgos y diversos tipos de intervención que sufrió el suelo del sitio Alto Arikulda en el contexto de confección y uso de geoglifos, así como alteraciones sufridas hasta la

actualidad, evidencia y permite discriminar secuencias de ocupación prehispánica e intervenciones sucedidas a lo largo de los siglos, desde el periodo Formativo hasta la Colonia, incluyendo alteraciones recientes, que hacen urgente y necesario un análisis crítico de daños para implementar medidas de conservación.

Perez Rodriguez, Veronica (University at Albany, SUNY)

[94] *Discussing the Antiquity and Characteristics of Prehispanic Sweat Baths in the Mixteca Alta Region of Oaxaca*

This presentation discusses the architectural, chronological, and associated artifact data of four sweat baths that were excavated at the Late and Terminal Formative site of Cerro Jazmín and the Postclassic settlement of Nicayuju, both in the Mixteca Alta region of Oaxaca. The paper documents prehispanic sweat baths from the Late Formative to the Postclassic periods and provides details about their contexts, mode of construction, dimensions, related features, and artifacts. The presentation contextualizes the available information on the prehispanic practice of bathing in *temazcales* in the Mixteca Alta region by talking about their antiquity and the trajectory of this cultural and medicinal practice as informed by the available ethnohistoric and ethnographic sources.

Perez Ruiz, Francisco [104] see Sobrino, Santiago

Perez Tisserant, Emmanuelle (University Toulouse Jean Jaurès)

[224] *Vaquero Work and Mobility: Reassessing Californian Mission and Ranch Lands as Social Interfaces*

The colonization of Alta California by Spain in the late eighteenth century was primarily carried out through Franciscan missions. These institutions sought not only to convert Indigenous populations to Catholicism but also to reshape their lifeways by introducing European–Mediterranean models of agriculture and pastoralism. As scholarship on ecological imperialism has shown, this process entailed the introduction of new plant and animal species, most notably horses and cattle. Paradoxically, these introductions generated new forms of mobility for Indigenous communities: the horse facilitated travel, while extensive cattle ranching required constant movement across the landscape. This paper examines, through archaeological, anthropological, and historical sources, how vaquero labor and expertise reshaped understandings of space and mobility in Alta California. By tracing the skills and practices of vaqueros across vast mission lands and beyond, it seeks to complicate the view of missions as closed and bounded environments. Instead, it highlights how Indigenous spatial practices and circulation networks persisted, albeit in transformed and sometimes contested forms, within and around these colonial landscapes.

Perla Barrera, Divina [177] see Hansen, Richard

Perreault, Charles [336] see Paige, Jonathan

Perrot-Minnot, Sebastien [41] see McBride, Mike

Perry, Jennifer [167] see Brown, Kaitlin

Pestle, William (University of Michigan-Kelsey Museum of Archaeology), Christina Torres, Allison Sabo (University of Michigan), Francisco Gallardo (Universidad Católica de Chile), and Gloria Cabello (Estudios Aplicados Antropología UC)

[32] *Paleodiet in the Norte Semi-arido: First Isotopic Approximations*

Several decades of isotopic research on prehistoric coastal peoples who resided between Antofagasta and the mouth of the Loa River have yielded detailed insights into the foodways of hundreds of that region's ancient inhabitants. In comparison, relatively little work has focused on the paleodietary practices of populations from the more southern arid to semiarid portions of the Atacama coast stretching from Taltal to the Rio Copiapó. In this work, we present preliminary results from stable isotope (carbon and nitrogen) analysis of $n = 33$ humans and accompanying foodweb (floral/faunal) samples representing this understudied ecotonal region. While paleodietary trends were generally consistent with those of the more northern populations, isotopic analysis also revealed more subtle differences stemming from both natural (foodweb availability and source isotopic differences) and cultural factors. While preliminary, these results represent

the first steps toward building a robust paleodietary dataset for Chile's semiarid north.

Pestle, William [32] see Sabo, Allison

Pestle, William [32] see Torres, Christina

Peters, Ann (Penn Museum)

[257] *Emblematic and Material Color across the Paracas-Nasca Transition: Dichotomies and Significance*

The human eye perceives color through contrast. Warp-patterned weaving of the Andes organizes spatial and iconic messaging through color relationships, including a dichotomous contrast essential to the complementary warp patterning practiced in contemporary communities of the southern Central Andes. Archaeologically documented examples of dichotomous color contrasts abound in the southern Central Andes starting in the late Middle Horizon, ca. 1000 BP, worked in warp patterning, weft patterning, and double-cloth. They co-occur in textile assemblages with polychrome imagery worked in other techniques and may reference fundamental principles of Andean thought and social organization. Here I explore antecedents in late Paracas and early Nasca, in the greater Ica region ca. 2300–1800 BP, a place and time associated with strong polychrome imaging traditions and color patterning previously discussed by Carrión (1931) and Paul (1986, 1998). I will demonstrate dichotomous color organization in both late Paracas and early Nasca textile design across a wide range of production techniques. The specific colors paired provide evidence for principles of color theory. Their associations with particular materials, forms, practices and iconography suggest other realms of significance.

Peters, Ann [257] see Armitage, Ruth Ann

Peterson, Christian [311] see Berrey, Adam

Peterson, Michael (USDA RD RUS), and Marcel Kornfeld

[229] *Krmpotich Site Folsom Assemblage Typological Variations and the Use of Modern Folsom Production Experiments to Decipher Stylistic or Functional Patterns*

The Krmpotich site in western Wyoming is significant for understanding Folsom occupation of the Rocky Mountains, Folsom chipped stone economy, and stylistic patterns of Folsom projectile point manufacture. Analysis of channel flakes suggests two functional or stylistic patterns in Folsom point production, which may indicate a limited number of Folsom makers at the site. Manufacturing techniques and artifacts from the Krmpotich site are similar to other Folsom assemblages where manufacturing processes created remnant features on some Folsom points and fluted preforms and influenced the final point shape or style. In this presentation we discuss variations in the fluting process at the site and emphasize the relationship of such variations and platform morphology. Experimental Folsom projectile point production is compared to prehistoric Folsom assemblage data. We argue that contrasting data from Folsom assemblages with modern Folsom experimentation can (1) help identify forgeries, (2) provide valuable information explaining Folsom human behavioral patterns as to why certain toolstone was preferred over others thus influencing Folsom typology, (3) provide evidence of platform preparation and fluting techniques influencing Folsom styles and functional characteristics, and (4) provide evidence suggesting there are typological differences and similarities in the Krmpotich site and other Folsom assemblages.

Peterson, Ryan (Stantec), Kary Stackelbeck (University of Oklahoma), and Alex Badillo (Indiana State University / Stantec)

[264] *Applied Archaeology in the Service of Community Justice: The Search for Victims of the 1921 Tulsa Race Massacre*

Cultural resource management firms have long been engaged in projects involving the discovery, excavation, documentation, and exhumation of human remains. Typically, the circumstances of that engagement are development-related, as when a cemetery is being relocated to facilitate a bridge construction (for example) or human remains are discovered in a proposed housing project. As some of the presentations in this session demonstrate, CRM archaeologists are increasingly being called upon to assist with non-development investigations involving human remains—particularly as communities and descendants begin to wrestle with

locating lost cemeteries or specific ancestors. The reopened investigation to locate long-hidden victims of the 1921 Tulsa Race Massacre is a highly complex, interdisciplinary, and community-centered effort that began in 2018 and is ongoing. Together with professionals from the Oklahoma Archeological Survey (University of Oklahoma), C. A. Pound Human Identification Laboratory (University of Florida), Intermountain Forensics, the city of Tulsa, and community members, the Stantec consulting firm is a fully committed partner in this pursuit of historical truth. This presentation aims to present lessons from the collaborative approach engaged in this investigation that may inform other similar efforts elsewhere, particularly as it pertains to the incorporation of private consulting firms.

Peterson, Ryan [264] see Badillo, Alex

Peterson, Ryan [216] see Wilson, Jeremy

Petrov, Ordance [269] see Carlson, Justin

Pfeifer, Maddison [115] see Connell, Mary

Phang Del Pozo, Patrick (University of Michigan), and Matthew Tyler Brown (University of Michigan)

[79] *Obsidian Provenance and Debitage Analysis at Muyumoqo, a Late Formative (600 BCE–200 CE) Site in Cusco, Peru*

Despite a long history of human occupation in the Cusco region, the sociopolitical dynamics and subsistence strategies of communities predating the Inka Empire remain poorly understood. The Formative period, particularly its later phase (600 BCE–200 CE), was marked by growing involvement in long-distance exchange networks alongside increasing socioeconomic complexity and inequality. Understanding how these shifts played out remains a central challenge in Cusco archaeology; however, excavations at the residential site of Muyumoqo, located in the Chit'apampa Basin, offer a rare opportunity to address this question in detail. Over 2,500 obsidian fragments were recovered from diverse domestic structures and adjacent open areas, representing the largest quantity yet documented at any site in Cusco. Composed predominantly of debris/shatter, the assemblage provides a robust dataset for integrating geochemical sourcing with spatial and technological analysis. Portable X-ray fluorescence (pXRF) was used to identify geological origins, while morphological and spatial analyses highlight the contexts and practices through which obsidian was manufactured, used, and discarded. By linking provenance data with household-level lithic attributes, this study offers new perspectives on the role of obsidian in daily life and contributes to broader discussions of lithic production, household organization, and long-distance interaction in the Late Formative Andes.

Phang Del Pozo, Patrick [295] see Weinberger, Emma

Phillips, Amy (Draper Natural History Museum), Craig Lee (Montana State University), Lawrence Todd (GRSLE Inc.), Daniel Dalmas (University of Utah), and David Rapson

[305] *Mountains and Basins: Role of Elevation in Stable Nitrogen Isotope Values of Faunal Material*

Stable nitrogen isotope analysis is applied to questions of human and prey species weaning behaviors, diet, and nutritional stress in archaeology. Yet complexities in nitrogen cycling, particularly regionally, make the interpretation of nitrogen isotope analysis difficult. The alpine tundra is associated with hot spots of nitrogen, but whether plants and water provide enough of a mechanism for wildlife to exhibit elevated nitrogen isotope ratios remains unknown. This poster draws on over 150 bison from the Greater Yellowstone Ecosystem and Bighorn Basin of northwest Wyoming to explore the hypothesis that animals using high elevation habitats (>2,500 m) are associated with elevated nitrogen isotope values when compared to bison from lower elevation contexts. A more nuanced understanding of the variables influencing stable nitrogen isotope ratios could improve interpretations at the regional level. This, in turn, could enhance interpretations of animal diets and movements through time, particularly in response to climate change, and result in regionally specific insights into past hunting strategies and human-animal interactions.

Phillips, Bruce [71] see Fertelmes, Craig

Phillips Quintanilla, Payton [317] see King, Kylie

Phipps, Elena

[257] *Looking at Shellfish Purple in the Andes*

Purple produced in the Andean region by natural dyes is a color that can be composed in a number of different ways. Shellfish purple, from the mollusks that are present on the rocky Pacific coast from Ecuador, Peru, and Chile, has been sporadically examined, and we see the color among some of the earliest textiles, generally on cotton. While few archaeological examples have undergone scientific analysis, its hue and surface application is distinctive. In 2022 the author presented a paper for the Dyes in History and Archaeology group on the color purple in the Andes and the various ways the color was produced in the corpus of precolumbian and early colonial textiles. Subsequently a collaborative project that included scientific analysis of several samples with unexpected results from two culturally related textiles from two different museum collections was presented at DHA 2024. For SAA 2026, the author, a researcher who emphasizes the importance of Andean textile materials and techniques, would like to discuss these studies within the archaeological context and examine the questions that arose—both culturally and scientifically—in the identification of the colorants and the analysis of the results.

Piccininni Avery, George

[248] *Who Has a License to Butt In: Exploring a Forgotten Joke Cycle through Small Finds at a Women's Dormitory*

During the excavation of the Bray-Digges yard in Williamsburg archaeologists uncovered a stick pin. The cracked face of the pin appeared in the shape of a badge displaying the phrase “License to Butt in.” Based on the pin’s manufacture and location on site, it likely dates to the period the building was used as the College of William & Mary’s first women’s dormitory, Brown Hall. Grounded in theories of performance, gender, and comedy, I aim to contextualize the women and the object as agents within the broader historical “License to Butt in” Joke Cycle (or Bit) active at the time of the building’s use as a dormitory from 1926 to 1930. This will be done through two means. First, I emphasize the way the pin connects to other historical joking contexts, specifically the “Buttinsky” ethnic joke, as well as the “Sons of Buttinsky”/“License to Butt in” postcard. Second, I examine how the women likely performed with, interpreted, and related to the artifact as a commodity, a fashion piece, and a practical joke. This research finds the women of Brown Hall potentially used the “License to Butt in” joke cycle to both reinforce and subvert norms about ethnicity and gender.

Pierce, Daniel (Missouri State University)

[210] *The Aztatlán and Obsidian: Local Procurement in a Pan-Mesoamerican Context*

The Aztatlán tradition of West Mexico (AD 850/900–1350/1300) has long been recognized for its role in interregional interaction, yet obsidian was largely restricted to regional sources for its procurement. Geochemical analyses consistently demonstrate that the majority of obsidian at Aztatlán sites derives from nearby sources in Nayarit and Jalisco. These findings suggest procurement strategies emphasized regional accessibility and embedded networks, rather than the extensive long-distance movements documented elsewhere in Mesoamerica. The exception of Pachuca obsidian being identified at the regional center of San Felipe Aztatlán highlights the rarity of such interregional connections rather than their norm. This paper situates obsidian procurement patterns within Aztatlán trade networks and broader Mesoamerican trajectories of exchange and interaction. By comparing the constrained geographic scope of Aztatlán obsidian to obsidian trade in Central Mexico and the Maya area, I argue that West Mexican participation in pan-Mesoamerican networks was selective context-dependent. Further, these studies raise questions about the social and political logics governing obsidian procurement. More broadly, this study contributes to current debates on regional variability in exchange and the significance of resource strategies for understanding West Mexican and broader Mesoamerican interaction spheres.

Pierce, Daniel [99] see Brzezinski, Jeffrey

Pierce, Daniel [99] see Macrae, Scott

Pietraszek, Alyssa (Texas A&M University), Jessi Halligan (Center for the Study of the First Americans, Texas A&M University), Jessica Hale, Melanie Damour (Bureau of Ocean Energy

Management), et al.**[180]** *Prospecting beneath the Waves: Optimizing Survey Design for Submerged Archaeological Sites in the US Gulf Region*

Archaeological site prospecting comes with many challenges, further exacerbated by rising sea levels and shifting coastal landscapes as sites once located subaerially become submerged. While recent technological advancements, particularly in marine geophysics and remote sensing, have improved this task, challenges remain due to the vast extent of the submerged landscape, the mismatch in scale between archaeological sites (<50 m) and geomorphological features (>25 m), and the significant financial and time commitments required. By integrating human behavior and site statistics into survey design, these challenges can be addressed more effectively. Funded by the Bureau of Ocean Energy Management (BOEM), this research analyzes archaeological site survey data from the Gulf states and the northern Gulf's Outer Continental Shelf and survey design parameters (e.g., vessel speed, line spacing) within a statistical modeling framework to narrow survey scope and recommend refinements of current survey methodologies. In doing so, this work aims to improve detection of both geomorphological features and potential archaeological sites now located offshore, providing a more efficient, quantitative framework for optimizing offshore archaeological surveys.

Pilette, Olivier (University of Georgia)**[111]** *What Can We Learn from the Five Key Lithic Materials of the Southern Laurentians Region (Québec, Canada)?*

A macroscopic petroarchaeological analysis and categorization of stone raw materials from 79 archaeological sites in southern Québec shows that five types dominate the region's lithic landscape. A detailed examination of a subsample of 66 sites reveals a north-south distribution gradient, suggesting preliminary patterns of mobility and interaction across the Upper Mauricie and the lower Ottawa River Valley regions. These results nuance existing socio-spatial models based on watershed-defined territories by highlighting the complexity and density of interregional exchange. Despite chronological uncertainties—stemming from limited stratigraphic contexts and scarce dating evidence—the observed patterns indicate that the circulation of lithic materials was shaped by macro-regional economic and cultural networks.

Pillsbury, Joanne (The Metropolitan Museum of Art)**[260]** *Archaeologists in the Art Market: New York, 1967*

The postwar years in the United States saw a vast expansion of activity in the study of the art and archaeology of the ancient Americas. From the perspective of the twenty-first century, we tend to think of these two interests as developing on separate tracks: one closely aligned with collectors, the art market, and museums; the other with field archaeology and the academic world. Yet the two interests were far more closely intertwined than we are comfortable acknowledging today. This paper examines a specific place and time—New York City in 1967—as a case study for illuminating the role of archaeologists in the art market. The discussion touches on issues of institutional identity formation, the history of taste, and changing values as the destructive impact of illegal looting became widely apparent.

Pimentel Nita, Roberto [45] see Tomczyk, Weronika

Pineda, Evan, and Gabriel Prieto (University of Florida)**[292]** *Sacred Geometry: Spatial Narratives of Sacrificed Camelids from the North Coast of Peru*

Throughout Andean history, religion and rituals have been integral to life and the societies and cultures that rose and fell in the region for thousands of years. These rituals have often included offerings, sometimes in the form of animal or human sacrifice. One of these ritual traditions carried out by the Chimú is composed of a sacrificial event of hundreds of children and camelids over ~500 years. This archaeological site of Pampa La Cruz has produced extensive research on the remains of the children, yet the camelids are lacking in scholarship and analysis. This study analyzes the body positions and burial treatments of the camelids, identifying patterns, commonalities, and differences in relation to the children. These findings provide insight into Andean concepts of spiritual dualism and the interconnected roles of humans and animals within Chimú social and religious landscapes. By centering camelids, this work highlights their equal and active role in Chimú ritual sacrifice, offering new perspectives on Chimú cosmology, worldviews, and sacrificial mortuary practices. ***This presentation will include images of human remains.

Pink, Jeremias

[198] *Obsidian Source Use and Site Function: Field Characterization of Obsidian Artifacts via pXRF at the Idaho National Laboratory*

Portable X-ray fluorescence spectrometry (pXRF) is a rapid, nondestructive, and increasingly popular method for determining the provenance of obsidian artifacts and other archaeological materials, but it is rarely used in the field to evaluate lithic resource use at individual sites. This study employs the field capability of pXRF to compare obsidian source use among six Late Precontact surficial scatters on the Snake River Plain of southern Idaho, including three short-term field camps and three seasonal camps associated with communal bison hunting. Results reveal significant differences in source use related to site type, rates of residential mobility, occupation frequency, and lithic procurement strategies. Several metrics are compared to evaluate differences in site function, including the diversity and directionality of source use, ratios of local to nonlocal artifacts, ratios of debitage to tools, debitage densities, and assemblage similarity. Findings of this study highlight the promise of pXRF as a low- impact tool for field characterization of lithic resource use at open sites at the Idaho National Laboratory and throughout the desert West.

Pink, Jeremias [198] see Freund, Kyle

Pinkston, Erin (Western University of Health Sciences), and Noreen von Cramon-Taubadel (Buffalo Human Evolutionary Morphology Lab, University at Buffalo, SUNY)

[89] *Diversity in Weaning Practices: Potential Plastic Responses in Craniomandibular Morphology to Early Life Experiences*

The complementary processes of breastfeeding and weaning are culturally prescribed and adaptive experiences requiring a mother to share nutritive substance with her child. Rather than passively receiving nutrients, the infant participates in the process via the biomechanically demanding act of suckling. Here, we explore the potential impacts of suckling on craniomandibular morphology, which has, historically, received little attention. Isotopic data and ethnographic reports of age at termination of weaning were synthesized to produce a mean age, in months, for 11 geographically and temporally distributed archaeological populations. Morphological data were collected from 3D surface scans for 278 individuals; data were then subdivided into six anatomical modules (skull, cranium, mandible, face and mandible, face alone, face and cranial vault). Weaning and morphological data were subjected to correlation tests to determine if an association existed between morphology and behavior. Both skull and mandible modules were significantly correlated with age at termination of weaning, indicating that early life experiences may play an important role in shaping our faces. With the increasing homogenization of weaning practices and reliance on bottles in modern times, archaeological and bioarchaeological research, especially the collection of isotopic data, is uniquely situated to investigate the extent of plastic responses during ontogeny. ***This presentation will include images of human remains.

Pinotti, Thomaz [282] see Adler, Michael

Pinta, Elie, Shalen Prado (University of Stavanger), and Dawn Mooney (University of Stavanger)

[165] *Investigating Past Foodways through Interdisciplinary Analysis of Wooden Material Culture: A Case Study of Norse Greenlandic Artifacts and Modern Analogs*

The study of past foodways represents an extensive field of research among archaeologists interested in reconstructing past human-environment relationships, diets, health, and social life events. Due to its flammable nature, wood is usually not the preferred material used to manufacture cooking vessels. However, wooden objects are otherwise used throughout our foodways, from storage through preparation to consumption. Furthermore, the relative ease with which wood can be carved allows for a variety of shapes, dimensions, and decorations, from simple amateur pieces to complex works of art. A better understanding of the uses of the different categories of wooden vessels and other various utensils has great potential to expand our knowledge of past food and drink practices, especially among groups where ceramic containers were rare, such as the Norse. This presentation focuses on a mix of archaeological artifacts recovered from

Norse Greenlandic contexts, as well as modern analogues used at Jernaldergården, a reconstructed Iron Age farmstead in Norway. This interdisciplinary pilot project combines macroscopic and microscopic analysis of wooden objects related to foodways and the residues they contain to gain a more detailed understanding of their past function.

Piperno, Dolores [354] see Fairbanks, Regina

Place, Noah (University of Arizona), and Rebecca Harkness (University of Arizona)

[166] *Got Any Games? Establishing the Presence of Gaming Pieces at the NAN Ranch Site*

Games are ethnographically well-documented phenomena in contemporary and historic Native American groups (Culin 1907). Recent work demonstrates their antiquity throughout the North American West (Madden 2025). These games, often forms of gambling, are typically played with modified animal bones and perishable materials such as reeds or sticks. Despite the evidence suggesting that gaming pieces take the form of animal bones or botanical remains, archaeologists working in the Mimbres Valley of New Mexico identify and classify ceramic sherds ground into a circle with no obvious utilitarian purpose as “game pieces.” The pieces are typically made of Mimbres Black-on-white (AD 1000–1130) sherds and do not have any agreed-upon diagnostic attributes other than their round shape and ground edges. These pieces are found distributed throughout Classic Mimbres sites in contexts such as cultural fill and floors of pueblos. However, no formal studies exist which have attempted to ascertain distribution patterns. Here, we establish diagnostic criteria for identifying game pieces in Classic Mimbres assemblages. We then examine the distribution of these pieces at the NAN Ranch site, a large Classic Mimbres (AD 1000–1130) community in the Mimbres Valley of New Mexico to identify patterns that may suggest their use as game pieces.

Place, Noah [25] see Watson, James

Plattner, Alain [46] see Cajigas, Rachel

Plaza-Calonge, Maria [309] see Garrido, Francisco

Pleskac, Janel (Sonoma State University)

[343] *Listening to Roscommon: Oral History, Intangible Heritage, and the Archaeology of Sound in County Roscommon, Ireland*

This paper presents research in progress from “Listening to Roscommon,” a community-based oral history project documenting musical heritage of County Roscommon, Ireland. Conducted in collaboration with the Castles in Communities archaeology field school, the project records and archives the life stories of local musicians across genres including traditional céilí, brass and reed bands, country and western, and showbands. These interviews generate qualitative data that illuminate how music, memory, and place may intersect to shape cultural identity. The project frames oral histories as intangible artifacts, revealing cultural “strata” embedded in soundscapes, performance venues, and cultural landscape. By treating songs, stories, and ephemera as material culture in their own right, “Listening to Roscommon” expands archaeological field school inquiry beyond excavation, positioning musical memory as a form of living heritage. Emerging themes include women’s roles and local-global dynamics framed as heritage processes, archaeology of soundscapes and social spaces, musical heritage as stratigraphy of cultural landscape, and significance for American archaeological field schools. As research in progress, this paper reflects on methodological challenges and opportunities in bridging oral history and archaeology, constructing durable partnerships with community-based digital repositories, and generating engaging deliverables, while emphasizing the value of collaborative, community-driven approaches to documenting intangible cultural heritage.

Plimpton, Kathryn (Natural Resources Institute, Texas A&M)

[74] *Adaptive Cultural Stewardship: Applying Conservation Science Frameworks to Heritage Management*

The military manages 27 million acres containing irreplaceable cultural heritage, which is facing intensifying pressures from climate change, encroachment, and regulatory shifts. Traditional preservation approaches—reactive, site-specific, and resource-intensive—cannot address these landscape-scale, long-term challenges.

Adaptive Cultural Stewardship offers a paradigm shift, applying proven conservation science methodologies to the management of cultural heritage. This approach integrates three core frameworks: Integrative Landscape Resilience for Cultural Heritage, Collaborative Stewardship Networks for Military Cultural Landscapes, and Adaptive Management Protocols and Systems for Cultural Site Resilience. This might look like resilience planning that maps vulnerability hotspots where natural hazards intersect cultural sites; networks linking military managers, Indigenous communities, and conservation scientists in knowledge coproduction; and adaptive policies, protocols, and systems such as decision trees for prioritizing interventions based on threat levels and site significance, sensor networks monitoring environmental conditions that can impact cultural sites, development of better predictive modeling, etc. What's Coming: Emerging challenges demand **innovative** responses—Cultural Triage for resource allocation under pressure, Climate Refugee strategies for sites facing inevitable loss, Living Landscapes approaches that treat heritage as dynamic ecosystem components, and Indigenous Futures frameworks that position Traditional Ecological Knowledge as cutting-edge adaptive management.

Pluckhahn, Thomas [157] see Herbert, Gregory

Pobiner, Briana (Smithsonian Institution), Michael Pante (Colorado State University), Jennifer Parkinson (University of San Diego), and Laurence Dumouchel (LinkedIn)

[356] *Identifying Taxon-Specific Carnivore Damage on Archaeological Faunas*

Approaches to identifying and recording carnivore damage on archaeological faunas have transitioned from largely qualitative and descriptive to more quantitative over the past few decades. Zooarchaeological criteria for recognizing taxon-specific carnivore damage have traditionally included skeletal part profiles, tooth mark frequency and location, and 2D tooth mark metrics. Recent methodological advancements including semi-quantitative measures of carnivore chewing intensity, the use of GIS in tallying tooth mark location and frequency, and collecting 3D measurements of tooth mark morphology that can be analyzed with computationally intensive methods, such as machine learning and artificial intelligence, have further enhanced our ability to distinguish taxon-specific carnivore damage. This presentation will review the history and development of these different approaches to identifying and recording taxon-specific carnivore damage, describe their strengths and limitations, and outline suggested next steps toward standardization.

Pobiner, Briana [221] see Norwood, Alexandra

Podrug, Emil [279] see Aspengren, Signe

Pohl, Mary (Florida State University)

[262] *Seeing Red: Painting within the La Venta Polity*

Static looking gray basalt monuments have come to characterize La Venta in our scholarly imagination, but Matthew Stirling's early site excavation recovered a red painted fragment of Colossal Head 4 dislodged by forceful bashing. Engineer Gene Ware was engaged to conduct multispectral imaging of selected La Venta sculptures, and he detected that red paint, with some black, was applied to stone with regular patterning. The elite client site of San Andrés extends the red theme throughout the polity, with red paint found on collapsed house materials. A feasting deposit dating ca. 460 BCE yielded up red pigment fragments, a roller stamp with glyphs to color the skin with calendrical designs, and cut human bones pointing to the shedding of blood. Does the La Venta polity's enlivened red visage advertise an aggressive show of might?

Pokines, James [228] see Ames, Christopher

Polcyn, Marek [89] see Gembicki, Maciej

Polivka-Curri, Sierra [313] see Kennedy, William

Pollack, David (Kentucky Archaeological Survey), A. Gwynn Henderson (Kentucky Archaeological Survey), and Brian Byrd

[273] *Markers of Long-Distance Fort Ancient Settlement Relocation: An Archaeological Case Study of the Early Colonial Shawnee Diaspora*

This case study, set in the early colonial era, highlights the importance of taking a broad, analytical perspective on long-distance Native American connections in the Eastern Woodlands. We discuss connections between archaeologically documented and historically recorded Indigenous People. Analysis of shell tempered ceramics from two colonial-era Native American archaeological sites near Augusta, Georgia, has established the presence of the Middle Ohio Valley (MOV) Fort Ancient farming peoples who relocated over 800 km to this region in the late 1600s CE. These ceramic datasets are used to validate historical records of the Shawnee Diaspora moving to the middle Savannah River region in Georgia and South Carolina in ~1674 CE. Savannah Town was a Shawnee (*saawanwa*) settlement in the Augusta area that persisted there until ~1707 CE. In summarizing our integrated results, we stress the linkage of the Shawnee to their precolonial MOV homeland and the persistence of their ceramic tradition until at least 1758 CE. We also discuss the potential, based on historic archival records, for identifying colonial-era Shawnee / Fort Ancient tradition ceramics at additional archaeological sites in the Eastern Woodlands: along the eastern colonial periphery in the mid-Atlantic region and in the deep South near the Tallapoosa and Chattahoochee Rivers.

Pollard, Helen (Michigan State University)

[210] *Transformation from a Periphery to a Core Region: The Early and Middle Postclassic of Michoacán, Mexico*

Unlike other core regions of Mesoamerica, Michoacán did not have a long history of large city-states and empires during the Classic and Epiclassic periods (AD 200–900) but was politically and economically peripheral to powerful polities to the east and west. During the Early and Middle Postclassic periods (AD 900–1300) the region exhibited a period of marked change, with new polities, new technologies, and new ideologies. Sociocultural change was a product of internal and external interaction among communities through both trade and warfare, as all interacted with climate fluctuations and volcanic eruptions. Using a world-systems framework, this is a time when the region was transformed from a periphery to a core region with the emergence of an expanding empire, the Tarascan state.

Pomeroy, Emma [267] see Serra, Margot

Ponce, Jocelyne (Tulane University)

[186] *Serving Community: Sourcing Feasting Ceramics from the Lowland Maya Center of La Corona*

Ceramic analysis has shed light on the role of feasting in fostering communal cohesion within middle-scale communities and neighborhood groups at the Lowland Maya center of La Corona. Neutron activation analysis of figurines, polychrome vessels, and utilitarian ceramics from feasting contexts in rural, peri-urban, and urban zones offers insights into the socioeconomic organization of this low-density settlement. By integrating functional and type-variety ceramic analyses with sourcing studies, this research identifies patterns of socioeconomic integration and differentiation across the settlement continuum. These findings underscore the importance of sourcing diverse ceramic materials in understanding interregional exchange and local socioeconomic dynamics. More broadly, this study contributes to understanding how Late Classic (ca. AD 600–900) Maya communities structured social networks, distributed resources, and maintained cohesion across dispersed landscapes.

Poniros, William [229] see McCormick Alcorta, David Rafael

Pool, Christopher (University of Kentucky), and Michael Loughlin (Stantec)

[312] *Terrain, Traditions, and Temporality in the Spatial Plans of Tres Zapotes and Its Hinterland*

This paper explores variation in formal architectural layouts through space and time with a particular focus on Tres Zapotes and its Eastern Lower Papaloapan Basin hinterland. Here, on the western margin of Olman, publicly available INEGI lidar complements robust datasets from high-resolution lidar, pedestrian survey, surface collection, and survey, offering insights into the visibility, distribution, timing, and modification of distinctive architectural plans against a backdrop of evolving Olmec and Epi-Olmec ceramic and sculptural traditions. We address three principal issues of general relevance in the interpretation of lidar data: (1) to what extent may the perceived absence of specific architectural plans in tropical lowland settings be an

artifact of variation in alluviation and ground cover, (2) how might variation in lidar-detected architectural plans reflect modifications of existing plans over time, and (3) what do documented disjunctures in adherence to architectural, ceramic, and sculptural traditions tell us about sociocultural interaction in the Formative Gulf lowlands?

Pool, Christopher [285] see Sullivan, Timothy

Pool, Rose [79] see Burr, Vivian

Pope, Carly (University of California, Los Angeles)

[311] *Envisioning Trade Dynamics: Ceramic Transportation and Cultural Transmission across Precontact Western Panama*

The Gran Chiriquí culture area encompasses southern Costa Rica and western Panama, spanning at least three topographic subdivisions: the Pacific Coast, Central Highlands, and the Caribbean Coast. The Caribbean Coast has been the least studied, particularly in comparison to the Pacific Coast. However, from 2003 to 2014, excavations on Isla Colón, the largest island in Bocas del Toro, Panama, identified multiple sites and recovered large, complex ceramic assemblages that include locally made pottery, imported wares, and local imitations of exotic styles. Ceramics from at least five distinct culture areas are evident stylistically, though the cultural processes and community dynamics that resulted in these diverse deposits are still poorly understood. To assess the chronology, scale, and cultural practices that shaped these assemblages, ceramic samples from seven sites across western Panama have been analyzed using complementary archaeometric techniques, including laser ablation inductively coupled plasma mass spectrometry, neutron activation analysis, and petrography. The identification of distinct paste groups and pottery styles serves to distinguish possible locations of production and shared visual languages. This not only establishes which ceramic types were being moved, but also the role of Isla Colón in precolumbian exchange networks and how its inhabitants interacted with others within and beyond Gran Chiriquí.

Pope, Katharine [77] see Millard, Matthew

Porcayo-Michelini, Antonio [271] see Ainis, Amira

Porter, Benjamin (University of California, Berkeley), Jordan Weitzel (University of California, Berkeley, Berkeley), Kevin McGeough (University of Lethbridge), and Shawn Bubel (University of Lethbridge)

[193] *Water Rituals in Iron Age Edom (Jordan): New Light on Ancient Busayra's Area A Building*

The first millennium Iron Age Levant witnessed the emergence of modest territorial polities, including Edom, a kingdom based in what is today the southern third of modern Jordan. Scholars have long suspected that Busayra, likely ancient Bozrah, was Edom's political seat that participated in commercial trade routes between Arabia and the Mediterranean. Renewed investigations by the authors have identified a fortified complex consisting of gates, plazas, and monumental buildings that sat on the settlement's acropolis. This paper examines a large rectangular building in Area A, which earlier excavations interpreted as a temple or palace. New excavations in this building have detected evidence in and around the building's central plaza and cella, suggesting water played an important role in rituals. This paper will also present new evidence confirming that the building was burned and destroyed during the mid-first millennium BCE, possibly by the Babylonian Empire in the mid-sixth century BCE.

Porter, Benjamin [193] see Weitzel, Jordan

Porter, Kevin [283] see Sain, Douglas

Portillo, Eduardo

[179] *In Pursuit of Marine Protein in Pottery: A Colorimetric Chemical Test Approach*

Marine resources are valuable indicators of both social and ecological relationships in the past. Their identification in archaeology has typically relied on isotopic and chromatographic analyses, which require specialized laboratories that remain largely inaccessible to Mexican research. Here, we propose a novel colorimetric approach to detect marine resource residues through chemical reactions targeting bromine, ammonia, and nitrites. Then, this color is quantified (ppb/ppm) by a colorimetric machine. To test this method, dogfish, catfish, and mussels were cooked in contemporary pottery jars. Samples were taken from bases, bodies, and rims. Marine organisms are enriched in bromophenols, which contain bromine; this element was separated by acid digestion and distillation. Protein presence was inferred through total organic nitrogen determined via the Kjeldahl method, with ammonia quantification. Nitrites were also tested as indicators of protein residues. Results revealed low but detectable levels of bromine and nitrites, alongside relatively high ammonia concentrations linked to the physicochemical properties of fish proteins. Although preliminary, these findings suggest that colorimetric tests provide a promising, accessible pathway for identifying marine resources in archaeological ceramics. Further experimental refinement is required to deepen our understanding of the underlying chemical processes.

Potra, Adriana [302] see Samuelsen, John

Pouley, John [318] see Butler, Virginia

Pounders, Sarah [227] see Shaune, Amanda

Pourmomeni, Shima (University of Florida)

[266] *Clay, Kiln, and Complexity: Early Craft Specialization in Seventh Millennium BCE Iran*

Throughout the Iranian Neolithic, diverse ceramic traditions were widely distributed across regions, yet because excavated sites were small and lacked features related to ceramic production, scholars have generally assumed pottery was produced at a household scale. Hormangan, a Neolithic site in the Bavanat River basin (Fars region, Iran), challenges this view. Excavations in 2016 uncovered a 70 cm high heated structure dating to 6100–6000 BC, enclosed by walls and surrounded by a 43 cm thick deposit of fine clay to the northeast and ash deposits to the southwest. These features suggest an open-fired kiln, not identified at other Neolithic sites in the Fars region, indicating pottery production at Hormangan extended beyond household levels and marked an early step toward craft specialization. Preliminary petrographic thin-section, XRD, and XRF analyses identified three local clay sources used for Hormangan ceramics. All sherds were chaff-tempered, although whether mineral inclusions were deliberately added remains uncertain. In this project, I reanalyze 36 ceramic thin sections and compare them with one from that clay deposit near the kiln to evaluate whether clay was intentionally prepared for ceramic production. The results provide substantial evidence for workshop-scale production, highlighting technological choices, craft specialization, and emerging social complexity in seventh-millennium BC southwest Asia.

Powell, Noah (University of Oklahoma), Kathleen Curry, and Matt Miller

[318] *Turning Collections into Connections: The Gunnison Valley Archaeology Alliance*

The Gunnison Valley Archaeology Alliance (GVAA) was founded to connect archaeologists and artifact stewards in the Upper Gunnison Basin, transforming isolated artifacts into shared knowledge. Recognizing a long-standing disconnect between professionals and collectors, GVAA seeks to bridge this gap and unite the community around archaeological preservation and education. This presentation will examine the alliance's origins, goals, and collaborative approaches that foster meaningful interactions essential for preserving context, expanding our understanding of the past, and promoting stewardship. As a case study, we highlight how collaboration led to the documentation of the region's first Clovis artifact, setting the stage for the eventual creation of GVAA. We conclude by reflecting on the challenges and successes of building a grassroots organization, offering lessons for others interested in developing similar collaborative models.

Powers, Kayla, Matt Peeples (Arizona State University), and Christopher Caseldine (School of Human Evolution and Social Change, Arizona State University)

[79] *Nondestructive Sourcing of Hohokam Tabular Tools: Assessing the Use of Portable X-Ray Fluorescence*

Hohokam tabular tools, often referred to as agave knives or scrapers, are common artifacts throughout the Phoenix Basin but remain understudied in terms of their manufacture, sourcing, and role in regional exchange networks. In this project, we applied portable X-ray fluorescence (pXRF) as a nondestructive method of chemical analysis to verify the assumption that metamorphic materials and tools cannot be sourced nondestructively. To evaluate this, regular rocks collected from potential material sources of these tools were analyzed using two different calibrations to determine if pXRF can demonstrate meaningful chemical differences between sources. The study's findings support the potential of using pXRF sourcing of tabular tools. By expanding the sample set and developing a calibration specific to these types of tools, this study offers new insights into a tool that has often been overlooked.

Powis, Terry (Kennesaw State University), Natalie Mason (Kennesaw State University), Kelsi Merkel (Kennesaw State University), Finn Killingsworth (Kennesaw State University), and Ava Armstrong (Kennesaw State University)

[155] *Village Life in the Etowah River Valley during the Middle Woodland Period*

Recent archaeological investigations have taken place at a precontact village located across the Etowah River from the Leake site located in Bartow County, Georgia. Excavations at the Cummings site have yielded substantial cultural deposits from excavations carried out over the past decade. Leake is regarded as the preeminent site in the region during this period and the data produced from Cummings allows us to discuss the nature, structure, and extent of their relationship from ca. 300 BC–AD 600. This paper will discuss each site and compare their sociopolitical and economic trajectories within the context of the Etowah River Valley.

Powis, Terry [157] see Freiwald, Carolyn

Powis, Terry [293] see King, Adam

Pozzi-Escot, Denise [62] see Oshiro, Janet

Prado, Ricardo [226] see Rodriguez, Orlando

Prado, Shalen [165] see Pinta, Elie

Praet, Estelle (British Museum)**[346] *Plastic Perceptions and Perceptions of Plastics: Crossed Views from Galapagos and Lake Titicaca***

Plastics are ubiquitous material culture and their itineraries are illustrative of artifacts typical of the Anthropocene. Increasingly, archaeologists and heritage professionals have become interested in plastics' affordances and their material properties. Plastics are substances for thought, becoming entangled in discourses related to environment, nature-culture, heritage, and consumer habits. Building on their omnipresence in our daily life, this paper will present a reflection emerging from two case studies, exploring shifting perceptions of plastic objects. The first case study stems from workshops centered around plastics as artifacts and plastic pollution with schoolchildren in Galapagos. The second case study consists of interviews on the north eastern shores of Lake Titicaca to explore current perspectives on material culture and heritage in the municipality of Puerto Acosta (Bolivia). While the purpose of the first case study was to explore plastics as super modern artifacts whose varied itineraries result in waste landscapes across Galapagos, the second case study was not aimed at studying plastics, but they made their way into the discourse about the environment, food practices and past material culture regardless. This paper therefore aims to offer a reflection based on those two studies.

Praet, Estelle [40] see Mouquet, Arthur

Prager, Christian (University of Bonn)**[92] *Designing Maya Glyphs: A Logic of Reduction?***

This study builds on epigraphic work by David Stuart, Stephen Houston, and Marc Zender, while presenting new analyses of monumental Maya inscriptions documented through high-resolution 3D scans by the Text Database and Dictionary of Classic Mayan project. These data allow precise examination of graphemic detail and sign composition beyond conventional photography, revealing subtleties of incision, surface treatment, and layout. Within this framework, the study situates glyphic reduction and compression within a wider scribal design process. It explores how *ajtz'iib* and *ajuxul* managed space when texts became condensed, conflated, or transgressed. Processes of variation, as outlined in work by Christian Prager and Sven Gronemeyer, include the horizontal or vertical segmentation of bi- and tripartite graphs resulting from the superimposition of graphemes within tightly packed blocks, a principle of superimposition first described by David Stuart and Stephen Houston. Such strategies reduced graphic complexity while preserving decisive traits that safeguarded graphemic identity. In some cases, sub-graphemic elements stood pars pro toto for an entire sign, particularly in painted and codical traditions. Cognitive approaches to reading suggest that recognition relies less on complete forms than on salient fragments and contextual redundancy, a capacity that ancient scribes appear to have intuitively exploited.

Pratt, Lauren [279] see Divinagracia, Anna Kristina

Pratt, Lauren [31] see Ren, Kara

Prendergast, Eric (Tetra Tech), Joshua Bauer (Tetra Tech), and Kathy Roxlau (Tetra Tech)

[264] *Two Tribal Representatives for Every CRM Archaeologist: Sentinel Project, US Plains and West*

The US Air Force Sentinel Projects extend through thousands of miles of land in the interior western United States to coastal California. They are the largest DoD undertaking since landmark cultural resources legislation. The project has been designed through consultation with 60+ invited tribes and involves on-the-ground tribal collaboration in survey and recording of all resources.

Prentiss, Anna [263] see Kuijt, Ian

Prestes Carneiro, Gabriela [221] see Rubinatto Serrano, Juliana

Preucel, Robert (Brown University)

[215] *Downstreamers: Cochiti Pueblo and LANL Toxic Waste*

"Downwinders" are commonly defined as those populations that have been negatively impacted by the airborne effects of national nuclear research programs. "Downstreamers" can be defined as those populations that are at risk due to toxic waste resulting from such research released into rivers and streams. Inspired by Rosemary Joyce's book *The Future of Nuclear Waste*, I consider some of the effects of the nuclear research at Los Alamos National Laboratory on the health and well-being of Cochiti Pueblo, located immediately downstream from Los Alamos. I suggest that an examination of the materiality of nuclear research can help contribute to a more expansive view of archaeology as a field committed to the study of the relations of people and other-than-human beings.

Preuett, Madison [49] see Williams, Makayla

Prevost, Camielsa [307] see Menager, Matthieu

Prieto, Alejandro [93] see Sánchez de la Torre, Marta

Prieto, Gabriel (University of Florida), and Dan Sandweiss (University of Maine)

[267] *Maritime Foundations for Andean Civilization at 50: Whither the Tides?*

Over the past 50 years, Michael Moseley's Maritime Foundations for Andean Civilization (MFAC) hypothesis has influenced theoretical discussions about the emergence of social complexity in the central Andean region. Although the emergence of monumental architecture and subsequent management of irrigation systems are crucial in the MFAC, other proxies have been studied, such as subsistence strategies, the textile industry, and settlement patterns. In more recent times, paleoclimate data and a more integral approach involving the

social and ideological aspects of maritime adaptations have become more frequent in Andean archaeology. In this presentation, we discuss how the MFAC is still shaping archaeological research on the Andean coast, combining multidisciplinary approaches, going beyond mere terrestrial versus marine dichotomies. Like MFAC, these are trends that Moseley himself pioneered. Current research supports the claim that coastal communities, regardless of their position in the chronological sequence, were more diverse and dynamic than previously thought. We ask, How and to what degree does MFAC still serve as a practical framework to study coastal adaptations beyond the central Andean region to get a better sense of the social trajectory of maritime communities on the entire west coast of South America?

Prieto, Gabriel [298] see Brinn, Andrew
 Prieto, Gabriel [100] see Hernandez, Xiomy
 Prieto, Gabriel [45] see Lantow, Vivian
 Prieto, Gabriel [292] see Pineda, Evan
 Prieto, Gabriel [30] see Zhu, Ruoyu

Primidova, Malike [314] see Cameron, Asa

Proctor, Lucas (Dartmouth College)

[163] *Making the Desert Green: Definitions and Challenges in Identifying the Origins of Oasis Agroecosystems in Southeast Arabia*

For millennia, traditional cultivation in hyperarid Southeast Arabia has relied on a unique oasis agro-ecosystem predicated on intensive, irrigated date palm groves in fortified settlements. However, the origins of this system remain a subject of debate among archaeologists in the region. In the 1980s–2000s, it was argued that this oasis system initially developed in the region during the late fourth–third millennium BCE, a period when increasing settlement scale, interregional trade, and technological innovation occurred alongside significant regional environmental aridification. Recent scholarship, however, has turned against this paradigm, arguing that previous attempts to link early cultivation to the oasis system uncritically applies a direct historical approach to 5,000 years of agricultural development, and that the necessary components of the oasis system only began to emerge in the first millennium BCE. In this paper, the evidence for early cultivation in SE Arabia during the fourth–third millennium is revisited alongside a discussion of the ecology of oasis agro-ecosystems. It will then be argued that early cultivation in the region should instead be defined as a “proto-oasis” system that is technologically and organizationally distinct from later “true” oases but nonetheless seeks to solve many of the same environmental challenges via similar strategies.

Proctor, Lucas [314] see Lau, Hannah

Prufer, Keith (University of New Mexico), Esther Brielle (Harvard University), and David Reich (Harvard University)

[223] *The Genetic History of the Maya 3500–500 BP*

Archaeological models of the rise and decline of the Maya lack direct demographic evidence. We present the largest ancient DNA study of the region, analyzing 1,551 genomes from 110 sites, spanning 3500–500 BP, alongside earlier Holocene individuals. Our results reveal that early demographic shifts follow a temporal trajectory; the addition of Chibchan-associated ancestry by 5300 BP followed by central Mexico-associated admixture by 3100 BP. After 2500 BP, geography was a primary driver of genetic variation in the southern lowlands. There is population structure that genetically distinguishes groups east of the Maya Mountains from those to the west. Eastern groups show high levels of ancestral continuity from local Holocene groups with little additional Mexican ancestry, which is epitomized and most pronounced in rockshelter burials. To the west of the mountains, lowland populations exhibit overall greater Mexican admixture. Across the southern lowlands we observe specific individuals showing nearly full Mexico-associated ancestry, suggestive of migrants, including from high status burial contexts. The Terminal Classic collapse dramatically reshaped the genetic landscape, leading to the near disappearance of the eastern rockshelter-associated ancestry and the homogenization of previously regionalized population structures with a shift among the Maya toward greater Mexican associated ancestry during the Postclassic.

Prufer, Keith [157] see Freiwald, Carolyn
 Prufer, Keith [221] see Neff, Nadia
 Prufer, Keith [81] see Pearson, Osbjorn
 Prufer, Keith [221] see Ray, Erin

Pryor, John, and Waylon Coats

[124] *A Path Forward for California Archaeology in a CalNAGPRA and AB389 World*

It has become clear to the two authors of this poster that archaeology in California and likely in North America is at a crossroads, much like the era of Binford's New Archaeology. The old practices of archaeology housed in universities and CRM firms are being swept away. The results of legislation such as CalNAGPA and AB389 have fundamentally changed the discipline. The results of these legislation have had unintended consequences and what will come out of this period of change is still not clear. What is clear is that the state-of-affairs as they are at this time are really not favorable for any parties. It may well be the discipline will be transformed into Tribal Archaeology, but what form that take is still to be determined. Where the discipline stands today, and possible paths forward are the subject of this poster.

Przadka-Giersz, Patrycja (University of Warsaw)

[100] *Circles, Dots, and Decisions: Identity, Power, and Transformation in the Culebras Valley from the Late Prehispanic to the Early Colonial Period*

The Culebras Valley offers a key perspective for exploring how local communities created, negotiated, and transformed their cultural identities after AD 1000 during the Late prehispanic periods. At its core lies Ten Ten, a major center whose plaza-platform architecture and distinctive circle-and-dot and molded ceramic styles constituted a recognizable material language. These elements were not merely markers of affiliation but also practices of identity-making, reproduced through domestic routines, mortuary programs, and public performances. In this way, Ten Ten demonstrates how communities used material culture both to define themselves and to forge connections across coastal and highland areas. With Inka expansion in the Late Horizon, the political and ceremonial space was reorganized: Chacuas Jirca became a new hub, adopting architecture and rituals aligned with imperial administration and integration, while earlier traditions persisted in new contexts. By comparing Ten Ten and Chacuas Jirca, I emphasize a sequence of continuity and change: from the formation of Late Intermediate period traditions to their adaptation under Inka and colonial rule. My ongoing research shows the valley as a layered record of cultural strategies, where artistic styles, architectural forms, and settlement patterns were repeatedly used to negotiate identity, memory, and belonging amid shifting historical circumstances.

Przadka-Giersz, Patrycja [272] see Giersz, Milosz

Przybyla, Joy (University at Albany)

[295] *The Curation of a Sacred Space: Preliminary Evidence of Postclassic (1150–1500 CE) Yucatán Cenote Attributes Using Cluster Analysis in R*

The Maya of the Postclassic (1150–1500 CE) sought out specific features in their ideological landscapes. One of the most important elements is the subterranean cave. Within the zone of cenotes of northern Yucatán, caves are not as prolific as they are elsewhere in the Maya region. However, cenotes do take on the role of caves as the axis mundi of site formation, including Cenote Chen Mul in Mayapan. Yet, as the primary source of groundwater in the area, not every cenote is designated a sacred space. By employing a cluster analysis in R, transformative cenote attributes, theoretically, will emerge. When broken down, what attributes transform cenotes into sacred caves? Cave modification is well known in the Maya region—rock art, plaster floors, staircases, altars, ossuaries, etc.—and these same modifications exist in select cenotes. What natural clusters of these modifications appear from the attributes? A correspondence analysis is employed to see if artifact presence and frequency can lend insight into the function of transformed cenotes.

Przystupa, Paulina (Alexandria Archive Institute / Open Context)

[335] *Indigenous Data Sovereignty, Government Archives, and Archaeological Data Literacy: A Case Study*

This paper uses the example of government-created data about the United States' Native American boarding school system to consider the relationship between public domain data, Indigenous Data Sovereignty, and archaeological data literacy. While there are many examples of collaborative work excavating boarding schools, significant information about them resides in government records. Such archaeologically relevant archives regularly reside in government-controlled spaces where non-Indigenous approaches to archiving govern stewardship and access. The data and information in these documents are Indigenous, as they were created about Indigenous peoples. Yet they are also public domain data, as government records that are legally accessible by almost anyone. So, what can we do to advocate for Indigenous Data Sovereignty when using materials from such collections? This paper proposes that one step archaeologists can take to encourage Indigenous Data Sovereignty is to make archaeological data literacy as integral to archaeological education as excavation. By educating current professionals, students, and the public in data literacy, as well as principles such as FAIR and CARE, we can collectively improve our understanding of what research we should do and when, how that research is shared, and begin to shift the discipline toward an Indigenous Data Sovereignty-centered framework.

Puente, Nicholas (University of Colorado Boulder), and Jennifer Sormberger (University of Colorado Boulder)

[206] *A Case Study in Sourcing Speleothems via Trace Elements at Punta Laguna, Yucatán, Mexico*

This paper discusses recent developments in the chemical analysis of speleothems, secondary calcium carbonate cave formations, with applications for sourcing studies. Specifically, it introduces a case study of speleothem manipulation at the site of Punta Laguna in Yucatán, Mexico. While attempts to chemically source speleothems began in the 1990s, few subsequent attempts have been made. As a result, a feasibility project was established to better understand the limits and possibilities of speleothem sourcing. Ancient Maya residents of Punta Laguna deposited 12 speleothems within a miniature masonry shrine located in the site's ceremonial center during the Postclassic period. To test whether speleothems from the Postclassic shrine came from nearby caves, the Punta Laguna Caves Project collected in situ speleothem samples from the only two caves in the site core where significant speleothem growth was present. These speleothems were then analyzed using Inductively Coupled Plasma-Mass Spectrometry (ICP-MS) to test several hypotheses including whether elemental concentrations vary along a speleothem's growth axis, whether variation is exhibited in speleothems from different portions of a single cave, and whether speleothems from different caves exhibit variation. The paper concludes by presenting several methodological recommendations for improving speleothem provenance studies.

Puente, Nicholas [34] see Davis, Kaitlyn

Puente, Nicholas [275] see Kurnick, Sarah

Pugliese, Francisco [221] see Rubinatto Serrano, Juliana

Punzo Díaz, José Luis (Instituto Nacional de Antropología e Historia), Ben Nelson (Arizona State University), Christopher Schwartz (S'edav Va'aki Museum), and Alfonso Gastelum (ICAT-UNAM)

[210] *Network or Networks? Long-Distance Interactions between Western Mexico and the Southwestern United States*

We analyze the appearance of different objects (metal, blue-green stones, tropical birds, shell, and pseudo-cloisonné decorated ceramics, to mention the most relevant), conducting a network study for each to understand continuity and change between 900 and 1350 CE. The analysis uses data collected through the Connections and Impacts of North and West Mexican Cultures Project conducted by Arizona State University and the INAH. This study, which involves 491 archaeological sites, 5,462 sets of objects, and more than 31,000 individual objects, may help to determine the uniformity or multiplicity of agents involved in the transmission of such precious goods. Our findings demonstrate the remarkable extent and complexity of interrelated exchange networks that linked West Mexico to the US Southwest between 900 and 1350 CE.

Punzo Díaz, José Luis [88] see Ávila, Claudia

Punzo Díaz, José Luis [178] see Dorison, Antoine

Punzo Díaz, José Luis [221] see Pacheco-Forés, Sofía

Punzo Díaz, José Luis [210] see Sedig, Jakob

Purcell, Gabrielle [81] see Carmody, Stephen

Purifoy, Haley, Cinthia Campos-Hernandez (University of Wyoming), Hannah Branson, and Briana Doering (University of Wyoming)

[313] *Paleoethnobotanical Analysis of Seeds and Charcoal from the Late Pleistocene to Early Holocene Transition at Swan Point, Alaska*

The study of plant resource exploitation in the archaeological record, particularly in interior Alaska, is limited to preservation and early archaeological and ethnographic bias. This study aims to use paleoethnobotanical methods to increase the study of plant use in interior Alaska through an in-depth analysis of macrobotanicals recovered from Swan Point. Swan Point is a multicomponent site located above the river flats of the Tanana River Valley, with Pleistocene-Holocene cultural components dating to 14,200 cal yr BP to 9000 cal yr BP. The transition from the Pleistocene to the Holocene brought dramatic ecological changes to the flora and fauna of interior Alaska as the glaciers retreated. This project uses paleoethnobotanical methods and analysis of seeds and charcoal recovered from hearth features to identify how human behavior reacted to drastic climatic changes. Ethnographic and ethnohistoric records and accounts from the region are used to expand on the interpretations of plants recovered.

Purifoy, Haley [313] see Campos-Hernandez, Cinthia

Purifoy, Haley [313] see Fouche, Jodi

Pye, Jeremy (Cultural Resource Analysts)

[297] *Parasites and Their Impact on Human Behavior and Society*

[WITHDRAWN]

Pye, Mary [272] see Gutiérrez, Gerardo

Qiu, Zhenwei (National Museum of China)

[354] *Plant Utilization Strategies of the Bashang Grassland in North China across the Paleolithic-Neolithic Transition*

This study examines the Paleolithic-Neolithic transition (approx. 15–8 ka BP) in the Bashang grassland, North China, focusing on plant use strategies against a backdrop of climatic and environmental change. During the early phase (15–11 ka BP), low-level food production gradually emerged alongside foraging economies, characterized by intensified and high-frequency plant utilization. Around 11–10 ka BP, the adoption of millet cultivation marked a shift toward domestication-based economies. Plant use showed high diversity and locality, encompassing woody and herbaceous species from terrestrial and aquatic environments—including nuts, fruits, tubers, and grasses—used for both food and fuel. These resources complemented animal exploitation and shifted from broad-spectrum gathering to intensification, supporting societal development. The introduction of new tools (e.g., stone shovels, grinding stools, pottery) reduced residential mobility and transformed habitation patterns, collectively facilitating the Neolithization process in the region.

Quade, Jay [71] see Semanko, Amanda

Quave, Kylie (George Washington University), and Jeffrey Splitstoser (George Washington University)

[43] *When Data Tangles: Data Quality and the Future of Big Data in Khipu Studies*

The proliferation and accessibility of computational methods present many opportunities for larger-scale analyses of Inka khipu. Simultaneously, khipu are recorded by researchers who are trained differently, employ varying recording protocols, and prioritize distinct attributes, leading to gaps, inconsistencies, and incompatibilities across datasets. Even seemingly straightforward measurements—cord length or knot values—are recorded inconsistently, while knot typologies and anomalous features are described in idiosyncratic ways. Color is subject to uneven categorization and prone to fading and staining. As perishable

artifacts, khipu deteriorate, complicating data integrity. Moreover, current data analyses require a khipu is reduced into a matrix of observable traits, while some khipu resist attempts to confine their materiality in boxes. We each collected data from a single khipu, documenting qualitative (fiber, attachment orientation, knot twist, cord structure, color, etc.) and quantitative attributes (instrumental color values, cord diameters, knot values, etc.) and ways that our observations diverged in the process. We highlight discrepancies in individual recording outcomes from ours and other studies to reflect on khipu data quality. Considering the treatment of the khipu corpus as “big data,” we argue for a “slow-science” approach that prioritizes methodological transparency, replication, consensus-building in recording practices, and caution in interpreting results.

Quave, Kylie [309] see Chiou, Katherine

Quesada, Marcos [163] see Melendez, Ana

Quezada Olivas, Juan [26] see Hopkins, Maren

Quigley, Gabrielle, Katherine Miller Wolf (University of West Florida), Lori McDuffie (University of West Florida Historic Trust), and Christina Bolte (Archaeology Institute, University of West Florida)

[112] *Odd Fellows in a Closet: Guidance for Museum Archives and Universities*

This poster presents recommended practices for the disarticulation of a historic anatomized skeleton articulated with metal fittings in the nineteenth century. The skeletal remains were recently found in the holdings of the city’s Historic Trust and are attributed to the Independent Order of the Odd Fellows, a group known to use human remains in their activities. Guidance for museums or other institutions on handling non-NAGPRA anatomized skeletons is limited. We outline the steps taken to deaccession and disarticulate a museum skeleton, and the roles of bioarchaeologists, curators, officials, and universities in this process and final curation. Finally, we summarize the ethical considerations and discussions that were part of this process. *****This presentation will include images of human remains.**

Quilter, Melvin [341] see Brouwer Burg, Marieka

Quinn, Colin [324] see Chorek, Sophie

Quinn, James (Mohegan Tribe of CT), David Rafael McCormick Alcorta (Mohegan Tribal Historic Preservation Office), Anthony Graesch (Connecticut College), and Jay Levy (Mohegan Tribal Historic Preservation Office)

[182] *Collaboration for Community and Capacity Building: Reciprocal Relations between the Mohegan Tribal Historic Preservation Office and Connecticut College*

Preserving cultural heritage requires a community of the willing. With few exceptions organizations concerned with heritage preservation are short staffed and increasingly asked to do more with less. Outside of history class, students are rarely exposed to disciplines concerned with heritage preservation until they reach college. This poster discusses our experiences over the past few years of growing the capacity for our institutions as a two-way street. A formal internship program in which students from Connecticut College work at the Mohegan Tribal Historic Preservation Office (MTHPO) has augmented the capacity to conduct heritage preservation work for both parties. Exposing students at a young age demonstrates that careers in cultural preservation are not only possible but meaningful and dare I say “fun.” MTHPO staff identify projects for students that advance department goals while allowing them choose topics that interest them to help them refine their academic pursuits. Connecticut College has called on MTHPO, whose staff included alumni of the internship program, to assist with on-campus archaeology. This reciprocal relationship serves as a model for institutions to pursue these collaborations for mutual benefit and increase capacity of both parties.

Quiñonez, Patricia

[100] *Tecnologías de la cuadrícula: Circulación y persistencia de la planificación urbana en Casma y Nepeña*

Los valles de Casma y Nepeña propiciaron una extensa urbanización desde el Período Formativo. Algunos sitios vinculados con la Cultura Casma precolonial tardía revelan evidencia de planificación ortogonal. Nos centramos específicamente en los sitios de Alpacote (Máquina Vieja) y PV31-116 en el valle bajo de Nepeña. Actualmente prácticamente destruido, Alpacote constituía una extensa conurbación que incorporaba múltiples montículos de adobe. PV31-116 (Proulx 1973), fuertemente saqueado, permanece en gran parte sin investigar. Hemos iniciado proyectos preliminares en ambos sitios, incorporando fotografías históricas, inspección de superficie y cartografía preliminar. La evidencia sugiere que estos sitios con planificación ortogonal datan de finales del Horizonte Medio, pero revelan poca evidencia de construcción o ocupación Wari. Así respalda trabajos recientes que cuestionan la planificación urbana como un simple indicador de la expansión imperial en los Andes precoloniales. De hecho, uno de los sitios urbanos más antiguos construidos en cuadrícula, Pampa de las Llamas, se encuentra dentro de la propia Casma, y las cuadrículas ortogonales persistieron en la región como modelo de organización del espacio urbano a lo largo del tiempo. Por lo tanto, analizamos las posibilidades de la cuadrícula como tecnología en los Andes, y examinamos su circulación y actualización en la región de Casma.

Quiñonez, Patricia [213] see Berquist, Stephen

Quiquerez, Amelie [279] see Martin, Fabiana María

Quiroga, Valentina [32] see Nuevo Delaunay, Amalia

Quiros, Franklin [35] see Smith, Byron

Quispe-Bustamante, Hubert [337] see Brown, Matthew Tyler

Quist, Rachel [200] see Hart, Isaac

Quiver, Braylon [114] see Fowles, Severin

Raab, Bailey (Binghamton University)

[81] *Double Dip: The Efficacy of a Second Flotation for Recovering Archaeobotanical Remains*

There is no doubt that water flotation facilitates analysis of archaeobotanical materials by washing soil from specimens and making them easier to identify, but what happens when flotation has been done poorly? While working on an archaeobotanical project, I attempted to analyze poorly floated macrobotanical samples where seeds within the samples were still covered in soil and therefore unidentifiable. Without a feasible alternative, I refloatated the samples to remove the excess soil. Afterward, I began to question what the second round of water flotation did to the preservation and recovery of archaeobotanical remains in the samples I analyzed. To test the efficacy of water flotation machines, archaeologists have quantified the recovery rates of burned plant remains from soil samples using different types of water flotation systems since the 1970s. The poppyseed recovery standard has been used extensively to this end. I present the results of a poppyseed recovery test to quantify the impacts a second round of flotation has on five simulated archaeological samples created from burned poppyseeds and sterile soil, standardizing all other factors of flotation to the fullest extent possible.

Rachal, David [178] see Stowe, Michael

Rademaker, Kurt (Center for the Study of the First Americans), Daniela Osorio (Universidad de Tarapacá), and Veronica Ortiz (Museo Nacional de Arqueología Antropología e Historia del Perú)

[41] *Early Bifacial Technology in the Central Andes*

We will review the technology and chronology of bifacial points and other instruments in the earliest archaeological lithic assemblages of Ecuador, Peru, and northernmost Chile. Fishtails and a variety of stemmed point forms are found in both coastal and highland sites. While unifacial tools tend to be made of

local raw materials, high-quality toolstone was preferred for bifacial tools and especially points, regardless of proximity to camps. Nondestructive provenance analyses are revealing that transfers of raw materials and bifaces increased in frequency and range in the Early Holocene, possibly due to the establishment of social networks spanning vast and rugged landscapes. Explaining the origins of variation in early bifacial technology remains an ongoing challenge. Resolving this issue within the central Andes, and between the central Andes and other regions of Latin America, will be possible with the development of accurate and precise radiocarbon chronologies.

Rademaker, Kurt [180] see Biwer, Matthew

Rademaker, Kurt [180] see Grote, Willow

Rademaker, Kurt [180] see Milton, Emily

Rademaker, Kurt [213] see Reid, David

Radican, Kelsey [301] see Haefner, Joseph

Radillo Rolón, Diana (Shumla)

[38] *Felines and Chalchihuites in Aztec Murals and Lower Pecos Rock Art*

In this presentation, I examine *chalchihuites* and felines and their symbolism associated with sacred water using images depicted in Aztec mural painting in Mexico (AD 1–650) and in the rock art of the Lower Pecos, Texas (5500–1300 cal BP). Although these two pictorial traditions are separated in time by more than 4,000 years, both narratives recurrently link the *chalchihuitl* (greenstone), *atl* (water), and felines. Together, these three recurring symbols embody a mythical concept rich in connotations related to the earth, fertility, and the rising sun, as well as the petition for fertile water in exchange for sacrificial blood or precious water. This analysis explores visual parallels to study past beliefs and the cognitive processes reflected in the pictorial culture of two Indigenous groups.

Radillo Rolón, Diana [276] see Keim, David

Radivojevic, Miljana (UCL Institute of Archaeology), Christopher Stevens (UCL Institute of Archaeology), Rebecca Roberts (UCL Institute of Archaeology), and Dorian Fuller (UCL Institute of Archaeology)

[315] *The First Industrial Age: Bronze Age Metallurgy and Its Legacy of Carbon Emissions*

The increase in CO₂ emissions beginning around 6000 BP remains insufficiently understood, with limited research addressing its origins. While the rise in methane emissions around 5000 BP is linked to intensified wet rice production in Eastern Eurasia, CO₂ sources from the same period require further investigation. This study presents new evidence for the environmental impact of large-scale Bronze Age copper production in the Eurasian Steppe, suggesting a possible link to a 10.2 ppm rise in atmospheric CO₂ between 3500 and 1000 BC—comparable to the 9.6 ppm increase during the Second Industrial Revolution. Based on conservative models, Central Asian mining systems may have produced up to 1.2 million metric tons of copper, generating an estimated 0.31 Gt of carbon emissions. The vast discrepancy between this output and the limited number of extant artifacts highlights recycling and trade at scale, inviting a broader reassessment of early anthropogenic climate influence.

Rafart, Eulàlia [93] see Sánchez de la Torre, Marta

Ragheb, Maryan (University of California)

[292] *Blurring Boundaries in Death: Children's Funerary Adornment in Predynastic Egypt and Nubia*

In Predynastic Egypt, the funerary adornment of children reveals how practices of mourning blurred the boundaries between cultural groups along the Nile Valley. Microscopic analysis of personal ornaments from the settlement site of Adaïma and from pastoral Nubian A-Group child burials at Adindan, Serra East, and Qustul (ca. 3800–3200 BCE) shows striking parallels in how children's bodies were prepared for burial. The crafting of ornaments and their placement on the body were collective acts, carried out by different members of each community. These adornment practices reflect both the individuality of the deceased child and the

shared values of the society, transforming the child's final image into a communal expression of identity. More importantly, their recurrence across settled Egyptian and mobile Nubian contexts demonstrates that responses to the disruption of loss transcended ethnic and cultural distinctions. By situating children's burials within broader social networks, this study highlights how communities used ornamentation not only to mourn but also to reinforce cohesion across boundaries. The funerary adornment of children thus provides critical evidence for the entangled relationships of Nile Valley groups, challenging rigid categorizations and underscoring the permeability of social and cultural identities in the late fourth millennium BCE.

Ragsdale, Corey (Southern Illinois University Edwardsville), and Aleks Stricker (Southern Illinois University Edwardsville)

[89] *Population Structure Analysis of Two Neighboring Communities in Early Modern Poland*

Much of what is known regarding the population structures and migration histories of Early Modern populations in Central Europe remains largely unknown. This is particularly true for rural communities and non-centers. Several cultural, climatic, and other environmental changes had an impact on the lives of the people throughout the region. In this study, we will focus on the effects of complex sociocultural processes on migration and mate exchange patterns among two communities in Greater Poland (Wielkopolska) during the Early Modern period. The village of Gać and town of Dzwonowo, both located in the modern Zielonka Forest, were neighboring communities approximately 3 km from one another. Both settlements are considered "vanished villages," and graves have been recovered over the course of several excavation seasons in the past six years. Using dental morphological data from human skeletons recovered from both sites, we compare biological population structures to examine (1) migration histories and (2) possible genetic exchange among the two communities. The results of our study show differences in population histories among the two communities, with a lack of genetic exchange between them. We interpret our findings through different sociocultural structures between the village of Gać and town of Dzwonowo. *****This presentation will include images of human remains.**

Raillard Arias, Daniela, and Sébastien Guillet

[33] *Mallqui and Mallki: Attending to Tree Teachings on Ancestor and Arboreal Relations through the Chachapoya Chullpa*

In the Amazonian Andes, Chachapoya cliff tombs embody a millennium of descendant interactions with the ancestral dead. Not simply territorial markers or symbols of a highly diverse mortuary system, Chachapoya *chullpas* are ancestral place-beings that mediate relations between people and a world of biotic entities. In this presentation, I attend to the relations between trees and ancestors materialized through an assemblage of archaeological wood remarkably preserved in *chullpas* of Peru's northeastern tropical montane cloud forests. I present a research practice that branches environmental knowledges of local, descendant communities in Leymebamba with dendroarchaeology and wood anatomy, framed through Indigenous science to ask what trees teach about relations. Of 29 beams sampled across four sites, one tree species was recurrently identified: Aliso (*Alnus acuminata*). As repositories for ecological knowledge, *chullpas* elucidate Chachapoya land management and agroforestry practices that reflect a preference for the Andean alder since at least 690–1180 CE. Akin to *mallqui* ancestors elsewhere in the Andes, young, cultivated trees (*mallki*) are regenerative and root communities to the land. Accordingly, I discuss how for Chachapoya people, Aliso's capacities to restore disturbed ecosystems, shelter biota, heal lesions, dye fibers, repel moisture, and resist rot aggregated agency to ancestral place-beings.

Raimbault, Megan [115] see Burke, Ryan

Raja, Mussa [221] see Skosey-LaLonde, Elena

Rakita, Gordon (University of North Florida), and William Graves (Statistical Research Inc.)

[82] *External Engagements: Syncretic Ritual Practices in the Casas Grandes World*

The role of Mesoamerican influences on the prehistory of the American Southwest and northern Mexico has been a perennial issue since the beginning of the past century. At times the influence of Mesoamerican cultures was seen as an important causal agent. No better example of this was Charles Di Peso's

reconstruction of the origins of the Casas Grandes phenomena that developed in northwestern Chihuahua, Mexico, in the fourteenth century AD. More recent reconstructions propose a more autochthonic genesis for the developments most impressively on display at the site of Paquimé. In this paper we explore the hybrid Southwest-Mesoamerican elements of the Casas Grandes culture. In doing so we explore the possibility that instances of syncretism can develop in the absence of coercion or force from an outside colonizer.

Rakita, Gordon [82] see Graves, William

Rambo, Colin (Stantec)

[264] *Positively Correlating Public Engagement and Creative Mitigation in CRM Archaeology*

As part of this session, I will explore the correlative relationship between “public engagement” and “creative mitigation” in cultural resource management (CRM) archaeology. I will discuss public approaches using ArcGIS Story Maps, virtual/augmented reality experiences, and other public education multimedia—that are only made possible via proactive engagement with culturally affiliated and/or public interest groups (e.g., Native American Tribal governments, nongovernmental organizations, historic preservation and other nonprofit organizations, etc.) during the life cycle of a CRM archaeology project. Exploring the positive correlation between “public engagement” and “creative mitigation” will provide attendees with a deeper understanding of both and a true appreciation for the level of effort that is required to co-create highly impactful deliverables that extend beyond the CRM archaeology project life cycle (i.e., ongoing community engagement with deliverables).

Ramirez, Andy [334] see Atherton, Heather

Ramirez, Bobby (Resolution Copper, Principal Advisor-Native Affairs & Cultural Heritage)

[37] *Environmental, Social, and Governance (ESG): Investing in Tribal Communities*

Today, socially responsible investors are looking to align their projects with their values. The consideration of ESG (Environmental, Social, and Governance) factors help investors measure the ethical and sustainable impact of a company and its operations. Company impacts on the environment and risk management practices, company relationships with those who are impacted by and have influence on a project, and the values that guide company operations and management can serve as benchmarks for stakeholder buy-in. ESG-conscious companies are instituting policies and practices that prioritize environmental responsibility, promote social equity, and align stakeholder interests and corporate values. This means companies share reciprocal relationships with the communities in which they operate. This presentation discusses how Resolution Copper works to gain a social license to operate based on trust and responsible practices, including net zero carbon contributions, partnership-building with Tribal Communities, and decision-making rooted in participation, transparency, and accountability.

Ramirez, Estevan [226] see Ciolek-Torello, Richard

Ramirez, Victoria (Bureau of Land Management)

[255] *Detecting Community-Level Ethnic Variation through Classic Vernal Style Rock Art*

Northeastern Utah's Uinta Basin marked the northernmost extension of maize agriculture in western North America. The foraging-farming transition saw the formation of Fremont farming communities, each with distinctive rock art galleries collectively referred to as the Classic Vernal style. Recent studies suggest these communities were composed of two linguistically and ethnically distinct groups (proto-Hopi and proto-Kiowa) who migrated from the Four Corners region ca. AD 300, bringing maize agriculture with them. This suggests Classic Vernal style rock art may reflect processes shaping ancestral Hopi and Kiowa identities, supported by ethnographic evidence of rock art symbolizing clan identity. It also implies that distinct communities created the rock art of the Uinta Basin. I develop a method that examines variation in headdress motifs as a means for testing the hypothesis that site-level differences in stylistic elements reflect intercommunity differences during the Uinta Fremont period. While the objective of this study is not to assign ethnicity, the results reveal significant differences between communities. Chi-square tests confirmed statistically significant relationships between headdress types and site areas. This analysis identifies unique

motifs specific to site locations within the Utah portion of Dinosaur National Monument and underscores the significance of headdress imagery in Fremont communities.

Ramirez Flores, Lady, and Alexis Rodríguez Yábar (Arizona State University)

[100] *The Casma Phenomenon in the Middle Casma Valley, Peru: Ceramics, Settlements, and Social Dynamics*

The middle Casma Valley, located on the north coast of Peru, remains a relatively unexplored area that is crucial for understanding the valley's long-term history. In 2024, the Middle Casma Valley Archaeological Project carried out a survey on the southern margin of the middle valley, documenting occupations from the Formative period onward. Among these, a massive Casma presence associating to the Middle Horizon and Late Intermediate periods (AD 1000–1450) stands out. This presentation focuses on the characterization of Casma ceramic production, including vessel forms and decorative styles, and their association with archaeological contexts such as domestic settlements, administrative compounds, funerary mounds, and cemeteries. The results indicate that the Casma phenomenon was far more fluid and dynamic than previously understood. Moreover, the study of large settlements in this part of the valley such as Cerro Bombón and Pallka (sector 3) is essential for reevaluating the scale, variability, and sociopolitical organization of Casma society.

Ramirez Flores, Lady [173] see Rodríguez Yábar, Alexis

Ramirez-Urrea, Susana (Universidad de Guadalajara)

[210] *Interregional Interaction and Sociopolitical Organization in the Aztatlán Network (Early–Middle Postclassic)*

Archaeological evidence reveals that transformative processes in sociopolitical organization and exchange networks within the Chapala and Sayula Lacustrine Basins began to manifest around 800/850 CE. Research conducted in Sayula demonstrates that, by 900 CE, the Aztatlán network had solidified its presence across Western Mexico, its development intricately tied to the expansion of exchange systems connected to Tula. Current scholarship indicates that Aztatlán units were structured as compact polities exhibiting city-state characteristics, distinguished by regional specialization in the production of strategic resources, prestige goods, a shared ideology, and the control of critical corridors and nodes within broader exchange networks. In Nayarit, social organization mirrored patterns observed among the Mixtec lordships, in contrast with divergent models present in the Jalisco Highlands. Among the principal Aztatlán centers, Ixtlán del Río (Nayarit), La Peña (Sayula), and El Chanal (Colima) could played pivotal roles, serving not only as hubs of sociopolitical integration but also as focal points for communal gathering and ritual activity. This analysis focuses on the sociopolitical frameworks and political economies of these units, investigating the mechanisms of articulation and interaction that contributed to the consolidation of the Aztatlán network.

Ramon Celis, Pedro (McGill University)

[94] *Living Heritage, Prohibited Conservation: Contradictions of Communal Care at Guiengola*

In the southern Isthmus of Tehuantepec, the archaeological site of Guiengola has been protected for centuries by descendants of its Zapotec builders, despite minimal institutional oversight. Yet communal practices, such as hunting, gathering, and grazing, are often framed by state authorities as threats to preservation. This paper explores the tension between official heritage discourse and local, embodied forms of territorial care. Drawing on seven years of ethnographic and archaeological research, I critically examine the state-led conservation model, which emphasizes technical control and monumentalization while sidelining communal knowledge and grassroots stewardship. Interviews and fieldwork reveal how local land authorities and residents of Tehuantepec enact a form of heritage governance that, though unofficial, has effectively shielded Guiengola from looting, development, and neglect. Locally, Guiengola is not seen as a static archaeological site but as a living mountain, imbued with agency, memory, and moral force. This relational ontology reframes care as reciprocal and rooted in everyday use. What institutions label “misuse” is, for its caretakers, a legitimate mode of inhabiting and protecting a sentient landscape. Engaging with critical heritage studies, I argue that Guiengola exposes the epistemic and political frictions within heritage declarations in Latin America, urging a rethinking of conservation through Indigenous sovereignties.

Ramos, Andrew, and Rachel Horowitz (Washington State University)

[115] *Lithic Technological Variation between Neanderthals and Modern Humans: New Insights from an Assemblage*

from Carihuela Cave, Spain

The persistence of Neanderthals in the Iberian Peninsula is a matter of some debate. Carihuela Cave, located in Andalusia, Spain, has some of the latest evidence of Neanderthal presence in the region. However, most excavations in the cave were conducted many years ago, and questions remain about the age of the occupations and the relationship between the modern human and Neanderthal occupations. This poster examines a portion of the excavated materials from the cave, from excavations conducted between 1969 and 1971. These materials, housed at Washington State University (WSU), were previously unanalyzed. We present a techno-typological analysis of the portion of the lithic artifacts from the cave housed at WSU. The analysis of these materials, in conjunction with an examination of the archival records from the collection, can provide new insights into the lithic technological sequence, shedding light on technological changes that may be associated with the Neanderthal and modern human occupations. These data will contribute to ongoing debates about Neanderthal / modern human occupation in the Iberian Peninsula.

Ramrekha, Marc (Rutgers University), Johanna Regev (Weizmann Institute of Science), Elisabetta Boaretto (Weizmann Institute of Science), Aren Maeir (Bar-Ilan University), and Dan Cabanes (Rutgers University)

[353] *Multi-layered Sites as Sources of Paleoclimate Data: Climate Signals from Tell es-Safi/Gath*

Climate plays a crucial role in the sustainability of urban life and is of great concern to both archaeological and contemporary studies. When studying paleoclimate, archaeologists commonly attempt to link data from sites with spatially distant proxy environment sources. However, this approach only allows for the establishment of tenuous relationships because climate proxy data are indirect measures of climate or regional vegetation trends that only reflect the consequences of human actions, not the actions itself. Furthermore, linking site data with distant proxy environment sources has a low temporal resolution. Consequently, responses to environmental shifts at the scale of humans remains largely unexplored. To address these issues, we use anthropogenic phytolith assemblages from the site Tell es-Saf, as sources of paleoclimatic data and thus serve as direct records of human-environmental interactions. By sampling from a variety of stratigraphic sequences and archaeological contexts, we were able to isolate climate signals from anthropogenic assemblages, demonstrating that (1) phytoliths directly link human activity with past environmental conditions and (2) that tell sites are archives of local paleoclimate data. This study offers a high-resolution, human-scale view of responses to environmental variability at Tell es-Safi/Gath and has the potential to be applied at other tell sites.

Ramsey, Madison (University of Maryland), Lauren Gryctko, and Jennifer Greentree (JMT)

[22] *Wealth, Railroads, and the Beautification of Death: Excavation of a Family Cemetery in Chesterfield, Virginia*

In April 2024, construction grading for a new road in Chesterfield, Virginia, uncovered an unmarked family cemetery containing 14 burials. A name plate recovered from the lone iron casket identified the occupant as "Nancy." Archival research determined the cemetery sat on land that once belonged to Ms. Nancy's father, a wealthy plantation owner, and provided a family tree whose members are likely the cemetery's occupants. Archaeological results determined the cemetery was active from the early nineteenth century to the advent of the Beautification of Death Movement, which the family took an active part in. Evidence suggests Nancy's family was at the forefront of this movement, used it to demonstrate their elite status within larger society, and that the area's wealthy elite were significantly interconnected with larger urban areas. This family cemetery demonstrates how the advent and use of railroads and other infrastructure improvements quickly connected rural areas to popular cultural traditions nationwide and to quickly shifting social ideologies. This excavation also demonstrated successful cooperation and coordination between the client, the construction company, JMT, and the living descendants, which resulted in a satisfactory conclusion for all parties involved.

Ramsier, Marissa (Cal Poly Humboldt), Katherine Gaddis (University of Nevada, Las Vegas), Michael Szyndler II (Cal Poly Humboldt), Michał Adamczyk (University of Szczecin, Poland; National Museum in Szczecin, Poland), and Katarzyna Słusarska (University of Szczecin/Poland)

[89] *Interpreting Habitual Activities and Lifeways in Medieval Pomerania from Patterns of Dental Pathology and Attrition at Żelewo*

The late medieval cemetery now designated Żelewo 1-3 is located in a region of present-day northwest Poland that was historically Pomerania. The cemetery was likely part of a village associated with a Cistercian monastery in nearby Kołbacz, which provides a means by which to contextualize the site within the region's unique history. Initial excavation of the cemetery took place in 2019 and continued from 2023 to 2025 as a salvage archaeology project. As typical of medieval Europe, analysis of the skeletal remains excavated from the site indicate a diet of abrasive foods and uncertain dental hygiene practices, evidenced by moderate to marked dental attrition, caries, and antemortem tooth loss in most adults. Interestingly, attrition and dental pathologies tended to be more marked in a sided and patterned manner, particularly around the molars. This may be partially explained by dietary habits in combination with suspected habitual materials processing, including possible use of nets as consistent with lakeside habitation. We discuss these findings together with implications for using dental attrition for estimating age when habitual extra-masticatory behavior is a known or suspected factor. *****This presentation will include images of human remains.**

Ramsier, Marissa [89] see Boyle, Ace
 Ramsier, Marissa [89] see Meyer, Francesca
 Ramsier, Marissa [89] see Paige, Megan
 Ramsier, Marissa [89] see Szyndler, Michael

Rand, Asta [89] see Gembicki, Maciej

Randall, Asa (University of Oklahoma)

[208] *Paving Florida with Sacred Shell Mounds*

One of Cheryl Claassen's many contributions to shell analysis is her 1994 historical and ethnoarchaeological study of the modern shell fishing industry in the Mississippi River basin, its links to button and pearl production, and the implications for shell fishing in antiquity. Taken together with her key insight that shellfishing was deeply connected with Indigenous social and ritual practice, Cheryl's work invites us to consider links between modern and ancient uses of shell elsewhere. In northeast Florida, Indigenous communities terraformed the landscapes of the St. Johns River and Atlantic coast with shell mounds. These places had complex positions within Florida's Indigenous communities, ranging from settlements to sacred platforms and mortuaries. In the modern era, settler colonists targeted these same places as resources for a new terraforming project: the construction of roads to facilitate connection and commerce through Florida and beyond. In this paper I examine the archaeology of shell site destruction, and consider the legal, social, and historical contexts that enabled modern communities to pave a new future with sacred places.

Randall, Kate [264] see Badillo, Alex

Ranere, Anthony [354] see Fairbanks, Regina

Rangel, Esteban [295] see Lee, Benno
 Rangel, Esteban [81] see Pearson, Osbjorn

Ranieri, Elizabeth [114] see Fulton, Kara

Rankle, Chad (University of California, San Diego), Hector Neff (California State University-Long Beach), Virginie Renson (University of Missouri Research Reactor), and Heather Thakar (Texas A&M University)

[311] *Isotopic Evidence Provides Insight on Prehistoric Diet in Pacific Nicaragua*

The paleodiet of Pacific Nicaragua has long been a focal point of academic curiosity, but uncertainty remains, even after examination of material, botanical, and historical evidence. Principally among the outstanding questions include determining the degree of reliance on maize agriculture, and the delineation of intra-regional dietary distinctions, within the Greater Nicoya culture area. Stable isotope analysis is a well-established method for interpreting paleodiet, particularly in complement with other lines of evidence, but the technique remains underutilized in Pacific Nicaragua. Here, we present the results of $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$

analysis in the dental enamel and bone collagen from 50 human teeth collected from 13 archaeological sites in Pacific Nicaragua. The results offer another line of evidence suggesting reliance on maize agriculture, although likely not as intensive as in other regions of Mesoamerica. The results also have implications on for the feasibility of stable isotope analysis on human remains in the region, given the taphonomic conditions of Pacific Nicaragua. ***This presentation contains images of human remains.

Rapson, David [305] see Phillips, Amy

Rasic, Jeffrey (University of Alaska Museum), Julie Esdale (CEMML), Ted Goebel, Kelly Graf (University of Kansas), and Nathan Shelley (Center for the Study of the First Americans)

[195] *Obsidian Provenance and Technology from Shég' Xdaltth'i', Central Alaska*

The Shég' Xdaltth'i' site (FAI-02043) in central Alaska's Tanana River Valley preserves occupations from both the late Pleistocene (Chindadn) and middle Holocene (Northern Archaic). Geochemical sourcing of 135 obsidian artifacts provides new insight into raw material procurement, land use, and technological strategies across these periods. The late Pleistocene obsidian assemblage derives entirely from the Batza Tena source, located ~230 miles (370 km) to the northwest, and exhibits technological diversity including microblades, burins, and evidence of bifacial and unifacial tool maintenance. In contrast, the middle Holocene obsidian sample consists solely of products of bifacial tool maintenance but reflects broader raw material connections: artifacts were sourced to Batza Tena as well as Wiki Peak (~250 miles / 400 km to the southeast) and at least one additional source. These results highlight shifts in both technological practice and regional mobility between the late Pleistocene and middle Holocene occupations at the site.

Ray, Erin (University of New Mexico [UNM]), Nadia Neff (UNM), Viorel Atudorei (University of New Mexico; Center for Stable Isotopes), and Keith Prufer (UNM)

[221] *Sex and Status-Based Differences in Weaning Age and Complementary Foods: A Case Study of Classic Period Maya in Southern Belize*

Social complexity is often positively correlated with differential access to resources including dietary items. Previous research of Classic period Maya has shown diet variation between individuals of different socioeconomic status, although the disparity in resource access is highly varied. This study seeks to explore the impact of differential access to resources on the types and introduction timing of complementary foods provided to weaning infants. We present the results of sequential-enamel sampling by laser-ablation and sequential dentin sampling to create community-level datasets from two civic-ceremonial centers in modern-day southern Belize. Additionally, we present the results of a machine-learning model employed to estimate socioeconomic status within these communities. We estimate the timing of cessation of breastfeeding using sequential $\delta^{18}\text{O}$ and $\delta^{15}\text{N}$ values paired with $\delta^{13}\text{C}_{\text{en}}$ and $\delta^{13}\text{C}_{\text{den}}$ to estimate the types and timing of the introduction of complementary food. A relative change in $\delta^{13}\text{C}$ sample values correlated to early life stages indicates introduction of complementary foods. Relative changes in $\delta^{18}\text{O}$ and $\delta^{15}\text{N}$ sample values indicates weaning cessation. An age-at-weaning estimate based on isotopic changes relative to dental mineralization age and dentin formation age are calculated for each individual. Changes in timing of weaning may indicate a mechanism for population change.

Ray, Erin [221] see Neff, Nadia

Ray, Ian [149] see Donahue, John

Raynal, Jean-Paul [93] see Delvigne, Vincent

Raynal, Jean-Paul [93] see Fernandes, Paul

Razo, Mikaela (University of Texas at San Antonio)

[207] *Reconsidering "Representative": The Robert King Harris Collection and the Geography of Access in Texas Archaeology*

This paper presents research conducted during the Smithsonian's Summer Institute for Museum Anthropology (SIMA) on the Robert King Harris collection, a significant archaeological assemblage housed at

the National Museum of Natural History. Often described as “representative” of Texas archaeology, the Harris collection comprises thousands of artifacts collected primarily during the early to mid-twentieth century by an “amateur” archaeologist. However, a close examination of the collection’s geographic distribution reveals that it overwhelmingly reflects materials from north, central, east, and west Texas, while only a few objects come from the south Texas region. This paper argues that the collection is not representative of Texas archaeology as a whole but rather of Harris’s professional and personal networks, sites he had access to, and the collecting practices of his era. By interrogating the assumptions embedded in claims of representativeness, this project reframes the Harris collection as a product of specific historical and relational dynamics. This case study contributes to broader archaeological discussions on the legacy of collector bias, regional coverage in curated collections, and the role of museums in shaping archaeological narratives through selective preservation and display.

Reader, Karen [42] see Halcrow, Sian

Reamer, Justin (Bowdoin College)

[354] *Pots, Plants, and Hominy: Changes in Lenape Cooking and Processing Practices during the Late Woodland (900–1675 CE)*

While both functional analysis of ceramics and macrobotanical analysis have greatly contributed to our understanding of past foodway practices and how they have changed through time, these two lines of evidence are not often considered together despite their close relationship. However, combining these two datasets can provide important insights into changes in past cooking and plant processing practices. In this paper, I present results from my macrobotanical and functional ceramic analyses at the Minisink National Historic Landmark (NHLM) to document how Lenape processing and cooking practices changed, and did not change, over the course of the Late Woodland (900–1675 CE). In particular, I focus on evidence for the adoption of nixtamalization by the Lenape and how this is revealed in both the plant remains and cooking vessels. My functional analysis of ceramics focuses on both changes to vessel manufacturing and use-wear and my analysis of macrobotanical remains focuses on the plants themselves. I argue that changes in pottery manufacture, but not usage, may be linked to the adoption of nixtamalization by the Lenape.

Reardon, Emily [216] see DeWitte, Sharon

Reber, Eleanora (UNC Wilmington)

[156] *Recycling at Russellborough: The Living Landscape and Reuse at a Colonial Governor’s Mansion at Brunswick Town / Fort Anderson, North Carolina*

The UNCW 2024 Archaeological Field School focused on finding the location of known outbuildings attached to the colonial governor’s mansion at Brunswick Town / Fort Anderson State Historic site. Remains are visible above the surface for the mansion itself, now generally known as Russellborough, and one of two kitchens known to be associated with the structure. Using GPR, the field school located the original locations of the other kitchen, a possible flagpole, and have partial indicators for the presence of other outbuildings. Despite good preservation of historic remains at the site, these buildings were not detectable on the surface. This is because the visible remains of the kitchen and other outbuildings were recycled sometime between 1776 and 1850. Recycled building materials were likely used to construct housing for enslaved people at a nearby plantation. Although Russellborough is often thought of as an unmoving part of the historical record, it was in reality part of a living cultural landscape. In local usage, it was a treasured historic monument, a source of local lore, and also a brick mine.

Recagno Browning, Gabriela [302] see Socha, Dagmara

Recklies, Laura (Oregon State University), and Loren Davis (Oregon State University)

[85] *A Digital Approach to Studying Early Holocene Projectile Points from Cooper’s Ferry/Nipéhe, Idaho*

The Cooper’s Ferry/Nipéhe site, on the ancestral homelands of the Nimiipuu (Nez Perce Tribe) in western Idaho’s lower Salmon River canyon, contains one of North America’s longest stratified records of Western Stemmed Tradition lithic technology. Lithostratigraphic Unit 6 (LU6) of Cooper’s Ferry/Nipéhe contains 30

stemmed projectile points with 94 associated radiocarbon ages, spanning 10,300–8780 cal BP. This dataset provides an opportunity to study projectile point technology contemporaneous with the Windust phase of the lower Snake River canyon culture history sequence. This comparison enables examination of post-Pleistocene technological developments in the southern Columbia River Plateau. Geometric morphometric (3D GM) analysis of LU6 projectile point forms will be conducted through 3D scans. Scans, along with their contextual metadata, 3D GM data, radiocarbon age associations, stratigraphic provenience, and toolstone provenance, will be archived with a digital object identifier (DOI). These methods aim to define the range of design forms in LU6 points and trace temporal changes. Results will be placed within the cultural-historical framework of the southern Columbia River Plateau, highlighting design similarities. Broadly, this project addresses typological characterization questions and demonstrates a comprehensive digital approach for defining, studying, archiving, and sharing data on projectile point technology.

Reddy, Seetha (Reddy Anthropology Consulting Inc.), Val Lopez (Chairman, Amah Mutsun Tribal Band), and Robert Geary (THPO, Habematobel Pomo of Upper Lake and Citizen of Elem Nation)

[219] *Native Voices and Enduring Legacies: Decolonizing Applied Ethnography in California*

In California, ethnographic studies originated in the sixteenth century, first by early colonizers, and later by nascent anthropologists captivated by the Indigenous peoples of the region and those commissioned by the federal government or other institutions to conduct “salvage” ethnographies. Our presentation explores the evolution of these studies in the twenty-first century, their impact on Native communities, and the practice and goals of ethnography itself. We offer insights into our own collaborative, community-based approach to understanding and contextualizing Tribal histories, one that prioritizes Indigenous Knowledge and perspectives of the living communities. This reorientation aims to foster new interpretations of Indigenous peoples, their ancestral lands, and cultural spaces. We will highlight the purpose and context of the Tribal-centered ethnography in California, specifically their role in enhancing equity, Native visibility and uncovering previously obscured Native histories, and how state and federal regulations have shaped the very nature of these studies.

Reed, David (Ohio State University)

[277] *Semi-supervised AI Analysis of the Copan Burial Dataset: Insights into Classic Maya Mortuary Patterning*

This presentation explores the application of semi-supervised artificial intelligence to a complex archaeological mortuary dataset from Copan, Honduras. After an initial query for a cluster analysis on 20 key grave goods variables for 683 burials, several advanced analytical methods were offered by the AI for further analysis. Four distinct burial clusters were initially identified reflecting social stratification, ranging from commoners to “super-elite” individuals. Artifact co-occurrence networks revealed consistent “packages” of grave goods, with jade, fine ceramics, and ceremonial items emerging as key status indicators. Temporal analysis showed shifts in grave goods across phases, while spatial data highlighted evolving rural-urban dynamics. A Random Forest model achieved high accuracy in predicting high-status burials, confirming the predictive value of select artifact types. Dimensionality reduction (t-SNE) further clarified latent social and cultural axes. Dietary stable isotope values showed nuanced relationships with status, suggesting complex food access patterns. This preliminary study both verified previous interpretations and provided additional insights thus demonstrating the potential of AI-assisted data analysis to uncover meaningful patterns in archaeological data with minimal human input and invites further refinement of semi-supervised methods for mortuary research.

Reed, Emily [314] see Evans, Lydia

Reed, Erica [48] see Cleary Moungey, Megan

Reed, Paul (Archaeology Southwest)

[247] *Putting Pueblos and Tribes First as We Transform American Archaeology*

Archaeology Southwest has been positioned to have positive impact on the course of American archaeology over the last few decades. By mating research, preservation, and outreach with close Tribal collaboration, we have produced some interesting findings and positive outcomes. Over the last 10 years, we have front-loaded

Tribal participation in our work and have developed projects directly with Tribes based on their interests and needs. In this presentation, I'll summarize this work, particularly in New Mexico, and chart a path for continuing the process of decolonization, and helping to empower Pueblos and Tribes as they take on active management of their heritage across multiple Public land jurisdictions.

Reeder-Myers, Leslie (Temple University), Whitney Goodwin (Archaeometry Laboratory at MURR; University of Missouri), and Alejandro Figueroa (University of Missouri)

[308] *Indigenous Fisheries at the Selin Farm Site and Guaimoreto Lagoon, Honduras*

For most of the last 2,000 years, the Indigenous Pech people lived, farmed, hunted, and fished around Guaimoreto Lagoon on the northeast coast of Honduras. They were forcibly removed from the coastal region as early as the sixteenth century and returned 400 years later to a dramatically altered landscape. Today, we are working with the Pech to understand the place they once held in this ecosystem, with our current focus on the once-healthy fishery. Through sediment cores from the lagoon and analysis of material from the Selin Farm archaeological site, we explore changes in both the environmental and cultural components of the Pech fishery. Several centuries of increasing political complexity, including a population boom around AD 600, came to an abrupt, as-yet unexplained end with population dispersal occurring around AD 900. While traditional archaeological explanations would look to environmental degradation, either from climate change or human impacts, to explain this shift, neither appears to be the case at Selin Farm. We explore the relationship between the fishery and the Pech's social and political organization during this time, arriving at a more complex view of the site's socio-ecology.

Reeder-Myers, Leslie [349] see Fajardo, Blanca

Reeder-Myers, Leslie [349] see Figueroa, Alejandro

Reeder-Myers, Leslie [349] see Goodwin, Whitney

Reedy, Chelsea, and Mary Lucia Schmidt (HDR)

[200] *Heat Adaptation in Performance Sports: Applying Cutting-Edge Science to Protect Field Personnel*

Recent advancements in heat-training science are reshaping preparation for work in extreme environments. Once confined to elite sport, heat acclimation now shows promise as a multidisciplinary tool to build physiological resilience, sustain output, and speed recovery. This study evaluates the application of structured acclimation protocols to high-risk occupations in the field of archaeology, mainly field labor personal, by synthesizing evidence on cardiovascular strain, thermoregulation, fluid–electrolyte balance, and perceptual responses to heat stress. We outline progressive, job-specific protocols and monitoring strategies (core/skin temperature, heart rate, wearables) paired with individualized hydration and recovery. Across settings, tailored programs can lower the incidence of heat exhaustion and heat stroke, reduce near-miss events, and maintain performance during heat waves. We propose integration of heat training into routine occupational health programs, including guidance on ramp-up timelines, work–rest cycles, environmental exposure limits, and criteria for return to work. By bridging sports science and occupational health, this research offers practical, evidence-based recommendations that enable employers and safety officers to deploy heat acclimation as a proactive measure to protect personnel and sustain performance in thermally challenging conditions.

Reedy, Chelsea [200] see Schmidt, Mary Lucia

Reese, Kelsey [198] see Linford, Samantha

Reese-Taylor, Kathryn (University of Calgary), Felix Kupprat, Matthew Longstaffe (University of Calgary), Shane Montgomery (University of Calgary), and Veronica Vasquez Lopez (University College London)

[36] *Rethinking Diversity: Household Variation in the Bajo El Laberinto Region, Campeche, Mexico*

While it is widely acknowledged that ancient urban populations were culturally and socially diverse, archaeological approaches to measuring this diversity have often focused narrowly on wealth—typically inferred from architectural features such as size and location within urban landscapes. Drawing on Jane

Jacobs's notion of cities as systems of "organized complexity," we argue that such limited metrics obscure the ways in which diversity itself fostered resilience and sustained prosperity. For Jacobs, the interplay of various social roles, economic activities, and ideological practices gave cities adaptability and long-term economic strength. This presentation examines household diversity during the Classic period (200–850 CE) in the Bajo El Laberinto region, focusing on the major urban hubs of Calakmul and Yaxnohcah. Over more than a decade, the Proyecto Arqueológico Bajo El Laberinto has excavated an assortment of residential compounds selected for architectural variation. Our findings reveal a range of intersecting identities between households—reflecting Jacobs's insight that diversity drove urban vitality, which in turn sustained enduring economic prosperity.

Reese-Taylor, Kathryn [35] see Anaya Hernández, Armando

Reese-Taylor, Kathryn [55] see Farquharson, Kyle

Reese-Taylor, Kathryn [355] see Kupprat, Felix

Reese-Taylor, Kathryn [277] see Lockett-Harris, Joshua

Reese-Taylor, Kathryn [341] see Longstaffe, Matthew

Reese-Taylor, Kathryn [223] see Montgomery, Shane

Regev, Johanna [353] see Ramrekha, Marc

Regnier, Amanda [301] see Hammerstedt, Scott

Reich, David [327] see Moses, Victoria

Reich, David [223] see Prufer, Keith

Reich, David [210] see Sedig, Jakob

Reichel, Mary Grace [115] see Miller, Jake

Reichert, Rhea [269] see Morris, Jessica

Reid, Amy [182] see Hamilton, Erin

Reid, David (University of Illinois at Chicago), and Kurt Rademaker (Center for the Study of the First Americans)

[213] *Reciprocity in Stone: Ritual Offerings at the Geological Sources of Andean Obsidian*

Obsidian was a major resource within the political and ritual economies of ancient Andean societies. The region of Arequipa, Peru, holds two of the three major obsidian sources predominantly utilized in the south-central Andes. Here, obsidian procurement began during the Terminal Pleistocene, and early transfers of highland obsidian to adjacent coastal regions formed the origins of long-lasting interregional networks. Nearly 20 years of geoarchaeological research within the Alca obsidian geological zone, encompassing over 2,000 km² and several geochemically distinct sub-sources, has yielded new evidence of ritual practice associated with the quarrying and mining of obsidian. In this paper, we document the offerings of painted stone tablets (a form of mobile rock art), ceremonial structures and tombs, and stone cairns associated with the geological sources themselves. We explore how these findings relate to broader Andean beliefs concerning animate landscapes and mountain deities. Tracing the ritual and symbolic attributes of obsidian along the technological sequence, we focus on the Middle Horizon (CE 600–1000) when Alca obsidians were transported to their furthest extents across Peru, largely through exchange and ritual networks of the Wari state.

Reid, Ethan [211] see Cole, Kasey

Reid, Rachel [305] see Jiang, Han

Reifschneider, Meredith [219] see Tripcevich, Nico

Reilly, Matthew (City College of New York)**[174]** *"I Want a Plantation": Diasporic Rhythms, Material Aspirations, and Contrarian Politics*

This paper explores socially conscious music, from the margins to the mainstream, that takes its inspiration from an unjust past to manifest equitable futures. Focusing specifically on musical genres of the Black Atlantic, I explore how Caribbean music styles like Calypso and Soca erupted in an anti-colonial moment of hope and fervent nationalism. These genres reflect the shifting spirit of heritage discourse in the post–World War II decades, informing interpretations of the archaeological record in places like Barbados today. Across the Atlantic, the genre of Hip Co developed in the unstable years of the 1980s conflict in Liberia. A blending of hip hop and traditional Liberian rhythms, its socially conscious lyrics often point to an entrenched inequality that arose, in part, because of the Back-to-Africa movement and emerging class hierarchies of the nineteenth century. Lastly, I offer thoughts on the contrarian politics of genres like punk rock that inspired many archaeologists to approach the past through a lens of solidarity and social justice.

Reilly, Matthew [103] see Stevens, Craig

Reindel, Markus (German Archaeological Institute)**[308]** *Ten Years of Settlement Archaeology in Northeast Honduras: Results and Perspectives*

Northeast Honduras has long been regarded from a Mesoamerican perspective as a marginal zone that only occasionally received influences from more complex societies to the west. Conversely, most studies of the Isthmo-Colombian Area omit northeast Honduras entirely, reinforcing the impression that it lay outside this cultural sphere. Our archaeological investigations in the Department of Colón, focusing on settlement patterns, stratified contexts, and archaeometric analyses, have revealed a dense network of small- to medium-sized sites along the coast, in the mountainous Cordillera Nombre de Dios, and in the fertile Aguan Valley, as well as on the Bay Islands. These settlements were embedded in dynamic regional and supraregional networks that extended into Mesoamerica, southern Central America, and the Caribbean. The cultural affiliation of the region clearly lies within the Isthmo-Colombian Area. The absence of monumental architecture suggests heterarchical social structures or “communities of practice.” The data from northeast Honduras now provide a robust basis for analyzing socioeconomic organization, exchange systems, and cultural relations within this representative subregion of the Isthmo-Colombian Area. *****This presentation will include images of human remains.**

Reindel, Markus [340] see Mader, Christian

Reinhard, Johan [302] see Socha, Dagmara

Reitsema, Laurie [344] see Edwards, Richard

Ren, Kara (University of British Columbia), Lauren Pratt (UCLA), and Aleska Alaica (University of British Columbia)**[31]** *Investigating Relationships between Early Hunter-Gatherers and Deer in the Eastern Andes of Northern Peru: A Multi-method Approach*

This project addresses a critical gap in archaeological research while providing insights into long-term human ecosystem interactions within a dynamic and marginal environmental context in the Eastern Andes of northern Peru—the *ceja de selva*. This distinct ecosystem is a cloud forest ecology characterized by dramatic changes in elevation, temperature, precipitation, flora and fauna. To explore human-deer-environment interactions of early hunter-gatherers within this context, we employ a multi-method archaeological approach involving zooarchaeology and stable isotope analysis. Following the work of Pratt (2024), a total of 53 samples were analyzed with preliminary results revealing strategies in deer culling and resource extraction within edge/disturbed environments of communities across time periods. We focus on *Odocoileus virginianus* / *Hippocamelus antisensis* as they are (1) a potential proxy for environmental variability due to detectable changes in isotopes in skeletal remains which can signify climactic shifts and (2) a key species in the foodways and cultural value systems of precolonial Andean societies. In short, these preliminary results demonstrate that communities were active agents within their own environments and formed social relationships across

human and nonhuman groups to sustain their lifeways. Moreover, it also highlights the importance of ensuring that deer are given proper attention when interpreting the past.

Renaud, Terri

[280] *A Tale of Two Neighborhoods: Geospatial Analysis of Detroit's Chinatowns*

This poster showcases a geospatial history of Detroit's Chinatowns. By using this landscape and community data, I show the changes in the Chinatown community from the early 1870s going through the 1990s. I start with the influx of a small number of Chinese immigrants to the border city of Detroit who came to start businesses. I show the development of Detroit's Chinatown, which established itself just west of downtown, and how it remained there as a vibrant community for decades. The Detroit Housing Commission, under the flag of Urban Renewal in the 1960s, classified the area as a slum and called for its demolition. This research displays the difference between the reality of daily life and the propaganda of the time. It also shows how the relocation of Detroit's Chinatown to the Cass Corridor in 1963 created barriers to the community's ability to maintain and thrive. This soon led to many families and businesses relocating elsewhere. Despite this, the Chinese diaspora community in Detroit maintains strong ties to the area, which can be seen in the current efforts to revitalize this former Chinatown location to honor history and the present.

Rennie, Patrick (MT DNRC)

[348] *The Distribution of Folsom Projectile Points in Montana*

Folsom in Montana is largely known from surface finds. Out-of-context Folsom projectile points and the few documented Folsom components in Montana tend to be from foothill/mountain settings. Further, Folsom is extremely rare in western and southeastern Montana. The MacHaffie and Indian Creek sites, both in foothill settings of southwestern Montana, are the only two professionally examined archaeological sites with Folsom components. The sample recovered from Indian Creek was small, but MacHaffie demonstrated consistency in lithic raw material collection and reduction strategies from Paleoindian through Middle or Late Precontact groups. High-quality cryptocrystalline silicates dominate Folsom projectile points in Montana. Obsidian is very rare. It is uncertain if the apparent paucity of Folsom in Montana is actuality or sampling error. However, substantial archaeological excavation in the coal fields of southeastern Montana, combined with deep trench examination work, has failed to produce evidence of Folsom or Paleoindian materials in general.

Rennie, Samuel [311] see Gonzalez, Silvia

Renson, Virginie [221] see Buckley, Gina

Renson, Virginie [311] see Rankle, Chad

Renson, Virginie [211] see Schollmeyer, Karen

Renteria, Rebecca (Crow Canyon Archaeological Center), Lyle Balenquah, and Devin Kewanyama

[335] *The Taawa'ki Restoration Project: A Practice in Community-Rooted Work, Collaboration, and Reconciliation*

The Taawa'ki Restoration Project is focused on the complete rebuild of Taawa'ki, a culturally significant Hopi clan house located within the Village of Orayvi (Third Mesa). This project is an ongoing collaborative effort involving various aspects of Hopi community and government, as well as other tribal, state, and federal agencies. This presentation will discuss the ongoing research of Taawa'ki, which includes ethnographies, ethnobotany, and traditional materials and practices, as well as dendrochronology and soil sampling. Integral to the collaborative elements of this project is a respectful approach that centers community-driven questions. Dendrochronological research undertaken in partnership with the Crow Canyon Archaeological Center (CCAC) prioritizes community interests while creating spaces for community members from youth to Elders, and generates data that enriches knowledge of deep cultural ties and relationship to Tuuwana'saavi—the Center of the Universe. CCAC's role in this project emphasizes the importance of reconciliation in archaeological discourse and as critical to advocacy of tribal sovereignty. Through this discussion we hope to highlight the collaborative efforts among the Hopi Tribe, its community members, and archaeologists in developing respectful and meaningful methods for field research, data collection, and future use—with, by, and for community.

Reuther, Joshua [179] see Fields, Stormy
 Reuther, Joshua [313] see Lanoë, François

Reyes García, Ana Cristina [94] see Frykholm, Soren

Reynolds, Samuel (University of Texas, Texas Archeological Research Laboratory)

[295] *Spirit Eye Cave: Preliminary Findings from Recent Excavations*

Spirit Eye Cave (41PS25) in Presidio County, Texas, is an important site that has been heavily looted for over a century, with most of its intact deposits and multiple burials destroyed. Due to the extensive disturbances at the site, recent investigations by the Center for Big Bend Studies at Sul Ross University have focused on excavating what remains of the site's deposits. In the summer of 2025, work was carried out in Shaft C, a small offshoot from Spirit Eyes' main chamber. This area contained a large packrat midden untouched by looting and preserved cultural material. The excavation of Shaft C produced extensive perishable artifacts and faunal remains, providing material useful for understanding occupations at the site. This poster introduces Spirit Eye Cave, outlines the goals and methods of the 2025 excavations, and presents preliminary findings.

Rhames, Brendan, and German Loffler

[50] *From Neighborhood to Campus: Excavating Mid-century Urban Change at Fresno City College*

This report presents results from two field seasons (spring 2023, spring 2024) at the Sutherland Lot Procurement (SLP) site on the Fresno City College campus, conducted as part of a Field Methods in Archaeology course. Intended as a mock excavation, the first six-week season yielded inconclusive results, prompting a second six-week season. Excavation uncovered artifacts and possible structural remains, likely from a mid-twentieth-century residential neighborhood. Archival research indicates that in the 1940s and 1950s, the Fresno City Unified School District acquired nearby housing to expand the FCC campus. Findings contribute to understanding the historical transformation of the site from residential use to educational space. This preliminary analysis outlines the excavation process, key discoveries, and the significance of continued investigation to better interpret FCC's cultural landscape.

Rhoades, Zack [211] see Cole, Kasey

Rhode, David (Desert Research Institute)

[81] *13,000 Years of Plant-Based Subsistence at Bonneville Estates Rockshelter, Nevada, USA*

People living in the North American Great Basin traditionally relied on a wide variety of plant foods for millennia, and the deep history of plant use in relation to technological developments, socioeconomic organization, demographic trends, and climatic fluctuation continues to be a key (if elusive) area of research. Here I explore patterns of plant-based subsistence at Bonneville Estates Rockshelter in the western Bonneville Basin. This detailed record reveals strong long-term continuities in the plant taxa important to subsistence, and equally strong changes in the intensity of usage of various economically important plants over the past 13,000 years.

Ricci Jara, Kevin [213] see Velasco, Matthew

Rice Fuller, Stephanie

[227] *Localizing Resistance Strategies: Context-Specific Responses to Egyptian Imperialism during the New Kingdom at Jaffa and Megiddo*

This study challenges universal models of imperial resistance through a comparative analysis of two distinct sites, Jaffa and Megiddo, pairing the archaeological evidence of local resistance at each with the specific Egyptian propaganda used to counter it in order to present a public narrative of complete domination over the region. It argues that the divergent tactics were more effective because they were shaped by each polity's distinctive role within the Egyptian empire. At the Egyptian military fortress of Jaffa, repeated destructions of the gate complex reflect a strategy of overt defiance, which Egyptian narratives reframe as cunning victories following temporary setbacks. In contrast, resistance at Megiddo took the form of cultural endurance, evident

in the continued use of indigenous sacred architecture and Mitannian-style cylinder seals. Egyptian propaganda countered this subtler resistance by mythologizing Thutmose III's victory at the Siege of Megiddo as a decisive event that brought the entire region under control. This comparative study of material realities to tailored imperial narratives investigates how the autonomy of local communities was asserted through context-specific acts of resistance in the face of imperial power as well as how imperial propaganda responded to the different tactics.

Richards, Katie (New Mexico State University), and Mario Zimmermann (Boise State University)

[166] *Exploring Fremont Pottery Function through Residue Analysis at Wolf Village*

The proliferation of pottery and the production of painted bowls is one of the hallmarks of the Fremont Late period (ca. AD 1000–1300) in the far northern reaches of the North American Southwest. Plain and painted Fremont pottery has been recovered from typical and unusual residences and communal contexts at village sites across the region. Scholars have used NAA to reconstruct distribution maps, and the provenience of sherds within villages has provided important clues about their function within villages; however, little research has been done to determine how these vessels were used and what types of foods were prepared, served, or stored in them. Understanding how these vessels were used provides insights into aspects of Fremont social life such as differential access to resources and feasting. We conducted residue analyses focused on general organic matter and pH values, as well as proteins more specifically, on plain and painted sherds from typical residences, an unusual residence, and a communal structure at Wolf Village, a Fremont village site in southern Utah Valley. This paper explores the differential uses of painted and plain pottery recovered from varied architectural contexts at this village site to better understand social function of Fremont pottery.

Richter, Kim (Getty Research Institute), and Gerardo Gutiérrez (University of Colorado at Boulder)

[316] *Memories of Migration and Materials of Interaction: The Legendary History of the Olmeca Xicallanca, the Huastecs, and Their Material Culture*

When in the sixteenth century Nahuatl-speaking groups from Puebla-Tlaxcala region remembered their epic migrations occurring centuries earlier, they enumerated the Huastecs (or Cuextecs) alongside the Totonacs and Olmeca Xicallanca as belonging to the seven original groups leaving Chicomoztoc. All three groups eventually settled along the Gulf Coast. Much ink has been spilled about the role of the legendary Olmeca Xicallanca and their connections to the central highlands of Mexico, especially to Cacaxtla and Cholula. More unusual on this list are the Huastecs, who are not typically part of this story, at least when told by the Mexicas, and whose connections to the Mexican highlands are even more obscure. To trace highland connections to the Gulf Coast, and specifically the Huasteca, during the Epiclassic and Postclassic periods, we analyze material connections and artistic strategies in addition to ethnohistorical sources. We argue that goods and trade routes, which later attracted the Mexicas to the Gulf Coast, were already well established by the Epiclassic period, connecting El Tajín, Cantona, Cacaxtla, and Cholula—and likely also the Huasteca—in a network of interaction. Luxury materials, such as textiles, feathers, and Maya blue, were traded from the Gulf Coast to the highlands via elite exchange networks.

Richter, Kim [86] see Hinojosa-Balino, Israel

Rick, John [179] see Acero-Shapiama, Erick

Rick, John [111] see Rojas-Pelayo, Lisseth

Rick, Rosa [179] see Acero-Shapiama, Erick

Rick, Rosa [111] see Rojas-Pelayo, Lisseth

Rick, Torben (Smithsonian Institution), Todd Braje (University of Oregon Museum of Natural and Cultural History), and Scott Fitzpatrick (University of Oregon)

[271] “Just Another Stop on the Kelp Highway”: Reflections on the Contributions and Legacy of Jon Erlandson to Archaeology and Historical Ecology

Since the 1970s, Jon Erlandson has explored the archaeology of seacoasts and islands around the world. With research spanning California, the Pacific Northwest, and Iceland, Erlandson’s contributions are far reaching, ranging from expanding our understanding of the antiquity of human use of coastal resources to the origins of seafaring and the ways archaeology can help understand contemporary environmental change and conservation. Here, we explore aspects of Erlandson’s research career and legacy, laying the groundwork for the cutting-edge coastal and island archaeological papers that form the core of this special session.

Rick, Torben [157] see Weitzel, Elic

Ridge, William [343] see Lingle, Ashley

Riebe, Danielle [305] see Hausdorf, Cassie

Riebe, Danielle [343] see Lingle, Ashley

Rieth, Amy (ASU SHESC)

[85] *Lithic Traces in the Eastern Maya Lowlands: Quantitative Investigations of Technological Behaviors*

Archaeologists face a rapidly expanding array of quantitative and computational techniques holding the potential to provide new insights into the archaeological record. Which methods, though, work best for which archaeological obstacles? This study represents an initial foray into addressing the applicability of unique quantitative approaches to the analysis of lithic-related behaviors within the eastern Maya lowlands. Specifically, we review promising developments in the application of machine-learning techniques to the identification of microlithic particles within archaeological soil samples, as well as inquiring into the applicability of the Coupled-Infrastructure Systems (CIS) framework in investigating lithic source management strategies among ancient Maya communities. Results indicate that, with careful and well-considered application, applying these quantitative techniques to the analysis of archaeological lithics holds potential to expand current knowledge surrounding Maya lithic usage and resource management.

Rietz, Alexandra (University of California Santa Cruz), Kalina Kassadjikova (UC Santa Cruz Human Paleogenomics Lab), Jan Frolík (Institute of Archaeology of the Czech Academy of Sciences (CAS) Prague, Czech Republic), and Lars Fehren-Schmitz (UCSC)

[297] *Paleogenomic Investigation of Ninth- to Eleventh-Century Burials from Prague Castle*

Prague Castle, the largest still-standing ancient castle complex in the world, has been central to the political and cultural history of Bohemia. During renovations of the castle’s churches, several ninth–eleventh-century burials were uncovered, presumably belonging to high-status members related to the royal family. We successfully extracted DNA from the dental remains of 12 individuals and generated single-stranded libraries. We then utilize genome-wide genomic data to investigate ancestry and determine biological sex, with particular focus on assessing potential kinship among the individuals in relation to the historical context of the remains. By integrating these genetic insights with historical and archaeological evidence, we aim to accurately reconstruct family lineages, thereby gaining further insights into the origins and dynastic structure of prominent early medieval families in Bohemia. Preliminary results indicate that individuals share uniparental haplogroups, suggesting they are likely from the same lineage. Deeper population genetic analyses against relevant reference datasets will show potentially variable ancestries of the individuals buried at Prague Castle.

Riggs, Brett (Western Carolina University), Jane Eastman (Western Carolina University), and Tony Boudreaux (Mississippi State University)

[208] *Landscapes of Creation: Envisioning Public Ritual in Ancient Appalachia*

This study proposes that many Southern Appalachian Mississippian (SAM) communities aligned buildings and larger landscapes with horizontal celestial events, positioning themselves for world renewal rituals of Creation and re-Creation. Here, we examine the built landscapes at the Watauga and Town Creek sites, where alignments to the autumnal vertical position of the Milky Way, and the path of the midsummer sun and the ecliptic plane define a quadripartite division of the cosmos that places the sites, and observers, at the center

for annual enactments of the re-Creation.

Ringelstein, Austin [219] see Francois, Alexis

Riordan, Robert [155] see Miller, G. Logan

Riris, Philip [311] see Fajardo, Sebastian

Rissolo, Dominique (UC San Diego)

[206] *Adopting Best Practices and Standards for the Digital Documentation of Archaeological Cave Sites in Mesoamerica*

The popular and often uncritical embracing of digital tools and techniques for 3D documentation of archaeological objects, features, and sites has led to a proliferation of models that vary greatly in their quality, utility, or relevance. As researchers move toward rapid reality-capture technologies, they run the risk of reducing cultural phenomena to their surface attributes. Moreover, as traditional survey and cartography practices are diminished or abandoned, we may be missing the more visceral and intimate connections to place and space that enable archaeological reasoning. Balanced approaches involve not only the thoughtful integration of digital 3D tools into traditional workflows but also the collection and use of digital 3D data in ways that comply with international best practices and standards. The Mesoamerican cave archaeology community continues to be extraordinarily active and prolific and is certainly moving toward those enabling technologies that make documenting dark, remote, and all-together challenging environments faster and easier. For this reason, it is essential that the community be open to the international discourse and dialogue surrounding 3D documentation of terrestrial and subterranean sites.

Rissolo, Dominique [178] see Clark, Loren

Rissolo, Dominique [84] see Smith, Derek

Ritchison, Brandon (University of Illinois Urbana-Champaign), Aurora Marguccio, and Aiden Brinkmann

[200] *There and Back Again: Sea-Level Fluctuations and Terminal Archaic to Early Woodland Occupations on the Georgia Coast*

Recent scholarship has highlighted critical lingering questions regarding Native American socioecological systems during the Terminal Late Archaic (ca. 3800–3100 cal BP) and Early Woodland periods on the Georgia Coast, particularly concerning patterns of seasonality, population density, and mobility patterns at non-shell sites following the abandonment of shell rings. The representativeness of archaeological datasets, often biased toward highly visible shell middens, and the precise nature of mobility in fluctuating environments remain unresolved. Kenan Field (9MC67) on Sapelo Island, GA, a large and persistently occupied multicomponent site lacking shell rings, presents a unique opportunity to address these gaps. This poster presents new analyses from Terminal Archaic and Early Woodland components at Kenan Field to deepen our understanding of community organization, environmental adaptation, and ceramic traditions during these understudied centuries. Our goal is to contribute to a more comprehensive history of coastal socioecological resilience, moving beyond narratives focused solely on shell ring villages.

Ritchison, Brandon [212] see Doubles, Catherine

Rittenour, Tammy [301] see Roos, Christopher

Rivas, Marco Antonio [104] see Sobrino, Santiago

Rivas-Tello, Daiana (Brown University)

[33] *Crafting Relationality through Site Offerings in Huancas (Amazonas, Peru)*

As archaeologists critically reflect on the discipline's colonial past and its underlying Western assumptions, the need for methodologies that center Indigenous knowledge has become a critical task. During fieldwork

conducted alongside the community of Huancas (Amazonas, Peru)—a former *mitmaq* colony forcibly resettled by the Inka in 1470 CE—our team witnessed pottery offerings at archaeological sites while tracing their enduring potting tradition. When Huanquina potters bury vessels decorated with rock art motifs and filled with coca leaves, they perform what Lelièvre et al. (2025) call “crafting as connecting with ancestors.” I argue that site offerings at Huancas reveal dynamic, reciprocal relationships between people, *apus* (mountain spirits), and the landscape, making these offerings valuable entry points for developing a methodology grounded in Andean relational thinking. These acts are not merely contemporary deposits but connect multiple beings across time, disrupting Western assumptions of linear time and the boundary between past and present. By treating offerings as methodological entry points, researchers can develop a tangible tool kit for culturally grounded and anti-colonial archaeological practices.

Rivera, David

[182] *Everyday Objects: Challenges in Establishing the Provenance of Roman Oil Lamps*

At its peak, the Roman Empire ruled the Mediterranean, much of Europe, Western Asia, and parts of North Africa. Throughout the empire, oil lamps illuminated daily life and were key commodities in trade networks. They were modified to reflect functional needs and artistic looks, enhancing the objects with cultural significance. Understanding artistic motifs oil lamps gives a glimpse of regional traditions, trade influences, and cultural symbolism. However, driven by widespread fascination with artifacts and the history of the Mediterranean world, collectors have resorted to looting and theft. Removing objects from their original sites erases much of their cultural and historic context. This poster presents an analysis of five Roman oil lamps, explaining how provenance can help establish authenticity and origin. While oil lamps are common artifacts and rarely demanded for return, they raise important questions: Can specific features of lamps help identify their place of origin? What issues do institutions encounter when returning cultural objects that are not highly desired for repatriation? What are some of the challenges for institutions seeking to return objects to modern nations that were once part of the Roman Empire?

Rivera, Mario [340] see Pérez Reyes, Luis Alejandro

Rivera, Michael (University of Hong Kong), and Tatfeef Haque (University of Hong Kong)

[217] *Community Ethics, Best Practices, and Ethical Considerations Working with Human Remains in Southeast Asia*

Ethical considerations and cultural attitudes inform the way professionals work with human remains. Southeast Asia presents challenges when attempting to understand and articulate the diversity of ideologies and ethics surrounding the dead. We assembled auto-ethnographic and qualitative data from 19 Southeast Asian archaeologists, forensic scientists, anatomists, and skeletal biologists pertaining to how we conduct work with human remains and engage with diverse communities around us. Our thematic analyses inform us: (1) our professional attitudes are influenced by social and ideological norms, and in some cases, we may play active roles in constructing and disrupting these attitudes through public outreach; (2) we must learn from broader communities and lessons from history with care and deliberation; (3) navigation of a global landscape has required contending with our colonial histories and postcolonial legacies in scientific practice; and (4) ethical opinions surrounding human remains are diverse and dynamic, and increasing room for regular dialogue between various communities is highly recommended. We hope this adds perspectives to the increasingly global conversation surrounding bioarchaeological ethics, which moves away from Western-centrism and toward more locally informed frameworks of care and respect. *****This presentation will include images of human remains.**

Rivera I., Arturo [304] see Shachar, Max

Rivera Prince, Jordi (Brown University)

[33] *Can There Be a Truly Andean Bioarchaeology? An Avenue toward Relational Investigations of Human Skeletal Remains in the Central Andes*

The investigation of human skeletal remains is a fundamentally Western analytical tool used to investigate bodies in and of the past. Osteological practitioners, in their skeletal analyses, are at danger of creating narratives that position dynamic, social, living beings as static entities. Such critiques are not new—but how

can bioarchaeologists begin to incorporate alternative approaches that paint the fullest representation possible of the people studied by our discipline? Here, I explore the nature of bioarchaeology and further disentangle how our practices can work to flatten what is a relational, dynamic relationship between people and their worlds. With a specific focus on bioarchaeological work in the Andes, I explore possible avenues through which bioarchaeologists can create engaged research programs that center Andean perspectives while reconstituting our approaches to bones, isotopes, and relationships between the body and the environment. With sustained interventions, it is possible to work toward flattening (though not completely removing) power differentials in our investigations. No photos of human remains will be shown in this presentation.

Rivera Prince, Jordi [309] see Chiou, Katherine
Rivera Prince, Jordi [216] see Heppner, Annalisa

Rivera Tames, Antonella [213] see Kohut, Lauren

Robb, Matthew, and Mary Miller (Getty Research Institute)

[260] *Ekholm Has Seen It: A Curator's Role in Shaping the Market*

Gordon F. Ekholm (1909–1987), long-standing curator at the American Museum of Natural History, played an essential role in the ecosystem of the New York prehispanic art scene in the 1950s, 1960s, and 1970s. He consulted with dealers, especially André Emmerich and Earl Stendahl, but also Mrs. Eleanor Ward; he worked closely with New York museum professionals, among them Dudley Easby of the Metropolitan and René D'Harnoncourt of the Museum of Modern Art. He was widely held to be one of the world's experts on prehispanic metallurgy. He provided an institutional and intellectual imprimatur so essential to the market that dealers would sometimes tell clients that "Ekholm has seen it" when doubts arose as to the authenticity or value of a potential purchase. Ekholm honed his object-based expertise as his own academic interests waned. Additionally, over the years he worked closely with AMNH donors to expand the museum's collection, such that the collection grew dramatically from 1965 onward, largely of works sold and donated by the very art dealers he advised.

Roberts, Nancy (Paradigm Education Solutions)

[322] *Brian Fagan's Impact on Higher Education Students, 1972–Present*

Brian Fagan began teaching in the anthropology department at the University of Illinois Urbana–Champaign in 1966/1967 and spent the majority of his storied career at the University of California–Santa Barbara. He was popular with students in large introductory courses from the start, even if those students weren't archaeology majors. However, his influence and impact on students really began with the publication of *In the Beginning: An Introduction to Archaeology* (Little, Brown and Co., 1972), the first contemporary textbook to present archaeological methods and theory as accessible and engaging content for students. Brian's initial textbooks—*In the Beginning* and *People of the Earth*—were immediate successes in classrooms both nationwide and internationally. Soon after, brief versions were created to make the content accessible to non-majors in colleges and universities with smaller anthropology departments. Almost one million students worldwide have learned about archaeology and world prehistory from these titles. Their appeal was and is timeless.

Roberts, Patrick [55] see Smith, Michael

Roberts, Rebecca [315] see Radivojevic, Miljana

Roberts Thompson, Amanda [300] see Demyan, Marcela
Roberts Thompson, Amanda [184] see Garland, Carey
Roberts Thompson, Amanda [184] see Hill, Mary

Robertson, Cassey [181] see Stauffer, Kaeleen

Robin, Cynthia (Northwestern University)**[341]** *An Ancestral Maya Marketplace at Aventura, Belize*

This presentation presents new evidence for a marketplace at the ancestral Maya city of Aventura, northern Belize. A combination of lidar and pedestrian survey were critical for identifying the location and spatial configuration of Aventura's marketplace. The marketplace was centrally located within the city, beside its main temple and situated along the city's north-south road. Preliminary test pit research identifies that salt was a primary item exchanged at the Aventura marketplace, with additional evidence for biface exchange. Excavations in summer 2025 also identified a possible market stall. Comparing the marketplace assemblage, household assemblages, and sweat bath assemblages at Aventura can identify distinction and complementarity that allow for a more nuanced understanding of each assemblage. The broad open spaces of marketplaces bring people together, economically and socially, and Aventura's marketplace continues to bring people together today as a site of community engagement, summer archaeology field experiences for Belizean youth, and public ceremony.

Robinson, Charlotte (University of New Mexico), and Jonathan Soon Lim (University of Arkansas)**[57]** *Landscape Classification in Southwestern Amazonian Floodplains: A Preliminary Decision-Tree Model*

The floodplains of southwestern Amazonia are a complex mosaic of forest, savanna, river, and wetland ecosystems, each of which were differentially exploited by ancient farmers and fishers. Recent archaeological evidence for significant precolumbian landscape modification indicates that past inhabitants may have enhanced or expanded these habitats via plant management and cultivation, burning, and the control of seasonal floodwaters, beginning over 3,500 years ago. This study presents a preliminary classification scheme to examine the environmental variation within domesticated landscapes, particularly as they change across wet and dry seasons. High-resolution, multispectral imagery was collated from several points along the annual flood regime and combined with digital elevation models (DEM) to distinguish different types of vegetation and water within a decision-tree model. By couching domesticated landscapes within their topographic and ecological contexts, the functional relationships between ecology, seasonality, and anthropogenic earthworks can be clarified.

Robinson, Eugenia (Middle American Research Institute, Tulane University)**[38]** *Ideational Cognitive Archaeology, Ethnography, and Creation at La Casa de las Golondrinas, Guatemala*

Ideational Cognitive Archaeology provides a framework for interpreting rock art with ethnography, ethnohistory and archaeological fieldwork. This paper applies the approach to La Casa de las Golondrinas—a sacred rock art and pilgrimage site—located in the Antigua Valley in the central highlands of Guatemala. Visited for over 2,500 years, it is near water sources and routes of travel that encouraged mobility. This paper focuses on the seasonal aspects of the site, a theme that includes water and creation. Recent fieldwork has found that the site is a solar calendar. Images mark the position of sunlight on March 21, which is the start of the rains and the planting season according to Kaqchikel Maya ethnography. Clusters of paintings near an “observatory” show rituals of blood sacrifice of the deer and the peccary, animals that represent respectively the dry and the rainy seasons. Serpent images represent rain, and clusters of paintings of spiritual animals, referencing the Popul Vuh, represent creation. A ritual deposit to Ixchel, the patroness of rainmaking and cycles of time, exists at the site. Overall, the site has sacred places recognized today in ethnography and ethnohistory and the paintings have Mesoamerican and Maya sacred themes.

Robinson, Francis (Vermont Division for Historic Preservation)**[148]** *Territories without Boundaries: Late Woodland Chert Use and Social Signaling in the Eastern Champlain Valley*

The Late Woodland period in northern New England (beginning ca. AD 1000) is most notably defined by the adoption of intensive agriculture by the Native people of the region. While archaeological data indicate that the fertile floodplains of the major rivers in the eastern Champlain Valley became seasonal nexuses for resident populations for farming, there otherwise has been little data available to suggest intra-valley catchment areas or other political, social, or ethnic boundaries. An ongoing, large-scale analysis of toolstone use in the production of Levanna-type projectile points from over 100 Late Woodland archaeological sites in the eastern Champlain Valley has revealed interesting patterning that suggests the existence of intra-valley

territories of some kind. Nevertheless, other lines of evidence suggest that these territories, however they were conceived, were unbounded in the traditional sense. The author will explore this patterning and its implications throughout the presentation.

Robinson, Kenneth (Eastern Washington University)

[200] *Early Aurignacian Adaptations to Climatic Disturbances ca. 40,000 BP*

Widely considered the first *Homo sapiens* population to persist in Europe, the Early Aurignacian culture of the Upper Paleolithic adapted to and interacted with a changing late Pleistocene environment. Temperatures trending cooler with frequent fluctuations resulted in large expanses of tundra ca. 40,000 years BP. One such fluctuation at this time was brought about by the coincidence of Heinrich Event 4 and the Campanian Ignimbrite eruption of the Phlegraean Fields volcano in modern-day Italy. Average July temperatures at this time near modern-day Paris were 41°F / 5°C. In this cooling and fluctuating environment, we find the Early Aurignacian culture characterized by: distinctive bone, antler, and stone bladelet tools; the hunting of reindeer, horses, and other mid-sized herbivores; and art and jewelry with symbolic dimensions. This project reviews and analyzes the literature on the late Pleistocene climate and Early Aurignacian culture ca. 40,000 years BP using a cultural ecological framework and provides a GIS analysis thereof, demonstrating that Aurignacian material culture design and function was environment-specific.

Robinson, Ryan [264] see Bodor, Thomas

Robinson, Samantha [282] see Borrayo, Jazmin

Robles Cortés, Erika (Harvard University)

[112] *The Exclusion of Latin American Scholars in Mesoamerican Studies: An Analysis of Citation Practices*

Is it theoretically, methodologically, and ethically appropriate to exclude the knowledge produced by scholars from the regions we work on? This investigation examines the representation of local researchers in Mesoamerican studies produced by foreign archaeologists. As a case study, I conducted a bibliometric review of 50 articles from the journal *Latin American Antiquity* on Maya archaeology, as this culture occupies the current territories of five Latin American countries: Mexico, Guatemala, Belize, Honduras, and El Salvador. After analyzing 3,842 sources, the results point to an alarming underrepresentation of Latin American research, with only 5.8% of references written by or led by local archaeologists. This analysis explores some of the reasons behind this exclusion and proposes solutions to resolve it. The disparity in citations not only affects marginalized groups but also limits knowledge and rigorous research. Therefore, the objective of this analysis is to highlight this problem and encourage us to decolonize, rethink, and rebuild our research practices.

Robles García, Nelly (Instituto Nacional de Antropología e Historia)

[94] *El Museo Frissell y sus claroscuros en la historia de la arqueología Oaxaqueña*

En esta ponencia se abordan las contradicciones históricas que se gestaron en torno a una de las colecciones más grandes de objetos arqueológicos en Oaxaca, ubicada en un recinto que terminaría siendo un importante pilar para el desarrollo de las investigaciones arqueológicas modernas de la entidad. Se abordan temas sobre el coleccionismo arqueológico de finales del siglo XIX y primera mitad del siglo XX y se analiza cómo los proyectos que albergó el museo Frissell fueron apoyadas sobre prácticas que hoy en día resultan jurídicamente cuestionables ante las leyes Mexicanas.

Robles-Montes, Mayra (SECIHTI / CICIMAR-IPN)

[167] *Unearthing the Depths: Contemporary Approaches to the Submerged Cultural Heritage of Espíritu Santo Archipelago*

Our research into the underwater realm of the Espíritu Santo archipelago has revealed a significant array of preserved geomorphological and cultural evidence. These findings highlight the importance of understanding the connections between early human societies and the Gulf of California. Notable discoveries include ancient coastal landscapes, fishing traps, and potential submerged prehistoric sites, marking a milestone in archaeological history, a history that is slowly being unraveled. In the first phase of our research, we

employed numerical modeling and marine geophysical methods to gain insights into landscape transformations during the Pleistocene-Holocene transition, a period marked by substantial climate change that significantly impacted human settlement patterns. In the second phase, remote sensing techniques, such as remotely operated vehicles and drones, have been proposed to create a comprehensive 3D record of underwater cultural heritage. Given the presence of this heritage, continued research is essential. Our findings will guide effective strategies for the conservation and management of these resources in collaboration with Mexican government agencies. The Espiritu Santo archipelago, inscribed on UNESCO's World Natural Heritage List since 2005, requires our collective commitment to ensure the preservation of its invaluable cultural heritage.

Robles Salmerón, Amparo (INAH)

[111] *From Archival and Catalogue Data to GIS: Evaluating the Vulnerability of Archaeological Heritage in Puebla, Mexico*

The Proyecto Atlas Arqueológico del Estado de Puebla (PAAEP) was developed to document, integrate, and spatially analyze archaeological sites across the state of Puebla, Mexico. This project consolidated data from two major sources: the *Catálogo Estatal* (CE), based on archival records from the Archivo Técnico Histórico del Centro INAH Puebla (ATHCINAH), and the *Catálogo Nacional* (CN), a national database managed by INAH's Dirección de Registro Público de Monumentos y Zonas Arqueológicas (DRPMZAH). Both datasets were standardized using the "Cédula para catalogar o actualizar sitios arqueológicos" (CCASA) and subsequently integrated into a Geographic Information System (GIS), which enabled the creation of a georeferenced information platform. A central outcome of this study was the development of the Cumulative Vulnerability Index, designed to evaluate the degree of risk affecting each archaeological site. The index incorporates eight variables: record updating, number of risk factors, conservation status, official protection polygons, urban coverage, land use and vegetation, property regime, and proximity to main roads. The results provide a spatially explicit tool to support decision-making for the protection and management of archaeological heritage, while strengthening inter-institutional collaboration between the Centro INAH Puebla and local authorities.

Rockwell, Heather (Salve Regina University), Nathaniel Kitchel (Salve Regina University), and Madeline Mackie (Michigan State University)

[148] *Dwelling on the Past: Identifying Household Boundaries in Northeastern Ice Age Sites*

Archaeologists often discuss boundaries on relatively large scales such as those between communities, ethnic groups, and polities. Less frequently discussed, especially among communities that did not construct dwellings of durable materials, such as stone, are the smaller but no less important boundaries between interior and exterior spaces. These "micro" boundaries influence the use of space and the activities that take place across them, creating patterns that can sometimes be identified in the archaeological record. By identifying boundaries between interior and exterior spaces we can begin to identify those divisions between the private and public, personal and community, and beyond. This in turn can provide insights into which activities were undertaken either within or beyond the boundaries of an interior space and perhaps which members of a group may have been most likely to conduct specific tasks. Here we discuss the results of our work to identify interior and exterior spaces during the fluted-point period of northeastern North America and the insights these efforts have produced into how boundaries between the interior and exterior may have structured life during the Ice Age of the Northeast.

Rockwell, Heather [216] see Garcia-Putnam, Alex

Rockwell, Sophie (Brown University), Elic Weitzel (Smithsonian National Museum of Natural History), Sarah Sportman (Connecticut State Museum of Natural History / University of Connecticut), and Gideon Hartman (University of Connecticut)

[79] *Investigating Industrial Pollutants in Archaeological Quahog Shell from the Long Island Sound*

Northern quahog (*Mercenaria mercenaria*) populations in the Long Island Sound have noticeably declined over the past several decades, affecting both local ecosystems and the livelihoods of local shellfishermen. However, limited research has been conducted on when and why this population decline began and the potential role of

industrial pollutants in causing it. We hypothesize that quahog may have suffered from increased heavy metal pollutants introduced to the Long Island Sound beginning in the nineteenth century by industrial activity. To investigate if and when quahog absorbed such pollutants during industrialization of the region, we examine heavy metal absorption in archaeological quahog shells from the seventeenth-century Hollister site, the eighteenth- and nineteenth-century Ebenezer Story Homestead and Tavern site, and modern quahog shell from the Long Island Sound. To do so, we use a pXRF device to determine levels of metal cations in powdered shell samples. We then compare these data to heavy metal deposition in sediment cores from the area, which suggests nineteenth-century increases in industrial heavy metals in Long Island Sound sediments.

Rockwell, Sophie [157] see Weitzel, Elic

Roddick, Andrew (McMaster University)

[215] *Joyce in the High Andes: “Looking Up” at Proto-Urban Tiwanaku*

One of Rosemary Joyce’s many contributions to global archaeology is her careful rethinking of historical process. Throughout the 2000s, Joyce explored how a range of theories of practice, from the well-trod to the rarely engaged, could challenge established narratives. She pushed us to “look up” (a la Vitelli 1998) through time and to consider the long-term historical resonances of unintended consequences. Her own work grapples with a range of materials, including early Mesoamerican earthen mounds, subtle stratigraphic layers, and a variety of polychrome ceramics. Her careful work with these materials revealed the historical consequences of depositional practices, communities of practice, and object itineraries. In this paper, I reflect on the broad consequences of Rosemary’s work into agency and structure beyond Mesoamerica. Specifically, I explore early historical processes of the Terminal Late Formative period (AD 420–590) at the proto-urban site of Tiwanaku. Here a range of methodological and theoretical revolutions have contributed to new interpretations of the site, yet a reevaluation of Tiwanaku historical process is needed. Drawing on recent results from a project to “unflatten” historical process at Tiwanaku, I begin to tease apart cause from consequence at this early Andean center.

Rodning, Christopher (Tulane University), and Kirstin Squint (East Carolina University)

[275] *Archaeology, Tribalography, and the Neyuheruke Wampum: Remembering and Remapping the Tuscarora War in Eastern North Carolina*

Wampum has a long history in Native North America as a material form of communication. Visual designs on wampum belts are mnemonic devices for storytelling, often related to diplomatic agreements between Indigenous communities and between Indigenous and European colonial groups. In 2013, the Tuscarora Nation of New York presented a wampum belt (known as the Neyuheruke wampum) to the people of North Carolina during events at East Carolina University commemorating the tricentennial of a decisive battle in 1713 at the Tuscarora stronghold of Fort Neoheroka during a period known in North Carolina history as the Tuscarora War. In this paper, we situate the Neyuheruke wampum within the broader history of wampum in eastern North America, and we relate it to what is known about the archaeology of the Neoheroka Fort site in eastern North Carolina. We argue that the Neyuheruke wampum is a form of tribalography—an Indigenous approach to narrative that emphasizes deep interconnections between people, land, time, and memory—related in this case to remembering and remapping the Tuscarora War and relationship between Tuscarora people and ancestral homelands in North Carolina.

Rodrigues, Teresa [275] see Schaafsma, Hoski

Rodriguez, Carlos [226] see Rodriguez, Orlando

Rodriguez, Elizabeth (UCLA), and Samantha Amarillas

[214] *The Pursuit of Mexican Artifacts*

Ancient Mesoamerican cultural objects have been widely sought after by museums and private collectors as far back as colonial times. In present times, there continues to be a market for ancient Mesoamerican ceramics, ranging from cooking vessels to figurines made for rituals. This impedes archaeological research, but more importantly it is destructive to the identity of Mexican people with Indigenous heritage. With the

Waystation Initiative at the Cotsen Institute of Archaeology at UCLA, our research centers the cultural heritage of Mexican ceramics to discuss their original use and how people's understanding of them changed due to their movement through the art market. We identify measures being taken to limit the buying and selling of cultural materials. We achieve our goal by beginning with provenance research, interviews, and conducting a thorough literature review, though there is difficulty tracing back to the peoples these cultural objects belong to. This directly reflects the parallels between looting as a result of colonization and how Indigenous Mexican people in Mexico and the United States continue to struggle to connect with their Indigenous identity. As a result, we conclude the best way for institutions to aid communities negatively impacted by colonization is to conduct voluntary returns.

Rodriguez, Myriam [302] see Tykot, Robert

Rodriguez, Orlando (GIPRI), Guillermo Munoz (GIPRI Corporation, Colombia), Judith Trujillo (GIPRI Corporation, Colombia), Carlos Rodriguez (GIPRI Corporation, Colombia), and Ricardo Prado (GIPRI, Corporation, Colombia)

[226] *Rediscovery of Stone Paved Roads in El Colegio, Cundinamarca (Colombia)*

Stone-paved roads are a fundamental yet understudied component of Colombia's historical landscape. Prior to motorized transport, these routes sustained regional economies and social interaction, enabling the circulation of goods, people, and ideas across varied ecological zones. Constructed and maintained through vernacular engineering by rural communities, they embody technological knowledge adapted to local geography while also serving as cultural landscapes embedded in daily life. This paper presents results from the first systematic inventory and characterization of stone-paved roads in the municipality of El Colegio, Cundinamarca (Tequendama Province). Field research documented 19 road segments, classified into royal roads, bridle paths, rural trails, and footpaths. Typological analysis revealed functional variability, from pedestrian-only tracks to routes accommodating horses and livestock. Several segments remained in use through the Republican period, highlighting their persistence as regional mobility corridors. The study establishes a baseline for understanding the social, technological, and environmental dimensions of Colombia's historic road networks. By integrating archaeological documentation with regional history and landscape analysis, this research advances the recognition of stone-paved roads as significant elements of cultural heritage and historical archaeology, contributing to broader debates on infrastructure, mobility, and landscape transformation in Latin America.

Rodríguez-Alegría, Enrique (University of Texas), and Kristin De Lucia (Colgate University)

[304] *Obsidian Tool Production under Mexica Domination at Xaltocan*

Xaltocan, located in the Basin of Mexico, was occupied for more than 300 years before the formation of the Mexica (aka Aztec) Empire. It was conquered by the Mexica in the fifteenth century, and then by the Spanish in 1521. Previous analyses of chipped stone in Postclassic (ca. 900 CE–1521) and colonial Xaltocan documented production of obsidian tools before the Mexica conquest, an abandonment of local production of obsidian tools under Mexica domination, and the resumption of obsidian tool production after the Spanish conquest. In this poster, we present new evidence of production of obsidian blades locally in Xaltocan under Mexica domination, in a household context excavated in 2017. Our analysis suggests that there was some specialization in obsidian blade production, whereas other contemporaneous contexts only present evidence of obsidian tool use and discard, but not of production. Our findings lead us to abandon the idea that Xaltocan did not have access to obsidian raw materials under Mexica domination, and to propose instead that under imperial domination, some houses in Xaltocan had access to obsidian raw materials and production of obsidian tools while others did not.

Rodríguez Ascaño, Luis [306] see Capriles, José

Rodríguez-Delgado, Eric [178] see Clark, Loren

Rodriguez Galicia, Bernardo

[164] *The Differential Use of Coastal Fauna in a Teotihuacan Neighborhood Center*

Archaeozoological research in Mexico is still very incipient, and its achievements in identifying animal remains continue to surprise both locals and outsiders; so much so that in the excavations at the Teopancazco neighborhood center in Teotihuacan, Mexico, an unusual concentration of coastal fauna remains was identified, which includes a fragment of sea urchin spine, 10 fragmented claws of crabs, 30 crocodile bone plates, and 1,098 fish bones that were captured and prepared in prehispanic times along the Mesoamerican coastal strip. The wonderful presence of such remains at such an important site as Teotihuacan is evidence of the use and exploitation of natural resources by past societies. The research aimed to interpret and provide an alternative for the differential use of coastal fauna in the multiethnic neighborhood center of Teopancazco, which, despite being far from the Mesoamerican coasts, still maintained cultural and emotional ties to the place of origin of its inhabitants. This situation allowed for proposing how the transfer and preparation of such an unusual type of animal resources were carried out in the mythical city of the gods.

Rodriguez Mejia, Fredy [352] see Landau, Kristin

Rodriguez Ramos, Reniel [173] see Kracht, Emily

Rodriguez-Rellán, Carlos (Universidad de Granada), Juan Cárdenas Párraga (Universidad de Granada), David García González (EEA-CSIC), and Javier Llamazares (Universidad de Granada)

[272] *New Evidence on the Production and Circulation of Polished Sillimanite Axes during the Late Prehistory of the Iberian Peninsula*

Sillimanite, particularly in its fibrolite variety, was one of the most intensively used raw materials during the Late Prehistory of the Iberian Peninsula for the production of polished tools. This is evidenced by the ubiquity, chronological persistence, and social value of these artifacts, with thousands of pieces documented in contexts ranging from the Early Neolithic to the Iron Age (fifth–first millennium BCE). However, these artifacts remain surrounded by numerous unanswered questions: What is the specific geological origin of the polished sillimanite axes found in the Iberian Peninsula? What strategies were employed for the procurement, production, and circulation of these objects? This paper presents the preliminary results of the ARPA and ANDALUSIL projects, which, for the first time, propose a holistic analysis of sillimanite axes—encompassing the identification of raw material sources, the reconstruction of manufacturing processes, and the dynamics of circulation of the finished artifacts.

Rodríguez Yábar, Alexis (Arizona State University), and Lady Ramirez Flores

[173] *New Insights into Pallka: Lithic and Ceramic Evidence of Interaction during the Formative Period in Casma, Peru*

Pallka is one of the most important Formative period sites in the Casma Valley, first identified by Julio C. Tello, who recognized its role as a key ceremonial center for understanding the Chavín phenomenon in the Central Andes. Previous research has also documented the presence of residential sectors associated with the ceremonial core. This paper presents, for the first time, exploratory results of lithic and ceramic analyses from test excavations conducted in 2025 across both residential and ceremonial areas of Pallka. Obsidian flakes and other lithic materials, particularly concentrated in the residential sector, suggest both the importation of raw materials and local tool production. Likewise, the presence of fine and diverse Chavín-style ceramics in both contexts indicates direct elite involvement in the administration of domestic and ceremonial spaces. XRF results show that the obsidian derives from the Quispisisa source, located more than 500 km away in Ayacucho. Ceramic analyses further reveal varied techniques and production sources, pointing to a complex network of interaction. Together, these data highlight Pallka's dynamic connections with distant regions and underscore its significance as a ceremonial center for understanding Chavín expansion and integration during the Formative period.

Rodríguez Yábar, Alexis [173] see Dalton, Jordan

Rodríguez Yábar, Alexis [100] see Ramirez Flores, Lady

Rogan, Jose [263] see Gil, Adolfo

Rogers, Jaime [157] see Herbert, Gregory
 Rogers, Jaime [349] see Kiahtipes, Christopher

Rogers, Jason [182] see Anderson, Shelby

Rogers, Monty [182] see Anderson, Shelby

Rogoff, David [275] see Kurnick, Sarah

Rojas-Pelayo, Liseth (University of Florida), Erick Acero-Shapiama, Daniel Contreras, Rosa Rick (Programa de Investigación Arqueológica Chavín de Huántar), and John Rick (Stanford University; Programa de Investigación Arqueológica Chavín de Huántar)

[111] *From Notes to Maps: A Legacy GIS Approach for Examining Mariash-Recuay Transformations at Chavín de Huántar*

This study investigates how Mariash-Recuay groups reoccupied and redefined the monumental center of Chavín de Huántar following the decline of the Chavín tradition (ca. 550 BCE). Although architectural evidence of these later occupations is extensive, scholarship has primarily concentrated on the Chavín period, leaving subsequent evidence dispersed across excavation plans, field notes, and publications. This project integrates these records in a GIS to examine how Chavín spaces were reused, transformed, and reinterpreted. The study explores which sectors of the site were reoccupied, whether the detected hotspots reveal continuity, internal variation, or innovation in the appropriation of space, and to what extent the Mariash-Recuay layout at Chavín diverges from or aligns with patterns observed at other Recuay sites. More broadly, it evaluates how fragmentary documentation can acquire renewed interpretive value when transformed into a digital spatial dataset. Methodologically, the project draws on published excavation plans from the last 60 years of fieldwork, georeferencing and digitizing maps and integrating them into a GIS with attributes for context type, chronology, and architectural association. Results include mapping the extent of Mariash-Recuay occupation, identifying spatial clusters, visualizing shifting activity areas, and building an integrated dataset that will serve as a resource for future research.

Rojas-Pelayo, Liseth [179] see Acero-Shapiama, Erick

Rojas-Vega, Carol [337] see Toyne, Jennifer Marla

Romero, Melissa [40] see Flores-Blanco, Luis

Romero Butrón, Ashuni (Instituto Nacional de Antropología e Historia), and Tanya Carino Anaya

[352] *Gaussian Splatting (3DGS) for Outreach and Dissemination of the Archaeological Site of El Meco, Quintana Roo, Mexico*

During the Archaeological Zone Improvement Program (PROMEZA) work at the archaeological site “El Meco,” Qroo, Mexico, in 2023 and 2024, we conducted digital documentation of various interventions, including building maintenance and excavations. One objective was to compile information from different processes and explore contexts to generate 3D digital models that provide precise data. Additionally, these models were conducted with the understanding that the information should also serve for dissemination and outreach. We experimented with various tools for processing the collected information; however, we focused on Gaussian Splatting (3DGS) technology for creating 3D models. This technology emerged in 2023 and has been groundbreaking within the 3D modeling industry and applications involving 3D environments, including augmented reality (AR) and virtual reality (VR). In sum, this technology—often open source and free—enables rapid processing of large amounts of information, generating lightweight models with formats compatible across different programs and platforms and realistic real-time rendering. Also, 3DGS helped us to disseminate the archaeological site through a virtual tour. *****This presentation will include images of human remains.**

Romero Butrón, Ashuni [183] see Carino Anaya, Tanya

Romo, Delaney (New Mexico State University)**[354]** *Maize Cultivation and Wild Plant Usage at Cottonwood Spring Pueblo (LA 175)*

When small-scale horticulture became more prominent in the southwestern United States, communities were not yet moving away from hunting and gathering but instead the two methods for gathering food were used in tandem with one another. In the Jornada Mogollon, the use of small-scale horticulture and hunting and gathering represent an adaptive response to resource availability. Maize was a dietary staple, but it did not fully replace the use of wild plants. This paper investigates plant use at Cottonwood Spring Pueblo (LA 175), a fourteenth-century archaeological site in southern New Mexico, and focuses on the intersection of wild and domesticated plants at the site. This research draws on macrobotanical remains recovered from the site through the process of flotation, sieving, sorting, and counting, and macrobotanical remains found in context during excavation. This study contributes to the understanding of how Indigenous communities were able to navigate shifting landscapes, retaining and passing down knowledge of wild plants, while also adapting to broader agricultural changes in the region.

Romo, Sean [22] see Derry, Emma

Roos, Christopher (Southern Methodist University), Matthew Liebmann (Harvard University), Michael Aiuvalasit (Illinois State Archaeological Survey), Tammy Rittenour (Utah State University), and Christopher Toya (Pueblo of Jemez)
[301] *Early Hemish Settlement of Ponderosa Pine Forests in the Jemez Mountains, Northern New Mexico*

Southwest archaeologists have believed substantial settlement of the forested uplands of the Jemez Plateau did not begin until the fourteenth century AD. This timing had implications for archaeological interpretations of potential source populations for the early Hemish (Pueblo of Jemez) settlers and for the time frame for human impacts on forest ecology. Here we provide multiple, independent chronometric lines of evidence that earliest Hemish settlement of the forested mesas of the Jemez Plateau began by the twelfth century AD. Off-site geoarchaeological records in the dry pine forests document an unprecedented increase in fire activity, grasses and ruderal plants, and large herbivores by AD 1130–1160. Optically stimulated luminescence of ceramics at three mesa-top sites indicate they were established by AD 1100–1200. Conservative modeling of radiocarbon ages from four reservoirs at mesa-top pueblos indicates that these were constructed by roughly AD 1160–1220. These dates implicate the Chaco and Northern San Juan basin areas as source populations—regions that suffered major relocations in the mid-late twelfth century, which is consistent with Hemish oral traditions. Major depopulation of the mesa-top settlements occurred in the seventeenth century with Spanish missionization, indicating at least five centuries of human-forest dynamics that shaped the trajectory of this landscape.

Roque Soplapuco, Manuel [293] see Sharp, Kayeleigh

Rorabaugh, Adam**[159]** *Boats and (Worked) Bones: Traditional Coast Salish Social Networks and Maritime Subsistence Technologies*

In the Salish Sea of Northwestern North America, maritime travel was central to social identity, connectedness, political life, trade, and maritime subsistence. This study examines the social signals shared through maritime social networks of one set of maritime subsistence tools, bone and antler fish hooks, leisters, spears, and harpoons. The production of these technologies reflect affinal social networks of knowledge production, specifically craft and subsistence skill training. Social network analysis is employed examining barb styles from dated site components over the mid Holocene. Barbed bone tools embody a form of guarded knowledge and embedded craft specialization. Shifts through time in these networks are consistent with the traditional bilateral descent patterns of Coast Salish speaking peoples. The elaboration of these networks over the early to mid-Holocene suggests cultural continuity in kinship practices since time immemorial as a result of the mobility granted by seafaring.

Rosa Figueroa, Jeffrey (California State University, Los Angeles), and Rachel Holland
[206] *Reconsidering Manuports: Theoretical Implications of a Separate Artifact Class*

The emergence of formal artifact studies in the second half of the twentieth century led to major advances in understanding the general character of cave artifact assemblages. By the end of the twentieth century and the start of the twenty-first century, entire categories of manuports were identified. Numerous studies, building directly on previous advances, examined the theoretical implications of manuports. While manuports may or may not be listed in artifact catalogues, they appear only in small quantities. However, these categories have yet to be systematically integrated into artifact collections, reflecting the fact that the implications of these new manuport categories have not yet been fully integrated into field methodology and reporting. This paper explores ideas on how manuports should be managed during field recovery operations and discusses the future inclusion of manuports as a distinct artifact class in future archaeological investigations.

Rosa Figueroa, Jeffrey [206] see Kohanski, Neil

Roscoe, Paul (University of Maine)

[263] *The Ecological Determinants of Population Density, Polity Size, and Leadership in Contact-Era New Guinea*
Although human population densities are challenging to determine archaeologically, density does appear to be an important determinant of human social and cultural forms, and increasingly archaeologists are developing datasets for tracking density changes over time and theoretical models of their interaction with cultural evolution, climate, and ecosystemic change. Drawing on a database of 225 New Guinea societies, this presentation charts how a diverse New Guinean ecology and the subsistence infrastructures of these small-scale groups appears to have driven their contact-era population densities, polity sizes, and political structures. A brief conclusion notes the effects that engagement with Asian and European colonial powers has had in generating the marked population growth typical of early phases of the Demographic Transition.

Roscoe, Paul [263] see Dastrup, Neil

Rose, Autumn (University of Florida), Ashley Sharpe (Smithsonian Tropical Research Institute), and Máximo Jiménez

[349] *Fishing for Feasts: A Preliminary Analysis of the Temporal Dynamics of Animal Use at Selin Farm, Honduras*
Selin Farm is a precolumbian site that sits on the northeast coast of Honduras that features several large shell-ceramic “feasting” mounds of impressive artifact density. With proximity to marine, estuarine, and freshwater ecosystems alongside mountains, coastal plains, and mangrove swamps, this site has attracted recent multidisciplinary interest in understanding fishery resilience. The first excavations by Paul Healy and colleagues in the 1970s provided preliminary fauna data examining dietary preferences and ecological exploitation patterns. His findings suggest a combined reliance on terrestrial and marine fauna and a shift toward dietary diversification and greater reliance on marine resources over time. Since then, recent excavations to better understand the timing and use of the mounds have recovered copious amounts of faunal data, currently under analysis. This paper seeks to synthesize the data analyzed so far with the goal of (1) providing an update to Healy’s original interpretation of the fishing activities and dietary preferences at Selin Farm and (2) creating informed, targeted strategies for future sampling of the underutilized data. We also discuss strategies for incorporating data from multiple projects and incorporating legacy data in ways that help to challenge, rather than perpetuate, past and current biases.

Rose, Chelsea (Southern Oregon University)

[256] *Small Town Charm: Opportunities, Challenges, and Contested Belonging in Rural Spaces*

The Kam Wah Chung State Heritage Site represents a key interpretive hub for Chinese heritage in the Pacific Northwest. Once home to the John Day Chinatown, its residents provided medical care, groceries, automobiles, and employment to the citizens of eastern Oregon, and were heavily involved in mining and ranching industries—each main economic drivers of the region. Despite this, much of this story has been lost or distilled down to racialized tropes and paternalistic vignettes. Early Chinese American residents are often portrayed as generic unskilled labor, and the many ways in which they supported and participated in the larger community have been erased or ignored. Structural racism and discriminatory legislation played a large part in this erasure, but ahistorical memory allowed communities to infill and reimagine the gaps left by the removal of the community from local history. This revised narrative has not only sidelined the many

contributions of Chinese Oregonians but has helped to create a mythical past celebrating rural Whiteness. When critically examined, material culture and archival data presents a more nuanced and complex story of the Chinese American experience in eastern Oregon, highlighting how much has been lost in the telling of the story over time.

Rose, Chelsea [346] see Sloan, Anna

Rose, Katherine (Institute for Field Research)

[85] *Integrating AI and Legacy Data in Remote Sensing Surveys of Northern Sudan*

This paper discusses the methods and results of a new project combining AI and legacy data to identify undocumented archaeological sites in Northern Sudan. The site of Jebel Barkal, near modern-day Karima, dominates the landscape with an imposing natural mountain and cultic pyramids, temples, and palaces. The Jebel Barkal Archaeological Project, in collaboration with the National Corporation for Antiquities and Museums of Sudan, has been investigating a dense settlement at the site. Little is known about the broader urban landscape surrounding the settlement due to a lack of systematic regional surveys. In order to address this gap in our knowledge, our project uses a new open-source AI tool to identify potential sites and features in legacy spatial data. The data includes decommissioned spy satellite imagery from CORONA, HEXAGON, and U-2 missions, as well as lidar and thermal imagery collected prior to the onset of the civil war in April 2023. This paper presents the features identified by the tool, evaluates the accuracy of the tool's detection abilities, and suggests a plan for ground truthing. Lastly, it reflects on the challenges of applying cutting-edge AI to multiple lines of data, collected with different objectives in mind.

Rosen, Arlene (University of Texas at Austin)

[200] *Geoarchaeology and Paleoenvironments of an Early to Mid-Holocene Hunter Camp at Shaar Uul, Ulaan Taiga Strictly Protected Area, Northern Mongolia*

The site of Shaar Uul, is located in northwestern Mongolia within the Ulaan Taiga Strictly Protected Area just west of the Darkhad Basin, along the Khug River in a glacially incised valley. It was recently discovered in 2024 by a team from Nomad Science and first excavated in the summer of 2025. The site represents a mid-Holocene residential camp of hunters, and possible early herders. In the terminal Pleistocene, rapid melting of the valley glacier left behind thick till deposits, which were rapidly incised into a series of cut-terraces. Shaar Uul is situated on a middle terrace, ca. 25 m above the current stream valley, and sits directly above a ca. 30 cm layer of alluvial channel and floodplain deposits which in turn overlay thick till deposits. There is very little postdepositional disturbance in the site, leaving most of the artifacts in a primary in situ disposition. After abandonment, the site was rapidly buried by fine-grained perhaps aeolian silts, and subsequent landscape stability sealed the site with a well-developed soil A-horizon and weaker B-Horizon. Shaar Uul represents a physical interface between human activities, landscape, and environmental change.

Rosen, Steven (Ben-Gurion University)

[212] *The Moving Frontier: The Changing Nature of Settled Zone–Desert Relations over the Long Term in the Negev*
Situating between the deep deserts of Arabia in the south and east, and Sinai in the south and west, the arid Negev has been a frontier for Mediterranean societies and civilizations since at least the terminal Pleistocene. This long-term perspective over a relatively small area offers an in-depth understanding of the changing nature of the frontier. The dynamics of the frontier extend well beyond the mere shifting of the border between settled societies and their nomadic counterparts. The impact of cumulative technological changes (e.g., hunting technologies, domestication and associated technologies, water harvesting and run off irrigation, relict infrastructures), increasing social complexity (especially, but not exclusively in the settled zone), including evolving trans-desert trade systems, and, of course, environmental fluctuations form a mosaic of complex frontier adaptations.

Rosenberg, Ciele (University of California, Berkeley)

[42] *Exploring the Extended Life Course, Embodiment, and Structural Vulnerability in Antioquia, Colombia: A Multiscalar Approach*

Biocultural approaches in bioarchaeology combine the social and biological and, in the context of this

research, aim to assess how embodied biocultural stress varies throughout different stages of the life course. Moreover, this work speaks to the extension of the life course across generations and emphasizes how the mother-infant nexus and DOHaD perspectives are inherently multiscale in that our bodies begin bound within another not just physically but also in terms of inherited traces of historical violence that can radiate across generations and be embedded into hard tissue. The use of both a multiscale and multi-temporal approach allows for a more robust contextualization of how the entanglement of historical events and different eras of sociopolitical violence and biopolitics may shape the embodiment of skeletal stress and structural vulnerability (Winburn et al. 2022). Colombia has one of the longest cases of civil conflict, class warfare, and violence to date. This research focuses on a subsample of women across three generations from the forensic osteological reference collection at the University of Antioquia in Medellin, Colombia. Various regions throughout Antioquia are represented in terms of population/birthplace, comprising individuals born between the mid-twentieth to twenty-first century (Isaza and Vargas 2011; Calle 2020).

Rosencrance, Richie (University of Nevada, Reno), and Katelyn McDonough (University of Oregon)

[319] *Recent Advances in Western Stemmed Tradition Projectile Point Chronology and Typology*

The Western Stemmed Tradition (WST) refers to a variety of stemmed projectile points and associated tools found in late Pleistocene and Early Holocene sites across the American Far West. At least nine projectile point types, spanning more than 4,000 years, are currently recognized in the WST. For decades researchers have struggled to place these point types in a cogent chronology due to significant morphological overlap of forms and a dearth of stratified and well-dated components. We and others have worked to address these typology and chronology problems through excavations, surveys, and collections-based research. In this presentation, we outline our approach to building chronologies with some tales of success and others of caution. We also discuss our approach to typology refinement that emphasizes technology and use life alongside 2D form. We underscore that chronology and typology building are never complete yet remain critical to archaeological practice in North America.

Rosencrance, Richie [319] see Smith, Geoffrey

Rosenswig, Robert (University at Albany-SUNY)

[81] *The Earliest Maya Village*

During the past two decades, the Belize Archaic Project has recovered regional evidence of human occupation at Progreso Lagoon in northern Belize. In 2024 and 2025, a small fourth to fifth millennium BP village was documented on a bluff approximately 1 km from the lagoon shores. Evidence of seven cobble surfaces that formed house floors were recorded as well as associated hearths, pit features, and stone wall bases. In addition, a lithic reduction zone was documented by extremely dense deposits of debitage, along with manufacturing failures and nearby cached complete tools. This aceramic domestic site is more than a millennium older than any ceramic-bearing sites known from the subsequent Formative period.

Rospopo, Steven (New Mexico Highlands University), and Hayward Franklin (University of New Mexico Maxwell Museum)

[294] *Reevaluation of the Cultural Occupation Model of Ancestral Puebloans in the Eastern Salinas Region of Central New Mexico*

Numerous researchers have investigated the material record of the Eastern Salinas Region of central New Mexico. The working hypothesis reports that area is a transition zone, borderland, or frontier landscape. Five distinct cultural tradition areas were defined using architecture and material contexts. Our study area is centered in the Gran Quivira and Chupadero Mesa area. In the AD 850–1150 period, our cultural model focuses on the demonstrable presence of early and late pit structure, Jacal structure, and early and late Puebloan structures and their material record. Limited testing, excavation, and extensive survey suggest that the occupation sequence can be more fully defined using architecture, lithic technology, and decorated and undecorated ceramic components at each site. We are reporting ceramic typology frequencies of Cibola Whitewares and Redwares, along with Jornada Mogollon ceramic types in the late pit structure and Jacal structure phases. We suggest that these ceramic typology elements that are associated with locally procured

chert toolstone represent a generalized pattern of large-scale immigration of peoples into multicomponent contexts, as observed at other regional sites within the US Southwest in the mid-1000s into the greater Salinas Region, when regionalized local environmental conditions and potential were maximized.

Ross, Douglas (Albion Environmental Inc.), and Bridget Wall (Far Western Anthropological Research Group)

[256] *Recapturing the Diversity of Everyday Life on Historic Farmsteads in Owens Valley, California*

Two major factors rob narratives of rural farms/ranches of their intra-regional diversity: the tendency of local historians to focus on leading citizens and neglect their less prominent neighbors and the tendency of archaeologists to emphasize exceptional sites at the expense of commonplace ones. In assessing rural properties for preservation and/or study, archaeologists often prioritize sites occupied by a single household over a short duration with discrete, tightly dated refuse-filled pits. However, many rural sites are defined by low volumes of artifacts in diffuse surface scatters with loose date ranges and association with multiple households. Of 22 rural homesteads evaluated in Owens Valley since the 1990s, only seven were deemed significant, and only one was subject to detailed analysis. Consequently, sites with substantial research potential go unrecognized, leaving gaps in our understanding of the lives of farmers/ranchers and homogenizing their experience. Two early twentieth-century sites in Owens Valley, previously deemed not significant, were reevaluated and subject to in-depth analysis. They were compared with one another, and with other rural sites in the valley, from the perspective of landscape and everyday consumer habits. Results help recapture some of the diversity lost in the often-homogenizing environment of local history and archaeology.

Ross, Douglas [256] see Wall, Bridget

Ross, Shell [296] see Ru, Huiwen

Ross-Ibarra, Jeffrey [354] see Fairbanks, Regina

Rossen, Jack (Chronicle Heritage)

[204] *Challenges and Advances in the Theory of Archaeobotany*

Archaeologists have barely scratched the potential of information that ancient plant remains can tell us. Traditionally, plant remains have been used to illuminate uses of plants, origins of agriculture, environmental reconstruction, and human adaptations. This early framework provided basic boundaries for research. It can also be argued that it constrained archaeobotanists from developing a true theoretical sophistication for their subdiscipline. Some examples of newer interpretations of plant remains include cultural evolution and chronological thresholds, plants and status, ideology, political aggression and resistance, and Indigenous archaeology. The limits of archaeobotanical interpretation may be greatly expanded by our energy and creativity. This session explores theoretical avenues of archaeobotanical materials and data. Archaeobotany can be a focal point of sociocultural theory, to pursue understanding of wide variety of issues, and archaeobotanists can stake a stronger claim to their prominent theoretical place in archaeology.

Roth, Barbara

[88] *If You've Seen One Desert, You Haven't Seen Them All: Comparing Archaic Period Occupations in the Mojave and Sonoran Deserts*

Archaic period occupations in desert environments have often been viewed as encompassing similar responses to arid landscapes that resulted in a pan-desert adaptation. The concepts of Desert Culture and Desert West address broad-scale similarities that mask the variability in responses to different desert environments that existed across time and space. In this paper I compare Archaic period occupations in the Mojave Desert of southern Nevada and the Sonoran Desert of southern Arizona. While they both represent desert adaptations and responses to changing environments, the archaeological record points to differences in subsistence, mobility, and landscape use that were conditioned by the different environmental settings. I review these differences and discuss the impacts that they had on Ceramic period adaptations that succeeded them.

Rouse, Lynne [314] see Ammerman, Steven
 Rouse, Lynne [315] see Ho, Joyce Wing In

Rovanpera, Jen [48] see Herzog, Nicole

Rowan, John [350] see Flicker, Dylan

Rowe, Matthew (University of Arizona), Christoffer Nielsen, Frederick Nielsen, and Charlton Nielsen

[318] *Shifting the Clovis Narrative in Arizona: Updates on the Northern Arizona Paleoindian Project*

In 2011, C. Vance Haynes Jr. reported a total of 109 Clovis points in Arizona with the majority concentrated in the southern portion of the state in the San Pedro River Valley. Since then, the number of documented Clovis points in the state has increased marginally. In 2022 we hypothesized that our understandings of Clovis and other Paleoindian artifact distributions in northern Arizona were underestimated in part because the high concentration of private lands limit survey work motivated by the National Historic Preservation Act 1966 and the National Environmental Policy Act 1969. Additionally, much of the archaeological effort in the region focused on investigating large sites such as the Homolovi pueblos. Here we report significant results from continued efforts to expand our knowledge of Clovis materials in the region through collaboration with Responsible Resource Stewards. Recent engagement with a legacy collection in St Johns, Arizona, revealed an extensive Clovis presence east of the Petrified Forest National Park. Results from this collaboration illustrate the research potential for legacy collections, demonstrate the importance of building partnerships between professional archaeologists and Responsible Resource Stewards, and confirm an important new locus for Paleoindian research in Arizona.

Rowe, Sarah (University of Texas Rio Grande Valley)

[53] *Things Tricia Taught Me: Reflections on Community-Engaged Archaeology and Academia*

Among the many highlights of her career, Patricia McAnany created positive impacts on archaeologists and communities through both her mentorship and her collaborative heritage work. This paper offers a personal reflection of Tricia's impact on my scholarly growth and collaborative practice during the years that I served as Program Director for InHerit and its associated nonprofit, the Alliance for Heritage Conservation. I revisit the projects we undertook in the Maya region generally, and in the Yucatán specifically, and identify the lessons learned from this time, both profound and mundane. I then reflect on the impact of these lessons in my own collaborative work in Ecuador over the last decade, and what I've carried with me as a woman in academia.

Rowe, Sarah [267] see Juengst, Sara

Roxas, Noel [350] see Wang, Yen Chun

Roxlau, Kathy [264] see Prendergast, Eric

Rozum, River [185] see Moriarty, Matthew

Rozzi, Roberto [170] see Russo, Gabriele

Ru, Huiwen, Yue Li (Yale University), Zining Deng (Yale University), Shell Ross (Yale University), and Ellery Frahm (Yale University)

[296] *Perforation Morphology Indicates Drilling Techniques and Stringing Wear of Stone Age Ostrich Eggshell Beads: An Experimental Study*

Stone Age hunter-gatherers from various regions worldwide commonly used ostrich eggshell (OES) beads as decorative items, gifts, and goods for exchange. The drilling methods of bead production and the string-induced wear of used beads provide valuable insights into the technological knowledge and adaptive strategies

of Stone Age hunter-gatherers, contributing to our broader understanding of human behavioral ecology. The experiment used different types of tools and applied various drilling techniques to perforate OES fragments. It further simulated the wear patterns of bead perforations caused by different stringing materials across multiple use scenarios. The perforation morphology (including the diameter of the cup perimeter and the position of restriction; the shape of the cup and the position of restriction) of all specimens is documented by using Keyence microscopy and Micro-CT scanning before and after post-production wear. By analyzing the measurement data collected from the experimental sets, the study helps understand the extent to which perforation morphology indicates drilling techniques and stringing wear in archaeological OES bead assemblages.

Rubenstein, Meghan (Colorado College)

[43] *Connecting Siloed Image Collections through IIIF*

The *Contributions to Mesoamerican Studies* website houses corpus volumes of photographs and drawings of monuments from ancient Mesoamerica, with an emphasis on Maya inscriptions. The aim is to make data available to anyone who works in this area by providing high-resolution images with a Creative Commons Attribution-Non Commercial-Share Alike 4.0 International License. As copublisher of this website, I have been exploring how to further our mission by incorporating the International Image Interoperability Framework, or IIIF. IIIF integration allows images from siloed collections and databases to be brought together for research and presentation purposes, alongside their valuable metadata. In this paper, I provide a brief introduction to IIIF, discuss how it can be integrated into WordPress websites and other online platforms, and demonstrate how users without specialist knowledge can take advantage of this technology in the decipherment process.

Rubinatto Serrano, Juliana, Gabriela Prestes Carneiro, Eduardo Neves (University of São Paulo), John Krigbaum (University of Florida), and Francisco Pugliese (University of Brasília)

[221] *Environmental Shifts and Social Complexity at Monte Castelo (RO-Brazil): Preliminary Isotopic Insights from the Late Holocene*

Monte Castelo is an important shell mound site in the southwest Amazon (RO-Brazil), with evidence of near-continuous habitation and use between 6000 and 700 BP despite major Holocene environmental shifts. Previous research suggests its inhabitants relied on a wide array of plants and animals for subsistence and increasingly diversified their plant cultivation, ceramic production, and landscape modification practices. However, we still lack data to understand the relationship between environmental change and the increasing social complexity of this community, especially during the Late Holocene Bacabal occupation (4300–700 BP). To provide proxies and further investigate changes in human practice, we present preliminary isotopic data (C, O, and Sr) from human and faunal tooth enamel samples. Patterns in carbon and oxygen among the human, capybara (*Hydrochoerus hydrochaeris*), and cervid samples support the argument for a broad-spectrum human diet and indicate a wide hunting range. Strontium ratios for both human and faunal samples fall within the expected range when compared to ratios from water samples of the nearby river systems. When integrated with research already conducted at the site, these new data facilitate our identification of connections between climate fluctuations and changes in human practices for a comprehensive history of the lives of past Amazonian people.

Rubio-Cisneros, Nadia [84] see Jiménez Cano, Nayeli

Ruf, Kim (University of Oxford)

[276] *The State of the (Rock) Art in Costa Rica: Regional Variations and Emerging Approaches*

Costa Rica's precolumbian rock art encompasses a wide range of forms, from painted images and abstract carvings to figurative scenes, with significant variation between regions. While it remains to be fully established, this diversity likely reflects distinct local traditions and contexts rather than an overarching practice. Previous research has often focused on isolated sites or styles, resulting in a fragmented understanding of the country's rock art. This presentation provides an overview of the main rock art types found across Costa Rica, outlining past and present research. Drawing on insights from recent and current fieldwork, it discusses how new approaches are beginning to shed light on specific regional expressions within

their social and environmental settings. Moreover, this paper will outline future research directions aimed at improving documentation and interpretation while acknowledging regional differences. It seeks to raise awareness of the complexity and regional diversity of Costa Rican rock art and their potential to challenge and expand current archaeological narratives in the Isthmo-Colombian Area.

Ruiz, Chris [333] see Kallenbach, Elizabeth

Ruiz Gonzalez, Judith [311] see Gonzalez, Silvia

Ruiz Gordillo, Javier (Instituto Nacional de Antropología e Historia)

[86] *El contexto arqueológico después del Tajín: Urbanismo y arquitectura*

El contexto cultural que surge en la región del Tajín, posterior al colapso de este centro rector, puede ser advertido en el urbanismo y arquitectura de asentamientos prehispánicos posteriores a éste. Para poder contextualizar debemos aproximarnos al Tajín, aun cuando brevemente. Así, vemos que ha de prolongarse durante el postclásico la disposición de la plaza principal, en este caso, la traza de la ciudad del Tajín manifestada en la “Plaza del Arroyo”, acotada por cuatro edificios que sugieren espacios dedicados a la religión, gobierno, ejército y comercio. Durante el postclásico se observan varios sitios en cuyo urbanismo ubican otro elemento abundante en el Tajín: el juego de pelota, remiten ya a espacios alejados y no centrales. Más, no es un parteaguas total, continuarán elementos vinculados a la arquitectura como su liga al agua, o bien, en la elección de espacios que habrán de transformar en su búsqueda de lugares a salvo de inundaciones.

RuizDiaz, Julio (Cornell University)

[249] *Between Ruin and Resilience at the Mission of San Cosme y Damián, Paraguay*

In the seventeenth century, Jesuit missions, known as *reducciones*, were established in Paraguay to consolidate Indigenous Guaraní populations into centralized communities, ostensibly protecting them from the exploitation of Spanish and Portuguese colonial systems. The legacy of these missions, such as San Cosme y Damián, extends beyond their colonial origins, becoming emblematic of Paraguay’s cultural heritage. These sites are not merely historical ruins but remain active participants in a dialogue between past and present. Unique among its peers, San Cosme y Damián has remained in continuous use and holds the status of national patrimony, with its presence on the tentative list for UNESCO World Heritage designation underscoring its ongoing significance. San Cosme challenges conventional archaeological and heritage frameworks that privilege material authenticity over lived practice. Restoration efforts since the late twentieth century have provoked criticism for compromising architectural integrity, yet they also reflect local demands for a usable heritage that resists being frozen in time. The site illustrates broader debates on the politics of commemoration, authenticity, and community participation. By complicating the boundaries between ruin and resilience, archaeology and lived religion, San Cosme invites a more inclusive and dialogical approach to the preservation and interpretation of cultural patrimony in postcolonial contexts.

RuizDiaz, Julio [247] see Cruz-Gil, Rafael

Russell, Bradley [338] see Masson, Marilyn

Russo, Gabriele (Universität Tübingen, Germany), Maya Haïdar-Boustani (Université Saint-Joseph de Beyrouth, Lebanon), Roberto Rozzi (Martin Luther University Halle-Wittenberg, Germany), Yamandú Hilbert (Eberhard Karls University of Tübingen, Germany), and Sireen El Zaatari (Eberhard Karls University of Tübingen, Germany)

[170] *Reconstructing the Lost Archaeological Legacy of Paleolithic Lebanon*

Once a center of early prehistoric research, Lebanon saw decades of flourishing archaeological activity from the late 1800s to the early 1970s. The outbreak of the civil war in 1975, however, abruptly halted all fieldwork, leading to the loss, abandonment, or dispersal of many archaeological collections. Several key sites, such as Naame and Antelias Cave, were destroyed by construction works, and the material excavated in the early twentieth century is often scattered, poorly documented, and lacks stratigraphic information like for the sites of Ras el Kelb and Nahr Ibrahim. This contribution summarizes my PhD research, which seeks to

recover and reassess Lebanon's overlooked Paleolithic record. To address these challenges, we applied a multiproxy approach combining zooarchaeology, taphonomy, dental wear analysis, stable isotopes, site catchment analysis, and direct dating using ESR and uranium-thorium methods. ZooMS was used to distinguish human remains from faunal material, and radiocarbon dating helped reconstruct site chronologies. Despite limited samples, results provide new insights into Pleistocene ecosystems, subsistence strategies, and hominin paleoecology. This research shows how interdisciplinary methods, methodological flexibility, and collaborative networks can help overcome the challenges of working with fragmented collections, ultimately restoring Lebanon's significance within broader discussions of human evolution in the Levant.

Ruth, Alissa [169] see Kroot, Matthew

Rutherford, Cady (UTSA)

[278] *Ground Truthing and Trees: A Maya Household Isn't So Wonky After All*

Lidar is an incredibly beneficial tool for identifying structures and other works on the ground. Since lidar and survey can both only see what is on the surface, sometimes excavations can lead to surprises. Excavations at a hinterland Maya household have uncovered construction sequences, interesting architecture, and ancient tree falls able to confuse both lidar and survey results. This analysis examines construction methods, the size and layout of this household group, variations between the expected findings, and the excavation results.

Rutkoski, Ashley (University of Florida), and Magdalyne Alley (University of Florida)

[266] *Assessing the Accuracy of Rim Diameter Measures Using Locally Made Pottery from the Southeastern United States*

Rim diameter is routinely measured to capture a vessel's morphology. Despite its widespread use, our ability to accurately estimate this metric remains uncertain. Analysts typically abide by a precedent that considers sherds representing 5% of the vessel's original rim as large enough to accurately estimate the vessel's orifice diameter. To test this standard, we had artisans of varying skill levels hand build vessels ($n = 13$) using local low-fired clays from Alabama and Georgia. Vessels were made to mirror styles (e.g., jars, bowls, cooking pots) and firing techniques used by Indigenous communities throughout the southeastern USA. The orifice diameter of each vessel was measured and then fractured to produce rim sherds. Twenty-three sherds were selected to represent a range of sherd attributes: percentage of vessel (3%–24%), rim curvatures (e.g., excurvate, incurvate, etc.), vessel forms (e.g., jars, bowls, and cooking pots), and sizes (5.5–53.0 cm). Analysts with different levels of expertise were asked to estimate the original diameter from these sherds. Statistical evaluation of the measurement error, using pair-wise t-tests, PCA, coefficient of variation, etc., revealed that the 5% threshold is not enough. These findings illuminate the challenges of collecting this metric as well as provide new empirically based guidelines for future analysis.

Rutkoski, Ashley [76] see Torvinen, Andrea

Ruvalcaba Sil, Jose Luis (Instituto de Física, UNAM), Henri Bernard (Universidad Veracruzana), Mayra Manrique (Universidad Autónoma de Campeche, Mexico), Alejandro Mitrani (LANCIC, Instituto de Física, UNAM), and Edgar Casanova (Universidad Nacional Autónoma de México)

[307] *New Findings on the MAX Greenstone Collection: Mineral and Chemical Identification for a Comparative Study*

The Museum of Anthropology of Xalapa (MAX) has one of the most complete archaeological collections of Veracruz, from Preclassic/Formative period Olmec south sites to more recent Huasteca collections in the north. Since 2015, several studies have been carried out on the mineral and chemical compositions of the greenstone collections with the support of the LANCIC of the Institute of Physics, Universidad Nacional Autónoma de México (UNAM). Noninvasive in situ techniques such as Raman, infrared (FTIR), X-ray fluorescence (XRF), and reflectance (FORS) spectroscopies were applied to identify the main minerals and the elemental composition. Results display a great diversity of minerals used by the prehispanic cultures that developed in Veracruz. We compare the analyses on the greenstone collections with measurements on new geological references collected from the states of Chiapas, Puebla, and Oaxaca. The aim of this study is to increase the knowledge on possible sources of raw materials and preferences on the use of greenstone minerals, as well as contribute to understanding exchange networks and manufacturing sites.

Ruvalcaba Sil, Jose Luis [262] see Hernández Lara, Luis
 Ruvalcaba Sil, Jose Luis [310] see Mitrani, Alejandro
 Ruvalcaba Sil, Jose Luis [51] see Servin Rosas, Claudia Margarita

Ryan, Susan (Crow Canyon Archaeological Center), Neha Gupta, Sarah Kansa (Open Context), Desiree Martinez (Cal Poly Pomona), and Christopher Nicholson (Center for Digital Antiquity [tDAR])

[335] *Respectful and Equitable Approaches to Research and Data Management: Applying CARE Principles to Crow Canyon Archaeological Center's Legacy Data*

This presentation outlines the systematic application of Collective Benefit, Authority to Control, Responsibility, and Ethics (CARE) principles to the Crow Canyon Archaeological Center's extensive Research Database that contains over four decades of data amassed from archaeological sites in the central Mesa Verde region and beyond. While Findable, Accessible, Interoperable, and Reusable (FAIR) principles have been integrated into current practices, the application of CARE principles has not been realized due to the origins of these legacy data. By developing a framework for integrating CARE principles through collaboration with Tribal Historic Preservation Offices (THPOs) and partnering with the FAIR+CARE Cultural Heritage Network, we delineate step-by-step methods for applying these principles to legacy datasets, honoring the importance of mutual respect and shared decision-making in each stage of the CARE cycle. By engaging in this collaborative framework, we develop a model for data governance and tribal sovereignty that promotes transparency and accountability and builds a more equitable and respectful data ecosystem that benefits Indigenous community members and researchers alike.

Rychtarska, Marta [89] see Slusarska, Katarzyna

Ryden, Ron [202] see Chenault, Mark

Ryzewski, Krysta (Wayne State University)

[174] *From Record to Refrain: The Archaeology of Sonic Spaces and Music Heritage in Detroit*

How might archaeology be relevant to the study of music and its heritage if the acts of making and listening to music are ephemeral, sensory experiences that produce few physical remnants? This presentation considers the relationship between the archaeological remains of music-making places and sonic spaces in Detroit, exploring how they resonate with past performances, collective memory-making, community harmony, and activism. In Detroit and elsewhere, there exists considerable interest among local residents and the professional historic preservation community in documenting and preserving buildings associated with music-making. The standing buildings of the United Sound Systems recording studio and the Blue Bird Inn jazz club are part of Detroit's archaeological record and are the basis for comparisons between a place of commercial music production and a renowned music performance venue.

Rødland, Henriette (University of Geneva)

[162] *Glass Beads beyond Trade: Possibilities for Local Production in Medieval Zanzibar*

Glass beads of various monochrome colors were a common item of personal adornment and ritual in Swahili settlements from the eleventh century CE onward. These beads are generally assumed to have arrived into East Africa via Indian Ocean trade routes from south Asia, where they were produced and traded for over two millennia. However, a recent discovery from Mkokotoni in northern Zanzibar suggests glass beads were produced or reworked at this East African site: a unique assemblage of 25,000 glass beads was recovered from a possible workshop context, along with unfinished beads and bead waste. The majority of the beads are morphologically different from the common Indo-Pacific bead type found at other Swahili sites, suggesting they may belong to a currently unknown bead series. In this paper I will present recent morphological and LA-ICP-MS analyses results for the Mkokotoni beads, and discuss their implications for local glass bead production and innovation and their integration into East African and Indian Ocean trade networks.

Sabatini, Benjamin [266] see Meanwell, Jennifer

Sabatini, Francesca [97] see Bellomia, Valeria

Sabo, Allison (University of Michigan), William Pestle (University of Michigan-Kelsey Museum of Archaeology), Francisco Gallardo (Universidad Católica de Chile), Richard Daza Riquelme (Secretaría Técnica del Consejo de Monumentos Nacionales, OTR Atacama), and Gloria Cabello (Estudios Aplicados Antropología UC)

[32] *Seeking Silex: Geoarchaeological Approaches to Lithic Source Identification in the Southern Atacama Desert, Chile*

Since the early Holocene, the Pacific coastline of the Atacama Desert, northern Chile, has sustained populations of hunter-gatherer-fishers with its robust and dependable resource base. The vast majority of sources of highly siliceous rocks (those most suitable in character/quality for lithic manufacturing), however, are restricted to geologic formations located inland as far as 40–100 km away in the Intermediate Depression. Acquiring these vital materials required coastal populations to make direct logistical forays through the absolute desert, and/or indirectly provision through trade with other groups. The research presented here combined satellite remote sensing, multispectral imagery analysis, and geologic mapping to identify undocumented sources of raw material in the area between Chañaral and Copiapó based on a sample of positive control sites located farther north. Through the identification of lithic sources in the southernmost extent of the Atacama Desert, the authors hope to gain a greater understanding of the processes of lithic procurement and manufacturing undertaken by the early inhabitants of the region.

Sabo, Allison [32] see Pestle, William

Sabourin, Faith (University of Texas at Austin)

[70] *Experimental Earth Ovens at Turkey Peak*

Turkey Peak is a reservoir project, located in north-central Texas, consisting of seven precontact sites with several rock heating element features, including likely earth ovens and possible stone boiling features. However, the natural iron-rich reddish sandstone of the region resembles the color of heated rock from within fire-cracked rock (FCR) features. The similarities in natural rocks versus FCR can make positive identification of cultural features challenging. This paper discusses a means of identifying FCR from the region of north-central Texas where iron-rich sandstone is present, using experimental archaeology and focused FCR analysis. Describing FCR characteristics such as cracking and color change due to heating will be the main focus of this paper. This research will aid future archaeological studies in north-central Texas in relation to FCR identification in reference to natural rocks during survey, testing, and data recovery.

Sacco, Samuel, Richard Burger (Yale University), Lucy Salazar (Yale University), Kalina Kassadjikova (UC Santa Cruz Human Paleogenomics Lab), and Lars Fehren-Schmitz (UCSC)

[301] *Paleogenomic Insights into Relatedness and Demography at Cusco, Peru, during the Late Horizon*

Cusco, situated in the southeastern highlands of Peru, was founded in the thirteenth century and grew to become the administrative and religious capital of the Inca Empire in the fifteenth century. Despite its significance, few ancient DNA studies have examined the genetic ancestry of individuals from archaeological sites in Cusco or measured patterns of genetic connectivity between Cusco and the broader Andean region. Using an analysis of allele frequency statistics together with patterns of shared identical-by-descent (IBD) genomic segments among over 50 ancient genomes from Cusco and 150 other ancient genomes from across the Andes, we provide temporally constrained measures of genetic relatedness within Cusco and between Cusco and the surrounding regions. We identify strong patterns of IBD segment sharing between various archaeological sites within the city, as well as high levels of connectivity between individuals in Cusco and outlying sites in the central Andean highlands. Using IBD segments, we also provide a reconstruction of the effective population size in the Cusco valley in the 2,000 years leading up to the Late Horizon, which indicates a rapid increase in population size preceding the settlement of Cusco and the later rise of the Inca Empire.

Saénz, Adriana [115] see Torres Porras, Alicia

Sain, Douglas, Zachary Beier (Chronicle Heritage), Emily Ford (Chronicle Heritage), Kevin Porter (Chronicle Heritage), and Alex Mayfield (Chronicle Heritage)

[283] 714 Toulouse Street Archaeological Investigation, New Orleans, Louisiana

Chronicle Heritage conducted archaeological investigations for Historic Resource Management Consultants LLC (HRMC) as part of the *Royal Street Campus Historic Structures Report* for the 714 Toulouse Street site (16OR136) in Orleans Parish, Louisiana. Undertaken on behalf of the Historic New Orleans Collection (HNOC), the project aimed to identify, evaluate, and document cultural resources within the courtyard of the historic property. Excavations included three full and one partial 1 × 4 m units, reaching depths between 25 and 141 cm below surface. The investigation recovered 902 artifacts and identified three architectural features, a brick-and-mortar foundation, a builder's trench, and a cobblestone drain, reflecting construction phases from the eighteenth to the late nineteenth centuries. Two distinct occupation phases were documented: a mid-eighteenth- to early nineteenth-century component characterized by kitchen-related artifacts and the cobblestone drain, and a late nineteenth- to early twentieth-century component associated with structural elements and domestic materials. The discoveries offer insight into the site's construction history and cultural use, contributing to the understanding of urban lifeways and architectural development in historic New Orleans. This work supports the site's significance within the Vieux Carré Historic District.

Saintenoy, Thibault [284] see Murphy, Beau

Saiz, Andrew [49] see Heckman, Robert

Saiz, Andrew [115] see Leckman, Phillip

Sakaguchi, Takashi, and Yoshiyuki Iizuka (Academia Sinica)**[209] Noninvasive Chemical Investigation of Stone Ornaments from the Karinba Site in the Late and Final Jomon of Central Hokkaido**

This research conducted noninvasive chemical analyses of stone ornaments recovered from burials at the Karinba site. A sample of 42 ornaments focusing on comma- and tube-shaped beads from 13 burials were analyzed and identified utilizing pXRF. The results revealed variation in raw materials for stone beads at the site; materials for these beads were chlorites (52.3%), talcs (38.0%), nephrites (2.3%), and other rocks (7.1%) rather than single dominant material of talcs, the myth that was previously reported. The results also revealed that (1) raw materials for beaded necklaces vary by burials, and (2) in terms of raw materials (except for amber), these necklaces could be grouped into two assemblages—either chlorite dominant or talc dominant beads. Further research is necessary for better understanding of variability in raw materials for stone ornaments at the site by additional sampling, particularly focusing on disc beads.

Sakai, Masato (Yamagata University)**[340] Preliminary Analysis of the “Writing and Reading” Practices in the Nasca Geoglyphs**

This presentation reports a preliminary analysis of the “writing and reading” practices associated with the geoglyphs on the Nasca Pampa. The study focuses on multiple trails along which geoglyphs are distributed. AI-assisted pedestrian surveys led to the discovery of new geoglyphs depicting a variety of motifs, including human figures, severed heads, animals, and geometric figures. Using AI and other image-recognition and pattern-analysis methods, we extracted and classified recurrent patterns in the composition and arrangement of these motifs, and objectively examined the thematic content embedded in each trail. The results reveal that specific themes—such as human sacrifice, domesticated animals, and wildlife—were selectively represented along different trails. These findings strongly suggest that the geoglyphs were not arranged randomly but instead conveyed narrative or symbolic messages. This study marks a significant step toward decoding the Nasca geoglyphs as a form of literacy in a non-literate society—an ancient medium for crafting and conveying possible narratives of cultural significance across the landscape.

Sakai, Sachiko (California State University [CSU] Long Beach), Eduardo Sanchez (CSU Long Beach), Steven Wong (CSU Long Beach), and Henry Austin (CSU Long Beach)**[79] Examination of E-shaped Structure, a Late Virgin Branch Puebloan Site at the Mt. Trumbull Area in the Arizona Strip**

The goal of this study is to gain a better understanding of the settlement patterns and adaptive strategies among the Virgin Branch Puebloans, small-scale farmers who lived in the marginal environment at the Mt.

Trumbull area in the Arizona Strip. The first phase of excavation project revealed evidence of multigenerational use of structures. The 71 ASM Basketmaker III pit house site was likely reoccupied at least twice after initial use. The Zip Code site (131BLM), a large site with multiple structures, was occupied on a long-term basis from AD 569 to 1275, with multiple generations of use in different rooms at various times. The second phase of excavation project focused on the later pueblo site (136ASM). This site has a unique E-shaped structure, whereas most of the area's late pueblos have C-shaped structures. One of the hypotheses to explain this unique E shape is that this may have been remodeled from the C-shaped structure. During the summer of 2025, we excavated three sections of this E-shaped structure to examine the timing of room use. Optically stimulated luminescence dating of ceramics from the living floor level, identified by pXRF, was used to examine the site's construction history.

Salame, María (Uppsala University), José Capriles (Pennsylvania State University), Sergio Calla Maldonado (Universidad de Granada), Juan Pablo Calero (JP Calero Studio), and Christophe Delaere (Universite Libre De Bruxelles)

[40] *Insights to the Palaspata Complex, Its Connection with Tiwanaku and Other Cultural Traditions Discussed from Its Surroundings and Material Culture*

The site of Palaspata is a key settlement for discussing the interaction between the cultural traditions of Lake Titicaca, the Central Altiplano, and the Cochabamba valleys in the Bolivian south-central Andes, particularly during the expansion of the Tiwanaku State (600–1000 CE). In this paper, we synthesize the information about the site and its surroundings, including its large, terraced temple located on the southern ridge of the site. In addition, we rely on research from the nearby sectors previously studied under the names of Ocotavi (OC-01) and Cayhuasi to discuss the nature of the larger settlement and the regional significance of Palaspata. For instance, while the 1950s investigations of the Swedish archaeologist Stig Rydén's missed the major ceremonial temple, a reanalysis of the ceramics and other artifacts recovered from that work and subsequent comparison to the materials obtained from OC-1 reveal a diversity of material cultural traditions including high-quality Tiwanaku style ceramics from the Lake Titicaca and Cochabamba regions that emphasizes wide-ranging social interaction among societies inhabiting contrasting environments. Together, the evidence suggests that Palaspata constituted a significant nexus for economic, social, and religious interaction that began before Tiwanaku, consolidated during the Middle Horizon, but also extended beyond its demise.

Salas, Monica (Lafayette College)

[21] *Measuring Labor, Reconstructing Ruins: Anthropometry and Archaeology at El Tajín*

This paper examines the entanglement of archaeological reconstruction and anthropometric study at El Tajín from the 1930s through the 1980s. During this period, the postrevolutionary Mexican state invested in the rebuilding of prehispanic structures, consolidating national identity and expanding tourism. Archival photographs reveal Totonac workers physically reconstructing the pyramid, yet their presence was consistently “underexposed”: rarely identified in captions, depicted in subordinate roles to archaeologists, or used as human scales and ethnic markers. This visual marginalization was compounded when the same workers became subjects of an anthropometric study. Their skulls, noses, and chests were measured, their blood tested, and their bare bodies photographed in frontal and profile poses. Statistical indices and ostensibly neutral descriptions framed them as malnourished and unsanitary, closely echoing previous projects in Mexican biotypology. In this way, archaeological and anthropometric practices converged to produce racialized “data” about living communities alongside reconstructed ruins. Drawing on archaeological records and archival photographs, this paper situates this anthropometric study within the broader history of physical anthropology in twentieth-century Mexico. It highlights how archaeological sites transformed workers into both builders of national heritage and objects of measurement. These entanglements reveal the enduring inequalities embedded in the production of archaeological and anthropometric knowledge.

Salas, Paloma [205] see Mansilla, Luis Felipe

Salazar, Daniel [223] see Tsukamoto, Kenichiro

Salazar, Diego [302] see Andrade, Pedro

Salazar, Diego [284] see Murphy, Beau

Salazar, Lucy [301] see Sacco, Samuel

Salazar Chávez, Victor [94] see Blomster, Jeffrey

Saldana, Melanie (Rincon Consultants Inc.)

[206] *Does Ritual Fauna Exist? A Fresh Approach to Maya Cave Faunal Assemblages*

Since World War II, numerous analyses have been conducted on faunal assemblages from Maya caves, but a consistent view of these assemblages has not yet emerged despite several notable efforts. Are certain species prominent in these assemblages? It seems that a simple question answerable by presence/absence may be overly reliant on iconography and cosmology for their selection. Regarding depositional patterns, Mary Pohl suggested that caves may show a preference for left-sided elements, but this hypothesis has not been consistently supported by evidence. This paper will organize data to define different types of cave faunal assemblages with a focus on distinct depositional patterns and interpretations in an effort to provide insight into instances where fauna have been identified as sacrificial offerings.

Sales, Katherine, and Nika Kello

[201] *Exchange Networks at Picuris Pueblo during the Developmental Period*

The Pueblo II period (900–1150 CE) was a dynamic chapter in the history of the northern Rio Grande, marked by the establishment of the region's first true villages. This poster examines the transition to village life in the ancestral Picuris region, where recent surveys and excavations at the Eagle Pile site have documented the explosive growth of a large settlement with hundreds of occupants during the tenth century. Through a study of the site's ceramics and chipped stone, we explore the Eagle Pile site's regional connections, both with other communities in the Rio Grande Valley and with the expansive Chacoan system in the San Juan Basin to the west.

Salgado, Silvia (Universidad de Costa Rica), and Carrie Dennett (Red Deer Polytechnic)

[168] *A Long and Winding Road: Exploring Ulua Polychrome Ceramic Styles in Greater Nicoya*

The history of Greater Nicoya ceramic economy—an archaeological subregion stretching from northwest Costa Rica to Pacific Nicaragua—demonstrates ties to Lenca pottery producers in west-central Honduras. These ties appear strongest toward the Late Classic period, yet key differences in manufacturing techniques between pottery producing centers in Nicaragua and Costa Rica suggest very different types of relationships at play. For example, some potting groups show clear stylistic connections with Ulua Polychrome, yet with little evidence for direct exchange, while others demonstrate direct evidence for the movement of Ulua Polychromes and indirect stylistic connections seen in specific forms and decorative themes. These connections have been noted for more than three decades; however, recent and ongoing compositional analyses have begun to confirm more complex realities than previously understood. Here we reflect on the importance of scholarly collaboration and analytical support in unpacking the complicated and curious nature of Ulua Polychrome influences and instances in Greater Nicoya.

Salgado, Silvia [307] see Menager, Matthieu

Salinas, Jorge [301] see Ng, Laura

Salinas, Letty [309] see Chu Barrera, Alejandro

Sallum, Marianne (Federal University of São Paulo, Brazil; University of Lisbon, Portugal), Marina Gomes, Wendel Dalitesi, Lucia Aparecida da Rosa, and Francisco Silva Noelli

[107] *Genealogies and Memories in Afro-Indigenous Territories in the Ribeira Valley, Brazil*

This paper seeks to highlight the recognition of contemporary women who are heirs to lineages and collective pasts of potters and forest cultivators. It is the construction of a profound “work of memory,” woven through present-day oral traditions, genealogies, and archaeological and historical data. In other words, it seeks to show people in their residential places and any other elements of materiality that leave

specific marks of their presence in time and space over the course of 500 years. These are the descendants of relations between Indigenous and African peoples who articulated their ancestral practices to create spaces of liberation in the forest.

Salomon Velasco, Lua (University of Tennessee, Knoxville), and Alden Yépez (Pontifical Catholic University of Ecuador)

[194] *Demystifying the Upper Amazon: Stratigraphic and Paleo-proxy Insights into Pompeii and Lost City of the Upano Valley (Eastern Ecuador)*

This work examines the intersection of decolonial archaeology and the reinterpretation of mountainscapes in the Upper Amazon, focusing on the Sangay volcano and Upper Upano Valley in eastern Ecuador. For decades, scholarship reproduced the “precolumbian Pompeii” hypothesis, which cast volcanic activity as a catastrophic event that allegedly depopulated the region between AD 400 and 600. More recently, popular media has echoed similar tropes through the “Lost City” narrative, portraying Amazonian settlements as mysterious civilizations suddenly erased and hidden beneath the forest. Both myths impose external imaginaries that dramatize Indigenous histories, obscure local epistemologies, and reduce communities to passive victims or exotic spectacles. This study dismantles these frameworks by reexamining archaeological and paleoenvironmental data. Stratigraphic and petrographic evidence indicate not a single cataclysm but continuous minor ash falls over millennia. Paleoclimatic proxies from nearby lakes suggest long-term adaptive and resilient human occupation during the first millennium AD. These recurrent volcanic phenomena shaped mobility, subsistence, and symbolic systems that recognized the volcano as a teluric deity and relational agent. The case of Sangay demonstrates how integrating scientific data with Indigenous ontologies generates more nuanced interpretations and challenges Eurocentric environmental determinism. Ultimately, decolonizing archaeology requires collaborative, intercultural approaches to heritage and landscape interpretation.

Saltonstall, Patrick, Amy Steffian (Alutiiq Museum), and Molly Odell (Alutiiq Museum)

[313] *Life along the Karluk Lake and River: 7,800 years of Continuity and Change*

Over the past 25 years, Alutiiq Museum archaeologists have surveyed the banks of most of the substantial salmon streams in Alaska’s Kodiak Archipelago—the homeland of the Alutiiq/Sugpiaq people. These surveys provide baseline information for how Alutiiq ancestors, largely viewed by researchers as coastal dwellers, used interior lake and river systems. For the last six years, museum archaeologists have been conducting targeted excavations to test hypotheses developed from survey data. Studies of sites spanning Alutiiq history in the Karluk Lake and River region have confirmed and amplified many of the prior survey results but have also provided some surprises. Use of Kodiak’s interior extends back to the earliest period of human occupation, even before the establishment of large and reliable salmon runs. It appears that early settlers established a pattern of seasonal harvesting that changed little over time. Interior resources were an essential part of the annual round, although the techniques for harvesting salmon, locations of settlements and camps, and the intensity of harvesting changed with time. These changes appear to reflect the development of larger, more socially complex Alutiiq societies.

Salvador-Baiges, Guillem [163] see Antolin, Ferran

Samuelson, John (Arkansas Archeological Survey), and Adriana Potra (University of Arkansas)

[302] *Provisioning the Dead: A Multi-isotopic Assessment Geographic Origin of Deer Offerings at the Crenshaw Site*

The Crenshaw site in southwest Arkansas is the location of a Caddo skull-and-mandible cemetery containing hundreds of individuals. Areas associated with the practice of skull-and-mandible burials indicate that the skulls and mandibles were processed in specialized structures containing animal remains used in rituals associated with the processing or caretaking of the skulls and mandibles. Deer are heavily represented in the area, including a pile of 2,042 deer antlers. Previous zooarchaeological work suggests deer and other animals were being brought to these locations for the rituals involving the skulls and mandibles. This study utilizes the previously established strontium and lead isotopic backgrounds to investigate the geographic extent of community participation in the burial rituals at the Crenshaw site. The deer were sampled for strontium and lead isotopes and compared to the isotopic signatures of surrounding sites to determine the geographic extent of those contributing and participating in the rituals at the site. This is viewed as a form of provisioning

for the dead rather than for the people living at the site. These results are also compared to deer from feasting refuse deposited on top of burials at the site.

Sanchez, Angel [340] see Masini, Nicola

Sanchez, Eduardo [79] see Sakai, Sachiko

Sanchez, Gabriel (University of Oregon)

[219] *Collaborative Archaeology: Two Case Studies from the California Coast*

Collaborative and community-based archaeology is a growing component of archaeological practice in California. Increasingly, collaborative studies occur across the spectrum of archaeology, including cultural resource management and academically oriented studies. Collaboration with Indigenous communities ranges from legally mandated consultation to community-led research. In this study, I review two case studies of collaborative research with, for, and by Native Californian Tribes in northern and central California. Through these studies, I highlight key commonalities in collaborative research with Native Californian Tribes.

Sanchez, Gabriel [47] see Apodaca, Alec

Sanchez, Luis [311] see Sharpe, Ashley

Sanchez, Walter, and Emilee Witte (Arizona State University)

[55] *Descifrando el espacio doméstico Estuquiña: Capanto y San Antonio*

El espacio constituye el principal escenario de las acciones humanas; por lo tanto, todo lo que ocurre en él revela los patrones de interacción de un determinado grupo social; y, al mismo tiempo es un reflejo de la sociedad que lo construye y de como esta se encuentra organizada. En ese sentido, el análisis comparativo de dos espacios permite examinar no solo su dimensión física, sino también sus implicancias sociales y simbólicas. Este poster tiene por objetivo exponer, de manera comparativa, el emplazamiento, la organización espacial y las dinámicas de interacción de los espacios domésticos correspondientes a dos sitios de la fase Estuquiña: Capanto y San Antonio, ambos ubicados en el valle medio del río Osmore, en Moquegua. Para tal fin se realizaron trabajos de prospección, complementados con el análisis formal de los espacios y el análisis de percepción de ambos sitios. Los sitios fueron seleccionados por su cercanía y emplazamiento en el territorio, condiciones que sugieren la existencia de una relación jerárquica.

Sanchez, Walter [278] see Witte, Emilee

Sanchez Balderas, Adriana (University of Victoria)

[161] *Weaving Knowledge: Graphic Narratives and Storytelling in Collaboration with Hach Winik from Mensabak, Chiapas, Mexico*

In this research project, I explore the kitchen, specifically around the hearth (*fogón*), as a place of continuous conversations, as a multisensorial communication of everyday material matters and encounters among Hach Winik families. My research uses arts-based, multimodal approaches to inquiry and to explore connections to feelings and relationships in the collective consciousness of Hach Winik foodways. Hach Winik voices and stories were collected in a collaborative process during conversations that are presented in a graphic novel. The graphic stories express memories, knowledge, and experiences, including contemporary issues, resulting from the profound relationship that people have with the hearth and around foodways. My aim was to use a co-creation approach to share stories from oral to visual developing best practices emerging from collaborative research with participants. These graphic narratives foster knowledge sharing and synthesize learnings to advance the generation of better practices for researchers and broader audiences. This presentation enriches the storytelling in a nontraditional format, such as the graphic novel, in which scholars and participants engage in research methodologies using visuals, recognizing the role of the researcher in capturing images in the deep memories of the research participants in a graphic form.

Sanchez Balderas, Adriana [70] see Hollingshead, Ian

Sanchez-Borjas, Angel (Pontificia Universidad Católica del Perú)**[340] *Geoglyphs beyond Nasca: A Regional-Scale Study along the Peruvian Coast***

Since the twentieth century, research on geoglyphs in Peru has been primarily concentrated in the Palpa and Nasca regions. However, in the current century, reports of geoglyphs have increased significantly along the Peruvian coast. Despite this growth in documentation, a comprehensive understanding of their meaning and spatial distribution has yet to be achieved. Based on new observations, we have identified a recurring pattern in the location of coastal geoglyphs: they are predominantly found between 500 and 1,000 m asl, situated in ravines and on hillsides where their integration with the surrounding landscape stands out as one of their most distinctive features. To advance their documentation and protection, since 2019 we have been developing a systematic geoglyph recording project using unmanned aerial vehicles (drones) in preselected areas. Our study area extends from the Barranca Valley (Lima) to the Chicama River Valley (Trujillo), encompassing diverse ecological and cultural contexts. Fieldwork has focused on geoglyphs facing direct threats from agricultural, urban, and extractive activities, prioritizing those at risk of disappearing. The methodology includes a preliminary identification phase using satellite imagery obtained through the free application Google Earth, followed by aerial surveys with drones and archaeological prospections with associated material collection.

Sánchez de la Torre, Marta (Universitat de Barcelona), Julien Le Guirriec (Universitat de Barcelona), Eulàlia Rafart (Universitat de Barcelona), Jonàs Alcaina (Universitat de Barcelona), and Alejandro Prieto (Universitat de Barcelona)
[93] *The ERC Project SPEGEOCHERT: New Analytical Methodologies for the Study of Human Mobility in the Pyrenees during the Upper Paleolithic*

The ERC-StG SPEGEOCHERT project explores human mobility across the Pyrenees during the Upper Paleolithic, challenging the long-held perception of mountainous regions as natural barriers. Recent archaeological research has demonstrated that hunter-gatherer groups not only inhabited but actively traversed these landscapes, even during colder phases of the last glacial cycle. The Pyrenees served as dynamic zones of interaction and movement, fostering connections between communities on both sides of the range. Central to the project is the study of chert, a key material for prehistoric tool-making. Due to its complex geochemical and structural variability, chert presents significant analytical challenges. To address these, the project employs portable Laser-Induced Breakdown Spectroscopy (LIBS), enabling rapid, minimally destructive, in situ analysis of lithic artifacts, particularly within museum collections. This technique, combined with portable X-ray fluorescence and VNIR spectroscopy, supports advanced statistical modeling and provenance studies. By identifying the main geological sources of lithic materials, the project aims to reconstruct mobility patterns of *Homo sapiens* during the Late Pleistocene. This integrated approach not only enhances our understanding of prehistoric human behavior but also redefines mountainous landscapes as central elements in the social and economic dynamics of early human populations.

Sanchez Guerrero, Andres Francisco [339] see Maldonado, Blanca

Sanchez Miranda, Guadalupe (ENAH), Matthew Pailles (University of Oklahoma), Ismael Sánchez-Morales (Arizona Museum of Natural History), and Jonathan Mabry (Tucson City of Gastronomy)
[88] *The Myth of San Dieguito/Malpais Industry*

The San Dieguito/Malpais Industry has been defined as a Pre-Clovis Industry or an Early Archaic adaptation to the extreme deserts of the Southwest. The San Dieguito/Malpais industry according to Malcom Rodgers and Julian Hayden lacks stone projectile points, and it is represented by heavy core tools and shell artifacts in desert pavement environments. In the last three years we carried out archaeological research visiting and recording with new technologies Julian Hayden's sites at the Sierra del Pinacate in Sonora, and we reviewed Hayden's artifact collections at the Amerind Museum. The crude heavy tools are identified as artifacts for specific activities, not as markers of a particular chronological industry.

Sanchez Miranda, Guadalupe [88] see Guzman-Armenta, Ramon

Sanchez Miranda, Guadalupe [88] see Krug, Andrew

Sanchez Miranda, Guadalupe [88] see Sánchez-Morales, Ismael

Sánchez-Morales, Ismael (Arizona Museum of Natural History), and Guadalupe Sanchez Miranda (ENAH)

[88] *What's the Point? Archaic Surface Assemblages from Three Multicomponent Sites in the Sonoran Desert*
Over the last 25 years, research into the preceramic human occupations of Sonora, in northwest Mexico, has produced significant new data on the foraging groups that first settled the region at the end of the Pleistocene, as well as the early agricultural settlements that emerged during the Late Holocene. However, relatively little is known about the human settlement of the Sonoran landscapes following Clovis hunter-gatherers and preceding the appearance of early farming communities. This knowledge gap stems not from a lack of archaeological evidence but rather from the paucity of dedicated research projects and published data focused on the Archaic record of the region. In this presentation, we describe Archaic surface assemblages of lithic materials from three multicomponent archaeological sites in the Sonoran Desert. These consist of hundreds of projectile points of Archaic typologies recovered during recent systematic surveys at El Fin del Mundo and El Gramal, as well as materials from multiple localities in El Pinacate originally surveyed in the 1950s and 1960s. We discuss the chronology of human occupations at these sites, the patterns of lithic raw material provisioning, and outline the next steps for advancing this research project.

Sánchez-Morales, Ismael [115] see Burke, Ryan

Sánchez-Morales, Ismael [88] see Sanchez Miranda, Guadalupe

Sanders, Stephanie [349] see Kiahtipes, Christopher

Sandoval, Cecilia [340] see Pérez Reyes, Luis Alejandro

Sandoval, Ismael [54] see Oliver, Samuel

Sandoval Molina, Andrea (University of Bradford), Benjamin Stern (University of Bradford), Catherine Batt (University of Bradford), Alex Surtees (University of Bradford), and Tomas Barrientos (Universidad del Valle de Guatemala)

[173] *Hunting Fool's Gold: Provenance Study of Prehispanic Mayan Iron Ore Reflective Artifacts*
Ancient Mesoamerican iron ore mirrors exhibit highly specialized craftsmanship and were culturally significant objects for Mesoamerican cultures such as the Olmec, Aztec, and Maya. Some of these mirrors were made using a carved slate base with iron ore tiles glued in a mosaic-like arrangement. To date, there have been no geochemical studies that indicate how these materials and goods were traded within the Mayan area. A geological survey was conducted in Guatemala to sample across possible sources of geological specimens from the minerals present in the artifacts: pyrite and goethite. This research aims to be a first attempt in the provenance of iron ore materials used to craft reflective artifacts from the Classic Mayan archaeological sites of La Corona and Cancuén, which were linked in a commercial route of precious goods. Geological samples were characterized by X-ray diffraction and then sulfur isotope analysis combined with other trace elemental techniques such as neutron activation analysis and portable X-ray fluorescence were used to determine the appropriate method for provenance the artifacts. Determining the provenance of these materials and goods will contribute to the understanding of ancient exchange networks and the relationships between Mayan sites and other areas in Mesoamerica and beyond.

Sandweiss, Dan [267] see Prieto, Gabriel

Sangamnerkar, Sayali (Florida State University), and Mark McCoy (Florida State University)

[77] *Magnetometry Survey and Excavations at the Crash Site of a Vought F4U-1D Corsair from World War II, Republic of Palau*

In this poster we present an update on the ongoing efforts of Florida State University, in partnership with the US Defense POW/MIA Accounting Agency (DPAA), to recover the remains of a pilot whose F4U-1D Corsair was shot down over the Republic of Palau in World War II. Building on previous investigations, fieldwork in

2025 was divided into two phases: preliminary magnetometry and subsurface testing to define site boundaries and locate subsurface anomalies, followed by targeted block excavations. This case study demonstrates how historical research, advanced geophysics, and systematic archaeological excavation can aid in the recovery and identification of missing US service members, contributing to national commitments for full accounting of those lost in conflict.

Sanger, Matthew [46] see Cajigas, Rachel

Santana Sagredo, Francisca [83] see Minniti-Nogueras, Sofía

Santana Sagredo, Francisca [177] see Wande, Claudio

Santisteban, Sintia [163] see Bardolph-Carsen, Dana

Santoro, Calogero [263] see Latorre, Claudio

Santos De Oliveira, Gabriel (University of Virginia)

[294] *Building Movement: An Introduction to the Monumental and Sacred Geoglyphic Networks and the Construction of a Deep Amazonian History in Pando, Bolivia*

This paper examines the monumental and sacred networks of geoglyphs in Pando, northern Bolivia, to explore the construction of a deep Amazonian history. Recent archaeological research in the southwestern Amazon has shown that geoglyphs were not isolated monuments, but part of wider landscapes of movement, ritual, and memory that connected communities across river basins and ecological zones. Focusing on Pando, a region often overlooked in narratives of Amazonian ancient history, this preliminary study highlights how local societies created enduring sacred landscapes through collective building, circulation, and performance. These practices demonstrate Amazonian agency in shaping long-term histories and challenge persistent views of the region as marginal or ahistorical. At the same time, Pando's location at a broader frontier suggests moments of interaction with highland neighboring worlds, where local traditions and external influences could intersect. By tracing these dynamics in dialogue with the experiences and perspectives of Indigenous communities living in Pando today, the research points to a history not of isolation but of entanglement and creativity. Ultimately, the case of Pando underscores the significance of Amazonian archaeology for understanding the making of complex landscapes, historical memory, and deep histories in lowland South America.

Saper, Shelby (University of Nevada, Reno), and Alexandria Firenzi (UNR)

[72] *Archaeological Site Distribution on the Isthmus of Santa Cruz Island, California: Preliminary Survey Results, 2021–2025*

The narrow Isthmus region of Santa Cruz Island, California, connects the island's eastern end, where the densest outcrops of high-quality chert are located, with the rest of the island. Still, despite the importance of the Isthmus for understanding Indigenous resource transport, prior to 2021, only small regions of this area had been surveyed. This is in part because of its challenging topography and dense vegetation. Since 2021, a team from the University of Nevada, Reno, has conducted intensive pedestrian surveys of the region in collaboration with Channel Islands National Park and representatives of the Santa Ynez Band of Chumash Indians. The results of this survey work indicate that the Isthmus was not only a stopover point between the eastern and western ends of the island but an important target for long-term habitation. The presence of a diversity of site types, including short-term camps, lithic tool production areas, and upland village sites with marine mammal components, offers deeper insights into how northern Channel Islands populations flourished in a dynamic and challenging landscape. The results of our survey work have important implications for understanding resource use and transportation in island environments.

Sarabia, Nicole (California State Polytechnic University-Pomona)

[248] *Identity Preservation during the Spanish Inquisition: Understanding the Adaptation of Artifacts to Conceal Ritual Items and Practices*

Jewish diaspora studies and placemaking through material culture is an important aspect of identity preservation, especially during times of persecution. During the Spanish Inquisition, Jews and Muslims were

persecuted for their beliefs and ritual practices. While some were able to flee to other countries, others were not so fortunate. Sephardic Jews fled to Mexico, which allowed them to practice their rituals and religious ceremonies in hiding, creating the term “Crypto Jews.” This project will discuss in detail the implementation of court records, artifacts typology analysis, and literature reviews to identify how material culture can contribute to placemaking and preservation of an identity through “artifact adaptation” and concealment.

Saracay, Karla

[50] *Creating the American West: Rancho Las Virgenes and the Transformation into a Motion Picture Landscape*
As a historic film ranch, Paramount Ranch is a material reflection of popular imagination surrounding the American West. Notably, the boundaries of the property were situated on a Mexican land grant previously known as Rancho Las Virgenes. This makes Paramount Ranch a palimpsest of the real and the imaginary. It is a place where social memory is created through Hollywood while sitting directly on California’s complex past. This area in the Santa Monica Mountains allows the opportunity to discuss the rancho period as an influential time of transformation between the Mexican and American occupations of the state. Through archaeological survey and archival research this project seeks to address the following questions to understand this context: How did land use during the rancho period at Rancho Las Virgenes alter the physical and cultural landscape of the Santa Monica Mountains? How did historic change in land use into the American period contribute to the transformation of the area into a movie ranch?

Sarantuya, Dalantai [76] see Olzbayar, Gankhuyag

Sarathi, Akshay (American University of Sharjah)

[162] *Beads in Translation: Local Categories, Archaeological Typologies, and the Work of Classification in Africa*
Beads are one of the most intensely categorized artifacts in African archaeology. Scholars divide them into typologies based on material, form, or geochemical signature, often in the service of dating assemblages or tracing long-distance exchange. Yet these classificatory schemes rarely align with the categories through which beads have been understood and valued locally, either historically or in contemporary ethnographic contexts. This paper explores the consequences of that gap, asking what is revealed (and obscured) when archaeologists prioritize certain bead attributes over others. Drawing on archaeological and ethnographic data on bead use across Africa, I examine how local frameworks of classification resist neat alignment with archaeological typologies. By juxtaposing archaeological and local categories, I argue that bead studies must grapple with the epistemological consequences of classification itself. Beads are not simply passive markers of exchange; they are objects that accrue layered meanings depending on how they are sorted, valued, and deployed. Recasting beads through both emic and etic categories illuminates Africa not only as a node in global trade but as a landscape of meaning-making in which ornamentation, value, and identity are constantly redefined.

Sarjeant, Carmen (Archaeological Investigations Northwest), Marly Howell, Alison Carter (University of Oregon), and Miriam Stark (University of Hawai’i)

[217] *Not Hot Enough for Stoneware? High-Fired Earthenware Production in Provincial Angkorian Cambodia*
After the transition from the pre-Angkorian to Angkorian period circa AD 1000, high-fired earthenware and other sand-tempered earthenware replaced an earlier prevalence of low-fired earthenware with coarse organic temper at Prasat Basaet in Battambang province, northwest Cambodia. The technological attributes of these high-fired earthenware are examined, comparing the composition of the fabrics, ceramic vessel morphology, and decoration with low-fired earthenware and contemporaneous stoneware in the assemblage. This study considers the changes in earthenware production and consumption in provincial areas as they are incorporated into the wider influence of the Angkor Empire.

Sarjeant, Carmen [217] see Howell, Marly

Sartor, Hayley, AJ White (Indiana University Indianapolis), and Lora Stevens-Landon (CSU-Long Beach)

[54] *Disentangling Artificial and Natural Landscape Features of the Ancient Harbor at Lechaion, Greece.*

While it is traditionally accepted that Greek and Roman planners modified an existing watercourse to form the harbor of Lechaion, the degree to which other landforms result from human activities is unclear. This study posits that much of the current site bears little resemblance to the pre-harbor landscape. We explore the possibility that the site's deltaic appearance is partially a result of sediment accumulation from longshore drift along the site's multiple moles and that some harbor embayments are artificial or at least heavily modified features. Despite a history of sea-level change, earthquakes, and facies changes at the site that complicate this analysis, a close examination of the site's sedimentological record suggests that the current landscape is more impacted than previously understood.

Sasso, Stefania [221] see Suni, Raivo

Satterwhite, R. David (Crow Canyon Archaeological Center), and Jeremy Grunvig (Crow Canyon Archaeological Center; Eastern New Mexico University)**[344] *Can We Infer the Availability of Prehistoric Water? A Case Study of the Water Needs at the Haynie Site (5MT1905), Southwest Colorado***

The Northern Chaco Outliers Project consists of four tightly clustered great houses within the central Mesa Verde Region of southwest Colorado. For this case study, we focus on the Haynie site (5MT1905). At Haynie, the primary occupations consist of a Pueblo I (CE 700–950) period village component and two Pueblo II (CE 900–1150) Chacoan outlier great houses. This study takes a landscape approach to evaluate the watershed surrounding the Haynie site, employing a combination of GIS-based hydrological analysis and paleoenvironmental studies to estimate potential surface water availability during the Pueblo II period great house occupation. Understanding human-environment interactions during the great house period is essential archaeologically. It includes how these interactions structured the feasibility of both farming and large-scale construction of the great houses and the surrounding community. Mortar and adobe production for great house construction requires immense quantities of water, and in a season when water is at its scarcest. Additionally, the quantity of water needed for construction is outside of that required for farming and domestic consumption. Therefore, understanding the local hydrology and its past potential is critical to assessing how surface water availability may have influenced the development of these community centers.

Saucedo, Alfredo (SUNY-Albany), Miguel García Mollinedo, and Carl Wendt (CSU-Fullerton)**[262] *Site Relationships in the Central Olmec region: A Least-Cost Path and Viewshed Analysis***

During the Early Preclassic (1400–1000 BC), Laguna de los Cerros has been considered by most archaeologists a secondary center to San Lorenzo. This argument centers on the role of Llano del Júcaro, a small nearby monument quarry, as playing a fundamental role in San Lorenzo's basalt extraction and carving processes. In this presentation, we analyze the relationship between Laguna de los Cerros and San Lorenzo through the possible transportation networks between these two, and other regional sites with monumental sculpture. The 5 m resolution lidar INEGI Digital Elevation Models provide data for generating a more precise and comprehensive surface representation. Surface topography is used to generate least-cost path and viewshed models. The evaluation of time/distance cost of transportation suggests the presence of Early Preclassic trade and transportation networks that lead us to believe that alternative explanations should be considered to explain the relationship between San Lorenzo and Laguna de los Cerros. More broadly, our results suggest transportation trends and their political and economic implications within the early social dynamics in the Olmec region, and specifically, a newer approach to the relationship between Laguna de los Cerros and San Lorenzo.

Saucedo, Alfredo [262] see García Mollinedo, Miguel

Saucedo, Alfredo [312] see MacLellan, Jessica

Saucedo, Alfredo [312] see Wendt, Carl

Sauer, Peter [83] see Korzow, Kristine

Saumur, Jennifer, Marion Forest (Sorbonne University), and Andrew Somerville (Iowa State University)

[278] *Living in Teotihuacan after the Classic Period: Coyotlatelco Evidence of Reoccupation of a Classical Compound in Hacienda Metepec*

Between 2022 and 2024, as part of the Hacienda Metepec Project, archaeological excavations were carried out in the eastern sector of the city of Teotihuacan, referred to as 9\NIE7 by Rattray (1979) and more recently as Hacienda Metepec. In this poster, we present the results of the excavation of Work Unit 2 (UT2), dedicated to the Coyotlatelco occupation (650–850 CE). The excavation of UT2, located at the corner of a Classic period structure, revealed nearly 40 m² of Coyotlatelco occupation. This provided insights into settlement patterns, consumption practices, and production activities of the populations that inhabited this part of the site after the fall of Teotihuacan: characteristic floor levels, ceramics, figurines, obsidian working, plant residues, and more. These occupation features help us better define the population present in the city of Teotihuacan following its collapse (ca. 550–600 CE).

Savateri, Sami (University of Central Florida), and Sarah Barber (University of Central Florida)

[94] *Preliminary Results from Proyecto Arqueológico Laguna de Manialtepec 2025: Mapping Public Spaces at Linda Vista*

During the summer of 2025, the Proyecto Arqueológico Laguna de Manialtepec (PALM) collected geospatial data on ceremonial architecture at five archaeological sites around the Manialtepec Lagoon on Oaxaca's Pacific coast, a region in which very little archaeological research has been conducted and economic development is changing the landscape rapidly. With the goal of creating planimetric maps for civic-ceremonial complexes for the sake of preservation and spatial analysis, architectural mounds, ballcourts, and other notable features were mapped via a series of high-accuracy GPS points and later connected in a Geographic Information System (GIS). This paper presents the preliminary results of this mapping project for the site of Linda Vista, a large Early Postclassic hilltop site on the western side of the Manialtepec Lagoon containing at least three ballcourts and a series of elite residential complexes. The data gathered this summer will grant us a greater understanding of the sites around the Manialtepec Basin and will preserve the spatial layout of a cultural landscape that has already begun to be changed by modern construction.

Sawchuk, Elizabeth [281] see Fennessey, Brenna

Saxon, Jasmine (Community Connections LLC), and Jessica Ericson (Community Connections LLC)

[169] *Building Partnerships through Nontraditional Community-Centered Archaeology*

At Community Connections LLC we approach archaeology through the lens of community-engaged scholarship (CES), centering collaboration and nontraditional cultural resource practices that reflect community priorities. This presentation examines projects at Mestas Ranch and Daniels Park in Colorado to help unravel the complex dynamics between archaeology, preservation, and community engagement, while advocating for inclusive heritage resource management practices. By investigating the success and challenges of these community heritage projects, we highlight how CES can foster respectful, useful, and productive partnerships. Our approach prioritizes a future of unity, shared authority, and the preservation of our collective heritage through co-created knowledge and practice.

Saxon, Jasmine [169] see Ericson, Jessica

Sayre, Matthew

[294] *Architecture and the Construction of Space outside the Ceremonial Center of Chavín de Huántar*

This paper presents results from a project investigating the emergence of institutionalized social inequality at Chavín de Huántar, a major Formative period site in the central Andes of Peru (ca. 1500–200 BC). While the monumental core of Chavín has long been recognized as a ceremonial and political center, the research highlights the domestic sector of La Banda, located across the Mosna River from the temple. Excavations foreground the built environment of everyday life, where the organization, construction, and spatial arrangements of houses provide key evidence for understanding how social differentiation developed beyond the monumental precinct. Architectural variability, examined alongside ceramics, botanical and faunal remains, and craft production, illuminates how households created and maintained social distinctions through both

their living spaces and participation in broader networks of ritual production. Preliminary findings indicate that La Banda residents were actively engaged in crafting symbolic paraphernalia for use in the ceremonial core while simultaneously shaping distinctive domestic built environments, offering a unique perspective on bottom-up processes in the formation of early complex societies.

Scaffidi, Beth (University of California, Merced), and Emily Milton (Michigan State University)

[221] *Sulfur Isotopes for Paleomobility and Paleodiet in the Andes: Insights from Multiple Tissues from a Coastal to Highland Transect in Southern Peru*

While sulfur (S) isotope analysis has long demonstrated marine contributions to diet, only recently have researchers begun to investigate its potential for tracking paleomobility. Samples for S isotope analysis are more easily prepared and affordably analyzed than Sr isotopes—the gold standard for mobility tracing—and temporal breadth and parsability of serial samples provide many more time steps of data in the individual life course to examine. Especially in coastal site localities, researchers are making great strides in establishing S baselines, understanding how climate and/or agricultural amendments food web S, and improving inter-laboratory replicability. Nonetheless, very few S isotope analyses of archaeological or baseline materials exist in South America. This study examines how S isotopes vary throughout the various ecologically constrained gradients of Andean vertical archipelagos, by testing human, faunal, and plant samples along a coastal-yunga-highland transect in southern Peru. Corresponding stable and radiogenic isotope data from the same samples clarify whether S variability is attributable to mobility, trophic level shift, or diet change.

Scaffidi, Beth [213] see Berquist, Stephen

Scaffidi, Beth [213] see Guerrero, Francisco

Scaffidi, Beth [337] see Jankowski, Maegan

Scaramelli, Franz [276] see Scaramelli, Kay

Scaramelli, Kay (Universidad Central de Venezuela), Franz Scaramelli (Nevada Department of Transportation), and Carlos Lasso (Instituto de Investigación de Recursos Biológicos Alexander von Humboldt, Colombia)

[276] *Perspectives on Faunal Representations in the Rock Paintings of the Parguaza Valley, Venezuela*

Pictographs in large rockshelters in the Lower Parguaza River, Venezuela, are unique in their portrayal of diverse animal species and anthropomorphic figures in a palimpsest of styles evolving over several millennia. Through an interdisciplinary approach, we analyze the figures from both biological (taxonomic) and cultural perspectives. The cave paintings offer a window to the perception and representation of fauna and how these have changed over time. Through the documentation of motifs from five rock art sites, we show both temporal and geographic variation in the species of fauna represented. We also document variation in the style of the paintings, from detailed depictions to highly abstracted forms, and from static to dynamic portrayals. At several sites, scenes involving fauna and humans offer insight into human and nonhuman interactions. Drawing on ethnographic and ethnohistorical sources, we examine the contexts associated with the rock art and the symbolic value of faunal representations in the worldviews of the ancient inhabitants of the region. Although predation is portrayed in some paintings, the images may depict propitiatory practices and references to creation and reproduction common in local indigenous cosmologies.

Scarborough, Isabel [149] see Donahue, John

Scarborough, Vernon [35] see Luzzadder-Beach, Sheryl

Scarborough, Sam (College of Wooster)

[202] *Religious Exchange at the Advent of Chavín de Huántar*

My research examines the development of Chavín religious iconography during the rise of Chavín de Huántar as a prominent ceremonial site in the Initial period and Early Horizon, circa 1100–800 BCE. Scholars have long recognized the important role of Amazonian flora and fauna in the iconography and art of Chavín sites, despite the primary temple at Chavín de Huántar being located in the highlands, far from Amazonia. In this

poster I aim to investigate the origins of these symbols in more depth through discussions of iconography present at sites in the areas between Chavín de Huantar and the upper Amazon. Routes between the two areas are considered, with discussion of how sites along these routes both influenced and were influenced by cosmological principles from Chavín and Amazonia. I examine iconography present on ceramics, stelae, and other artifacts to investigate relationships between cultures in the region. Through this analysis of iconography, I aim to clarify the movements of people and the nature of exchange of cultural traits at this dynamic early period of Andean history.

Schaafsma, Hoski (Desert Archaeology Inc.), Justin Mortensen (Desert Archaeology Inc.), and Teresa Rodrigues (Gila River Indian Community)

[275] *Hilltop Enclosures: Manifestations of Dialogues between Peoples and Their Landscapes*

Select hilltops in central Arizona became cultural convergence points in the three centuries between AD 800 and 1100. Relationships between people and their landscapes are as complex as those between cultures. The human-landscape interaction is a dialogue within which landscapes shape people, and people shape the landscape through cultural ideation, the same with culture to culture interactions. In central Arizona, a region of complex cultural and geographic topography, this multilateral dialogue produced a new set of archaeological features. For 300 years the Hohokam people of the flat, desert river valleys moved into the rugged upland and lived among peoples of the Sinagua, Cohonina, Prescott, and Mogollon cultures. From this cultural/landscape dialogue emerged a new ceremonial system, manifested as large ceremonial hilltop enclosures, small religious retreats, and new iconography imposed upon the hills. The resultant modified landscape reflects the social processes that created the new cultural and literal landscapes to be navigated by members of the interacting cultures. We suggest an interpretation of the processes that produced these large constructs and the cultural reverberations that continued long after AD 1100 in both northern and southern Arizona cultures.

Schachner, Gregson (UCLA), Kirk Anderson (Museum of Northern Arizona), Jonathan Harges (Petrified Forest National Park), Joel Nicholas (Hopi Cultural Preservation Office), and Octavius Seowtewa (Zuni Cultural Resource Advisor Team)

[71] *Collaborative Research Planning for the Care of a Challenging Ancestral Landscape in Petrified Forest National Park*

Wallace Tank Pueblo became one of the largest Ancestral Pueblo villages managed by the National Park Service after the purchase of a ranch adjacent to Petrified Forest National Park in 2016. The 600-room, 1250–1375 CE village is located in a highly favorable location for water availability and was impacted by ranching activities, pothunting, and catastrophic flooding for over a century, resulting in a unique management challenge. To address this challenge, NPS initiated a cooperative agreement with UCLA to assemble a team of archaeologists, geomorphologists, ethnographers, and Hopi and Zuni elders and cultural preservation specialists to study the landscape and propose a management plan for this important site. This poster reports the results of five years of work involving over 20 researchers from multiple entities that has identified management goals centered around co-management with descendant groups and the rehabilitation of a landscape with substantial cultural and ecological value today.

Schachner, Gregson [277] see Bernardini, Wesley

Schaefer, Jonathan

[182] *Bajada Phase Occupations in the Middle Little Colorado River Valley, Navajo County, Arizona*

In the spring of 2024 while surveying for a new transmission line in Central Navajo County in the Middle Little Colorado River Valley, Tetra Tech archaeologists identified a cluster of Early Archaic Bajada phase activity areas and habitation sites. The Early Archaic period and the Bajada phase remains poorly understood within Arizona and the American Southwest. These new sites could potentially shed light on this enigmatic time period in a portion of the state which has previously received little attention due to historic land ownership patterns.

Scharf, Elizabeth, and Mary Soaper (University of North Dakota)

[49] *Sod Block Construction? Evaluating a Core from the Cater Aplin Site in Harrisonburg, Louisiana*

The Cater Aplin site (16CT467) is a small mound site located on the west bank of the Ouachita River in Harrisonburg, Louisiana. Although little work has been done on this site, the earthwork likely dates to 1200–1400 BP. Evidence of potential sod block construction is indicated by alternating light and dark layers visible in a core from the toe of the mound. This poster evaluates existing evidence to determine if this patterning is due to the use of sod blocks, erosion, or other processes. Data are presented to evaluate several competing explanatory hypotheses for the stratigraphy of this core.

Schellinger, Sarah [323] see Minor, Elizabeth

Schenk, Kristine [184] see Conger, Megan

Scher, Naomi (Far Western), Kaitlin Brown (California State University Northridge), and Adrian Whitaker (Far Western Anthropological Research Group)

[219] *California Archaeology at a Crossroads: The California Archaeology Collaborative and Efforts to Shape the Future of the Discipline*

California archaeology is experiencing rapid changes in both academic and compliance settings. Recent legal changes have impacted traditional training opportunities in undergraduate field schools and graduate research, which in turn is affecting the preparation of students entering the cultural resource management (CRM) workforce. Amid these ongoing developments, the California Archaeology Collaborative (CAC) emerged from the collective recognition of a need for unified action among tribal representatives, educators, and agency officials and other CRM professionals. Motivated by California's unique legal and cultural landscapes and inspired by national dialogues like Airlie House 2.0, the CAC was established to foster communication across sectors and identify and address core challenges in CRM and archaeological education. This paper explores the foundational motivations behind the CAC's creation, CAC implementation and progress, and the importance of innovative strategies to navigate the evolving landscape of contemporary archaeology in California and beyond.

Scherer, Andrew (Brown University), Sarah Newman (University of Chicago), Shanti Morell-Hart (Brown University), and Harper Dine (University of Exeter)

[161] *Eating in the Maya West: Dietary Stable Isotope Analysis from the Maya Kingdoms of Piedras Negras, Yaxchilan, and Sak Tz'i'*

Nearly 20 years ago, Scherer and colleagues considered social and temporal differences in diet in the Classic Maya kingdom of Piedras Negras based on the analysis of carbon and nitrogen stable isotope signatures from 47 individuals interred at the polity capital. Here, we provide an expanded view that includes evidence for dietary patterns observed in 43 interred individuals from other communities in the kingdom of Piedras Negras, smaller communities in the neighboring kingdom of Yaxchilan, and the polity capital of Sak Tz'i' (Lacanja Tzeltal). These data contribute a breadth of dietary information pertaining to individuals from communities that represent a range of population sizes, geopolitical roles, and environmental locations. We situate these results relative to other isotopic studies from nearby polities as well as the evidence for western precolonial Maya diets that is emerging from zooarchaeological and paleoethnobotanical studies. Combined, these results highlight the diversity of Maya diets both within and between Classic period Maya kingdoms and illustrate the enormous complexity in attempting to generalize dietary trends in the Maya area.

Scherer, Andrew [355] see Bazarsky, Alexandra

Schlesinger, Jonathan [83] see Korzow, Kristine

Schmader, Matthew (University of New Mexico)

[38] *Hybrid Forms, Composite Creatures, and the Transit between Worlds in Rio Grande–Style Puebloan Rock Images*

Ancestral Puebloan rock imagery in the southwestern United States often combines elements from different animal, human, plant, and natural sources. Blended elements may depict or refer to otherworldly states of existence. Beings made from combined forms can shift from shapes familiar in the present world and

transport the viewer's frame of reference to the spirit world. Generalized Puebloan belief in layered worlds below and above the present world is an important organizing concept. Other worlds, especially the world below, refer to mythical times before animals and humans were fully formed, or existed as primordial beings. Those realms may also refer to the land of the dead or the underworld. Certain animals may have been chosen as spirit guides, having specific powers, as healers or as guardians of cardinal directions. Placement of images relative to natural features may impart additional power. Ambiguity and multiple meanings enhance those powers while referring to concepts of emergence and transformation. For example, transformation may occur when dancers wear kachina masks and then assume the attributes or identities of those kachinas. Examples presented are from Petroglyph National Monument, in the central Rio Grande valley of New Mexico, dating to the late pre-European contact period (AD 1300–1540).

Schmidt, Kari [111] see Peltzer, Summer

Schmidt, Mary E.

[74] *The Art of Possible: Adaptive Historic Preservation in a Modernizing Army*

As one of the United States' oldest institutions, the Army's 250-year history has resulted in a monumental historic infrastructure. Comprising over 13 million acres, 120,000 historic buildings, and over 84,000 archaeological sites, this portfolio is the largest of its kind within the Department of Defense and among all federal agencies. Facing the demands of rapid modernization through the Continuous Transformation initiative, the Army employs an adaptive and responsible framework to navigate the complex challenge of balancing critical mission requirements with the preservation of its invaluable historic resources.

Schmidt, Mary Lucia (HDR), and Chelsea Aurelea Reedy

[200] *Turkey Peak Reservoir Project: Phase II Faunal Analysis and Cultural Insights from the Middle to Late Archaic to Late Prehistoric Period in the Southern Plains, Palo Pinto County, Texas*

HDR conducted archaeological investigations for the Turkey Peak Reservoir in Palo Pinto County, Texas, as part of compliance efforts for the Palo Pinto County Municipal Water District No. 1, intermittently between 2016 and 2024. HDR excavated six sites (41PP377, 41PP384, 41PP385, 41PP386, 41PP387, and 41PP388) that may elucidate past foodways of north-central Texas peoples, an area that has historically received little attention from formal archaeological inquiry. Two of the sites (41PP387 and 41PP388) yielded a majority (77%) of the faunal assemblage produced from the excavations, including many of the specimens with clear culturally modified bones. Overall, faunal analysis identified evidence of butchery practices on bones from four of the six sites. This poster focuses on the methods and findings for 41PP387 and 41PP388, specifically. Remains from 41PP387 suggest the presence of a discard midden primarily comprised of bison/bovid, cervid, and avian (possible turkey) specimens. Large in situ bison bone elements with cutmark indicators were found alongside an exhausted lithic knife. Across Palo Pinto Creek, 41PP388 contains evidence of a single butchered bison carcass. The recovered faunal assemblage suggests that these sites possess high research potential for understanding subsistence strategies and landscape use within the Brazos River watershed.

Schmidt, Mary Lucia [200] see Reedy, Chelsea

Schmitt, Dave (1959–2025) [157] see Edwards, Nicolette

Schneider, Matthew (University of Pittsburgh)

[342] *Turtles All the Way Down: Sea Turtle Zooarchaeology in South Florida*

Sea turtle is a ubiquitous feature of south Florida archaeological assemblages, and historic accounts attest to their significance as a food source to both Indigenous communities and European colonists in the region. Despite this, however, dedicated zooarchaeological studies of these remains are sparse, and our understanding of sea turtle consumption in the past remains limited. Here, I assess emergent regional trends in the sea turtle zooarchaeology of south Florida in order to better understand both their significance as a food source to Ancestral Indigenous communities and the potential impact of turtle fishing practices on local ecosystems.

Schnell, Joshua (University of Pittsburgh), Whittaker Schroder (University of Florida), Fernanda Macedo Córdova, Guillermo Lara Bolaños, and Olivia Ellis (University of Pittsburgh)

[161] *Mortuary Tradition in the Lakamtuun Kingdom: The View from Benemérito de las Américas*

The site of Benemérito de las Américas Primera Sección sits at the confluence of the Lower Lacantún and Upper Usumacinta Rivers in eastern Chiapas. Although no clear epigraphic evidence from the site has yet emerged, the scale and location of the site suggest a link to the Lakamtuun dynasty known previously only through the epigraphic record. The site exhibits many cultural affinities with sites along the Pasión River corridor in Guatemala such as Ceibal and Altar de Sacrificios, and recent evidence suggests Benemérito was politically allied with sites such as Tikal, Motul de San José, Yaxchilán, and Altar de Sacrificios during the Early to Late Classic periods. This paper reports on the first eight individuals excavated from Benemérito over two seasons of fieldwork in 2022 and 2025, focusing on their mortuary contexts. These burials span the Late Classic and Terminal Classic, with recent evidence of Postclassic interment as well. The emerging view of the mortuary program at Benemérito is compared to those known from the Pasión sites with close cultural ties. Preliminary osteological data from these individuals will be reported as well, though analyses of those most recently excavated are still ongoing. ***This presentation includes images of human remains.

Schollmeyer, Karen (Archaeology Southwest), Jeffrey Ferguson (University of Missouri), Virginie Renson (University of Missouri Research Reactor), Gabriela Ionita (University of Missouri Research Reactor), and Joan Coltrain (University of Utah)

[211] *Turkey Provisioning, Deer Hunting Locales, and Isotopic Zooarchaeology in the Mesa Verde Region of the US Southwest*

In the Mesa Verde region, increasing population aggregation and shifting settlement locations from AD 750 through 1225 also increased pressure on local wild and cultivated food resources, including animals. As the availability of some taxa diminished around settlements, farmers increased their use of previously rarely consumed species like turkeys, and may have relied on increasingly distant source areas for large game such as deer. Archaeological chemistry—specifically strontium, carbon, and oxygen isotope analysis—allows us to critically examine the extent to which provisioning and transport of animals took place and whether game source areas changed over time. We examine maize provisioning of managed turkey flocks, including assessment of whether changes in provisioning were associated with periods of resource stress and social change. We also examine transport of deer in order to assess changes in the distance of hunting trips undertaken to acquire large game during these time periods. These lines of evidence allow us to assess existing arguments about localized food resource depletion and its role in social changes that culminated in widespread village depopulation by AD 1280.

Schorr, Gavin [295] see Lee, Benno

Schorsch, Sarah (University of Colorado Boulder)**[278] *Material Culture and Status in Colonial New Mexico: Ceramic Evidence from Estaca***

This poster examines ceramics from recent excavations by the University of Colorado Boulder and Northern Arizona University at Estaca, a colonial period Indio-Hispano village in northern New Mexico. Excavations have recovered a diverse ceramic assemblage from several midden and household contexts, reflecting the material culture of a settlement shaped by Indigenous and Spanish colonial traditions. Current research focuses on the classification and typological analysis of these ceramics to investigate household and community practices within Estaca, while also situating the site within greater regional contexts of colonial New Mexico. By analyzing variation in ceramic production, form, and use, this study examines how inhabitants of Estaca maintained daily life, participated in exchange networks, and engaged in cultural continuity and adaption under colonial conditions. The results contribute to the understanding of rural communities in colonial New Mexico and provide a comparative perspective for interpreting similar frontier contexts across the Southwest.

Schortman, Edward (Kenyon College), and Patricia Urban (Kenyon College)**[308] *The Social Contexts and Implications of Pottery Production in Precolumbian Northwest Honduras***

Very few pottery workshops are known from precolumbian northern Central America, the area stretching from Nicaragua through Honduras, El Salvador, and into Guatemala. Consequently, we find it hard to infer how the items whose fragments comprise our most abundant artifact class were made and to describe the

sociopolitical and economic contexts in which ceramic manufacture was pursued. Research we directed in the adjoining Naco, middle Chamelecon, and lower Cacaupala valleys in northwest Honduras unearthed multiple pottery workshops dating to the seventh through tenth centuries CE. This paper explores the different ways artisans working in the area fashioned vessels that were nearly identical formally and stylistically. We also consider how these distinctive manufacturing processes instantiated a matrix of overlapping social networks that stubbornly refused to be constrained by political or topographic boundaries. We end by suggesting that the social networks manifested by a pot's use may not equate with those social webs through which the skills needed to fabricate vessels were learned and put into practice.

Schottmueller, Paul

[58] *The Mayan Legacy and Continuity of the Huun*

The Huun is translated by many as a headdress or bark paper, a material that does not preserve well in the archaeological record. However, to understand how these adornment artifacts are used one can view the present-day traditional Lacandon Maya, for they still make the Huun from the *akhun che*, or amate tree bark. This poster presents the Mayan concept of Huun, which holds ceremonial significance for the Lacandon, as well as being represented in Classical Mayan hieroglyphic form at Palenque and Yaxchilan. In Palenque at the Temple of the Foliated Cross tablet and in the stone carving of Kan Balam, the Huun is depicted being worn ceremonially during the offerings recorded in glyphic texts. The Lacandon of today still perform these rituals, in which the Chak Huun is tied to the god pot and offered prayers as a form of payment for healing an illness. On the Temple of the Foliated Cross Tablet, Kan Balam holds a small effigy of Sak-Hunal, which he offers as payment, with a Sak-Huun tied around his head, apparently representing a moment of *nawaj*, or adorning of an effigy.

Schreiner, Nina (SC Institute of Archaeology and Anthropology)

[218] *NAGPRA, Repatriation, and State Law: A Case Study from South Carolina*

The Department of the Interior provides a framework for respectfully returning disinterred Native American Ancestors and belongings through the Native American Graves Protection and Repatriation Act (NAGPRA). Yet, while discussions of an African American Graves Protection and Repatriation Act (AAGPRA) have begun, no federal law requires repatriation of non-Native Ancestors. Additionally, NAGPRA repatriation provisions only take effect after state and local laws about the disposition of disinterred human remains have been satisfied. State laws define what counts as a cemetery or archaeological site, describe consequences for disturbing a burial, and outline appropriate protocols for contacting kin. Using South Carolina as a case study, this paper reviews cemetery and preservation laws, including laws about maritime heritage. Analysis of the state legal framework is juxtaposed with instances when archaeologists or medicolegal professionals brought Ancestral individuals to the state curation facility in accordance with state law. Understanding the trajectory of individuals and cultural items within state legal systems exposes gaps and overlaps that create challenges for NAGPRA compliance and other forms of respectful return. These interstices are sites for intervention, where law or policy change could reduce disruption to Ancestors and descendants.

Schreiner, Nina [184] see Garland, Carey

Schroder, Whittaker [161] see Schnell, Joshua

Schroeder, Bryon (Center for Big Bend Studies / Sul Ross State University)

[318] *A Different Context: Conducting Meaningful Research with Unprovenanced Legacy Collections*

Engaged amateurs, or Responsive and Responsible Stewards (RRS), are the driving force behind some of the most influential field efforts and significant material collections in the discipline. Many examples exist of RRS collaboration with professionals who serve as valuable sources and whose collections provide important insights into the past. These examples highlight collaborative fieldwork where professionals recover or verify the locational information of recovered materials. This presentation focuses on collected or orphaned materials lacking clear locational data found by RRS. As a discipline, we often prioritize locational data over recovered artifacts, and the loss of verifiable context by professionals has left some important collections unanalyzed. This paper will present several examples of context-free archaeological collections and methods

for reconstructing spatial information, aiming to place these collections within meaningful contexts of past site use and significant historical themes central to the development of American archaeological practices.

Schroeder, Bryon [263] see Kidwell, Jasmine

Schroeder, Bryon [282] see Sommer, Evan

Schroeder, Sissel (UW-Madison), Tamara Thomsen (Wisconsin Historical Society Maritime Archaeology Program), and Michael Wiemann (USDA Forest Service)

[165] *Technological Innovation and Bioengineering in Ancient Dugouts of Wisconsin*

Comprehensive radiocarbon dating and wood identification of more than 80 dugout canoes from Wisconsin has resulted in the identification of unexpected wood choices that imply forest management, innovative methods of canoe production, and cultural responsiveness to climate change among the Indigenous peoples of Wisconsin. The presence of tyloses in red oak indicates that these trees were bioengineered over decades to yield water resistant wood for dugouts or that a now extinct species of red oak was selected because of its water resistant properties. Elm used for some dugouts provides evidence of novel ancient technological skills and knowledge that has been lost to time. Indigenous people responded to climatically induced changes in forest cover by actively selecting certain tree taxa.

Schroeder, Sissel [165] see Wiemann, Michael

Schubert, Lutz [178] see Guderjan, Thomas

Schulte, Nicholas [283] see Fovenyessy, Stephanie

Schurr, Mark [305] see Vazquez Fiorani, Agustina

Schwadron, Margo (US Fish & Wildlife Service), and Carla Hadden (Center for Applied Isotope Studies, University of Georgia)

[342] *Coastal Fisher-Hunter-Gatherers of the Pumpkin Key Shell Works Settlement*

Pumpkin Key is an enormous shell works settlement in the Ten Thousand Islands, Florida. With more than 30 4–7 m tall mounds constructed by the coastal fisher-hunter-gatherers of the settlement, they engineered the landscape to harness the energy and resources of the sea and in turn left a legacy of monumental architecture, created new uplands and ecotones, redirected water movement, affected shellfish beds, and altered the coastal landscape indefinitely. The masses of oyster shells were discarded in organized and planned piles, which were formed into functional constructions such as mounds, ridges, plazas, water courts, and canals. These shell works were formed over time, growing and expanding on the shell works landscape. Shell works functioned to direct and redirect water to and from the site, creating canoe portals, swales, ditches, fish traps, and perhaps even places to practice aquaculture. Investigation of Pumpkin Key includes systematic mapping, spatial analysis with lidar and DEM, excavations, vibracore analysis, isotopic and zooarchaeological studies, and more than 100 radiocarbon dates used to interpret Pumpkin Key's site history. Pumpkin Key and other shell works sites evince a set of design principles derived using holistic ecosystem knowledge. Pumpkin Key is therefore a significant monument to traditional ecological knowledge.

Schwartz, Christopher [169] see Kroot, Matthew

Schwartz, Christopher [210] see Punzo Díaz, José Luis

Schwartz, Maisie (Logan Simpson)

[90] *Historic Human Remains Detection Dogs: What Are They and How Are They Useful for Archaeological Mitigation?*

Archaeologists struggle with detection and confirmation of historic and Tribal ancestral remains during fieldwork. Although Tribal Historic Preservation Officers and cultural specialists work to pre-identify potential burial locations, disputes often loom between cultural knowledge and scientific confirmation of burial sites. The disturbance of historic and Tribal ancestral remains is detrimental to projects, both in terms

of budgets and schedules. More importantly, it is disrespectful to Tribes and permanently destroys the physical and spiritual integrity of ancestors and their burial sites. Historic Human Remains Detection (HHRD) dogs are becoming a proven method of noninvasive human remains detection, especially when coupled with Tribal knowledge. By using HHRD dogs, we can identify high probability locations for historic and ancestral Tribal remains prior to ground disturbance, allowing for greater flexibility in early stages of project design so the remains may be avoided. Join representatives from Logan Simpson, the Institute for Canine Forensics, and the Fort Independence Indian Tribe as they discuss the methodology and benefits of using HHRD dogs for fieldwork from multiple perspectives.

Schwarz, Victoria [180] see Grote, Willow

Scissons, Todd (University of New Mexico)

[166] *The Acoma Cultural Province, A Landscape Defined by Clay: Bridging the Gap between Traditional Knowledge and Science*

It is well known that ceramics make up one of the biggest traits of the Acoma Pueblo culture. The longevity of ceramic use has become an important part of learning about the past. However, there is more to Acoma Pueblo culture than just ceramics. For the Pueblo of Acoma, their history is not defined by one trait but many traits that together form Acoma traditional knowledge. One such trait that I wanted to research is the source of ceramics. We know so much about ceramics, but what story does the clay source tell about Acoma traditional knowledge? For this paper, I wanted to look at clay sources within and outside the present-day Acoma reservation. There were two objectives that I wanted to achieve with this research: (1) How do the clay source samples compare with each other? (2) Based on the results of scientific analysis of clay sources, would traditional knowledge about clay processing come up with the same results and what does this say about the importance of traditional knowledge? Using science to prove the relevance of oral history or traditional knowledge, instead of disproving it, can and should be a part of the process of researching the past.

Searcy, Michael [25] see Giovannangelo, Victoria

Seckinger, Jeffrey

[42] *Integration of Skeletal and Dental Data in Bioarchaeology Using Life History and the Life Course*

The adoption of the life course approach in bioarchaeology has come in part from an increasing appreciation that the phenomena we observe is multiscalar and that multiple lines of evidence provide the most robust interpretations. In spite of this, bioarchaeological research has tended to bifurcate along specialist lines of studying either skeletal or dental tissues; rarely are the two studied in conjunction with each other. This is further exacerbated when considering tissues at the microscopic level. With a careful analysis of both, we are able to explore in fine detail how early life experiences, as evinced by episodic “stress” found in dental tissues, can inform interpretations of bone quality and bone quantity. This presentation will also explore how such an approach fits in with broader theoretical goals of exploring the intersections of the life course and life history theory and how scholars can integrate the two in a productive manner. I propose rather than being differences in kind, the two can be seen as operating on different scales. Furthermore, performed actions throughout the life course of an individual can modulate several aspects of life history, within the parameters and affordances of phylogenetic patterning operating at the generational and evolutionary level.

Sedig, Jakob, José Luis Punzo Díaz (Instituto Nacional de Antropología e Historia), Steven LeBlanc (Peabody Museum), and David Reich (Harvard University)

[210] *How Genetic Data from the Proyecto de Investigación Poblaciones Antiguas del Norte y Occidente de México (PIPANOM) Has Impacted Archaeological Understanding of Ancient Mexico*

The Proyecto de Investigación Poblaciones Antiguas del Norte y Occidente de México (PIPANOM), a collaboration between archaeologists, geneticists, and local communities in Mexico and the United States, has already produced results that have provided insight into the spread of Uto-Aztecan groups northward from Mexico into what is today the US Southwest and identified a child of closely related parents at Paquimé, Chihuahua. This paper presents results from PIPANOM’s next phase, which explores population-level results

from the study of over 300 ancient individuals from central, west, and north Mexico. Key findings include the delineation of a genetic boundary between Mesoamerican and northern Mexico populations, evidence of abundant north Mexico ancestry in individuals from Cueva de los Muertos Chicos in Durango, and a distinctive ancestry among individuals from Trincheras sites in Sonora. Additionally, we leverage the large number of individuals from two population centers, Tzintzuntzan and Paquimé, to examine precontact population sizes and the degree of heterogeneity among the people who live in these cosmopolitan cities.

Sedlmayr, Jayc (UTHSC), Clay Corbin (Commonwealth University of Pennsylvania), and Nataliia Mykhailova (Institute of Archaeology NASU)

[205] *Exalting the Sacred Horned Beasts: Horned and Antlered Sacred Prey Spiritual Beliefs and Ceremonialism in Ethnohistoric and Archaeological Cultures with Focus on Head and Skull "Cults"*

Worshipful treatment of horned and antlered prey species has been a significant component of human societies. This spiritual complex has developed into elaborate ceremonial traditions and spread with hominin dispersals and adapted into new socioecological niches across the planet. Cephalic structures (head, skull, horns, antlers, teeth, tongues, and other soft tissues) are viewed as containing important vital essence acting as sacra to propitiate and mediate with deities, Masters of Animals, nature spirits, etc., often to ensure the regeneration of these game species. Sacred prey ceremonialism is frequently part of communal hunting and mega-traps from gazelle kites to bison jumps, often in association with the development of complex societies such as Mammoth Steppe cultures, Taş Tepeler, and the Deer Stone-Khirigsuur complex, and with agriculture the many manifestations of the Cattle Cult Complex and associated megalith culture. In many societies similar cephalic spiritual beliefs and ritual practices exist in parallel with human and/or sacred predator head ceremonialism. Domestic horses replaced cervids and wild bovids in Eurasian Steppe (including Indo-European) and convergently later Amerindian societies. To better understand and compare across these phenomena we are developing an ethnoarchaeological database of animal ceremonial cultural elements. We present case studies from these to elucidate select patterns.

Seebach, John (Colorado Mesa University)

[348] *Stones but No Bones: Competing Measures of Folsom Peripherality in Far West Texas*

The sparse Late Pleistocene record of Trans-Pecos Texas presents a counterpoint to the models of Folsom life derived from sites located across the Great Plains and Rockies heartland. In the heartland Folsom foragers regularly carried toolstone over great distances as a feature of their subsistence economy, which was evidently organized around the recurrent exploitation of bison herds. A different picture emerges in west Texas. Here, tools were manufactured, used, and discarded not far from their quarries of origin. In conjunction, low quantities of nonlocal stones suggest the cyclical mobility ranges documented in adjacent areas do not extend this far south. Finally, kill sites have yet to be recognized. Together, these lines of data strike at the heart of how we define Folsom peripherality. In the Trans-Pecos we see only occasional visits to the region by Folsom peoples, or mobility ranges that do not significantly overlap with the heartland. The region is thus, by definition, "on the edge." What remains to be seen is whether the edge is one defined by Folsom peoples or instead by the archaeologists who study them.

Segal, Gavi [333] see Levin, Maureece

Seidemann, Ryan (Water Institute), Christine Halling (University of New Orleans), Freddie Evans, and Eva Baham (Dillard University)

[216] *Repatriation Efforts and the Successful Return of 19 Individuals Taken for Scientific Research in the Nineteenth Century*

Recently the skulls of 19 African American individuals were repatriated from Germany to New Orleans, Louisiana. In New Orleans, these individuals were received and embraced by the community as the representative descendants for the individuals as they returned from being held abroad for over 150 years. Although the 19 individuals were named and identified as being from New Orleans, there were no records connecting how the 19 ended up in Germany. As part of the community cultural repatriation team, local researchers from Dillard University and the University of New Orleans collaborated on researching the historic context to connect the individuals to New Orleans' Charity Hospital. Additionally, genealogists

connected the names of the 19 individuals to historic hospital records and census data, shedding light on their lives and how they had inadvertently connected to the descendant community's and the anthropologists' lives in the present. Here, researchers discuss how this experience unfolded and emphasize the use of local resources, the importance of collaboration with local experts, and perspectives from the descendant community. The anthropological analysis of the individuals (which was completed and required for repatriation) was secondary to genealogical research, with the latter being pivotal to the successful repatriation effort.

Seidemann, Ryan [22] see Boutte, Kerry

Seifert, Jerrod [343] see Lingle, Ashley

Seikel, Katherine [333] see Levin, Maureece

Seitsonen, Oula [315] see Conesa, Francesc

Seligson, Ken (California State University Dominguez Hills), and Evan Parker (National Park Service)

[338] *No Breaks till Bolonchén: Mapping the Wide Puuc World with Bill*

Bill Ringle's influence on Maya studies goes well beyond his many significant contributions to our current understandings of settlement patterns, sociopolitics, resource management, iconography, and epigraphy. His genuine interest in learning ever more and the ways he mobilized his keen intellect inspired all who knew him. He truly was and will forever be one of the giants of Maya archaeology. We are fortunate enough to count Bill as a mentor, friend, and colleague and have had the privilege of working with him in the Puuc Region. This paper discusses some of Bill's broader influences on us as archaeologists before focusing specifically on our investigations of the large acropolis site of Muluchtzekel that had occupation phases spanning the Middle Preclassic through the Terminal Classic period (ca. 800 BCE–900 CE). Located along the southern edge of the Valle de Yaxhom in the eastern Puuc, it served as a node in networks connecting the broader valley to the north, and the hilly Bolonchén district to the south. A combination of lidar-based mapping and test excavations by our team helped elucidate the long habitation arc of this sprawling site and the role that it played in local sociopolitics.

Seligson, Ken [282] see Amarillas, Samantha

Seligson, Ken [62] see Collins, Ryan

Seligson, Ken [275] see Hernandez, Hector

Seltzer-Rogers, Heather (Chronicle Heritage), and Thatcher Seltzer-Rogers (Chronicle Heritage)

[177] *Archaeological Survey and Ethnographic Investigations of Two Eighteenth-Century Pueblitos (Bee Holdził) in the Dinéetah Region of Northwestern New Mexico*

In support of improving outdated site records and preservation of cultural resources on state trust land, the New Mexico State Land Office contracted the documentation of two Diné pueblitos (*bee holdził*) in the ancestral homelands of Dinéetah in northwestern New Mexico. These *bee holdził*, both of which date to the eighteenth century, represent a uniquely Diné structure type restricted to this area and are commonly interpreted as defensive positioning during a time of increasing internecine conflict. Documentation of these sites, and others in their immediate vicinity, combined with the inclusion of Navajo Nation and local informant-supplied ethnographic details, expands the potential to protect such important places and center descendant community histories while also expanding our archaeological understanding for this time period in the Dinéetah. This presentation discusses the results of this survey and the detailed construction and associated assemblages for the two sites in terms of larger questions such as the role and history of *bee holdził*.

Seltzer-Rogers, Thatcher (Chronicle Heritage)

[166] *Mimbres and More: Early to Middle Formative Period Patterns and Dynamics of the Deming Plain of Southwest*

New Mexico

Archaeological investigations in southwest New Mexico operated historically as academic-led endeavors at a series of large residential villages dispersed along the Upper and Middle Mimbres River Valley and, to a far lesser extent, the Upper Gila River Valley. These have provided significant information about Formative period settlement, ceramic production and distribution, and subsistence patterns, thereby enabling substantive inquiries into relationships between the Mimbres “core” and outlying areas. Notably, there has been a recent interest in the southern Mimbres region that spans the Deming Plain near major residential sites such as Old Town and Pruitt and extends the New Mexico Bootheel into northern Chihuahua. In 2024, data recovery operations occurred at several sites in the Deming Plain to mitigate effects of a transmission line’s installation. These excavation data, entwined with those produced by nearby surveys, provide the opportunity to assess patterns in use of the Deming Plain and engagement with larger, well-known settlements in the Mimbres valley. In this presentation, I employ the results from the analysis of ~7,500 ceramic artifacts from the project to investigate production, use, and exchange in the Deming Plain and contextualize the results within recent interpretations of the southern Mimbres region.

Seltzer-Rogers, Thatcher [177] see Seltzer-Rogers, Heather

Semanko, Amanda (University of Arizona), Jordan Abell (Lehigh University), and Jay Quade (University of Arizona)

[71] *Geochemical Traces of Domestication: Comparing Aşıklı Höyük and Balıklı in Central Anatolia*

Expanded geochemical analyses of archaeological materials from the Pre-Pottery Neolithic tell site of Aşıklı Höyük in Central Anatolia continue to uncover elemental signatures of human practices from the distant past. Archaeological and environmental samples from the nearby hunter-gatherer pit house site of Balıklı provide an exceptional contemporaneous comparison for the earliest occupation at Aşıklı Höyük. Currently, no evidence exists for animal management or domestication at Balıklı, whereas sheep and goats were managed in increasing numbers at Aşıklı Höyük over a millennium of occupation. In this study, we quantified the geochemical composition of the water- and weak acid-soluble fraction of over 150 new samples from Aşıklı Höyük and Balıklı. Sample types included kerpic, mortar, plaster, hearths, ash, floor material, dung deposits, refuse, and natural alluvium. While our results support the earlier findings of Abell et al. (2019) showing increased chlorine, nitrate, and sodium due to rising caprine populations from the earliest to latest levels at Aşıklı Höyük, we build on this previous work by further characterizing variations between the geochemical composition of archaeological and natural deposits at Aşıklı Höyük and Balıklı using an expanded geochemical tool kit.

Seminario, Linda (Delaware State Parks)

[343] *In the Trenches: Salvage Excavation as a Tool for Public Education*

The Time Traveler’s Program is run by Delaware State Parks and provides opportunities for members of the public to participate in and learn about archaeological excavations and methodology. Despite the popularity of this program, a lack of allocated staff led to a dwindling number of public archaeological opportunities. In the spring of 2025, an underground electrical wire replacement at the twentieth-century Maxwell House in White Clay Creek State Park led to the placement of a 60 m trench. After the excavation of the trench, parks staff identified several artifacts in the back dirt pile and reported them to the Cultural Resources Unit (CRU). The following salvage excavation allowed for the revival of public archaeological opportunities through the Time Traveler’s Program. In addition, the salvage excavation allowed for the training of parks staff to better understand archaeological methods and take consideration of cultural resources during construction projects. This presentation will consider the potential benefits of utilizing salvage archaeological sites as a learning opportunity for the public.

Semon, Anna [46] see Cajigas, Rachel

Sengupta, Baisakhi

[344] *Sacred Landscapes and Stone Horse-Warriors: The Ghora-Galis of Medieval Western Himalayas*

Focusing on one of the world's richest yet least studied cultural landscapes and artistic traditions, the paper presents the results of my dissertation project on Ghora-Gali sites located in the Jammu-Kashmir region of the Western Himalayas. Ghora-Galis, or horse passes, is a generic term for understudied Medieval sacred landscapes that preserve monumental stone sculptures including carved water fountains, horse-warrior figures, reliefs, and pillars. Despite their enormous patterns of distribution, clustered on mountain slopes, the finds have not been studied due to their location in politically and climatically challenging topographies. Discussing my research based on three seasons of survey, I present documentation consisting of 250 mapped and photographed sculptures across six archaeological sites. The project applies an interdisciplinary approach combining archaeological survey with iconographic, textual, and epigraphic analysis. My observations indicate that the sculptures were consciously clustered to create sacred landscapes tied to Medieval water rituals, commemorative traditions, and artistic practices of transhumant warrior communities. By situating the Ghora-Gali sites within wider networks of Jammu-Kashmir, Chamba, Kullu, and Kangra, I highlight the importance of studying peripheral micro-regions to demonstrate how they shaped localized artistic, ideological, and cultural traditions beyond the dominant narratives of temple centric histories of the region.

Seowtewa, Octavius (Zuni Cultural Resource Advisor Team, ZCRAT Lead)

[37] *Different Ways of Knowing: Co-creating Indigenous Archaeology Curriculum*

Place is much more than a physical location. Zuni (Ashiwi) have deep associations with land and places, and we express these through songs, prayers, and storytelling. The retelling of stories creates a sense of belonging and binds people to that place. Zuni ancestors share knowledge with their descendants through archaeological sites and other special places. When Zuni visit these places, we reactivate that knowledge. Meaning is tied to a specific location, so Zunis must go there. Revisiting places and reactivating knowledge are how Zuni people continue today. But Zunis recognize there are different ways of knowing. As Tribes become more involved in archaeology and cultural resource management, Zuni is looking to support young people in the stewardship of their ancestral lands. This presentation will discuss mutually beneficial opportunities for Tribes to co-create training and curriculum for Indigenous archaeologists that not only positions Native people for academic and professional success but revitalizes esoteric knowledge, promotes cultural resiliency, and strengthens Ashiwi's and other tribal connections to land and places for generations to come.

Seowtewa, Octavius [218] see Bishop, Katelyn

Seowtewa, Octavius [71] see Schachner, Gregson

Serafin, Stanley (University of New South Wales), Elizabeth Paris (University of Calgary), Roberto López Bravo (Universidad de Ciencias y Artes de Chiapas), and Breanna McGaughey

[24] *Bioarchaeological Investigation of Funerary Cave Use among the Highland Maya of Moxviquil, Chiapas, Mexico*

Caves feature prominently in the worldviews of modern and recent Indigenous communities of highland Chiapas and likely did so in the past as well. Numerous reports of isolated skulls and long bones on the surface within caves in this region led to the view that they often served as ossuaries. However, few have been systematically excavated. A cave at Moxviquil, one of numerous small sites in highland Chiapas that flourished during the Classic (ca. AD 300–900) and Early Postclassic (ca. AD 900–1200) periods, presents the rare opportunity to investigate a highland Maya cave skeletal assemblage that was excavated in its entirety. Excavations conducted in 2015 as part of the PIERACH Project discovered that the soil beneath the cave's surface was densely packed with remains. In this presentation we explore the function of this cave based on the results of bioarchaeological investigation. We present findings on the inventory, paleodemography, taphonomy, paleopathology and body modification for the complete assemblage. We place these findings within their regional and chronological context and explore the implications for the broader study of cave use among the highland Maya of Chiapas. *****This presentation will include images of human remains.**

Sereno, Juan (INAH)

[55] *Xochitepec de los Goitya: Survey and Architectural Analysis of a Looted Site in the State of Guerrero, Mexico*

Looting represents one of the most significant challenges in the current professional field, as the search for ancient materials and artifacts for profit has radically altered the archaeological contexts in the northern region of Guerrero. The urgent task of recording, documenting, conserving, protecting, and researching

these settlements has become a priority for those collaborating with the National Institute of Anthropology and History. This work presents the first actions taken for the archaeological registration of the Xochitepec de los Goitya settlement. Based on initial surveys at the site, it has been possible to generate descriptions of this settlement affected by looting, which has allowed to produce the first analyses of its architecture.

Serra, Margot (University of Cambridge), David Beresford-Jones (University of Cambridge), George Chauca Iparraguirre (Universidad Nacional Mayor de San Marcos), Camila Alday (University of Cambridge), and Emma Pomeroy (University of Cambridge)

[267] *Osteobiographical Evidence from Early Burials on the South Coast of Peru: New Perspectives on Marine Hunter-Gatherer Trajectories and Moseley's MFAC Hypothesis*

Preceramic burials from Peru's south coast dating to between 10,000 and 6,000 years ago show remarkable preservation of soft tissue and organic funerary materials thanks to a hyperarid environment. Elsewhere in the world, meanwhile, many shoreline sites of this age have been inundated by rising sea levels into the mid-Holocene. Ongoing osteobiographical studies of nine in situ Preceramic burials recently excavated at La Yerba, Rio Ica estuary, and others from Pernil Alto and Pampa de Santo Domingo, Paracas, integrate archaeological, bioarchaeological, and biogeochemical evidence to provide new evidence on funerary patterns, health, diet, and mobility. These analyses will shed light on the cultural, subsistence, and economic transformations experienced by marine hunter-gatherer communities through the long Preceramic on this Pacific coast. These analyses also offer a vital comparative perspective for understanding broader hunter-gatherer trajectories elsewhere and thereby contribute to a revised perspective of Moseley's (1975) *Maritime Foundations of Andean Civilization* hypothesis. Rather than another example of Andean exceptionalism, the transition toward food production in this region reflects a generalized expression of Mesolithic trajectories preceding agriculture worldwide, simply more manifest here because organic materials are better preserved and the archaeological record is less distorted by sea-level change. ***This presentation includes images of human remains.

Serrano-Ramos, Alexia [170] see Égüez, Natalia

Serrao-Leiva, Tamara (San Bernardino County Museum), and Gabrielle Carpentier (San Bernardino County Museum)

[214] *The Third Place: Becoming a Trusted Interim Custodian for Ancestors in Transition*

San Bernardino County Museum (SBCM) has increasingly served as a "third place" for ancestors—a trusted, temporary resting point between unsafe or inconvenient institutions and their eventual reburial or return to communities of origin. Many Tribal Nations face cultural and logistical limitations that prevent them from caring for ancestors for extended periods. In good faith partnerships and through long-standing trust, SBCM has provided secure, respectful, and culturally responsive care during this interim stage. This model has supported repatriations not only within Southern California but also from institutions across the country. Together, we will consider how museums can act as ethical custodians when direct Tribal possession is not feasible. By framing museums as safe harbors rather than permanent keepers, we suggest a replicable model of collaboration that honors sovereignty, reduces barriers to repatriation, and ensures that ancestors are treated with dignity as they move between institutions and home.

Serrao-Leiva, Tamara [258] see Calistri, Hannah

Servin Rosas, Claudia Margarita, Alejandro Mitrani (Instituto de Física, UNAM), Jose Luis Ruvalcaba Sil (Instituto de Física, UNAM), and Javier Martínez González (INAH)

[51] *Noninvasive Analysis of Sculptural Pigments at Cantona*

Cantona, one of the largest urban centers of Classic Mesoamerica, has yielded stone sculptures whose painted surfaces remain understudied due to preservation concerns. Cantona's cultural context heightens its importance: unlike other contemporary centers, the site shows relatively few artistic or luxury objects, limited use of stucco, and an overall austere material record. These patterns may be linked to environmental conditions, as scarce water resources likely constrained particular construction and decorative practices. Within this framework, painted stone sculptures stand out as one of the few media of artistic and ideological

expression. This study applies noninvasive imaging and spectroscopic methods, including ultraviolet photography, X-ray fluorescence (XRF), visible near-infrared reflectance spectroscopy, Raman spectroscopy, and optical microscopy, to characterize four pigment colors: red, yellow, white, and green. Results identify hematite as the primary red pigment, calcite as the dominant white pigment, goethite as a source of yellow, and celadonite as the principal green pigment. These findings document varied use of mineral resources and reveal differences in pigment preparation through time. The study highlights the interpretive value of nondestructive analysis for understanding Cantona's distinctive cultural practices, while contributing to broader discussions of color and materiality in Classic Mesoamerica.

Sethathi, Betsy [209] see Elster, Eli

Sevara, Christopher [323] see Minor, Elizabeth

Sevin, Lucille, François-Xavier Le Bourdonnec (Université Bordeaux Montaigne), Louis Marguet (Muséum National d'Histoire Naturelle de Paris), Jean-Alix Barrat (Université de Bretagne Occidentale), and Delvigne Vincent

[93] *"Is It Really the Same?" Multi-method Characterization of Aquitaine Jasperoids Applied to Provenance Studies*
Jasperoids are a type of hydrothermal silica found as tools in several Middle and Upper Paleolithic sites in southwestern France. Outcropping discontinuously in the basal Jurassic levels across much of the western edge of the Massif Central, this material presents varieties that are difficult to distinguish with the naked eye and convergent microfacies, making the determination of their origin challenging. The aim of the present work was to build an adapted analytical framework that would allow, as with other silicate, the identification of the provenance of these objects within archaeological assemblages. To achieve this, we started with the geological material and applied a multiproxy characterization approach based on naturalistic, mineralogical (XRD), and geochemical (pXRF, SEM-EDS, ICP-MS) studies. This approach made it possible to identify the contributions and limitations of each technique applied to the material, demonstrating the necessity of a combined methodology. At the end, the methodology proved effective in discriminating certain sources of jasperoids from the Limousin border. Beyond these methodological aspects, two archaeological applications were carried out on Magdalenian (Bouyssonie cave) and Azilian (Pont d'Ambon rockshelter) artifacts, providing new insights into the circulation of goods and the interaction between humans and their environment.

Sewing, Mason, and Kelly Graf (University of Kansas)

[195] *Hammers, Hot Rocks, and Anvils: Showcasing Base Camp Activities at the Shég' Xdaltth'i' Site, Central Alaska*
Shég' Xdaltth'i' is located near Fairbanks, Alaska, and is a well-stratified archaeological site with components dating to the late Pleistocene. In this poster, we will concentrate on the spatial distributions of the non-chipped stone lithic material from Component I. We will consider these in relation to site activities. For example, we will examine the raw material variability and analyze its distribution across the excavated space, especially in relation to the location of features (e.g., hearths, bone discard areas, lithic workshops). Additionally, we have been conducting a refit study of these materials to assess their transport within and between activity areas. This poster will present our findings and interpretations along with discussion of how they fit into our understanding of the site.

Sghinolfi, Amedeo [163] see Bardolph-Carlsen, Dana

Shachar, Max, Sarah Baitzel (Washington University in St. Louis), Arturo Rivera I. (Washington University in St. Louis), Nicola Sharratt (Georgia State University), and James Davenport (University of Missouri)

[304] *Comparing NAA and LA-ICP-MS Compositional Analysis of Post-Tiwanaku Sama-Cabuza Sherds from Los Batanes, Tacna, Peru (Twelfth Century)*

Compositional analyses of ceramics can disentangle relationships of style, production, and identity. After Tiwanaku state collapse (eleventh century), communities throughout the south-central Andes developed new pottery production techniques and aesthetics, leading to the fluorescence of Tiwanaku-derived styles. The

growing body of compositional data of contemporaneous assemblages and clay data from regions such as Moquegua, Azapa, and the Altiplano have revealed changes in resource acquisition, production standardization, and the persistence of long-distance ceramic exchange networks complementing the stylistic variability. We compare neutron activation analysis (NAA) and laser ablation inductively coupled plasma mass spectrometry (LA-ICP-MS) data of 18 Sama-Cabuza ceramic sherds from Los Batanes, Sama, Peru (twelfth century). Both analyses show considerable internal compositional variation, suggesting a lack of standardization in resource procurement and the use of variable technologies in making Sama-Cabuza pottery. A chemically distinct subset of sherds potentially indicating nonlocal origin, a hypothesis that is tested with local clay source data from Sama. While the results produced by NAA and LA-ICP-MS differ slightly, general compositional trends and outlier samples are consistent across both methods. Our analysis characterizes the chemical composition of Sama-Cabuza ceramics and explores the possibility of long-distance ceramic exchange networks in the wake of state collapse.

Shady Solís, Ruth [267] see Valqui Güimack, Miguel

Shaffer, Gabby (University of Oregon)

[217] *Pottery from Prasat Baset, Cambodia: Updated Results from a Study of Earthenware Ceramic Vessels and Rim Forms*

This paper will present updated results from a study of earthenware vessels and rim forms dating to the Pre-Angkorian and Angkor periods (sixth–fifteenth century CE) from the site of Prasat Baset, Cambodia. This provincial site is unique in having a long occupation history that predated the beginning of the Angkor Empire. Earthenware makes up the majority of the ceramics assemblage and was important for a variety of daily life activities, yet has historically understudied compared to Angkorian stoneware. Earthenware vessels and rims were sorted by composition and decoration, measured, and drawn for comparison within the collection. Statistical and spatial analysis was conducted as well. Previous results indicated a potential temporal pattern of the ceramics (presented at the 2025 SAAs), and this paper will be an update on previous research. The findings will contribute to understanding the range of earthenware vessels at Baset, their possible function, and address questions about transitions within households from the Pre-Angkor to Angkor period in provincial Cambodia.

Shahat, Amr

[163] *From Archaeology to Water Justice: Isotopic Advances from Nile Valley Archaeobotany on Plant–Water Relations in Arid Regions*

The Nile River shaped ancient Egyptian perceptions of life and afterlife. Understanding its isotopic composition is crucial to raise advocacy for water justice to support the diverse communities of humans, animals, and plants this river has sustained in the past and present. This project reconstructs the impact of climatic changes and human interventions (e.g., dam constructions) on plant and food biodiversity that shaped the civilizations of the Nile Valley physically and culturally. Archaeological, ethnographic, and modern botanical samples were analyzed using oxygen isotopes, in addition to clumped isotopes on Nile River shells to evaluate the impact of climatic changes on Nile water oxygen isotope composition, which are reflected in plant-food species that shaped ancient Egyptian foodways and public health. New methods were applied to analyze non-exchangeable oxygen isotopes in the carbonyl group of ancient desiccated archaeobotanical materials from Egyptian tomb offerings, differentiating local from imported plant food species based on the isotopic composition of their water source. Combined with C and N isotopes, this work provides critical data on ancient water availability, relative humidity, and soil fertility and how these ratios shift in modern times with increased aridity and dam constructions.

Shantry, Kate (WSU)

[70] *Making Space for Hot Rocks: Merits and Data Potential of In-Field FCR Analysis*

What should we keep and what can we learn? These questions are confronted before, during, and after excavations of fire-cracked rock (FCR) assemblages. Study of FCR is often hindered by the inherent factors of bulk, cost, and weight. In-field analysis offers a solution to this problem. This paper presents methods for on-site FCR classification that focuses on material types, fracture mechanics, morphology, and size.

Representative sampling for post-field high-resolution analyses are also considered. The goal is to obtain reliable data from FCR while serving the more pragmatic concerns of minimal collection and curation in service of both Indigenous and scientific perspectives on archaeology.

Shao, Yingyin (School of Archaeology and Cultural Heritage, Zhengzhou University)

[106] *The Still of the Marquis of Haihun: Rewriting the Global History of Distillation Technology*

Distillation is among the oldest purification technologies in the world, and has played a crucial role in the development of human civilization. However, the early technological history of distillation remains largely obscure. In the present study, a bronze set of artifacts unearthed from the tomb of the Marquis of Haihun (92–59 BCE) in China was investigated, which was scientifically excavated and preserved in situ. Through an interdisciplinary approach that integrated archaeology, chemical engineering, and traditional distillation practices, it was demonstrated that the apparatus constituted the world's earliest definitive evidence of a water-cooled still that incorporated continuous cooling and external receiving of distillate. Experimental archaeology confirmed its capability to produce distilled liquids, including water, spirits, and hydrosols. This discovery not only pushed back the confirmed use of stills to 59 BCE but also revealed a complex water-cooling system that is dated more than a millennium earlier than that previously recorded (thirteenth century CE). Based on archaeological evidence, this study reveals the indigenous origins and development of distillation technology in East Asia and systematically reassesses early stills on a global scale, thus supporting a model of pluralistic, independent innovations across the ancient world.

Shapiro, Craig

[91] *Incentivizing Progress: An Allyship Framework for Capacity Building, Transparency, and Repatriation at Cultural Stewardship Institutions*

Envisioning an ethical future for cultural heritage and preservation spaces is overdue, and archaeologists have the opportunity to engage in allyship through reimagining the field. Many archaeologists recognize how the discipline has historically perpetuated a status quo of inadequate cultural stewardship in the Global South and are reflexive about how the field has contributed to the legacies of colonial oppression. To engage in future work that is pointedly Indigenized and decolonial, archaeological allyship requires using our collective access to colonial museums, connections within major research institutions, and public/private partnerships to create ethical frameworks that center culturally affiliated communities. Increasing Indigenous representation, repatriating Indigenous ancestors and cultural items, and developing sustainable ethical frameworks for cultural stewardship institutions are all necessary outputs. This paper proposes a combination of questions to consider and methods to implement for cultural heritage practitioners interested in motivating their respective partner institutions to develop better practices regarding artifact collections and the communities those collections represent. This model may also serve as a pathway for museums and institutional collections to appease anti-colonial public sentiment in the interest of self-preservation and intends to engage the wider discipline in critical thought while considering the responsibility of cultural stewardship moving forward.

Sharp, Kayeleigh (Northern Arizona University), Izumi Shimada, Manuel Roque Soplapuco (Museo Nacional Sicán, Ferreñafe, Peru), and Edgar Bracamonte Lévano (Museo Tumbas Reales de Sipán-Ministerio de Cultura)

[293] *Significance of the Northern Gallinazo: Chronology, Metallurgy, Corporate Architecture, and Pottery*

Evidence from 2024/2025 fieldwork in the Lambayeque Region of north coast Peru clearly position the Northern Gallinazo (NG) as a distinct and durable ethnic polity that played a major role in regional developments of the first millennium CE. NG managed crucial copper resources while interacting with the better-known Mochica polity. Findings from recent excavations at Huaca Letrada (La Leche), Songoy-Cojal (Zaña), and other NG and first millennium settlements show that the NG was a key player in widespread metallurgical networks that controlled access to copper and copper mines; evidence that transforms ideas on Gallinazo-Mochica social interactions throughout the entire north coast during the first millennium. Converging lines of evidence include (1) widespread evidence of long traditions of copper mining and metallurgy evident at Huaca Letrada (ca. 250–420 CE), Songoy-Cojal (ca. 530–880 CE), and other NG sites in Lambayeque; (2) broad array of domestic, ritual, and funerary pottery that positions NG as a distinct regional

art style; and (3) distinctive monumental construction techniques and forms that distinguish NG from other groups. New evidence forces us to rethink north coast social, economic, and political organization and consider mutualistic relationships that may have existed between NG and Mochica in the Lambayeque Region, Peru.

Sharp, Kayeleigh [337] see Jankowski, Maegan

Sharpe, Ashley (Smithsonian Tropical Research Institute), Nicole Smith-Guzmán (Smithsonian Tropical Research Institute), Claudia Diaz Perez (Smithsonian Tropical Research Institute), and Luis Sanchez (Museo Nacional de Costa Rica)

[311] *An Isotopic Exploration of Societal Diversification in Precolumbian Panama*

The precolumbian history of Panama stands in unique contrast to the state-level societies of Mesoamerica to the north and the Andes to the south. Characterized by a network of powerful chiefdoms at the time of the Spanish arrival in the early sixteenth century, the development of the sociocultural sphere of chiefdoms that arose in this region between 200 BCE–1500 CE is still not well understood. Focusing on one of the largest sites excavated to date in Panama, Cerro Juan Díaz, this study uses isotopes (carbon, nitrogen, oxygen, and strontium) from bone and tooth enamel of 49 human individuals combined with preexisting isotopic data from nearby sites to understand the diet and mobility patterns of people in ancient Panama. The results reveal a distinct shift from a mostly egalitarian diet before 700 CE to markedly different diets and mobility patterns among individuals. By 1150 CE, distinct isotopic differences emerge between sexes and between adults and children, revealing evidence of increasingly diverse social roles and mortuary practices. We interpret these results considering other archaeological and ethnographic records from the region to understand social trends that occurred in Panama throughout the 1,500 years before Spanish contact.

Sharpe, Ashley [311] see Nunez-Cortes, Yajaira

Sharpe, Ashley [311] see Pace, Veronica

Sharpe, Ashley [349] see Rose, Autumn

Sharratt, Nicola [304] see Shachar, Max

Shaul, David (University of Colorado Boulder)

[23] *California Linguistic Prehistories*

I break California linguistic prehistory into smaller units based on clearly defined geographic areas: the southern Central Valley, the Bay Area, and the northern Central Valley. Using the *linguistic area* concept as the unit of analysis, with the Waicura and Nebe languages (southern Baja California) as an illustration, I then review previous work on the linguistic area centered around the Uto-Aztecan language family (UA). What linguistic areas preceded the one centered on UA? Wappo, Proto-Tepiman, and Proto-Yuman data inform a pre-UA linguistic area in the southern Central Valley. Linguistic prehistories help archaeologists in their own work with the prehistories of artifacts, in this case, of California.

Shaune, Amanda (Wayne State University), and Sarah Pounders

[227] *The House in the Woods: Early Archaeological Investigations into a Rural Site of Enslavement in Gainesboro, Tennessee*

This paper presents preliminary findings from the initial phase of archaeological investigations at a rural site of enslavement in Gainesboro, Tennessee. Located on the periphery of a former enslaver's residence, the 12 × 18-foot wooden dwelling yielded artifacts including hand-forged nails, a hearth feature, Civil War-era materials, and a limestone water feature—indicating sustained, yet socially marginalized, domestic occupation. Archival research uncovered historical records documenting an enslaved woman named Lucinda and her three children—Isaac, James, and Nana—residing on the property during the mid-1800s. Together, these findings reveal a possible link between the archaeological site and the daily lives of this family, offering a rare and tangible glimpse into their experiences. They suggest that enslaved individuals and families in the rural Upper South lived under socially and spatially marginalized conditions—often isolated from the main residence—providing valuable insights into their resilience, everyday life, and the broader system of slavery in

understudied regions.

Shaw, Chris (US Forest Service)

[255] *Moving across Imagined Borders: A Reexamination of “Fremont” and “Ancestral Puebloan” Rock Imagery in Mill Creek Canyon near Moab, Utah*

The Moab, Utah, area has traditionally been theorized as a border zone between groups classified in culture-history typologies as “Mesa Verde Ancestral Puebloan” and “San Rafael Fremont.” Overlapping assemblages are seen as mixed settlements, the result of trade, resettlement, or a mixture of traits that challenges existing typologies; this is true of the rock imagery in Mill Creek Canyon, which presents a complex pantheon of both “Fremont” and “Ancestral Puebloan” styles and images. In this paper, I spatially analyze the prevalence of individual ideographic images in the Mill Creek Canyon system, demonstrating how conventionalized motifs such as flute players, birds, and fringed-stick headdresses are spatially organized and relate to regional examples. By focusing on individual images rather than “rock art styles,” I seek to emphasize the fluidity of iconographies across imagined geographic culture-history boundaries, demonstrating how overlapping imagery and ideas were inscribed and negotiated on multiple social scales.

Shaw, Justine (College of the Redwoods)

[223] *How Rapid Was the Maya Collapse? New Insights from Sisal, Quintana Roo, Mexico*

While the term “collapse” is admittedly problematic, it is clear that many Maya sites in the northern Lowlands were largely or entirely abandoned by the end of the Terminal Classic period. Since Terminal Classic ceramic types continued to be used by those few who remained at sites following this abandonment, it has been difficult to investigate the rapidity of this exodus. It could be that the process took several human generations, with households gradually leaving as drought conditions, a flood of refugees, political unrest, and other factors made life less bearable. Alternately, such factors may have applied enough pressure to cause people to rapidly leave or fail to survive, with only ephemeral occupations remaining at a speed appreciable within a human lifetime. New dates from the site of Sisal indicate that the latter scenario is potentially more likely in this region. It appears that there was a rapid abandonment of monumental architecture, at some sites followed by open-fronted structures, and then only small, round foundation braces in small clusters in site peripheries. This final stage dates to the very late Terminal Classic to the early Postclassic at Sisal, where malnutrition and an early death characterize the primary dated burial.

Shaw-Müller, Kyle (University of Toronto)

[186] *Imagining Middle Horizon (ca. 600–1000 CE) Townscapes on Peru’s North Coast: A New Moche V Motif on Bottles from Huaca Colorada*

The Middle Horizon (ca. 600–1000 CE) witnessed unprecedented urbanization on Peru’s north coast. The city of Pampa Grande dominated the Lambayeque Valley in the north, while the comparable urban centers of Mocollope, Galindo, and Huacas de Moche thrived in the southern Moche region. Despite the development of such large, dense settlements, depictions of cities are lacking from the recorded Moche iconographic corpus. However, some sculpted Moche bottles represent landscapes that contain possible urban structures, including temples. Remarkably, recent excavations at Huaca Colorada—a sizeable Moche temple complex on the edge of agricultural fields in the Jequetepeque Valley—have yielded sherds from several Moche V bottles that add to this collection of landscape depictions. The vessels are painted with representations of large settlements. I interpret these probable “townscape vessels” in the context of Huaca Colorada’s late ceremonial landscape and argue that they depicted the home cities of pilgrims who ritually terminated the bottles at the site.

Sheehan, Michael (Bureau of Land Management)

[227] *When the Middle of Nowhere Becomes Somewhere: Terrace, Utah, and the Transcontinental Railroad*

Completion of the transcontinental railroad in 1869 radically transformed westward expansion of the United States in the nineteenth century. The remote town of Terrace, Utah, provides a unique lens through which to examine that transformation. Terrace was a major maintenance hub for the railroad and was home to approximately 800 people, including an estimated 200 Chinese workers who lived in “Chinatown.” The Chinatown at Terrace was the third largest in Utah in the last quarter of the nineteenth century. The Bureau

of Land Management-Salt Lake Field Office and the Utah State Historic Preservation Office conducted a series of excavations at Terrace, focusing primarily on Chinatown, between 2020 and 2025. Materials recovered from those excavations, ranging from glass and ceramics to food remains, indicate that the residents of Terrace in general, and Chinatown in particular, were drawing on a global resource base even though to all appearances their town was in “the middle of nowhere.”

Sheets, Payson (University of Colorado)

[36] *For Supernatural Access, Ceren Households Produced Their Own Incensarios and Provided Gifts to a Professional Diviner*

Ceren household cultivation provided ample food from milpas surrounding their properties, with nearby outfields. A manioc cultivation zone yielded more than 10 tons of tubers that were just harvested. All households overproduced certain items beyond their consumption needs for exchange with other households. The items included manos and metates, perforated mortars, cotton thread, painted gourds, pigment for people's skins during a ceremony, agave fiber, cotton seed oil, cacao, and bajareque-architecture reinforcing poles. Each household manufactured their own *incensarios*, with an animal figure at the juncture of the handle and bowl. Surprisingly, each household building had its own *incensario*. They were to connect residents with their spirits of deceased ancestors, deities, or other elements of the supernatural domain. Any resident wishing professional divination could contact the woman whose practice was performed in Structure 12. If both agreed, the client would produce an artifact as payment for services and hand it to her. She would then cast a collection of minerals or beans to be “read” and the result conveyed to the client. In addition to divination, she probably was a curer, and could well have been a midwife. Her connections to the supernatural domain must have been more effective than individual Cerenians.

Shelley, Nathan (Center for the Study of the First Americans, Texas A&M University), Kelly Graf (University of Kansas), and Ted Goebel

[195] *Intra-site Spatial Analysis of the 13,000–12,700-Year-Old Component at Shég' Xdaltth'i', Central Alaska*
Shég' Xdaltth'i' is (FAI-2043) located about 30 miles south of Fairbanks, Alaska, in the Tanana Flats. Results of archaeological testing and excavations between 2013 and 2023 identified three distinct archaeological components, Components 1, 2, and 3. Component 1 and 3 date to 13,800 cal BP and 5000 cal BP, respectively. Component 2 has been further differentiated into two chronologically discrete subcomponents, 2a (lower) and 2b (upper), found in two isolated areas of the excavation. In each area, Component 2a materials were found associated with a lower hearth feature dating to 13,000 cal BP, while materials associated with 2b were found associated with slightly higher hearths features dating to 12,700 cal BP. While excavating a 25 m² block, approximately 60,000 pieces of archaeological materials were collected in situ with three-point provenience. This poster will discuss the spatial patterning of lithic technological activity areas in Component 2 at Shég' Xdaltth'i'. Data from the lithic analysis of the Component 2 artifacts will be used to delineate potential activity areas throughout the site. We will use spatial analyses to demonstrate different lithic technological activity areas in Component 2 and to test the discrete nature of these activity areas in relation to radiocarbon dates.

Shelley, Nathan [195] see Graf, Kelly

Shelley, Nathan [195] see Rasic, Jeffrey

Shen, Ling [258] see Xue, Liping

Shen, Wenxi [220] see Chen, Xuexiang

Shenkman, Allyson, and Lacey Carpenter (University at Buffalo)

[94] *The Early Comal in Oaxaca: Exploring Specialized Usage*

Culture and food are inextricably linked, and cookware is a material expression of this connection. In Oaxaca and Mesoamerica, the comal has formed an integral part of the cooking tool kit for millennia. The use of comales for preparing tortillas is well-documented in Oaxaca, with examples as early as 500 BCE. The cultural significance of tortillas has been emphasized by Mesoamerican archaeologists; as a portable, quick-

cooking, and long-lasting food, the tortilla played a key role in expanding populations and diversifying work outside of subsistence farming which contributed to developing urban complexity throughout Mesoamerica. At Teotihuacan, for instance, the distribution of comales around the Avenue of the Dead may indicate communal subsistence for early construction workers, a context that extends beyond family food preparation. In this paper, we analyze the distribution of comales across multiple regions in Mesoamerica to better understand the timing of their appearance in Oaxaca. Within this macro-regional context, we present data from an assemblage of comales recovered from excavations of houses at the Tilcajete sites (500–100 BCE) to better understand the context in which early comales were used as well as the physical properties of these ceramic vessels.

Sheridan, Kelton (Southern Methodist University)

[76] *Bone Temper under a Microscope: Challenges and Outcomes of Experimental Ceramic Petrography*

Ceramic petrography is a useful way to understand microscale decisions that past potters made when constructing their vessels. Certain choices made by potters can also lend insight into daily practices that contribute to individual and cultural identities. Pottery tempered with animal bone is found throughout Texas on many different types of sites, made by different cultural groups. Archaeologists have made great strides in identifying the temper as animal bone and conducting petrographic analysis generally focusing on provenience of the clay. But what can we learn about the bone itself as a meaningful component to the pottery production process? How is bone prepared before adding to the clay? How does it break down in the firing process? These are questions I seek to answer through the production of experimental briquettes and textural analysis of thin sections. This paper explores the results from an experimental study making ceramics tempered with animal bone, and what I learned through the process of the subsequent petrographic analysis. I will also discuss the challenges I encountered and the lessons I learned from the petrographic analysis of these experimental briquettes as well as how the training I received in ceramic petrography was essential to conducting this study.

Sherman, Simon (Washington University in St. Louis)

[273] *Three Archaic? Examining the Role of Interdependence at Middle Archaic Sites in Louisiana*

Some of the earliest monumental earthen constructions in North America date to the Middle Archaic period (7000–4000 BP) in Louisiana. Three mound complexes such as Frenchman's Bend (16OU259), Watson Brake (16OUI75), and Hedgepeth (16LI7) occur in distinct geologic and physiographic contexts, yet all are associated with swampy floodplain environments. Frenchman's Bend lies on a ridge bordering the Ouachita Valley, Watson Brake at the junction of an upland stream valley with the Ouachita segment of the Mississippi alluvial valley, and Hedgepeth along a small Tertiary upland stream valley. Despite these varied settings, the sites share similar ecological conditions that framed construction. While scholars have suggested that exchange during the Middle Archaic was limited beyond the circulation of red jasper beads, recent analyses complicate this view. This paper reexamines lapidary items, zoomorphic beads, and chipped stone from Middle Archaic sites and Late Archaic sites like Poverty Point (16WC5) to reconsider interaction, exchange, and symbolic practices in early mound-building societies.

Sherwood, Chloe, Rodrigo Guzman (University of Central Florida), Michael Callaghan (University of Central Florida), and Brigitte Kovacevich (University of Central Florida)

[99] *Using Lidar Data and GIS Analyses to Understand Looting Patterns in the Maya Biosphere Reserve*

Looting continues to threaten archaeological heritage sites across the Maya Biosphere Reserve in Petén, Guatemala. This research explores looting activity at sites both inside and outside the Mirador-Río Azul National Park, focusing on major centers such as El Mirador, Nakbé, and Wakná, occupied from the Middle Preclassic to Terminal Classic periods (800 BC–AD 900). Through lidar data and GIS analyses, looting clusters were identified, as well as their associations with trails, camps, and freshwater reservoirs. Findings indicate that looting is more concentrated outside the park, highlighting the value of park boundaries and protective measures in reducing site destruction. Significant associations were also found between looting hotspots, water reservoirs, and trails, while no strong link appeared with camps—suggesting looters avoid areas with greater human presence such as rangers or community members. This project highlights how spatial technologies can reveal patterns of site vulnerability, guide artifact re-provenancing, and even

anticipate future looting. By identifying environmental and infrastructural factors that shape looting activity, this research offers insights for heritage management and hopes to contribute to strengthening conservation strategies across the Maya lowlands.

Shevnina, Irina [315] see Berner, Jack

Shiao, Jen-Chieh [84] see Chew, Zi-Qi

Shield Chief Gover, Carlton [49] see Williams, Makayla

Shimada, Izumi

[258] *Tree of Many Parts: 10,000+ Years of Human and Algarrobo (Prosopis sp.) Interplay on the North Coast of Peru*

This paper discusses highly varied, durable, and valued interrelationship Indigenous inhabitants of the north coast of Peru have had with the thorny, flowering native tree locally known as *algarrobo* (aka *guarango*; *Prosopis pallida*; mesquite in English) for more than 10,000 years. While its valued roles for the historical and modern dwellers and their anthropogenic landscape have been recognized by botanists and their allies, its older archaeological roles and significance are not well known or documented. Practically all parts of the tree including its resin and fallen leaves were used for economic, social, and/or religious purposes. Edible bean pods have served as a major fodder for llamas and other domesticates. Its longevity, surviving over 1,000 years through droughts and El Niño rains and floods, explains why the tree has served as the symbol of resilient life. Its predilection for growing in artificially disturbed areas such as deep tombs explains why it appears in the narrative Sicán art depicting the mortuary process of a key deceased leader. In essence, the tree has been an integral part of life and landscape of the coastal Peru and serves as an informative historical ecology case study.

Shimada, Izumi [211] see Gonzalez-La Rosa, Luis Manuel

Shimada, Izumi [293] see Sharp, Kayeleigh

Shingoitewa, LeRoy (WestLand, Tribal Monitor Program Lead), and Bernadette Carra (WestLand, Tribal Monitor Group Manager)

[37] *Project Budgeting to Support Early Engagement and Ongoing Collaboration with Tribes*

Cultural resource management, including archaeological and built-environment studies, is a multi-billion-dollar-per-year industry. Archaeologists and other non-Native specialists have developed a variety of Western-science-based research approaches to serve project needs and reveal information about cultural heritage, including cultural resource surveys, artifact analysis, and data recovery. Historically, Tribes have had little input into how to field projects and how the collected data is interpreted and utilized. In response, some Tribes have developed their own Tribal CRM departments, while others have encouraged archaeologists and project proponents to integrate Tribally informed inventories and community-based mitigation alternatives rooted in data sovereignty. At the same time, the mining, renewable energy, land-development, and other land-based industries are increasingly looking to fund socially responsible projects. Tribal engagement can complement a company's social governance and bolster community outreach efforts. Successful projects today rely imperatively on the willingness of archaeologists and project managers to serve as ambassadors for Tribal input and to adopt more progressive Tribal engagement strategies, often with dedicated support from federal and state agencies. This presentation explores project budgeting strategies for tribal engagement and best practices to open pathways for what Tribes might actually want for a project.

Shiratori, Yuko, and Ruben Nunez Ocampo (Centro Geo)

[161] *Exploring the Selva Lacandona: New Evidence toward the Rediscovery of Sak B'alam*

The Selva Lacandona in Chiapas is one of the largest rainforests in Mexico, located in the easternmost part of Chiapas, bordering Guatemala. Most of the selva is within the Montes Azules Biosphere Reserve (REBIMA), a protected biodiverse natural area. Due to this, deforestation and inhabitation as well as archaeological research in the REBIMA are restricted. However, some mobile squatters have begun an illegal occupation

within the REBIMA, damaging the vegetation by deforestation and slash-and-burn farming, and are involved in looting Maya objects in the selva. Proyecto Arqueológico Sak B'alam has been exploring the REBIMA in the Selva Lacandona to rediscover the last settlement of Lakandon Ch'ol, called Sak B'alam, which was conquered by the Spaniards in 1695 and abandoned in 1714. The salvage investigation of a squatter's settlement in the REBIMA has recovered new evidence for the understanding of the Lakandon Ch'ol and Sak B'alam. This paper presents recent research in the REBIMA, discussing some occupations in the preconquest period.

Shiratori, Yuko [161] see Bogner, Rachael

Shiratori, Yuko [161] see Lozada, Josué

Shnaider, Svetlana [315] see Ho, Percy Hei Chun

Short, Laura (HDR)

[70] *Earth Ovens across the Red River: Fire-Cracked Rock Features in North-Central Texas and South-Central Oklahoma*

Earth ovens are well documented across the entire United States and through much of the world; yet, in Texas, they are largely associated with the western and central portion of the state. This paper seeks to address the relative lack of attention to earth ovens in the rest of the south-central United States, by presenting a preliminary analysis of earth ovens in north-central Texas and south-central Oklahoma. In addition to examining the distribution of earth ovens across the landscape and their utilization by the people of the Southern Plains, a meta-analysis of our understanding of earth ovens will also be addressed. While the presence of piles of burned rock have been well known since early studies of Texas archaeology, these features only really began to be understood in the 1970s. Thus, another goal of this paper is to examine how reporting on these features has changed through time.

Sibilia, Ella, Oliver Casadei, Megan McCracken, Kathryn Anderson, and William Chadwick (Indiana University of Pennsylvania)

[77] *Close-Interval Metal Detection of Wreckage at Crash Sites of Large Aircraft to Identify Priority Areas for the Recovery of Human Remains*

This B-17 case study explores a widespread, shallow aircraft crash site with a roughly west-to-east trajectory. This area was initially delineated as a 110 m² area through wide-interval (20 m transect) metal detection survey. Select areas of site were subjected to close-interval metal detection and pedestrian survey to better understand site boundaries and distribution of materials toward the recovery of human remains. Spatial positioning and material type were recorded for each metal object recovered from incident-related strata. Excavation units were situated based on observations from these surveys. Potentially probative materials were subsequently recovered within and outside the initial site boundaries. Although this approach has not been traditionally employed during site investigations, the survey results suggest that assessment of material type may offer a quick, effective means of identifying potential excavation areas in large and complex sites. When incident markers have been obscured on the landscape, close-interval survey methods may narrow down potential areas for excavation.

Siegel, Peter [44] see Kiernicki, Lydia

Sierpe, Victor [58] see Morello Repetto, Flavia

Sierra, Miya

[280] *Pottery Types and Trade Networks in Eighteenth-Century New Mexico*

San Miguel de Carnué (LA 12924) is a multicomponent archaeological site located east of Albuquerque in Tijeras Canyon. This is within the traditional lands of the Cañón de Carnué Land Grant. This site contains the remains of an eighteenth-century colonial plaza settlement connected with that community land grant. The location and the history of this particular site is of interest because the inhabitants, who were themselves multiethnic, lived near and interacted with Pueblo Indian communities that produced and traded pottery. This archaeological site has potential to yield more information about this trade through analysis of ceramics

collected during a 1946 University of New Mexico archaeological field school. Through this analysis, we can learn more about the people who made these ceramics and how they were connected with this colonial settlement.

Sillar, Bill [79] see Ogburn, Dennis

Silliman, Garrett [323] see Millhauser, John

Silliman, Stephen (University of Massachusetts Boston)

[174] *Indigenous Use of Metal in Colonial Contexts—It's Not What You Think: Archaeology, Heavy Music, and Heavy Heritage*

This paper explores representations of North American colonial and Indigenous histories in popular music with an eye toward archaeological interventions and implications. As an intervention, we need to recognize that musicians narrate some of the same pasts we study, and their songs likely have better traction than our publications, talks, and museum exhibits. Song themes about these histories tend to fall into two categories—tragic, terminal stories of vanishing people in the wake of national and colonial processes or heavy stories of Indigenous persistence that link past and present despite those powerful forces. It is not hard to find parallels in archaeological interpretation over the last few decades. In terms of implications, Indigenous storytelling in music, especially in the metal genre, helps to pinpoint lingering problems in archaeology pertaining to hybridity, adoption, and change/continuity. The ways that Indigenous musicians have taken up metal, historically a white musical genre, over the last 20 years point to creative strategies within longer arcs of persistence and survivance.

Sills, E. Cory (University of Texas at Tyler), and Heather McKillop (LSU)

[36] *Chemical Signatures in Marine Sediment of Ancient Activities at Submerged Salt Works*

Patterns of sediment chemistry at the Paynes Creek Salt Works reveal evidence of ancient Maya household activities, including salt production, salting fish, and other crafts. This research builds on previous studies of soil chemistry analyses from multiple lowland Maya sites that identified the presence and abundance of specific chemicals associated with activities. Sediment chemistry at the salt works provides valuable information lacking in the highly acidic red mangrove peat matrix of the sites that destroyed bone, microfossils, shell temper in pots, and calcium carbonates in other materials. We suspected that fish were salted in addition to salt production since both are common activities at salt works worldwide, modern and past. Based on previous studies at Chan b'i and Ta'ab Nuk Na salt works, marine sediment samples were analyzed at a cluster of submerged salt works recently excavated on an NSF project. The chemical signatures show areas of brine boiling, brine enrichment, drying fish, and additional activities. In the absence of preserved fish or animal bones, elevated levels of calcium and magnesium suggest fish processing. High concentrations of calcium, phosphorus, potassium, magnesium, manganese, aluminum, zinc, and barium indicated brine boiling or brine enrichment activities.

Sills, E. Cory [201] see Appert, Rebecca

Sills, E. Cory [278] see Broussard, Alex

Sills, E. Cory [165] see Foster, Cheryl

Sills, E. Cory [36] see McKillop, Heather

Sills, E. Cory [278] see Meaux, Amanda

Sills, E. Cory [304] see Miller, Sarah Nicole

Silva, Fabiola E. (White Sands Missile Range)

[317] *Saqueo y Hechizas: A History of Looting, the Antiquities Market, and Forgeries in Northwestern Chihuahua, Mexico*

Saqueo, the illegal removal of prehispanic artifacts from ancestral lands, has plagued Latin America since colonial times. The collective human experience of coveting the “other” the “forbidden” and accumulating “treasure” has detrimental results to both the archaeological record and living descendants. The purpose of this paper is to examine the complex history of looting, the antiquities market, and forgeries in northwestern

Chihuahua, Mexico. Casas Grandes, or Paquimé, is the focus of this study. This site's highly collectible ceramics and proximity to the United States/Mexico border, make this an unusual case study where commodities are extremely close to the market. Haciendas, the railroad, the lumber industry, the Mexican Revolution, and the Joint Casas Grandes Project all contributed to a network of looting, trade, forgeries, and contraband of Casas Grandes pottery among locals (Mestizos and Mormons) and foreigners within a 100 km radius within a span of 100 years. Data for this study was collected by analyzing Casas Grandes pottery collections and archives curated at several museums in the US Southwest as well as a series of extensive interviews conducted with looters, collectors, artisans, and museum professionals in the region.

Silva de la Mora, Flavio (University of Alabama Tuscaloosa)

[168] *Households, Communities of Practice, and Living Collections: Honoring Rosemary Joyce's Influence*

My research engages with many of the themes that Rosemary Joyce has so powerfully advanced: households as sites of practice and knowledge transmission, the entangled relationships between people and things, the value of working with legacy collections, collaboration with descendant communities, and the importance of recognizing voices beyond dominant centers of power. In the Maya Lowlands, I have worked outside palace and temple walls, focusing on commoner houses and rural communities through the study of lithic collections, from surface surveys to workshops, in the same area where I examined roads and exchange routes. Using a material science approach, I traced obsidian and other materials to reconstruct communities of practice and bottom-up networks that connected households across landscapes. Building on this foundation, my work has also explored Maya lithic technology, crafting, and daily life alongside archaeobotany and soil chemistry, turning to kitchens, patios, and hearths as spaces where ecological knowledge, memory, and identity were produced in daily practice. Inspired by Joyce's vision of archaeology as a profoundly social and theoretically expansive endeavor, integrating feminist and Indigenous perspectives, embracing diverse materials, and foregrounding communities of practice, I celebrate her enduring influence as a model for more inclusive and transformative archaeologies.

Silva Noelli, Francisco [107] see Sallum, Marianne

Silver, Michael

[193] *Were Hohokam Stone Palettes Used in Canal Engineering?*

Carved stone palettes are recognized as a distinctive characteristic of the Preclassic Hohokam culture. Palettes have been found throughout the Hohokam region and their distribution has helped to define that region. Palettes are frequently, but not exclusively, associated with cremation burials; many appear to have been deliberately broken. They are also thought to have had some non-mortuary function or functions. Prior study has documented context and physical properties of palettes and examined potential uses, including as a tool for pigment processing and use (i.e., a palette). During the same Preclassic period associated with palettes, the Hohokam constructed irrigation canals by exploiting or creating contours in the landscape to direct and control the flow of water. It is supposed that the Hohokam engineered these irrigation canals without the use of leveling instruments. I examined the descriptions, drawings, and measurements of over 1,000 Hohokam palettes documented in Devin White's 2004 monograph. With few exceptions, palettes had been worked in a manner that would have afforded use as leveling instruments for canal engineering and irrigation system construction. Ongoing experiments, using replica palettes, demonstrate that palettes could serve as a practical, effective, and accurate leveling instrument for canal engineering.

Silverman, Stephanie (University of Kansas)

[91] *It IS That Deep: Pseudoarchaeological Internet Content and the Rise of Anti-intellectualism*

The rise of the Internet as the sole resource for information exchange, coupled with the modern rise in anti-intellectualism, platforming of "alternative" science and conspiracy theories, and the rejection of higher academia as elitist and biased, has led to a resurgence in pseudoscientific content across the Internet, especially in the realm of pseudoanthropology and pseudoarchaeology. While much of this content seems irrelevant to researchers and academics, as most pseudoscientific Internet content can be ignored or passed off as stand-alone videos by disreputable sources, pseudoanthropological content is highly damaging to the reputation of the field and to real archaeology taking place. The notion that anyone can be an expert on the

Internet also contributes to the continual spread of anti-science rhetoric, which in turn creates a feedback loop that fuels anti-science content and belief among people.

Silvia, Zachary (Stanford University)

[174] *Sumerian Cry: Mesopotamian Archaeology in Heavy Metal's Anti-cosmic Underground*

This paper explores the reception of Mesopotamian archaeology in the music of heavy metal's most fringe communities, particularly the subgenres of black and extreme metal. It does so as a case study emphasizing the ways in which Near Eastern antiquity altered the dynamics of modern new religious movements after moments of archaeological discovery in the nineteenth and twentieth centuries. More than just a genre of loud music, these heavy metal "scenes" share in lyrical themes that often embrace, if not celebrate, nihilism, social alienation, Satanism, and personal decadence. In doing so, community self-representation casts its adherents as social outsiders challenging prevailing religious, political, and cultural hegemonies aligned with Luciferian new religious movements—merging inverted Biblical traditions with authority sought in ancient Mesopotamian cosmologies. These cosmologies are ones only made visible by archaeological discovery and its reception in pop culture, such as through the works of H.P. Lovecraft and the Simon *Necronomicon* (1977). Unlike other black metal scenes of the United States and Europe, this brand of anti-cosmic extreme metal has broad appeal in the Global South from as early as the late 1980s as much as northern contemporaries.

Simmons, Alan (UNLV)

[252] *Living on the Edge: Neolithic Ghuwayr I in Southern Jordan*

The documentation of large Near Eastern Neolithic mega-sites over 30 years ago caused considerable revision to our comprehension of early village life. Likewise, smaller villages, many in what are now marginal environments, also provided important new data. Ghuwayr I is one such site. It is a small but exceptionally preserved Pre-Pottery Neolithic B village located in southern Jordan. At the risk of turning myself into legacy data, this presentation updates our investigations that ended over 25 years ago. While overdue, we are now nearing completion of a final monograph. One research objective was to examine if a "rural" and "urban" (or "core/periphery") distinction could be made between Ghuwayr I and mega-sites. Our findings suggest that Ghuwayr I was not a peripheral village linked to larger sites. Rather, it is an unexpectedly complex settlement that may have been a regional center. In particular, the village's architecture is complex, including a likely public area / "theater." This presentation summarizes results from Ghuwayr I and its place within the wider Neolithic world. It also examines if small settlements caused the same negative ecological effects as some larger sites. Finally, we discuss the development of an archaeological park at the site.

Simmons, Alan [299] see Henning, Savanna

Sinensky, R. J. (Crow Canyon Archaeological Center), Jonathan Dombrosky (Crow Canyon Archaeological Center), and Stewart Koyiyumtewa (Hopi Tribe)

[314] *Reassessing Environmental Causes of Thirteenth-Century Migration in the Northern US Southwest: Hopi Perspectives and Integrated Plant-Animal Evidence*

Environmental overshoot and drought-induced migration have been central themes in Southwest archaeology for over a century. The thirteenth-century migration of tens-of-thousands of Ancestors from the Mesa Verde region to the Hopi Mesas, Zuni villages, Pueblo of Acoma, Rio Grande Pueblos, and beyond is perhaps one of the most influential examples. Declines in specific plants and animals are often cited as drivers of this movement, yet issues of error and representativeness leave the exact relationship between environment and migration unresolved. Simplistic conclusions linking human impacts on landscapes and mobility also carry real implications for descendant communities. We address these concerns by integrating Hopi perspectives with a large, multisite plant and animal database curated by the Crow Canyon Archaeological Center. Our analysis reassesses links between environment and migration in the Mesa Verde region, and is framed within a long-term collaboration between Crow Canyon and Hopi farmers exploring the environmental conditions required for growing traditional maize varieties.

Sinensky, R. J. [335] see Coffey, Grant

Sinensky, R. J. [314] see Evans, Lydia

Singh, Garima (Deccan College PGRI, Pune)**[266]** *Identifying Heat-Induced Altered Minerals of Harappan Faience*

The paper aims to assess the uniformity of Harappan settlements in the Ghaggar region, India, with the objective of identifying potential craft industrial areas. These areas may have facilitated interactions between the inhabitants of the site and urban Harappan settlements, leading to the development of a substantial internal trade network. The research primarily focuses on faience and the functional characteristics of furnaces and their potential by-products, specifically examining the typological differences between the furnaces and kilns found at the sites. The geochemical characteristics of in situ faience bangle fragments that have undergone heat alteration were obtained from furnaces and kilns located at the Harappan sites. The authors investigated the control samples using Fourier transform infrared spectrometry (FTIR) and used thermogravimetric analysis (TGA) to examine burnt soil samples and heat-treated faience bangles. However, the analysis also incorporated other scientific applications such as X-ray diffraction (XRD) and scanning electron microscopy (SEM). The study investigates the structural modifications of fired clay plaster obtained from kilns and furnaces to ascertain the nature and degree of molecular alterations in soil minerals. To evaluate this, research seeks to examine the advancements in pyrotechnology among the Harappans by comparing available data from other sites.

Sitzia, Luca [93] see Parish, Ryan

Skinner, Dougless [56] see Paulson, Kirsten

Skosey-LaLonde, Elena (ICArEHB, Universidade do Algarve), Ana Gomes (ICArEHB, Universidade do Algarve), Vera Gomes (CCMAR, Universidade do Algarve), Mussa Raja (Eduardo Mondlane University), and Nuno Bicho (ICArEHB, Universidade do Algarve)

[221] *The Climate of Agriculture: Monsoon and Temperature Pressures on Early and Late Farming Communities in Southern Mozambique*

Mozambique's Holocene archaeological record offers critical insights into human-environment interactions along the southern coastline of the western Indian Ocean. This paper investigates the role climate change has had on facilitating the spread and settlement of agricultural populations in Holocene Mozambique. Stable isotope ($\delta^{18}\text{O}$ and $\delta^{13}\text{C}$) analyses of the Lake Nyalonzelwe sediment-core (Inharrime, Inhambane) were used to reconstruct precipitation patterns; namely, changes in monsoon intensity in Holocene Mozambique. TEX_{86} paleothermometry and branched glycerol dialkyl glycerol tetraether (brGDGT) indices provided estimates of mean annual air temperature (MAAT [$^{\circ}\text{C}$]) over the last 7500 cal BP. Results suggest that MAAT stabilization and prolonged monsoon seasons may have contributed to the viability of the episodic migration of the Bantu through coastal Mozambique between 3000 and 2000 yr BP. During the earliest introduction of agriculture and through the medieval period in Mozambique, site abandonment is commonly tied to precipitation decrease rather than changes in temperature, and resilience to drought is seen in the heightened use of marine and coastal resources. These paleoenvironmental and paleoclimate data are integrated with ethnographic histories and archival archaeological records to explore patterns of human migration, settlement, and resilience strategies of Early and Late Farming communities in southern coastal Mozambique.

Slade, Alan (University of Texas at Austin: Texas Archaeological Research Laboratory)

[348] *Lithic Raw Material Variability in Folsom Point Assemblages: A View from Eastern Texas and Bordering States*

This study area for this project concentrates on eastern Texas, west Louisiana, southeast Oklahoma, and southwest Arkansas. Folsom point occurrences are quite rare in the east Texas region; only 18 have been reported. In Louisiana they are even rarer, just a couple have been reported. Nine Folsom points from Arkansas have been reported across the state. And in southeast Oklahoma there are only seven recorded. The second part of the study was to try and identify the raw material sources and toolstone varieties used to produce these points. The materials range from identified cherts, such as the Edwards Plateau chert, and some unidentified cherts. Plus Alibates Agate.

Slayton, Emma (Carnegie Mellon University)

[159] *Human Considerations for Modeling Seafaring*

When considering computational modeling of movement in the past, it is important to remember that we are not modeling merely geography but also human action. While many have addressed the complexities of walking across hillsides and valleys, more complex is the calculation of human effort by people paddling across the sea. Here we do not just have an individual but a group effort against changing environmental factors that continually push pressure upon a vessel and the people in it. Using knowledge gained from experimental archaeology, we can make an argument for more accurately addressing the human component of computationally modeling seafaring in the past. Increasingly, multiple researchers have worked to capture these metrics, but we are still determining how to appropriately incorporate them into computational models that could address traveling across the sea in the past. One issue is that many people who compute seafaring modeling do so using different metrics, different methodologies, and different environmental data that may affect both regional perspectives and model complexities. This paper will address the complexities of capturing and addressing human effort within experimental archaeology and differing seafaring models, as well as showcasing an example of this work from the Caribbean perspective.

Śliwa, Jakub [276] see Palonka, Radosław

Sloan, Anna (Southern Oregon University), Chelsea Rose (Southern Oregon University), and Kimberly Wooten (California Department of Transportation)

[346] *Reduce, Reuse, Research: Creating a Digital Database to Integrate Historical Plastics into Archaeological Investigations*

Archaeologists are increasingly confronted by plastic artifacts, and while interest is growing, there are few resources to help identify these items and how they can inform on the past. Southern Oregon University is developing an open-source online type collection—the Historic Plastics Database—as an aid for the identification and interpretation of plastic artifacts. The collection provides archaeologists and researchers tools to date sites accurately and explore more nuanced questions about how the growing commercialization of plastic items changed daily life by providing affordable, mass-produced consumer products. When plastic objects are neglected, important avenues in twentieth-century archaeological research are overlooked, such as women's growing preference for plastic jewelry, buttons, and other accessories, compromising our ability to recognize innovation, adaptation, and agency in the people we study. This paper will discuss the creation of the Historic Plastics Database, and challenges and opportunities encountered along the way.

Sloan, Kathryn [114] see Zaragosa, Gabriella

Slocum, Diane, and Adolfo Batun-Alpuche (Universidad de Oriente)

[87] *Rethinking Colonial Churches through Architectural Stratigraphy in Tahcabo, Yucatán, Mexico*

Traditional scholarly interpretations of colonial mission sites have presented these places as primarily material evidence for sixteenth-century European conquest, failing to acknowledge their continued use and alteration by local peoples. This paper instead investigates the longer-term material transformation and interrelated change in meaning of a colonial mission church in Tahcabo, Yucatán, Mexico. Drawing on the lens of object itineraries, this analysis focuses on the church's object journey. Analysis of stratigraphic sequencing of church construction phases using a Harris Matrix reveals evidence for architectural change that disrupts simplistic narratives of the church as a lasting remnant of colonial dominance. This examination contradicts views of the church as solely an enduring colonial power and instead supports the vision of the church as a material palimpsest, the result of local and nonlocal actors with different agendas.

Slotten, Venicia (University of California, Santa Barbara)

[163] *Ancient Arenal's Forested Agroecosystems: Plant Resource Diversity in a Volcanic Landscape*

The Arenal region of Costa Rica experiences frequent volcanic eruptions every few hundred years, which has periodically disrupted the way of life for the people, flora, and fauna in the vicinity of Arenal volcano. Despite this, village communities thrived in the area for several millennia through the incorporation of hundreds of plants to meet their resource needs. Without a distinct specialization in their agricultural system, these ancient people consistently used their ecologically diverse setting to their advantage through a cuisine that

welcomed underground storage organs (tubers) and tropical fruits growing on trees which could withstand the tumultuous conditions that would result from a volcanic eruption. The management of this fruitful landscape ensured that forest products would provide a plentiful harvest for inhabitants and their future generations.

Slotten, Venicia [306] see Hastorf, Christine

Slotten, Venicia [81] see Lee, Aidan

Slovak, Nicole (Santa Rosa Junior College), and Stacy Drake (Field Museum)

[282] *Violent Death, Reverential Burial: A Bioarchaeological Analysis of a Late Intermediate Period Mummy from Ancon, Peru*

This poster presents the latest research into Mummy 20, a partially mummified, tattooed, adult male unearthed at the Ancón Necropolis, a massive burial ground located on the central coast of Peru. Since his discovery in the late nineteenth century by archaeologist George Dorsey, Mummy 20—currently housed at the Field Museum in Chicago—has been recognized as an outlier relative to other burials from the site owing to the apparently violent manner of his death and the elaborate preparation of his body and associated *fardo* (or mummy bundle). Here, we present the results of our ongoing bioarchaeological analysis of Mummy 20, including evidence for extensive skeletal trauma and postmortem funerary treatment, and discuss future study plans. We also discuss Mummy 20's significance within the broader context of Late Intermediate period (1000–1438 CE) burials on Peru's coast—particularly in the north—where similar patterns of peri-mortem injury and mortuary ritual have been observed. *****This presentation will include images of human remains.**

Slowinski, Lauren (Fullerton)

[73] *A Post-manufacture Use-Life Analysis of Lake Mohave and Silver Lake Projectile Points from the Mojave Desert*

This study analyzes the post-manufacture use-life of 137 Western Stemmed Tradition (WST) Lake Mohave and Silver Lake projectile points from collections across California's Mojave Desert. Two-dimensional flatbed scans were used to evaluate resharpening through the Hafted Retouch Index (HRI), use-related damage via diagnostic impact fractures, and penetration potential using tip cross-section area (TCSA) and perimeter (TCSP). Results show notable differences between point types and raw materials. Lake Mohave points exhibit lower average HRI values than Silver Lake points, indicating less intensive resharpening. Among Silver Lake specimens, fine-grained volcanic stone examples display higher HRI values than those made of obsidian, suggesting raw material influenced curation strategies. Impact fractures occur more frequently on Silver Lake points, reflecting greater use intensity or functional differences. TCSA and TCSP values demonstrate that both point types were morphologically capable of effective penetration, though subtle distinctions may relate to prey size or weapon delivery systems. Overall, these results highlight variability in WST technological systems and suggest that point morphology, raw material selection, and curation intensity reflect adaptive strategies in a resource-variable desert environment. This research also underscores the utility of digital collections for comparative lithic analysis during the terminal Pleistocene–Early Holocene transition.

Slowinski, Lauren [319] see Knell, Edward

Slucky, Alexandra (University of York), Tim Williams (University College London), Lara Gonzalez Carretero (University of York), and Michelle Alexander (University of York)

[163] *Managing Medieval Merv: A Combined Archaeobotanical and Biomolecular Approach to Exploring Irrigation, Agriculture, and Subsistence at Desert Oasis Cities along the Silk Roads Focused on Merv (Turkmenistan)*

The Silk Roads, the far-reaching commerce routes via Eurasia that thrived over several millennia, feature many ancient cities in marginal environments requiring innovative agricultural management for sustainability and economic relevance. This paper looks at irrigation expansion and agriculture management at Merv, a Central Asian oasis city and strategic Silk Roads nexus that reached its apogee during the early medieval period between 700 and 1200 CE. Irrigation is vital within the Merv oasis for prolonged agricultural management due to the region's arid climate. Following the Arab conquest, demands for new infrastructure and access to clean water resulting from a rapidly rising urban population saw an industrialization of irrigation

and agricultural transformation. Recent archaeobotanical and stable isotope analysis of introduced stable crops found along the Madjan Canal shows expansion from its original existence as a Sasanian irrigation ditch (second–seventh centuries CE) to a central water system that became the lifeblood of the Islamic city, maintained up until the Mongol sack of 1221 CE. This paper investigates whether innovative irrigation technology facilitated the growing of foreign crops, thus impacting the urban diet and agricultural practices at Merv. Or did the introduction of new crops urge the necessity of irrigation expansion and thus agricultural transformation?

Slusarska, Katarzyna (University of Szczecin, Poland), Amanda Agnew (Ohio State University), Marta Rychtarska (Museum of the First Piasts at Lednica, Poland), and Magda Miciak (Museum of the First Piasts at Lednica, Poland)

[89] *Uncovering Childhood Stress in Medieval Giecz: Nutritional and Biomechanical Factors in Cranial Lesion Formation*

Childhood health in medieval Europe remains poorly understood. Stress-related cranial lesions, often linked with vitamin C deficiency, provide insights into diet, growth, and disease in past populations. This study analyzed cranial lesions consistent with scurvy, such as porosity and new bone formation at muscle attachment sites, in 70 subadults aged up to 11 years from the medieval cemetery at Giecz, site 10 (Poland), excavated between 2014 and 2021. The excellent preservation and high proportion of subadults offer an opportunity to explore juvenile health in this region of Europe. Lesion presence and severity were assessed using standardized criteria at sites of masticatory/suckling muscle attachments. Results show a statistically significant association ($p < 0.05$) between lesion formation and age, likely reflecting developmental transitions in feeding. Lesions were most frequent and severe in individuals around three years old, coinciding with the shift to solid foods and increasing independence. Macroscopic analysis combined with predictive modeling highlighted biomechanical and vascular factors influencing lesion development. These findings suggest that vitamin C deficiency was influenced by both dietary and physical stressors in growing children, providing new evidence for the multifactorial origins of childhood stress in medieval Poland. *****This presentation will include images of human remains.**

Slusarska, Katarzyna [89] see Boyle, Ace

Slusarska, Katarzyna [89] see Meyer, Francesca

Slusarska, Katarzyna [89] see Ramsier, Marissa

Slusarska, Katarzyna [89] see Szyndler, Michael

Smallwood, Ashley [319] see Smith, Heather

Smith, Alexander [115] see Connell, Mary

Smith, Alexia [45] see De Schiffart, Sophia

Smith, Briana [36] see Thompson, Amy

Smith, Byron (Cal Poly Humboldt), Franklin Quiros (Cal Poly Humboldt), Timothy Beach (University of Texas at Austin), and Sheryl Luzzadder-Beach (University of Texas at Austin)

[35] *Engineered Landscapes in the Three Rivers Region of Belize: Exploring Reservoir Construction within the Birds of Paradise Wetland Fields*

Recent excavations and coring at the Birds of Paradise wetland field's reservoir demonstrates the complex history of landscape management, construction, and use at this site as early as the Late Preclassic through the Postclassic. Stratigraphy from the reservoir's southeastern embankment presents a multifaceted sequence of burning and deposition possibly reflecting human or naturally transported sediments in the lower reaches of this feature. After studying this reservoir's embankment from all sides, we propose four models of formation. The first model suggests that the reservoir's embankments were initially constructed during the Late Preclassic on top of contemporary sediments. Under this model, locally derived sediments may have been used to initially raise this feature above the surrounding landscape and later distally sourced sediments were

used to continue that raising. The second model posits that the initial raising began during the Late Classic as distally sourced sediments were used to commence construction on top of the broader Late Preclassic paleosol. The third and fourth models focus on the southern embankment's formation and suggests that earthen materials were either transported by the ancient Maya or the result of seasonal and storm pulses within this shallow water margin.

Smith, Byron [124] see McDermott, Michael

Smith, Catherine (Argonne National Laboratory), Chris Howell, Anna Doyle (Argonne National Laboratory), Jamie Lewis (Argonne National Laboratory), and Jennifer Josephs

[218] *Regulatory Changes to NAGPRA Subpart B Present a Dynamic Opportunity for G2Gs*

The core purpose and general process of NAGPRA Protection on Federal Lands (43 CFR Part 10 Subpart B) has remained constant, yet the process specifics have transformed over time. These subtle changes reflect a gradual movement toward increasingly meaningful engagement with NHO and Tribal Partners that exemplify the Government-to-Government (G2G) relationship. These changes present an opportunity to integrate more substantive dialogue into execution of each step, further strengthening relations. This paper highlights the impactful changes and some integration strategies such as promotion of proactive planning and real-time guidance instead of reactive remediation, solicitation of Native expertise in developing general SOPs and project-specific processes and procedures, inviting a continuous assessment of the respectful care and disposition of existing repository holdings, and instilling an actionable function to G2G meetings that stimulates active involvement.

Smith, Derek (Western Washington University), Hazel Lloyd (Western Washington University), Jeffrey Glover (Georgia State University), and Dominique Rissolo (UC San Diego)

[84] *Revealing the Secrets of Shells: Insights from the Malacological Record at Two Ancient Maya Ports*

Since 2011, the Proyecto Costa Escondida (PCE) has been conducting interdisciplinary research along the north coast of Quintana Roo, Mexico. This research has been focused at the ancient Maya port sites of Vista Alegre and Conil, both of which are situated along the south shore of the Yalahau lagoon, a critical habitat for fisheries in the region. These sites have evidence of settlement dating from the Middle Preclassic period to the period of Spanish contact. This nearly 3,000 years of occupation provides a window into shifting adaptive strategies of coastal inhabitants as they dealt with rising sea-levels and shifting political and economic networks. Over the course of our fieldwork at the sites, we have produced a robust malacological record and have conducted detailed analyses of those remains. This paper presents insights from the analysis of ca. 10,000 individual shells and explores the patterns present in these data. This is one of the largest malacological datasets reported in the Maya area and when analyzed through a historical ecological lens provides insights into the dynamic relationship between humans and their near-shore resources as well as important baseline data for today's ecologists interested in assessing the health and sustainability of the Yalahau Lagoon.

Smith, Donald (Chronicle Heritage)

[228] *Archaeological Finds, Geology, and Fortification Structure at Revolutionary War Fort Clinton, West Point, New York*

The Buffalo office of Chronicle Heritage conducted Phase 2 investigation at Revolutionary War Fort Clinton at the United States Military Academy, West Point, New York, in 2024. The study included work with ground-penetrating radar (GPR), deep soils testing with a soil sampling machine, and excavation of test units. It identified a probable underground fort feature (a filled ditch), as well as undisturbed soils buried beneath fill deposits and that contain a preceramic Indigenous American archaeological site. The depths at which the buried soils were identified were highly variable, suggesting the underlying bedrock has an irregular upper surface, possibly with a narrow ridge-like feature. Such a feature may have informed decisions made by the builders of the fort during the Revolution concerning the configuration of an unusual rectangular bastion along its eastern wall.

Smith, Emily (UCSB), and Gustave Greene (University of California, Santa Barbara)

[305] *Fragmented Traces in Degraded Spaces: Testing Alcohol Identification Use-Alteration Methods in Eroded*

Contexts in the Kerma Nile Valley

Use-alteration analysis has shown promise in recent years as a methodological pathway forward in the study of alcohol production and consumption practices. Ceramics were the primary vessels for brewing and viticulture activity, transport, and storage writ large, forming large and impressive assemblages that provide insight into alcohol-linked practices across time. Organic residue analysis methods, though an important line of inquiry, remain inefficient when deployed as the sole analytical method given the ubiquitous nature of key biomarkers used to signal the presence of wine or beer. While preliminary studies (see Arthur 2012, 2021) illustrate the significant results a ceramics-centered approach can provide to understanding alcohol presence at archaeological sites, postdepositional preservation of markers remains an ongoing factor in results interpretation. For sites within Sudanese Nubia, these methods have only just begun to be deployed, and the question of regional and agricultural environmental conditions impacting vessel integrity has the potential to influence the outcome of results. Ceramic data from Hannek, a Kerma-era Kushite settlement (ca. 2050 BCE–1500 BCE) located approximately 7 km north of the Kerma capital in Sudanese Nubia, were analyzed to test the viability of use-alteration techniques on heavily surface depressed and eroded sites within the Nubian Nile Valley.

Smith, Eric [95] see Codding, Brian

Smith, Geoffrey (University of Nevada, Reno), and Richie Rosencrance (University of Nevada, Reno)

[319] *Distinguishing Long-Stemmed Cougar Mountain and Haskett Points in the Intermountain West*

Terminal Pleistocene and Early Holocene sites in the Intermountain West are typically marked by long- and/or short-stemmed projectile points assigned to the Western Stemmed Tradition. Researchers have proposed at least 10 stemmed point types, sometimes on an ad hoc basis, with little regard for using metric data or other information that could serve to decrease variability in how we classify them. In this paper, we review the historical development of two common long-stemmed point types—Cougar Mountain and Haskett—and explore ways to distinguish them using their bases. Their long stems, which are often the only way that Cougar Mountain and Haskett points may be recognized when broken, are at face value similar. Because researchers use such points to assign ages to most Terminal Pleistocene and Early Holocene sites, and because Cougar Mountain and Haskett points likely date to slightly different times, effectively distinguishing the two stemmed point types is more than simply a matter of typological navel-gazing.

Smith, Geoffrey [72] see McDonough, Katelyn

Smith, Gerad (University of Alaska)

[344] *Late Pleistocene Glacial Outburst Floods in the Tanana Valley, Alaska: Integrating New Data and Traditional History*

During the Late Pleistocene, the Copper River basin in Alaska was filled with a large, glacially dammed lake. As the local ice sheets melted back in the mountains surrounding the basin, the lake collapsed and drained into different major watersheds to the north (Tanana), west (Susitna), and south (Copper). Using thermoluminescence dating, we investigate relict landscape features associated with the final northern *jökulhlaup* event, providing the first absolute date for the collapse. The date coincides with the earliest emergence of humans in Alaska.

Smith, Gerad [71] see Hoover, Brooke

Smith, Gerad [313] see Lanoë, François

Smith, Heather (Texas State University), Ashley Medlin, Eugene Gryba, Ashley Smallwood (University of Louisville), and Thomas Jennings (University of Louisville)

[319] *Comparing Ranges of Shape Variation between Experimental and Archaeological Fluted Point Assemblages Using Geometric Morphometrics*

Researchers have used ranges of variation present in the shape of fluted points from archaeological assemblages to test hypotheses concerning North American Late Pleistocene regional variation in point

manufacture, effects of resharpening and allometry, standardized manufacturing techniques, functional constraints, and variation in lithic raw material quality and availability, to name a few. In this study, we compare the range of variation present in an experimental assemblage of fluted points made by an experienced flintknapper, adhering to specific manufacture protocols, to the range of variation present in site-level assemblages of Clovis points using 3D geometric morphometric variables. Discussion will address the implications our results have on understanding sources of shape variation that have affected Clovis point shape in archaeological assemblages. We will highlight the utility of using geometric morphometrics and other measures of variation, such as coefficient of variation, to study archaeological materials to understand cultural factors like point standardization, skill level of knapper or knappers, quantity of knappers, and the knapping environment.

Smith, Heather [183] see Medlin, Ashley

Smith, J. Gregory (Northwest College), Charles Houck (University of North Carolina at Charlotte), and Tara Bond-Freeman (Independent Researcher)

[338] *Mapping with a Master: Reflections on Bill Ringle and the Ek Balam Project (1984–1999)*

Bill Ringle initiated the Ek Balam Project with George Bey in 1984, launching a partnership that lasted over 40 years. Mentored by Bill as an undergraduate, Houck joined the project in 1987 and remained on it after entering graduate school. Bond-Freeman first worked at Ek Balam in 1992 and later became the lead ceramicist. In 1993, Bill and George received an NSF grant to work at Ek Balam just as Smith entered his graduate program, and Bill gave him a shot. All three of us served on the project until it concluded in 1999 and earned our doctorates based on the research we carried out as project members. Here we review the results of the Ek Balam Project's mapping program, excavation work, and lab studies. Over the course of 15 years, we mapped over 3 km² of urban Ek Balam, plus dozens of milpas in the vicinity. Test-pitting and larger-scale excavations were carried out both within the urban center and its hinterland. Analysis of nearly 270,000 sherds revealed details of Ek Balam's development and demise. After this review, we offer suggestions for future Ek Balam researchers and comment on the unforgettable legacy of Dr. William McKinley Ringle III.

Smith, Jaye, and Jeffery Clark (Archaeology Southwest)

[34] *Continued Work on the Ray Robinson Collection: Materials from Fishhook Cave in the Northern Safford Basin, Southeastern Arizona*

Investigations continue into the Ray Robinson Collection by a dedicated team of volunteer researchers, in partnership with Archaeology Southwest and the Arizona State Museum. This paper focuses on the extensive artifact assemblage collected during the 1950s and 1960s from what Ray called the Fishhook Cave site north of Safford, Arizona. This cave is quite possibly the renowned McEuen Cave (AZ W: 13:6 ASM) originally documented by Byron Cummings and Lyndon Hargrave in 1934; and investigated by Bruce and Lisa Huckell and Steve Shackley in 1997 and 2001. Of the 2,687 items documented in the Robinson assemblage, nearly half are chipped stone artifacts made with a wide variety of materials from both local and distant sources. The impressive perishable, worked bone, and ceramic assemblages include objects that are unique to southeastern Arizona. Our preliminary research, along with the artifacts documented from this site, will be an important contribution to the archaeology of this understudied region.

Smith, Jimmy [51] see Smith, Reid

Smith, Jonathan [264] see O'Sullivan, Rebecca

Smith, Matthew [76] see Torvinen, Andrea

Smith, Michael (Arizona State University), and Patrick Roberts (Stable Isotope Laboratory)

[55] *Why Archaeologists Need Systematic Site Population Data*

In this poster we highlight why archaeologists need to assemble systematic site population data of urban and agrarian societies if they are to study fundamental questions about a way of life that is increasingly dominant for humans around the world. At the site level, insights into population and density are crucial to explore

topics like spatial equilibrium, settlement persistence, growth trajectories, and the emergence and variability of urban life. At the regional level, site population data illuminate political economy and human-environmental relationships, and they also permit key urban analyses, including rank-size distributions, urbanization level, settlement scaling, and urban relocation. We also present and describe “URBank,” a new database of urban settlements hosted at the Max Planck Institute of Geoanthropology in Jena, Germany. URBANK links regional databases of urban phenomena, promoting systematic quantitative research on cities across space and time. While URBANK will include many types of information on early settlements, population and population density are key variables that will enable URBANK to advance research on ancient social and economic processes.

Smith, Reid, and Jimmy Smith (Texas Historical Commission)

[51] *Ceremonial Activities in the El Malpais-Cebollita Mesa-Acoma Area of New Mexico (AD 900–1300)*

Archaeological evidence and the traditions of modern Pueblo peoples confirm the profound significance of ritual in Puebloan culture. However, limited contemporary evaluations have been conducted in the El Malpais-Cebollita Mesa-Acoma area. Two sites in this area (LA6918 and LA6919), excavated from 2010 to 2024, which radiocarbon date to ca. AD 897–1384, produced evidence of ceremonial activities. Macrobotanical analysis of hearths from the final burning layer of several rooms detected the presence of domesticated tobacco and plants typically used in ceremonies, suggesting the possibility of ritual room closing. Analysis of blue-green pigment from a small metate using Polarized Light Microscopy and Raman Spectroscopy identified the material as being consistent with copper sulfate mineral, which has been documented in workable paint used in ceremonial performances from Pueblo Bonito, Chetro Ketl, and Aztec West. Additional analysis of the site included Neutron Activation Analysis of over 60 sherds and local source samples. This review seeks to provide a contemporary analysis of the ceremonial activities at this site.

Smith, Ryan (University of Pittsburgh)

[40] *Reconsidering the Northeastern Basin in Circum-Titicaca Interaction and the Development of Complex Societies*
Interregional interaction—here defined as the movement of objects, people, and ideas across distances exceeding routine daily mobility—was a key catalyst in the development of complex societies in the Titicaca Basin. Early Formative cultures such as Qaluyu, Chiripa, and later Pukara tapped into long-distance networks that circulated prestige goods and other valued materials, while Tiwanaku became a hub for migration, exchange, and multiethnic interaction. Such connections did not end with state decline: during the Late Intermediate period, demographic movements and shifting alliances created new forms of interaction with significant sociopolitical implications. Yet not all areas of the basin were equally implicated in these networks. The northeastern basin, from the highlands northeast of Asillo into the valleys of Carabaya and Sandia, lacked large centers or monumental spaces and has therefore received less attention than other subregions. This paper does not critique that imbalance but considers how it may leave our understanding of the development of “core” areas incomplete—especially the northern basin. Recent evidence points to a growing intensity of interregional connections over time in the northeast, though their character varied across periods. By comparing these dynamics with other regions, this study reassesses narratives of interaction and sociopolitical development in the circum-Titicaca world.

Smith, Zachary [198] see Gonzalez Garcia, Jorge

Smith-Guzmán, Nicole [311] see Cabrera, Kevin

Smith-Guzmán, Nicole [311] see Nunez-Cortes, Yajaira

Smith-Guzmán, Nicole [311] see Pace, Veronica

Smith-Guzmán, Nicole [311] see Sharpe, Ashley

Snead, Aidan, Brandon Lewis (Santa Monica College), and Gabrielle Ahdoot

[223] *Programme for Belize Archaeological Project: Sacred Consumption Activities of the Ruling Elite and the Architectural Transformation of the La Milpa Core*

The Programme for Belize Archaeological Project represents a regional research program aimed at elucidating the nature of Maya political, social, and economic integration within the northeastern Petén.

Toward this end, extensive research is being undertaken at the primary center at La Milpa. Of specific interest is understanding the role of La Milpa within the changing political landscape of the region. Contrary to previous interpretations, research undertaken by Santa Monica College suggests that La Milpa was home to an entrenched ruling/elite class no later than the Early Classic. The 2025 field season concluded architectural excavations of Courtyard 149, situated immediately east of the South Acropolis and argued to house one of La Milpa's earliest rulers. In addition, considerable focus was directed toward examining the garden/food processing area associated with Courtyard 135, the residence of La Milpa's greatest ruler, Ukay. Architectural data from Courtyard 149 allow us to propose a gradual development model for the entirety of the southern core, while excavations at Courtyard 135 provide a detailed examination of both the mundane and sacred consumption activities associated with Maya rulers.

Snead, Aidan [62] see Ahdoot, Gabrielle

Snitker, Grant [73] see Fetterhoff, Alex

Snitker, Grant [280] see Peck, Katherine

Snoeck, Christophe [221] see Foley, Sarah

Snortland, J. Signe (Metcalf Archaeological Consultants, a Terracon Company), and Kimball Banks

[104] *Surviving Cold Northern Plains Winters: Mandan and Hidatsa Winter Earthlodge Villages*

Typically, during the Plains Village period Mandan and Hidatsa people built summer earthlodge villages on high Missouri River bluffs overlooking tributary confluences. But winter villages, which were occupied during long, cold winters, were constructed on sheltered floodplains where archaeological evidence was usually washed away during spring flooding. In 2023 Metcalf Archaeological Consultants excavated a cluster of four earthlodge village sites on sheltered bottomland along Square Butte Creek near a dense timber stand on the Missouri River. Ceramics indicate site occupation began during the Huff phase (CE 1300–1500) and reoccurred periodically through the Four Bears phase (CE 1880–1886). The assemblages are atypical of summer earthlodge villages. Winter village sites are an underrepresented type-site with few having been identified, let alone excavated. Ethnohistorical accounts of Mandan and Hidatsa winter villages in settings like the Square Butte Creek Valley support an interpretation that these were winter occupations rather than summer villages, offering an opportunity to explore seasonal differences in cultural material and technology.

Snow, Dean (Pennsylvania State University)

[319] *Basic North American Projectile Point Classification*

My purpose is to address current persistent shortcomings in basic archaeological point classification. Basic classification differs from advanced typology, an analytical process that can lead to the definition of chronological, functional, or morphological types defined for specific problems and purposes. For basic classification to facilitate the identification of specimens to be selected for subsequent analysis, it should track the steps the knapper took to produce a concise morphological description. It should also be well associated with adequate independent dating and geographic distribution metadata. Only about 23% of the 2,500 published type names in current use in North American archaeology meet these standards. These shortcomings in turn force mitigation efforts that can diminish opportunities for more of the kinds of new research highlighted in this symposium.

Snow, Meradeth [327] see Airola, Danielle

Snow, Meradeth [282] see Baron, Atlantis

Snow, Meradeth [25] see Giovannangelo, Victoria

Snow, Meradeth [62] see Hazelwood, Lacy

Snow, Meradeth [292] see McDonald, Holli

Snow, Meradeth [282] see Sommer, Evan

Snyder, Emma [266] see Hirshman, Amy

Snyder, Madeline (University of Texas at San Antonio), and Carolyn Freiwald (University of Mississippi)**[62]** *Construction of Memory: Household Ancestor Veneration at Las Ruinas de Arenal, Belize*

Maya household archaeology has long recognized the practice of interring ancestors within the floors of household structures. Previous research has demonstrated that this trend holds true for households in the Belize River Valley. This paper will add to the corpus of research by discussing such practices at Las Ruinas de Arenal, Belize, based on the results of the 2024 and 2025 field seasons. Recent excavations at a Late Classic household group at the site allow for a more complete understanding of the occupational chronology and construction history of the group, with multiple episodes of occupation spanning from the Middle Preclassic to the Late Classic. Here, burials in the group's eastern shrine as well as two burials associated with subsequent construction episodes of the western household structure will be discussed, paying particular attention to how ancestor veneration influenced social memory at the site. The importance of ties to ancestral people and places will be further illustrated through various practices including reentry and retrieval of bones, as well as revisitation after the household was abandoned. ***This presentation will include images of human remains.

Snyder, Tom (New York University), Randy Haas, and Mark Aldenderfer (University of California, Merced)**[277]** *Cranial Vault Modification and Metabolic Stress in the Andean Upper Formative Period: A Bayesian Analysis*

The Andean Upper Formative period (250 BCE–500 CE) in the Lake Titicaca Basin of South America presents an important case study for understanding the effects of dynamic social organization on individual health. Previous researchers hypothesized that participation in some cultural practices can act to signal group identity, impacting resource access and potentially leading to variable health outcomes. To evaluate this hypothesis, we present a bioarchaeological analysis of 81 crania recovered from a series of open-air cave sites in the Ilave Drainage of the Lake Titicaca Basin. We find that 56% of the individuals sufficiently preserved for observation exhibit evidence of porotic hyperostosis (PH), a bony lesion indicative of metabolic stress. We further observe that 81% of the burial population exhibit some form of cranial vault modification (CVM), generally understood as a marker of group identity in archaeological Andean contexts. Annular forms comprise 89% of modified crania in this study. A Bayesian regression fails to find support for any relationship between CVM style (annular, tabular, or unmodified) and PH, indicating that this form of group identity may not confer advantages or disadvantages for individual resource acquisition. Future meta analytical work may elucidate whether these outcomes changed in state societies.

Soaper, Mary [49] see Scharf, Elizabeth

Soares, Anauene (University of Brasilia)**[214]** *Between Voluntary Return and Donation: Ethical Challenges*

Negotiating the restitution of cultural objects poses various challenges, mainly concerning legal limitations, community engagement, and ethical implications of collections. This study employs an analytical approach. I examine efforts to “voluntarily return” or “ethically return” cultural objects to nations or communities of origin, comparing these processes to that of “donation.” The latter has been practiced only when the nation of origin formally requests repatriation and is used by many countries in the Global North. Examples include the *Ubiraja jubatus* fossil and the Tupinambá cloak donated to Brazil. This article emphasizes that in both civil law and common law countries—such as Brazil and the United States—preserving cultural heritage depends on balancing the legitimate claims of each party, ensuring community participation, and recognizing the cultural values embedded in heritage objects. These principles also support voluntary return to the place of origin, as demonstrated by institutions such as the Fowler Museum and the Waystation Initiative, both at UCLA. I also examine the Smithsonian's Shared Stewardship and Ethical Return Policy. Finally, this study highlights the critical need for voluntary returns to promote the ethics of restitution, which extend beyond the legal frameworks governing these transactions.

Sobel, Elizabeth [124] see Lehr, Juniper

Sobel, Elizabeth [149] see Worman, F. Scott

Sobel, Sonya (University of Oregon, Museum of Natural and Cultural History), and John Blong (Washington State University)

[333] *Expanding Microfossil Reference Collections in the Pacific Northwest: Starch and Phytolith Evidence from Biscuitroot, Bitterroot, and Balsamroot*

Regional plant microfossil reference collections are a critical tool for identifying archaeological residues and reconstructing past subsistence practices, yet they remain limited in much of the Pacific Northwest. This study contributes new starch grain and phytolith characterizations for three plants of ethnographic importance—*Lomatium cous* (cous biscuitroot), *Lewisia rediviva* (bitterroot), and *Balsamorhiza sagittata* (arrowleaf balsamroot)—traditionally used by the Nez Perce and other Indigenous communities across the Columbia Plateau and Pacific Northwest. Modern comparative samples were collected from multiple locations and examined under light and polarized microscopy to document morphological variation. Statistical analyses were used to assess the consistency of observed attributes. Findings indicate intra-species variation in starch morphology for *L. cous* and *L. rediviva*, while also identifying traits with strong diagnostic potential. In addition, phytoliths were successfully recovered from *B. sagittata*, expanding the small body of reference data available for this taxon.

Sobrinho, Santiago (University of Texas at San Antonio), Jesus Gallegos (INAH Yucatán), Marco Antonio Rivas (INAH Yucatán), Jose Francisco Osorio Leon (INAH Yucatán), and Francisco Perez Ruiz (INAH Yucatán)

[104] *The Preclassic Ceramics of Chichen Itza and Their Role in the Cultural History of Casa Colorada's Group*
Chichen Itza has been commonly studied based on archaeological evidence dated to the Late and Terminal Classic periods (600–1150 CE) when most monumental centers were built and inhabited. In the present paper, we focus on the ceramic of the Casa Colorada group, widely recognized by many researchers as one of the earliest centers of political power on the site, as well as an important apocenter for ritual performance by local and foreign elites. During the 2022–2023 excavations of the PROMEZA Chichen Itza project, two deep units located on the eastern access staircase and ballcourt of the Casa Colorada group revealed a series of partially sealed contexts with Yalan/Tihosuco ceramic materials associated with Chichen Itza's Preclassic period dated to the Middle Preclassic II (700–350 BCE), Late (350 BCE–150 CE), and Terminal Preclassic (150–250 CE) in the region. The well-preserved stratigraphy and architectural evidence of both structural fill and floors of Casa Colorada's plaza has allowed the present research to develop a contextual analysis of the ceramic materials providing new insights into the cultural history of this emblematic group and its possible emplacement on top of a previously existing preclassic Maya Community.

Socha, Amy

[183] *Don't Sink Your Dugout: Load Capacity as a Proxy for Use of Dugout Canoes*

The majority of dugout canoes identified in Florida are found ex situ and without context. This project revisits an avenue of investigation to provide useful data indicative of the actual uses of dugouts when they are lacking context. Load capacity was first calculated for an archaeological dugout in 1982 (Brose and Greber) and has not frequently been utilized since, if at all. Using surface equations to create a 3D, bounded model of a dugout, then applying integrative calculus, quantifies the relationship between load and realistic use conditions of each dugout canoe. This project presents two case studies from Florida—the Fort Myers dugout and the Torreya State Park dugout. Not all dugouts fit the conditions necessary for the application of these calculations, but for those that do this project demonstrates how this method can open significant interpretive avenues for these dugouts that would not be available when they are otherwise without context.

Socha, Dagmara (University of Warsaw), Marzena Sykutera (Nicolaus Copernicus University), Gabriela Recagno Browning (Museo de Arqueología de Alta Montaña), Winnie Martinez (Universidad Católica de Santa María), and Johan Reinhard (National Geographic Society)

[302] *Toxicological Studies on the Inca Frozen Mummies from the Ampato, Sara Sara (Peru), Chuscha, Llullaillaco, and Quehuar (Argentina) Volcanoes*

This paper presents a toxicological analysis of human sacrifices recovered from the Ampato and Sara Sara volcanoes in Peru, and the Chuscha, Quehuar, and Llullaillaco volcanoes in Argentina. Using LC-MS/MS hair

and nail samples were analyzed for the presence of psychoactive substances, including cocaine, benzoylecgonine, cocaethylene, atropine, scopolamine, mescaline, harmine, harmaline, bufotenine, and N,N-dimethyltryptamine (N,N-DMT). Cocaine and benzoylecgonine were identified in all hair samples, while cocaethylene was found exclusively in individuals from Chuscha and Lullaillaco. Although nail samples presented contamination challenges, trace amounts of harmine were detected in individual Ampato #1 (known as Ampato Maiden). *****This presentation will include images of human remains.**

Solar-Valverde, Laura (El Colegio de Michoacán)

[210] *Mechanisms of Long-Distance Exchange in Mesoamerica: Agents of International Trade in the Early and Middle Postclassic, ca. AD 900–1350*

Toward the end of the first millennium AD, prehispanic trade networks reached an unprecedented geographic extent. Among the products exchanged were exotic goods considered highly valuable, either because of their distant origin or because their production required specific resources and specialized technologies. This presentation will discuss the nature and actions of the agents involved in the transfer of such goods, that is, the individuals responsible for the functioning of the networks that made international trade possible, with an emphasis on West Mexico.

Solar-Valverde, Laura [210] see Somerville, Andrew

Soler-Arechalde, Ana (UNAM)

[310] *PPC Project Archaeomagnetic Dating with Radiocarbon Restrictions*

The archaeomagnetism is a dating technique based on the variations of small scale of the geomagnetic field, between one and 10,000 years on objects made by man, mainly stuccos exposed to fire. In Mexico, many archaeological sites are located near volcanoes, which is the reason that volcanic products were added to the stucco mix, enhancing the signal of geomagnetic field recorded by them and allowing us to determine it in unburned samples. The unburned samples record the geomagnetic field when they were made, notably increasing the number of moments to be dated, robusting the chronologies, making them with better resolution. A detailed sampling of Plaza de las Columnas at Teotihuacan of burned and unburned stuccos from 2015, 2016, and 2025, 39 of 64 give us good results. Our results are compared with those obtained in other complexes and neighborhoods of Teotihuacan. The radiocarbon chronology of the PPC project were used to restrict the dates obtained.

Soler-Arechalde, Ana [164] see Beramendi-Orosco, Laura

Solis, Christine [54] see Acosta, Daryll

Solis, Reyna, and Emiliano Melgar Tisoc (Templo Mayor Museum)

[164] *The Presence of Foreign Lapidary Materials in Teopancazco, Teotihuacan: Interactions with the Mayan Area*

A significant number of artifacts recovered from Teotihuacan originate from regions beyond the central highlands of Mesoamerica. This presence indicates an active circulation of goods across diverse regions, stemming from complex social interactions with various settlements during the Classic period. Among the most notable materials are jadeite prestige items, likely produced in the Mayan area, which have been found in various contexts throughout Teotihuacan, such as in the neighborhood of Teopancazco. These artifacts exhibit patterns of differential consumption, appearing in domestic, palatial, and ceremonial settings. This paper explores the intricate networks of exchange and interaction that may have connected Teotihuacan with the Mayan region and examines the evidence regarding the production, circulation, and provenance of these lapidary objects.

Solis, Reyna [307] see Espinosa Ramirez, Lizandra

Solis, Reyna [307] see Melendez, Juan

Solis, Reyna [164] see Melgar Tisoc, Emiliano

Solis-Gómez, Arina [84] see Jiménez Cano, Nayeli

Solis-Pichardo, Gabriela [221] see Buckley, Gina

Solometo, Julie [277] see Bernardini, Wesley

Somerville, Andrew (Iowa State University), Laura Solar-Valverde (El Colegio de Michoacán), Peter Jimenez (Instituto Nacional de Antropología e Historia), and Luis Martínez-Méndez [210] *Bioarchaeology at Cerro del Teúl, Zacatecas: Exploring Migration and Identity at a Pre-Caxcan Ceremonial Center*

The archaeological site of Cerro del Teúl in southern Zacatecas, Mexico, was an important ceremonial center of northern Mesoamerica during the Postclassic period. This paper presents preliminary results of recent bioarchaeological research on 73 individuals excavated from the ceremonial core of the site. Analyses included osteological assessments of age, sex, and cultural modifications to the body, as well as stable isotope analysis of bones and teeth. The results provide insights into the identity of the Early/Middle Postclassic residents of Cerro del Teúl through the reconstruction of residential mobility and dietary practices across different social and demographic segments of the population. Findings reveal intra-site variation in diet and document the presence of individuals who were likely born elsewhere and migrated to Cerro del Teúl prior to death. These results are contextualized within broader social and economic networks of the Postclassic world system. *** This presentation will include images of human remains.

Somerville, Andrew [49] see Fafin, Manon

Somerville, Andrew [278] see Saumur, Jennifer

Sommer, Evan (University of Montana), Meradeth Snow (University of Montana), Xoxi Nayapiltzin, Bryon Schroeder (Center for Big Bend Studies / Sul Ross State University), and Lacy Hazelwood (University of Montana)

[282] *Population Genetics at Cultural Crossroads: aDNA Insights from a Prehistoric Texas Site*

The Millington site (41PS14) is an important site within the La Junta de los Rios site area, Texas. Millington's location straddles the borders of the Puebloan world, the Southern Plains, and Northern Chihuahua, situating it perfectly for a dynamic population history that remains heavily debated. Mosaic cultural traits in the archaeological record have led to competing hypotheses about whether the inhabitants were colonists of the Jornada Mogollon, Southern Plains, entirely local, or some hybrid thereof. This research examines the population dynamics present at Millington through the generation of four genomes from individuals interred at the site; all of the burials occurred during the La Junta phase of the local chronology, corresponding to roughly 1200–1450 CE. Analysis will be performed to establish the biological relatedness of these individuals to Puebloan, Plains, and Desert groups, which in turn may aid in understanding the origin and relationship of Millington's occupants. Furthermore, DNA evidence may be used to identify direct descendant communities, in turn fostering additional dialogue concerning heritage efforts. This work takes place at the request of local tribal communities and maintains NAGPRA compliance, with the aim to be a tool for local Indigenous communities to add to their understanding of their history.

Sonnenschein, Cordelia

[326] *Whorling through Tucson: Evaluating Agave and Cotton Spinning Practices through Proxies*

Fiber and textile production is often studied through proxies, with spindle whorls among the most durable and widespread indicators. In the Tucson Basin, Arizona, modeled whorls and perforated disks were used contemporaneously as spindle weights at sites across the region from ~900 CE onward. Researchers have theorized that perforated disks were suited to heavier fibers such as agave and yucca, while modeled whorls were used for lighter fibers like cotton. This paper evaluates that theory by sampling spindle whorl and perforated disk assemblages from multicomponent Hohokam villages and assessing trends in fiber use and tool morphology from the Sedentary and Classic periods (950–1450 CE), with consideration of continuity into the historic period. Using Parsons's typology of spindle whorls (Parsons 1974) alongside 3D scanning and volumetric measurements, the study examines relationships between whorl weight, diameter, and fiber type, informed by macrobotanical data on cotton, agave, and yucca. Preliminary findings suggest that perforated disks and modeled whorls may have been used for the same fiber (likely cotton), based on relatively uniform

weights. This research contributes to regional understandings of fiber use and communities of practice, while testing digital methods for refining spindle whorl analyses and linking textile production to agricultural intensification.

Sonnenschein, Cordelia [224] see Mathwich, Nicole

Soon Lim, Jonathan [57] see Robinson, Charlotte

Sormberger, Jennifer [206] see Puente, Nicholas

Sorreso, Dominique [79] see Kennedy, Ryan

Soteras, Raul [163] see Antolin, Ferran

Soto, Catalina [224] see Figueroa Beltran, Carlos

Soto, Lizzette (University of Alabama), and Alexandre Tokovinine (University of Alabama)

[83] *Fierce, Flamboyant, and Feathered: Ethnobiological Perspectives on Hummingbird Deities*

Within Mesoamerica, hummingbird imagery conveyed ancestral associations and possible cultural borrowings from northern groups, with particularly strong representations among the Mexica, Mixtec and the Classic Maya of northeastern Petén. These areas contain portable media with depictions of hummingbird deities merged with the patrons of the cosmos. Devotional representations of hummingbird supernaturals appear to be restricted to a smaller region in northeastern Petén, particularly the sites of Holmul and Naranjo. The very same area is responsible for portable media with depictions of a hummingbird deity or deities with traits of the Maize God, Jaguar God of the Underworld, and Death God, suggesting a link to patrons of the lunar cycle. The hummingbird, therefore, served as both an observable species and a symbolic medium through which broader social, religious, and environmental meanings were conveyed. By integrating ornithological knowledge with cultural analysis, a deeper understanding of the intricate connection between Holmul, Naranjo, and the Mexica/Mixtec region can be gained. A closer examination of hummingbird ethology, particularly pollination, nesting, and the known persistence of hummingbird species in the region, will reveal a more comprehensive understanding of this relationship.

Soto, Saul (East Los Angeles College)

[214] *Replanting a Mushroom Stone: New Pathways for the Voluntary Return of Maya Cultural Heritage*

The mushroom stones of Mesoamerica received a brief moment in the academic limelight during the early to mid-1900s driven by archaeologists such as S.F. Borhegyi, K. Mayer, and R. Wasson. As this generation passes on, the transactional history of these stones becomes more difficult to trace. This paper examines the provenance of a basalt mushroom stone and its displacement from the highlands of Guatemala to a private collection in the USA. Through a discussion of restitution, consent, and collaboration within the context of archaeology's historical role in Guatemala, this research will provide a new starting point for future returns of mushroom stones by addressing questions such as: How do descendant Maya communities want to approach the restitution of their cultural heritage? How can these exchanges benefit those most affected by the removal of the stones? What should those returning Maya items know when getting started? As a result of this research it is clear that collaboration, humility, and care must be the leading values.

Southon, John [257] see Armitage, Ruth Ann

Soutif, Dominique [344] see Morrow, Giles

Soza, Danielle [247] see Disque, Candice

Spangler, Jerry [95] see Medina, Ishmael

Spenard, Jon (Cal State University San Marcos), and Tawny Tibbits (University of Iowa)**[101] Results of an XRF Sourcing Study of Ancient Maya Obsidian Artifacts from the Mountain Pine Ridge, Belize**

Obsidian artifacts are commonly found at ancient Maya sites throughout the lowlands, but the three sources of the objects were made from, El Chayal, Ixtepeque, and San Martín Jilotepeque, are located in the volcanic highlands of southern Guatemala. Archaeological investigations by our Rio Frio Regional Archaeological Project in the Mountain Pine Ridge Forest Reserve, Belize, some 300 km from those sources, have recovered an assemblage of obsidian artifacts from the ancient Maya site of Nohoch Batsó and the ritual caverns Rio Frio Cave A and Actun Satoh Witz. The assemblage includes prismatic blades, flakes, and blade cores. In this paper, we present the results of an XRF sourcing study on the obsidian assemblage, the first of its kind for this region. Our study sheds light on the long-distance exchange networks the ancient inhabitants of this region engaged with.

Spencer, Kaylee (Florida State University), and Michael Carrasco (Florida State University)**[91] Ancestral Echoes, Contemporary Voices: Indigenous Art in Dialogue**

This paper explores curatorial strategies that bring ancient art into dialogue with the work of contemporary Indigenous artists, using the exhibition *Conversaciones: Latin American Indigenous Art* (Florida State University Museum of Fine Arts, 2024–2025) as a case study. It investigates how placing precolonial objects alongside works by living artists who identify with their Indigenous heritage can reactivate collections historically shaped by colonial narratives. The study considers the ways this practice reintroduces descendant voices into museum interpretation, allows contemporary artists to reclaim narratives, and creates new opportunities for engaging ancient works. At the same time, it explores how artists draw on ancestral motifs, material practices, and cosmologies as dynamic sources for reinvention, offering fresh perspectives on their place within Indigenous genealogies. More broadly, the paper situates these strategies within current practices in art and cultural institutions, reflecting on how such exhibitions challenge Eurocentric canons, foreground Indigenous epistemologies, and expand interpretive possibilities for both ancient and contemporary art.

Spencer, Kaylee [326] see Werness-Rude, Maline

Spencer-Wood, Suzanne (Oakland University)**[251] Comparing Labor Regimes at Colonialist and Reform Carceral Institutions**

Historical colonialist and reform institutions largely incarcerated poor people to teach them Western “habits of industry.” Gender ideology resulted in different discriminatory reasons for admitting women and men for reform. A variety of labor regimes were required by colonialist Spanish presidios, missions, and ranchos; industrial boarding schools for Native Americans or immigrants; and reform institutions, from workhouses, poorhouses, and poor farms to Magdalene asylums, juvenile reformatories, women’s prisons, and insane asylums. Documentary records of required labor can be normatively gendered and have complemented excavations that uncovered some evidence of institutionalized inmate labor, from workshops, tools, unfinished products, and food remains to landscape features. Workhouses and poorhouses, whether public or private, were not uniform—some subscribed more to reform ideology and required the forms of meaningless punitive labor required in prisons, while others only required productive forms of labor. Some aboveground archaeology as well as excavations have uncovered undocumented aspects of methods of enforcing labor. Documents record institutional variations in the amount of reform and labor required of inmates and their treatment, from lenient to abusive. Excavations have also recovered undocumented evasions of institutional Protestant-based rules prohibiting inmates from drinking alcohol, smoking, and gambling and prohibiting females from wearing jewelry.

Spicer, Ashley [45] see Parker, Glendon

Spinelli Sanchez, Océane, Anne Delagnes (CNRS), and François-Xavier Le Bourdonnec (Université Bordeaux Montaigne)**[93] Local, but Strategic? Deciphering Selection and Procurement Patterns of Quartz: Insights from France and Ethiopia**

Despite its ubiquity in prehistoric tool kits, quartz remains understudied due to its mechanical variability (de Lombera-Hermida 2008; Tallavaara et al. 2010) and the need for a more robust analytical framework to

address its complexity. Often dismissed as a low-quality and expedient material, it is typically assumed to be used locally without selection (Knutsson 2014). Yet studies demonstrate that strategic behaviors can be inferred from both selection patterns and local-scale provenance (Colonge et al. 2011; Daffara et al. 2025). The interdisciplinary approach developed combining geological fieldwork, knapping aptitude characterization, and neocortex exoscopy reveals how intra-source variability, postdepositional alterations, and lithological diversity within a single catchment area can be used to assess procurement and selection strategies. Case studies from the Cevennes region (France) and the Hamar Range (Ethiopia) illustrate how quartz, often overlooked in provenance studies, can instead provide high-resolution insights into local raw material management. By focusing on quartz as a model material, this presentation aims to reframe the discourse on local raw materials and provide tools for identifying selective behaviors where long-distance procurement is absent or complementary. This approach challenges current narratives centered on flint and obsidian and promotes a broader understanding of lithic landscapes and technological choices in prehistory.

Splitstoser, Jeffrey (George Washington University)

[257] *Chromatic Logics: Color and Meaning in Wari Khipus*

Color is one of the most striking and least understood features of Wari khipus, the earliest known examples of Andean knotted-cord records. Wari khipus employ an extensive range of chromatic techniques and strategies—wrapping, patterning, and seriating cords—to organize and emphasize information. Groups of knots are often distinguished not only by placement or structure but also through deliberate use of contrasting hues. Recurring patterns involving red camelid fiber and white cotton suggest meaningful hierarchies that resonate with color practices in Andean weaving and other perishable arts. This paper explores how Wari khipu-makers integrated color as a key element in both the visual and informational design of their devices.

Splitstoser, Jeffrey [43] see Quave, Kylie

Sponholtz, Julia, Neil Duncan (University of Central Florida), John Walker (University of Central Florida), and Bronwen Whitney (Northumbria University)

[44] *Understanding Atajaos: A Microbotanical Study of Phytoliths from a Possible Fishing Weir in the Llanos de Mojos, Bolivia*

The people of the Llanos de Mojos have been actively managing their environments for at least 3,500 years, creating enduring investments into the landscape. Using management practices such as controlled burning and earthwork construction, the inhabitants shaped the mosaic landscape of savannas, raised fields, forest islands, and permanent wetlands still visible today. The past Mojeños also modified their environment by constructing *atajaos*, or zig-zag-shaped features, often located near raised fields that have been categorized as fishing weirs. However, recent researchers have shown that *atajaos* may not have only been used to manage fish but also for broader wetland management throughout the seasonal floods. To better understand how *atajaos* were used, I processed and analyzed the phytoliths from a soil core taken from near the Las Almendras forest island in the west central Llanos de Mojos in conjunction with data from previously analyzed cores. These results will help clarify how *atajaos* fit into the wider environmental context and how people managed their environment in the region.

Sportman, Sarah [79] see Rockwell, Sophie

Spuck, Jacob (Colliers Engineering and Design), and Catherine Villella (Colliers Engineering and Design)

[345] *Defense and Deposits: Archaeology and Geoarchaeology in the Safford Basin*

The Safford Basin of southeastern Arizona preserves a complex cultural landscape where prehistoric communities organized settlements along the terraces of the Gila River. Recent investigations in the region have significantly expanded knowledge of site boundaries and revealed new loci of agricultural features, defensive structures, and domestic activity. To move beyond traditional pedestrian survey, geoarchaeological analysis was applied to examine depositional history, soil development, and the potential for buried cultural horizons within the alluvial setting. Complementing these efforts, remote sensing techniques, including aerial

imagery and lidar, were used to detect subtle landscape modifications, such as irrigation alignments and ridges, that guided both survey design and subsurface testing strategies. Together, these methods provide a fuller understanding of how communities adapted to dynamic riverine environments, managed agricultural production, and constructed defensive works during the late precontact period (AD 1000–1450). This paper demonstrates how integrating archaeology, geoarchaeology, and remote sensing yields a more nuanced interpretation of cultural landscapes in the Safford Basin while advancing best practices for archaeological research and cultural resource management in the Southwest.

Squint, Kirstin [275] see Rodning, Christopher

Sreedharan, Ambily (Archaeological Survey of India)

[266] *Russet-Coated Painted Ware Pottery: The Potential Chronological, Social, and Economic Significance of a Poorly Understood South Indian Ceramic Type*

Russet-Coated Painted Ware (RCPW) is a distinctive type of ceramic ware primarily found in the Deccan and southern regions of India. Notable as one of the few painted ceramics in this region and for its presumed use as a chronological marker of the early historic period, important questions about RCPW still remain. Currently, there is no comprehensive record of its spatial distribution or chronological span, nor an understanding of production patterns and potential exchange networks. While RCPW is generally viewed as a single category, its internal variability has not been systematically documented. This paper provides an overview of RCPW, exploring its technical features, chronological placement, distribution patterns, and possible sociocultural significance. Drawing on existing archaeological evidence from the fourth to third centuries BCE to the Early Medieval period (around 13–14 CE), this study aims to clarify its origin and extent, production techniques, morphology, and decorative motifs, serving as a baseline for further, more detailed research. We trace the evolution of RCPW from its initial identification as Andhra Ware by Wheeler in 1947 to its reclassification as Russet Coated Painted Ware by Thapar in 1957, including its geographic distribution. This paper presents the most comprehensive spatial analysis of RCPW to date.

St. John, Tamara [169] see Clark, Andrew

Stackelbeck, Kary [264] see Peterson, Ryan

Stacy, Jordyn

[56] *Paws of the Past: Identifying Domestication in Archaeological Cat Remains*
[WITHDRAWN]

Stamer, Julianne [297] see Hannigan, Elizabeth

Stanford, Grace (University of Oklahoma)

[277] *Beyond the Rocks: Understanding Raw Material Use in Oklahoma during the Plains Village Period*

Raw material use and manufacture are common components within archaeological studies. This ongoing comparative study of lithic raw material from the Middle to Late Plains Village (AD 1250–1700) investigates the material remaining at two archaeological sites in central/western Oklahoma. It is anticipated that a difference will be found in how local and nonlocal materials are utilized as tools were manufactured. It is expected that more time was spent on manufacturing tools from nonlocal materials. This should be seen in the lithic assemblage through evidence of higher frequencies of heat treatment and higher amounts of formal tools in nonlocal materials. This research seeks to contribute to what is known about ancestral Wichita social transitions before and after this period.

Stanish, Charles (USF), and Henry Tantalean

[340] *The Fundamental Unit in Linear Geoglyph Complexes*

Geoglyphs are ubiquitous in the prehispanic Andes from at least the Initial period. The two major types of geoglyphs are figural (biomorphs) and geometrics (lines, trapezoids, circles, etc.). In a few places during the Early Horizon, people created linear geoglyph complexes on pampas. These complexes were composed

almost exclusively of lines and trapezoids. Using a comparative approach, we define the fundamental unit of these complexes and evaluate their growth and elaboration through the late Early Intermediate period. We argue that the fundamental unit was used to structure increasingly complex processions to major settlements using data from Casma, Chíncha, Pisco, and Nasca.

Stanton, Travis [338] see Ardren, Traci

Stapleton, Lyssa (UCLA Cotsen Institute of Archaeology)

[318] *Navigating Power and Responsibility: Collaborative Frameworks for International Restitution and Stewardship*
Effective stewardship of cultural heritage requires navigating the priorities of governments, descendant communities, and collecting institutions. Consequently, collaboration remains challenging due to colonial legacies embedded in collections, the tension between viewing objects as “art” or “culture” and the historically unequal power dynamics shaping decisions about ownership and access. Efforts to reconnect objects with their origins are hindered by incomplete documentation, differences between ancient and modern national borders, conflicts between nations and communities, museums and universities constrained by limited resources and insufficient training, and collectors’ reluctance to adopt new ethical practices. How do archaeologists balance acting as responsible stewards, de-commodifying cultural objects, and developing ethical relationships with museums and private collectors? How can we educate the public about ethical stewardship and the rights of Indigenous and descendant peoples while foregrounding equity through protocols and culturally informed practices? Case studies from UCLA’s Waystation Initiative demonstrate practical methods for working with various stakeholders, developing protocols for undocumented and “orphaned” collections, and navigating international returns, illustrating sustainable practices for restitution and long-term stewardship.

Stark, Carly (University of California, Davis)

[149] *Digging Safely: Addressing Biomechanical Risk in Archaeological Fieldwork*

Excavation is a physically strenuous, yet necessary, component of most archaeological research. While some research has broadly evaluated the hazards of archaeological excavation, the existing literature does not sufficiently address the biomechanical and ergonomic risks associated with such work. Biomechanical and ergonomic risk assessment is commonplace among other physically demanding occupations (e.g., agriculture or construction). Such studies guide the design of safer and more efficient tools and tasks, reducing the likelihood of injury or acquired musculoskeletal disorders among workers. This research uses a mixed approach to assess the biomechanical and ergonomic properties of archaeological fieldwork. Combining manual work evaluation data with community survey data, this research addresses the unique work expectations placed on archaeologists by establishing a research-to-practice guide for the discipline. This has epidemiological, social, and legal implications, ensuring that archaeology may be a more equitable and accessible discipline in the future.

Stark, Miriam (University of Hawai’i), Mitch Hendrickson (University of Illinois, Chicago), Lisa Kealhofer (Santa Clara University), Peter Grave (University of New England), and Quan Hua (Australian Nuclear Science and Technology Organisation)

[217] *Consumption beyond Angkor: Geochemical Analysis of Khmer Stoneware Ceramics from the Regional Center of Preah Khan of Kompong Svay, Cambodia*

Southeast Asia housed one of the world’s most complex empires on the eve of the Early Modern period. The ninth–fifteenth-century Angkorian Empire dominated much of mainland Southeast Asia. Its capital, covering 1,000 km², connected more than 20 provinces in all directions. Despite more than 25 years of Angkorian archaeological research across modern Cambodia, little is known about the hinterland that supported Angkor’s capital from the ninth through fifteenth centuries. This study aims to clarify the organization of Angkor’s hinterland by using NAA results from 763 stoneware ceramics from Preah Khan of Kompong Svay. We analyze how provincial ceramic consumption reflected interaction with the Angkorian capital. We also study how spatial and temporal changes in ceramic use in one urban block of the main temple enclosure reveal shifting regional access to ceramics from scattered Khmer production zones. Our findings clarify how Angkor’s transportation system operated and highlight the evolving role of Preah Khan of Kompong Svay within the empire.

Stark, Miriam [217] see Carter, Alison
 Stark, Miriam [217] see Heng, Piphai
 Stark, Miriam [217] see Sarjeant, Carmen

Stark, Sören [314] see Ammerman, Steven
 Stark, Sören [315] see Ho, Joyce Wing In

Stauffer, John [273] see Swisher, Kimberly

Stauffer, Kaeleen (Western Colorado University), Daniel Hampson (Binghamton University), Cassey Robertson (Western Colorado University), and David Hyde (Western Colorado University)

[181] *Structure 29 at Plaza C, La Milpa: Monumental Architecture in Restricted Space*

Structure 29 is located on the east side of Plaza C, in the southern half of the major Maya polity of La Milpa, third-largest site in Belize. Structure 29 is the shortest in length of the three range structures that surround the plaza. However, it has a complex articulation with the Kotanil Courtyard as its eastern side forms the western of the contiguous enclosed space. Both Plaza C and the adjacent Kotanil Courtyard have restricted access. The 2025 season marks the first year of the Tzaman Acropolis Research Project (TARP), and Structure 29 was a focus of excavations with the goal of determining the form and function of the structure, as well as how it articulates with the rest of the plaza and surrounding structures, including the acropolis on the south side. Though early in our data recovery, we discuss the findings from excavation at the center and northern corner of the structure and hypothesize on possible functions and articulations with the Kotanil Courtyard.

Stauffer, Kaeleen [181] see Bielenberg, Henry

Steele, Kelly [343] see Marshall, Amanda

Steele, Teresa [170] see McCartin, Madison

Steelman, Karen [38] see Boyd, Carolyn

Steffian, Amy [313] see Saltonstall, Patrick

Stehr, Katy, Sarah McClure (UC Santa Barbara), Nicholas Triozzi (University of California Santa Barbara), and Kristina Horvat Oštrić (University of Zadar)

[347] *New Zooarchaeological Data from Neolithic Dalmatia: Graduša-Lokve in Context*

Previous zooarchaeological research at Neolithic sites on the Dalmatian coast of Croatia has demonstrated that species composition shifted over time, reflecting both environmental fluctuations and changing social and economic practices. Shifts in livestock demographics also indicate differences between sites in both herd management and food procurement strategies. New data from Danilo period (Middle Neolithic) Graduša-Lokve adds to this picture; similarly to other contemporary sites, domesticated animals such as sheep (*Ovis aries*) and goats (*Capra hircus*) formed the bulk of the diet, while new data also further support the continued importance of hunting wild species. Comparison between Danilo and later Hvar levels at Graduša-Lokve indicate changes in livestock husbandry that may represent adaptive responses to shifting environmental conditions or changes in social or economic practices.

Steinbrenner, Larry (Red Deer Polytechnic), Carrie Dennett (Red Deer Polytechnic), and Adam Benfer (Leiden University)

[304] *Communities of Practice in West-Central Central America: Competition or Cooperation?*

Archaeological approaches in Pacific Nicaragua and adjacent territories have long pursued the culture-historical goal of identifying archaeological cultures that correlate with (typically antagonistic) ethnolinguistic entities referred to in the ethnohistoric record. This poster puts this preoccupation to the side and outlines a

different approach more consistent with emerging research in other areas of Central America, like Honduras and Panama. We ask: based exclusively on the available material culture evidence, can we identify communities and networks in the archaeological record that tell us different stories from those emphasizing competition and strife that are perpetuated by ethnohistory? Does the archaeological subarea known as Greater Nicoya even exist when viewed from the perspective of technological traditions emphasizing cooperation and the sharing of knowledge (like potting and lithic traditions) that might have transcended culturally diverse groups?

Stephens, Rhiannon [357] see LaViolette, Adria

Stephens Reed, Lori [166] see Bellorado, Benjamin

Stern, Benjamin [173] see Sandoval Molina, Andrea

Sterner, Katherine (Towson University), Sarah Mason (Digging Deeper Educational Consulting), and Julia Berg (Digging Deeper Educational Consulting)

[149] *Trowels to Teaching: A Case Study in Embedding Archaeology Education in Applied Archaeology Programs* Archaeology is not new to public education. However, scholars of archaeology education have noted the lack of a systematic approach to the field in the last two decades. In our case study of the Trowels to Teaching Workshop, a five-day professional development program for Maryland K–12 educators conducted in 2025 through the Baltimore Community Archaeology Lab at Towson University, we offer a model for embedding archaeology education in existing applied archaeology programs in the academy. The workshop combined hands-on field and laboratory training, collaboration with Indigenous representatives from the Piscataway Conoy Tribe and the Pocomoke Indian Nation, and active participation by undergraduate student employees who both learned and taught archaeological skills. Formal pre- and post-assessments demonstrated significant learning gains among participating teachers, including increases in archaeological knowledge, confidence in lesson design, and awareness of descendant perspectives. The outcomes highlight how applied archaeology programs in universities can integrate teacher professional development into existing research, provide undergraduates with transformative teaching experiences, and deepen collaborations with descendant communities.

Sterner, Katherine [350] see Britt, Reagan

Stevens, Christopher [315] see Radivojevic, Miljana

Stevens, Craig (Society of Black Archaeologists), and Matthew Reilly (City College of New York)

[103] *Liberian Material Culture and Black Atlantic Connections: Archaeology, Archives, and 3D Digitization* The Back-to-Africa Heritage and Archaeology Research Project examines the processes of nineteenth-century settlement in Liberia, where West Indians and Black Americans established communities alongside diverse Indigenous populations and resettled Africans from across the continent. These encounters were deeply entangled with centuries of Atlantic trade, forced and voluntary migrations, and the cultural exchanges that shaped the Black Atlantic world. The Liberian nation-building project thus brought together heterogeneous Black communities—formerly enslaved people and their descendants, local groups, and migrants from multiple African regions—whose tastes, skills, and material and expressive practices crisscrossed the ocean and took root in new settings. By investigating this history through the archive, archaeology, 3D digitization, and collaborative curation, our project foregrounds the material culture created and reshaped by these communities, tracing how objects and practices have united institutions and constituencies across Liberia and the United States. In doing so, we seek to pluralize conceptualizations of the Black identity formations and highlight broad and ongoing processes of freedom-making in the Atlantic world. In this paper, we discuss the sites of Providence Island and Crozierville to highlight the creativity and resilience of Liberian communities through the wider Diasporic, transatlantic lens.

Stevens, Nathan (CSU Sacramento)**[73]** *Investigating Technology Change without Typology: The Spread of the Bow and Arrow in California*

This research investigates the first use of the bow and arrow by Indigenous Californians by using a large dataset of obsidian hydration dates and projectile point attributes that allows technological change to be plotted without relying on projectile point “types” or culture-historical periods. While the traditional view is that precolonial Californians started using the bow throughout the state around 1,500 years ago, this study shows that this new weapon system arrived at different times in different places. The research suggests the bow appeared at the Oregon border about 2,500 years ago, then spread in a wave-like fashion to areas further south, hitting the Sacramento Delta area much later, about 900 years ago.

Stevens-Landon, Lora [54] see Sartor, Hayley

Stewart, Carlyn (State Land Office)**[249]** *Flower Power: How a Tiny Flower Protected 13 Cultural Sites on New Mexico State Trust Lands*

The New Mexico State Land Office (NMSLO) manages over nine million acres of land that was stolen from the Indigenous and Hispano peoples as a condition of US statehood. This land was allocated to New Mexico under the Ferguson Act of 1898 and the Enabling Act of 1910 explicitly to generate funding for schools and hospitals. While acknowledging this history, the NMSLO is devoted to the principle of stewardship and the responsible care of cultural and natural resources. Since 2021, the establishment of the Cultural Properties Protection Rule and the Cultural Resources Office have increased protections and promote the practice of complete site avoidance. However, NMSLO has another tool in our dig kit: conservation leases. Though we have a fiduciary obligation to make money, conservation leases (business leases paid for by a lessee to not cause any surface disturbance) are one way we can accomplish this while also being better stewards of the land we manage. In this paper, I discuss examples of how conservation leases are being utilized as a management strategy on New Mexico State Trust Land to protect cultural resources while still adhering to fiscal requirements of the system we must operate within.

Stewart, Haeden**[233]** *Living with Latent Waste: Ruby, Arizona, and the Long-Term Effects of Lead Tailings*

We are living through an era that has been described as “the apotheosis of waste,” a globe brimming with greenhouse gasses, mountains of tailings, lagoons of pig-shit, and acres of cancerous sludge. The massive scale and persistence of industrial waste has transformed the air, water, and soil that we live on, and remade the very way we produce and reproduce social life. How can archaeology, a discipline that tends to view persistent waste as a fragmentary trace for the purposes of historical reconstruction, attend to the massive quantity of anthropogenic waste in a manner that is appropriate to the scale of our current climatic crisis? Drawing from excavations of a 1930s mining community that lived downwind of lead tailings, this paper explores the theoretical potential of “tailings” as a metaphor for the affective and effective afterlives of industrial waste: their biophysical harms, their ecological affordances, and the uncertainties they carry with them.

Stiles, Kaitlyn (Kleinfelder Inc.), Josie Twigg (Kleinfelder Inc.), Eric Strother (Kleinfelder Inc.), Charlene Nijmeh (Muwekma Ohlone Tribe of the San Francisco Bay Area), and Richard Massiatt (Muwekma Ohlone Tribe of the San Francisco Bay Area)

[268] *Archaeological Recovery at the Early Holocene Component of the Ancestral Heritage Site CA-SCL-1070/H*

We present the methods and results of archaeological construction monitoring and field recovery efforts at a newly identified multicomponent site in the southern San Francisco Bay Area, CA-SCL-1070/H (P-43-004159), which has been named by the Most Likely Descendant (MLD) of the Muwekma Ohlone Indian Tribe: Mánni Húyyú Muwékma Yatiš Túnnešte-tka, meaning “Place Where the Ancient People Are Buried Site.” In collaboration with the MLD, Kleinfelder recorded a total of 39 Indigenous human burial interment features containing 41 individuals, five precontact thermal/faunal bone cache features, ground stone and flake stone artifacts, faunal bone, and 135 Pleistocene fossils. During Kleinfelder’s investigation, 10 human bone and charcoal samples yielded radiocarbon dates. Dates for the interred individuals and burial features range from 11,275–11,195 to 9025–8775 calibrated years before present (cal BP), and those for non-burial prehistoric

features range from 10,190–9905 to 9685–9490 cal BP. These dates indicate this site is a Paleoindian burial ground/cemetery (a bounded area exclusively used for mortuary purposes), the first discovered in California and one of only a few known in North America. The overall site organization, stratigraphy, chronology, and other aspects of CA-SCL-1070/H provide a framework for understanding early burial practices on the Pacific Coast of North America.

Stineman, Calvin [295] see Weinberger, Emma

Stiner, Mary [347] see Munro, Natalie

Stiner, Mary [158] see Wolverton, Steve

Stojkoski, Slobodon [269] see Angeloff, Nick

Stollings, Stella [300] see Gilmore, Zackary

Stone, Abigail (Illinois State University), Matthew Pawlowicz, Jeffrey Fleisher (Rice University), Jeremy Farr (University of Queensland), and Kathryn de Luna (Georgetown University)

[357] *Contextualizing the Early Iron Age in Zambia: New Excavations in the Kafue Floodplain*

The Early Iron Age (EIA) of south-central Africa is important but also complicated and understudied. This period captures a critical moment in the broad narrative of Bantu Expansions: the spread of Bantu languages, Bantu-speaking peoples, farming systems, and iron technology across much of central and southern Africa. Our work seeks to add nuance to these continent-wide narratives, building on prior research demonstrating that language, people, agriculture, ceramic styles, and metallurgy did not spread as part of a single package, but instead along distinct pathways and timetables. In this paper, we present a localized, contextualized approach, focusing on two newly encountered EIA sites, Ikololo and Iyunga, located along the Kafue floodplain in southern Zambia. This tight geographic scale offers a fuller picture of what life was like in this specific region at this important moment. Our findings shed light on processes of in-migration, adaptation, and placemaking as communities rooted themselves in an unfamiliar landscape and became integrated into emerging regional exchange networks that supported the rise of Later Iron Age polities. This study highlights the value of new excavations in recalibrating outdated chronologies and deepening our understanding of social transformation in south-central Africa.

Stone, Abigail [162] see Fleisher, Jeffrey

Stoner, Wesley [310] see Sugiyama, Nawa

Stoner, Wesley [266] see Takatsuchi, Ryohei

Stowe, Michael (Department of Defense), David Rachal (Tierra Vieja Consulting), and Mark Willis (Flinders University)

[178] *Footprints in Flux: Assessing Preservation in the Tularosa Basin Using High-Resolution Photogrammetry and DEM-Based Image Change Detection*

Fossil prints in ephemeral playa and alluvial environments provide invaluable records of past fauna and human activity. However, their preservation is highly sensitive to the dynamics of sedimentary processes and environmental conditions. This study employs change detection techniques to monitor and quantify alterations at a trackway site in the Tularosa Basin, using high-resolution photogrammetry and DEM-based image differencing to track changes over time. Repeated surveys conducted in 2015 and 2024 reveal patterns of track exposure, burial, and erosion, demonstrating how quickly footprints can form or degrade in arid landscapes. Subtle sediment movement, crust formation, and moisture fluctuations were found to significantly influence the morphology and visibility of tracks, even over short timescales. By systematically documenting these changes, we can assess the preservation potential of footprints and develop strategies to protect ephemeral trace fossils. Additionally, this methodology allows for the reconstruction of paleoenvironmental conditions, linking sedimentary processes to faunal and human activity. Our results highlight the utility of combining remote sensing with field-based monitoring to capture dynamic landscape processes and inform

conservation efforts. This approach offers a robust framework for future studies in arid and semiarid basins, where ephemeral surfaces are critical to the formation and preservation of trace fossil records.

Strauss, Stephanie (University of Texas at El Paso)

[312] *Seeding the Earth: Greenstone and Placemaking on the Formative Landscape*

Greenstone is a charged material category throughout the range of visual culture production in ancient Mesoamerica. Deeply saturated to almost luminous, mottled to solid, smooth, hard, and cool to the touch—greenstone was collected, curated, and interred into the earth from the Formative to the Postclassic periods. Greenstone caching traditions found their deepest roots in the Early and Middle Formative eras, though practice varied between, and in many cases within, discrete urban spaces. From massive interments of undifferentiated blocks to precisely aligned collections of carved portable objects, greenstone caches seeded the Formative landscape. Though unseen (but not unknown) for the majority of their life histories, ritual caches defined and refined Formative urban plans. Greenstone caches were sown into the earth where the earliest ritual architecture sprouted up toward the heavens—the power embedded with these plantings was then translated into ritual memory to stretch across generational cycles of urban growth and decline. This paper tracks the similarities in greenstone caching practices across the Gulf Coast region, broadly defined, and explores how continuities and disjunctions in these practices reinforce, but in some cases complicate, our understanding of the great culture areas of the Formative period.

Strawn, James (University of Georgia), D. Shane Miller (University of Alabama), Jesse Tune (University of Mississippi), and Derek Anderson (Cobb Institute of Archaeology)

[319] *Hey Jude: Using PAM to Reassess an Early Holocene Point Style in the Mid-South*

The Holocene archaeological record in the mid-South has many poorly defined and dated projectile point styles. Based on our research at the Hester site in Amory, MS (22MO569), we argued that the stemmed Jude type dates to the Early Holocene and is probably contemporaneous with the Scottsbluff and Hardin types. Here, we compare the Jude, Hardin, and Scottsbluff types to a large database of points from the Tennessee and Tombigbee River Valleys using morphometrics and Gower Distance and Partitioning Around Medoids (PAM) to formally identify and evaluate patterns of morphological variation in haft design.

Streseman, Caitlyn

[182] *Echoes of the Lucayans: Successes and Setbacks with the Curation of the Deadman's Reef Site Archaeological Collection*

The archaeology of the Bahamas illustrates a long but incompletely understood settlement history beginning with the earliest inhabitants, the Lucayans (circa AD 700–1530). Although Lucayan cultural history has been significantly studied on specific islands in the Commonwealth of the Bahamas, early history on the island of Grand Bahama is more elusive. Out of 12 sites discovered on the island, the current location of only a small percentage of archaeological finds is known and little information is readily accessible to the Bahamian public. This project aims to contribute to narrowing this gap in knowledge by curating a part of a collection from Deadman's Reef Archaeological site (cal AD 1276–1616), the only systematically excavated site on Grand Bahama, excavated from 1997 to 2001. Part of the collection remains on Grand Bahama but has suffered from water damage and improper storage. Additionally, contextual data, including site maps and artifact lists, no longer exist on Grand Bahama. This project explores the unique challenges that arise when curating legacy collections, international archaeology, and Bahamian archaeology.

Strezewski, Michael (University of Southern Indiana)

[273] *The Mann Site: Building a Unique Hopewell Phenomenon in Southwestern Indiana*

The Mann site is one of the largest and most important late Middle Woodland (200–600 CE) sites outside of the Ohio Hopewell core area. Located in Posey County, Indiana, Mann encompasses 17 earthworks, including large and small geometric earthworks, two platform mounds, and at least eight burial mounds. Immense amounts of habitation-type debris are also found at the site, representing an occupation area much larger than any other contemporary site in the Midwest. Study of the site's earthworks and artifacts indicates that the Mann phase was a unique amalgamation of characteristics from the Hopewell cultures of Ohio and the Southeast. Ohio-like characteristics at Mann include large geometric earthworks and the presence of large

quantities of exotic goods, while those of the Southeast include the platform-shaped mounds, complicated stamped pottery, and large-scale habitation areas adjacent to the earthworks. These characteristics were combined in a unique way to create a distinctive amalgamation and recombination of Hopewell ideas. It is clear that the Mann site can only be understood in broad geographic terms, encompassing large portions of the Eastern Woodlands. The creation and maintenance of the Mann site phenomenon involved the routine movement of both people and artifacts across great distances.

Stricker, Aleks [89] see Ragsdale, Corey

Strong, Rebekah [45] see Kirgesner, Samantha

Stroth, Luke (UC, San Diego)

[204] *A Review of Macrobotanical Quantification Techniques and the Challenges of Data Standardization in Paleobotanical Research: A Case Study from Nim li Punit (AD 150/250–830+), Southern Belize*

The modern-day Toledo District, Belize, is home to a variety of plant resources used by Maya communities today for medicinal, culinary, and crafting purposes. Scholars, archaeologists, and ethnographers have documented plant use across the contemporary and ancient Maya world. In this paper I report a novel paleobotanical dataset from Nim li Punit (AD 150/250 to 830+) and calculate diversity indices to compare the collection from Nim li Punit to 18 previously published datasets from Mexico, Guatemala, Honduras, El Salvador, and Belize. One challenge in synthesizing these datasets is a lack of standardization in how paleobotanical data is quantified, alternatively as presence/absence, counts, ubiquities, or densities. However, I argue this is not necessarily an obstacle in identifying similar applications of and contexts of use for plant resources. In my paper I consider how diversity indices may encourage different (mis)interpretations of available data and emphasize the importance of additional lines of evidence including ethnographic research, paleoenvironmental data, and depositional context in providing a richer picture of the role these plant resources played in ancient life.

Strother, Eric [268] see Stiles, Kaitlyn

Stroup, Delaney (Western Colorado University), Jessica Weinmeister (Binghamton University), and David Hyde (Western Colorado University)

[181] *Excavations at Plaza C at La Milpa: Surrounded by an Acropolis and Three Range Structures*

The Tzaman Acropolis Research Project's first season took place during the summer of 2025 at the Maya polity of La Milpa, located in northern Belize. Plaza C, situated on the southern portion of the site, was the focus of this season's research. The plaza is surrounded by the Tzaman Acropolis to the south, and three monumental range structures to the west, north, and east, and has restricted access from other areas in La Milpa. One objective of the 2025 season was to excavate a series of plaza test pits to identify the depth and sequence of constructions, and to recover ceramics for chronology. Preliminary findings revealed plaster floors, platforms, earlier plaza walls, and culturally modified bedrock. This poster presents our findings and initial interpretations of the data.

Stuart, David (University of Texas at Austin), and Stephen Houston (Brown University)

[53] *Up, Down, and Slanting: A New Perspective on Ancestral Space and Disposition in Classic Maya Inscriptions*

Tricia McAnany made a major contribution to Maya studies by showing how ancestors were "implanted" within built environments. Acts of interment naturalized certain claims over space and, by their prioritization, asserted the authority of certain families and affinities. This paper identifies one key aspect of ancestral implantation through the examination of the recently deciphered hieroglyph for the word *y-ahk'ol*, "above," used to orient the acts of the living in spatial relationship to the dead, yet conceived in the Classic period within a sloping orientation. To be above was upslope (*ahk'ol*), below downslope, evoking a landscape of hills and ravines. Glyphic evidence and present-day languages, particularly Tzeltal Mayan, reveal how *y-ahk'ol* was applied to the placement of royal burials and their relative disposition in space and in time.

Stuart, David [112] see Marengo Camacho, Nelda Issa

Stuckey, Sarah [156] see Kennedy, Jason

Stumpf, Mara (Texas State University), and Sara Juengst (UNC Charlotte)

[337] *Current Understandings of Dental Modifications in South America*

Dental modification has been well-documented from the coast of Ecuador, with practices including elaborate dental inlays and incisions. However, few examples come from recently excavated or well-provenienced sites, making the antiquity and changing significance of dental modification unclear. This paper presents a synthesis of known examples and types of dental modification from Ecuador, and recommendations for future study of South American dental modification. First, we will discuss the different styles of known Ecuadorian dental modifications, how they may vary by region, and the changes of styles over time. Then, we compare these examples from Peru, Colombia, Panama, and Costa Rica. We suggest that dental modification was much more common in northwestern South America compared to the Central and Southern Andes or Amazonian lowlands. We also argue that it may be necessary to develop a South American chart of dental modification styles as the standard chart developed by Romero (1978) does not capture the diversity of South American dental modification.

Sturm, Jennie (SWCA Environmental Consultants)

[46] *"It's Great When It Works" and Other Misconceptions about Geophysics*

Despite decades of prevalence and piles of successful case studies, geophysical archaeology remains misunderstood in many corners of the broader archaeological discipline. Statements such as "it's great when it works" or "we don't know what it is until it's ground truthed" not only reflect a fundamental misunderstanding about what these methods do but also imply that these methods cannot be trusted unless confirmed or validated by "real" archaeological knowledge. After so many years, why is this still the case? Drawing from case studies, this presentation explores some of the possible answers, including the broader problem of misunderstanding science, a lack of qualifications/standards within the subdiscipline of geophysical archaeology, and a misuse of the methods. As the session abstract suggests, once we move geophysics from a supporting role and start to engage with it as its own thing, it becomes a powerful way to access information and understand the past in ways that aren't possible with other archaeological methods.

Stutz, Aaron (Bohusläns Museum)

[263] *Population Decline in the Scandinavian Middle Neolithic: Resilient Eco-Cultural Niche "Downshifting" in the Fifth Millennium BP*

Major population fluctuations span multiple generations in the Western European Neolithic. Centennial-scale demographic booms, declines, and recoveries are integral to local establishment and development of agropastoral production, especially in the sixth and fifth millennia BP. Theoretical work has focused on systemic drivers of demographic decline, leaving the question, what happens later, during the phase of reduced population? Utilizing ^{14}C datasets, this presentation examines geographic and chronological variability in Scandinavian Neolithic population downturns. This paper considers regionally variable demographic declines in eco-cultural context, focusing on how fishing, hunting, and gathering practices interacted with agropastoral practices, population fluctuations, and social identities. The presentation provides updated results from the author's ongoing research on the long-term Pitted Ware Culture (PWC) occupation of western Sweden. Dating between ca. 5000 and 4000 BP, the Western Swedish PWC record suggests that mobile fisher-hunter-gatherers—with low population density—held an extensive coastal territory over nearly a millennium, even as a Late Neolithic farming population set in motion a demographic recovery on the inland Falbygden plateau. Interregional comparisons highlight divergent Scandinavian responses to demographic decline, including population turnover and local continuity. However, responses share persistent ecological downshifting. This paper considers why reduced energy-extraction rates constitute resilient eco-cultural adaptations under certain conditions.

Suarez, Nicholas (University of Pittsburgh), Claire Ebert (University of Pittsburgh), Bryan Hanks (University of Pittsburgh), James Davenport (University of Missouri), and Julie Hoggarth (Baylor University)

[201] *Status and Context-Based Variation in the Distribution of Obsidian at the Lowland Maya Center of*

Baking Pot, Belize

Among the ancient lowland Maya, obsidian imported from the Guatemalan and Mexican highlands was used for both utilitarian and ceremonial purposes and was accessible at all levels of the sociopolitical hierarchy. Geochemical sourcing of obsidian artifacts, however, demonstrates that access to particular obsidian sources may have varied by household status, with different sources preferentially used for specific activities across Maya society. Here we present combined portable X-ray fluorescence (pXRF) and contextual data from more than 2,500 obsidian artifacts from Preclassic to Terminal Classic (ca. 900 BCE–CE 900/1000) contexts from the regional polity of Baking Pot in the upper Belize River Valley Region of the eastern Maya Lowlands. Architectural and other contextual data is used to reconstruct both the status/hierarchical context of the obsidian's distribution (e.g., elite, intermediate elite, or commoner) and its behavioral/systemic context (e.g., workshops, mortuary goods, ritual deposits, waste). The results demonstrate preferential use of obsidian from El Chayal, Guatemala, in ritual and ceremonial contexts, and differences in access to this resource between elites and commoners. These findings carry broader implications for understanding the development and evolution of inequality in resource access in ancient societies.

Suárez, Rafael (Universidad de la República, Uruguay), and Jenny Volarich (Universidad de la República)**[41] Oversized Bifacial Technology during the Late Pleistocene and Early Holocene in Uruguay**

Research on the early peopling of Uruguay has made significant advances in recent decades. In addition to the cultural diversity documented at the end of the Pleistocene and the Early Holocene, where at least four technocomplexes with different point designs have been identified for the period between 13,000 and 10,300 cal BP, now the presence of oversized bifacial points has also been recognized. This study characterizes these complex bifaces, focusing on their morphology and technology. The classical definition of what are termed Fishtail points is no longer adequate. For decades, researchers have highlighted the great diversity exhibited by Fishtail bifaces in their blades, shoulders, bases, and stems. Current observations show that oversized Fishtail bifaces display considerable morphological variability, including examples exhibiting true barbs with angles of approximately 45°–55°. The production of Fishtail oversized points in Uruguay shows parallels with Clovis technology in North America. However, in contrast to North America, in Uruguay the practice of producing oversized bifaces continued in post-Fishtail times during the Early Holocene with Tigre technocomplex (ca. 12,000–11,300 cal BP) and Triangular non-stemmed points. This paper examines possible explanations for the occurrence of this technology, which may reflect symbolic meanings and/or social prestige within early human groups.

Suárez Calderón, Amanda [311] see Corrales-Ulloa, Francisco

Suasnavar, Jose [177] see Hansen, Richard

Sugiyama, Nawa (University of California-Riverside), Ronald Bishop (Smithsonian Institution), Wesley Stoner (University of Missouri), Ryohei Takatsuchi (University of California-Riverside), and Ariel Taxis Muñoz (University of California-Riverside)**[310] Feast Diplomacy: Teotihuacan-Maya Interactions at Plaza of the Columns Complex**

The discovery of a grand feast involving foreign diplomats at a civic-administrative complex in the ceremonial core of Teotihuacan, Mexico, offers an unprecedented opportunity to examine the intersection of interregional and internal sociopolitics, cuisine, and a robust ritual economy in Classic Mesoamerica. Offering D1 features 21,000 ceramic sherds, over 100,000 faunal remains, a robust paleobotanical assemblage, and other material residues of a grand feast curated over an area of 7 × 2.5 m. The reconstruction of 70 fine Maya vessels, depicting regal elites exchanging precious goods, challenges existing understanding of early Maya-Teotihuacan interaction. This context predates historically documented military takeovers by Teotihuacan in Maya epigraphic records. We present ceramic bulk data to quantify the feast's scale and infer the social identities of the participants. Preliminary INAA data suggests multiple areas of ceramic production. This feast diplomacy represents not a singular event but a collaborative process involving a community of artisans, culminating in a unique high-level diplomatic occasion that forged a novel interaction with the Maya. Sugiyama, Nawa [310] see Mitrani, Alejandro

Sugiyama, Nawa [310] see Sugiyama, Saburo
Sugiyama, Nawa [266] see Takatsuchi, Ryohei
Sugiyama, Nawa [310] see Taxis Muñoz, Ariel

Sugiyama, Saburo (Arizona State University), and Nawa Sugiyama (University of California-Riverside)

[310] *The Plaza of the Columns Complex Project: Ten Years of Investigation at Teotihuacan's Civic-Administrative Core*

The Project Plaza of the Columns Complex (PPCC) began in 2015, with the explicit aim of exploring the nature of the Teotihuacan polity. Previous intensive excavations at the Feathered Serpent Pyramid, the Moon Pyramid, and the Sun Pyramid complexes have revealed that the ruling group was highly concerned with materializing their worldview through monumental constructions and carried out diverse sacrificial rituals, suggesting centralized rulership with militarism. However, specific political structures and dominant agents have not been well understood, and the headquarters and/or residences of royal families have not been physically located in the urban center. The PPCC was created to explore a massive ceremonial-administrative complex, one of the most probable core facilities of the state. We present a summary of the excavation sequences listing some notable discoveries, including early termination rituals, Maya mural fragments indicating direct contact with the Maya dynasties, and feasts with multiethnic participants. Test pit/trench excavations helped refine the architectural features and chronology of the site from early periods of urbanism to the collapse of the city. An archaeological spatial analysis of the core ceremonial districts using our new 3D maps suggest that its northern large walled compound would have been the central hub of the state.

Sugiyama, Saburo [310] see Taxis Muñoz, Ariel

Sugrañes, Nuria [95] see Neme, Gustavo

Sugunalan, Thayra [60] see Wai, Stefanie

Sullivan, Alan [79] see Mink, Philip

Sullivan, Bryn (University of Oregon)

[72] *Climate, Plants, and Foodways through Time: Macrobotanical Insights from Coprolites at Last Supper Cave, Nevada*
Great Basin archaeologists have long investigated the dynamic relationships among people, climate, and culture, yet many questions remain about past subsistence practices, particularly the dietary role of plants and small animals. Few diachronic studies are available to examine the relationships between Indigenous foodways and environmental change in one location, in part due to the paucity of sites where organic residues are preserved. This study addresses these relationships through the analysis of nine coprolites from Last Supper Cave, spanning the terminal Pleistocene through middle Holocene. Coprolites provide a secure context for distinguishing between culturally and naturally deposited plant and animal remains, offering direct insight into individual diets and local landscapes. This poster presents macrobotanical findings that reveal the role of plants in past northern Great Basin diets. This project contributes to a larger study that aims to advance the field of coprolite research by integrating radiocarbon, botanical, faunal, parasitological, and aDNA analyses. The Last Supper Cave analysis will be the first coprolite study from Nevada's High Rock country and is intended to become one of the most comprehensive coprolite studies to date, providing high-resolution data to inform our understanding of traditional foodways and impacts of climate change in the Great Basin.
Sullivan, Kathleen [343] see Marshall, Amanda

Sullivan, Lynne [208] see Marrinan, Rochelle

Sullivan, Timothy (HMB Professional Engineers), and Christopher Pool (University of Kentucky)

[285] *Mapping the Social Cosmos: The Transformation of Ceremonial Space at Tres Zapotes from the Middle Preclassic through the Early Classic Periods*

The organization of performative and processional spaces has powerful implications on how people conceived of and interacted with cosmic forces that permeated all aspects of life in the Mesoamerican world. The accessibility and visibility of these spaces to the community at large also reflects the social organization of society, and the status of leaders relative to commoners. Through the mapping of patterns of ceramic distributions, collected from an intensive surface survey, combined with deep auger excavations, and previous excavations into architecture at the Olmec capital of Tres Zapotes, we have gained information on how people used mound groups, and how patterns of use changed from the Middle Preclassic through the Early Classic periods. This paper addresses the significance of these changes in the context of the site of Tres Zapotes itself, and in the broader Middle Preclassic through Early Classic Mesoamerican context.

Summers, Natalie (Tulane University)

[292] *A Synthesis of Evidence for Motherhood among Classic Period Maya Women*

It has been long established in the literature that past women played a pivotal role in society and the economy of the Classic period (250–900 CE) Maya, as they continue to today. This research will delve deeper into ancient women's roles as parents and explore the available evidence for motherhood of Mayan women specifically during the most vulnerable years of the child's life (ages 0–5). Among the topics explored will be iconographic depictions and epigraphic evidence of motherhood found carved or painted onto artifacts; however, the bioarchaeological evidence will also be utilized to support conclusions about motherhood during this time period; namely, stable isotopic research that reveals health and diet information (and thus weaning times) for children as well as osteological markers of pregnancy. Additionally, this paper will apply historical and modern conceptions of motherhood in the modern Maya descendant communities and languages in order to create an ethnoarchaeological approach for better understanding motherhood among the Classic Maya.

Suni, Raivo (University of Tartu), Ülle Aguraiuja-Lätti (Tallinn University, Estonia), Stefania Sasso (University of Tartu, Estonia), Kristiina Tambets (University of Tartu, Estonia), and Ester Oras (University of Tartu, Estonia)

[221] *Where Did They Come From? A Multi-isotopic Approach for Provenancing Archaeological Human Remains from Veibri Mass Grave, Estonia*

The paper explores the potential of a multi-isotopic approach for reconstructing ancient human migrations. We conducted a comprehensive analysis combining strontium, oxygen, sulfur, nitrogen, and carbon isotopes, alongside ancient DNA, to model the origins of individuals found in a thirteenth-century mass grave in Veibri, Estonia, as accurately as possible. The Veibri mass grave contains the remains of 10 men discovered in the floodplains of the Emajõgi River. Using isotope and ancient DNA data along with statistical modeling, we aim to link these individuals to potential regions of origin. Their possible nonlocal origin aligns with historical records. The late twelfth and early thirteenth centuries CE were a pivotal period in the region's history, marked by the Crusades and violent incursions from both the east and west. The Veibri case study offers compelling evidence of these historical events and gains stronger interpretive support through the integrated use of isotopic analysis and ancient DNA.

Sunseri, Jun [183] see Hinkle, Rory

Sunseri, Jun [301] see Lovell, Juliette

Supak, Karen (Great Basin Institute)

[182] *Agreements, Archives, and Archaeology: How Nonprofit-Federal Partnerships Help Steward America's Cultural Resources*

For more than 25 years, the Great Basin Institute (GBI) has partnered with federal landholding agencies to conserve natural resources in the western United States. In 2023, the growing need for cultural resources support drove the creation of the Cultural Resources Services (CRS) Program. GBI's CRS Program provides opportunities for cultural resource specialists to collaborate with agency professionals to implement a wide variety of heritage management projects. The result of these federal partnerships thus far has been the employment of over 250 archaeologists, archivists, and historic preservation specialists in more than 50 national parks, national forests, and BLM units across the United States. These agreement partnerships provide a unique opportunity for emerging and seasoned heritage professionals to gain valuable on-the-job

training and experience while contributing to the stewardship of our nation's rich cultural heritage.

Surovell, Todd (University of Wyoming), Madeline Mackie (Michigan State University), Spencer Pelton (Office of the Wyoming State Archaeologist), Briggs Buchanan (University of Tulsa), and Jacob Arnzen (University of Wyoming)

[229] *Contemporaneous Clovis and Folsom Diagnostic Artifacts at the La Prele Site, Converse County, Wyoming*

For almost a century, it has been recognized that the use of Clovis points chronologically preceded the use of Folsom points. This foundational archaeological knowledge is supported by stratigraphic evidence and radiocarbon dates from across the Great Plains and Rocky Mountains, although Bayesian analysis of radiocarbon dates from a series of fluted point sites suggests as much as a 200-year period of overlap. Investigations at the La Prele site (48CO1401), a mammoth kill and campsite in Converse County, Wyoming, dating to between 12,900 and 13,000 BP provide new insights into the problem. At La Prele, Clovis and Folsom diagnostics were recovered on the same short-lived occupation surface within an alluvial terrace of La Prele Creek. This discovery, situated within a large lithic assemblage of more than 58,000 pieces, reframes our understanding of the terminal Pleistocene cultural landscape. In this paper, we discuss the stratigraphic, geochronological, and typological evidence for the contemporaneity of both projectile point styles within the same occupation. This unprecedented co-occurrence shows a greater time depth for Folsom and greater chronological overlap with Clovis than previously recognized.

Surtees, Alex [173] see Sandoval Molina, Andrea

Suter, Kai Anne, Âu Ý Nhiêu, Lý Văn Châu, K Thanh Hiếu, and Diep Cong-thi

[217] *Thin-Section Petrography on Ceramics from Oc Eo - Ba The*

Oc Eo - Ba The is an archaeological site located in the An Giang province of Vietnam. In 2022 Oc Eo - Ba The was submitted to the UNESCO tentative list of cultural sites. The site is defined as two parts, the Ba The Mountain that is the religious center and the Oc Eo ancient city that has been found nestled between a series of canals. These canals connected the city to the ocean making Oc Eo an important trade port for the Funan kingdom. This research is looking to expand understanding of Oc Eo culture that thrived in the area between the first and eighth centuries through ceramic analysis. Thin-section petrographic analysis has been carried out to try to discover the provenience of the clay used for ceramics. The following presentation will give the results of the thin-section analysis and discuss what the results could mean for where Oc Eo ceramics were produced.

Sutherland, Rachel, Rebecca Hazard (Idaho State University), John Dudgeon (CAMAS/Idaho State University), and Kirsten Mink (Idaho State University)

[56] *Strands of Evidence: Microscopic Analyses of Human and Faunal Hair for a Comparative Reference Collection*

Hair is a valuable resource in anthropological research and beyond. Hair structure can provide biological information associated with stress, diet, and mobility, as well as ecological and environmental information. Microscopy has proved a valid method for taxonomic identification of animal hair and characterization of human hair. Microscopic analyses, commonly optical microscopy (OM), and increasingly, scanning electron microscopy (SEM) offer highly resolved imaging of hair size, hair condition, surface residues, cuticle scale pattern, and internal structure. This project employs cross-sectional and length-wise morphological analyses using both OM and SEM imaging to establish a permanent hair comparative collection at Idaho State University designed for long-term research accessibility. The primary focus will be on structural differences that assist in classification. For animals, this involves taxonomic identification of hair at the family or species level. For human hair, the priority lies in cataloguing basic characteristics that change with lifestyle decisions. This work will establish a multidimensional permanent resource of both human and North American mammalian faunal hair specimens, with application to the environmental sciences and wildlife conservation, archaeological research, and forensic investigations. Our classification and comparative collection will be a valuable reference tool and diagnostic manual for future cross-disciplinary research and medicolegal investigation.

Sutherland, Rachel [114] see Lara Maldonado, Isabel

Sutter, Richard (Purdue University-Fort Wayne), Celeste Gagnon (Wagner College), and Bethany Turner (Georgia State University)

[337] *Emerging Trends and Future Directions in Dentally Derived Biodistance Analyses for Ancient Skeletal Populations of the Moche Valley, North Coast of Peru*

Although more recent methods such as aDNA and isotopic analyses have made important contributions to the study of migration, mobility, ethnicity, and group identity, advances in methodology and statistics have advanced analyses using traditional datasets, such as nonmetric tooth cusp and root traits. Here, we highlight some of these developments using examples from ancient skeletal populations in the Moche Valley, Peru, and demonstrate how results from nonmetric traits show a high level of correspondence with—and provide complementary information to—those from both genetic and isotopic analyses. We show that high levels of relatedness and low estimated genetic heterozygosity among Virú- and Moche-affiliated populations did not prevent the emergence of new identities or the development of conflict. Instead, isotopic and nonmetric dental evidence suggest that closely related littoral and coastal valley groups began to diverge, with their relative isolation and economic specializations likely fostering distinct group identities. Additional case studies from ancient Moche Valley populations further illustrate both the potential and the limitations of nonmetric tooth trait analyses. ***This presentation will include images of human remains.

Sutton, Connor (Vanderbilt University)

[274] *Counterpower and the Cosmopolitical Storm: An Investigation into the Limits of Moche Sovereignty*

Within Peru and beyond, the Moche are renowned for their extravagant burials of individuals interred with spectacular crafts and accoutrements. These concentrations of wealth, associated with particular individuals and interred in *huacas* (monumental platform complexes), are typically taken for granted as the property of powerful heads of expansive states. However, the last decade or so of Moche scholarship has destabilized the neo-evolutionary, progressivist models implicit in these interpretations, highlighting the need for investigation into the political institutions and value systems in which these materials, people, and places were embedded. Here, through a discussion centered by *huacas*, I show that an examination of the relations between *huaca* centers and the peoples they gathered indicates that Moche elites acted more as organizers, performers, and animators than as administrating rulers. Further, considering the cosmopolitical agency of landscape, ancestors, and other-than-human agents like water will illuminate how environmental forces acted within (rather than upon) coastal Andean collectives. Importantly, this suggests analyses of the relationships between Moche “elite” and “commoner” are incomplete without the structural inclusion of a third actor: the El Niño phenomenon. The actions of an agentic landscape circumscribed Moche sovereignty and cultivated counterpower: the latent capacity to identify and depose illegitimate authorities.

Swelstad, Georgia (University of Montana)

[297] *Advancing PMI Estimation in Bioarchaeology through Necromicrobiome Analysis*

Accurate estimation of the postmortem interval (PMI) is critical not only in forensic investigations but also in bioarchaeological contexts, where determining whether human remains are modern or ancient has both legal and ethical implications. PMI estimation can help bioarchaeologists avoid disturbing potential crime scenes and contributes to our understanding of taphonomic processes, particularly how environmental factors shape bone preservation across time and space. This study investigates the human necro-microbiome, specifically skin-associated microbial communities, as a tool for PMI estimation in arid, high-elevation environments, which are common settings for archaeological discovery. Research was conducted at the Forensic Investigation Research Station (FIRS) in western Colorado, a region poorly represented in existing decomposition models. Using 16S rRNA sequencing and accumulated degree days (ADD), microbial succession was tracked throughout decomposition. Prior findings (Burcham et al. 2024) identified *Helcococcus seattlensis* as a reliable PMI indicator across environments, while other taxa varied by climate. This study aims to confirm those results in a semiarid, high-altitude setting, advancing region-specific, noninvasive methods for estimating PMI. By refining microbial-based PMI models, this research enhances our ability to assess the relative age of remains, improve interpretations of taphonomy, and inform ethical decision-making in archaeological fieldwork.

Swenson, Edward (University of Toronto)

[321] *Stranger Kings and Stranger Temples: Cosmopolitics and the Architectonics of Alterity in the Ancient Polities of the Andes and Cambodia*

This paper demonstrates the value of stranger king models to interpret varied manifestations of radical alterity in the cosmopolitics of the Moche of Peru and the Angkorian state of Southeast Asia, as reflected in the symbolism of monumental religious architecture. In both traditions, temple-mountains concentrated cosmic powers and contained ontological otherness. The repetitive rituals of architectural termination and rededication of Moche pyramids paralleled the apparent sacrifice of Moche elites, and regicide and royal scapegoating commonly structure stranger king cosmopolitics. Angkorian kings similarly built state-mountain temples enshrining their supernatural essence in the form of a linga. However, they also commissioned numerous repetitive foundations, including āśrama and hospitals as projections of kingly beneficence. These religious facilities differ significantly from temple mountains, and as centers of learning, health care, and spiritual retreat, they served to demonstrate the monarch's compassion for his subjects. However, the specific locations, construction history, and commemorative inscriptions of the repetitive foundations highlight the distinctive "strangeness" and inherent tensions underwriting Angkorian kingship. Ultimately, the comparison intends to shed light on the diverse role played by monumental architecture in mediating structures of alterity essential to the establishment and reproduction of ontological difference and, by extension, often abject forms of political inequality.

Swidorowicz, Roger [101] see Perez Gomez, Jose Miguel

Swisher, Kimberly (Eastern Kentucky University), and John Stauffer (Choctaw Nation of Oklahoma)

[273] *Mississippian by Degrees: How Intermediaries Shaped and Connected Mississippian Communities in the Lower Chattahoochee River Valley and Beyond*

In Bruce Smith's (1990:3) seminal work *The Mississippian Emergence*, he compares the cultural phenomena and development of Mississippian to regional sets of "nested black boxes" that vary in terms of their "interaction exchange lines of communication and movement of people, objects, and ideas." While many more of these "black boxes" have continued to be opened since 1990, there are still many that remain sealed, limiting our understanding of not just the development of but what is Mississippian. Manifestations of Mississippian can widely vary, but archaeologists still discuss them as being (undoubtedly) Mississippian. In this paper, we will be exploring the ways in which Mississippian communities were affected and connected by intermediaries, communities that arguably remained non-Mississippian. Specifically, we will be discussing how the non-politically stratified Averett culture and surrounding Mississippian communities of the Lower Chattahoochee River Valley affected the shaping of this macroscale cultural phenomena in the Eastern Woodlands. We argue that such intermediaries helped to develop, shape, and connect the Mississippian cultural experience through their degrees of interactivity with one another.

Swope, Marion [282] see Taivalkoski, Ariel

Sykutera, Marzena [302] see Socha, Dagmara

Syzdek, Caroline [124] see Finley, Whitney

Szpak, Paul [282] see Bari, Dawn

Szpak, Paul [84] see Bernard, Hayden

Szpak, Paul [79] see Kennedy, Ryan

Szpak, Paul [305] see McCuaig, Julia

Szyndler, Michael (Cal Poly Humboldt), Marissa Ramsier (Cal Poly Humboldt), Katherine Gaddis (University of Nevada, Las Vegas), Jacek Karmowski (Jagiellonian University, Kraków, Poland), and Katarzyna Slusarska (University of Szczecin, Poland)

[89] *Grit: A Study in Medieval Pomerania, Examining Skeletal Remains for Resilience and Agency, Post-trauma*

Traditionally, studies in biological anthropology have often cited the presence of individuals with healed trauma observed on skeletal remains as evidence for social care either at the time of the trauma or due to assumed ongoing disability after healing. Here, we present three case studies from a late medieval cemetery at Żelewo 1-3 in northwest Poland. The site is associated with a Cistercian monastery in nearby Kołbacz, the oldest of its kind from Pomerania. The individuals in this study may provide evidence supporting a model of agency regarding the way disability and impairment are interpreted in people of the past. One individual in this study sustained a prominent leg injury. Another had a crushing injury to their foot and fused ribs. The third had blunt-force trauma to the head and broken clavicles. However, no osseous signs of marked changes in mobility or functionality were observed; the trauma appeared well healed, and we observed robust muscle attachments and a lack of significant atrophy. We discuss these findings with respect to implications for resilience. While social care was logically initially important in these cases, it should not overshadow the individuals' potential agency and self-sufficiency. *****This presentation will include images of human remains.**

Szyndler, Michael [89] see Ramsier, Marissa

Tackney, Justin [155] see Krus, Anthony

Taivalkoski, Ariel (University of Alaska Anchorage), Ryan Harrod (University of Alaska Anchorage), Ivory Iverson (University of Alaska Anchorage), Marion Swope (University of Alaska Anchorage), and Ashley Hannigan

[282] *Tracing Trauma: Pathology and Osteoarchaeology in the Alaska Consortium of Zooarchaeologists (ACZ) Collection*

The Alaska Consortium of Zooarchaeologists (ACZ) reference collection houses more than 300 reference skeletons from mammal, fish, and bird species native to the Arctic and subarctic. Specimens include both wild-collected dead, animals collected for biological study, and specimens from animals housed at conservation agencies and zoos. Alaska is one of the most biodiverse regions in the world, encompassing a large array of ecosystems. With this great diversity in ecosystems and species comes unique challenges that may be reflected in the prevalence of disease and traumatic lesions within animal populations. This project examines the prevalence of pathological conditions within the ACZ collection alongside differential diagnoses for the pathology. This study will contribute to the growing literature on animal bone pathology, including methodologies for lesion quantification and differential diagnoses. Reporting of pathologically modified animal bones from archaeological assemblages is still rare. Examination and publication of lesions within modern reference collections help to refine methodologies and provide reference images for lesions.

Taivalkoski, Ariel [48] see Harrod, Ryan

Takatsuchi, Ryohei (University of California-Riverside), Nawa Sugiyama (University of California-Riverside), Wesley Stoner (University of Missouri), and Ronald Bishop (Smithsonian Institution)

[266] *Made in or Made out of Teotihuacan? A Ceramic Study from the Plaza of the Columns Project Teotihuacan* Teotihuacan, located in the northeastern Basin of Mexico, was one of the most important cities during the Terminal Formative (ca. 100 BC) to Early Classic periods (300–550 CE). Widely recognized as one of Mesoamerica's eminent urban polities, ceramic thin-section petrography sheds light on social complexity at Teotihuacan with the entanglement of local and foreign attributes within its material culture. Specifically, within ceramics, potters did not sign their work but variations in fabric, mineralogical/rock inclusions, and chemical composition (INAA) can infer the cultural interactions and trade Teotihuacan was part of. The Plaza of the Columns, in Teotihuacan's ceremonial center, is posited as a palatial administrative center. Within the Plaza of the Columns, Offering D1 is an exceptional context with evidence of "ritual killing" of material culture used during a feasting event. Excavations there yielded over 21,000 ceramic sherds including ceramics made in styles associated with the Maya, the Gulf Coast, and Oaxaca. The presentation focuses on an ongoing investigation of petrographic attributes for insights on the relation between local and nonlocal raw materials. Initial examinations allow for inferences of what was made in and what was made outside of Teotihuacan during the introduction of Lustrous Ware in the Tlamimilolpan phase (150–350 CE).

Takatsuchi, Ryohei [310] see Sugiyama, Nawa

Talbot, Richard [299] see Bennett, Jeremy

Tambets, Kristiina [221] see Suni, Raivo

Tamburro, Paul (Brown University)

[255] *Re-sounding Word and Image: The Social Settings of Mesoamerican Song and Speech Scrolls*

Sound scrolls, also known as “volutes,” “vírgulas de sonido,” and “speech scrolls,” are ubiquitous in Mesoamerican art. Yet while their forms and regional variants have long attracted scholarly attention, the social grounding of visualized speech and sound has not been fully explored. This paper takes a comprehensive approach to the motif to ask: what types of figures were shown vocalizing, across Mesoamerica, and in which social settings? Whose speech or song was rendered visible, and when? In some cultures, such as that of Teotihuacan, sound scrolls appear frequently, though they may stand on their own without a clear listener. In other areas, such as among the Maya, speech scrolls usually imply a depicted audience, in scenes often marked by social asymmetry. Additionally, a regular association between speech and feasting suggests that metaphors between orality and ingestion were at play, and a new visual typology of scroll forms is also proposed.

Tamoria, Raveena (University of York)

[346] *Coastal Hawai'i in the Plastic Age: Archaeological Perspectives on Pollution and Heritage*

Marine plastic debris at coastal sites reveals the entangled relationships between environmental degradation, cultural memory, and global consumption. In Hawai'i, plastic waste accumulates along shorelines and sacred spaces, threatening coastal ecosystems and disrupting the cultural lifeways of local communities. These intrusions complicate stewardship and interrupt the continuity of traditional practices rooted in place-based care. Archaeology offers a critical lens for interpreting these material legacies, linking pollution and disposability to broader issues of sustainability, governance, and environmental justice. Beyond interpretation, this research utilizes archaeology as a tool for community engagement and environmental action. Through shoreline cleanups, youth workshops, and collaborative programming, the project fosters intergenerational dialogue and reconnects participants with coastal spaces through hands-on care. These contributions ground the research in community realities and affirm the importance of relational approaches to heritage and sustainability. In this way, archaeology becomes a transformative practice—mobilizing collective care, amplifying community voices, and reclaiming coastal heritage in the face of global environmental harm.

Tang, Yiyi

[220] *Starch, Phytoliths, and Power: Exploring Foodways across Liangzhu Communities*

The Liangzhu culture represents a pivotal stage of social complexity in the Lower Yangtze during the Neolithic. While archaeobotanical research on Liangzhu sites has largely focused on subsistence economy, less attention has been given to the social and cultural dimensions of foodways. This study addresses this gap by analyzing food residues on pottery sherds through starch and phytolith analysis. By comparing results from both high-ranking centers and peripheral island settlements, it examines how daily food consumption practices may have (or not) varied across communities of different social status. In doing so, the study highlights the role of pottery vessels not only in food consumption but also in shaping broader patterns of social dynamics within Liangzhu society.

Tantalean, Henry [340] see Stanish, Charles

Tardio, Katie [202] see Meier, Jacqueline

Tarkanian, Michael [266] see Meanwell, Jennifer

Tarulis, Elizabeth (University of Tennessee Knoxville)

[258] *Fitting the Mold: Documents and Distributions of North American Clay Stemmed Tobacco Pipes in New England*

Tobacco (*Nicotiana* sp.) is an American plant that pervaded Europe and, eventually, the globe beginning in the sixteenth century. While there were many approaches to tobacco consumption, one method dominated English colonial life: pipe smoking. The English learned of clay tobacco pipe smoking from local Indigenous inhabitants at the Roanoke Colony and brought the practice back to England. After its introduction, pipe smoking spread throughout England and English, and Dutch craftspeople soon began to produce tobacco pipes made of white ball clay for export. Although white ball clay tobacco pipes dominate most seventeenth-century English colonial assemblages, archaeologists have also identified pipes made using North American clays. These pipes became a focus of debate in the Chesapeake region, but they have also been found in Canada, New England, and parts of the American Southeast. This paper utilizes legacy collections to determine the spatial and temporal distribution of North American pipes across New England, with an emphasis on tobacco pipes, which mimicked export shapes using a two-piece mold. Together with documentary records, I examine English attitudes around tobacco consumption and suggest the possible purpose(s) of North American, mold-made tobacco pipes in New England.

Tashmanbetova, Zhuldyz (Washington University in St. Louis), Kristine Korzow (Texas A&M University), Paula Dupuy (Nazarbayev University), Michael Frachetti (Washington University), and Christina Warinner (Harvard University; Max Planck Institute for Evolutionary Anthropology, Leipzig)

[315] *Tracing Saiga across Time Using ZooMS: New Evidence from the Central Eurasian Steppe*

The Eurasian saiga antelope is among the most enigmatic and least studied endemic animals of Eurasia and one of the longest-lived species, with adaptive biology and behavioral ecology spanning more than half a million years. Yet its role in prehistoric economies has been consistently underestimated due to difficulties in identifying fragmentary remains. Previous research has addressed this gap by developing morphological identification criteria to distinguish saiga from other wild gazelles and domestic medium-sized bovids, but these efforts have largely prioritized cranial characteristics. Here, we present two novel collagen peptide markers for saiga that allow us to distinguish it from phylogenetically and biogeographically related antelopes, cervids, and domestic caprines and bovids, thereby overcoming long-standing challenges in zooarchaeological identification. Applying this method to the faunal assemblage from the multi-period steppe site of Koken (East Kazakhstan) demonstrates that saiga occurred in regions outside its current migratory range, highlighting shifting ecological distributions and human hunting strategies across the Late Pleistocene and Holocene. More broadly, these findings highlight the saiga's importance as a keystone species linking grassland ecology, prehistoric subsistence, and the long-term adaptability of steppe communities.

Taube, Karl

[92] *The Epigraphic Artistry of Yaxchilan Lintel 48: An Iconographic Perspective*

In terms of ancient Maya writing, full figure texts demonstrate a consummate merging of literacy and art with a keen understanding of the subtleties of Maya iconography. Because these signs are extremely graphic and appear in very specific epigraphic contexts, they are a boon and almost a "Rosetta's" stone to Maya iconographic research, including for example gods impersonating numbers. By no means common, such texts are mostly limited to stone monuments from some of the greatest and most illustrious Maya sites, including Palenque, Copan, Quirigua, and Yaxchilan. In addition, they are largely Late Classic, with a noteworthy earlier exception being Yaxchilan Lintel 48. Whereas most full figure Long Count dates feature period endings, Lintel 48 bears a specific historical date of AD 526, denoting the accession of king K'inich Tatbul Skull II, who constructed Structure 12 that housed Lintel 48 and others that formed a lengthy text. In this presentation, I focus on the full figure glyphs of Lintel 48 and how they pertain directly to a much broader spectrum of images and meanings appearing in the rich corpus of Classic Maya iconography.

Tavera-Medina, Carito [305] see Curran-Morton, Willow

Taylor, Michelle (American University)

[91] *An Autoethnographic Approach to Community-Engaged Fieldwork at James Madison's Montpelier*

This paper begins with an autoethnographic reflection by the author of this paper who is a part of the descendant community at James Madison's Montpelier. The author embarked on a journey of self-discovery

while conducting the first of many archaeological excavations in the quarters of the enslaved after discovering familial connection to the enslaved community at the presidential estate. Thousands of artifacts that have been unearthed by descendants at James Madison's Montpelier help to interpret the past for not only scholars but also for descendants. The author explores the success and challenges that she faced as a Black woman in the field of archaeology. The role and involvement of descendants in the field of archaeology is most visible at historic sites that engage with community leaders. At James Madison's Montpelier the descendants of the enslaved community are overwhelmingly Black women. These women have been able to contextualize the artifacts associated with enslaved women, men, and children who were members of their families. This is partially because of the cultural tradition of passing down familial stories to women through oral history. The presence of women in academia particularly Black women has led to solidarity and increased representation within disciplines including archaeology and history.

Taylor, Noah [337] see Becker, Sara

Taylor, Samantha (New South Associates), and Jennifer Langdale (New South Associates Inc.)
[105] *Archaeology and Segregation-Era Black Spaces: A Case Study in Charlotte, North Carolina*

This paper will discuss the 2025 archival research and excavations at the Sunset Park Club and Pool site (31MK1345), a mid-twentieth-century segregation-era Black community pool and social club in Charlotte, North Carolina. Later rebranded as Club Mona Lisa and the Hi-Fi Club, Site 31MK1345 hosted many prestigious social events and up-and-coming activists and musicians, including Malcom X. The site consists of the partial remains of a large concrete pool and a dense surface scatter. In 2025, archaeologists from New South Associates Inc. conducted a preliminary archaeological survey at the site. Many of the artifacts recovered from the site are associated with the nearby Sunset Park Club, including ashtrays, alcohol bottles, a variety of hotel ware, and decorative glass. Site 31MK1345 is a unique cultural resource that represents a part of history that is often underrepresented in the archaeological record: segregation-era social institutions. Black spaces, such as Site 31MK1345, were instrumental in the building and maintenance of Black communities during segregation. As such, site 31MK1345 is uniquely situated to convey the importance of Black community and identity during the segregation era in Charlotte.

Taylor, Sarah, and Annabelle Lewis (University of Colorado Boulder)

[196] *Connecting Rural Lifeways and Mortuary Practices in Nineteenth-Century Upstate New York*

In the mid-1800s, waves of immigration and changes in agricultural strategy following the rise of industrial dairying transformed life in the rural communities of Upstate New York. The impacts of this transformation were felt in a variety of ways, one consequence being the related changes in mortuary practices as household economics, social relationships, and ideology around gender shifted. This poster examines practices of mortuary commemoration at three large cemetery sites in Madison County, New York, connecting burial and census data to examine the variations in lifeways and practices between different rural communities in the nineteenth century. To understand how life experiences shape methods of mortuary commemoration, the authors compare mortuary strategies practiced by recent European immigrants to those of established New York farmers in Erieville and Nelson, New York. In the nineteenth century, as today, the category of "farmer" or "immigrant" was not a monolith; by examining these large identity categories through the lifeways framework, we explore the role of social connections and economic opportunity in mortuary choice-making at multiple scales over time, complicating our understanding of rural life and identity in the past.

Taylor, William [211] see Orellana Soto, Michael

Taylor Riccio, Kia [314] see Wallman, Diane

Tedesco, Olivia

[51] *Seeing through the Layers: Aesthetic and Sensorial Engagement with the Moche Painted Murals of Pañamarca*
 This research engages with the painted murals at the Moche site of Pañamarca in Peru and how these murals transformed over the site's two centuries of Moche occupation, from approximately 650 to 850 CE. The

painted murals of the site's "Hall of the Moche Imaginary" were covered in whitewash and painted over seven times, likely reflecting changes in rulership at the site. In each layer, the Moche artists chose to preserve certain traditions and reject others, perhaps reflecting individual artistic choices or changing societal compositions at Pañamarca. Through both a visual and an archaeometric analysis using XRF, I will examine the similarities and differences between layers, both in aesthetic choices as well as in material changes. This research will also engage with an archaeology of the senses, attempting to understand the experience of an artist working at this site and considering questions such as the consistency of the paint, the illumination of the space, and what the artist may have been seeing on the layer below as they created their own visual composition. Through an engagement with the aesthetic and symbolic traditions at Pañamarca, this research contributes to broader scholarship on the de-essentialization of Moche culture.

Teeter, Matthew [305] see McCuaig, Julia

Teja, Melissa, Bryan Haley, and Gabriel Wrobel (Michigan State University)

[111] *Visualizing Sarteneja: GIS Mapping of Belize's Archaeological Heritage*

Sarteneja, an ancient Maya settlement in the Corozal District of northeastern Belize, covers roughly 4 km², much of it now under farmland and forest. Building off earlier terrestrial surveys from the 1980s, a drone-based lidar survey in summer 2025 produced the first complete high-resolution digital map of Sarteneja's urban core and surrounding settlement. The survey revealed clusters of structures and broader spatial organization extending beyond earlier maps. This poster presents the results of the lidar analysis and demonstrates how the integration of these data into a GIS framework expands the known boundaries of the settlement and refines our understanding of its spatial organization. With modern development threatening the area, this lidar-based GIS mapping provides a critical foundation for future excavation, comparative analysis, and long-term preservation of Sarteneja's archaeological landscape.

Tellez, Alba (SUNY Albany)

[278] *Household Strategies in Peripheral Contexts: New Insights from the Epiclassic Site of Chabelo, Hidalgo, Mexico*

Recent excavations at Chabelo, located in the northeastern highlands of Hidalgo, revealed an isolated domestic context dating to the Epiclassic period (ca. 600–900 CE). During this time, the region remained outside the influence of major Epiclassic centers that structured political and economic networks elsewhere in central Mexico. The project seeks to investigate household organization, domestic production, and material practices within an area that has remained largely understudied for this period. Excavations exposed architectural features, middens, and activity areas associated with sustained household occupation. Preliminary analysis of ceramics, lithic tools, and other domestic materials suggests local production with limited evidence of interaction with external networks, reinforcing the site's spatial and political isolation. These findings provide new data on Epiclassic settlement dynamics and domestic economies in the region, positioning Chabelo as a key comparative case for understanding household strategies in peripheral contexts. By documenting life in an area beyond the reach of dominant centers, this research contributes to broader discussions of regional variability, autonomy, and adaptation during the Epiclassic period.

Terrier, Thiéfaine [49] see Birch, Jennifer

Terry, Richard [35] see Hutson, Scott

Texis Muñoz, Ariel (University of California-Riverside), Nawa Sugiyama (University of California-Riverside), and Saburo Sugiyama (Arizona State University)

[310] *Reassessing Teotihuacan's Periphery: Ceramic Distributions and Terrain Analysis*

This paper presents results from recent analyses of the Teotihuacan lidar map acquired by the Project Plaza of the Columns Complex (PPCC) in 2015. A systematic surface survey verified more than 1,300 potential features identified in the lidar data—including mounds, terraces, plazas, structures, and depressions. The surface survey collected 99,000 ceramic sherds, which were analyzed and georeferenced to assess spatial distribution. These results have been partially integrated with the Teotihuacan Mapping Project (TMP) ceramic data, expanding the scope of known distributions beyond the TMP grid, particularly in the piedmont

of the Patlachique Range and the northwest of the TMP grid. This expanded dataset refines our understanding of ancient settlement patterns in the Teotihuacan Valley and emphasizes the role of terrain in shaping urban development. Ongoing hydrological analysis of the lidar data further refines our understanding of the relationship between environmental constraints, resource management, and spatial organization at Teotihuacan. This study contributes to broader discussions on urban planning and landscape modification in ancient Mesoamerican cities. The lidar map provides a new system for spatial analysis in the Teotihuacan Valley and a framework for integrating legacy data, allowing for a more comprehensive understanding of the archaeology of the Teotihuacan Valley.

Texis Muñoz, Ariel [310] see Sugiyama, Nawa

Thacker, Paul (Wake Forest University)

[71] *Stone Transport Decisions and Upper Paleolithic Raw Material Economies: Exploring Volume Ratio Analysis*

Volume ratio techniques in lithic analysis hold promise for modeling the mass and form of stone transported to and subsequently from an activity area, providing key insights into past raw material economies and *chaînes opératoires* without the efforts required for refitting. However, the development and application of robust volume methods for archaeological assemblages have been hindered by insufficient consideration of variability in initial raw material morphology and the impact of different core technologies and reduction strategies on dimensional estimates. To address these gaps, comprehensive dimensional data, including mass, surface area, and volume, are presented from an extensive sample of geologic cobbles collected at the Rio Maior-Azinheira Ridge secondary chert source. Stone artifact assemblage analysis from Upper Paleolithic sites located near the RMAR source tests volume and mass statistical methods across very different reduction strategies. Experimental replication of various components of the Upper Paleolithic assemblages provides an independent evaluation of the effects of core reduction strategies on estimation model accuracy. This study demonstrates that volume and mass ratio modeling is best utilized as a semi-quantitative technique for comparing intraregional and/or stratified assemblages, a conclusion with important implications for the analysis of both lithic assemblages and geologic source locations.

Thaher, Ahmad [228] see Ames, Christopher

Thakar, Heather [311] see Rankle, Chad

Thavakumaran, Saranggan [279] see Divinagracia, Anna Kristina

Thavakumaran, Saranggan [356] see Munro, Magdalen

Then-Obluska, Joanna, and Laure Dussubieux (Field Museum of Natural History)

[162] *Who Needs Indian Beads? South Asian Glass in Northeast Africa*

The Red Sea and Indian Ocean coasts of northeast Africa were once vibrant hubs for trade among the Romans, Indians, Persians, Arabs, and Africans. It is evident that the distribution of commodities, whether imported directly or indirectly from South Asia to northeast African coasts, were subsequently disseminated inland to the north, west, and south. Recent compositional studies of beads found in Egypt, Sudan, Ethiopia, and Somalia have brought to light new evidence for the presence of South Asian glass beads in antiquity (first–third centuries CE), late antiquity (fourth–sixth centuries CE), medieval (seventh–fourteenth centuries CE) and post-medieval (fifteenth–eighteenth centuries CE) times. The study provides a chronological, geographical, and quantitative overview of South Asian mineral-soda-high alumina glass types, as evidenced from bead assemblages in northeast Africa. The study raises further issues for future research, particularly in relation to the awareness of the origin of the beads and their demand among diverse cultures in both coastal and inland regions under discussion.

Thiam, Aïssata [162] see Ogundiran, Akin

Thiry, Médard [93] see Fernandes, Paul

Thomas, Jayne-Leigh (Indiana University), and Francisco Nahoe**[218]** *The Ethos of Repatriation: Indiana University and Easter Island, an International Case Study*

In 1990, the Native American Graves Protection and Repatriation Act mandated specific procedures for the return of ancestral remains and important cultural items to federally recognized tribes and Native Hawaiian organizations. Thirty-five years later, NAGPRA has clearly generated an ethos of repatriation that stimulates and guides institutional collaboration with Indigenous peoples beyond the scope of US jurisdiction. Our paper presents the details of an international repatriation event involving the Rapa Nui people of Easter Island and Indiana University. We highlight the practical and legal challenges of developing repatriation praxis in an explicitly international context. We further explore multiple dimensions of partnership and mutual benefit that begin to grow from such efforts.

Thompson, Amy (University of Texas at Austin), Claire Novotny (Kenyon College), Kaitlin Murphy (Texas Tech University), Briana Smith (Horizon Environmental), and Brett Houk (Texas Tech University)**[36]** *Household Assemblages and Architectural Investment: Tracing Socioeconomic Variation, Household Production, and Wealth Inequality in a Classic Maya Neighborhood of Chan Chich*

Recent comparative archaeological research has drawn on traditional pedestrian surveys and robust lidar datasets to assess wealth inequality based on house size metrics. These data provide broad insights into wealth differentials and act as a foundation for multiproxy assessments of household production and socioeconomic inequality. Expanding on these studies, we compare house size metrics with household excavation data, including architectural features and artifact assemblages, in a multiproxy assessment of residential wealth and household production. In our case study, we excavated six residential units, or house groups, of different sizes and layouts in the eastern reaches of Neighborhood C of the Ayikal Naob district of Chan Chich in northwestern Belize. In this paper, we consider architectural, burial, and artifactual data from our 2025 excavations at Ayikal Naob to offer preliminary conclusions about variations in household production and wealth across our six house groups. This study highlights the utility of using multiple lines of evidence to assess wealth inequality and explore the impact of household production on socioeconomic variation.

Thompson, Amy [341] see Murphy, Kaitlin

Thompson, Jessica [25] see Watson, James

Thompson, Jessica C. [162] see Heckel, Claire

Thompson, Jessica C. [304] see Xu, Tianrui

Thompson, Jordan (Washington State University), Rachel Horowitz (Washington State University), John Blong (Washington State University), and Justin Holcomb (Kansas Geological Survey, University of Kansas)**[71]** *Reexamining the Weitas Creek Site (10CW30): An Early Nimíipuu Upland Hunting Camp*

The Bitterroot Mountains mark both an ecological and social margin between the Southern Columbia Plateau and several neighboring regions. The Nimíipuu (Nez Perce) traditionally followed a seasonal subsistence cycle crossing these ecological and social boundaries, referencing long-term landscape and resource knowledge while negotiating complex social interactions. The Weitas Creek site (10CW30) is situated along the North Fork of the Clearwater River, in north-central Idaho, within the ancestral homelands of the Nimíipuu at the western edge of the Bitterroots. Weitas Creek was previously interpreted as an upland hunting camp containing early Windust and Cascade phase technologies, dating to 16,000–8000 BP. This poster presents a reanalysis of the site through fine-grained excavation, new chronometric dating, geoarchaeological and micromorphological analysis, lithic technological analysis of new and archival materials, and geochemical sourcing of lithic artifacts. These analyses provide a refined understanding of the chronology of the Weitas Creek site, dating to at least 10,300 BP, and provide insight into changing landscape adaptation within the context of social dynamics in a liminal territory.

Thompson, Jordan [72] see Blong, John

Thompson, Josephine (Mirador Conservation Fund), Richard Hansen (Idaho State University; FARES Foundation), Carlos Morales (University Texas), Enrique Hernández (Mirador Basin Project), and Edwin Escobar (FARES)

[355] *New Insights into the Lidar Analyses in the Contiguous Mirador-Calakmul Karst Basin, Guatemala*

Extensive lidar investigations throughout most of the southern half of the Mirador-Calakmul Karst Basin have covered an area of more than 2,100 km², making it one of the most comprehensive lidar studies yet conducted in Guatemala. Continuation of the peripheral areas of the basin have resulted in the identification of new and fascinating archaeological sites that have not been previously documented and provides new and informative perspectives of the formation of complex societies in the Middle and Late Preclassic periods of Maya history. New sites such as Balamnal, Noholtun, Noholnal, El Pesquero, La Union, and Chicanticaanal allow a new perspective of the economic, social, and political reach of the Mirador hegemony in the formation of an incipient state in the centuries prior to the Christian era.

Thompson, Karen (University of Melbourne)

[43] *Khipus: What We Think We Know and What We Want to Know (and How We're Trying to Find Out)*

Khipus have long intrigued scholars for their role in recording and communicating information outside the bounds of writing systems recognized by Western traditions. Khipus are increasingly understood as complex, information-rich artifacts that almost certainly recorded numbers and potentially encoded linguistic data. This session offers a primer on the current state of khipu decipherment studies, grounding newcomers in established interpretations while highlighting the field's many open questions. What do we *think* we know about how khipus worked? After almost a century of research, much remains uncertain. Can their structure and materiality be decoded systematically, or does the diversity of the small group of surviving examples limit us intractably? To explore these challenges, researchers are drawing on interdisciplinary approaches—open scholarship, data science, computational tools, and cohort-level statistical analyses. This session surveys these emerging approaches and the questions driving them. By critically examining both our knowledge and its limits, we aim to foster interdisciplinary dialogue and invite broader participation in the ongoing effort to understand and celebrate the intellectual depth and social sophistication of precolumbian Andean peoples.

Thompson, Robert [77] see Millard, Matthew

Thompson, Victor (University of Georgia)

[322] *Brian Fagan's Fish Tales: The Importance of the Sea in Human History*

Brian Fagan, by his own admission, was not a fisherman. Nevertheless, he had a love of sailing, of the sea, and of history. It was this love, and his ability to recognize a good story when he saw it, that led him to write the book, *Fishing*. In it he explores humanity's relationship with our mother ocean. Fagan weaves a narrative that demonstrates to the public how fishing was critical for early cities, how it spurred technological innovation, how it was important not only in how people moved through a watery world but how they fundamentally viewed them. Ever the big thinker, Fagan takes these historical accounts on fishing and links it to present-day concerns, issues of sustainability, and our current relationship with the sea. We are at a key moment in history where we need now more than ever both the engaged storytelling that Fagan's book represents for science communication as well as a concern for ocean history and the future of life in it. We need more Brian Fagans in archaeology to help us all demonstrate the value of what we do and its central importance to many of the key issues to our species.

Thompson, Victor [300] see Demyan, Marcela

Thompson, Victor [271] see Fitzpatrick, Scott

Thompson, Victor [85] see Howland, Matthew

Thomsen, Tamara [165] see Schroeder, Sissel

Thomsen, Tamara [165] see Wiemann, Michael

Thomson, Madonna [258] see Greenwood, Kate

Throgmorton, Kellam (Northern Arizona University), and David Witt (GeoVisions)**[201] *Radioactivity and Ultraviolet Fluorescence of Narbona Pass Chert***

Initial testing for ultraviolet fluorescence in known and suspected Narbona Pass materials indicated that the presence of fluorescence may be useful for differentiating between Narbona Pass chert and other, similarly colored cherts and chalcedonies (Witt 2022). The presence of uranium compounds was hypothesized to be the source of this fluorescence, which is a discriminating factor between Narbona Pass chert and other cryptocrystalline materials. This poster presents the results of continued testing along these lines, in which known and suspected Narbona Pass materials were analyzed for radioactivity (as a proxy for the presence of uranium compounds) and ultraviolet fluorescence.

Thulman, David (George Washington University), and Adam Burke (Texas A&M University)**[319] *Supplementing Typology with Toolstone Provenance in a Large Bolen Projectile Point Dataset***

Projectile point seriation and typology have historically been used in Florida archaeology to address synchronic and diachronic research questions in a record marked by few reliable radiometric ages, poor site preservation, and ambiguous stratigraphy. Early Holocene Bolen projectile points present a particular typological challenge due to the prevalence and of four discernible “subtypes” (two subtypes each of side- and corner-notched bases). Whereas side-notching tends to be the earliest notching technology in the Southeast, at least two side-notched and corner-notched Bolen subtypes appear to be coeval. The social dynamics that produced these distributions are not easy to infer. To better tease apart the spatial, temporal, and technological patterns this paper presents new toolstone provenance data for Bolen points from northern Florida in conjunction with the basal typologies derived from landmark geometric morphometric analyses. These data are applied to questions of temporality, geography, and cultural patterns that can help explain the distribution of Bolen basal variation in northern Florida.

Thurman, Emily (Arizona State University)**[160] *Transcontinental Trajectories: Comparing Sustained *Spondylus* Use Temporally and Geographically Using a Complexity Science Framework***

The study of systems impacting the long-term exploitation of the marine shell *Spondylus* exemplifies the benefits of applying a complexity science framework in archaeology. Spanning both time and place, the lasting legacy of *Spondylus* can be observed throughout the Americas. As indicated by patterns of overconsumption in Ecuador and Mexico, the use of *Spondylus* persisted in recent decades, though there is a disjuncture between understandings of historic and contemporary use patterns. To explore this multifaceted issue, complexity science principles facilitate a systematic study of the dynamics of *Spondylus* procurement. Informed by ecological data and archaeological distributions, a dynamic model of consumption and production can represent outcomes of resource exploitation and management over the *longue durée*. This model is the first step toward exploring the use and exchange of *Spondylus* beyond harvesting sites. Applicable to multiple regions, this model can simulate economic and ecological impacts on *Spondylus* populations under different use regimes, allowing for a comparison of systems between regions. The theoretical underpinnings of complexity science can bridge the gap between the management of *Spondylus* in recent decades and the long-term extraction of *Spondylus* before European contact, illuminating the trajectories of *Spondylus* acquisition throughout time and across international borders.

Tibbits, Tawny [101] see Spenard, Jon

Ticona Mendoza, Javier [40] see Mouquet, Arthur

Tidd, Justin**[183] *Historic-Era Mining Infrastructure: A 3D Perspective***

This poster investigates the effectiveness of 3D modeling for recording historic mining resources. These resources frequently occur in contaminated contexts that require remediation. While it is often possible to remediate contaminated areas while preserving the historic resource, successful remediation sometimes necessitates destruction. This poster will assess the efficacy of 3D spatial data as a form of digital preservation of historic-era mining resources in Catron County, New Mexico, USA. In this instance, the

historic resource is not in danger of being removed and thus serves as a test of the methodologies in question. Emphasis will be placed on recording above ground structures in the Clairmont mining camp using both aerial lidar and photogrammetry-based 3D image models. Analyses of both methodologies and a comparative summary will be presented. Results will include a focus on accuracy, data limitations, and future applications.

Tierney, Citlali [81] see Pearson, Osbjorn

Tinsley, Gaylen (WestLand Engineering and Environmental Services)

[37] *Working with Tribal Communities, an Archaeologist's Perspective*

Many Archaeologists acknowledge their obligations to conduct research that is respectful of tribal perspectives and relevant to descendant communities. Collaboration with Tribes provides a fuller and more holistic understanding of the past and is foundational for mutually beneficial partnerships that honor sovereignty and heritage. There are more Native archaeologists working in the field today than ever before. As the archaeology community widens to include Indigenous practitioners, what effects have Native archaeologists had on their non-Native counterparts? This presentation provides frontline accounts from WestLand archaeologists who work alongside Tribal Monitors and tribal cultural department representatives every day. This candid discussion will explore the successes and some common early issues experienced within a culturally diverse field crew, and how these partnerships are helping to shape modern CRM and revitalize the archaeology community while building lasting bonds with the people whose ancestral sites we study.

Todd, Lawrence (GRSLE Inc.), Daniel Dalmas (University of Utah), and Emily Milton (Michigan State University)

[182] *Artifacts Over Sites: Cumulative Inventories and Regional Archaeology in the Greater Yellowstone Ecosystem*

For most of the twenty-first century, the Greybull River Sustainable Landscape Ecology (GRSLE) Project has conducted artifact-based inventory and interdisciplinary analyses in the higher-elevation Greater Yellowstone Ecosystem. Unlike traditional site-based surveys, this largely non-collection effort systematically records the provenience and descriptive attributes of every artifact encountered. A growing regional dataset of more than a quarter million artifacts has been assembled with corresponding environmental and ecological data, including animal migration corridors and fire histories. Materials from several key regional sites have also been systematically coded into the database, allowing comparative analyses across both surface and excavated assemblages. In 2025, GRSLE extended into adjacent lower-elevation basin settings to address analytical “blank spots” on Wyoming’s archaeological map. Applicability of these methods were tested across contrasting and transitional landscapes including water and elk scat collection for isotopic analysis. This poster highlights examples of how the cumulative artifact-based and ecosystem-sourced dataset supports diverse research questions, from lithic raw material use and mobility to the spatial organization of artifacts when compared with human and animal land use over time. By prioritizing artifacts as the fundamental unit of analysis, GRSLE demonstrates the value of long-term, multidisciplinary inventories for advancing interpretations of human behavior at the landscape scale.

Todd, Lawrence [111] see Burnett, Paul

Todd, Lawrence [115] see Hamada, Riley

Todd, Lawrence [72] see Orngard, Charles

Todd, Lawrence [305] see Phillips, Amy

Todd, Lawrence [201] see Wagemann, Jackson

Todisco, Dominique [279] see Martin, Fabiana María

Tokovinine, Alexandre (University of Alabama), and Dana Moot II (University of Alabama)

[92] *Inventing a Tradition: Writing in Eastern Petén during the Early–Late Classic Transition*

This paper examines a case of rapid calligraphic innovation during the Early–Late Classic transition in the region of eastern Petén, Guatemala (550–600 CE). Two categories of media are considered:

carved/incised/molded artifacts and features where a distinct and relatively uniform “font” emerged versus painted polychrome vessels characterized by greater variability of graphic forms and a thinner boundary between legible texts and imitations. Paleographic variation is compared to differences in orthographic conventions within each media group. Finally, the study considers known archaeological contexts of the inscriptions in the region—particularly near the archaeological sites of Naranjo and Holmul—and how these contexts may inform our understanding of the social and political processes driving continuities and changes in Maya writing.

Tokovinine, Alexandre [85] see Moot, Dana

Tokovinine, Alexandre [83] see Soto, Lizzette

Toledo, Kusy [40] see Flores-Blanco, Luis

Tolley, Anna (University of Texas at San Antonio)

[252] *Building Ritual Landscapes: Evidence of Quarrying and Construction at Xunantunich, Belize*

This paper presents information regarding local resource use in building and causeway construction and how the reuse of a ritual location signifies the transcendence of knowledge through a period of site abandonment. Xunantunich, located in the Belize River Valley, is an ancient Maya site that was occupied in the Preclassic period and later in the Late Classic period. Group D, a Preclassic ritual location at the site, was revitalized and expanded during the Late Classic. Recent excavations at Group D as part of the 2024 Mopan Valley Preclassic Project revealed a previously undocumented limestone quarry adjacent to the causeway that links the architectural group to Xunantunich's Late Classic site core. This research contributes to discussions of ancient social landscapes and Group D's connection to Xunantunich's wider ritual landscape.

Tomasto Cagigao, Elsa Lucila [337] see Agresti, Guido

Tomczyk, Weronika (Dartmouth College), Milosz Giersz (University of Warsaw), Roberto Pimentel Nita (University of Warsaw), and Jiajing Wang

[45] *The Last Day on the Pasture: Insights into Prehispanic Coastal Pastoralism by Analyzing Abdominal Content of the Rasgo 19 Camelid from Castillo de Huarmey, Peru*

Preserved abdominal contents of an animal provide a rare form of archaeological evidence, giving direct insight into its diet shortly before death. Even in the hyperarid desert of northern Peru, renowned for exceptional preservation of organic materials, such finds are exceedingly uncommon. We employ zooarchaeological and microbotanical analyses to investigate the osseous and non-osseous remains of a decapitated camelid, whose well-preserved skeleton was recovered from Rasgo 19, a context within the palace complex of Castillo de Huarmey, a Wari site located on the northern coast of Peru. Our findings clarify ritual practices involving animal offerings in the Wari era and shed new light on coastal camelid management, a system later disrupted by Spanish colonization. Comparing our results with macrobotanical remains from other Castillo de Huarmey sectors also expands our understanding of the general use of local vegetation and its seasonality. This case study is the first-of-its-kind analysis of the abdominal content of a domesticated Andean animal.

Tomczyk, Weronika [158] see Dombrosky, Jonathan

Tomka, Marybeth (Argyle Archaeological Services), Angela Neller (Wanapum Heritage Center), Alex Barker (Arkansas Archeological Survey), and Caroline Parris

[52] *Curation Workflows and Ethical Considerations for Publishing Collections Archaeological Collections Information Online*

Publication of archaeological collections information online through the Nationwide Collection Locator Project required us to distill existing repository information into equivalent, public-facing data fields. This process began with publishing a minimum set of fields in 2024. Using those fields, we related them to data points from several repository databases to concentrate on fields that are easily obtainable and enhance usability. We chose the most salient fields to publish and by employing the OpenRefine data cleaning tool, we

are seeking data cleanliness and coherence. Critically, we applied a multistage review process to negotiate the ethical and cultural sensitivities inherent in our holdings, particularly flagging collections with contents which should not be published or contain problematic issues. For these, we can restrict the public reference or provide a general description with a “contact for information” note. This balanced approach allows symmetries and overlaps between datasets of collections housed at different repositories. Through linkages to other datasets in the Digital Index of North American Archaeology these data make collections discoverable thus contributing to regional synthesis, protecting archaeological sites in situ, while upholding ethical and legal obligations to rightsholders and stakeholders.

Tomka, Marybeth [52] see Childs, S. Terry

Torp, Lyle (The Ottery Group), and Matthew Palus (University of Maryland)

[264] *The Second Battle of Princeton: Field Notes from Compliance Archaeology at Conflict Sites*

Archaeological investigations at military sites and battlefields in the United States frequently take place in the context of compliance at the intersection of development and heritage management. Conflict archaeology is distinctive in its landscape scale, which often exceeds the appetites of individual development or infrastructure projects, and the degree to which conflict sites can be cherished, the continuing, dynamic relevance of historical conflict. Disturbance of sites of conflict for development is frequently controversial, sometimes defined by extended struggle and oppositional relationships. The conflict associated with archaeology at Maxwell's Field in Princeton shadowed a plan to construct faculty housing at the Institute for Advanced Study, with opposition by the Princeton Battlefield Society, the National Trust for Historic Preservation, the American Battlefield Protection Program, and other groups between 2003 and 2017. Vast resources were expended as consultation was usurped by court battles, where despite the characterization of the historic landscape as sacred ground, legal arguments focused on technical aspects of zoning regulations rather than archaeological significance and the value of heritage. This presentation addresses the positive outcomes from scientific study and heritage management at the Revolutionary War Princeton Battlefield.

Torras Freixa, Maria (Boston University), and Natalia Moragas (University of Barcelona)

[324] *Burying among the Inhabited Ruins of Teotihuacan*

Defined by D. Nichols as one of the least understood phases of Teotihuacan, the Mazapa period (800/850–1150 CE) has been mainly known by its ceramic tradition and the burials discovered in the tunnels near the Sun Pyramid. However, data collection from previous excavations in the ancient city has revealed a more diverse panorama, pointing out new and different burial practices. In this presentation, we are going to analyze the presence of Mazapa burials dispersed among the inhabited ruins of Teotihuacan and their relationship with the Classic city. Are these burials located in abandoned areas? Reoccupied ones? Or new settlement areas? Through these and other questions, we are going to bring new ideas about the elusive Mazapa occupation. In this sense, Mazapa burials constitute a significant dataset not only for understanding the material abandonment of the urban core of Teotihuacan, but also for interpreting the symbolic re-signification of the ruins under new sociopolitical frameworks.

Torres, Christina, and William Pestle (University of Michigan-Kelsey Museum of Archaeology)

[32] *Fragments of Lives on Chile's Semiarid Coast*

Chile's *norte semi-arido* corresponds to the climatic transition between the absolute desert of the true north and Chile's central temperate zone. This coast is a fertile ground for human occupation with numerous groups inhabiting the coast, building small settlements, interacting across great distances, and burying their dead in mounds accompanied by grave goods. While systematic excavation has been hampered by widespread looting and poor preservation, museums of the area house the fragmented remains of this occupation. These have been collected over the years from individuals, early expeditions, and salvage work following development of the coast. Here, we present an overview of material housed in TalTal ($n = 11$), Chañaral ($n = 14$), Caldera ($n = 16$), and Copiapó ($n = 3$), highlighting patterns of preservation and demography. While little of these lives is available to us, we can see aspects of health and diet as well as the occasional difficulties of life on the coast evidenced through injury and patterns of infant death as well as aspects of their cultural practices through the occasional alteration of head shape. While this is in no way a

comprehensive appraisal, this initial consolidation provides a fragmented view into lives lived along the coast.

*****This presentation will include images of human remains.**

Torres, Christina [32] see Pestle, William

Torres, Emilio [355] see Fries, Eric

Torres, Hilda (Texas State University)

[101] *Blydefontein Rock Shelter: A Comparative Use-Wear Study of Lithic Tools*

Blydefontein Rock Shelter, a Later Stone Age site located in South Africa, is composed of a rich lithic assemblage associated with the Interior Wilton industry of the Wilton Complex. In this study, the Blydefontein Rock Shelter lithic assemblage is compared to the Later Stone Age Meerkat Rock Shelter lithic assemblage, as well as the experimental assemblage through an intensive use-wear analysis. The process of identifying and selecting the tools for use-wear analysis was guided by an attribute analysis previously performed on the Blydefontein Rock Shelter lithic assemblage. The study integrates macro- and micro-analysis with a stereomicroscope, metallurgical microscope, and scanning electron microscope. The identification of production sequences and material in contact with an artifact's surface are guided through the results of an experimental program. The comparative study aids in identifying possible uses of the Blydefontein Rock Shelter lithic tools including the use to produce ostrich eggshell beads. Patterns of technological organization are studied through the comparison of wear traces identified on tools from the lithic assemblages. The use-wear analysis of the lithic tools further elaborates and expands our understanding of activities performed by hunter-gatherers during the Later Stone Age.

Torres, Narciso [81] see Fedick, Scott

Torres Porras, Alicia (University of Hamburg), Leslie Cruz (Archaeology Intern), and Adriana Saénz (INAH Puebla)

[115] *Layers of Memory: Salvage Archaeology and Urban Continuity in Tecamachalco, Puebla*

Salvage excavations at Parque Juárez in Tecamachalco, Puebla, provided an unprecedented opportunity to explore the historical depth of a civic space that, despite its central role in community life, had never been systematically studied. Conducted in collaboration with the Instituto Nacional de Antropología e Historia (INAH) and the Municipality of Tecamachalco, the project revealed evidence spanning more than two millennia, from early prehispanic occupations to the modern era. The research highlights the layered character of the *zócalo*, where traces of Preclassic contexts coexist with memories of the nineteenth and twentieth centuries. Domestic and social practices shaped the space across time, while hydraulic systems anchored its role in community identity. By integrating stratigraphic data, artifact patterns, and historical contexts, this study shows that salvage archaeology bridges past and present and reveals the convergence of heritage, memory, and territory in present-day Tecamachalco.

Torvinen, Andrea (Florida Museum of Natural History), Ashley Rutkoski (University of Florida), Nicolas Gauthier (University of Florida), Matthew Smith (University of Florida), and Neill Wallis (Florida Museum of Natural History)

[76] *Building Confidence in Ceramic Petrography through AI-Assisted Training*

Ceramic petrography provides crucial insights into pottery production, yet mastering thin-section analysis remains challenging due to limited training opportunities and the inherent complexity of visual interpretation. Students struggle to verify their analytical decisions against expert consensus, while instructors face time-intensive assessment at scale. Here we present an AI-powered training platform that uses computer vision techniques, including object detection, segmentation, and classification, to provide objective, quantitative analysis of petrographic features in archaeological ceramics and geological samples. We seek to enable students to practice identifying grain size distributions, orientation patterns, and mineral compositions while receiving immediate feedback against ground truth data. The system pairs technical terminology with concrete visual examples, guiding learners through analytical decision trees via spaced repetition to build confidence and reasoning skills. We propose this prototype as a foundation for community collaboration,

inviting participants to shape its development and create more accessible, standardized training pathways in petrographic analysis for archaeologists and geoscientists.

Tostevin, Gilbert [336] see Melton, J. Anne

Totten, Darian [292] see Bader, Alyssa

Toya, Christopher [301] see Roos, Christopher

Toyne, Jennifer Marla (University of Central Florida), Carol Rojas-Vega (PACHA Project), Rosio Diaz Ruiz (PROAMAZONAS, Chachapoyas), Marcela Urizar (Universidad de Atacama, Chile), and Parker VanValkenburgh (Brown University)

[337] *Historical Transformations in Mortuary Practices across the Chachapoyas Region, Peru: A Preliminary View*

There is great variation in mortuary practices across the Chachapoyas region, including individualized sarcophagi and residential floor pit burials; collective chamber tombs, mausoleums, and caverns; and secondary burials in walls and architecture. There appears to be some regional variation, but with limited radiocarbon dating it is not clear how practices shifted overtime. During the early historic period after AD 1535 we see the introduction of Judeo-Christian religious beliefs and mortuary traditions. We evaluate mortuary context variation at two different archaeological complexes on either side of the Utcubamba River, Purun Llaqta de Maino (PLM) ($n = 52$) lies to the east and El Imperio ($n = 31$) to the west. Both have multicomponent occupations, Chachapoya (AD 800–1470), Inca (AD 1470–1535), and early colonial (AD 1535–1650). Different from earlier mortuary practices such as floor pit flexed body burials and cavern interments, we see the extended supine body position burials within and around church constructions. Variable preservation limited some osteological analyses, but it appears that individuals of a range of ages were buried within the colonial church at PLM. Notable placement and treatment of the youngest individuals external to the church at El Imperio appears to reflect new concepts of community inclusion and membership.

Trabert, Sarah [194] see Bethke, Brandi

Trader, Patrick (Gray & Pape Inc.)

[264] *The Kreitzer Site (12VG2104), a Transitional Yankeetown-Angel Phase Site, Ohio River Valley, Southwestern Indiana*

In 2022, Gray & Pape Inc. identified the Kreitzer site (12VG2104) during deep testing efforts for the I-69 Ohio River Crossing Project for the Indiana Department of Transportation in southwestern Indiana. Initially considered a Late Woodland Yankeetown phase (AD 700–1200) occupation, data recovery efforts in 2023 and 2024, resulted in the identification of an Angel phase occupation (AD 1100–1270). Examination of pottery revealed traditional Mississippian pottery styles with characteristic Yankeetown tempering agents, indicating a hybrid pottery style, suggesting the site is transitional between the Yankeetown and Agnel phases. Multiple datasets including ceramic analysis, radiometric determinations, and results of microbotanical and macrobotanical analysis suggest that an earlier Yankeetown component was in use during the Medieval Climatic Anomaly. The later Mississippian Angel phase component, a farmstead, was in use during the Little Ice Age and subsequently abandoned around AD 1250.

Tran, Justin (University of California, Riverside), and Kenichiro Tsukamoto (University of California, Riverside)

[193] *At the Water's Edge: Living with Reservoirs at El Palmar, Campeche*

The ancient Maya prospered in the tropical Maya lowlands, where they developed water management strategies attuned to regional environmental conditions to sustainably provide water for large, sprawling communities. Among these strategies is the use of artificial reservoirs or *aguadas*, which collect and store immense amounts of rainwater during the wet season to sustain populations well into the dry season. *Aguadas* provided resource-rich aquatic environments that integrated with natural ecosystems and supported local diets and water needs for Maya urban populations. Naturally, *aguadas* also impacted Maya settlement

decision-making, social organization, and political and ritual activities. Preliminary results from the 2025 field season of the El Palmar Reservoir Project, focusing on excavations at two large monumental *aguadas* and one adjacent household group at the ancient Maya city of El Palmar, Campeche, Mexico, provide insights into daily living associated with water management. Investigations combined material analysis with GIS-based assessments of water capacity and household proximity to explore the relationship between daily life and large-scale water infrastructure, as well as interrogate questions of control, access, and the nature of localized versus centralized management. The results contribute to data on Maya hydraulic infrastructure and the role of households and rituals in maintaining sustainable water resources.

Tran, Justin [165] see Horn, Sherman

Traxler, Loa (University of New Mexico), and Alejandra Alonso (Instituto Nacional de Antropología e Historia)

[352] *Preserving the Royal Legacy of Classic Copan: Conservation Challenges and Response to Climate Change*
Amid intensifying climate disruptions across Mesoamerica, the earliest royal shrines of Copan—monumental shrines dedicated to the site's founding king and queen—face escalating threats from seasonal rainfall and tropical storms. Built in the fifth century CE and preserved beneath the Copan Acropolis, these elaborately decorated structures hold immense cultural and historical significance, projecting the legacy of K'inich Yax K'uk' Mo', the dynastic founder of the Classic Maya kingdom. However, recent shifts in regional climate patterns have caused structural instability and accelerated deterioration of their polychrome stucco facades. This presentation discusses a collaborative conservation project stabilizing these fragile monuments while also creating access to them through digital reconstructions. Integrating lidar scanning, geospatial modeling, and condition-based conservation methods developed by the COEDMAC initiative, the project is preserving endangered architecture, responding to the imperatives of heritage conservation and climate adaptation. This paper highlights the need for climate-resilient heritage practices and underscores the potential of digital technologies to mediate access, preserve memory, and strengthen institutional capacity in the face of climate uncertainty. The Copan shrines stand as both monuments of the past and markers of contemporary challenges in heritage stewardship.

Trenkle, Logan, Samuel Blehm, Ashton Ford, Julie Jarzemsky, and David Hyde (Western Colorado University)

[181] *Exploration of an Archaeological Excavation Rigging Interface System at La Milpa's Tzaman Acropolis, Northern Belize*

Archaeological excavations of ancient structures in the Belizean jungle present significant logistical and safety challenges. Steep, multistory buildings, dense vegetation, and unstable debris create inefficient and dangerous conditions for crews who must manually transport excavated material. The remoteness of these sites, located far from medical services, further amplifies the risk of injury. To find a solution for these issues, engineering students at Western Colorado University partnered with David Hyde and the Programme for Belize Archaeological Project to develop, manufacture, and install a rigging and pulley system to transport loads of excavated material down structures as they are excavated. Three systems were successfully installed and utilized during a field session at the Tzaman Acropolis at La Milpa. This poster details the design, manufacturing, and implementation of these systems and discusses the effectiveness of the design, challenges on-site, and potential future improvements.

Triadan, Daniela (University of Arizona), and Xanti Ceballos (University of Arizona)

[312] *Aguada Fénix: Early Preclassic Horizontal Monumentality in the Middle Usumacinta Region*

The site of Aguada Fénix in eastern Tabasco, Mexico, is one of the largest monumental constructions in Mesoamerica. It dates to the beginning of the early Middle Preclassic, around 1100 BC. The main complex consists of a rectangular plateau with an E-Group at its center and is delimited by 20 large edge platforms. In addition, the overall constructions and modifications at the site include another very large modified artificial mound or plateau, a series of causeways and reservoirs, and extensive water management features and shoreline alterations of a large lagoon. This complex represents monumentality on a landscape scale previously unknown in the Maya lowlands.

Trigg, Heather (University of Massachusetts Boston)

[75] *Three Hundred Years in the La Cienega Valley: An Archaeology of Hispano Occupation from the Seventeenth through Nineteenth Centuries*

The La Cienega Valley has been a center of Hispanic New Mexican settlement since the early 1600s. During the early colonial period, Hispanic colonists there established ranches and exploited Indigenous people in their pursuit of making a living in this difficult environment. Pueblo peoples' tribute payments and their coerced labor was a hallmark of the early colonial society and fundamental to the functioning of the colony. The Pueblo Revolt in 1680 interrupted the Spanish occupation of the valley, but colonists returned, modifying the ways they distributed land and interacted with Pueblo peoples. One of the most important features of the post-revolt colony was an elimination of tribute obligations and reduction of forced Pueblo labor, although enslavement of Indigenous people remained. Extensive excavations at several archaeological sites in the La Cienega Valley, one from the seventeenth century and two others dating to the eighteenth to nineteenth centuries, allow us to explore Hispanic lifeways before and after the Pueblo Revolt, continuing into the US territorial period. Comparison of architectural features, ceramic assemblages, and environmental samples from these sites illustrate continuities and changes in Hispanic society.

Trincado López, Pablo

[340] *Los caminantes del desierto más árido del mundo y sus rutas de geoglifos*

El desierto más árido del mundo, en el norte de Chile, contiene miles de dibujos que se realizaron alrededor de mil años atrás junto a una extensa red de caminos precolombinos. La mayoría de estos dibujos son desconocidos, por la dificultad de acceder a ellos, y por factores erosivos y humanos que los degradan día a día, hasta hacerlos desaparecer. Esta presentación propone mostrar los distintos paneles de 3 zonas geográficas; el valle de Lluta en Arica, la extensa pampa del Tamarugal, y el curso del río Loa, el río más largo de Chile que se encuentra en pleno desierto; Identificar las diferencias y similitudes en su iconografía y los métodos constructivos. Es fundamental para entender la vida del hombre que camina en el desierto como observa y valora su territorio orientando las figuras hacia el entorno espacial: la noche estrellada, la salida del sol durante los solsticios y equinoccios, las vistas hacia los cerros sagrados, y los elementos lineales que proponen un camino de peregrinación ritual.

Triozzi, Nicholas [347] see Stehr, Katy

Tripcevich, Nico (Archaeological Research Facility), Sarah Kansa (Open Context), Elizabeth Dresser-Kluchman (University of California, Berkeley), Meredith Reifschneider, and Albert Gonzalez (California State University, East Bay)

[219] *Expanding Access to Archaeological Careers through a Paid, Local Field School at the Archaeological Research Facility (UC Berkeley)*

This paper discusses the development and current status of the ARF Field School, a program piloted in 2022 by the Archaeological Research Facility (ARF) at UC Berkeley. The program was designed to address the critical need for accessible archaeological training through a local, paid field school that prepares students for careers in cultural resource management (CRM), government agencies, and academia. With US archaeological job growth projected at 8,000 new positions over the next decade, field school training is increasingly essential but often prohibitively expensive. The ARF Field School aims to remove financial barriers by compensating students and offering commuter-based instruction in the San Francisco Bay Area. In this six-week program, students gain hands-on experience in research design, field methods, artifact analysis, and public dissemination, while connecting with faculty, CRM firms, government agencies, and local communities. Participants in two past sessions of the ARF Field School (in 2022 and 2024) have moved into archaeology-related employment or advanced degree programs. By offering a replicable model for inclusive, local training, the ARF Field School demonstrates how humanistic education can lead to meaningful and sustainable careers in archaeology.

Tripcevich, Nico [315] see Medina, Shelby

Tripoli, Simone (University of Wisconsin, Madison), Nam Kim (UW-Madison), Hao Nguyen Thi (Institute of Archaeology Vietnam Academy of Social Sciences), and Madison Maynard (University of Central Florida)

[293] *Casting Light on Mold Reusability: Investigating the Production of Bronze Trilobate Points at Cổ Loa*

Building on recent experimental mold research conducted by the authors, this study analyzes samples of bronze trilobate points from Co Loa, a site located 17 km northeast of Hanoi, Vietnam, in order to explore the organization of their production. While prior studies of the Co Loa and Dong Son bronze points have mainly focused on distinguishing stylistic differences, there has been no systematic attempt to discern the production process of these points. Unlike typological approaches that distinguish artifact styles, our focus for this paper is morphometric: we investigate whether measurable differences in size and shape among points can reveal distinct production groups, potentially linked to specific casting molds or workshops. From a total corpus of over 10,000 points reported at the site, we analyzed a sample of 187 points curated in the Vietnam National Museum of History, the Hanoi Museum, and the Cổ Loa Collections Exhibit. Detailed measurements of the bronze points enable exploratory cluster analyses that will yield information regarding the patterns of production of the trilobate points in this region.

Troncoso, Andres [284] see Murphy, Beau

Trowbridge, Meaghan [182] see Weldy, Megan

Trujillo, Judith [226] see Rodriguez, Orlando

Truong, Yubitz (Eastern New Mexico University)

[127] *Digital Archaeology at Blackwater Draw and Hell Gap National Historical Landmarks: Exploring Changes in Field School Methods*

Archaeological field schools serve as foundational training grounds, passing on essential knowledge and practices to future professionals. At Blackwater Draw and Hell Gap National Historic Landmarks, decades of instruction have evolved since 1932 or 1961, respectively. Traditional sketch mapping and static photography, while still integral to learning processes, are taught in conjunction with current digital technologies such as close-range photogrammetry (CRP), total stations, and lidar. Technological innovations not only enhance documentation accuracy and long-term data preservation but also reshape how students engage with archaeological landscapes and material culture. Our poster explores the implications of incorporating digital methods within field school settings. While both sites began recording with sketch maps and static images, field school faculty and directors took advantage of evolving technologies. Field schools now train students in traditional methods alongside newer technological methods; however, they do so in creative ways. While this shift in technology is important, our poster explores if it has an impact on students. We use phenomenological methods and amassed student impressions to discover if there are any real differences in field school experiences, student engagement, and how mixed technology plays a role in creating future archaeologists.

Trzciński, Maciej [177] see DeGeorgey, Alex

Tsukamoto, Kenichiro (University of California, Riverside), Octavio Esparza Olguín (Universidad Nacional Autónoma de México), Daniel Salazar (Laboratoire ArchAm, UMR8096-CNRS), and Adriana Velázquez-Morlet (Instituto Nacional de Antropología e Historia)

[223] *Study of Early Royal Events in the Maya Lowlands: Stela 46 at El Palmar, Campeche, Mexico*

The Long Count calendar was integral to the prosperity of lowland Maya kings during the Classic period (ca. 250–900 CE), but its initial articulation with kingship is not fully understood. Our archaeological and epigraphic studies at El Palmar in Campeche, Mexico, provide additional insights into this question. A key monument is Stela 46, originally found at one of El Palmar's outlying groups and now stored at the Campeche INAH Center. The inscriptions carved on the lateral sides of the stela contain a Long Count date of 8.7.0.0.0, equivalent to September 5, 179 CE. Despite heavy erosion, our epigraphic and iconographic studies using high-resolution 3D modeling revealed not only the Long Count but also royal events linked to specific calendar dates.

Tsukamoto, Kenichiro [301] see Gehling, Emily

Tsukamoto, Kenichiro [193] see Tran, Justin

Tu, Dongdong (ShanghaiTech University)

[102] *Fortifying Community: Stone-Walled Settlements and the Making of Complexity in North China*

This paper examines stone-walled settlements (“stone cities”) in northern China from the late Neolithic Yangshao period to the Bronze Age Upper Xiajiadian period. Framing wall building and upkeep as collective action, I ask how these community projects—planned, executed, and maintained by cooperative groups—mediated leadership, governance, and social transformation during moments of intensifying interaction across steppe–agricultural frontiers. Preliminary synthesis suggests that stone-walled sites acted as nodal institutions that materialized membership, organized periodic gatherings, buffered conflict, and coordinated defense and storage. Variation through time and across landscapes—between lowland river basins and upland hillforts—indicates multiple governance pathways, from neighborhood councils and corporate groups to emergent chiefly leadership. Changes in wall scale, construction techniques, gate design, and associated ceramic regimes help distinguish communal mobilization from coercive extraction and illuminate transitions in authority.

Tuffery, Christophe, and GDR “Silex”

[93] *Interactions between Researchers, Methods, and Digital Tools in the Study of Silicites: The Case of the GDR “Silex” Community*

Until the 2010s, practices for surveying and inventorying silicite samples stored in reference rock collections (*lithothèques*) in France were inconsistent, preventing data exchange and cross-referencing. Since 2019, the “Silex” research group has developed digital methods and tools that have transformed how lithothèques and samples are used in scientific communities. The concept of an “evolutionary chain” enabled the creation of a protocol for detailed sample analysis at multiple scales. This approach has directed new surveys toward priority areas and provided insights into the paleogeography of prospected zones and the paleoenvironments of excavated archaeological sites. These tools are particularly suited to regions rich in silicite sources, such as Western Europe, where the volume of data exceeds what any single researcher can manage. They promote collaboration, helping to avoid biases in knowledge and the limits of individual expertise. The methods and systems developed by the GDR “Silex” have built a community of researchers who share approaches for inventorying, recording, and characterizing silicites. Interoperability requirements in open science guide the design of digital tools and workflows that enable data exchange and publication in line with FAIR principles.

Tune, Jesse [319] see Strawn, James

Tung, Tiffany [83] see Baker, Lilian

Turley, Samantha (Vanderbilt University)

[213] *Building Communities and Community Buildings: Architectural Energetics amid Imperial Transitions in the Colca Valley, Peru*

The peoples of the Colca Valley in southern Peru built homes and ritual structures that endure to the present. Their built forms materialize both community labor and community engagement with successive imperial incursions: first the Inca Empire in the fifteenth century and the Spanish Empire in the sixteenth century. Both occupations wrought resettlement and consolidation of communities and the production of new kinds of architectural assemblages. While the architectural styles built during these periods are well documented, less clear is how architectural production practices themselves were organized and may have changed over time. Predicated on the idea that processes of building construction and maintenance were integral to articulating community relations and quotidian “ways of being” in a landscape, this study turns to energetics to help illuminate these processes. This study develops a variety of metrics to characterize processes of construction as well as labor and time investment estimates. It leverages multiple field seasons collecting material and volumetric data of structures across 10 sites and the locations of raw material sources and material production sites. This diachronic examination of building trends and investment reveals the resiliency and flexibility of community building practices amid imperial incursions.

Turner, B. [355] see Lyons, Elizaveta

Turner, Bethany [337] see Sutter, Richard

Turner, Daniel [216] see Heppner, Annalisa

Turner, Michelle [166] see Bellorado, Benjamin

Turner, Noah [181] see Brown, Troy

Turner, Sam [178] see Dorison, Antoine

Turney, Kathryn (Tetra Tech Inc.), Aliencia Schubert (Tetra Tech Inc.), and Jonathan Schaefer [115] *An Isolated Clovis Preform in the Lower San Pedro Valley, Cochise County, Arizona*
[WITHDRAWN]

Tushabramishvili, Nikoloz [336] see Kovach, Tanner

Tushingham, Shannon (California Academy of Sciences), Shelly Davis-King (Davis-King & Associates), Ron Goode (North Fork Mono Tribe), Rebecca Wilcox (California Academy of Sciences), and Sarah Jacobs (California Academy of Sciences)
[167] *Ancestral Harvests, Future Resilience: Indigenous Knowledge and Herbarium Science to Reveal Human-Plant Relationships, Phenology, and Climate Impacts in Archaeology*

Understanding how plants respond to anthropogenic—particularly climate-related—change is central to documenting past and present human activity on the land. Yet traditional scientific models have too often overlooked the deep, multigenerational knowledge held within Indigenous communities, resulting in incomplete narratives about human-environment interaction. This paper introduces an integrative framework that braids Indigenous knowledge with more than a century of herbarium specimen occurrence data and archaeobotanical records. By uniting Native and Western science, our approach provides more holistic models of plant phenological change, encompassing shifts in harvest windows, biological interactions (e.g., pollinators, climate change), and the lasting effects of cultural stewardship practices (fire, tending). Understanding when and where human activities occurred further elucidates human-environmental dynamics, including harvest times, species interactions (e.g., food webs), and impacts. Through practical examples, we highlight how archaeologists and cultural resource managers can systematically incorporate Indigenous knowledge, narrative, and landscape-scale data into site documentation and stewardship. The model is replicable across regions and species, fostering resilient resource management. This collaborative, decolonizing framework emphasizes co-design, narrative storytelling, and community education, ensuring research outcomes empower and benefit Indigenous partners, setting a new standard for ethical, community-led research and providing essential tools for climate adaptation and cultural revitalization.

Tuvshinjargal, Tumurbaatar [31] see Windle, Morgan

Tveskov, Mark (Southern Oregon University)

[174] *Turns Out, Vikings Really Did Make It into the American West: Indigenous and Nordic Futurisms through Heavy Metal*

This paper considers heavy metal and Nordic folk music in discourses of decolonization, anti-modernity, and environmental futurisms. I describe the rhetorical dynamics and signals of the practitioners and participants of this cultural moment, and their use, innovation, and discard of the materiality, texts, and meta-narratives of history and archaeology. Interlaced within this phenomenon are variously generative or problematic tensions and ambiguities over the quality, authenticity, nature, authority, and utility of historical and cultural information. Among these are the historically fraught relationships between Indigenous and northern European perspectives.

Twigg, Josie [56] see Malik, Mustafa

Twigg, Josie [268] see Stiles, Kaitlyn

Two Bears, Davina (Arizona State University)

[174] *"Here Come the Anthros": Contemporary Indigenous Songs about Archaeology*

Music in Indigenous communities was and is powerful. Indigenous peoples continue to compose music whether for their traditional ceremonies, social dances, or in the many contemporary genres that exist today including country and western, classical, electronic, hip hop, and even death metal. Since the boarding school era, when the US government forced Native American children to attend federal Indian boarding schools far from home, Native children learned to play classical and band instruments and compose music in modern genres. It was in the 1960s that Indigenous contemporary music gained popularity and began to flourish especially within Indian Country. The themes of Native music today often touch upon contemporary social in/justice issues. In this paper, I introduce and discuss music by several Indigenous artists who composed songs (and a music video) that present Native American Indigenous perspectives in the critique of anthropology and archaeology.

Tykot, Robert (University of South Florida), Andrea Vianello (University of South Florida), Katherine Dunning (University of South Florida), Myriam Rodriguez (University of South Florida), and Vidhi Patel (University of South Florida)

[302] *Isotopes for Diet and Mobility of Individuals from the Island of Lazzaretto in Venice during the Second Plague, 1430–1700 CE*

One hundred human individuals were selected from the 1,200 excavated at the island site of Lazzaretto in Venice for collagen, apatite, and tooth enamel isotope analysis to potentially identify those who were nonlocals during its use (1430–1700 CE) at the time of the Black Death. We hypothesized to have local and nonlocal individuals (identified by oxygen isotopes in teeth), and with variation in the millet (C4) and aquatic foods in their diets. Analyses were conducted at the University of South Florida (USF) with samples processed on the mass spectrometers at the USF College of Marine Science. About 15% of the individuals appear to have lived elsewhere as a child, based on tooth enamel oxygen isotope value results, and several of them had carbon isotope values that suggest different diets, indicating living elsewhere. About 15% also have nitrogen isotope values in their bones, representing adult diet, with high or low isotopes indicating their average levels were based on different levels of animal/aquatic protein. The interpretation of the isotopic data suggests that some individuals came to Lazzaretto from afar. The Lazzaretto is a rare cemetery exclusively dedicated to people carrying infectious diseases. Our study has shown the impressive interconnectedness of its world.

Tykot, Robert [81] see Atogu, Michael

Tzib, Frank [114] see Glover, Catherine

Tzib, Frank [263] see Hoggarth, Julie

Uc Cetina, Víctor [111] see Barajas Castro, Anuar

Uldall, Tamara (Washington State University; HDR), and John Blong (Washington State University)

[200] *Geoarchaeological and Archaeobotanical Studies to Establish the Temporal and Environmental Context of the Noe Creek Campground Site, Idaho*

The North Fork Clearwater River in the Nez Perce-Clearwater National Forests in Idaho is within Nimípuu (Nez Perce) ancestral homelands in an area traditionally used for a variety of seasonal subsistence activities. The Noe Creek Campground site (35CW33) is one of several sites along the North Fork Clearwater River with the potential to provide insight into Nimípuu upland subsistence activities in relation to environmental change over time. Nearby archaeological sites such as the Kelly Forks Work Center site (10CW34) and the Weitas Creek site (10CW30) show evidence of human activity in the region spanning the terminal Pleistocene through the historic period. This poster presents the results of geoarchaeological and archaeobotanical studies conducted at the Noe Creek Campground site to answer research questions

related to site formation and temporal and environmental context, and includes data from the Kelly Forks Work Center site and other regional sites (e.g., the Weitas Creek site) as well as published Nimiipuu oral histories and ethnographies with the goal of gaining a broader understanding of Nimiipuu lifeways in the region.

Ullah, Isaac (San Diego State University)

[160] *Situating Complexity Science within the Past and Future of Archaeological Theory*

Archaeological theory has long sought to explain how individual actions interact with broader socio-natural structures. Structuralism and determinism stressed constraint, cultural ecology introduced adaptation, processualism applied systems thinking, postprocessualism foregrounded agency and interpretation, and recent currents emphasize material agency and entanglement. Yet across these traditions, mechanisms for modeling dynamics, feedback, and rapid change remain underdeveloped. This paper argues that complexity science, particularly complex adaptive systems theory, extends this lineage by providing formal tools for dynamic explanation. Concepts such as feedback loops, nonlinearity, emergence, path dependence, and tipping points illuminate how local actions aggregate, how structures persist or unravel, and how cross-scale interactions shape historical trajectories. Recasting twentieth-century frameworks as early but largely descriptive engagements with complexity, I show how complexity theory integrates positivist and interpretive insights without collapsing their differences. I apply this perspective to resilience, highlighting that its impacts are scale dependent: stability at the system level may entail rigidity or precarity for individuals. Complexity approaches make such trade-offs explicit, reframing stability as a political and ethical condition. By weaving inherited theory with tools such as network analysis and agent based modeling, archaeology can address present challenges with a more dynamic and reflexive understanding of human history.

Ulloa, Rebecca (Chronicle Heritage)

[283] *Past and Present Investigations at AZ U:10:275(ASM): Understanding Chronology at Hohokam Sites in the Queen Creek Delta, Arizona*

AZ U:10:275(ASM), historically known as the Sand Dune site, is an approximately 250-acre Hohokam site near Queen Creek, at the eastern edge of the Phoenix Basin in Arizona. While densely settled, this area is outside of the primary canal-irrigated core of the Salt-Gila system. In 2021, Chronicle Heritage conducted testing and data recovery of a 22-acre transect through the center of the site. The project demonstrated that the site was occupied during the late colonial and Sedentary periods, contributing to our understanding of the timing and stability of Hohokam use of peripheral areas. The site was also much smaller than suggested by previous survey work, improving our understanding of regional settlement patterns.

Underhill, Anne (Yale University)

[220] *Urbanization, Food Preparation, and Food Consumption at Liangchengzhen*

Inspired by increasing publications calling for an understanding of daily food practices, this presentation examines ceramic and other lines of evidence that are informative about the preparation and consumption of foods at the late Neolithic, Longshan period settlement of Liangchengzhen located in the eastern seaboard (Haidai) area of northern China. It considers results from studies of food preparation and consumption in other urban areas of the world in addition to the specific cultural context and relevant spatial areas for one neighborhood at Liangchengzhen. There are some notable changes over time in addition to consistency in food practices among households.

Underwood, Kaylee, Corina Kellner (Northern Arizona University), and Kaitlyn Davis (Northern Arizona University; Chronicle Heritage)

[57] *Analyzing Agricultural Practices: Archaeological and Modern Plant Isotopes and Phytoliths from Peru and the US Southwest*

The arid environments of the Andes and the US Southwest can be difficult places to farm, yet archaeological and contemporary evidence indicates that agricultural communities have successfully cultivated crops in these areas for thousands of years. To better understand environmental conditions and agricultural practices for growing crops in these locations, we analyzed plant isotopes and phytoliths from four sites: two archaeological sites in Nasca, Peru (La Tiza and Huaca De Loro) from the first millennium CE, a

southwestern United States historical plant reference collection, and modern plants in Flagstaff, Arizona. The morphology and abundance of phytoliths provide insights into growing conditions, including water availability and planting and harvesting strategies. Isotopic ratios of carbon and nitrogen help to understand photosynthetic pathways, aridity impacts, and possible fertilizer use. Results indicate that communities found ways to supplement/increase the amount of water available to their crops and developed other strategies to aid crop growth. The protocols developed for this project will aid future researchers to better understand agricultural practices in arid environments over time, particularly in relation to climate change.

Unkel, Sarah [155] see Krus, Anthony

Urban, Patricia [308] see Schortman, Edward

Urban, Thomas [353] see Bustos, David

Ure, Scott [299] see Bennett, Jeremy

Uribe, Mauricio (Universidad de Chile)

[32] *Arqueología de las dinámicas socio-espaciales del litoral de Tarapacá, Chile: Tecnologías para el registro y análisis de 4.000 años de desarrollo marítimo en el Desierto de Atacama*

A través del estudio de los asentamientos desde una perspectiva de larga duración, esta ponencia busca comprender las dinámicas socioespaciales de las comunidades costeras de Tarapacá y, sobre la base de información arqueológica de alta resolución, aportar al manejo ecológico en el tiempo y actual del territorio litoral del Desierto de Atacama. Entonces, mediante la realización de un catastro arqueológico de alta resolución del litoral de Iquique-Pisagua, buscamos comprender los procesos de ocupación del territorio y maritorio a partir de análisis espaciales que permitan documentar y modelizar los asentamientos humanos en términos espaciales y cronológicos, profundizando en el conocimiento de las sociedades y los cambios de la ocupación del litoral tarapaqueño. Con estos fines, desarrollamos una escala de análisis regional de alta precisión, buscando comprender en detalle la heterogeneidad del registro arqueológico costero de más de 4.000 años de ocupación. Un modo de vida que, generalmente, ha sido descrito como estable y conservador, ocultando una diversidad de historias en territorios-maritorios con distintas configuraciones espaciales y vínculos territoriales. En consecuencia, proponemos dar un salto cualitativo en la cobertura y digitalización del patrimonio arqueológico, generando modelos espaciales para el estudio de las dinámicas sociales desde las primeras ocupaciones hasta tiempos recientes.

Uribe, Mauricio [340] see Gaete, Nelson

Uribe, Mauricio [83] see Minniti-Nogueras, Sofía

Uribe, Mauricio [177] see Wande, Claudio

Urizar, Marcela [337] see Toyne, Jennifer Marla

Uthoff, Stephen

[124] *Quantifying the Probabilities of Submerged Paleocoastal Site Locations Using Bayesian Statistics*

This research explores predictive strategies on locating submerged paleocoastal archaeological sites in the California Channel Islands using Bayesian statistical approaches. Building on a maritime mobility model, I have identified several areas along the Channel Islands' submerged paleocoastlines with high potential for site presence. This work addresses a key question: can incorporating archaeological variables like proximity to paleo-drainage systems, lithic sources, and environmental/cultural markers from known paleocoastal sites into Bayesian frameworks improve site location probability estimates? This poster presents a conceptual model for integrating such variables and discusses preliminary outcomes from testing the approach with existing datasets. The methodology formalizes prior archaeological knowledge to enhance survey strategies in submerged coastal environments. This research contributes to more effective, data-informed methodologies for identifying submerged sites critical to understanding early human occupation and mobility along the Pacific Coast.

Uzzle, Stephen**[301]** *Flaked Stone Insights from the Gila River Farm Site (LA 39315), Southwest New Mexico*

Salado villages in southwest New Mexico include residents descended from local Mogollon communities and residents whose ancestors migrated to the area from the Kayenta region. These villages contain evidence for both types of heritage in a combination of local and northern influenced artifacts and architectural features, with some room blocks showing more links to the Kayenta area and others showing more links to local Mogollon traditions. To date, no flaked stone items diagnostic of either Kayenta or Mogollon heritage have been defined. However, if room blocks were occupied by residents of different heritage, these differences might also create variability in the flaked stone assemblages associated with those room blocks. This analysis assesses differences in material types between room blocks in the lithic assemblage at the Gila River Farm site. I compare flaked stone material type and obsidian source area by room block in order to assess whether residents of different room blocks used various raw materials with different frequencies. This analysis of flaked stone raw material type reveals different and complementary patterns from the analysis of other, more heritage-specific cultural items like decorated pottery and ground stone tools.

Vacca, Kirsten (University of Hawai'i-West O'ahu)**[215]** *Embodying Social Archaeology in Pedagogy and Mentorship: Lessons from Rosemary Joyce*

Social Archaeology references a body of literature that explores how lived experiences in the past were embodied differently depending on intersectional social identities. Teaching these concepts in the classroom necessitates we understand how our students also embody their intersectional identities and how their lived experiences impact their engagement with archaeology. My first introduction to pedagogical theory and practice was as a graduate student instructor for Rosemary Joyce, teaching an archaeology of gender course at UC Berkeley. The approaches I learned teaching this class ignited a lifelong passion for pedagogical theory and formed the foundation of my current approach to teaching at a university that serves Indigenous students. In this paper, I explore how theories that inform approaches to social archaeology also inform pedagogical and mentoring practices. Specifically, critical theories have been instrumental in developing a better understanding of social identities in the past and present, aiding in the transformation of educational practices. Continued implementation of pedagogical methods informed by critical theories, I argue, will result in a discipline that is increasingly relevant to students' lives and equipped to meet this political moment.

Vachula, Richard [195] see Graf, Kelly

Vaiglova, Petra [314] see Meiggs, David

Vail, Gabrielle, Andrew Glass (Script Encoding Initiative), and Alexandre Bassi**[43]** *New Digital Tools for Researching and Rendering Maya Hieroglyphic Texts*

Drawing on the complementary skills of our project team in the fields of archaeology, epigraphy, and linguistics (Vail), type design (Bassi), and font engineering (Glass), we propose an innovative digital typographic solution to developing a font capable of accurately representing and rendering Maya hieroglyphs in digital format. This collaboration, part of the Script Encoding Initiative at UC Berkeley, brings script experts into dialogue with members of the Unicode Consortium, the international body that sets the standard for text encoding in digital technologies. Using examples from rubbings of Maya monuments from Yaxchilan, we discuss our process, employing the newly created font to digitally render texts and demonstrating the active composition of signs using keyboard input. As a first step toward making this powerful tool available for studying, preserving, and using the Maya hieroglyphic script to enhance understanding of Maya culture, it paves the way for collaboration with Maya communities. Our goal of submitting a proposal with ~300 glyphs in 2026, with expansions through extension sets, is key to encoding the Maya script in Unicode and making it widely accessible in a standardized format across digital platforms, thereby facilitating the creation, sharing, and preservation of documents, and fostering additional breakthroughs in decipherment.

Vail, Gabrielle [87] see Clark, Dylan

Vail, Gabrielle [112] see Marengo Camacho, Nelda Issa

Valadez Azúa, Raúl (IIA, UNAM)**[164]** *La fauna en el centro de barrio de Teopancazco*

El llamado centro de barrio de Teopancazco, en la antigua ciudad de Teotihuacán, se considera un espacio de la élite media vinculado con actividades administrativas y artesanales. La investigación arqueológica dirigida por la dra Linda Manzanilla permitió reconstruir mucha de su dinámica desde el siglo I al VII de nuestra era. La fauna descubierta corresponde primordialmente a contextos de rellenos, algunos cuidadosamente elaborados y con contenido faunístico relevante, por lo que se consideraron “rellenos con ofrenda” y otra porción apareció en entierros y fosas. La colección incluyó más de 25.000 especímenes pertenecientes a más de un centenar de taxa entre los que destacan especies marinas llevadas desde la costa del Golfo de México. La más relevante actividad involucrada con la fauna fue la elaboración de vestimentas para uso en ceremonias, tal y como lo demuestra la propia arqueofauna como pinturas murales ahí descubiertas, razón por la cual se le puso a Teopancazco el calificativo de “sastrería prehispánica”.

Valasquez, Londin [352] see Landau, Kristin

Valdez, Fred [178] see Khan, Faizan

Valdez, Fred [35] see Luzzadder-Beach, Sheryl

Valent, Ivan [298] see Ballinger, Madeline

Valenti, Matthew [280] see Chadwick, William

Valentin, Luna [55] see Menéndez Pereda, Alba

Valentin, Norma [164] see Velazquez, Adrian

Valenzuela, Antonia**[83]** *Los otros habitantes de Tarapacá Viejo: Repensando el rol de los animales en el mundo colonial / The Other Inhabitants of Tarapacá Viejo: Rethinking the Role of Animals in the Colonial World*

Este trabajo analiza la presencia y el significado de los restos arqueológicos de animales en la región de Tarapacá (Chile) durante la época colonial. La investigación se centra en un periodo de profunda transformación, marcado por la superposición de las tradiciones incaicas y la influencia española. El discurso histórico y artístico ha tendido a invisibilizar la agencia y el rol de los animales en este complejo entramado cultural. Una revisión de las pinturas cusqueñas y limeñas revela la presencia de “criaturas” híbridas, animales simbólicos que no encajan en las narrativas convencionales. Este fenómeno nos lleva a cuestionar su contraparte material e indagar el lugar que ocuparon estos animales en la hibridación de un nuevo orden social. Desde una perspectiva que combina la arqueología y la historia, esta ponencia argumenta que los animales no deben ser considerados como meros recursos pasivos, sino como agentes partícipes en la configuración del paisaje sociocultural. El análisis de los restos zooarqueológicos, junto con fuentes artísticas y documentales, permitirá reconstruir su desplazamiento y transformación simbólica. Esta investigación busca devolver la voz a una experiencia a menudo silenciada, enriqueciendo nuestra comprensión de la complejidad social de la región de Tarapacá durante la época colonial.

Valenzuela, Daniela (Universidad de Tarapacá), Adrián Oyaneder (University of Exeter), Persis Clarkson (University of Winnipeg), and Marta Crespo (Independent researcher)**[340]** *Geoglyphs in Motion: Variability of Form, Setting, and Context in Atacama Desert, Northern Chile*

Geoglyphs are among the most striking visual expressions of precolumbian societies in the Atacama Desert. Research in the valleys of Lluta, Azapa, Codpa, and Camarones demonstrates that, although all occur in arid lowlands, they display significant variability in form, location, and context. Close analysis of figure design, aided by drone-based photogrammetry, also highlights internal variability and suggests possible new, faint geoglyphs. This diversity reveals how geoglyphs articulated a range of social practices across distinct ecological and cultural settings during the Late Intermediate and Inka periods (ca. AD 1000–1535). Monumental geoglyphs along caravan trails acted as visual and ritual landmarks for long-distance mobility, while smaller panels in agricultural and domestic contexts suggest localized, intimate uses. Others integrated

productive areas, pathways, and ceremonial spaces, serving as nodal points of multiple activities. Together, these contexts underscore geoglyphs' role as dual markers of circulation and as instruments in negotiating social interaction, territoriality, and identity. We propose that geoglyphs formed part of a broader "technology of caravanning," where visual communication, ritual practice, and logistical signaling facilitated movement across desert landscapes. Emphasizing regional variability, this study contributes to broader debates on geoglyphs in precolumbian mobility, interaction, and conflict across the Americas.

Vallejos Martínez, Luis (Zona Arqueológica Caral-Unidad Ejecutora 003/Ministerio de Cultura del Perú), Miguel Valqui Güimack (Ministerio de Cultura del Perú), Jose Alva Nuñez (Ministerio de Cultura del Perú), Tatiana Abad Lezama (Ministerio de Cultura del Perú), and Angelica Lopez Ramos (Ministerio de Cultura del Perú)

[285] *Prospecciones arqueológicas del litoral de Casma: Identificando ocupaciones precerámicas en las cadenas montañosas del distrito de Comandante Noel*

El reconocimiento de la cadena montañosa del distrito de Comandante Noel, enmarcado en las investigaciones de la temporada 2024 de Bahía Seca, buscó complementar los estudios previos de Mallpas (1983, 1986), Uceda (1986, 1992) y Pozorski & Pozorski (1992) sobre el precerámico (9000-1800 aC) en las zonas adyacentes. El material precerámico recuperado en prospecciones, fue identificado, registrado y caracterizado, permitiendo visualizar el aprovechamiento del entorno marino y estacional de montaña, vinculado a una red de ocupaciones precerámicas Paijanenses y otros a lo largo del litoral casmeño. El estudio fue llevado por medio de prospecciones extensivas y reconocimiento aéreo, sectorizado en zonas norte, centro y sur, focalizándonos en este último. Los resultados definieron 15 ocupaciones, asociadas a campamentos-taller, agrupados en 4 grupos, en la cadena montañosa de cerro Los Pinos, laderas bajas, el litoral y la pampa. El material se vincula a la tradición Paiján con artefactos como *debris*, preformas foliáceas, unifaciales, lascas, puntas de proyectil, raederas y núcleos. De igual manera, se determinó la presencia de un grupo diferente, no diagnóstico, sin vínculo a la tradición Paiján. La data complementa la comprensión del desarrollo social de las ocupaciones precerámicas Paijanenses a lo largo del litoral casmeño.

Vallejos Martínez, Luis [60] see Alva Nuñez, Jose

Vallejos Martínez, Luis [342] see Lopez Ramos, Angelica

Valqui Güimack, Miguel (Zona Arqueológica Caral-Unidad Ejecutora 003 Del Ministerio de Cultura del Perú), Marco Machacuay Romero (Ministerio de Cultura del Perú), and Ruth Shady Solís (Ministerio de Cultura del Perú)

[267] *La ocupación residencial del subsector F3 del asentamiento pesquero de Áspero durante el Formativo Inicial (3000-1800 aC)*

El asentamiento de Áspero se ubica a 500 m del océano Pacífico y fue ocupado durante el Formativo Inicial (3000-1800 aC) de los Andes Centrales. Debido a su ubicación estratégica y sus construcciones, fue uno de los centros pesqueros con arquitectura monumental más importantes de la época. Sin embargo, dado la relevancia de la monumentalidad en las investigaciones sobre el proceso de complejización social temprano en los Andes, los estudios previos en Áspero se han centrado solamente en los edificios públicos piramidales. Consiente de esta problemática y ausencia de información, La Zona Arqueológica Caral-UE 003 / MC viene realizando investigaciones no solo en los edificios piramidales, si no también en las áreas residenciales de Áspero desde el año 2005. Como resultado, se han podido identificar varios sectores de viviendas como es el caso del subsector F3, donde se logró exponer 14 fases de ocupación caracterizadas por plataformas de poca altura sosteniendo residencias de quincha y piedra, cuyos rellenos constructivos fueron principalmente basurales de ceniza y material orgánico como moluscos y peces, además, los objetos de pesca como las pesas de piedra, flotadores de mate, anzuelos y redes fueron los objetos más recurrentes en las excavaciones.

Valqui Güimack, Miguel [60] see Alva Nuñez, Jose

Valqui Güimack, Miguel [342] see Lopez Ramos, Angelica

Valqui Güimack, Miguel [285] see Vallejos Martínez, Luis

van Der Merwe, Breyten [209] see Elster, Eli

Van Duzor, Ryan [157] see Balco, William

Van Dyke, Ruth (Binghamton University), Julia Coverdale, Daniel Hampson (Binghamton University), and Liv Winnicki

[277] *New Eyes on Kin Ya'a: A Chacoan Great House Community*

In 2023–2024, under a CESU agreement, Binghamton University re-surveyed the National Park Service parcel of the Kin Ya'a Chacoan community, 45 km south/southwest of Chaco Canyon in northwest New Mexico. Kin yaa'aanii, near Crownpoint, is home to the Towering House Diné clan. On the 100-acre NPS parcel south of the Kin Ya'a tower kiva, we relocated and rerecorded 10 sites, and we recorded 13 new sites. Sites range in age from the Basketmaker III period to historic Diné. New sites include a large Diné settlement and several Chaco road segments visible on lidar. Although many habitation sites are contemporaneous with the late 1000s / early 1100s tower kiva, we also identified a substantial late 800s / early 900s community. Ceramic and lithic data indicate strong ties to the Zuni area and connections with the Four Corners region but little interaction with the Chuska Mountains.

Van Gilder, Cynthia (St. Mary's College of California), Sarah Beth Dempsey (St. Mary's College of California), and Chris Dixon-Hundredmark (Bellevue College)

[339] *Teaching Archaeological Values with Engaged-Learning Pedagogy*

As archaeologists committed to the stewardship of the archaeological record on behalf of the past, present, and future of humanity, we are constantly in search of pedagogies that will cultivate in our students the knowledge, skills, and values relevant to our discipline. This paper shares the results of an ongoing collaborative project that seeks to harness the power of engaged learning pedagogies to cultivate the values of archaeological stewardship in a relatively traditional classroom setting. While engaged learning, including the related areas of service-based learning and community-based research, traditionally involves students' direct engagement with the public, here we explore how providing opportunities for iterative, critical self-reflection, with or without the component of direct interaction with members of the community, can build students' capacity to "interrogate their personal values and challenge normative assumptions" (Owen 2016:14), making them more effective leaders in the stewardship of archaeological resources. Drawing from data collected in both four-year private undergraduate and two-year public junior college settings, here we share theoretical insights and practical applications gleaned from our work thus far.

Van Gilder, Cynthia [48] see Dixon-Hundredmark, Chris

Vander Notelear, Dominick [178] see Guderjan, Thomas

VanDerwarker, Amber (UC-Santa Barbara), Brad Lieb (Department of Culture and Humanities, Chickasaw Nation), and Tony Boudreaux (Mississippi State University)

[81] *Maize, Politics, and Plant Foodways in the Mississippian Blackland Prairie*

Maize has long been associated with being Mississippian. Six decades of archaeobotanical research reveals significant variability in the organization and timing of maize agriculture relative to political developments across the broader Midwest/Southeast. While we know a lot about Mississippian period plant foodways, our lens is skewed toward specific regions that have been subject to more archaeobotanical research. In the interior southeast specifically, our knowledge is based mostly on the Lower Mississippi, Black Warrior, and Tombigbee Valleys, which present inverse patterning in terms of the timing of maize adoption/intensification relative to the establishment of political hierarchies. Between these two regions lies the Blackland Prairie region of eastern Mississippi, from which we present new plant data from three sites (Lyon's Bluff, Curry Mound, Stark Gate/Farm), collectively dating between 1050 and 1650 CE. We evaluate these data diachronically to address changes in Mississippian period plant foodways and agricultural practices as they relate to local political developments.

VanDerwarker, Amber [312] see Johnson, Emily

VanPool, Christine (University of Missouri), and Todd VanPool (University of Missouri)**[38]** *Worlds in Motion: Ideational Cognitive Archaeology and the Power of Magical Objects*

Ideational cognitive archaeology (ICA) is essential for understanding how past peoples animated and engaged with the material world. ICA explores the cognitive frameworks through which societies classified beings, objects, and forces—revealing how material culture was designed to participate in ritual and mediate between human and spirit worlds. This paper develops a comparative framework for applying ICA to magical objects as active agents within cosmological systems. Drawing on cross-cultural examples—including Casas Grandes effigy vessels, Puebloan prayer sticks, shamanic drums, *nkisi* figures, and ritual implements from the Hermetic tradition—we argue that magical objects were created not merely to represent cosmological ideas but to *perform* them. Through design choices that emphasize movement, sound, light, and symbolic correspondences, such objects coproduced altered states of consciousness, marked liminal thresholds, and embodied cosmological relationships. By integrating ethnosemantics, symbolism, and object agency, ICA offers a powerful method for identifying how magical technologies worked within their cultural context. This paper calls for a renewed focus on the ideational dimensions of artifacts—not simply their typology or function—to understand how material culture enacted and sustained systems of magic and belief.

VanPool, Christine [38] see VanPool, Todd

VanPool, Todd (University of Missouri), and Christine VanPool (University of Missouri)**[38]** *Ideational Cognitive Archaeology and Sacred Spaces: Environmental Design for Spiritual Experience at Paquimé*

This study examines how the ancient settlement of Paquimé (AD 1200–1450) in northwestern Mexico was deliberately designed to facilitate spiritual encounters through environmental manipulation. Using ideational cognitive archaeology, we analyze how Paquimé's elites engineered “enchanted spaces” by strategically employing embedded cues, controlled lighting, restricted access, and symbolic materials to produce altered states of consciousness and encounters with nonhuman intelligences. Three key examples illustrate this “engineered enchantment”: the T-shaped ballcourt with its restricted viewing areas and ritual burials that embodied Mesoamerican cosmology; the Walk-in Well featuring controlled access, darkness, poor air quality, and ritual offerings that created an underworld-like environment; and the carefully curated meteorite wrapped in cloth within a ceremonial chamber. These spaces incorporated environmental factors known to facilitate anomalous experiences—variable lighting, temperature changes, acoustic properties, and culturally significant embedded cues—while being integrated within the broader Flower World cosmological framework. By monopolizing access to these transformative spiritual experiences, Paquimé's elites strengthened both religious authority and political control, creating a pilgrimage destination that drew people from across the region. This research demonstrates how architectural phenomenology and environmental psychology can illuminate the sophisticated methods ancient peoples used to structure religious experience and social power.

VanPool, Todd [38] see VanPool, Christine

VanValkenburgh, Nathaniel [281] see Zimmer-Dauphinee, James

VanValkenburgh, Parker [337] see Toyne, Jennifer Marla

Vaquero, Manuel [272] see Mosquera Castro, Tania

Varela, Carlos (El Colegio de la Frontera Sur, San Cristóbal de las Casas), Arnoldo González Cruz (Instituto Nacional de Antropología e Historia), Mauricio Obregon Cardona (Universidad Nacional Autónoma de México), and Alfonso González Díaz (El Colegio de la Frontera Sur, San Cristóbal de las Casas)**[84]** *Domesticated Waterscapes: Fishing in Lowland Palenque, Mexico*

Since 2018, a substantial number of fish remains have been recovered from various contexts in the Mayan city of Palenque, Chiapas, Mexico. Taxonomic analyses have identified two classes, four families, and 11 species of fish. The preponderance of freshwater species identified in this study suggests that fishing was an important part of daily life. In view of the aforementioned findings, we sought to identify the areas in which

ancient Palencans may have engaged in fishing activities. Integration of lidar imaging and aerial photography imply that the ancient agricultural fields located in the lower part of the city constituted a substantial productivity area, within which fishing activities may have been undertaken. In this presentation, the results of the initial excavation season are discussed.

Vargas, Geissel [311] see Gonzalez, Silvia

Vargas, Geissel [311] see Nunez-Cortes, Yajaira

Varien, Mark [335] see Coffey, Grant

Varillas, Rosa (UIC)

[213] *Local Resilience and Imperial Integration: Rethinking Inka Provincial Strategies on the Arequipa Coast*

The coast of Arequipa has often been considered marginal to the Inka heartland, yet new evidence suggests it played a key role in provincial integration and local continuity. This paper presents recent archaeological research at Puerto Inka and surrounding sites in the Chala quebrada and Atiquipa lomas, combining radiocarbon dating and LA-ICP-MS compositional analysis of ceramics with excavation and survey data. Results indicate that Puerto Inka was more than a coastal outpost: it functioned as a node connecting highland caravans, coastal fisheries, and possibly long-distance exchange. Material evidence reveals both the persistence of local practices and the incorporation of imperial strategies of control, particularly in food production and distribution. By situating these findings within broader networks of connectivity, this research highlights how communities in Chala negotiated resilience under Inka rule and demonstrates that coastal Arequipa was an active locus of imperial and local interaction rather than a peripheral zone.

Varney, Tamara [324] see Brown, Matthew A.

Vasileski, Aleksandar [269] see Morris, Jessica

Vasquez Lopez, Veronica [36] see Reese-Taylor, Kathryn

Vasquez Marin, Jose Eduardo [309] see Chu Barrera, Alejandro

Vasquez-Young, Aria (University of Massachusetts, Boston), and Marco Fontan (University of Massachusetts, Boston)

[107] *Extraspatial Concepts of Domesticity: Theorizing Domestic Territories of Care in the Chota-Mira Valley*

This article aims to explore the intersections of racialization, gender, and age within the experiences of childhood enslavement in colonial Quito dating back to the seventeenth century. Using documents from the Archivo Nacional (National Archives) of Ecuador, this investigation approaches the children and their families listed in the inventories of seven identified eighteenth-century Jesuit haciendas (estates). The goal of this work is to re-interpret the descriptions about these children, their relationships to other members of the plantation society, and their possible roles in maroon survival systems in a way that humanizes their existence beyond products of labor. This perspective aims to move beyond the heteronormative patriarchal configurations of enslaved domestic spaces and provides an analysis of plantation life. What this describes is the interracial, intergenerational, interclass, and interage interactions children moderated, based on the concept of Black domesticity and its subsequent practices to provide a narrative that denounces the traditional view of children's roles on Jesuit plantations and in Ecuadorian society at large.

Vazquez, Edgar (Terracon-DFW), and Jonathan Welch (Terracon Consultants Inc.)

[55] *Fieldhouse Analysis at LA44088*

LA 44088 is a Piro-Tompiro habitation site situated on a terrace in the Abo Pass Salinas region of Torrance County, New Mexico. Terracon mitigated the previously recorded site between December 2022 and March 2023 to document three rock alignments and one thermal feature. During the investigations, the site was determined to be an expansive habitation site with multiple occupations. Terracon documented 34 precontact non-mortuary features consisting of 14 thermal features, 12 structural features (3 masonry

structures, 4 pit houses, 2 undefined flagstone-lined structures, and 3 flagstone-lined bin/cists), four unburned pits, two middens, an activity area, and a rock cluster. Of the 12 structural features, Terracon recorded three fieldhouses, from which numerous samples and cultural materials were collected. Fieldhouses included a single room subdivided into two smaller rooms (Feature 3) and two isolated masonry rooms (Features 38 and 57). The comparative analysis between these features is presented to illustrate similarities and differences among the features in terms of form, function, and chronology.

Vazquez, Edgar [155] see Welch, Jonathan

Vazquez Fiorani, Agustina, and Mark Schurr (University of Notre Dame)

[305] *Molecular Evidence of Regional Agropastoral Foodways in the Southern Andes during the First Millennium AD (Tucumán, Argentina)*

The spread of agropastoralism in the south-central Andes involved diverse local adaptations that are often difficult to detect due to poor preservation of organic remains. To address this challenge, we conducted a large-scale organic residue study of 173 Formative period (AD 200–800) pots from three contemporaneous villages in the Tafi Valley, Tucumán, Argentina. Using gas chromatography–mass spectrometry (GC-MS), compound-specific isotope analysis (GC-C-IRMS), and bulk isotope analysis of charred food crusts (EA-IRMS), we reconstructed subsistence practices and local foodways across distinct micro-environments. Biomolecular and carbon-stable isotopes on lipids and charred food crusts ($\delta^{13}\text{C}$) showed the exploitation of C_3 plants and ruminant animals and a clear regional patterning of broad subsistence strategies. Minor and eventual maize consumption was likely masked by other lipid-rich resources. These findings provide the first direct chemical evidence of subsistence micro-diversity within the Southern Andes, demonstrating that neighboring communities pursued distinct combinations of farming and herding despite similar cultural traditions. Methodologically, the study highlights both the potential and limitations of lipid residues for detecting plant use in South American contexts and underscores the need for expanded regional reference datasets.

Vázquez López, Verónica, Hannah Zanotto (University of Arizona), and F.C. Atasta Flores Esquivel (Universidad Nacional Autónoma de México)

[312] *Middle Preclassic Standardized Complexes and Interactions between the Middle Usumacinta Region and the Gulf Coast*

The Middle Usumacinta Archaeological Project has documented numerous standardized architectural complexes across southeastern Mesoamerica, following two primary layouts: the Middle Formative Chiapas (MFC) and Middle Formative Usumacinta (MFU) patterns. Both feature monumental architecture, particularly elongated plazas with E-Groups. The MFU pattern—defined by a rectangular plaza surrounded by edge mounds—is common in eastern Tabasco, with Aguada Fénix as its largest and likely earliest example. MFC complexes, characterized by a northern pyramid, are prevalent along the Gulf Coast and in northwestern Chiapas. Although the MFU layout draws inspiration from San Lorenzo, the sociopolitical organization of these centers appears distinct from that of the Olmec heartland. This paper examines standardized site layouts, chronologies, and interregional connections, focusing on MFU centers such as La Carmelita and Buenavista, whose occupational sequences differ slightly from Aguada Fénix. Pajonal, an MFC site with strong affinities with La Venta yet sharing features with Aguada Fénix, serves as another key case. Its location between these centers suggests that it was the setting of intense intercultural exchange, while material evidence indicates Pajonal's participation in both Gulf Coast and Maya area trade networks. These case studies contribute to defining interaction spheres and understanding cultural diversity in the region.

Vega, Zithlaly [166] see Claypatch, Hunter

Velasco, Daniela, and José Capriles (Pennsylvania State University)

[306] *Agropastoral and Aquatic Resource Use at Chiripa: Evidence from Faunal Remains Recovered during the 2022 and 2023 Seasons*

Agropastoral and Aquatic Resource Use at Chiripa: Evidence from Faunal Remains Recovered during the 2022 and 2023 Seasons

Velasco, Jesus (INAH Centro Tamaulipas)

[25] *Health and Society in Northern Mesoamerica: Between Foragers and Agriculturalists in Caves of Northeastern Mexico*

The materials analyzed in this study refer to topics concerning the problem of the presence of agriculture and the impacts on health and nutrition in the ancient population of northeastern Mexico. As general background information, the investigation has focused ethnologically and archaeologically on this area to consider the problem of interaction between societies of hunter-gatherers and farmers, a typical scenario experienced by northern Mexican populations, particularly by those in the zones that form a boundary between Mesoamerica and arid America. In the early 1950s Richard MacNeish excavated a series of dry caves sites within our study area and discovered evidence for the local adoption of domesticated plants and the subsequent development of a mixed foraging / partial farming economy that persisted for some millennia before culminating in the establishment of settled farming villages. Indeed, for our study, the coastal plain of Mexico and intermountain valleys in the Sierra Madre Oriental are relevant for these problems, since our knowledge of interaction of different culture complexes of hunter-gatherers and agricultural populations in a variety of ecological environments is evident for a long time. This is the case for the prehispanic Huastec culture and the ancient desert population of hunter-gatherer-farmers from the south and southeast of Texas.

Velasco, Matthew (Cornell University), Rómulo Pari Flóres (Universidad Católica de Santa María), Manuel Mamani (Independent Researcher), Kelly Moss (University of California-San Diego), and Kevin Ricci Jara (Independent Researcher)

[213] *Investigaciones recientes en el complejo arqueológico Uyo Uyo del Valle de Colca, Perú*

El complejo arqueológico Uyo Uyo, ubicado en el distrito de Yanque (Caylloma, Arequipa), fue uno de los principales asentamientos de los Collaguas durante el Horizonte Tardío. Entre los años 2011 y 2012, se llevó a cabo un proyecto de conservación y puesta en valor en el sitio, el cual dio como resultado la recuperación de importantes hallazgos arqueológicos como restos de cerámica, óseo animal, y entierros humanos. En la presente ponencia se analizarán los patrones arquitectónicos en conjunto con el análisis de los restos arqueológicos, con el objetivo de llegar a una visión más amplia de la función del sitio y la conformación de la identidad o identidades de sus habitantes. Los resultados muestran que la población local dependió en la ganadería de camélidos y también en el cultivo de maíz. En comparación con otros sitios, menos personas sufrieron traumas craneales, lo cual puede indicar un mayor estatus social o protección contra la violencia bajo el imperio incaica. Estos nuevos resultados serán contextualizados por estudios previos en el valle del Colca sobre la producción agrícola, la guerra, y la formación de la etnicidad Collagua a través del tiempo.

***This presentation will include images of human remains.

Velasco, Matthew [204] see Angell, Emma

Velasco, Matthew [213] see Kohut, Lauren

Velasco Alban, Janny (University of Texas at Austin)

[173] *Reading the Sediments: An Experimental Application of Soil Micromorphology in a Manteño Archaeological Midden from the Ecuadorian Pacific Cloud Forest*

Around 1300 CE, the Manteño, a late non-state society, incorporated the cloud forest of the Chongon-Colonche cordillera as part of their territory. This incorporation assumed the sociopolitical expansion and their consolidation as leaders in the trade of spondylus, mother pearl, and other fine merchandise in the Pacific. Recent studies have analyzed ecological factors in incorporating new territories, especially linked with access to new crop lands, forest resources, and water. This process resulted in the construction of monumental settlements configuring the forests in a particular way, combining the stone foundations within the current forest. The study of soil micromorphology in archaeology has contributed to expanding our understanding of human modification evidence on microscale landscapes. This methodology, taken from geoscience, has been an essential tool in analyzing archaeological records and specific imprints on how human remains can alter the composition and structure of soils through time. This experimental research has developed a baseline to understand how human populations interact with the environment and how they modify the microstructure of soils as part of the landscape transition.

Velásquez García, Erik (Instituto de Investigaciones Estéticas de la UNAM)**[92]** *Some Reflections on the Creative Process and the Cognitive Power of Maya Hieroglyphs*

The creative process of Maya hieroglyphs involves many facets. Due to the brevity of time, I will emphasize only a few. The visual and material nature of the hieroglyphs encapsulated the ethereal substance of the words, whose nature was supernatural, originating within the animic heart (*ohlis*). But the power or warmth of the words was enhanced by ritual and rhetorical formulas. Calligraphic art creatively impacted both realms of the cosmos: the ecumene, due to the technical skill of the scribes; and the anecumene, thanks to the ritual manipulation of supernatural components. By opening (*pas*) the earth to extract the sculptural supports, the craftsmen reproduced the actions of Chahk and his axes. The gods, previously dormant, awakened (*ahaal*) in these monuments (García Juárez 2025), while the words, anthroponyms, and actions of the rulers experienced a new dawn (*pasaj*), encased (*pix*) within the stone hieroglyphs, transcending the limitations of the ephemeral and biological. For this reason, hieroglyphs were never to lose their figurative visuality, which was seen as a body that enclosed sound and meaning (inner soul components). At the same time, inscriptions and codices became cognitive mirrors, means of wisdom, or instruments for seeing (*ilbal*) the past and the future.

Velasquez-Muela, Melany (USFQ), and Florencio Delgado-Espinoza (Universidad San Francisco de Quito)**[309]** *Strategic Analysis of Inka Pucaras: Military Logistics in the Conquest of Northern Chinchaysuyu*

The Inka Empire's northward expansion into extreme of the Chinchaysuyu, a region encompassing modern-day Ecuador, was fiercely contested. Its conquest was defined by an organized resistance from Indigenous groups. In a strategic counter to Inka imperialism, these diverse societies formed complex confederations, uniting powerful chiefdoms across the North Andean landscape. To overcome this opposition, they employed a military construction of offensive and defensive infrastructure. These installations, known as *pucaras*, were formidable fortresses strategically distributed across both the Western and Eastern Cordilleras. Their placement was a calculated component of imperial policy, directly influenced by the imperative to surveil, dominate, and pacify the belligerent populations in the surrounding valleys and territories. This research analyzes the strategic logic governing the location of individual and clustered *pucaras*. By using spatial analysis techniques through Geographic Information Systems (GIS), this work reconstructs the possible sightlines (inter-visibility), territorial control, and access to critical routes. This methodology allows the examination of Inka military strategy, providing us with data to model the tactical and logistical considerations of the Inka northern expansion.

Velazquez, Adrian (Museo del Templo Mayor-INAH), Norma Valentin, and Belem Zuniga (Secretaria de Edu. Publica)**[164]** *The Mollusks of the Teopancazco Neighborhood Center*

In the Teopancazco neighborhood center, 677 mollusk shells were found, belonging to the Gastropoda and Bivalvia classes. Most of them are marine, from both the Atlantic and Pacific coasts of Mexico, but continental mollusks have also been found. In Teopancazco, mollusks had religious importance, as evidenced by their presence in contexts associated with plazas, temples, burials, and offerings. They were also used for the manufacture of ornamental and votive objects. The production of these pieces appears to have been carried out on-site, given the discovery of fragments with traces of work, which constitute evidence of production. It is very likely that they were part of the clothing of the middle-class elites, whose production was one of the activities carried out on-site. By studying the manufacturing traces using scanning electron microscopy (SEM), it has been possible to determine that volcanic rocks were used to grind the shell pieces; obsidian tools were used to cut and create decorative designs; and flint drills and polishers were used. Traces of other materials, such as sandstone grinders, have been found on a few pieces, suggesting that these elements were imported to Teopancazco from other regions, perhaps the Huasteca.

Velázquez, Luis [339] see Maldonado, Blanca

Velázquez-Morlet, Adriana [223] see Tsukamoto, Kenichiro

Veléz, Leopoldo [88] see Guzman-Armenta, Ramon

Véliz Corado, Fernando

[252] *A Message Meant to Be Heard: Authority, Performance, and Acoustics at Naranjo*

In the last decade, the implementation of lidar and GIS in the study of ancient Maya landscapes has revolutionized Maya archaeology by enabling analyses of settlement patterns, defensive features, demographics, and paleoenvironments. However, little attention has been paid to the ancient Maya's soundscapes and their perception of sound. This paper will implement lidar data from Naranjo to develop a soundshed analysis that will test how and why the inhabitants of Naranjo acoustically engineered public and private space. The methodology will involve GIS and Python algorithms applied to Naranjo's lidar dataset, as well as ground truthing using recordings at the site to test the results obtained in the lab. Based on similar studies conducted at sites like Palenque and Copan, the analysis is expected to show that the Maya of Naranjo created architectures, plazas, and palaces as spaces intended to transmit messages that could and should be heard by differentiated audiences. This study has the potential to contribute to our understanding of how rulers used sound to shape political geography, thus reinforcing authority, visibility, and control within space.

Vellanoweth, Rene [271] see Ainis, Amira

Vendome-Gardner, Charlotte (University of Exeter)

[276] *Beyond the Stereotype: Working to a Landscape-Based Model of Study with Fluteplayer Rock Art Imagery in Chaco Canyon*

The Fluteplayer is a widely recognized image within rock art, but it has been misinterpreted, appropriated, and widely commodified as the Kachina Kokopelli, detracting from its true cultural value. This discussion will present final PhD research that aims to address this discourse within the study of Fluteplayer imagery using a landscape-based approach to establish a context and wider sociocultural placement of the image within Chaco Canyon, the ideological center place of an Ancestral Puebloan world. Using a combination of GIS viewshed analysis and fieldwork focusing on ideas of "lived" landscape experiences, Fluteplayer rock art locations identified by the Chaco Rock Art Reassessment Project (CRARP) will be studied in relation to associated site contexts, research pertaining to the Chacoan culture, and comparative artifact analysis. Understanding the wider sociocultural placement of the Fluteplayer will move the image beyond its pertained stereotype and allow it to significantly contribute to research discussions, as a key landscape dataset, on Chaco Canyon.

Ventresca-Miller, Alicia (University of Michigan Museum of Anthropological Archaeology)

[315] *Unlocking Interspecies Integration in North-Central Asia via Biomolecules*

Over the last two decades, archaeological research across north-central Asia has led to a clarification of the timing of the introduction of domesticated animals and plants. As economies in this region shifted from foraging to the use of ruminant livestock, to horse dairying and riding, and finally to the cultivation of grains, these marked major thresholds in human history. As part of my forthcoming book, a new model is proposed for the stages of integration of cultivated species into societies—from the initial introduction of domesticated animals or plants to their acceptance, solidification or complete incorporation, and finally intensification. The delineation of these varied stages depends on novel biomolecular techniques to refine these broader narratives, including proteomics, ancient DNA, and isotopic analyses. Resulting findings suggest that there were multiple trajectories and timelines for cooperation between species, as domestic species were integrated into societies there were shifts in landscape use, knowledge systems, and the structures of social systems that encompassed cultivated species.

Verano, John [301] see Patroni Castillo, Karla

Verdugo, Cristina (Astrea Forensics), James Brady (California State University, Los Angeles), and Lars Fehren-Schmitz (UCSC)

[24] *The Midnight Terror Cave Skeletal Assemblage: A Paleogenomic Perspective*

Various hypotheses concerning the question of who was sacrificed by ancient Maya have focused on

differences in sex, age, or social status as factors that played a role in the selection of individuals for sacrifice. Our analysis of genomic data obtained from 19 individuals from Midnight Terror Cave (MTC), Belize, and Dos Pilas, Guatemala, skeletal assemblages, provide insights into this question by examining genetic variability between the two sites and how it relates to the larger Mesoamerican landscape. We find that the genomes from both sites fall well within the genomic diversity of previously published ancient and modern-day Maya communities. Comparison of genomic ancestry and diversity estimates between the two sites suggests that individuals were selected for sacrifice from their immediate areas.

Verduzco, Abrianna [334] see Harvey, Amanda
Verduzco, Abrianna [334] see Newcomb, Alyssa

Vernon, Kenneth (Scientific Computing and Imaging Institute), Kelsey Carlston (Gonzaga University), Weston McCool (California Polytechnic State University), Kurt Wilson (Lawrence University), and Brian Coddling (University of Utah)

[95] *The Evolution of a Labor Market*

We develop a formal equilibrium model that shows how a subsistence population organized around the institution of private property can undergo internal differentiation into wage laborers and employers. The supply of labor is provided by potential workers facing a familiar time allocation problem: whether to invest their limited endowment of time into food production on their own land or on land owned by someone else. Demand for labor comes from potential employers whose labor investments are constrained by the wage rate, which is set by the market. The well-known requirement of environmental heterogeneity, or variance in the productivity of private land, is derived analytically from the model. We conclude with some discussion of how an initially competitive labor market may become less so over time, with important consequences for the distribution of goods.

Vernon, Kenneth [95] see Medina, Ishmael

Vetrisano, Lucas [93] see Franco, Nora

Vianello, Andrea [302] see Tykot, Robert

Vicencio, A. Gabriel (Boston University)

[310] *Tracing Basalt and Andesite Exchange Networks in the Plaza of the Columns Complex*

Much of what we know about stone tool exchange networks comes from analyses of obsidian. The characterization of other rocks remains less understood, yet they were critical as construction materials, for fashioning sculptures, and as grinding tools. This study examines the possible geological sources and exchange networks to better understand the origins of basalt and andesite archaeological artifacts from central Mexico. The inhabitants of the Plaza of the Columns Complex, where a wide variety of lithic artifacts have been recovered, participated in numerous exchange networks; therefore, determining the origins of these materials is essential. This research examines new methodologies for sourcing basalt and andesite tools, evaluates possible procurement strategies employed by the inhabitants of the complex, and compares these patterns with those observed in other districts within the city.

Vidal-Elgueta, Alejandra (Pontificia Universidad Católica), Virginia McRostie (Pontificia Universidad Católica de Chile), and Magdalena Garcia (Museo Chileno de Arte Precolombino)

[165] *Reflections on the Relationships between Human Groups and Forests in the Atacama Desert Based on Prehispanic Wood Carving*

The Atacama Desert, Chile, sustained a wide forest of varying proportions and characteristics during the prehispanic period, which enabled the cohabitation of diverse human groups. This long-standing coexistence is reflected in wood carving practices, traditionally analyzed through a dichotomous and functional lens that categorizes wooden objects as either utilitarian (e.g., pointed sticks, fire starters, spindle whorls) or ceremonial (e.g., ornaments, pendants, figurines). However, this conventional perspective fails to fully acknowledge the value and role of wood and forests within prehispanic societies. This study aims to reflect

on the relationships between human groups and forests through the analysis of more than 300 wooden objects found in several archaeological site from the Atacama Desert, dated between 3000 yrs BP to the colonial period. The results reveal that wooden objects are part of complex assemblages of actions, practices, and associations of material culture, allowing for a deeper understanding of the relationship between wood—and by extension, forests—and the human groups of the prehispanic past.

Vidal-Elgueta, Alejandra [83] see Minniti-Nogueras, Sofía

Vidal-Elgueta, Alejandra [177] see Wande, Claudio

Vidal Guzmán, Cuauhtémoc (George Washington University)

[94] *What the Bones Remember: Zooarchaeological Evidence of Persistent Culinary Practices at the Ñuu Savi Site of Etlatongo*

This paper adopts a diachronic perspective to investigate the persistent culinary practices at the site of Etlatongo in the Ñuu Savi region of what is now the Mexican state of Oaxaca. With a continuous occupation over several millennia, Etlatongo presents a unique case through which to examine how long-term social transformations influenced foodways and cuisine. Utilizing zooarchaeological data from Terminal Formative / Early Classic and Postclassic domestic contexts, I examine the relations among meals, animals, and politics. I argue that, despite significant historical change, the culinary practices observed in later periods remained deeply rooted in traditions established at the site's distance past. Preliminary patterns indicate an increasing reliance on specific sources of meat over time, particularly domestic dogs. However, the role of dogs at Etlatongo was multifaceted; beyond serving as a source for quotidian meals, dogs also held significant symbolic and social value, as evidenced by their inclusion in burial contexts and possible roles as special companions. *****This presentation will include images of human remains.**

Vidal-Montero, Estefanía, and Pablo Méndez-Quirós (Universidad de Chile)

[32] *Propuesta para una “arqueología de caletas” en la costa de Tarapacá*

Presentamos los resultados de una prospección sistemática de parte de la costa de Tarapacá. Los resultados muestran una amplia cronología de ocupación que configura a las “caletas” como espacios clave en la extensa historia de los asentamientos costeros tarapaqueños. Documentamos estas ocupaciones a través de excavaciones, que confirman que se trata de focos actividad humana que se establecen con certeza desde el Arcaico Tardío (~5000 aP) en adelante. Estos son sitios caracterizados por conchales monticulares de distintas proporciones, en algunos casos formados por densos basurales primarios. En otros casos, se trata de campamentos con pisos ocupacionales sucesivos con evidencia de talla lítica. Para el período Formativo hay ejemplos de sitios con y sin arquitectura que aprovechan abrigos rocosos. Son grupos pescadores que comienzan a manejar cerámica producida en el interior. Estos vínculos sociales se expresan en la materialidad presente en la costa durante el PIT, donde confirmamos ocupaciones más estables en torno a caletas como Los Verdes, Caramucho, Chanavaya y Chomache, entre otras, que presentan materiales extra-locales. Estos datos apuntan a la relevancia de las caletas como espacios arqueológicos complejos, que requieren de una aproximación pormenorizada que detecte la variabilidad de las ocupaciones humanas en estos espacios litorales.

Vidal-Solano, Jesus (Universidad de Sonora), Maren Hopkins, and Kelsey Hanson (University of Texas at Arlington)

[26] *Geological Diversity and Geo-identity in the Ceramic Community of Mata Ortiz, Chihuahua, Mexico*

This study integrates geological and petrographic approaches to examine the ceramic tradition of Mata Ortiz, Chihuahua, as a living expression of geo-identity. Past interpretations of archaeological ceramic traditions in the region have presented the geologic landscape as homogenous, but recent geologic research demonstrates great diversity that contributes to new understandings of ceramic technology in the region. The research highlights the continuity of the Rio Grande Rift Magmatic Province into northern Mexico, a geological feature previously recognized only in the United States (Colorado, New Mexico, Texas). The discovery of Eocene–Oligocene peralkaline volcanic rocks provide a new framework for understanding raw material sources and their cultural appropriation in the region. By situating the clay sources of ceramic tradition within this broader volcanic and tectonic context, we present how geology and landscape shape community identity. This interdisciplinary approach not only redefines regional geological knowledge but also reinforces the

cultural heritage of Mata Ortiz, a community contributing to sustainable narratives of geo-identity and heritage.

Viebjerg Larsen, Peter, and Eric Jones (University of Colorado Boulder)

[196] *The Settlement Ecology of Foothills Farming in Late Nineteenth-Century Colorado*

By the late nineteenth century, the American West had been extensively settled, with the groundworks for the modern agricultural and urban landscape of the West having been laid. The farmers of flatland Boulder County represent this state of affairs at the end of the frontier period, and this research investigates the intersection of their diverse identities, agricultural practices, socioeconomic statuses, and other aspects of their lives. This project expands on research presented at the 2025 SAA meeting. Using historical censuses and GIS-based spatial analysis, we examine the relationship between farmers' distribution on a varied landscape and aspects of their identity. We found lasting patterns related to the origin of land ownership, whether purchased or obtained through the Homestead Act, likely as a result of socioeconomic inequality. Additionally, immigrants of differing national origins continued unique patterns of agricultural activity based on cultural differences in farming. Other patterns are also analyzed. The results show the variable ways that the people settling the American West in the nineteenth century settled on and responded to their new environment, and how these aspects of settlement impacted the modern geography of the West.

Vierra, Bradley [49] see Heckman, Robert

Vierra, Bradley [115] see Leckman, Phillip

Vigliani, Silvina [178] see Clark, Loren

Villacorta Ostolaza, Luis Felipe (Museo Raimondi), and Milosz Giersz (University of Warsaw)

[207] *The Raimondi Stela: History, Conservation, and Contemporary Tensions*

The Raimondi Stela is one of the most iconic objects of ancient Andean art and a key reference point in the history of Peruvian national collections. Its incorporation into the national heritage at the end of the nineteenth century—through its purchase, removal from Chavín de Huántar, and subsequent transfer to Lima—illustrates not only the logistical and political complexities of the time but also the shifting visions of Republican Museum projects during the late nineteenth and twentieth centuries. As such, the stela has served as a thread through which broader changes in political conjunctures, scientific progress, and curatorial discourses can be traced. In 2023, the authors carried out a comprehensive historical and diagnostic study of this unique piece, currently exhibited in the permanent collection of the Museo Nacional de Arqueología, Antropología e Historia del Perú in Pueblo Libre, Lima. The study examined both the condition of the stela itself and the history of its curatorial trajectory, while also situating it within wider debates about heritage, identity, and state cultural policies.

Villalpando, Elisa [25] see Cerezo-Román, Jessica

Villalpando, Elisa [25] see Watson, James

Villanea, Fernando [211] see Orellana Soto, Michael

Villanueva, Carlos [79] see García De León, Arturo

Villar Quintana, Anthony (UNMSM)

[309] *Más de un Wamani: Repensando la territorialidad inca en la cuenca del Utcubamba (Amazonas-Perú)*

La cuenca del Utcubamba (Amazonas-Perú) ofrece un escenario privilegiado para examinar los procesos de administración imperial en los Andes nororientales. En esta ponencia se presenta una sistematización de los sitios del Horizonte Tardío registrados en la región, evaluando su patrón de asentamiento, arquitectura y posibles jerarquías entre asentamientos. A partir de estas evidencias, se propone una aproximación a la manera en que el Tawantinsuyu organizó políticamente este territorio, explorando la existencia de más de un *wamani* o provincia inca en esta cuenca. El reconocimiento de estas divisiones administrativas incas no solo permite comprender la flexibilidad y adaptaciones del poder estatal en un paisaje diverso, sino que también abre la posibilidad de identificar territorios previos de los grupos locales conquistados e incorporados al

imperio. Este análisis combina perspectivas arqueológicas e históricas para aportar a la discusión sobre la variabilidad provincial y los modos de integración en regiones periféricas del dominio inca.

Villar Quintana, Anthony [62] see Gontarski, Sarah

Villasenor Iribe, Eunice [156] see Blumenfeld, Dean

Villegas Ortega, Luis (Universidad Nacional Mayor de San Marcos)

[340] *Análisis de los geoglifos en Arequipa: Majes, Sigvas y Vitor*

Este estudio, parte de una tesis de maestría en Arqueología Andina, examina el poder simbólico del culto al agua a través de las principales características de geoglifos de Arequipa en los valles de Majes, Sigvas y Vitor. Empleando un enfoque interdisciplinario que une la arqueología del paisaje con la historia social andina, la investigación identifica más de 50 geoglifos vinculados a antiguos caminos, petroglifos y altares. La hipótesis central propone que algunas figuras actuaban como dispositivos territoriales y rituales para el culto al agua, articulando redes sociales y narrativas de poder en el espacio andino prehispánico. Se postula que los geoglifos cumplieron un papel activo en la creación de un paisaje simbólico, esencial para la afirmación de las identidades de las comunidades Chuquibamba, Collaguas, Cabanas, Sigvas y Majes en un contexto ecológico desafiante como es el desierto costero centro sur andino.

Villela, Khristaan (Getty Research Institute)

[260] *Selling Ancient Mexican Art in Mid-Twentieth-Century Print Advertisements: From Kahlua to Antidepressant Medications*

During the 1960s–1970s, the Stendahl Gallery of Hollywood, CA, used print advertisements in a broad range of publications, including *Art in America*, *Art News*, and others to sell its stock of ancient Mexican objects. This study will examine the surviving advertisements and their function in the mid-twentieth-century ecosystem of sales of illicitly exported Mexican antiquities.

Villella, Catherine [345] see Spuck, Jacob

Vincent, Delvigne [93] see Sevin, Lucille

Vining, Benjamin [267] see Contreras, Daniel

Vivero Miranda, Jose (University of Oklahoma)

[166] *Beyond Provenance: Ceramic Technology and Ethnogenesis in the Northernmost Frontier of Mesoamerica*

Guasave in northwestern Mexico holds particular significance as it historically demarcates the frontier between Mesoamerica and the US Southwest. While external influences in northwestern Mexico have been the conduit for modeling the expansion of Mesoamerican traditions and practices, technological analyses have not yet been considered to evaluate the extent of changes among the local Huatabampo groups in Guasave during the onset of the Aztatlán tradition from AD 1100 to 1450. This work thus allows the reevaluation of ongoing discussions of Mesoamerican peripheries. Switching from external influences as the avenue to trace social changes and existing borderlands, this work instead emphasizes a local scale of analysis based on recently explored sites in the Guasave coastal area. By evaluating high-visibility and low-visibility technological attributes of Red plainwares over time, and contextualized with the provenance of Aztatlán polychromes, this work offers nuanced insight into how the so-called “spaces in-between” react to external stimuli and shape ethnogenesis. While this work aligns with frameworks that consider potters’ choices as active expressions of identity and influenced by intra- and intercommunity factors, it also acknowledges that ceramic technology and ethnic identity formation are fluid processes that may not always conform to rigid models.

Volarich, Jenny [41] see Suárez, Rafael

Volpe, Hannah (Western Colorado University), Mark Willis (Flinders University), Michael McDermott, and David Hyde (Western Colorado University)

[181] *Lidar Imagery at La Milpa, Belize: Comparing and Contrasting Two Datasets*

The use of lidar (light detection and ranging) has become an increasingly necessary tool for archaeology, particularly in densely vegetated areas, such as the jungle of Belize where the Programme for Belize Archaeological Project, PfbAP, does research on Maya archaeology. In the summers of 2024 and 2025, two different people using different equipment collected two sets of lidar data for La Milpa, the third-largest Maya site in Belize, and, in its prime, a thriving major city. Under the auspices of the Tzaman Acropolis Research Project (TARP), lidar data was collected across the site of La Milpa. Lidar data was also collected for La Milpa in 2024 in coordination with the Dos Hombres to Gran Cacao Archaeology Project (DH2GC). This poster will summarize the equipment used for data collection and provide a comparison of the two sets of imagery, as well as discuss newly identified features at the site.

Volta, Beniamino [23] see Leonard, Daniel

von Cramon-Taubadel, Noreen [89] see Pinkston, Erin

Von Nagy, Christopher (Shared History Program, UNR)

[262] *From Two Vantage Points: A Comparative Consideration of Olmec Period Ritual Economy in Guerrero and Tabasco*

In this paper, I consider implications to our understanding of Formative period—"Olmec"—Mesoamerican ritual economies from two distinct, geographic vantage points. Part of the same Urban Origins Research Project, I and my colleagues conducted a multiyear research program in western Tabasco centered on the site of San Andrés, a para-urban component of the Middle Formative, Eastern Olmec La Venta polity, and at Quiotepec-Oxtotitlán, a large Formative town in the Chilapa-Zitlala stretch of the Atentli River valley best known for the striking, fifteenth century cal BC through first millennium cal AD cave art within and above Oxtotitlán Cave (some art is almost certainly either older). Excavations at both sites revealed material evidence of rituality. At San Andrés, extensive middens and midden-filled pits suggest a large, central ritual economy within the polity. While more restricted in scale, evidence excavated within the rockshelter component at Oxtotitlán Cave adjacent to Panels C-1 and C-2 document Formative ritual practice in Guerrero associated with the art. While linked to broader pan-Mesoamerica trends and regional economic systems, practices evinced at both sites echo the more local and regional historical trajectories of a civilizational mosaic.

Voy, McCall

[45] *From Field to Future: Safeguarding Our Zooarchaeological Heritage*

Zooarchaeological collections are a valuable resource whose research potential is directly tied to their long-term preservation. While the focus of zooarchaeological analysis is often on the interpretative results, the material's journey from excavation to curation directly impacts the types of research questions that can be addressed both in the present and the future. This presentation will explore how our curation practices—including storage methods, material choices, and environmental controls—impact the research that can be conducted on faunal assemblages. Non-osseous materials, in particular, are highly susceptible to degradation from environmental factors and biological agents, highlighting the need for careful management as well as increased discussion in order to mitigate material and data loss. By critically reflecting on and improving our curation practices, we can mitigate material loss, ensure the integrity of faunal assemblages, and ultimately expand the scope of zooarchaeological inquiry for generations of scholars. This presentation argues that proactive and thoughtful preservation is not just good practice but a critical step in preparing zooarchaeology for future research.

Vukomanovic, Jelena [323] see Millhauser, John

Wa, Ye [216] see Berger, Elizabeth

Wade, Angela [169] see Krasinski, Kathryn

Wagemann, Jackson, Daniel Dalmas (University of Utah), Kurt Wilson (Lawrence University), and Lawrence Todd (GRSLE Inc.)

[201] *Glass Trade Bead Movement and Distribution in the Absarokas*

Recent investigations within the Absarokas have highlighted significant amounts of information from within contact locations via glass trade beads. This project analyzes the history of trading posts in the Absaroka mountains, focusing particularly on trade bead movement. Using data from recent years of the GRSLE (Greybull River Sustainable Landscape Ecology) project, we investigate the patterns in bead presence across the Absarokas to document the types of sites on which they're found and explore their cultural context. Initial research focuses on mapping the distribution and types of beads to discuss possible trade pathways and explore why certain beads appear in specific contexts while others do not, allowing for questions about selection, exchange, and cultural preference. By examining bead typologies, site associations, and historical writings, the project helps uncover the symbolic and social significance of these artifacts. Ultimately, this research contributes to broader discussions on material culture, cultural exchange, and histories of trade and tradition in the Northern Plains and Rocky Mountain corridors during the early historic period.

Wages, Natalie [333] see Levin, Maureece

Wai, Christopher [60] see Wai, Stefanie

Wai, Stefanie (University of Toronto), María José Culquichicón-Venegas (Universidad Nacional de Trujillo), Christopher Wai (University of Toronto), Taylor Alexander (Durham University), and Thayra Sugunalan (Fleming College)

[60] *Refining Relative Chronologies between Legacy Data and Recent Survey Data: A Preliminary Analysis at Pacatnamú*

Pacatnamú is a large 18.5 km² city composed of more than 50 huacas located on north coast of Peru. Archaeologists have long debated on whether the site was a Chimú administrative outpost, a pilgrimage center, a local religious-political center, or the seat of the Lambayeque Sur polity. Presently, much of the original data and our understanding of Pacatnamú comes from excavations in the city core between 1937–1939, 1953–1954, 1962–1963, and 1983–1987. Due to the age of these excavations, very few absolute dates exist for this monumental site. Furthermore, a large number of samples would be needed to adequately phase the site's many components spatially. It remains unclear how the city developed and changed over time between the Moche (AD 400–850) and the Late Intermediate period (AD 1000–1450). Nonetheless, Pacatnamú has been part of many existing discussions on north coast settlement and ritual. This paper presents our preliminary results of the 2024 surface survey, where we analyze and integrate our findings with previously published archaeological data to attempt a new cohesive understanding of the spatiotemporal distribution of the site and its components. This data, while reliant on relative chronologies, will prelude more dedicated future excavations that can provide more nuanced understandings.

Wai, Stefanie [356] see Munro, Magdalen

Wake, Thomas (UCLA-CIOA Zooarchaeology Lab)

[342] *Assessing Dietary Strategies in Neotropical Shell Middens: Further Evidence of the Utility of Column Samples in Zooarchaeological Investigations at Sitio Drago, Bocas del Toro, Panama*

Ongoing analysis of rich and diverse samples of vertebrate bone from Sitio Drago (SD), Bocas del Toro, Panama illustrates the importance of fine-grained sampling in understanding past subsistence strategies at the site. The analysis of charred macro- and micro-plant remains recovered from 30 × 30 × 10 cm column samples provide crucial information concerning the presence of both domestic and wild species in the diet at SD. These same contexts provided important data concerning the presence and use of small vertebrates at the site. Field recovery methods at SD included the use of 3 mm mesh wet screens and the retention of all screen residues for subsequent sorting into respective artifact and ecofact classes. As noted in previous publications and presentations few small fish remains and species were represented in identified samples.

Sorting the heavy fractions of the column samples resulted in the recovery of small vertebrate remains in relatively large numbers and clarifies the dietary role of small fish such as anchovies and sardines at SD.

Walden, John [58] see Blastic, Anna

Walden, John [36] see Ellis, Olivia

Walden, John [114] see Glover, Catherine

Walden, John [263] see Hoggarth, Julie

Walden, John [277] see Jensen, Matthew

Walden, John [282] see Mink, Kirsten

Walker, Debra

[35] *Like Water for Maize: Dating Water Management Features in the Bajo El Laberinto Region and the Rise of Settled Life*

This paper addresses the major water management features studied by Nick Dunning in the Bajo el Laberinto region of southern Campeche. Over the last decade, researchers investigated water management at Yaxnohcah and Calakmul, two large sites separated by the vast *bajo*. Using lidar, ground truthing, excavation, radiocarbon dating, and ceramic analysis, researchers tied massive water management features to the precocious early rise of Yaxnohcah, encountering both the earliest and latest documented residents in direct association with managed water infrastructure. Subsequently, intentional settlement survey and testing near water features at Calakmul has returned very similar results, with the earliest and latest occupants settling near accessible water sources. Nick's determination to find and understand the building and maintaining of water features undergirds what we know about the earliest maize farmers of the Middle Preclassic, as well as the resilient Postclassic residents.

Walker, Debra [355] see Kupprat, Felix

Walker, Debra [277] see Lockett-Harris, Joshua

Walker, Debra [341] see Longstaffe, Matthew

Walker, Debra [223] see Montgomery, Shane

Walker, John [44] see Sponholtz, Julia

Walker, William (New Mexico State University), Judy Berryman (New Mexico State University), and Tuesday Critz (University of Missouri Columbia)

[212] *The Internal Jornada Mogollon Frontier*

Cottonwood Spring Pueblo (LA 175) is a large, multiple-pueblo community located on the western flanks of the San Andres Mountains, due west of White Sands Missile Range and White Sands National Park, NM. This location situates it on a frontier between the southern Jornada Mogollon heartland, the eastern Postclassic Mimbres to the north and west, and northern Jornada Mogollon of the Sierra Blanca to the northeast. Previously, we argued that these El Paso phase pueblos (AD 1275/1300–1450) represent a multiethnic community consisting of local southern Jornada peoples and migrants from the Sierra Blanca Region. In this paper, we combine new architectural evidence, neutron activation analysis data, and Kopytoff's frontier theory to expand our understanding of complex social dynamics at play in this community.

Wall, Bridget (Far Western Anthropological Research Group), and Douglas Ross (Albion Environmental Inc.)

[256] *The Legacy of Indigenous Sheepherding in Eastern California*

The history of sheepherding in the American West has traditionally been intertwined with Basque immigrant communities, often identified through documentary research, oral histories, and archaeological remnants such as arborglyphs, corrals, and stone bread ovens. These associations obscure the rich multicultural history of sheepherding, which also included individuals of Spanish, Mexican, and Peruvian descent as well as local Indigenous men. The minimization of Indigenous labor has relegated these itinerant sheepherders to a brief

mention or footnote. In eastern California, sheep were historically herded to the high meadows of the Sierra Nevada Mountains during summers and south through the lowland valleys in winters. Two galvanized metal water tanks near Owens and Mono Lakes preserve numerous penciled inscriptions dating from the 1930s through the 1960s. In addition to Basque sheepherders, these tanks include the names of several Indigenous men from the Utu Utu Gwaitu Tribe (Benton Paiute Reservation) near the California-Nevada border. Documentation of these inscriptions, along with an examination of arborglyphs recorded in higher elevations, demonstrates a focus on ranches rather than the larger businesses operating out of Bakersfield, California, or Reno, Nevada. Further genealogical and archival research highlights the role of Indigenous sheepherders in eastern California ranches.

Wall, Bridget [50] see Hill, Brittany
Wall, Bridget [256] see Ross, Douglas

Wallis, Neill [173] see Kracht, Emily
Wallis, Neill [76] see Torvinen, Andrea

Wallman, Diane (University of South Florida), and Kia Taylor Riccio (Syracuse University)

[314] *Cultural Exchange and Culinary Transformation: Examining Indigenous-European Relations at LaSoye, Dominica, through Paleoethnobotany and Zooarchaeology*

Food serves as a vital material medium in colonial encounters, acting as a tool for control, appropriation, connection, and resistance. The adoption, rejection, blending, and modification of culinary praxis in colonial contexts is selective, shaped by cultural logic, social dynamics, and power relations. Here, we conduct a comprehensive analysis of food remains from the site of LaSoye on the Caribbean Island of Dominica to explore how Indigenous people and Europeans mediated their relationship through food. LaSoye was a long-term Indigenous settlement that transitioned into a multicultural trading center from the mid-seventeenth century and lasted until the early eighteenth century. Our research employs a multifaceted methodological approach, combining archaeological analysis of macrofaunal remains with starch grain and lipid analysis of ceramic vessels. The integration of these methodologies enables a nuanced understanding of social relationships and interactions at LaSoye, particularly as the ancestral Kalinago in Dominica faced precarious futures with the arrival of Europeans in the fifteenth century. The results illustrate how foodways acted as both a symbolic and practical means of cultural negotiation, facilitating the creation and maintenance of interethnic alliances while simultaneously reaffirming the significance of traditional food practices.

Wallman, Diane [271] see LeFebvre, Michelle

Walmsley, Robert [115] see White, Tyler

Walshe, Keryn [255] see Nowell, April

Walz, Jonathan

[162] *African Beads: Dynamism and Innovation in Hinterlands*

When systematically retrieved, studied at multiple scales, and interpreted from a socially embedded perspective, adornments (such as beads) offer opportunities to address African connectivity, innovation, and values in the archaeological past. This paper highlights beads of multiple materials from more than 25 archaeological sites in lowland northeastern Tanzania that date (by relative and absolute techniques) to the eighth to seventeenth centuries AD. The paper assesses beads from social, contextual (space and time), typological, and compositional perspectives. Bundling, emulation, and repurposing receive emphasis. Alongside other archaeological, ethnographic, and oral historical evidence, patterns in bead assemblages demonstrate regional scale dynamics in the lower Pangani Basin. Spheres of power and socio-technical practices from interior Africa, the Swahili Coast, and the broader Indian Ocean influenced adornments in this region. Societies in the coastal hinterland fashioned something new from economic and cultural entanglements. A socially embedded approach to hinterland adornments remakes African history.

Walzer, Mariah (Channel Islands National Park)

[353] *Stratigraphic Evidence for Indigenous Use of Fire as a Dryland Agricultural Landscape Management Tool on the Northern Colorado Plateau*

While documented in ethnography and traditional ecological knowledge, Indigenous burning practices are rarely recognized in the archaeological record of the Desert West. A 2021 study from Utah's Fish Lake Plateau showed evidence of Indigenous fire management during the Fremont period. This study offers one local example to complement that regional signal. Cub Creek Village in Dinosaur National Monument, dated to AD 300–1300, shows an evolution from an early, light agricultural, upland occupation to a lowland pit house village with intensive maize production. I analyzed an arroyo paleofire record to understand the relationship between Cub Creek occupants, fire, and landscape management. Analysis of size, shape, and concentration of charcoal informs on fire intensity and fuel types. The data are compared to expectations for an anthropogenic fire regime and a precipitation reconstruction to evaluate the role of climate. Increased fire activity is associated with the beginning of the upland occupation and maize agriculture, and then fire activity is low throughout the occupational period despite major droughts. After villagers left Cub Creek, the natural fire regime returned. This study demonstrates that fire histories can be created for complex stratigraphic settings and that fire management practices may look different at regional and local scales.

Wande, Claudio (Universidad de Chile), Mauricio Uribe (Universidad de Chile), Francisca Santana Sagredo (Pontificia Universidad Católica de Chile), and Alejandra Vidal-Elgueta (Pontificia Universidad Católica)

[177] *Challenging Warfare Narratives of the Late Intermediate Period in the Andes: Pucaras and the Production of Shared Socio-productive Landscapes in Tarapacá, Northern Chile, South-Central Andes*

The Late Intermediate period (AD 1000–1450) in the central and south-central Andes has been explained as the outcome of Tiwanaku's collapse, which, together with climatic instabilities, generated a state of insecurity that gave rise to turbulence, mayhem, and ultimately warfare. These war narratives rely on the appearance of *pucaras*, traditionally described as hilltop settlements with peripheral walls that allegedly functioned as fortifications. However, such interpretations frame war as a universal driver and attribute social transformations exclusively to “external pressures” while overlooking the internal dynamics, tensions, and agreements of Andean communities. These perspectives neglect evidence that these communities also engaged in extensive space use, the construction of vast agro-hydraulic systems, and negotiations with diverse groups. Here, we examine *pucaras* located in the Tarapacá Precordillera of northern Chile to evaluate how these cases fit or challenge traditional models, contributing to a broader understanding of Late Intermediate period social processes. We contend that perspectives framing war as a universal driver have deprived Andean communities of the agency to generate their own cultural trajectories. In contrast, our results suggest that *pucaras* functioned as polysemic devices through which specific social and productive landscapes were structured according to Andean principles of coexistence and conflict resolution.

Wang, Jiajing

[44] *Microbotanical Insights into Early Pig Domestication in China*

The history of ancient China is also a history of pigs. Domesticated as early as 8,000 years ago, pigs were among the first animals to live alongside humans in Neolithic villages, profoundly shaping the rhythms of the Neolithic lives and transforming human interactions with the environment. This study introduces a novel method for understanding the initial circumstances of pig domestication in China. By analyzing starch, phytoliths, and parasite remains embedded in pig dental calculus, we identify both commensal and prey pathways to domestication, reflecting flexible management strategies in early farming communities. Many pigs consumed cooked starchy foods and fecally contaminated materials, indicating close integration with human settlements. The recovery of human whipworm (*Trichuris trichiura*) eggs from pig dental calculus represents the earliest archaeological evidence of this parasite in East Asia, highlighting the role of animal management in zoonotic disease transmission.

Wang, Jiajing [45] see Tomczyk, Weronika

Wang, Li-Ying [217] see Carter, Alison

Wang, Yen Chun (University of California, Los Angeles), Earl Hernandaz (UCLA), Noel Roxas, Madelene Yakal (Costen Institute of Archaeology, UCLA), and Stephen Acabado (Cotsen Institute of Archaeology, UCLA)

[350] *Dating the Binanuahan, Caramoan (Bicol, Philippines) via Trade Ceramic Analysis*

Filipino archaeologists have recently focused on settlements with place-names such as *Binanuahan* or *Binanwaan*, derived from *banwa* (community or polity). These sites provide entry points for examining local histories before and during Spanish colonial rule. To test this approach, the Bicol Archaeological Project (BAP) excavated Brgy. Binanuahan, Caramoan, Camarines Sur, in 2025. Given the limits of radiocarbon dating, trade ceramics were used to establish chronology. Ceramic analysis indicates occupation from the eighteenth to twentieth century, the period of Spanish resettlement policies. This suggests that local communities adapted to colonial restructuring while sustaining connections to regional trade. Regionally, the study advances knowledge of settlement patterns in Bicol and the dynamics between local and colonial communities. Globally, it demonstrates how archaeological attention to Indigenous place-names and small-scale settlements can reveal the ways communities engaged with colonization and integrated into broader transoceanic systems. Further research will refine these insights.

Wang, Yuan (University of Washington)

[261] *Chariots, Interregional Interactions, and Regional Social Complexity during the Anyang Period Based on New Discoveries from the Loess Highland*

Recent excavations in Qingjian County, Shaanxi Province, have uncovered dozens of chariots of the Yinxu period, marking their first discovery in the Loess Highland. The discovery demonstrates that the Loess Highland served as a critical nexus in the eastward transmission of chariot technology, bridging Eurasian Steppe and the Shang core. These vehicles functioned primarily as elite status symbols rather than military implements. The substantial resource investment required for chariot production and maintenance reveals unexpected social complexity in this region. These findings compel a reevaluation of intercultural exchange networks and the development of sociopolitical hierarchies in northern China during the Yinxu period.

Wang, Zichan (UCLA)

[261] *Discovering Metalworkers in the Mortuary Context in Bronze Age China and Beyond*

Materials, technologies, customs, and beliefs often travel together. While research on interregional interaction across the Eurasian steppes has emphasized the transmission of materials and technologies, the adoption, resistance, and localization of customs and beliefs remain underexplored. This article examines metalworker burial customs in Shang (1600–1000 BCE) and Zhou (1000–221 BCE) China, identifying two distinct metalworker burial customs in the Central Plains and the “Crescent-Shaped Cultural-Communication Belt” (Tong Enzheng 1987). These contrasting customs reveal varied conceptions of metalworker identity and reflect distinctive forms of labor organization in their respective societies.

Wang, Zichao (University of California, Los Angeles)

[261] *Qin Ritual Practice in an Inner Asian Context: Territorial Expansion and Religious Expression*

Qin built the first Chinese empire in northwest China in the fourth century BCE, and it, for the first time in Chinese history, incorporated the majority of the Loess Plateau into its territory. It thus pushed the northern boundary of early Chinese state to the extremity of agricultural zones and got in direct touch with the nomadic forces in Inner Asia. The massive connections with first the agropastoralists on the loess highland and then the nomads in Inner Asia greatly influenced the societies and cultures of Qin and therefore turned its ritual expression into an extraordinarily hybrid one. In recent decades, a large number of sites in relation to Qin's ritual practices have been revealed archaeologically, most notably the Zhi-sites in western Shaanxi, and the information yielded from them necessitates a reconsideration of the understanding of Qin's ritual activities. By examining the Qin ritual expression in an Inner Asian context, this paper attempts to provide a new explanation regarding the emergence of Zhi-sacrifice and demonstrate that interregional interactions played a critical role in shaping the cultural appearances of Qin in its process of empire-building.

Ward, Grace (University of Arizona)

[258] *Monumental Forests? Agroforestry beyond Food in the Native American South*

Drawing from ritualized plant tending traditions around the world, I hypothesize that the forests surrounding Archaic earthworks in the southeastern United States were living aspects of expansive ceremonial landscapes. Ancestral Native American communities in the Lower Mississippi Valley built some of the earliest monuments in the Americas beginning around 6,000 years before present. Archaic period earthwork sites—including Watson Brake and Poverty Point—were constructed in bottomland forests along back channels of the Mississippi. Forest fruit seeds and nutshell comprise the majority of the macrobotanical assemblages from these sites. While most of the research on plant use by Archaic mound-builders has focused on the absence of evidence for domesticate-based agriculture, I look beyond subsistence typologies to consider the significance of intensive forest management associated with the construction of monumental earthworks. If forests were more than a backdrop, how were they and their nonhuman dwellers integrated into the ceremonialism of mound-building? What are the archaeological signatures of ritualized forest management? The data that I present to address these questions are primarily derived from legacy collections. On a methodological note, I discuss collections as a means to “unbox” histories of Native land use in the American South.

Ward, Sebastian [295] see Lee, Benno

Warinner, Christina [315] see Ho, Percy Hei Chun

Warinner, Christina [315] see Kim, Donghee

Warinner, Christina [315] see Tashmanbetova, Zhuldyz

Warner-Smith, Alanna (American University)

[42] *Life Course Approach as Multisited Bioarchaeology: A View from Nineteenth-Century Ireland, New York, and the Places Between*

A multisited life course approach attends to the ways that phenomena, such as capitalism, immigration, and urbanization, are experienced at the locus of the body. Key to the embodiment of these phenomena is movement, which brings bodies into relation with landscapes, people, and things. “Lives are not led inside places,” Tim Ingold (2011:149) writes, “but through, around, to and from, from and to places elsewhere.” Properly attending to lived experiences thus requires following bodies on the move—beyond singular sites, collections, and categories of analysis. I develop a “multisited bioarchaeology,” drawing from multisited ethnography and critiques of single sites. I do so by considering the lives of Irish immigrants in the Huntington Anatomical Collection, which is comprised of urban residents dying in New York City between 1893 and 1921. I center on stature, an important skeletal indicator of early health experiences. While it might be assumed that stature data is indicative of early life in Ireland, I consider stature in relation to numerous landscapes and phenomena. Far from a singular experience of Ireland, stature data shed light on the ways health was shaped by the environments of both Ireland, New York City, and the paths they took between.

Warner-Smith, Alanna [216] see Hosek, Lauren

Watanave, Aldo (University of Florida), Michelle Watanave, and Elvis Monzón

[60] *The Preceramic Occupation in the Moche Valley, Peru*

In the Moche Valley, Preceramic period occupation is primarily limited to sites near the Pacific Ocean, with limited knowledge about this period inland. The monumental site of Menocucho, situated in the middle-upper part of the Moche Valley and widely accepted as belonging to the Initial period occupation (1800–800 BCE), has garnered attention for its monumentality and potential significance in the early development of Andean societies along the northern coast of Peru (Watanave and Watanave 2023). During the last excavation season at the site, the authors uncovered a new, much earlier occupation dating back to the Preceramic period (2500–1800 BCE). It appears that the site was occupied for at least 1,000 years longer than previously believed, and since then, it has played an important role in relation to power dynamics. In this paper, the authors will discuss the nature of Menocucho during this early occupation and its gradual transition to the Initial period, during which various changes have been observed.

Watanave, Michelle [60] see Watanave, Aldo

Waters, Michael (Center for the Study of the First Americans)

[41] *Geoarchaeological Investigations at August Pine Ridge, Belize, in the Context of the Chronology of Clovis and Fishtail Complexes and North American Megafauna Extinction*

An accurate and precise radiocarbon chronology for the Clovis complex, based on 10 buried sites in North America with diagnostic Clovis lanceolate projectile points, shows that Clovis dates from 13,050 to 12,750 cal yr BP. Older and longer proposed Clovis age ranges are based on statistics or poor geochronology. An accurate and precise radiocarbon chronology for the Fishtail complex comes from nine buried sites in South America. Radiocarbon dates from these sites range from 12,800 to 12,200 cal yr BP. Other sites suggest that the Fishtail complex may be as old as 12,900 to 13,000 cal yr BP. Ongoing geochronological studies are defining the time of extinction of North American megafauna. Geoarchaeological investigations at August Pine Ridge provide the stratigraphic and geochronological contexts for the Paleo-Indigenous projectile points from this site. The geochronology of August Pine Ridge is compared to the known and accurate age range for the Clovis and Fishtail complexes.

Waters, Michael [180] see O'Connell, Ellen

Watkins, Maya (Brigham Young University)

[205] *Fremont Anthropomorphic Head Adornment in Clear Creek Canyon Rock Art*

The Fremont depicted human figures (anthropomorphs) in rock art and figurines, but the research about Fremont anthropomorphs has primarily been descriptive. Several researchers, including myself, have proposed a systematic approach to examining Fremont anthropomorphic rock art through a comprehensive catalogue of design elements. The catalogue includes a comprehensive list of design elements, including head and body morphology, held and worn objects, positions of limbs, head adornment, etc. In this paper, I limit my analysis to head adornment in the rock art of Clear Creek Canyon. My examination of head adornment in Fremont rock art defines the types of head adornments in Clear Creek Canyon and interprets them. The interpretation is based on naturalistic comparisons, Fremont archaeological objects, and analogy to ethnohistorically known Pueblo groups. Finally, I argue that the head and associated elements were loci of identity for the Fremont of Clear Creek Canyon and I discuss new implications for our understanding of the Fremont belief system.

Watkins, Tia [58] see Blastic, Anna

Watson, James (University of Arizona), Aaron Young (University of Arizona), Noah Place (University of Arizona), Jessica Thompson (University of Arizona), and Elisa Villalpando (Instituto Nacional de Antropología e Historia)

[25] *A Life History Approach to Reconstructing Health among Incipient Farming Communities in Northwest Mexico*

Previous research on health among incipient farmers of the Sonoran Desert in northwest Mexico largely focused on populational-level analyses to identify that overall health among these groups was good. Populations exhibit low levels of infectious diseases and nutritional deficiencies reflecting small community sizes and low social complexity. In contrast, high rates of trauma and moderate degenerative joint disease reflect significant intercommunity conflict and age/labor/mobility-related activities. Here we seek a nuanced understanding of health among these early farmers at the individual level through a life history approach, integrating biomarkers, contextual information, and directly interrogating the osteological paradox (specifically hidden heterogeneity in risk and selective mortality). We chose six individuals out of a skeletal sample of 390 to reconstruct life histories: a young male and older woman with advanced treponemal infection; an older adult male buried with a stone pipe and shell jewelry; an adult female buried with a stone bowl, pestle, and tortoise carapace; and an adolescent male and female buried with shell bead necklaces. Life histories of these individuals demonstrate distinctive health experiences reflecting selective mortality based on heterogeneity in risk and egalitarian treatment of the deceased regardless of health status, but social roles/status (identity markers) were signaled through associated funerary objects.

Watts, Joshua (Archaeology Southwest), Caitlynn Mayhew (Archaeology Southwest), Lauren Haupt (University of New Mexico), Wade Campbell (Boston University), and Skylar Begay (Archaeology Southwest)

[335] *The Co-development of cyberSW as a Science Gateway*

cyberSW is a large, rich database with information on nearly 30,000 precontact settlements in the US Southwest and Northwest Mexico—plus the artifacts and features from many of those settlements. cybersw.org is the public-facing web application that provides access to these data for registered users (mostly, but not exclusively, professional archaeologists, academics, and students). Since launching in 2020, we have sought to develop this resource collaboratively with Indigenous archaeologists and other interested Tribal partners. That effort included implementing an advisory Tribal Working Group (TWG) and beginning to engage seriously with that group on issues related to Indigenous data sovereignty. We are wrestling with how to implement both FAIR and CARE principles wherever possible in the context of legacy archaeological datasets and with sometimes-inconsistent priorities from our various users and supporters. To date, we have mostly focused on learning and trying to understand where cyberSW fits into this discussion; for example, by attending an Indigenous Data Sovereignty Summit in 2024 and consulting the TWG on which data belong on a public-facing resource and how to present those data.

Weaver, Ashlyn

[156] *Hawaiian Cowboys: Paniolo Culture, Mexican Vaqueros, and the Untamed Beasts*

The Hawaiian Paniolo (cowboy) tradition reflects a distinctive blend of Indigenous Hawaiian culture and the influences of Mexican and Californian ranching practices. This research explores the archaeological and historical accounts surrounding the emergence of the Paniolo, highlighting their cultural significance to the Hawaiian Islands and its connections to broader transpacific and transcontinental ranching systems. Examining primary and secondary data reveals that the arrival of Mexican vaqueros in the 1830s transformed Hawaiian social, economic, and pastoral practices, leading to the development of a distinct Paniolo identity characterized by cultural resilience and adaptability.

Weber, June (New South Associates Inc.), J.W. Joseph (New South Associates Inc.), and Patricia McMahon (New South Associates Inc.)

[251] *The Atlanta Prison Farm and the Landscape of Incarcerated Agriculture*

Prison farms appeared in the southern states in the late nineteenth and early twentieth centuries and directed the work of the incarcerated in agricultural production. Organized and operated at the local, state, and federal government levels, these prisons required inmates to work in agriculture—tilling fields, planting crops, harvesting produce, and raising livestock—all for the benefit of the government agency. The crops produced included cash crops previously grown on the plantations. With their placement often on former plantation lands and use of a predominantly Black prisoner labor force, such prisons were sometimes known as prison plantations. The City of Atlanta Prison Farm came into operation in the 1920s on former plantation and subsequent dairy farmlands the city had acquired in 1911 and was in use until the 1990s. Now under planning for use as a city park, New South Associates conducted historical research and archaeological survey of the property. This presentation looks at how the landscape evolved from the plantation era through creation of the prison farm and how the landscape of bound labor evolved from one era to the next.

Weber, June [251] see McMahon, Patricia

Weber, Sadie [179] see Acero-Shapiama, Erick

Webster, David [263] see Kuijt, Ian

Webster, Laurie (University of Arizona)

[257] *A Very Precious Blue: Indigo in the Late Precontact Southwest*

Blue and green yarns occur sparingly in late 1200–1400 CE cotton textile assemblages from central and southern Arizona and southwestern New Mexico, where they were incorporated into tapestry weaves, supplementary-weft fabrics, and striped and plaid fabrics and used as wrappings and ties in ritual caches. Two blue yarns are described in the older literature as testing positive for indigo, but methods and specific results

are unpublished. The American variety of indigo (*Indigofera suffruticosa*) is native to tropical regions of Central and South America, and evidence is currently lacking for its cultivation in the USA prior to European contact. Indigo is also a challenging dye to produce, requiring specialized knowledge of the process. In this paper, I review the special and restricted uses of dark blue yarns by people in the southern Southwest and evidence for the importation of pre-dyed indigo blue yarns, importation of the dyestuff, local cultivation of the indigo plant, and local processing of the dye in this region.

Weinberger, Emma, Patrick Phang Del Pozo (University of Michigan), Calvin Stineman, and Ian Beggen (University of Michigan)

[295] *Geometric Morphometric Analysis of Archaic Projectile Points from Hatun Machay: A High Puna Rockshelter in the Callejón de Huaylas, Peru*

Variation in shape and manufacturing style of Archaic period (~12.5–3 kya) projectile points is not well documented in the north-central Peruvian Andes. Though important work is represented by the work of Lynch (1980) at Guitarrero Cave and Cardich (1975) at Lauricocha Cave, little focus has been given to the high Puna ecosystem of the Callejón de Huaylas, an important intermontane valley that would have connected coastal and highland populations since initial peopling of the Andes. In this poster, we present geometric morphometric analysis of more than 100 projectile points from the recently excavated site of Hatun Machay (4,100 m asl). Through this analysis, we develop a better understanding of variation of form and potential function of hafted bifacial tools utilized by Andean foragers as early as 10 kya and as late as the Early Formative period (~3 kya). Moreover, we document important stages of technological development in a key location for mobile forager adaptations in the Peruvian highlands.

Weinmeister, Jessica [181] see Stroup, Delaney

Weinrich, Savannah (Indiana University of Pennsylvania)

[207] *Reanalyzing Ceramic Vessels through a Techno-functional Analysis from the Chester Fields Shell Ring Legacy Collection and the Potential for Cultural Representation*

The Chester Fields site is a shell ring site in Beaufort County, South Carolina. In 1932, Woldemar Ritter excavated portions of the shell ring. Unfortunately, Ritter died before his official report could be published, but his assistant, Regina Flannery, published a small bulletin on the excavations. The site yielded numerous artifacts, including coarse earthenware vessel fragments that would later be associated with the Stallings Island cultural phase (5100–3600 cal BP). This research will involve evaluation of original records, including field notes, maps, and catalogues. Ritter's original documentation will be cross-referenced against current collection as well as other institutions that are listed in museum records. A technofunctional analysis of ceramic artifacts will be conducted on the ceramic vessel fragments present in the assemblage. Sherds will be assessed for their functional aspects such as vessel form, evidence of sooting, and carination features, while the technological attributes will be based of ceramic construction, firing techniques, temper material, and inclusion size. This research will highlight the site's significance toward better understanding Indigenous heritage, emerging coastal technologies between 5000 and 3000 BP, and the continuing relevance of legacy collections in Southeast archaeology.

Weinstein, Richard (Coastal Environments Inc.), and Nancy White (University of South Florida)

[273] *Connections between Weeden Island on the Eastern Gulf Coast and Troyville and Coles Creek on the Central Gulf Coast*

Ever since the first descriptions of Weeden Island, Troyville, and Coles Creek “cultures” appeared in the archaeological literature of the 1930s and 1940s, similarities between the three were noted and reported upon. Such similarities primarily involved ceramic vessels but also other characteristics, such as mound construction and settlement patterns. This paper summarizes current data on the similarities among these three Middle to Late Woodland prehistoric cultural adaptations and offers a more detailed look at why and how connections might have occurred. For instance, while Swift Creek-early Weeden Island and Troyville apparently developed out of a pan-southeastern Hopewellian base (Santa Rosa/Swift Creek in the east, Marksville in the west), which originated first, and which had the greatest cultural influence on the other?

How was that influence spread? We look at dates, unwieldy ceramic classifications that became “cultures,” and geography to try to update interpretations and suggest there was probably continual cultural interaction along the Gulf Coast.

Weismantel, Mary (Northwestern University)

[215] *Rosemary Joyce: Gender Warrior*

An appreciation of Rosemary Joyce’s many contributions to our field, with special reference to gender and sexuality studies, museum studies, the politics of archaeological practice, and archaeological theory. The paper will also make reference to Professor Joyce’s impressive record as a mentor to many people, myself included.

Weitzel, Elic (Smithsonian National Museum of Natural History), Elisabeth Ngo, Sophie Rockwell (Brown University), and Torben Rick (Smithsonian Institution)

[157] *The Late Holocene Historical Ecology of the Long Island Sound Shellfishery*

The Long Island Sound has long been a culturally and economically important source of shellfish in North America. However, little systematic work has been done on the historical ecology of this shellfishery. Here, we synthesize both original and previously published zooarchaeological data from 55 archaeological components across 35 sites around the Long Island Sound spanning the last 5,000 years. With this information, we are able to assess Late Holocene changes in relative taxonomic abundance and shell size for eastern oysters, northern quahog clams, soft-shelled clams, and bay scallops. Our results suggest a long pattern of decline in the abundance of quahog and corresponding increases in the harvesting of oysters, soft-shelled clams, and scallops. Statistical modeling implicates environmental changes over the course of the Late Holocene—sea level, temperature, and precipitation—in these shifts, not harvest pressure by Native Americans. These long-term trends in shellfish exploitation and abundance help to improve our understanding of the historical ecology of the Long Island Sound shellfishery, establishing necessary baseline information for conservation efforts today.

Weitzel, Elic [79] see Rockwell, Sophie

Weitzel, Elic [95] see Zeanah, David

Weitzel, Jordan (University of California, Berkeley, Berkeley), Shawn Bubel (University of Lethbridge), Kevin McGeough (University of Lethbridge), and Benjamin Porter (University of California, Berkeley)

[193] *Water and Rituals in Iron Age Edom: Recent Discoveries within Ancient Busayra’s Area A Building in Southern Jordan*

The first millennium Iron Age Levant witnessed the emergence of modest territorial polities, including Edom, a kingdom based in what is today the southern third of modern Jordan. Scholars have long suspected that Busayra, likely ancient Bozrah, was Edom’s political seat that participated in commercial trade routes between Arabia and the Mediterranean. Renewed investigations by the authors have expanded our understanding of this important polity, which includes a fortified complex consisting of gates, plazas, and monumental buildings on the settlement’s acropolis. This paper focuses on the large rectangular building in Area A that earlier excavators interpreted as a temple or a palace. New discoveries in and around the building’s central plaza and cella suggest that water played an important role in rituals. We will also present new evidence confirming the building was burned and destroyed during the mid-first millennium BCE, possibly by the Babylonian Empire in the mid-sixth century.

Weitzel, Jordan [193] see Porter, Benjamin

Welch, Jonathan (Terracon Consultants Inc.), and Edgar Vazquez (Terracon-DFW)

[155] *Unraveling the Past: Chronicling Multiple Ancestral Puebloan Occupations at LA 44088*

LA 44088 is an Ancestral Puebloan habitation site on a low terrace in the Tarrant County, New Mexico. Between December 2022 and March 2023, Terracon Consultants Inc. conducted excavations at this site, revisiting it to document four previously documented features including three rock alignments and one thermal feature. Terracon excavations uncovered an expansive habitation area with evidence of multiple

prehistoric occupations. Forty-six precontact features were excavated, including 12 architectural features (three masonry structures, four pit houses, two undefined flagstone-lined structures, and 3 flagstone-lined bin/cists), 14 thermal features, four unburned pits, two middens, one activity area, one rock cluster, and 12 areas containing human remains. The findings paint a vivid picture of life in the past, with fieldhouses positioned close to the surface, while pit house structures and thermal features lay buried deep beneath. Terracon employed a mix of artifact analysis and advanced dating techniques to unravel the timeline of habitation at LA 44088. This paper delves into the connections between the 46 features and unpacks the chronology of LA44088. Prepare to be captivated by the rich history that this site has to offer!

Welch, Jonathan [55] see Vazquez, Edgar

Weldy, Megan (New Mexico State Land Office, Santa Fe), and Meaghan Trowbridge (SWCA Environmental Consultants)

[182] *A Big WIND: A Collaborative Approach to Large-Scale Wind Development and Cultural Resource Protections*
The New Mexico State Land Office, in partnership with the Albuquerque Office of SWCA Environmental Consultants, would like to present a poster discussing the collaborative approach applied to the development of a recent wind development. The consultant and agency, along with the proponent, worked closely over nearly a year to avoid adverse effects to all cultural resources during the planning process for a wind development set to be the largest wind project in the Western Hemisphere upon construction completion. Cultural resource surveys occurred across land managed by the New Mexico State Land Office, as well as private lands. Poster will discuss the private sector's survey approach and organization, agency consultation process, and a look at the final wind development footprint of construction compared to the spaces surveyed by archaeologists. Hint, the area surveyed was MUCH larger than the final footprint.

Wells, Joshua (Indiana University South Bend; Digital Index of North American Archaeology), Eric Kansa (Open Context), and Sarah Kansa (Open Context)

[52] *Integrating Collections into the Digital Index of North American Archaeology (DINAA) and Future Paths for Open Archaeological Data*

The mission of the Digital Index of North American Archaeology (DINAA) has been to make the continent's archaeological record findable at a landscape scale while protecting sensitive site information. DINAA's efforts to connect archaeological site records and, recently, scientific literature have been important contributions to date. Using the Open Context platform to integrate collections information with DINAA marks a next step in growing a more comprehensive open data ecosystem for North American archaeology. With new collections metadata, linked as primary attributes of archaeological sites, we are finally connecting the "what" with the "when," "where," and "why" of DINAA's publicly available resources. This project helps demonstrate the potential of ethically constructed, open-access archaeological digital systems. With the other posters in this session, we provide a framework for repositories to share vital information about archaeological collections without compromising sensitive details about them or the sites from which they originated. This integration is an important professional and technical step toward more broadly linking open archaeological data to foster equitable access and responsibility to descendant communities, reduce destructively replicative fieldwork, provide collections-based mitigation for cultural resource management, and help unlock the scientific and cultural potential of archaeological investigations.

Wells, Joshua [52] see Childs, S. Terry

Wendt, Carl (CSU-Fullerton), Miguel García Mollinedo, and Alfredo Saucedo (SUNY-Albany)
[312] *Investigating La Duda: A Middle Formative Usumacinta (MFU) Architectural Complex in the La Venta Olmec Region*

Recent analysis of lidar imagery by Takeshi Inomata and his colleagues (2021) has revealed hundreds of formal architectural complexes (FACs) in the Tabasco and Veracruz lowlands. La Duda represents one of these complexes. The site is located in the Arroyo Pesquero survey region, approximately 10 km southwest of La Venta. La Duda's architectural configuration exhibits similarities with both Aguada Fénix and San Lorenzo, including 20 rectangular-shaped platforms separated by narrow alleys that flank a large interior rectangular

plaza. San Lorenzo's and La Duda's plazas are each 1,000 m long, whereas Aguada Fénix's measures 1,400 m. La Duda's plaza is oriented east–west, while those of San Lorenzo and Aguada Fénix are oriented north–south. In this paper, we present preliminary observations from recent “ground truthing” work at the site. Fieldwork involved pedestrian topographic mapping, surface collection, and subsurface testing. Our goal is to ascertain the construction process and sequence in order to draw inferences about the function of the complex within the region. More broadly, this research will contribute to a more complete understanding of the variation in form, function, and chronology of lowland FACs, and help clarify the relationship between the region's inhabitants and the architectural complexes they built.

Wendt, Carl [262] see García Mollinedo, Miguel

Wendt, Carl [262] see Saucedo, Alfredo

Werness-Rude, Maline (Ventura College), and Kaylee Spencer (Florida State University)

[326] *Indelibly Rendered: Deeply Carved Ceramic Traditions in the Maya World*

While carved ceramic traditions receive little emphasis in the scholarly literature, a number of standout examples have arrested attention because of their nuanced artistry, complex symbol sets, and erudite texts. A group of cache vessels from the Early Classic contain circular scenes deeply inset into the vessel walls and complemented with vertical hieroglyphic texts. In the Late Classic, conversely, the Chocholá style emerged in the Yucatán Peninsula and exhibited similar traits: Single scenes set into the vessel walls and positioned across from vertical or diagonal texts, a formatting combination that is otherwise rare. In both the Early and Late Classic, additional, unique, stand-alone examples from other areas of the Maya world speak to the intricacy possible within the carved ceramic tradition. In most cases, complex imagery combined with nuanced symbolism introduces restricted narratives that defy easy interpretation. This paper examines the differences between the Early and Late Classic approaches to planar variation in carved ceramics and considers how these formal strategies shaped narrative content and meaning.

Wernke, Steven [281] see Zimmer-Dauphinee, James

Wesp, Julie (North Carolina State University)

[215] *Sculpting Embodied Subjectivities: Rosemary Joyce's Influence on Archaeologies of the Body*

Rosemary Joyce's body of scholarship encompasses numerous geographical areas and theoretical frameworks and has given birth to a legacy of scholars that have been shaped by her mentorship. This paper draws on Joyce's work that centers the body and embodiment in archaeological research as the mode to understand the dynamic nature of lived experiences. It is through the body that social identities are substantiated and repeated actions create, replicate, and transform these identities through time. She reminds us that it is from these embodied subjectivities that we experience the world. This perspective has been influential in my approach to bioarchaeological research, particularly how the repetitive actions of labor, structured by aspects of identity such as gender or status, physically change the size and shape of our bones. We are sculpted by our lived experiences and our relationships to other bodies. Joyce's repeated actions as a scholar and mentor has shaped archaeological theory and practice and the embodied subjectivities of its practitioners.

West, Catherine [170] see Mooneyham, Erin

Westmont, V. Camille (University of Alabama at Birmingham)

[251] *Begin Again: The Rise of Neoliberal Forced Labor Systems Following the End of Chattel Slavery in the US South*
Historians have repeatedly observed that the systems of convict leasing that arose in the US South following emancipation provided all of the benefits of chattel slavery with few(er) of the risks and non-recoupable costs. This paper adds to the continuing debate around the relationship between these two heinous practices by exploring the uneasy transition from lifelong hereditary enslavement to on-demand, low-investment forced labor from a material lens. Drawing on data from the Lone Rock Stockade (40GY78) in Tennessee, this paper seeks to outline which material and spatial practices were retained from lessor's prior experience with slavery, which were introduced from capitalism labor practices, and which represent new methods and means of managing unfree labor forces. It will examine how material dimensions mediated these ideologies,

relationships, and systems with an eye toward examining how deeply rooted systems of oppression can become ingrained within systems of incarceration and labor extraction.

Whelan, Carly (California State University, Chico), and Cecily Merwin (US Forest Service)

[167] *No Halt in Basalt? Cultural Change and Continuity in the Northern Sierra Nevada*

In 2022, two basalt (fine-grained volcanic) Great Basin Stemmed points were found in the Plumas National Forest. These points were sourced using X-ray fluorescence (XRF), then returned to the places where they were found. We visited several basalt sources in the region to collect samples for comparison to the points, and we determined that the points are from the Gold Lake source. Gold Lake is a high-quality basalt that was used throughout the northern Sierra Nevada into the Sacramento Valley. Previous studies of sourced obsidian have been used to discern changes in mobility and trade networks in California and the Great Basin, but basalt has not received as much attention. In this study, we examine transport distance and source diversity of basalt and obsidian artifacts to infer changes in land use and exchange systems in the northern Sierra Nevada over time. We do this with a database of sourced projectile points and debitage that we created for Butte, Plumas, and Sierra Counties from records housed at the Northeast Information Center. This study demonstrates that reports on previous archaeological studies can still provide a wealth of information to answer contemporary archaeological questions.

Whitaker, Adrian (Far Western Anthropological Research Group)

[211] *Could Large Mammal Faunal Remains Provide Indirect Evidence of Precontact Landscape Management?*

It is widely acknowledged that fire was used throughout the Western United States as a landscape management tool. Direct archaeological evidence is rare and successful studies that identify Native American burning rely on multidisciplinary approaches. One such study in California by Lightfoot, Cuthrell, and colleagues used changes in the relative abundance of small mammal species through time as part of a broader argument that precontact Native American burning was used to maintain open meadows in what is now a forested environment. In an unrelated series of studies, Broughton has identified a pattern of increased hunting of artiodactyls in the late period. Using a detailed biological habitat suitability model for black-tailed deer I examine whether Late period increases in artiodactyl indices in central California may have been driven by regular Native American burning of chaparral habitats. If these patterns can be demonstrated it suggests that faunal data (old and new) could provide evidence of widescale landscape management.

Whitaker, Adrian [167] see Azevedo, Terry

Whitaker, Adrian [167] see Eubanks, Jill

Whitaker, Adrian [219] see Scher, Naomi

White, AJ [54] see Sartor, Hayley

White, Chantel (University of Pennsylvania), Katherine Moore (UPenn Museum of Archaeology and Anthropology), and Robin Griffith (Epicuity LLC)

[314] *Making Meals in the East Chamber: Investigating Nineteenth-Century Food Preparations in the Enslaved Living Quarters of the Russell Kitchen House, Charleston, SC*

Historical buildings can be archaeological repositories for well-preserved desiccated organic materials, including food remains. Recent investigations into the protected spaces behind the walls, floors, and hearths of the Russell kitchen house have provided food evidence dating to the early to mid-nineteenth century. In a second-floor bedroom known as the East Chamber, enslaved people used a small hearth for heating, cooking, and other daily tasks. This paper details the food remains found directly under the hearth including African Diaspora crops such as cowpea, okra, peanut, rice, watermelon, and pepper seeds. Faunal remains were also identified under the hearth, including the bones of beef, pork, chicken, and fish, as well as fragments of eggshell. Interpretations of the food evidence are contextualized by local historical recipes and research into West African cooking traditions to consider the practicalities and possibilities of cooking meals in the East Chamber hearth. These results help shed light on how enslaved people living in close proximity to their enslavers in urban city environments found ways to nourish themselves and prepare meals of their own choosing.

White, Marie [204] see Goedert, Tristan

White, Nancy [208] see Marrinan, Rochelle

White, Nancy [273] see Weinstein, Richard

White, Tyler (University of Texas at San Antonio), Robert Walmsley (University of Texas at San Antonio), and Robert Hard (University of Texas at San Antonio)

[115] *Archaeological Conservation and Education in the Texas Hill Country*

A pilot project on a private ranch near San Antonio, Texas, pursued educational, preservation, and research objectives. The owner of the Cherry Springs Ranch has long-term goals of converting her 2,000-acre Hill Country ranch from stock raising to education and conservation. Pedagogical goals included designing a field program close to campus that met the needs of entry level CRM training. With the initial identification of archaeological resources, the ranch owner can consider archaeological conservation along with ecological protections. Research included identifying and evaluating a series of archaeological sites located in multiple settings. The depositional contexts of sites varied, with buried and surface sites occurring. In some locations high-quality chert toolstone was ubiquitous and being exploited by prehistoric hunter-gatherer populations as evidenced by both early-stage lithic reduction and tool manufacture. Thus far nine sites have been identified and four have been evaluated, including a burned-rock midden.

Whitehead, Mason (University of Kansas), Emily DeGruson, and Ted Goebel

[115] *Lithic Debitage Analysis at Bonneville Estates Rockshelter, Western Bonneville Basin, Nevada*

Research at Bonneville Estates Rockshelter has informed heavily on raw material procurement, lithic tool production, subsistence, and paleoecology of early Indigenous foragers of the eastern Great Basin. Continued study of the rockshelter's assemblage of lithic debitage can inform on the technological activities carried out by its occupants and how these activities may have changed through time. In this poster, we report a systematic examination of lithic debitage from cultural components VII (Paleoindian) through I (Latest Archaic), spanning nearly 13,000 years of time, testing for diachronic patterns of technological change through the rockshelter's entire cultural sequence. Analytical variables include debitage type, raw material, platform surface preparation, and metrics including size value and weight; and inter-assemblage analyses are conducted through contingency-table and univariate statistical analyses of data. Besides interpreting technological change through the site's debitage assemblage, we also discuss our findings in the context of other previous and ongoing analyses of the Bonneville Estates record and the larger paleoecological context of the Bonneville Basin.

Whitehead, Mason [295] see DeGruson, Emily

Whitehead, Michael [264] see Bodor, Thomas

Whitley, David

[38] *The Ethnographic Turn, Natural Models, and the Interpretation of Prehistoric Symbolism*

The origins of Ideational Cognitive Archaeology lie in the 1980s Ethnographic Turn, which revolutionized the discipline by introducing epistemological and ontological perspectives, numerous analytical approaches, and explanation in cognitive rather than behaviorist terms. One such approach involves symbolic interpretation, a concern that behaviorist archaeologists have ignored in favor of ritual, failing to recognize the tautology of trying to explain behavior in terms of other behaviors. Yet how can we confidently interpret prehistoric symbolism? This starts with the recognition that symbolism is often highly empirical. Natural models, based on natural constants and invariant traits, can in certain cases be used to infer symbolic meanings that themselves are widely shared across time and space. A series of natural models from western North America are discussed to illustrate their cross-cultural applicability and the utility of this approach to symbolic interpretation.

Whitman, Renee**[208]** *Dogs and Shells in the Archaic Southeast*

Dogs and shells go hand in hand at Archaic period archaeological sites in the southeastern United States. Dogs were an integral part of prehistoric life and served as companions, protectors, hunters, and haulers for their people. They also served a spiritual role as ritual food and the consecration of burial grounds. The phenomenon of burying dogs in and around human cemeteries has been around for millennia but shows a sharp increase during the Middle Archaic period, an era that also corresponds with the rise of shell mound and midden sites. Shell mounds and midden constructions are viewed as more than remnants of food debris and have served as territorial markers, site and family area delineators, and repositories for human burials. Inspired by the interdisciplinary work of Cheryl Claassen, this paper examines the interconnectedness of dogs and shells throughout the Southeast.

Whitney, Bronwen [44] see Sponholtz, Julia

Whittaker, John [339] see Kamp, Kathryn

Whittemore, Anna (Cornell University)**[337]** *A Moveable Feast: Isotopic Indicators of Foodways and Mobility in an Andean Population, ca. 800–1200 CE*

Two of the most common bioarchaeological indicators of mobility, $^{87}\text{Sr}/^{86}\text{Sr}$ and $\delta^{18}\text{O}$, are environmental proxies for consumed food and water, rather than direct measures of human movement through the landscape. Thus, consumption of nonlocal foods can alter an otherwise “local” signature. In contrast, $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ are often characterized as “dietary isotopes” because they can distinguish consumption patterns within a food system. However, local conditions for food production can strongly influence these values, as elevation, aridity, livestock foddering, and fertilization practices in different environments can lead to variable fractionation effects. This paper critically examines the bioarchaeological use of these four isotopes and presents multiple interpretations for original data from 154 individuals who were buried in the Qaracha Valley of Ayacucho, Peru. Radiocarbon dates place this population in late Middle Horizon (ca. 850–1000 CE), and Late Intermediate period (ca. 1000–1400 CE). Results indicate a C_4 plant-dominated diet and some nonlocal individuals within a largely local population, but this paper will unpack the complexities of these seemingly straightforward findings, including subsistence shifts in the MH-LIP transition, decreasing interregional trade following the decline of Wari interregional networks, and changes in cultural norms regarding the locality of marriage and burial.

Whittington, Stephen, and Scott Zeleznik**[355]** *The Paired Site Conundrum at Copan, Honduras: GIS Analysis of Legacy Data from Neighboring Classic Maya Sites*

This presentation uses statistical analysis in ArcGIS Pro to take a fresh look at artifact distributions from two paired Classic Maya sites in the Copan Valley. Ostumán and Los Mangos are two adjacent elite sites west of the main ruins of Copan. Excavations involving more intensive test-pitting than had been done previously in the Copan Valley were carried out at the sites in 1989. Explanations for the pairing phenomenon at such sites in the valley were tentative and based largely on conjecture. The purposes of the excavations were to fill gaps in the history of rural elite settlement and to determine if valuable data explaining the sites’ spatial proximity could be obtained without undertaking extensive clearing of architecture. Analysis of distributions of artifacts from those excavations provides new insights into functional areas within each site, the relationship between Ostumán and Los Mangos, and the pairing phenomenon in the Copan Valley.

Wichlacz, Caitlin**[166]** *Black and White and Re[a]d All Over: A Multi-method Approach to Material Characterizations of Salado Polychrome Pottery*

Individually and in concert, the analytical methods we employ shape the knowledge we are able to build about our subjects of interest. Local and regional histories of research, available materials, and current research questions inform these choices and their outcomes. This paper shares results and insights from a multi-method analytical study of Salado polychrome ceramics from the Phoenix Basin of Arizona, designed to

better understand the distinct material and social relations that structured how Phoenix Basin residents obtained Salado polychrome ceramics during the late Classic period (ca. 1300–1450 CE). A suite of complementary chemical and mineralogical characterization methods, including neutron activation analysis, electron probe microanalysis, laser ablation inductively coupled plasma mass spectrometry, and ceramic petrography, allows the assessment of compositional and technological variability and patterning. These methods each offer different kinds of information about ceramic materials, and they serve to bridge significant existing datasets. This research examines the intersection of local Phoenix Basin patterns with the regionally expansive Salado phenomenon in ways that inform understandings at both local and regional scales and begin to allow the Phoenix Basin to be incorporated directly into larger scale regional and synthetic perspectives on ceramic technology and provenance.

Wiemann, Michael (USDA Forest Service), Sissel Schroeder (UW-Madison), and Tamara Thomsen (Wisconsin Historical Society Maritime Archaeology Program)

[165] *Wood Selection in Ancient Dugout Canoes of Wisconsin*

The University of Wisconsin–Madison and the Wisconsin Historical Society have assembled a collection of wood specimens from some 80+ dugout canoes that date to 4460 ± 30 BP from what is now Wisconsin. Woods used for these craft include red and white oak, elm, ash, butternut, birch, white pine, and spruce. Some (oak, elm) are very strong but would have been difficult to work. Others (pine, spruce) are easier to work but would have produced weaker canoes. One major factor in choice of wood was availability, with the softwoods (pine and spruce) selected in northern Wisconsin and along Lake Michigan, and the hardwoods (oak, ash, elm, butternut) selected in southern Wisconsin. The species used varied over time depending on their availability, which changed with the climate-determined species mix.

Wiemann, Michael [165] see Schroeder, Sissel

Wiesenberg, Nicholas [101] see Kardulias, Paul Nick

Wijker, Adam [344] see Morrow, Giles

Wilcox, Daniel

[148] *Cooking Vessel Connections: Examining Paleo-Inuit Interactions through Cooking Vessel Morphologies*

There is great deal of research studying the movement of Paleo-Inuit peoples across the Eastern Arctic. These studies have examined environmental and cultural factors that influenced population movement in and across the region. The Medieval Warm Period (1500–1100 BP) was a climatic event that impacted migrating animal species that Paleo-Inuit peoples relied on. It was near the end of this climatic event that southern Dorset populations in Newfoundland decided to abandon the island and move north into areas populated by other Dorset communities. The end of the warming period also saw the Early Inuit, sometimes called the Thule, begin to enter the Eastern Arctic. These population movements have been examined by way of population reconstructions examining household sizes and through studying technological changes. This study contributes to our understanding of migration and diffusion across the region by examining cooking vessel morphologies. Cooking vessels in the Eastern Arctic have been important not only for food preparation but also as symbols that connect communities together. Therefore, studying vessel variation offers an opportunity to look at both environmental and cultural influences on technological exchange. This research uses geometric morphometric methods to examine vessel variation and identify potential connections between Paleo-Inuit communities.

Wilcox, Michael (Stanford University)

[224] *Food Systems, Community Health, and Colonization: Cattle Colonialism in Muwekma Ohlone History*

Much of the scholarship about Spanish colonization portrays colonization in reductive terms—missionization, military conquests, and the introduction of so-called “novel pathogens” are used as explanations of the absence of Indigenous populations. The economic and environmental drivers of colonization are best understood as elements of Indigenous and colonial food systems. This approach is beneficial in developing a more nuanced approach to community health, labor regimes, and the transformation of Native foods with

monocrops such as wheat and cattle. For California Natives, the introduction of livestock into grasslands that supported stable populations of people was accomplished through fire ecology and other sophisticated resource management practices. This paper discusses the resource requirements in land and labor that accompanied this transformation in colonial California—the effects of which can be seen today in the catastrophic fires in California landscapes.

Wilcox, Michael [149] see Connell, Samuel

Wilcox, Rebecca [167] see Tushingham, Shannon

Wiles, Gregory [101] see Kardulias, Paul Nick

Wiley, Nicholas [199] see Pawlowicz, Leszek

Wilkinson, Darryl (Dartmouth College)

[33] *The Autochthony Horizon of the Late Precolonial Andes*

The aim of this paper is to consider how we can rethink the archaeological record by developing alternative classificatory schemes; using categories that might have more direct relevance to the societies we seek to study. Traditionally, archaeologists would see the walk-in wells of the Chimú as having little in common with the carved rock outcrops of the Inkas. For a start, they are made of very different substances (i.e., stone vs. water) and are normally interpreted as having starkly divergent functions (i.e., ritual vs. economic). And yet, they also share some striking commonalities. Both are materially continuous with the subterranean environment—local bedrock in the case of the carved outcrops and the underlying water table for the walk-in wells. I suggest that this concern with material autochthony, although overlooked by modern archaeologists, indicates that the outcrops and the wells were fundamentally similar entities for the peoples of the late precolonial Andes. Or put another way, walk-in wells were the *wak'as* of the Chimú. *Wak'as*, as recent anthropological and archaeological research has emphasized, are not defined by their substance, but by the relations which bring them into being. It is my argument that autochthony was one of those fundamental relations.

Wilks, Stefania [314] see Evans, Lydia

Willett, Patrick [209] see Murphy, Hanna

Williams, Bee [344] see Edwards, Richard

Williams, Charlotte (University of California, Berkeley)

[21] *Datafying the Monument Builders: The History and Legacy of Anthropometric Work at the United Fruit Company's Zaculeu Restoration Project*

In the 1940s, the United Fruit Company sponsored archaeological work at the site of Zaculeu, Guatemala. Tasked with “giving a monument to the people of Guatemala” the company conducted a notorious conservation project with, at the project’s height, 40 Indigenous Maya laborers. Within this archaeological arena, American researchers with other institutional affiliations took advantage of what they saw as a ready pool of people in order to conduct “anthropometric” research. Smithsonian Institution-affiliated scholars Charles Goff and T. Dale Stewart used as subjects the very archaeological site laborers, creating a situation in which people were tested against the very ancestral sites they were contracted to excavate. This paper analyses the problematic entanglement between past and present that is specifically manifested in anthropometric studies within archaeological sites. Using archival records from the United Fruit Company conservation project, this paper tracks how archaeologists, entrepreneurs, and anthropologists created conceptions around Mayaness that chronologically cleaved contemporary populations from Maya pasts.

Williams, Katharine (Crow Canyon Archaeological Center), and Gareth Couch (National Tribal Geographic Information Support Center)**[335] *Lidar and Geospatial Data Sovereignty***

Indigenous Data include maps of ancestral landscapes. Lidar has been widely embraced by archaeologists because it allows for visualization and examination of bare earth landscapes, thus often significantly reducing the time and costs required for preliminary site location and identification processes. However, this level of access and exposure of ancestral landscapes is a double-edged sword, wherein entire regions are now available for archaeological inquiry without direct conversation or engagement with communities on the ground. This paper examines intersections between geospatial archaeology, particularly in terms of publicly accessible datasets in the United States, and Indigenous Data Sovereignty, even as the logistics of enforcing data governance are increasingly challenging with the rapid production of high-resolution spatial datasets.

Williams, Lindsey (Texas A&M University), Nicholas Bentley (Texas A&M University, Center for the Study of the First Americans), and Caitlin Doherty (Center for the Study of the First Americans, Texas A&M University)**[180] *Debitage Analysis of Legend Cave (8CI1256), West-Central Florida***

Dry caves in Florida are an understudied geomorphological feature that likely contain great archaeological potential. Legend Cave (8CI1256) is medium-sized cave located on the Brooksville Ridge in west-central Florida. In 2025 we conducted archaeological excavations within this cave, demonstrating the presence of multiple deeply buried archaeological components. Here we present the results of ourdebitage analysis on materials collected during the 2025 excavations. We use these data to infer on-site integrity, site use, and past lithic reduction activities employed by people occupying the site.

Williams, Makayla (University of Kansas), Ayla Alves Borges (University of Kansas), Madison Preuett (University of Kansas), Justin Garnett (Sul Ross State University), and Carlton Shield Chief Gover (University of Kansas)**[49] *Hell Gap 2025: Looking beyond the Localities***

This poster presents recovered diagnostic artifacts, additional assemblages, and a wall profile recorded by the University of Kansas and Washington State University 2025 archaeological field school investigation at Hell Gap National Historic Landmark (48GO305). The Hell Gap National Historic Landmark site is most commonly known for its deeply stratified Paleoindian campsite. Located in southeast Wyoming, on the eastern edge of the Hartville Uplift, the site is associated with previously published investigations resulting in a complete cultural sequence and well-known localities I–V. The 2025 field school tested an arroyo segment near Locality IV, a 2 m long segment wall profile, to identify sedimentary layers equivalent to those identified by previous projects containing occupational layers. Additionally, the field school employed a systematic pedestrian survey, redirecting its focus outside of the previously reported localities, which resulted in the identification of multiple archaeological assemblages. Toward the end of the field season, an assemblage was identified on the surface near the profile wall, yielding two obsidian flakes, a possible preform bead, and diagnostic projectile points nearby, holding potential for a better understanding of site occupation through future research.

Williams, Patrick Ryan (Arizona State University), and Luis Flores-Blanco (ASU)**[173] *Provenance Analysis of Tiwanaku Stone Sculptures Using pXRF and ICP-MS Techniques***

This paper explores the origins of the volcanic stones used in Tiwanaku stone sculptures, highlighting the strategic and ideological significance of raw material procurement during the Middle Horizon (AD 500–1000). Geochemical analyses were conducted using portable X-ray fluorescence (pXRF) on archaeological samples and inductively coupled plasma mass spectrometry (ICP-MS) on geological samples. The analysis shows that the litho-sculptures were made from stones with chemical compositions matching two distinct volcanic sources: basaltic rocks from the Copacabana Peninsula and andesitic rocks from the region between Mount Ccapia and Juli. These findings support the notion that these sculptures were crafted with both distant materials and stones from sacred landscapes, reinforcing its political authority and sacred connection to the Andean state.

Williams, Piper [170] see Mendoza-Blajos, Olivia

Williams, Reylynne (Gila River Indian Community, THPO)

[37] *Integrating Tribes in Standard CRM Project Workflow*

Effective consultation and engagement with Tribes by agencies, archaeologists, and project proponents require long-term commitments to communicate, collaborate, and coordinate in meaningful and respectful ways that fit each specific Tribal community's needs. Meaningful engagement extends far beyond a few virtual meetings and email correspondences. One way for Tribes to orientate themselves to a project or undertaking is by visiting the landscape. Essentially, we need to reconnect with our ancestral lands and reacclimatize with the environment. This presentation discusses the importance of providing landscape visits to THPOs and natural resource departments as part of effective Tribal engagement strategies. These can take the form of half-day long project visits to immersive multiday tours of sites and places documented during archaeological surveys, biological surveys, and water studies. These first-hand accounts will build on project understanding utilizing modern technology and building relationships that come from in-person experiences.

Williams, Tim [163] see Slucky, Alexandra

Williams, Veronica [276] see Paya, Tomás

Willis, Mark [341] see Murata, Satoru

Willis, Mark [178] see Stowe, Michael

Willis, Mark [181] see Volpe, Hannah

Willis, Staci (Houston City College)

[48] *Playing with and within the Online Archaeology Classroom*

Hands-on learning has long been central to archaeological pedagogies. For this reason, many archaeology educators are wary of the recent shift to online course offerings for higher education. And yet, undergraduate archaeology professors are increasingly being asked to teach introductory archaeology courses in an asynchronous online modality. This is particularly the case at hundreds of community colleges across the United States. A shift to online education, however, does not mean the end of hands-on learning for introductory archaeology students! In fact, through intentionally crafted course design and thoughtfully guided activities, the online archaeology classroom can still offer valuable hands-on education. In this poster, I will present my experiences experimenting with teaching archaeology online. By asking students to engage in creative and often personalized ways with archaeological methods and concepts, students learn by doing and create community along the way. Whether students are sorting their own junk drawers, playing games to learn how to read a stratigraphic profile, or presenting their own personal archaeological record, a pedagogy centered on active learning is possible in archaeology online courses.

Wills, Chip [263] see Kuijt, Ian

Wilson, Candice [343] see Marshall, Amanda

Wilson, Doug

[256] *Fort Vancouver and the Origins of the Rural American West*

Colonization of the west included fur trading companies that expanded into other economic endeavors. Fort Vancouver, the headquarters post of the Hudson's Bay Company's Columbia Department, was established in 1825 in part because of the agricultural potential of its surrounding prairie. Modeled after English manorial farms, Fort Vancouver's farm included elements unique to the fur trade. Its products supplied forts and posts of the Pacific Northwest to Russian Alaska and Mexican California. A village of 40–60 homes housed a racially distinctive population, including Native Americans and Native Hawaiians. The farm and village and its landscape contrasts with the independent American immigrant farms that were established as the territory became increasingly Americanized in the mid-1840s. I argue that Fort Vancouver was the epicenter of a shatter zone at the edge of Indigenous, fur trade, and American settlements. Events at Fort Vancouver

splintered across the region. As one of the first “rural places” in the colonial Pacific Northwest, the archaeology of Fort Vancouver demonstrates how this community contrasted with the rise of the American community of Vancouver, Washington Territory, providing a means to explore how racialization and nationalization perpetuated the shatter zone during this early colonial period.

Wilson, Gregory [177] see Dioneda, Justine

Wilson, Jeffrey [264] see Badillo, Alex

Wilson, Jeremy (Indiana University Indianapolis), Brooke Drew (Indiana State University; Stantec), Gretchen Zoeller (University of Pittsburgh), Alex Badillo (Indiana State University; Stantec), and Ryan Peterson (Stantec)

[216] *Beyond Burials: A Community-Engaged and Multidisciplinary Approach to Bioarchaeology*

The Henry Street Bridge Project, located on the former grounds of the Greenlawn Cemetery in downtown Indianapolis, offers a unique opportunity to conduct bioarchaeological research in advance of the reburial of over 1,000 individuals interred during the nineteenth century. The project emphasizes engagement and transparency with the public, officials, and other stakeholders through meetings, lab and site tours, a website, educational outreach, and oversight from a community advisory group. While skeletal analysis remains central to the research, the team is also compiling complementary databases from census records, cemetery deeds, death certificates, parish records, and other historical sources to deepen our understanding of life and death in Indianapolis as it transitioned from a sparsely populated state capital to an urban center over the cemetery's seven decades of use. Key research questions and interpretive challenges include accounting for biases introduced by prior exhumation efforts, the sexton's reuse of plots, and the broad-scale effacement of the city's first cemetery. Through public engagement and integration of archival, archaeological, spatial, and osteological data, we underscore the value of a multidisciplinary and community-informed approach to reconstructing past lives, one that neither begins nor ends with the bones alone. *****This presentation will include images of human remains.**

Wilson, Kurt (Lawrence University), Brian Coddling (University of Utah), and Simon Brewer (University of Utah)

[95] *The Impact of Subsistence Change on Demography: Theory-Informed Approximate Bayesian Computation Reveals Four-Fold Increase in Carrying Capacity Following Economic Intensification*

Subsistence intensification is a major process in human history; however, quantifying its effects on demography is challenging given multiple uncertainties. Here we synthesize advances in behavioral ecological theory and Approximate Bayesian Computation (ABC) to generate and provide a theory-informed, computational model approach for quantifying the effects of intensification on past population dynamics. Using western North America to provide two case studies (Colorado Plateau and Great Basin), we demonstrate how this ABC approach narrows the timing of the adoption of intensified strategies to 2100 ± 117 and 2174 ± 395 cal BP, identify that intensification increased landscape carrying capacities by 4.1 ± 1 and 4.2 ± 1.9 -fold, and suggest that the process of intensification ranged over periods of 970 ± 244 and 1473 ± 416 years. Subsistence intensification has been tied to state formation, violence, inequality, sedentism, and numerous more influential phenomena. Our findings of intensification producing a four-fold population increase align with other prehistoric estimates from Europe and Africa to further suggest even this relatively small carrying capacity change coincides with significant social effects.

Wilson, Kurt [95] see Medina, Ishmael

Wilson, Kurt [95] see Vernon, Kenneth

Wilson, Kurt [201] see Wagemann, Jackson

Wilson, Nathan [312] see Arnold, Philip

Windle, Morgan, and Tumurbaatar Tuvshinjargal (Mongolian Academy of Sciences)

[31] *Art, Antlers, and Astragali: Reconstructing Ephemeral Human–Cervid Relationships in Mongolia (Pre-)History*

Cervids have long been integral to Mongolia's cultural and symbolic landscapes, yet their direct traces in the

archaeological record remain elusive. Mortuary contexts dominate Central Asian archaeology, and deer remains are often fragmentary or represented only by isolated elements such as antlers or astragali. This scarcity complicates reconstructions of subsistence strategies, ritual practices, and social organization involving deer. In contrast, symbolic representations of cervids are strikingly abundant. Late Bronze deer stones—carved stelae adorned with flying deer—for instance underscore their prominence in mortuary ritual and cosmological thought, while prolific deer imagery in rock art suggests their role as mediators between human, nonhuman animal, domestic, and spiritual realms. Ethnographic and historical evidence shows that deer have long played important roles in hunting, cosmologies, domestication, and seasonal lifeways—forms of traditional ecological knowledge that shape relationships between humans, deer, and Mongolia's landscapes. Posthumanist and animist perspectives view deer not just as symbols or resources but as animate agents within multispecies worlds. By integrating zooarchaeological analyses with these ethnographic, historical, and ontological perspectives, this paper reconsiders human-cervid relationships in Central Asia as both materially ephemeral and conceptually enduring, offering new avenues for reconstructing their role in Mongolia's prehistoric cultural landscapes.

Windler, Zach [281] see Owen, Ross

Wingfield, Laura (Kennesaw State University)

[205] *Weaving Hats, Headbands, and Hair to Unravel into the Spirit Realm from Honduras to Colombia*

In the Indigenous Americas old and new, headwear and hairdos were and are *not only* for beauty and prestige *but also* for protection of the human body's top portal to the spirit world, the fontanel. Whether an ancient deer shamaness from Costa Rica dons a skull cap with multipurpose side knobs (hairbuns as female antlers) or a contemporary Colombian Kogi elder sports a woven conical hat (representative of Kogi homes and Andean mountains), the function is still protection of this sacred body part. Each culture to be discussed in the central region of the Americas, from Honduras to Colombia, imbues its own priorities and distinctive style and approach to this key fashion item. The design of each hairstyle or headpiece reveals its own expression of how the wearer connects to the spirits in the beyond and how she, he, or they contain powerful beings within themselves, humans strong enough to wear such fancy tops. Brief references to Native North American, Caribbean, and other South American examples bolster this shared understanding of "millinery" as sacred.

Winkelman, Benjamin, Heather McKillop (LSU), Sarah Nicole Miller, and E. Cory Sills (University of Texas at Tyler)

[179] *Classic Maya Architectural Wood Selection*

With funding from an LSU summer Aspire grant, an index of tree species was created to aid in the identification of preserved ancient Maya wooden building posts from the Paynes Creek Salt Works in southern Belize. A total of 4,042 wooden posts were mapped at 70 underwater sites, with samples exported to LSU for species identification and radiocarbon dating. For species identification, waterlogged wood post samples were cut using backed razors before being imaged in three planes with a digital slide microscope. The images were compiled with images from the Inside Wood online database with defining traits for each species. Over 20 species previously identified from the Paynes Creek Salt Works are included. This guide decreases the time taken to categorize wood specimens, allows new researchers to be easily taught identifying characteristics, and sheds light on how the Classic Maya interacted with their environment to select wood for architecture.

Winnicki, Liv

[177] *Diné Fortresses and Cultural Transformation in Eighteenth-Century Northwestern New Mexico*

This project investigates Diné (Navajo) fortresses on Chacra Mesa, NM, to explore how Indigenous communities navigated cultural contact, conflict, and shifting regional dynamics during the eighteenth century. While prior archaeological research in the Southwest has emphasized Pueblo responses to Spanish colonization, Diné histories remain comparatively underexplored. This study centers Diné experiences and examines how Diné communities made strategic decisions in the face of pressures from Spanish settlements, Ute raiding, and interactions with nearby Puebloan groups. The project focuses on fortresses constructed by

the Diné in high mesas and canyons, alongside traditional hogan sites. These settlements offer insight into defensive strategies, social organization, and the emergence of material practices that resemble those of contemporary Diné culture. Fieldwork includes pedestrian survey, drone-based mapping, GIS line-of-sight analyses, ceramic analysis with petrography to determine local versus imported production, and dendrochronology to date construction events.

Winnicki, Liv [277] see Van Dyke, Ruth

Winters, William (University of Texas at San Antonio), and George Bey III (Millsaps College)
[223] *The Puuc Mosaic Masks of Kiuc: Architectural Expressions of Politics and Cosmology*

Since 2019, the Bolonchén Regional Archaeological Project has been conducting excavations at the Kuche Group within the northern Maya Lowland site of Kiuc. Located in the Puuc region of southern Yucatán, Mexico, this palace dates to the Terminal Classic period (AD 800–1000) and is believed to have been occupied by the royalty of Kiuc during the later stages of the site's original occupation. Over the course of several recent seasons of excavation, we have fully revealed the eastern side and upper-room of the royal throne room (str. N1050E0815). We have recovered over 500 individual architectural elements of Puuc style masks that were composed of numerous individual elements carved from limestone and typically adorned the upper wall zone of buildings. While largely considered to be representative of specific deities or zoomorphic beings, it has also been speculated that these mosaic masks served as material expressions of political rulership and legitimacy. In this paper, we will discuss the nature of these masks and how their discovery during excavations of the royal throne room furthers our understanding of Kiuc as an independent political and ceremonial center and how it may have been positioned in the overall political sphere of the Puuc region.

Wirtz, Kai (Hereon)

[263] *Multi-centennial Cycles in Continental Demography Emerge from Changing Climate Stability and Socio-technological Feedbacks*

Human population dynamics and their internal and external drivers are not well understood, especially over the long term and on large scales. Here, we show that demographic growth trajectories of all inhabited continents from 9 to 3 ka BP reveal multi-centennial and partially synchronous cycles. These continental cycles were estimated based on summed probability distributions of radiocarbon dates and, for Europe, cross-validated by archaeology-derived settlement data. The European growth cycles showed a strong correlation with multi-centennial variations in climate stability. The empirical findings help to validate a model for socio-technological evolution and demographic growth. The model reveals internal feed-back mechanisms which amplify effects from environmental instability. For example, environmentally induced subsistence crises further amplified mortality through diseases, conflict, migration, and (de)innovation processes. The synergy of these endogenous mechanisms together with spatial spreading can explain the recurrent synchrony of climate stability and population growth.

Wissler, Amanda (McMaster University)

[216] *Did Young Adults Have a Shorter Duration of Illness in the 1918 Flu?*

In the 1918 flu pandemic, it was widely believed that “healthy” young adults experienced the greatest rates of morbidity and mortality. Previous bioarchaeological research, however, found that frail individuals were more likely to die in 1918 than their non-frail counterparts, suggesting that these anecdotal accounts may not have been entirely true. This research investigates one possible reason for this belief by examining whether young adults had a shorter duration of illness before death. Data were collected from death certificates of all individuals who died of pneumonia and influenza in Cleveland, Ohio, in October of 1918 ($n = 1,460$). Based on previous beliefs about the 1918 flu, I expect to find that young adults between 20 and 40 years old experienced a shorter duration of illness—and therefore died more suddenly—than other age groups. However, results show no statistically significant difference in the duration of illness among any age groups. Indeed, the average duration of illness is nearly identical for all ages. These results suggest that young adults did not experience shorter durations of pneumonia or influenza during the 1918 flu and that this was not a factor in contributing to the beliefs about “healthy” young adults experiencing high mortality.

Wissler, Amanda [196] see Bailey, Lydia

Witelson, David (Rock Art Research Institute)

[38] *Thinking Through the Ideational Cognitive Archaeology of Unity and Diversity in Southern African Hunter-Gatherers*

Southern Africa is home to one of the world's richest areas for the study of hunting and gathering societies. Research on the local archaeology, including abundant and highly detailed painted and engraved rock art, has benefited from ethnographic and ethnohistorical sources that are directly relevant to local hunter-gatherer groups across several centuries and thousands of kilometers. It was in that context that nascent Ideational Cognitive Archaeology (ICA) first arose. However, despite the same broad hunter-gatherer populations being responsible for the rock art and other archaeological traces, most specialists tend to emphasize either unity in their religious beliefs, rituals, and symbolic thinking or diversity in their subsistence-strategy adaptations to various environments. Both are relevant. This contribution considers the implications of ICA for addressing the pattern of simultaneous unity and diversity in archaeological interpretations.

Witt, David (GeoVisions)

[105] *The Same Old Stories: Addressing Cultural Resource Inventory Disparities in a Multicultural Community*

The City of Hillsboro, Oregon, maintains a Cultural Resource Inventory (CRI), a list of 87 significant and historic buildings, structures, objects, trees, and sites "that are noteworthy in exploring the culture and history of Hillsboro" and that meet the requirements of the National Register of Historic Places. This paper will discuss the history of the CRI and its ostensible purpose within community planning and preservation efforts. Despite the seemingly comprehensive nature of the CRI, all but five are structures. Furthermore, the list focuses almost exclusively on White history post-settlement and does not reflect the multicultural nature of the community's history. In a city where 41.5% of the population are not White, and where 10.8% do not speak English well, the CRI does not reflect the breadth of their heritage, nor is it available to them. City staff recognize these limitations, have made some efforts to correct these issues, and have asked the Hillsboro Landmark Advisory Committee (HLAC) for help. This paper presents the results of GIS analysis and resulting recommendations to gain feedback on the methodology employed and contribute to the larger discussion on addressing inequality in whose stories are told.

Witt, David [201] see Throgmorton, Kellam

Witte, Emilee (Arizona State University), Walter Sanchez Sr., and Donna Nash (Arizona State University)

[278] *Knock Knock: Wari Elite Ritual Door Offerings*

How do we differentiate a purposeful ritual door offering from quotidian trash being swept out a doorway? Doorways are passages for movement and portals for social interactions. In this poster, we will discuss what ritual door offerings looked like in the ancient Andes and how doorways might have functioned. In this poster, we present Unit 146 Rasgo 10, a doorway feature excavated in the 2025 field season at the Cerro Mejía site in Moquegua, Peru, as a case study of Wari household ritual. Excavations uncovered a material deposit of bone, mineral, and lithic tools, and a scattering of finely decorated ceramic sherds, purposefully broken into small pieces (< ~1 cm) and spread around the doorway. This study shows how thresholds served as active spaces where ritual and domestic relationships were negotiated and materialized and is a reminder that in the ancient Andes, crossing a doorway also meant crossing into ritual.

Witte, Emilee [55] see Sanchez, Walter

Wohlgemuth, Eric [268] see Armstrong-Ingram, Angela

Woldekiros, Helina

[357] *Pathways of Introduction: Animal Mobility Networks and Agricultural Transformation in the Pre-Aksumite and Aksumite Horn of Africa (1600 BCE–400 CE)*

The development of complex agricultural systems in highland Ethiopia during the Pre-Aksumite and Aksumite

period represents a critical case study for understanding how animal mobility shaped early farming economies in sub-Saharan Africa. This paper examines zooarchaeological evidence from Pre-Aksumite and Aksumite sites located in the Horn of Africa, including Mezber, Aksum, and Agula, using morphometric analysis, direct AMS dating, and isotopic evidence from over 22,000 faunal specimens to reconstruct networks of animal movement that enabled integration of exotic domesticates into indigenous Highland agricultural systems. Results demonstrate that cattle were established by 1600–900 cal BCE, followed by systematic incorporation of sheep/goats and chickens through maritime and overland trade routes connecting Ethiopian highlands to Red Sea and Nile Valley networks. Stable isotope analysis indicates differential feeding strategies maximizing both C₃ and C₄ plant resources, while morphometric data suggest selective breeding for highland conditions. The earliest directly dated chicken remains (820–595 cal BCE) from Mezber provide evidence for Red Sea maritime connections. This multispecies approach enabled resilient agricultural systems persisting across the Pre-Aksumite to Aksumite transition.

Wolf, Marc (GWE Corp.)

[161] *Mapping Chiapas Landscapes: DEMs, Drones, and GIS*

La Totuga is a medium-sized ancient settlement on the outskirts of the modern town of Ixtapa in Chiapas, Mexico, approximately equidistant (and slightly north) between the modern capitol of Tuxtla Gutierrez to the west and San Cristobal de las Casas to its east. Occupation spans from approximately late Preclassic through Terminal Classic times (~AD 150–850) with a Postclassic (~AD 950) reuse during an era in Mesoamerica that is often associated with a dynamic fusion of numerous cultural standards and traditions. The site is located atop a tri-lobed ridge that rises steeply from the shallow Rio Salinas drainage; it is the western side of a valley system, flanked toward the east by the ridge underlying modern Ixtapa within the radically rolling terrain of elevated landforms and greatly sloping topography. This paper discusses the mapping project and technological innovations—including the use of drone (UAS) flight data, lidar imagery, and newer GIS processing methods and capabilities—used to render and visualize the site's architecture and natural landscape.

Wolff, Christopher (University at Albany)

[148] *Over the Edge: Crossing Boundaries between Archaic Groups of Newfoundland and the Mainland*

Core-periphery models still haunt much of our thinking when it comes to examining cultural innovation and interaction between island and mainland populations. This view can bias our interpretations in ways that neglect contributions of island groups in favor of those on the mainland. In this manner, ecological boundaries are given too much explanatory power, even when material culture tells a different story. Conversely, instead of being prohibitive or limiting cultural contexts, ecological and cultural boundaries can act as incubation zones for innovation and change. This can be due to necessity because of challenging conditions or can arise from boundary communities living in more dynamic social and environmental contexts, increasing exposure to more novel experiences. This paper will examine some of the cultural traditions of Archaic peoples on the island of Newfoundland and their complicated interactions with contemporary communities on the mainland. It will suggest that boundaries, social and ecological, played an important role in cultural innovation and variation in Archaic societies of the eastern Subarctic, some of which came from transcending the edge of the known world.

Wolff, Lisa

[76] *How to Avoid “Reinventing the Wheel”: Mentorship and Network Building in Learning Petrography*

Ceramic petrography is a useful skill in archaeological ceramics research, though one that is highly specialized and requires time and material to learn the skill. Few universities offer specialized courses or programs in ceramic petrography, and even then, access to source material for teaching and learning is often regionally limited. The result: several independent researchers and theses published with petrographic analysis that may not integrate with previously studied material, either due to lack of access, lack of standardized analytical methods, lack of access to previous researchers, or all three. One such example is Egypt. Petrographic work from Egypt is a list of the same few cited names. To build on the previous work and to avoid redundancy, collaboration is a critical skill for students and petrographers. The best way to do this is through network building and mentorship opportunities.

Wolffhagen, Jesse (Harvard University)**[356]** *Playing FAIR and Square: Open Methods and Open Data in Zooarchaeology*

While we spend a lot of time and effort describing the bones on the table as part of our work, when it comes time to analyze our results, we end up working with data tables. This is especially true as the field moves toward more collaborative research to study phenomena that go beyond the scale of a single assemblage. Doing this effectively requires setting up methods that allow us to communicate effectively to ensure that we have shared standards and definitions in both our methods and our data. In this presentation, I go over the FAIR principles (Findable, Accessible, Interoperable, and Reproducible) and existing efforts to adapt these principles to zooarchaeology. While many of these efforts focus on recording zooarchaeological data with FAIR principles in mind (e.g., Atici et al. 2013; Whitcher Kansa 2015; Lau et al. 2018), less emphasis has been given on applying FAIR principles to “analytical code” in zooarchaeology. With the growing adoption of scripted statistical languages like R in archaeology, we can and should develop new standards on sharing the exact methods for analysis, visualization, and even data cleaning. Opening our methods can foster data reuse and collaboration, while also encouraging methodological innovation.

Wolin, Daniela [48] see Baustian, Kathryn

Woloszyn, Janusz (University of Warsaw), and Liz Gonzales (PUCP)**[213]** *Toro Muerto: Iconografía y cronología de un paisaje rupestre andino*

Toro Muerto, en el valle de Majes (Arequipa, Perú), es el mayor complejo de arte rupestre andino, famoso por la abundancia y diversidad gráfica de sus petroglifos. Sin embargo, hasta fechas recientes el sitio no había sido registrado de manera sistemática e integral. El Proyecto de Investigación Arqueológica Toro Muerto (PIA-TM), haciendo uso de tecnologías modernas logró desarrollar una documentación actualizada que permite por primera vez analizar de forma comparativa los principales motivos geométricos, zoomorfos y antropomorfos. Los resultados muestran una distribución espacial desigual de los diseños, lo que ofrece nuevas perspectivas sobre la organización social y ritual de los antiguos visitantes del sitio. Asimismo, el estudio asociado a la distribución de los diseños abre la discusión sobre la cronología relativa y función del conjunto a partir de la iconografía, destacando el Sector X, cuya orientación y características sugieren una posible función como observatorio astronómico prehispánico.

Wolverton, Steve, Christyann Darwent (University of California, Davis), Susan Dixon-Renoe (University of Missouri-Columbia), Mary Stiner (University of Arizona), and Virginia Butler (Portland State University)**[158]** *What We Have Learned from Working with Lee Lyman*

Contributors to this presentation have worked with Lee Lyman in one fashion or another over the last 40 years. Some of us have been his students and some have been his colleagues. We break down what we have learned from Lee as a mentor, a collaborator, a reviewer, an editor, and other experiences as his colleagues, students, and friends. Lee does not always have “the answer,” but he comes close because he usually has “an answer” to a question or “a solution” for a problem, which he freely shares. Research and teaching, for many of us, entails vulnerability and feels risky; Lee has always designed his approaches for writing and teaching in ways that seem fearless. We share personal stories of ways we have benefited from our close association with this monumental scholar.

Wolverton, Steve [279] see Betts, Chelsea

Womack, Andrew (University of Toronto), and Liye Xie (University of Toronto)**[102]** *Investigating Collective Action in Neolithic and Bronze Age Northwestern China*

In research on early complex societies in what is now northern China there is a tendency to focus on the emergence of what are interpreted as signs of hierarchical social organization as key indicators of “complexity” as well as precursors to early states and, eventually, dynasties. However, relatively little research has considered why and how the move toward increasingly hierarchical forms of social organization occurred in some societies but not others. Here I present a case study on social organization during the Neolithic and Bronze Age (5000–1500 BCE) in what is now Gansu Province and surrounding regions of

northwestern China. Focusing on subsistence practices, craft production, and interregional exchange, the presentation will explore potential instances of collective action as well as data demonstrating heterarchical complexity at some sites and more hierarchical forms of organization at others. Conclusions will focus on the importance of exploring this topic at the local scale of analysis and changes in organization over time.

Wong, Gillian (University of Texas at El Paso), Tyler Faith (University of Utah), Brian Chase (University of Montpellier, Centre National de la Recherche Scientifique; University of Cape Town), and Justin Pargeter (New York University; University of Johannesburg)

[170] *Balancing Sample Size and Interpretive Potential in Microfauna: An Example from the Western Cape, South Africa*

The remains of small vertebrates are often found in association with archaeological materials and can be powerful tools for understanding paleoecology, human behavior, and site formation processes. These microfauna studies have a >100-year history in the paleo-sciences, but it was not until the 1990s that their taphonomic analysis was standardized. It is now clear that taphonomic analyses are essential to understanding the depositional agent and context of these remains and to building robust inferences. Microfaunal assemblages, though, tend to be massive, and balancing the sampling needs of taphonomic work, often requiring data taken on most skeletal elements, and taxonomic identifications, which often focus on specific elements, is challenging. In this study, we use the late Quaternary micromammal assemblage from Boomplaas Cave, South Africa, as an example of how to address this challenge. We discuss decision-making that includes consideration of temporally long depositional contexts and the use of data from successive excavations that implemented different recovery protocol. We argue that standardization of sampling strategies in microfaunal studies does not allow researchers the flexibility needed to manage such massive sample sizes and interpret the data. Instead, we recommend several general principles to guide sampling decisions with analogous microfaunal assemblages.

Wong, Steven [79] see Sakai, Sachiko

Woodfill, Brent (Winthrop University)

[87] *Revisiting Ancestral Maya Economies*

Patricia McAnany's work has broken new ground in multiple ways, from bringing religion out of the "black box" where processualism had relegated it in *Living with the Ancestors* to finding ways for archaeology to become a powerful tool for descendant communities through InHerit. Between (and overshadowed by) these two career-defining productions, she published *Ancestral Maya Economies in Archaeological Perspective*, a book that presaged several facets of the current theoretical conversation although it has not fully been incorporated into it. In this paper, I will revisit the book with 16 years of hindsight, specifically focusing on it as a potential link between postprocessualism and the current Ontological Turn in archaeology.

Woodfill, Brent (Winthrop University)

[16] *Collaborative Archaeology as Networks of Mutual Assistance: The View from Central Guatemala*

Engaging in collaborative archaeology with descendants, neighboring communities, and other stakeholders involves new challenges and opportunities that can be both daunting and tantalizing in equal measure, leading many to ask whether it is worth it. Over the past three decades, the author has faced a steep learning curve for establishing a meaningful reciprocal relationship with the Maya and Ladino communities around his research sites, eventually settling on creating and maintaining a network of mutual assistance based on the interests of, abilities of, and resources available to its members. Such networks do take time to establish and both energy and resources to maintain but have resulted in a transformative research experience. The close contact with communities and good will this approach provides grants project members access to a wide range of otherwise inaccessible ecological, geographical, and cultural knowledge as well as permission to access sensitive areas and invitations to work in caves and sites that would otherwise have remained unknown. In addition, this approach opens up alternative funding sources, promotes the protection of archaeological remains, and opens up new possibilities for creating responsible, ethical methodological approaches to fieldwork.

Woodfill, Brent [161] see Bogner, Rachael

Woodhead, Genevieve (University of New Mexico)

[166] *Ceramic Evidence for Local-Newcomer Interaction in Chaco Canyon, New Mexico*

How do newly co-residing people interact? I begin to answer this question through a close examination of Chaco-McElmo Black-on-white pottery from Chaco Canyon, New Mexico. Around AD 1100, Chaco Canyon started to materially change. Buildings became squarer and more compact with enclosed plazas and walls built from large, blocky stones. Chaco residents adopted new dietary, burial, and trash disposal practices, and the pottery of Chaco started to resemble that of Mesa Verde, particularly the McElmo Black-on-white ceramic type. All these material changes serve as evidence that Ancestral Pueblo people moved from the Mesa Verde area to Chaco Canyon ca. AD 1100, joining a remnant population of local Chacoans. Did locals and newcomers make these material changes together? Did they collaborate on Chaco-McElmo Black-on-white, or were newcomers solely responsible for this novel twelfth-century style of pottery? Preliminary analyses of data on conservative, habitual potting practices and decorative techniques indicate that locals and newcomers merged certain technological practices and broadcast a shared identity through their pottery's painted designs. These changes to practice and identity may have promoted a sense of community membership in a time of social and demographic turmoil. Local-newcomer coresidence thus prompts renegotiations of communities of practice and identity.

Wooller, Matthew [179] see Fields, Stormy

Wooten, Kimberly (California Department of Transportation)

[167] *Plastic Planet: The Archaeological Origins of Plastic Consumerism*

A survey of plastic artifacts from archaeological collections in California hints at the rise in plastic production beginning in the late nineteenth century, a trend that would ramp up to full gear over the next 50 years. Shaped by the plastics industry, consumer behavior turned away from traditional materials toward cheaper, more disposable, and more toxic plastic products. It is a shift that reveals the origins of the current plastic pollution crisis, a major contributor to climate change. This presentation will discuss the results of the collections survey, the industrial history of plastic production, and touch on the impacts of plastic pollution on archaeological heritage. The audience will be introduced to the new online *Historic Plastics Database*, a tool featuring both plastic type examples and artifacts with a focus on the western United States. The database is intended to assist professionals in understanding plastics from the perspectives of both historical and contemporary archaeology.

Wooten, Kimberly [346] see Sloan, Anna

Worlow, Halee (Arkansas Archeological Survey), and Juliet Morrow (Arkansas Archeological Survey)

[229] *Classification of Projectile Points in the Megalithic Center of America, the Arkansas Ozarks*

We present a point sequence for the southeastern Ozarks based on a private collection of points recovered from a rockshelter in Independence County. We documented more than 40 morphometric attributes including completeness, blade edge treatments, use-wear patterns, lithic material type, presence or absence of heat treatment and burning, fracture type, and weight. We use these data to explore patterns of landscape use and mobility for nearly the last 13,000 years.

Worman, F. Scott (Missouri State University), Elizabeth Sobel (Missouri State University), and Kevin Cupka Head (Center for Archaeological Research, Missouri State University)

[149] *Dig Up Opportunity in Your Backyard: Accessible Field Training for Undergraduates*

Barriers created by financial and scheduling costs of a traditional field school are a major theme in the current conversation about preparing students for archaeological careers. Coupled with the recognized shortage of trained archaeologists, this has prompted some universities to begin exploring alternative models for field schools. Others are seeking ways to diversify field training opportunities. Drawing on our experiences, we discuss the benefits and challenges of teaching local commuter field schools of various types.

We have created field experiences that are low in cost and offer a range of scheduling options; a primary benefit is accessibility for students in diverse life circumstances, many of whom would otherwise be unable to complete this basic requirement for employment in archaeology. In addition, local field schools foster sustained engagement with community partners. Leveraging the opportunities provided by our Center for Archaeological Research and community partners, we have also built work-integrated learning experiences that facilitate school-to-career pipelines. Some challenges have included securing and maintaining institutional support, reorienting our research agendas, and investing time in developing new skill sets. We consider how the challenges and benefits of local, flexible field training programs relate to the current landscapes of both higher education and professional archaeology.

Worthey, Kayla (Harvard University), Douglas Mitchell (S'edav Va'aki Museum), Jonathan Mabry (Tucson City of Gastronomy), Gary Huckleberry, and Natalia Martínez-Tagüenia (Universidad Autónoma del Estado de Morelos)

[88] *Seasonality of Coastal Resource Use on the Margin of the Gran Desierto de Altar, Sonora, Mexico, since the Middle Archaic*

Where the Gran Desierto de Altar meets the northern Gulf of California coast, shell middens buried within dunes attest to millennia of coastal resource use in the traditional lands of the Hia C-ed O'odham. Radiocarbon and cultural chronologies indicate that coastal foraging in the vicinity of Bahía Adair has been continuously practiced since at least the Middle Archaic. Here, stable oxygen isotopes ($\delta^{18}\text{O}$) from micro-milled ventral margins of clam shells (primarily *Chione* sp., *Glycymeris* sp., and *Leukoma* sp.) are used to assess season of death, and provide insight into the seasonal partitioning of coastal resource use in the region through time. Results indicate that among seven localities on the coasts of Bahía Adair and Estero Morúa, mollusks were primarily collected during the cool season. The seasonal regularity with which shellfish were gathered points to 6,000 years of continuity in coastal foraging practices in the Gran Desierto, likely shaped by forager expertise of the phenology of littoral and inland desert habitats.

Wriston, Teresa (DRI)

[183] *A Race against Time: 3D Digital Preservation of Basque Tree Carvings near Lake Tahoe, Nevada*

Livestock herders, many of which were Basque shepherds, carved quaking aspen trees while tending their herds in the late nineteenth and early twentieth centuries throughout the mountainous western United States. Carvings often include various figures, dates, and names or initials useful for tracing individual herders. These carvings, called arborglyphs, are disappearing as the trees they were carved into die from age, succumb to drought, or burn during wildfires. In the best of circumstances, aspen trees rarely survive over 150 years, and herders began grazing their livestock in the Sierras ca. AD 1850—170 years ago. Estimates suggest that over 70% of these carvings have already been lost. During this project we tested various camera equipment, lighting, and shooting methods to evaluate which equipment and techniques are critical for the development of good 3D models that can be used to digitally preserve these carvings. We found that cell phone cameras consistently result in good models as long as three criteria are met: (1) sharp focus, (2) even lighting, and (3) two-thirds overlap of each image. This means that the public has the equipment in hand to help digitally preserve Basque tree carvings in this race against time.

Wrobel, Gabriel [111] see Teja, Melissa

Wu, Nikki, Derek Anderson (Cobb Institute of Archaeology), Christyann Darwent (University of California, Davis), Jelmer Eerkens (University of California, Davis), and Daniel Kirby

[170] *Just Keep Swimming: Toward Sea Turtle Solutions*

Sea turtles are featured in myths and legends across various cultures around the world and have the potential to answer remarkable research questions about both the present and the past. For instance, zooarchaeologists can leverage information from prehistoric faunal assemblages to address contemporary problems of conservation and climate change. As six out of seven sea turtle species are critically endangered, endangered, or vulnerable according to the International Union for Conservation of Nature Red List (IUCN 2025), one way to understand the impacts of climate change on these “fantastic beasts” is to expand our knowledge of life history patterns and paleoecology with the zooarchaeological record. Despite their

significance, studying archaeological sea turtle remains in the Caribbean poses many challenges. This presentation reviews the successes and difficulties of using traditional zooarchaeological methods to identify species and biomolecular testing—namely, Zooarchaeology by Mass Spectrometry (ZooMS), stable isotope analysis ($\delta^{13}\text{C}$ and $\delta^{15}\text{N}$), and radiocarbon dating—on sea turtle bone from the Aklis site, St. Croix, US Virgin Islands. Reflecting on these challenges, we offer some practical solutions that may help surmount these obstacles in the future.

Wu, Rubi (Shandong University), Xuexiang Chen (Shandong University), Yu Dong (Shandong University), Weixing Zhang, and Amy Bogaard (University of Oxford; Santa Fe Institute)

[258] *Rice $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ Values as Indicators of Watering and Manuring Regimes*

The aim of the present study was to test whether stable carbon and nitrogen isotopes in rice grains can provide an independent line of evidence for rice management, including irrigation and manuring. Three heritage and four commercial landraces were cultivated under various watering conditions in the glasshouse at the Department of Plant Sciences, Oxford. The results show that paddy conditions have a significant negative effect on the $\delta^{13}\text{C}$ values of heritage rice compared with saturated soil conditions but a variable effect on faster growing, commercial varieties. Watering had an inconsistent effect on $\delta^{15}\text{N}$ values. Meanwhile, field experiments in Shandong, China, also show a significant negative effect of paddy versus dry conditions on the $\delta^{13}\text{C}$ values of rice. Variable manuring practices and in some cases use of chemical nitrogen complicated an investigation into effects of watering and manuring on $\delta^{15}\text{N}$ values in field experiments in the Shandong and Shanghai region. Analysis of samples from fields with long-term manuring further refines this framework. Overall, this study indicates that $\delta^{13}\text{C}$ values and $\delta^{15}\text{N}$ values are useful for identifying rice water regimes and have potentials in identifying manuring regimes in the Neolithic China.

Wunderlich, Shelly (Burns & McDonnell), and Brandy Harris (Burns & McDonnell)

[300] *Thinking Outside the Pine Box: Alternative Methods for Unmarked Cemetery Identification*

Traditional methods used for unmarked cemetery identification include historic map reviews, deed research, magnetometer or GPR survey, and mechanical scraping. This poster presents case studies where unconventional archival and archaeological methods were used to identify the location, or in some cases, absence, of abandoned or unmarked cemeteries.

Wyatt, Andrew [105] see Cottle Peacock, Clélie

Wygall, Brian (Adelphi University), Kathryn Krasinski (Adelphi University), Charles Holmes, Barbara Crass (Museum of the North), and Lillian Barber (Adelphi University)

[195] *Late Pleistocene Stone and Mammoth Ivory Tool Production and Circulation in the Middle Tanana Valley, Alaska*

The Tanana Valley has been the focus of intense late Pleistocene archaeological and geological investigations into the interaction between the First Alaskans and Ice Age megafauna, particularly woolly mammoth. In the middle Tanana Valley of central Alaska, the Holzman archaeological site is located along Shaw Creek's west bank. Archaeological excavations at the Holzman site have uncovered expedient tools on local quartz with well-preserved hearths, avifauna, and megafauna. Evidence for campfires and lithic tool manufacture dates to 14 ka in component 5b (C5b)—among the earliest in the Americas. In the 13.7 ka C5a, an extensive workshop event left abundant local quartz artifacts behind, the by-product of mammoth ivory reduction and manufacture of ivory blanks or preforms, and the earliest known ivory rod tools in the Americas. The Holzman site contributes new information to a growing archaeological record of the middle Tanana Valley during the Late Glacial period.

Wygall, Brian [169] see Krasinski, Kathryn

Wyllie, Cherra (AMNH)

[316] *The Maltrata Monolith as a Puebla-Tlaxcala-Veracruz Monument*

The delineation of Mesoamerican subregions implies socio-geographic homogeneities. These classifications,

based on modern states and Indigenous languages, often hinder our ability to identify cultural areas straddling boundaries. The Valley of Maltrata, situated on the Veracruz-Puebla border primarily served to support and control multidirectional trade and communications between the Altiplano and the Gulf Coast (Lira Lopez 2004). Maltrata maintained a clear, albeit indirect, relationship with Teotihuacan during the Classic period. In all likelihood the route was maintained after the fall of Teotihuacan, while lacking artifacts typically associated with Classic Veracruz culture. The Maltrata Monolith, with an eclectic, cosmopolitan style characteristic of the Epiclassic period, is nevertheless firmly grounded in the iconography of Puebla-Tlaxcala, while simultaneously referencing its southeastern Mesoamerican neighbors. The monolith contains calendric signs diagnostic of the Xochicalco writing system, identified by epigrapher Javier Urcid, further reinforcing its strong ties with central Mexico. It is likely that iconographic elements found their way from Maltrata into the art of El Tajín, Las Higueras, and El Zapotal, along with a new religious and social order that swept through Mesoamerica after the fall of Teotihuacan.

Wysocka, Joanna [327] see Airola, Danielle

Xiao, Hui (University of South Florida)

[173] *Investigating Cultural Processes at a Regional Mississippian Center in Northwest Florida through pXRF Ceramic Analysis: The Case of Pierce Mounds*

This paper examines the chronology and cultural development of northwest Florida between AD 900 and 1500. Three issues are addressed: the nature of the Woodland–Mississippian transition at the edge of the Mississippian world, the reception of Mississippian influences in northwest Florida, and the decline of the Mississippian period in this region. The Pierce Mounds site (8Fr14) is used as the primary case to build the framework, as it is a major ceremonial center occupied from the Early Woodland through the Mississippian period at the mouth of the Apalachicola River. Other Mississippian sites in the river valley are included for comparison. pXRF analysis of ceramic composition is combined with radiocarbon dates to refine occupational history. Results suggest that the Late Woodland tradition in the form of check-stamped ceramics persisted at the river mouth during the Early Mississippian period. Fort Walton culture, the local Mississippian variant, peaked ca. AD 1200–1400 in the valley, marked by diverse ceramics and more intense regional interaction. Fort Walton societies gradually disappeared from the valley after AD 1500. The study highlights the strength of the pXRF method for understanding cultural processes, social identity, and interaction strategies by integrating ceramic chemical compositional and chronological data.

Xiao, Peiyuan (Institute of Tibetan Plateau Research, Chinese Academy of Sciences), Ben Marwick (University of Washington), and Hao Li (Institute of Tibetan Plateau Research, Chinese Academy of Sciences)

[336] *Evidence for Discoid Technology within Late Pleistocene Acheulean: Insights from the Middle Yangtze River Valley, South China*

Recent work on the Middle Paleolithic (MP) of East Asia highlights diverse lithic technologies, including Levallois, discoid, and Quina, alongside the persistence of Acheulean traditions. Human fossils from this period show mosaic traits, reflecting interactions between local and incoming populations as well as complex evolutionary dynamics. However, the relationship between lithic technologies and hominin lineages is unclear, hampering assessments of whether technological diversity arose from local innovation or population dispersals. This study shows new evidence from the Tiaotougang and Sandinggai sites in Middle Yangtze River Valley, dated to ~100–20 ka BP. Using a quantitative framework, we demonstrate long-term technological continuity. Core reduction was primarily organized around peripheral exploitation, with discoid method as defining features. Tool kits are dominated by small flake tools, reflecting a low-curation concept to retouching. Large Cutting Tools (LCTs), linked to Acheulean traditions, persist but progressively decline, outlining a diachronic trajectory. Our results indicate that the decline of Acheulean traditions in the study area was accompanied by the development and refinement of small flake production strategies, providing evidence for local continuity and technological innovation rather than population dispersals. This pattern highlights pronounced regional variability and the complex evolutionary trajectories of technological behavior during the East Asian MP.

Xie, Liye (University of Toronto)**[102]** *Collective Action in Early China: Historical Traditions and Archaeological Insights*

Collective action has long been central to human societies. In recent decades, archaeologists have increasingly recognized the importance of examining how cooperation and the negotiation of obligations and interests mutually shaped governance and leadership in complex societies. While often framed differently in scholarly traditions, practices of collective action have been widely described in historical and ethnographic accounts of Asian societies. Communities collaborated to construct infrastructure, manage land and water, participate in ritual activities, provide mutual aid, and sustain enduring social institutions. This paper explores how such practices may be identified in the archaeological record of Neolithic and Bronze Age China. These cases contribute to a broader comparative understanding of the diverse ways in which collective action and governing institutions intersected in the ancient world.

Xie, Liye [102] see Womack, Andrew

Xie, Tao (Chengdu Institute of Cultural Relics and Archaeology)**[261]** *Archaeological Discoveries of Western Han Tombs at Laoguanshan, Sichuan*

In 2012, four Western Han earthen-pit tombs with wooden coffins were excavated at Tianhui Town, Jinniu District, Chengdu, Sichuan. The tombs yielded numerous lacquered wooden artifacts and pottery, with smaller quantities of bronze and iron objects. Notable discoveries include over 50 wooden slips from tomb M1, four bamboo-and-wood loom models from M2, and more than 930 bamboo slips with a lacquered human figurine marked with acupuncture points from M3. This considerable assemblage of Western Han slips, the first of its kind in Sichuan, highlights Chengdu as an important source of unearthed Han period manuscripts. Analysis of nine excavated medical texts indicates that some may be lost Bian Que classics, offering valuable insights into the history of traditional Chinese medicine. The lacquered human anatomical model, corresponding to the meridian medical texts recovered from the tombs, is the earliest and most complete of its kind in China, providing critical evidence for the origins of meridian and acupuncture theory. The four loom models, representing previously unknown Shu brocade jacquard looms, are the only intact examples from the Western Han period with a clearly documented archaeological context, enhancing our understanding of the origins and development of silk textile technology in China and beyond.

Xie, Tao [261] see Lin, Kuei-chen

Xomidjonova, Maftuna [315] see Medina, Shelby

Xu, Tianrui, Ilaria Patania (Washington University in St. Louis), Tristram Kidder (Washington University in St. Louis), Potiphar Kaliba (Malawi Department of Museums and Monuments), and Jessica Thompson (Yale University)**[304]** *Beyond Visual Comparisons: Experimental Approaches to Organic Craft Detection in Tropical Africa*

Organic craft technologies such as basketry, mats, and cordage were central to ancient lifeways but remain archaeologically elusive due to the rapid decay of perishable materials. In tropical contexts, preservation typically occurs only through indirect traces such as negative clay impressions. Yet most studies rely primarily on visual similarity between positive casts of archaeological impressions and modern craft reconstructions. This study integrates nondestructive visual identification (SEM) with microbotanical extraction to investigate the formation and preservation of negative impressions. Our analysis centers on archaeological samples from two rockshelter sites in the Kasitu Valley of Malawi, with dates potentially extending into the late Pleistocene. We hypothesize three potential pathways for their preservation: accidental firing near furnace structures, intentional burning adjacent to campfires, and bioturbation. Complementing this, experimental impressions made from locally produced baskets (*lichelo*) under different temperatures provide a comparative framework for evaluating whether the presence of phytoliths can serve as an indicator of organic craft technologies. In doing so, this project aims not only to advance methodological approaches to the detection of organic craft but also to highlight the contributions of often-overlooked social actors—particularly women, children, and the elderly—in shaping the material worlds of early human societies.

Xu, Wen (School of Archaeology and Cultural Heritage, Zhengzhou University)

[106] *A Comprehensive Analysis of “Frog” Motif Remains from Pre-Qin China: Typology, Complex Network Analysis, and GIS Visualization*

The frog motif was a significant decorative element in ancient societies. Although it persisted beyond the Han dynasty with rich symbolic meanings, its formative development occurred during the Pre-Qin period, where it was closely associated with major urban sites, archaeological cultures, and high-status tombs. This study examines the early evolution of the frog motif by comprehensively analyzing Pre-Qin artifacts through typological, complex network, and GIS visualization methods. Typological analysis reveals clear developmental patterns, identifying the late Neolithic as a critical turning point. Complex network analysis identifies three origins and two transmission chains, with a star-shaped radiation pattern emerging after the formation of Central Plains dynasties. GIS spatial analysis shows frog remains originated in low-lying plains and exhibited a spatiotemporal evolution from aggregation to dispersion and from northwest to southeast.

Xue, Liping (Hangzhou City University), Hong Chen (Zhejiang University), and Ling Shen (Hangzhou City University)

[258] *Use-Wear or Manufacturing Trace? A Reexamination of Sickle-Gloss-like Polish on the Ground Stone Knives in the Liangzhu Culture*

Ground stone knives in the lower Yangtze River Region have often been recognized as tools for harvesting cereals, such as rice. Indeed, traces resulting from contact with herbaceous plants, resembling sickle gloss, have been identified on archaeological specimens. While such traces are generally regarded as use-wear, this study proposes that some of the sickle-gloss-like polish observed on Liangzhu culture stone knives may, in fact, represent manufacturing traces produced by polishing with herbaceous plants. These traces differ from use-wear polish in both morphology and distribution—a distinction that can be effectively demonstrated through replicative experiments. Stone knives exhibiting such polish are typically not utilitarian tools but ritual objects, as corroborated by their morphology, manufacturing techniques, and archaeological context. The polishing of these items with herbaceous plants may have constituted a form of deliberate refinement. In previous studies, such traces have been consistently interpreted as use-wear, leading to the classification of the corresponding artifacts as harvesting tools. This interpretation constitutes a misunderstanding, as it overlooks the nonutilitarian significance embodied by these objects.

Yadmaa, Tserendagva [76] see Olzbayar, Gankhuyag

Yaeger, Jason [341] see Cap, Bernadette

Yaeger, Jason [223] see Nowakowski, Lauren

Yagi, Hiroaki, Joe Iwanaga (Tulane University), Marcello Canuto (MARI/Tulane University), and Tomas Barrientos (Universidad del Valle de Guatemala)

[327] *Investigating Maya Dental Inlays with Micro-CT: A Case Study from the Classic Maya Site of La Corona, Guatemala*

Excavations at the Classic Maya site of La Corona, Guatemala, uncovered 32 human burials, most dating to the Late Classic period, when the dynasty flourished under Kaanul hegemony. Among these, eight individuals exhibit dental inlays. This study applies microcomputed tomography (micro-CT) to analyze the internal structure of inlaid teeth, providing insights into ancient drilling techniques. The high-resolution 3D reconstructions allow us to assess the precision, angulation, and depth of cavities, revealing technological variation that may be related to social status. Furthermore, analysis of the CT images shows that inlay procedures often resulted in dental pathology, such as dentin invasion, which could have led to long-term health problems. Our results highlight both the advantages and limitations of micro-CT in the study of ancient dental modification, especially in cases where traditional sectioning methods are not feasible. This approach provides a nondestructive means to investigate technological choices and their biological implications, contributing to broader discussions of identity, status, and health among the ancient Maya. *****This presentation will include images of human remains.**

Yakal, Madelene [350] see Wang, Yen Chun

Yamamoto, Kolby [124] see Kaspura, Molly

Yang, Jishuai, and Xiaoyan Yang

[354] *The Spread of Ancient Crops through the “Plateau Road”*

The spread of prehistoric crops and domesticated animals across the Eurasian continent significantly transformed regional production systems and lifestyles, exerting a profound impact on the development of human societies. It is widely accepted that the westward expansion of foxtail millet (*Setaria italica*), broomcorn millet (*Panicum milliaceum*), and *japonica* rice (*Oryza sativa* sub. *japonica*), alongside the eastward spread of barley (*Hordeum vulgare*) and wheat (*Triticum aestivum*), followed the Eurasian “Steppe Route” or the “Oasis Route” via Central Asia, Xinjiang, and the Hexi Corridor. We systematically reviews the crop remains from archaeological sites across the Tibetan Plateau and adjacent areas. Based on the spatiotemporal distribution of these remains, we suggest that the spread of East Asian domesticated crops, such as foxtail millet, broomcorn millet, and *japonica* rice to South Asia, and the spread of West Asian domesticated barley and wheat, as well as South Asian *indica* rice (*Oryza sativa* sub. *indica*) to East Asia, may have involved bidirectional trans-Himalayan exchanges. Consequently, we propose the hypothesis of crop dissemination across the Himalayas via the “Plateau Road.” It is probable that this “Plateau Road” comprises a network of east–west routes along the Yarlung Tsangpo River valley, as well as north–south corridors traversing the Himalayas.

Yang, Xiaoyan [354] see Yang, Jishuai

Yang, Zhanfeng (Chengdu Institute of Cultural Relics and Archaeology)

[261] *The Cultural and Chronological Relationship between the Sanxingdui and Jinsha Sites*

The Sanxingdui and Jinsha sites collectively underwent four developmental stages: the Baodun Culture, Sanxingdui Culture, Shierqiao Culture, and Xinyicun Culture. The Sanxingdui site experienced continuous development from the third phase of the Baodun Culture to the early Xinyicun Culture without interruption, with two peaks of development. The first peak occurred during the third phase of the Baodun Culture, while the second peak spanned from the early Sanxingdui Culture to the early Shierqiao Culture, during which it served as the cultural center of the entire Chengdu Plain. The Jinsha site developed intermittently before the Shierqiao Culture, with only sparse remains discovered from the Sanxingdui Culture period. However, it experienced continuous and uninterrupted development during the Shierqiao and Xinyicun Cultures, with its peak occurring from the early Shierqiao Culture to the early Xinyicun Culture. In the early Shierqiao Culture (approximately 1340–1050 BC), the developmental peak of the Jinsha site coincided with that of Sanxingdui site. Thereafter, the Jinsha site replaced Sanxingdui as the center of the entire Chengdu Plain.

Yang, Zhanfeng [261] see Lin, Kuei-chen

Yann, Jessica (Michigan State University)

[218] *From Policy to Practice: Developing Cultural Heritage Guidelines and the First Repatriation to the Bahamas*

In recent years, many collections-holding institutions have increasingly recognized their responsibilities as stewards of cultural heritage, particularly in relation to the colonial-era legacies inherent in many past practices. This presentation highlights the creation and implementation of a set of cultural heritage guidelines at Michigan State University, designed to provide a framework for ethical stewardship, collaborative research, and responsible repatriation practices. These guidelines are meant to be applied across the university and to promote the recognition of, and the ethical and collaborative care and use of cultural heritage. Alongside the development of these guidelines, we also undertook the first repatriation of Ancestral remains (ever) to the Bahamas in 2024, a landmark moment that demonstrates the importance of transparent processes, persistence, and community engagement. By tracing the development of institutional policy alongside the implementation of this return, I hope to illustrate how Michigan State University went from policymaking to meaningful action to help guide others who may also be interested in facilitating similar practices.

Yeahia, Sabrina (University of Illinois Chicago), Christina Friberg (Field Museum), Rachel Cajigas (University of Alabama), and Elliot Blair (University of Alabama)

[123] *On the Plaza's Edge: Geophysical Investigations at Angel Mounds (12Vg1)*

Angel Mounds State Historic Site was a fortified Mississippian (1150–1450 CE) city at the center of a network of settlements in the Lower Ohio River Valley whose people thrived through 200 years of intense drought and regional warfare. Throughout uncertain times, the people of Angel Mounds continued to build and maintain mounds while engaging in the same practices that integrated communities in the region earlier on in the Mississippian period. To better understand how people coped with such uncertainty, we focus our investigations on the organization and use of community spaces at the site. Peterson's 2010 magnetic gradiometer survey revealed unidentified and untested anomalies on the edge of the site's plaza adjacent to the main mound. These anomalies were targeted for survey using a dual-remote sensing methodology combining magnetic gradiometry and ground-penetrating radar. A side-by-side analysis of the geophysical data corroborates and strengthens the identification of subsurface features revealing more about community activities at Angel Mounds without site disturbance.

Yeatts, Owen [181] see Brown, Troy

Yépez, Alden [194] see Salomon Velasco, Lua

Yepez Alvarez, Willy [213] see Bautista, Stefanie

Young, Aaron [25] see Watson, James

Young, D Craig [74] see Duke, Daron

Young, Saige [295] see Lee, Benno

Youngpeter, Christina (Washington University in St. Louis)

[258] *Effects of Water Availability on Eastern North America's Sleeping Crops: Results from Pilot Growth Experiment with *Chenopodium berlandieri**

Cahokians (1050–1400 CE) practiced intensive agriculture with a biodiverse suite of crops. Their management practices have been discussed in other studies based on data from ethnographic sources and intensive paleoethnobotanical analyses. To directly investigate the agricultural practices and crop management strategies of Cahokians, I have conducted a pilot study by growing goosefoot (*Chenopodium berlandieri*), a sleeping crop, under controlled greenhouse settings. This study investigates the effects of varying water availability on plant maturity, seed yield, seed morphometrics, and stable carbon ($\delta^{13}\text{C}$) and nitrogen ($\delta^{15}\text{N}$) isotope values. This work reveals the range of optimal and tolerable watering availability for this sleeping crop and sets the stage for impending investigations of sister crops, including sumpweed (*Iva annua*), erect knotweed (*Polygonum erectum*), little barley (*Hordeum pusillum*), and maygrass (*Phalaris caroliniana*). This study establishes the relationship between stable isotope values and water availability, giving meaning to the testing of archaeological stable isotope values. These data will better inform future paleoethnobotanical studies of Cahokians' agricultural management of the sleeping crops. Previous growth experiments have been undertaken with these plants, but none have directly considered the effects of varying water availability.

Yousofi, Farahnosh [79] see Mink, Philip

Yu, Pei-Lin (Boise State University)

[217] *The Persistent Upper Paleolithic and Early Neolithic of Taiwan: Archaeological Considerations for Mutualistic Relations*

The Neolithic onset in Taiwan is marked by rapid development of sedentized villages overprinted on a scanty Paleolithic archaeological record. Skeletal evidence of hunter-gatherers of Taiwan indicates at least two distinct populations who negotiated territories and resource access with arriving farmers. Today, several Indigenous Taiwanese verbal traditions describe prolonged coexistence with “small dark” hunter-gatherers.

Elsewhere in SE Asia, ethnographically documented mutualistic relations between hunter-gatherers and small-scale cultivators offer an interesting frame of reference for the hypothesis: rather than extirpation, some of Taiwan's hunter-gatherers entered into mutualistic relations with farmers that exchanged forager goods and services with cultivars. This paper outlines the current state of knowledge for archaeological correlates of mutualistic relations and implications for Taiwan.

Yu, Weiting (Stanford University)

[30] *A Toast across Time: Investigating Yangshao Period Alcohol Production and Consumption at the Xipo Site in Henan, China*

The Xipo site (ca. 3600–2900 cal BC) is a Yangshao culture settlement featuring large public buildings and a cemetery (late phase) that provides evidence of emerging social stratification. A previous study identified evidence of *qu*-based brewing with large-mouthed vats at the cemetery. It remains unclear if this brewing method was already practiced prior to the cemetery phase and the introduction of large-mouthed vats from eastern regions. My study examined *jiandiping* amphorae sherd residues from a trench feature to study brewing across all phases. The trench could have been where people dumped feasting refuse from the large public houses. Results suggest that brewing with rice and millets was practiced since the early phase; the remains of *Monascus* fungus was found in samples from early and middle phases, indicating that people already used *qu* starters prior to the cemetery phase. This study also introduces the perspective of sensorial assemblages to study Xipo feasting assemblages. While a previous study proposed the model of competitive feasting, I argue that the politics of feasting may have worked through conviviality besides the creation of differences and hierarchy, and that feasting may have had the power of bringing people together since the site's early phase.

Yu, Yanyan

[263] *Population Responses to Climate Change in the Boundary Areas of the Dryland in East Asia Since the LGM*
Drylands, the most climate-sensitive terrestrial regions, currently support more than 38% world's population. Understanding long-term population responses to climate change in and around these areas provides critical insights for anticipating future societal challenges. We integrate radiocarbon-dated archaeological records, simulated climatic data, the Minimum Terrestrial Resource Model (MTRM), and pollen-based vegetation reconstructions to examine spatiotemporal variations in dryland boundary, population distribution, potential hunter-gatherer density, and plant and animal resource densities in East Asia at four key periods since the Last Glacial Maximum (LGM) (20–19 ka, 15–14 ka, 10–9 ka, and 6–5 ka). From 20–19 ka to 15–14 ka, continued warming and humidification drove a northwestward retreat of the dryland boundary, sustained steppe ecosystems, and increased wild animal food resources richness, fostering population growth and expansion. From 15–14 ka to 6–5 ka, continued climatic amelioration promoted a vegetation transition from steppe to forest in boundary areas of the dryland, decreasing wild animal resource availability and shifting population centers toward more humid regions in the southeast. This ecological transformation coincided with the emergence and intensification of agriculture. These results demonstrate a cascading mechanism in which climate change reshaped vegetation cover and food resource distribution, driving human adaptation and long-term shifts in population geography.

Zanotto, Hannah [312] see Vázquez López, Verónica

Zaragosa, Gabriella, Kathleen Jenkins, Alayna Jordan, Anthony Herrera, and Kathryn Sloan

[114] *Paving the Way: An Analysis and Conservation of the Adobe Pavers at the Alamo*

Archaeological excavations at the Alamo have yielded several archaeological features, including prepared surfaces. During recent excavations north of the Alamo Church, archaeologists encountered in situ adobe pavers. The presence of these adobe pavers presented unprecedented opportunities to analyze the material composition and implement conservation methods to preserve them in place. To expand on the material composition of the adobe pavers, a portable X-ray fluorescence (pXRF) was employed to analyze the adobe used at the Alamo. Additionally, the artifacts associated with the adobe pavers have provided a temporal context of the adobe pavers likely within the late mission period due to the presence of Puebla Blue on White II and Huejotzingo Wavy Band ceramic sherds; both of which date between 1775 and 1825. Shortly

after archaeologists encountered the adobe pavers, the pavers began to crack due to the exposure from the natural environment. This promptly resulted in the application of an acrylic solvent by Alamo conservators as a preventative measure to halt additional deterioration. Both the material composition analysis and conservation methods of the adobe pavers will expand our knowledge of adobe use and construction practices during the mission occupation at the Alamo.

Zarco, Jesus (UNAM)

[167] *Climate Change and Cultural Variability on the Pacific Coast of Baja California: Confronting Paradigms through the Study of Lithic Technology of Prehistoric Groups*

Traditional cultural ecological models of Baja California attribute to the paleoclimatic variability of the Holocene a causality for the processes of social complexity that occurred among prehistoric groups. The models assume that climate change affected environmental productivity and ecosystem succession, impacting on the subsistence strategies, social organization, and technology of these groups. Since stone artifacts are the best preserved and most direct correlate of the way in which prehistoric groups interacted with the environment, their study from a behavioral approach allows us to understand the behavior of these groups in response to past climate changes. This presentation contrasts the Baja Californian paradigm that climate change had severe consequences on the cultural variability of prehistoric groups by studying lithic assemblages found in multiple archaeological occupation on the coast of San Quintín.

Zavodny, Emily [305] see Hausdorf, Cassie

Zeanah, David (California State University Sacramento), and Elic Weitzel (Smithsonian National Museum of Natural History)

[95] *Population Dynamics, Niche Construction, and Small Seed Intensification in the Eastern Agricultural Complex: Three Case Studies*

Whether small seed cultivation and domestication in the Eastern Agricultural Complex resulted from resource enhancement through population-induced intensification or niche construction in the absence of intensification remains a long-standing question. In an earlier analysis of macrobotanical assemblages from three regions in the eastern United States, surges in walnut shell—an indicator of anthropogenic fire mosaics—were shown to correlate with evidence of small seed cultivation. This pattern was consistent with predictions that seed cultivation would have become economically worthwhile as population circumscription constrained mobility, suggesting that foragers intensified their use of local, anthropogenic vegetation communities as populations grew, thereby stimulating the development of horticultural economies. However, population growth was only generally inferred from regional archaeological interpretations. Here, we use summed probability distributions of radiocarbon dates to directly examine demographic trends in each of the three regions. Comparison of these demographic proxies with the macrobotanical evidence supports the argument that niche construction and seed use intensified as population circumscription constrained mobility.

Zedeño, María Nieves (University of Arizona)

[38] *Expressions of the Self: Understanding Cognition through Bodily Adornment*

Bodies are the ultimate canvas of self-expression. They can reflect a range of individual thoughts and feelings, from pride to fear, as well as broadly shared cultural principles and social mores. In this paper I reflect on a range of material culture used in the Great Plains to exert rituals of self-expression. From philosophical principles that guide bodily ornamentation to the travails of intercultural struggle to express (or mask) one's cultural identity, I attempt to understand the relationship between tradition and European innovation in bodily adornment and to reveal how loss of expressive freedom has been compensated with creative solutions deployed by tribal reservation residents to hide, modify, and ultimately revitalize rituals of the body.

Zelevnik, Scott [355] see Whittington, Stephen

Zender, Marc (Tulane University)

[92] *Reading Maya Art*

Maya art is a rare and complex combination of linear elegance and naturalism, blended with a densely coded,

language-based symbolism. Decorated objects, ranging from painted vases and carved ornaments to towering stone monuments and building façades, bear the traces of a symbol system that, while endlessly fascinating, can make an understanding of these images daunting to the uninitiated. In this paper, I draw on several pathbreaking studies by David Stuart and my own book, *Reading Maya Art: A Hieroglyphic Guide to Ancient Maya Painting and Sculpture* (co-written with Andrea Stone), to focus attention on several hieroglyphs that are also the building blocks of much of Maya art. It will be seen that these symbols touch on key facets of the Maya world, from the natural environment (animals, plants, geography, and the heavens) to the mental landscape of gods, myths, and ritual. Further, both intentional design and widespread convention undergird this use of Maya signs, allowing them to be “read” and appreciated both linguistically and symbolically, even as scribes innovated novel means of sign-incorporation and sign-development over centuries of art and writing across the Maya lowlands.

Zeng, Baodong (Jingdezhen Ceramic University), and Liangren Zhang (Nanjing University)

[299] *Interregional and Intraregional Interactions among the Hami Population in Eastern Xinjiang during the Prehistoric Period: Insights from Pottery Analysis*

During the prehistoric period in Hami, located in eastern Xinjiang, China, the fusion of populations from surrounding regions with local inhabitants gave rise to the Tianshanbeilu Culture, Yanbulak Culture, and Barkol Steppe Nomadic Culture, which has riveted the attention of scholars. This paper aims to test the thesis by analyzing the chemical composition, petrographic characteristics, and painted pigments of 314 pottery samples from 11 archaeological sites. Examining the origins, distribution, and production techniques of this pottery reveals how the Hami population interacted and integrated within and across regional boundaries. The research indicates the existence of four major pottery production zones in Hami. Interregional pottery interactions occurred through the trade of finished products, the transportation of raw materials, or technical exchange, with instances of commissioned and imitated pottery within the region. Pottery excavated from different sites clearly exhibits local versus external origins. The research also indicates no direct pottery exchange between the Tianshanbeilu Culture and the Xichengyi Culture of the Hexi Corridor; the similar style of pottery wares between the two sites may have resulted from population migration and technological exchange. Finally, the authors briefly explore the impact of the pottery trade and human interaction on production specialization and social complexity.

Zhan, Xiaoya [216] see Berger, Elizabeth

Zhang, Chenyang (School of Archaeology of Jilin University)

[106] *Discussion on Seasonal Settlement of Late Yangshao Sites in the Huangqihai Region*

The Huangqihai region, situated in south-central Inner Mongolia, represents a significant settlement area from the Late Yangshao period. This study examines the subsistence and economic strategies employed at the Miaozigou and Dabagou sites, revealing that while agricultural practices were evident, the increasing aridity and cooling climate prompted a heightened dependence on hunting and gathering. This research posits, for the first time, the presence of seasonal settlements during the Late Yangshao period in the Huangqihai region: the Miaozigou site is identified as a summer central settlement primarily engaged in agricultural production and gathering, whereas the Dabagou site is characterized as a winter hunting camp. Through a thorough and detailed analysis of the residential structures at these two sites, this study investigates the viability of seasonal settlement patterns from various perspectives, with the objective of elucidating the lifestyles of prehistoric inhabitants and their environmental interactions. Additionally, the research offers a constructive examination of the methodologies and approaches required to further explore the specific characteristics and significance of such settlements.

Zhang, Li

[65] *Erlitou as a Migrant City: Population-Relocation Policies of the Erlitou State and Their Historical Significance*

This study reexamines Erlitou in light of recent debates on early urbanism. Archaeological evidence shows that the formation of the Erlitou capital and the urbanization of the Luoyang Basin were driven by large-scale, diverse migration. Migrants came not only from within the Songshan cultural zone but also from distant regions such as the Yangtze River basin, often as a result of political relocation—an antecedent of later Qin–Han resettlement policies. The Erlitou case demonstrates how archaeology, through material evidence, offers

an independent historical narrative that both complements and challenges traditional textual accounts, while contributing to global discussions on the political and anthropological dimensions of early cities.

Zhang, Liangren [299] see Zeng, Baodong

Zhang, Mengtong

[209] *Identifying Neighborhood Relationships through Pottery-Making Traces*

Research on pottery production methods has long been a focus of archaeological inquiry; however, studies that utilize traces of pottery manufacture to explore social relationships among users within ancient communities remain relatively scarce. The Yuchisi site, a well-preserved Neolithic settlement in Anhui, China, offers an exceptional context for such investigation, with numerous intact house foundations and a substantial quantity of unearthened pottery. This study aims to examine potential social interactions and kinship ties among residents across different dwellings by systematically analyzing and quantifying variations in pottery size and manufacturing techniques from household contexts at Yuchisi. Currently, preliminary identification of the manufacturing traces on the small ceramic cups has revealed three distinct production techniques, suggesting the existence of three distinct pottery-forming traditions. Further analysis is now underway to examine their spatial distribution within the settlement, aiming to explore the relationship between the consumers of these cups—the inhabitants of the houses—and the technological traditions observed.

Zhang, Weixing [258] see Wu, Rubi

Zhao, Haitao (Institute of Archaeology, CASS)

[65] *Multi-grid Layout and the Structure of the Erlitou State and Kingship*

In recent years, excavations at the Erlitou capital have revealed a multi-grid layout organized by major thoroughfares and flanking walls, which subdivide the city into distinct functional zones. This scheme reflects a hierarchical urban plan integrating perimeter enclosures, residential and mortuary spaces, and ritual installations. At its center lies the palace district, encircled by ritual precincts, elite residential-burial zones, and state-run workshops. The spatial configuration demonstrates a strong centripetal order, articulating a tiered system of zoned control centered on the palace city. The centrality of the palace complex, together with the surrounding noble compounds, underscores the supreme status of royal authority within the capital. The establishment of functional divisions and grid-based management reflects a deliberate and coherent planning strategy, testifying to the ruling elite's advanced administrative capacities and governing system. This meticulously ordered capital plan embodies the Erlitou state's rigid social hierarchy and centralized organization. It constitutes the clearest marker of Erlitou's transition into a dynastic polity—one that foreshadows the urban models of the Shang capitals—and demonstrates both the early consolidation and the enduring impact of royal authority in early China.

Zheng, Xinyuan [221] see Pacheco-Forés, Sofía

Zhong, Lingbi [266] see Ford, Anabel

Zhou, Zhiqing (Chengdu Institute of Cultural Relics and Archaeology)

[261] *Sanxingdui and Jinsha: Legacy of Ancient Shu*

Sanxingdui and Jinsha served as the political, cultural, and economic centers of the Chengdu Plain during the Bronze Age. Their well-organized urban layouts, advanced theocratic systems, and unique strategies of resource control shaped the distinctive identity of the Ancient Shu civilization. They represent not only the grandeur of Bronze Age cities in the upper Yangtze River region but also stand as exemplary models of Yangtze River culture. Jinsha was both a continuation and an evolution of Sanxingdui's theocratic tradition. After the seventh century BCE, the decline of the Jinsha urban center foreshadowed the rise of new values, new social orders, and the transition toward monarchic states. Together, Sanxingdui and Jinsha vividly demonstrate the development and transformation of theocratic society in the Chengdu Plain, marking the peak of Ancient Shu civilization. Their cultural achievements embody the richness and depth of ancient Chinese civilization and remain an integral part of the world's cultural heritage.

Zhou, Zhiqing [261] see Lin, Kuei-chen

Zhu, Ruoyu (University of Florida), and Gabriel Prieto (University of Florida)

[30] *Feasting and Ceremony in Late Early Horizon Huanchaco (400–200/150 BCE), Moche Valley, North Coast of Peru*

Located in the Huanchaco Bay area of the Moche Valley, north coast of Peru, the sites of Pampa La Cruz (PLC) and José Olaya–Iglesia Colonial (JO-IG) represent contemporaneous Salinar occupations (La Iglesia phase in Huanchaco) dated to 400–200/150 BCE (late Early Horizon). Distinct from earlier Cupisnique/Chavín traditions, Salinar society was marked by community-based rituals, long-distance exchange, and new forms of political competition, with feasting and ceremony central to power reconfiguration and identity formation. In this paper, we present zooarchaeological analysis of mammal remains from PLC and JO-IG to investigate communal rituals and feasts in a coastal community of long-term maritime adaptation. We identify camelids as critical food and ritual resources, alongside pinnipeds and other marine mammals. We also highlight spatial variation in animal uses between PLC (open plaza and “elite” household) and JO-IG (cemeteries and U-shaped structure). These differences reflect distinct ritual purposes and scales of participation. In light of zooarchaeological and contextual evidence, we argue that local fishing communities integrated both exotic and local elements into feasting and ceremonial events, by which they positioned themselves as active participants in reshaping power, identity, and community in a regional social transformation.

Zhu, Shi Jie (Yale University)

[220] *Social Differentiation through the Lens of Pottery Production and Foodways at Liangchengzhen and Dinggong in China*

While the emergence of social complexity and processes of urbanization have long been argued for Longshan period sites in the Shandong area of China, changes in ceramics production and consumption over time, which could provide alternative perspectives on how such social processes took place, have rarely been systematically studied at individual sites. This presentation draws on ceramic evidence from the Longshan sites of Dinggong and Liangchengzhen in Shandong, combining compositional, morphological, and use-wear analyses to examine chronological changes in the production of different pottery types, as well as shifts in food practices as revealed by patterns of pottery consumption. This investigation offers a distinct opportunity to discuss the possible roles that ceramic production and consumption played in the emergence of social differentiation at the two sites.

Zhuang, Lina (National Museum of China)

[226] *Archaeological Observations on the Paleolithic–Neolithic Transition In North China*

The Paleolithic–Neolithic transition is one of the important topics of concern in the archaeological field. Various signs indicate that there is a transitional period for the Paleolithic–Neolithic transition in North China. This transitional period began around the Last Glacial Maximum, when Neolithic cultural elements gradually emerged. By the early Holocene, marked by the appearance of domesticated crops and animals, the transitional period came to an end. This paper starts with several aspects such as technology, settlement patterns, utilization of animal and plant resources, and art and population changes; summarizes the changes in the adaptive behaviors of ancient populations in North China under the influence of climatic events in different periods; and then observes the whole process of the Paleolithic–Neolithic transition in North China. The Paleolithic–Neolithic transition in North China is a process in which humans continuously adjusted their adaptive behaviors under the influence of multiple climatic events since the Last Glacial Maximum. In this process, there were superimposed effects of climatic events as well as human active choices. Stable agricultural societies gradually formed in the middle and lower reaches of the Yellow River, while hunting and gathering populations still occupied the northern and western parts of North China.

Zieschang, Lizz [228] see Cook Hale, Jessica

Zikidi, Claire [297] see Hannigan, Elizabeth

Zilke, Emma**[83] *Human-Animal Relationships at a Seventeenth-Century Colonial Maine Site***

In this presentation I will discuss the results of the faunal analysis from the Abraham Preble Homestead site in York, Maine. This site dates to the seventeenth and early eighteenth centuries and is located within the historic homestead of Abraham and Judith Preble and their descendants. Through an analysis of the husbandry practices at this farm I contribute to our larger understanding of the interspecies dynamics of subsistence and colonization in early colonial New England. The Prebles, like many early colonists, relied on farming and livestock for their subsistence needs. This would have been true for the first Preble generation as they set up their farmlands and raised animals, and it was also true for the second Preble generation during the economic distress following the York Candlemas Massacre of 1692. While the Prebles procured some wild game through either hunting or trade, they relied most heavily on their cattle, pigs, and sheep. Using the zooarchaeological data I will discuss what these livestock populations were like and how they were cared for. Through faunal analysis, I explore the relationships that the Prebles, and by extension other rural New England colonists, had with these animals that were so important to their survival.

Zimmer, Paul [334] see Atherton, Heather

Zimmer-Dauphinee, James (Vanderbilt University), Junlin Guo (Vanderbilt University), Yuankai Huo (Vanderbilt University), Nathaniel VanValkenburgh (Brown University), and Steven Wernke (Vanderbilt University)

[281] *Bigger Is Better? Evaluating Foundation Models for Continental-Scale AI-Assisted Satellite Imagery Survey in the Andes*

The disparity between the geographic scale of past human activity and that of archaeological research projects presents significant challenges. In the Andes, Tawantinsuyu (the Inka Empire) covered approximately two million km², while most pedestrian surveys in the region cover less than 1,000. Archaeological surveys using high-resolution satellite imagery can augment local perspectives, providing broader views of the “connective tissue” between disparate field projects. Nevertheless, manual survey of satellite imagery is labor-intensive. AI-assisted survey can better harness human expertise by allowing us to devote our attention to observing features rather than searching for them, while also mitigating errors caused by observational fatigue and repetitive work. To enable continental-scale AI-assisted archaeological imagery survey, we utilized the computational power of the Frontier supercomputer at Oak Ridge National Laboratory to train a custom AI foundation model using the DINOv3 framework by ingesting ~two million km² of Worldview-2 and Worldview-3 satellite imagery spanning Andean South America, with additional geographic data. We fine-tuned the resulting foundation model and the off-the shelf DINOv3 model with manually labeled datasets to detect archaeological features. We compare the results of these models to previous efforts and discuss the impact of AI-Assisted satellite imagery survey on archaeological perspectives.

Zimmermann, Mario (Boise State University), Lilia Fernandez Souza (Universidad Autónoma de Yucatán), and Rafael Cobos (Universidad Autónoma Yucatán)

[354] *A Forgotten Ancient Crop and Its Use at Chichen Itza, Yucatán, Mexico*

Paleoethnobotany has seen a significant increase in research output and public attention over the last couple of decades. This broader development within archaeology has had a positive impact on Maya scholarship. More and more projects establish collaborative ties between researchers and communities to better understand topics such as land-use changes, adaptations to changing environments, or the impact of economic forces on farmers. Spurred by archaeological discoveries, one aspect that has garnered attention is crop diversity and, more specifically, records of cultivars that have fallen out of use. Research in this area focuses both on the role of these plants in the past, as well as their potential for Maya farmers in the present and future. In this paper, we will discuss one such case documented at the northern lowlands center of Chichen Itza. Through microbotanical analysis, we collected data to examine anomalies in both taxonomy and use alterations.

Zimmermann, Mario [166] see Richards, Katie

Zipkin, Andrew (Eurofins EAG Laboratories), and Gideon Bartov (Eurofins EAG Laboratories)

[209] *Ochre Source Discrimination by Elemental Fingerprinting with Glow Discharge Mass Spectrometry*

Provenience analysis of archaeological ochre pigments can shed light on ancient mineral resource exploitation practices, transport and trade networks, and the use and reuse of rock art sites over time. As a prerequisite to such analyses, researchers must demonstrate that inter-source compositional variability is greater than intra-source variability (i.e., the Provenience Postulate). Measuring as many chemical elements as possible, with the greatest sensitivity possible, provides the most options for identifying a combination of variables that can uphold the postulate. This work proposes that Glow Discharge Mass Spectrometry (GDMS) with a plasma-supporting holding cathode is the optimal technique for this application. We used Nu Instruments Astrum GDMS instruments to characterize three southern African ochre sources of archaeological interest with a standard-less, relative sensitivity factor-based approach to measuring trace elements. This technique yielded conservative reporting limits ranging from 0.01 parts per million (ppm) to 5 ppm, maximizing the number of elements with no below detection limit (BDL) observations. Using ppm concentrations with no data transformations or replacement of BDL observations, we were able to discriminate among the three sources with simple two element biplots (B vs. Sc and Ni vs. Sm) as well as with multi-element Principal Components Analysis biplots.

Zoeller, Gretchen [216] see Wilson, Jeremy

Zori, Colleen (Baylor University), and Davide Zori (Baylor University)

[177] *An Argument for the Intentional Destruction of the Medieval Castle of San Giuliano (Lazio Province, Italy)*

The medieval castle of San Giuliano, located 75 km northwest of Rome in Lazio province, was occupied AD 1000–1300. Situated in a rugged landscape of volcanic plateaus and ravines, this hinterland site stood at the crossroads of competing political forces that included the Papal States, Holy Roman Empire, powerful aristocratic families, and emerging self-governed communes. This paper examines the site's defensive architecture: walls, gates, dry moat, and a prominent tower. I will argue that these defensive features and an associated hall were deliberately destroyed in the final quarter of the thirteenth century. This included a calculated dismantling of the hall and the directional collapse of the grand tower in such a way that the entry into the family chapel was blocked. While no known contemporary texts directly document the conflict that led to the San Giuliano castle's destruction, I propose several plausible historical contexts, ranging from the expansion of nearby Viterbo's *contado* (hinterland) to territorial disputes and power struggles involving powerful elite families that included the Orsini, the Prefect of Vico, and the Anguillara. By integrating archaeological evidence with regional political history, this study provides insight into the dynamics of territorial control and symbolic violence in medieval Italy.

Zori, Colleen [302] see Grimes, Vaughan

Zori, Davide [177] see Zori, Colleen

Zovar, Jennifer (Whatcom Community College)

[339] *Digging for Stories: Teaching Excavation in a Community College Introduction to Archaeology Class*

The idea of excavation often attracts people to archaeology, but traditionally students don't experience it until taking a field school later in their educational career. Getting archaeology students in the dirt from the very beginning is a good way to engage their interest and ground their theory in practice. However, teaching excavation skills at a community college with limited funding can be a challenge. Over the last 10 years, I have experimented with many ways to engage students in excavation as part of their regular introductory class. In this presentation, I discuss lessons learned and introduce my current practice, a mock excavation that is nondestructive and sustainable while encouraging student creativity. The exercise includes discussions about the ethics of archaeology and is modified to be accessible for students of any age or disability status, enabling all students to visualize themselves as field scientists. The discussion also makes connections between archaeology and other areas of study, which is especially important for students who are not majors. In my presentation, I draw on student surveys and interviews from the last year. Overall, students report high levels of engagement as they come to see how archaeological knowledge is created and why it matters.

Zovar, Jennifer [149] see Donahue, John

Zuckerman, Molly [196] see Bailey, Lydia

Zuniga, Belem [164] see Velazquez, Adrian

Zwyns, Nicolas [170] see McCartin, Madison

Zych, Boleslaw [276] see Palonka, Radoslaw