

finding ancient Maya houses and reconstructing households, and gratefully acknowledged his contribution to the founding of our own house.

[253] *Discussant*

Pye, Jeremy (University of Florida)

[67] *Lice, Lice Combs, and Human History*

Lice are ectoparasites and have likely parasitized man for millions of years. To manage an infestation, people often picked lice and eggs from the hair of others, or used fine tooth combs for removal. The earliest known lice combs date to around 1,500 B. C. in the Old World and their general form has changed very little since that time. Lice were once routine companions of people of all races and socio-economic classes until the mid-20th century when pesticides and improvements in sanitation and personal hygiene made lice infestations relatively rare in modernized countries.

Pyper, Laura [128] *see Horlacher, Jacob M.*

Pyszka, Kimberly (University of Tennessee)

[240] *unto Seynte Paules: Anglican Landscapes and Colonialism in South Carolina*

With the passing of the 1706 Church Act, the Church of England became the established religion in South Carolina. Ten parishes were created at the time, including St. Paul's Parish whose church and parsonage sites have been identified through archaeological investigations. Using St. Paul's as a case study, this paper focuses on the Church's role in the development of the colony. Through the landscape it helped construct and the social functions of St. Paul's Church and parsonage house, the Anglican Church helped transform South Carolina from a struggling frontier colony to one of the wealthiest colonies in the New World.

Qin, Zhen (Washington University in St. Louis) and Tristram Kidder (Washington University in St. Louis)

[6] *Geoarchaeological Investigations at Sanyangzhuang, Henan Province, China*

Research at Sanyangzhuang, including excavation of two 12-m deep profiles, shows that the Yellow River floodplain was marked by episodes of stability indicated by six well-developed paleosols, alternated with episodes of large-scale flooding. We explore environmental and archaeological evidence from these paleosols, the oldest of which dates to the Early Holocene. Flood events provide exceptional preservation during the later Holocene, revealing buried fields, architectural details, and remains of daily life. We reconstruct the flood that buried the site in late Western Han times and discuss how this event altered the political and demographic history of China.

Quates, Duane (U.S. Army, Fort Drum, NY) and Michael Sprowles (ORISE / U.S. Army Installation, Fort Drum, NY)

[99] *The Magic Box and the Gravestones of the Displaced: Using Remote Sensing for the Enhancement, Inventory, and Public Investment of the Historic Fort Drum Cemeteries*

With over 500 families displaced by the 1940s DoD expansion of Fort Drum, NY, the 13 known historic cemeteries are the most poignant reminders of the thriving communities that once lived there. In 2011, the

Fort Drum Cultural Resources Program embarked upon several projects aimed at strengthening community relations. These projects were initiated to further define and identify these significant resources through remote sensing, create an inventory for genealogical research and resource management, and enhance the cemeteries for public use. This paper discusses what these projects entail.

Quave, Kylie (Southern Methodist University), Gabriela C. Bertone (Universidad Nacional Mayor de San Marcos), Li Jing Na (Universidad Nacional Mayor de San Marcos) and Paula Espósito (Universidad Nacional Mayor de San Marcos)

[166] *Royal Maize, Common Cuy? Authority and Identity on the Inka Royal Estate (Cuzco, Peru)*

Studies of Inka diet and cuisine often turn to ethnohistorical modeling and analysis of pottery as culinary equipment. Systematic analyses of macrobotanical and faunal remains are demonstrating the variability and complicated relationships between authority, identity, and status. At Cheqoq, a royal estate settlement near Cuzco, we address household-by-household access to food in comparison with production and distribution regimes. We ask how elite and state cuisine emerges in daily practice or not. What are the implications for forming an imperial identity and how is power exercised over subaltern groups attached to the nobility, as at Cheqoq?

Quave, Kylie [141] *see Kennedy, Sarah*

Quick, Russell (Cultural Resource Analysts, Inc.), Randall Cooper (Cultural Resource Analysts, Inc.), Paul Bundy (Cultural Resource Analysts, Inc.), Andrew Bradbury (Cultural Resource Analysts, Inc.) and Jason Anderson (Cultural Resource Analysts, Inc.)

[90] *New Solutions to the Oldest Problem: Doing more with less in the New Economy*

Over the last thirty years, excavation budgets have decreased alarmingly. During the same period, computers have become increasingly compact and powerful. For CRM and research archaeologists, use of digital data recorders and electronic databases allows researchers to streamline data recovery and improve work flow by decreasing errors and avoiding replicated data entry. CRA's evolving tool kit integrates GPSs and digital data collectors with flexible relational databases into a system that efficiently uses resources by increasing data consistency, providing timely data updates to multiple analysts, improving excavation strategies, allowing more time for analysis, and resulting in a better end product.

Quick, Russell [127] *see Martin, Andrew V.*

Quilter, Jeffrey (Peabody Museum, Harvard University) and Daniel Sandweiss (University of Maine)

[86] *Prehistoric Sustainability on the Peruvian Coast*

As a tropical desert with at least 13,000 years of human occupation ranging from hunter-gatherer-fishers to complex states and empires, the coast of Peru is a good setting to study prehistoric sustainability. At a millennial to centennial scale, data indicate that recognizable social

formations rose and fell. Nevertheless, these data raise questions about sustainability: what is the effect of time-averaging on the archaeological perception of sustainability? What should be the scale limits (temporal, spatial, demographic) of variability--that is, how much flux is still considered sustainable? We address these questions in the Peruvian context.

Quimby, Claire (Indiana University)

[125] *Alternative Approaches to Writing Indigenous Archaeology*

In recent years indigenous archaeology has increasingly embraced multiple viewpoints and alternative ways of interpreting the past, while maintaining its academic rigor. The conventions of traditional academic writing, however, can encumber attempts to take a multivocal approach within a single text. Alternative forms of writing offer a potential solution to this problem for the writer who is willing to experiment with technology, format, and style. In this paper I will explore some of these alternatives, their benefits, and their potential obstacles or weaknesses.

Quinn, Allen [84] *see Pedler, David*

Quinn, Colin (University of Michigan) and Horia Ciugudean (Muzeulul National al Unirii - Alba Iulia)

[83] *The Bronze Age Landscape of Southwest*

Transylvania: Regional Patterning and Dynamics

Metal production played a significant role in changing technological, economic, ritual, and social systems in Bronze Age Europe. During this period, the ore producing region of Southwest Transylvania (Alba, Romania) likely was a key locale within larger macro-regional systems. This poster synthesizes the current data on regional land use and applies spatial analytical techniques to explore landscape dynamics in Southwest Transylvania during the Early and Middle Bronze Age. This diachronic regional perspective can elucidate social, economic, and ritual organization in Southwest Transylvania during a period of dynamic changes in social complexity, metal production, and use of metal throughout Europe.

Quirk, Laura (Conestoga College)

[230] *The Ghosts in their Closets: Revisiting the Catholic Cemetery at Indiana, Ontario*

The question of what a community remembers and what it tries to forget is a topic that is well illustrated by the town of Indiana, Ontario. It was a rural industrial town of the 19th century and amongst the many buildings in the town, there stood a Catholic Church and cemetery. Today all that remains of the town is one house, the Catholic cemetery and a few scattered archaeological traces. My paper will focus on those who sought to remember the history at Indiana and consider why there were political and cultural barriers in bringing that history to light.

Raczek, Teresa (Kennesaw State University) and Namita Sugandhi (Indiana University NW, Gary)

[211] *Mitigating Impact and Maximizing Research:*

Creative Excavation at Chatrikhera, Rajasthan, India
Conducting archaeological fieldwork in the midst of currently occupied areas poses a number of logistical, methodological, and ethical challenges. Many methods

developed to address these challenges have been generated for urban settings. Such methods include collaborating and consulting, selecting excavation areas carefully, and modifying excavation techniques appropriately. However, archaeological research in rural settings poses its own unique set of issues. This poster will present the excavation strategies employed by the Chatrikhera Research Project (CHARP) to maximize excavation efforts while minimizing impact during its initial excavation season at Chatrikhera, a vibrant village community in Rajasthan, India.

Rademaker, Kurt (University of Maine) and Dan Sandweiss (University of Maine)

[231] *Functional Variability in Early Lithic Technologies of Southern Peru*

Southern Peru contains a robust early archaeological record, with well-dated Terminal Pleistocene and Early Holocene sites on the Pacific Coast and in various eco-zones in the adjacent Andean interior. Early coastal and highland sites have starkly contrasting lithic technologies, with predominantly unifacial and expedient industries at the coast and bifacial projectile-based assemblages in the Andes Mountains. Does early technological variability in Peru signify cultural diversity during colonization? We examine connections between lithic technology, subsistence remains, and environmental data from early sites and suggest that variability in early lithic technologies may be determined by site function.

[231] *Second Chair*

Raes, Amy [166] *see Springate, Megan*

Rafferty, Janet (Mississippi State University) [241]
First Chair

Rafferty, Janet [241] *see Peacock, Evan*

Rafferty, Sean (University At Albany, SUNY)

[121] *Prehistoric Intoxicants of the Americas*

The use of intoxicants was widespread in prehistoric North and South America. In this paper I briefly summarize archaeological evidence for the use of a variety of intoxicating substances in a variety of prehistoric Native American contexts. Data includes botanical, artifactual and chemical evidence. In my conclusions I suggest some promising avenues of future research.

Rafuse, Daniel [96] *see Gutierrez, Maria A.*

Ragsdale, Randi [150] *see Leventhal, Richard M.*

Railey, Jim (SWCA - Albuquerque)

[183] *Lithics and Mobility: A Case Study from the Albuquerque Basin Late Archaic*

The Late Archaic in the Southwest was a mosaic in which the beginnings of intensive farming occurred alongside continued, highly mobile hunter-gatherer economies. This includes the Albuquerque Basin, where early farming became established along the river valleys, while some groups may have continued to follow a more mobile, hunter-gatherer lifeway. To explore this potential diversity, lithic assemblages from several Late Archaic components in the Albuquerque Basin are compared along multiple dimensions, including lithic-category

representation, specific tool types, raw material usage, and debitage-assemblage characteristics. The patterning suggests both residentially mobile and more logistical strategies were pursued by local Late Archaic groups.

Rainey, Katharine (Archaeobotanical Consultant), Karen Adams (Archaeobotanical Consultant) and Rein Vanderpot (Statistical Research, Inc.)

[35] *Archaeobotanical Remains from the Mescal Wash Site, Southeastern Arizona*

The Mescal Wash Site in southeastern Arizona, occupied from about 1200 B.C. to A.D. 1450, is a good example of a persistent place. Flotation and macrobotanical remains from the site along Cienega Creek were examined to discern temporal changes in plant use, plant availability, occupational seasonality, and spatial variation of plant use. The Mescal Wash inhabitants consistently supported themselves with a variety of wild plants and maize, and utilized a variety of woody plants. As a place used by different groups over a long timespan, Mescal Wash appears to have been used in a sustainable manner over its entire lifespan.

Rakita, Gordon (University of North Florida)

[116] *Casas Grandes Mortuary Practices: Patterns, Perspectives, & Processes*

In this paper, I describe the mortuary practices for the Casas Grandes region of Chihuahua, Mexico using a long-term, temporal perspective. Doing so allows me to draw attention to mortuary practices with deep tradition and those which are more idiosyncratic to places and periods. I focus on both modal burial patterns and the diversity in mortuary practices for the region. Additionally, I highlight those aspects of ancient Casas Grandes mortuary ritual that are amenable to comparison with similar rituals throughout the American Southwest.

[59] *First Chair*

Ramenofsky, Ann (University of New Mexico)

[241] *Reassessing Native Population Change and Introduced Diseases*

Anthropology at UW was the crucible for the investigation of native demographic change from disease introduction. Prior to the 1980s, the issue had not been widely investigated archaeologically even though we knew that population size or density was a significant variable in any explanation of cultural change. Over the past 25 years this issue has been extensively researched, and positions range from no disease effect to massive disease sweeps. Here the issue is revisited: Native population change varies temporally and spatially, affected by factors of geography, native settlement strategies, invader population composition, and the elusive nature of microbes.

Ramírez, Felipe [73] *see Pastrana, Alejandro*

Ramírez Barrera, Sandra Liliana [210] *see Matadamas Díaz, Raúl*

Ramirez Valencia, Víctor Manuel [58] *see Martín Medina, Geiser G.*

Ramon Celis, Pedro (Pedro Guillermo Ramon Celis)
[210] *El palacio de los seis patios, nuevas exploraciones y datos relevantes de Yagul en la cronología del*

Posclásico Tardío

Yagul es un sitio con una ocupación muy importante en el periodo Posclásico, este momento de la historia prehispánica ha sido definido con el transcurso de los años a través de investigaciones que generaron diversas cronologías para explicar el desarrollo social del Valle de Oaxaca. Durante el año 2011 fueron realizadas exploraciones en la Plataforma del Palacio de los Seis Patios en Yagul, en las cuales fueron localizadas diversas etapas constructivas de su edificación. Los resultados de los análisis del material localizado ayudarán con el conocimiento de un momento clave dentro de la dinámica social del Valle de Oaxaca.

Randall, Asa (University of Oklahoma) and Kenneth E. Sassaman (University of Florida)

[199] *Assembling the Past Now for the Future: Florida's Archaic Mounds and History Making*

Archaic (ca. 7300-4000 cal BP) mounds of Florida's St. Johns River basin were composed variously of substances (earth, shellfish and animal remains), objects, ancestors, and other places by diverse communities. Far from refuse disposal, the ongoing acquisition and depositional assembly of these elements—each embedded within networks of meaning and significance—generated and remixed associations between historical narratives, present experience, and potential futures. In this paper we consider how these Past-Futures were alternatively gathered together in the course of ongoing social reproduction and mobilized as new histories in the context of culture contact and environmental change.

Ranere, Anthony (Temple University) and Patricia Hansell (Temple University)

[167] *Causes and consequences of Panama's first environmental crisis*

Small-scale societies living in Central Panama during the third millennium BP faced an environmental crisis of their own making; a deforested and eroded landscape that could no longer support the number of people living in the region under prevailing subsistence practices. This presentation documents the actions that took place in the preceding six millennia that led to this crisis and the cultural response that led to a solution and, ultimately, to the development of the complex societies described by chroniclers in the early 16th century.

[167] *Discussant*

Ranere, Anthony [128] *see Magnoni, Aline*

Rankin, Adrienne [222] *see Doyel, David E.*

Rasic, Jeff [112] *see Speakman, Robert J. [110]* *see Buvit, Ian*

Rasic, Jeffrey (National Park Service), Joshua D. Reuther (Northern Land Use Research, Inc./ University of Arizona) and Robert J. Speakman (Smithsonian Institution, Museum Conservation Institute)

[153] *Was Beringia a crossroads or turnstile? A look at long term patterns of human interactions through obsidian provenance data*

Beringia is often described as an important migration route and hub of human contacts between Siberia and

the Americas, but the history, intensity and nature of human movements and interaction across this key region is poorly known. Direct evidence is now available through geochemical sourcing of more than 9000 obsidian artifacts from 1000 Alaskan archaeological sites. Data show that since the late Pleistocene Siberian obsidian was transported to Alaska, but only infrequently, intermittently, and late in prehistory. We discuss ecological, demographic and economic reasons for this pattern and broader implications relevant to understanding the early colonization of the Americas.

Raslich, Frank (Michigan State University)

[64] *Testing Applications of LA-ICP-MS in Lithic Analysis*
Chemical characterization of regional raw material is valuable in understanding systems of resource procurement and exchange. The 1971 Historic Sites Survey resulted in an array of chert samples from the Central Illinois River Valley, providing an exceptional sample for geochemical analysis with the goal of creating a synthetic and comprehensive map of lithic outcrops and their chemical signatures. The repository collections were analyzed using Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS) to evaluate whether specific lithic outcrops displayed unique chemical signatures. This study tests the regional efficacy of this method while also addressing problems of intra-outcrop chemical variation.

Raslich, Frank [143] *see Johnson, William J.*

Raslich, Nicole (Michigan State University)

[143] *Artifact Analysis of Stone Street Burial Ground*
Temporally situating the Stone Street Burial Ground (20GS136) employing analysis using stylistic comparisons of associated funerary objects with known mortuary traditions throughout Michigan and the Great Lakes is the focus of this paper. Numerous ceramic, shell and lithic associated funerary objects were recovered over three field seasons, and were digitally imaged and then reburied. This analysis suggests that the burials are those of a (early?) Late Woodland population along the Flint River, contributing additional knowledge about Flint's pre-contact inhabitants and is also an example of the positive outcomes that result from collaboration with local indigenous communities.

Rautman, Alison E. [113] *see Puseman, Kathryn*

Raviele, Maria (Smithsonian Institution)

[184] *Winter, Spring, Summer, or Fall?: Palynological Evidence for Seasonal Mound Construction of Angel Mound A*

Recent work by Monaghan and Peebles (2010) at Angel Mounds (12VG1) revealed that construction of Mound A was rapid and likely planned. Pollen samples taken from small bore earth cores of Mound A provide greater context for both the local site environment and evidence related to the construction of Mound A. Results from the palynological analysis are discussed in the context of rapid mound construction.

Ravn, Mads [176] *see Denham, Sean Dexter*

Ray, Jack (Missouri State University)

[68] *Chert Hill: A Previously Undocumented High-Quality*

Chert Source in the Central Range of Trinidad

Chert Hill in the Central Range of Trinidad represents an important toolstone source for prehistoric Amerindians that is not well known in the archaeological community. A preliminary investigation in the vicinity of this chert source revealed sizable redeposited cobbles up to 10 cm in diameter, which is considerably larger than chert cobbles previously thought to exist in Trinidad. Analyses of raw material collected from the vicinity of Chert Hill and chert artifacts from an Amerindian component at the La Reconnaissance site in the Northern Range indicates that Chert Hill was an important lithic source for prehistoric Amerindians

Raymer, C. Martin (Kentucky Archaeological Survey)

[185] *Fort Ancient Settlement Dynamics: Village Establishment, Abandonment and Relocation*

Fort Ancient sites commonly exhibit more than one Fort Ancient component and village clusters reflect long-term repeated use of some localities. This poster examines regional spatial patterns of periodic abandonment and reoccupation of village sites and localities in the middle Ohio River Valley. Through an investigation of Fort Ancient settlement dynamics, we can gain a better understanding of the ecological, economic, social, and political factors that led to village abandonment and infer territorial boundaries, contested areas and buffer zones.

Razeto, Anna (University of Copenhagen)

[206] *Beyond Practical: Infrastructure in the Capitals of the Roman and Han Empires*

This contribution compares elements of the urban infrastructure of Rome and Chang'an. The provisioning of infrastructural facilities represents the most practical stage in the process of planning and construction of a city. However, these facilities did not only have practical functions, but could be imbued with sacred and ritual significance; be used as instruments of social control, political propaganda, or as markers of civic status. This paper focuses on wall circuits and gates, and on intra-mural road networks, concentrating on their material remains in Chang'an and Rome, their practical purposes, symbolism, and the reasons behind their existence.

Ready, Elspeth (Stanford University) and Eugène Morin (Trent University)

[144] *A reanalysis of ungulate indices*

Binford's utility indices, which apply the concept of diminishing returns to the analysis of skeletal patterning, are frequently used to interpret faunal assemblages. In this paper, we review criticisms of Binford's indices and identify some discrepancies in the calculations of many well-known indices developed by various authors. We used published anatomical data to correct for these discrepancies. The data also led us to develop new indices for bison, horse, and more particularly, sheep. Finally, we reanalyze some of Binford's Nunamiut data using these indices. The analysis suggests that "rider-averaged" indices may obscure rather than shed light on foraging behaviours.

Reber, Eleanora (UNC Wilmington)

[145] *Background Residues: Pottery Firing and Lipid Persistence*

Modern absorbed pottery residue analysis depends in part on the assumption that original soil lipids are burned

out of ceramic vessels to produce a blank slate in terms of residue analysis. Using this assumption, all lipids in a potsherd must derive from either vessel use or postdepositional interaction with soil lipids. In some cases, it appears that soil lipids from the original clay of a pot can persist throughout vessel firing and remain in the ceramic vessel, blurring the distinction between natural and anthropogenic lipids in an absorbed residue. Experimental production of pottery allows the investigation of this phenomenon.

[145] *First Chair*

Reber, Eleanora [64] see Kerr, Matthew T.

Rebnecker, Karin (Michigan State University)

[98] *Obsidian Sources used by the Tarascan Empire Elites and Commoners in the Pátzcuaro Basin, Michoacán, Mexico.*

Prehistoric Mesoamerica societies used obsidian for many tasks from the Formative Period to the Colonial Period. The obsidian was acquired from a variety of volcanic activity areas. The Tarascan civilization produced obsidian tools from a few sources both in and outside the Tarascan Empire. This study focuses on the Pátzcuaro Lake Basin and the obsidian sources used at the Tarascan capital of Tzintzuntzan and 2 other sites within the basin. The research conducted illustrates control of obsidian sources by the Tarascan state and those that may have been brought into the basin through a market system.

[98] *Second Chair* [98] *Second Organizer*

Redman, Erin [119] see Ward, Timothy J.

Redmond, Brian (Cleveland Museum of Natural History)

[239] *On the Edge But Still Connected: Long-Distance Interaction and the Emergence of Late Prehistoric Societies in Northern Ohio*

By AD 1300, societies in northern Ohio developed settled, maize agricultural lifeways marked by a limited selection of Upper Mississippian cultural attributes. Previous studies of the associated Sandusky and Whittlesey archaeological complexes attributed these developments to cultural "influences" from Fort Ancient polities in the middle Ohio Valley. New data indicate that interactions with the south were established by AD 1000 and featured the movement of marine shell from the Gulf Coast and cotton (*Gossypium* spp.) fiber from the Southwest or northern Mexico. Thus, contacts both near and far must be considered in the development of these northern sedentary societies.

Reece, Robert (Kennesaw State University) and Jon Spenard (University of California, Riverside)

[15] *High in the Sky: Excavations During the 2011 Field Season at Sak Pol Pak*

The ancient Maya site of Sak Pol Pak is located approximately 3 km southwest of Pacbitun, a medium-sized ancient Maya ceremonial center on the outskirts of the contemporary town of San Antonio, Belize. It is situated atop the highest mountain within Pacbitun's periphery suggesting a likely affiliation between the two sites. The goals of our 2011 investigations of this hilltop center were to establish a chronology for the site, its occupational history, and to search for evidence that

would directly link it with Pacbitun. We focused this work on the area in front of an 11 m tall pyramid in the main plaza, the dominant building at the site, and a midden behind the main residential complex. This paper presents the results of these investigations and offers an initial interpretation of the site and its role in the greater Pacbitun region.

Reed, David (University of Michigan) and W. Scott Zeleznik (University of Michigan)

[102] *The Maya in the Middle: An Analysis of Sub-Royal Archaeology*

Our previous mortuary and social complexity analysis of Classic period Copán and other polities found that ancient Maya social organization was continuous and highly variable without clearly defined class structure. Our evaluation raised questions of how sub-royal elites emerged and functioned in such societies. Webster has noted that the paucity of cultural specifics allows the imposition of preconceived organizational models on the ancient Maya. Nowhere is this more apparent than with the ambiguous sub-royal elite. We show that Webster's works on labor expenditure, settlement patterns, demography, and household archaeology give us a framework to better understand this ambiguity.

Reed, Denne (University of Texas at Austin) and W. Andrew Barr (University of Texas at Austin)

[117] *Taphonomy and temporal variability in micromammals from Pleistocene Levels at La Grotte des Contrebandiers (Smuggler's Cave) Morocco.*

Changing paleoenvironment is an explanation for the Mousterian-Aterian socio-technological transition, and micromammals provide one line of evidence for discerning paleoenvironmental change. This paper presents a systematic, taphonomic and paleoenvironmental analysis of the micromammals. Taphonomically, the surface modifications and low density of specimens suggests a taphonomic regime other than an avian predator, such as a mammalian predator. The assemblage also has low taxonomic diversity, and stable taxonomic abundances through time. The latter finding does not support the hypothesis of local environmental change at the site. Implications of local paleoenvironmental stability through the Mousterian-Aterian transition are discussed.

Reed, Kaye [117] see Hallett-Desguez, Emily Y.

Reed, Lori (Aztec Ruins National Monument), Jeffrey Ferguson (University of Missouri Research Reactor) and Andrea Carpenter (Independent Petrography Consultant)

[216] *Crushing Cobbles: A Study of Local Resources and Pottery Production at Aztec Ruins, New Mexico*

Most of the pottery produced at Aztec Ruins and other sites in the Middle San Juan region are typed within the Northern San Juan or Mesa Verde crushed rock tradition. Establishing an Aztec production signature and differentiating vessels produced at Aztec from nonlocal pots produced in the central Mesa Verde region are important for examining changes in production strategies and interregional interaction between the Chacoan and post-Chacoan periods. In this study, we use neutron activation analysis (NAA), petrography, and refiring to examine temper and clay selection at Aztec.

Reed, Paul (Center for Desert Arch.)

[123] *Sedentism, Social Change, and the Bow in the Ancient Pueblo Southwest*

In the American Southwest, the bow developed relatively rapidly among Pueblo people in the sixth century AD. This new technology replaced the millennia-old atlatl and dart weaponry system. Roughly 100 years later in the AD 600s, Pueblo socioeconomic organization began to evolve rapidly, as groups adopted a more sedentary lifestyle. Many factors converged to allow this pattern to emerge but the role of the bow has not been fully explored. In this paper, I trace the development of the bow and discuss its role as sedentism emerged and profound social changes occurred in ancient Puebloan society in the seventh century.

Reeder-Myers, Leslie (Southern Methodist University), Torben Rick (National Museum of Natural History, Smithsonian Institution), Jon Erlandson (University of Oregon), Nicholas Jew (University of Oregon) and Lauren Willis (University of Oregon)

[126] *CA-SRI-666: An Early Holocene Village on Santa Rosa Island, California?*

California's Channel Islands contain numerous archaeological sites dated to the Terminal Pleistocene/Early Holocene. Early Channel Island peoples appear to have been highly mobile, targeting a variety of aquatic and terrestrial resources. Questions remain about the antiquity of sedentism and village formation, with some suggesting an Early-Middle Holocene development and others not until the Late Holocene. Stable isotope, faunal, and artifact analysis at CA-SRI-666 on Santa Rosa Island suggest that this site may have been an early village dated to ~8000 cal BP. We discuss the implications of CA-SRI-666 for understanding broader settlement and land use along North America's Pacific Coast.

Reedy, Chandra (University of Delaware) and Yimeng Liu (University of Delaware)

[270] *Calibration of Image Analysis Protocols for Quantitative Ceramic Petrography*

Digital image analysis has great potential for quantitative ceramic petrography. However, fundamental experimental work is needed with laboratory-prepared standards of known parameters. There are many choices in image analysis work, all of which can affect results. This paper reports on research with prepared standards used to calibrate protocols for analysis of digital images of thin sections under a polarizing microscope, scanned whole thin sections, and digital images of sherds under a stereo microscope. The most accurate and reproducible protocols for measuring size, shape, and quantity of non-plastic particles and for porosity and macrotexture studies will be presented.

Reents-Budet, Dorie (Smithsonian Institution)

[152] *Art, Archaeology, and American Intellectualism*

Dr. Virginia Fields brought a renewed focus on the intellectual divide and interface between academia and public museums. This talk explores Dr. Fields' scholastic bases and professional approaches to investigating and presenting the art and culture history of the ancient Americas in the academic and public arenas, addressing particularly the illogical and unproductive chasm between

the two.

Reents-Budet, Dorie [242] *see Werness-Rude, Maline D.*

Reese, Kelsey (Washington State University), R. Kyle Bocinsky (Washington State University), Kay E. Barnett (Mesa Verde National Park), Stefani Crabtree (Washington State University) and Elise Alonzi (University of Notre Dame)

[85] *Large, Aggregated Villages in Little Soda Canyon The Mesa Verde Community Center Survey—a component of the Village Ecodynamics Project—seeks to expand our understanding of the distribution and organization of large, aggregated villages within MVNP from AD 600-1290. We used existing documentation to produce composite maps of three large villages in Little Soda Canyon: 1) the 34-plex; 2) the Juniper Flats Village; and 3) the Battleship Rock Village. We ground-truthed these maps while focusing on the relationships between sites and analyzed pottery to improve chronological resolution. As indicated by the histories of these villages, the focus of communities in the Little Soda Canyon changed over time.*

[257] *Discussant*

Reese-Taylor, Kathryn (University of Calgary)

[152] *The Origins of Maya Kingship during the Middle Preclassic*

In her dissertation, Virginia Fields argued for the development of Maya kingship during the Late Preclassic period based on the presence of a suite of traits among the lowland Maya. These included the construction of massive public architecture adorned with mask programs, the presence of elite goods in burials and caches, and specific iconographic motifs such as jaguarian imagery, seated rulers, and the maize headband. However, recent investigations reveal that these traits appear much earlier. This paper discusses the formation of centralized rule during the Middle Preclassic and the relationship of Maya kingship to other coeval political organizations in Mesoamerica.

[4] *Discussant*

Rego, Justin [155] *see Cegielski, Wendy*

Reid, J. Jefferson [120] *see Whittlesey, Stephanie M.*

Reilly, Frank (Texas State University)

[266] *Cognitive Approaches To the Analysis of Mississippian Shell Gorgets*

Stacking a group of Craig Style gorgets provides such cosmological information as the specific levels of the beneath and celestial worlds. Robert Williams further suggests that the braided hair or "HORN" worn by the Morning Star image might serve a similar function as the swirls of smoke in certain Craig Style gorgets. This twisting observation could explain why sweet grass is always presented as a twist. Thus, some Mississippian artist used a two-dimensional medium, to describe a three dimensional model of the four or more dimensional enfolding of time and space or the transitioning amongst the cosmic worlds.

[152] *First Chair*

Reilly, Kent [97] *see Walker, Chester P.*

Reindel, Markus (German Archaeological Institute, Bonn, Germany)

[175] *Settlement Dynamics on the Western Slope of the Andes in the South of Peru*

Coast-highland relationships on the western slope of the Andes in South Peru played a major role in the development of civilization. The "Andean Transect" project of the German Archaeological Institute investigates the settlement dynamics between the Palpa and the Lucanas regions from the Early Archaic to the Inca period (8000 BC – 1532 AD). More than 1500 sites have been recorded and excavated. Influenced by climate and landscape variations, important population shifts occurred in early periods (Paracas) from the highlands to the coast, while in later periods (Nasca, Middle Horizon) people moved again to the highlands.

Reinhardt, Eduard (McMaster University), Peter van Hengstum (Woods Hole Oceanographic Institution) and Jeremy Gabriel (McMaster University)

[41] *Reconstructing groundwater salinity (potability?) using foraminifera and thecamobians in the Ox Bel Ha and Aktun Ha cave systems, Quintana Roo, Mexico*
Foraminifera and thecamobians have recently been applied to anchialine cave sediments and show great promise as a paleohydrological indicator of groundwater properties and their relationship with sea-level and climate change. Recent microfossil data from Ox Bel Ha and Aktun Ha cave systems spanning the last 3500 yrs shows changes in the salinity of the meteoric lens with fresher conditions commencing in the Terminal Classic and continuing into the Post-Classic period with drier conditions. Density stratification and turbulent flow in the water masses is thought to be driving the salinity changes.

Reinhart, Katrinka (Stanford University)

[57] *Feasts and Ancestral Offerings: Social Networking in Early China*

Feasting was a prominent form of social networking and political maneuvering in early China that left indelible traces in the archaeological and historic record. Ceramic analysis at the early Shang dynasty town of Yanshi suggests that the practice of offering food to ancestors is not restricted to the elite domain. Networking between the living and the dead occurred across the social hierarchy. This paper examines the role of feasting in augmenting social networks and political power in early China drawing from contextual pottery analysis, historical sources, and starch analysis of pottery and teeth from the Neolithic through the Zhou dynasty.

Reitze, William (University of Arizona)

[180] *Once a Pre-Clovis, Only a Pre-Clovis?*

Investigation of the Lucy Site, Central New Mexico
The Lucy Site (LA4974) has persisted as an archaeological enigma since its discovery in 1954. Materials recovered at Lucy originally corroborated the antiquity of Sandia and contributed to interpretations of the early settlement of North America. Issues soon arose with the legitimacy of the Sandia concept and thus brought the validity of Lucy into question. This paper presents a reinterpretation of materials from Lucy focusing on the spatial distribution of artifacts,

gearchaeological interpretations, and analysis of the lithic and bone assemblages to better interpret the archaeology of the often overlooked Clovis, Folsom, and later assemblages in addition to the controversial Sandia occupation.

Renn, James [245] *see Smith, James B.*

Reuther, Joshua D. [153] *see Rasic, Jeffrey T.*

Reyes, Eric [58] *see Domínguez, María del Rosario*

Reynolds, Cerisa (University of Iowa)

[141] *Faunal Use and Resource Pressure at the Origins of Agriculture in the Northern U.S. Southwest*

This poster will examine faunal use patterns during the Basketmaker II period in attempts to determine whether or not instances of resource stress occurred during the first two millennia of farming in the Northern U.S. Southwest. Patterns to be evaluated include the use of high- versus low-value faunal resources, the procurement of animals that are difficult to capture or expensive to process, and the processing of faunal remains for grease and other nutrients. These patterns will be evaluated as they relate to population densities, environmental changes, site location, site type, duration of site occupation, and a number of other factors.

Rezek, Zeljko (University of Pennsylvania) and Harold Dibble (University of Pennsylvania)

[117] *Middle Paleolithic Lithic Assemblages from Contrebandiers Cave, Morocco; A North African Perspective*

New excavations of the Contrebandiers Cave in Morocco have contributed new Middle Paleolithic assemblages that have been regarded traditionally as (Moroccan) Mousterian and Aterian. Using standard typological and technological indices, this paper examines the variability of lithic material within each, as well as between the two industries from this site. In addition, a regional comparison between the lithic material from Contrebandiers Cave and published material from other Mousterian and Aterian sites across North Africa will be discussed, along with the implications for the study of technology and behavior of early modern humans in North Africa.

Rhode, David (Desert Research Institute)

[211] *Archaeological Wood Charcoal in Qinghai Lake Basin, western China: Implications for Environmental Change, Human Settlement Patterns, and Anthropogenic Development of Tibetan Pastures*

Archaeological sites in the Qinghai Lake Basin, northeast Tibetan Plateau, western China, commonly contain wood that show significant changes in the distribution of local shrubland and woodland development through the last 15,000 years. These vegetation trends correspond with major changes in regional hunter-gatherer settlement strategies. Coupled with other regional evidence of vegetation change, this charcoal-based record is useful for addressing the current debate about the timing and importance of anthropogenic vs. climatic factors in the development of the typical unforested pasturelands that prevail in the northeast Tibetan Plateau.

Rhodes, Jill and Joseph Mountjoy (Universidad de

Guadalajara, Centro Universitario de la Costa)

[98] *Lessons from the grave: status, inequality and health in the Late Formative Period of West Mexico*
Skeletal analysis enriches our knowledge of past societies. Human remains from two Late Formative cemeteries (200BC – 200AD) in the Los Reyes Valley, West Mexico were examined. Dental caries and enamel hypoplasia prevalence were examined as markers for diet and health. Grave goods and skeletal markers of status were examined to provide insight on societal structure of the Shaft-and-Chamber Tomb archaeological culture. Osteological and archaeological evidence for diet identified the presence of maize agriculture, although other markers indicate considerable breadth of resource acquisition. Comparative analysis indicates a socio-economically stable, egalitarian society without the burden of nutritional deficiencies impacting overall health.

Ribeiro, Loredana (Universidade Federal de Pelotas, RS, Brazil) and Lucas Bueno (Universidade Federal de Santa Catarina)

[158] *Diversification and regionalization in the peopling of Central Brazilian Plateau in the Early Holocene*
The main purpose of this paper is to discuss the hypothesis that the peopling process of Central Brazilian Plateau (CBP) is marked since the end of the Pleistocene by a process of increased diversity of adaptive strategies implemented by human groups resulting in a scenario of cultural regionalization in Mid-Holocene. We argue that both diversity and regionalization are associated with different times of CBP occupation and possibly related to paleoenvironmental changes that have affected the composition and distribution of major ecosystems of this macro-region. This process can be divided into three periods that represent different moments of occupation, with specific characteristics regarding the composition of lithic assemblages, rock art, settlement patterns, environmental and climate conditions.

Rice, Don and Prudence Rice (Southern Illinois University Carbondale)

[102] *40 Years in Petén, Guatemala: Development of an "Invisible College"*

In 1972 Don and Pru Rice entered the doctoral program of the Department of Anthropology at The Pennsylvania State University. Prior to our arrival, however, a number of individuals were interacting and setting agendas that would define our careers. In 1972 their various perspectives spawned a project to correlate Maya social and natural histories for the paired lake basins of Yaxha and Sacnab, Petén, Guatemala, through paleolimnology and settlement pattern surveys. This historical ecology program began a 40-year history of collaborative archaeological, ethnohistorical, and paleoecological research for the Rices. Our paper reviews the genealogy and topics of that history.

Rice, Prudence (Southern Illinois University)

[269] *The "Las Bocas 'Mirror'" and Mesoamerican Calendars: "Calculator" or Hoax?*

The "Las Bocas 'Mirror,'" a pyrite mosaic plaque of unknown provenience, is purportedly from the Formative site of Las Bocas, Mexico. Its mosaic pieces are arranged in three triptych-like panels, the left and center holding 128 tesserae in groupings of four, but the right

panel lacks such regular arrangement. Originally thought to have some possible lunar tallying function, this plaque can be used to compute the days of the Mesoamerican 260-day, 365-day, and Venus calendars, as well as other significant calendrical intervals. The plaque is either an elaborate hoax or a sophisticated "calculator"-like device for calendrical computations.

Rice, Prudence [102] see *Rice, Don S.*

Rice, Prudence M. [201] see *Cecil, Leslie G.*

Rich, Kelley (University of Alabama) and Terry G. Powis (Kennesaw State University)

[15] *Stable Oxygen Isotope Analysis of the Freshwater Gastropod *Pachychilus* sp. and Its Use for Seasonality Studies at Pacbitun, Belize*

The freshwater gastropod *Pachychilus* sp. (jute) is commonly found in lowland Maya archaeological sites and may be a source of information pertaining to human subsistence behavior. In the Maya lowlands, $\delta^{18}\text{O}$ variation observed in the shell carbonate of jute shells may reflect seasonal fluctuations in rainfall and evaporation. This paper will present a study of modern jute and their aqueous environments from the Cayo District of Belize to test the capability of this species to be used in seasonality studies. A seasonality study of Middle Preclassic jute from Plaza B in the site core of Pacbitun will also be discussed.

Rich, Michelle [151] see *Eppich, Keith*

Richard, Francois (University of Chicago) [92]
Discussant

Richards, Colin [229] see *Hamilton, Sue D.*

Richards, John (University of Wisconsin - Milwaukee), Thomas J. Zych (University of Wisconsin-Milwaukee) and Katie Z. Rudolph (Indiana University)

[187] *Introduction to Recent Archaeological Investigations at the Aztalan Site (47JE0001)*

The 2011 UWM archaeological investigations at Aztalan targeted six locations adjacent to the west bank of the Crawfish River within the formerly palisaded portion of the site. Results confirmed the presence of intact midden deposits in four of the six areas tested. LIDAR images of the site suggested the presence of a linear berm parallel to the riverbank. Testing of this feature confirmed the presence of intact midden deposits in four of the six areas tested. Related excavations documented massive aboriginal filling that may have been an attempt to enclose a portion of the Crawfish River within the palisade.

Richards, John [187] see *Kolb, Michael F.*

Richards, Julian (University of York Archaeology Data Service), Adam Brin (Digital Antiquity, Arizona State University), W Fred Limp (University of Arkansas) and Judith Winters (Internet Archaeology, University of York)

[129] *Developing a 3D digital heritage ecosystem*

This paper will discuss a linked electronic publication and digital archive, published as part of the award-winning

LEAP project (<http://ads.ahds.ac.uk/project/leap>). This describes the use of close-range laser scanning to create digital surrogates of archaeological artefacts (http://intarch.ac.uk/journal/issue30/limp_index.html). The paper is supported by two digital archives: held by ADS in the UK, and by tDAR in the USA. The project demonstrates the potential of close range laser scanning for research and public display, and the importance of metadata for recording the information processing workflow derived from close range laser scanning, and for archiving digital data in the long term.

[81] *Discussant*

Richards, Katie (Brigham Young University)

[161] *Exploring Fremont Potting Communities: A Design Analysis of Fremont Painted Bowls*

Archaeologists have been studying the Fremont culture for nearly a century; unfortunately, during that time the study of Fremont ceramic designs has been grossly neglected. The Fremont produced two types of ceramic painted bowls: Ivie Creek Black-on-White and Snake Valley Black-on-Gray. This paper compares and contrasts the structure, symmetry, and design elements of the two Fremont painted bowl types in order to explore the relationship between the two communities of potters and address issues of identity.

Richards, Michael [139] *see Grier, Colin*

Richards, Michael P. [176] *see Mannino, Marcello A.*

Richards, Mike [145] *see Salazar-García, Domingo Carlos*

Richards, Patricia (Univ of Wisconsin-Milwaukee)

[187] *Excavating the Excavations: Unravelling the Palimpsest of a Century of Archaeological Work at the Aztalan Site*

Excavations in a portion of the riverbank midden at Aztalan encountered evidence of two previous archaeological excavations. Maps of Samuel Barrett's 1919-1920 fieldwork at the site suggest that one of the previous disturbances is part of a large, irregular excavation dug by Barrett in this area. The second disturbance appears to relate to the Wisconsin Historical Society investigations conducted by William Hurley during the early 1960s. Although digging in the Barrett-Hurley backdirt proved uninformative, the exercise highlighted the difficulty in working at an archaeological site that has been episodically excavated for over 100 years.

[187] *First Chair*

Richter, Kim (Getty Research Institute)

[195] *Constructing Huastec Social and Gender Identity through Sculpture*

Little is known about Huastec social structures or gender relations during the Postclassic period because there are no written records providing insight. Yet, Huastec figural sculptures representing men and women, often with magnificent headdresses, evidence how the ancient Huastec constructed gender and manifested power through these costume elements. Identifying Huastec headdress types indicates distinct levels of stratification in which men and women appear to be equally ranked. Moreover, a close analysis of headdress iconography

reveals a clear similarity to the Postclassic international symbol set, demonstrating that the Huastec signaled their membership in the Postclassic international network through their costumes.

Richter, Tobias (University of Copenhagen) and Lisa A. Maher (University of Cambridge)

[228] *Unpacking the Neolithic in southwest Asia*

Archaeologists have long defined the beginnings of archaeology through the appearance of the 'Neolithic package'. We argue that a similar 'Epipalaeolithic package' defines the foragers of Final Pleistocene southwest Asia, although this is less clearly defined. It revolves around mobility, social organization, technology, group size, resources, and symbolism. The Epipalaeolithic is therefore defined through reference to the Neolithic, as an opposite extreme and 'other'. Looking at the historiography of the Epipalaeolithic and two decades worth of new research, we argue that this picture lags behind the Neolithic, leading us to challenge the dichotomy between Final Pleistocene foragers versus Holocene farmers.

Rick, John (Stanford University)

[26] *Evidence for Ritual Practice at Chavín de Huántar, Peru*

Chavín de Huántar, spanning the Formative Period of the central Andes, has long been recognized as an ornate, highly planned, and prominent ceremonial center. Recent extensive investigations at Chavín have begun to give details about specific ritual activities carried out in different contexts at the site. Emphasis seems to have been placed on architecturally-structured procession, water-based ritual, multiple simultaneous sensory stimulæ, and extensive, customary sacrifice of both objects and organisms. Although still speculation to some degree, the role of different classes of participants is becoming clearer.

[26] *First Chair*

Rick, Torben [126] *see Reeder-Myers, Leslie A.* [157] *see West, Catherine F.*

Rick, Torben C. [164] *see Braje, Todd J.*

Ridenhour, Benjamin [244] *see Lettieri, Philip R.*

Riebe, Danielle (University of Illinois at Chicago)

[63] *Prehistoric Interactions: Identifying Regional Variation in Late Neolithic Ceramics from the Great Hungarian Plain*

In part, social development and cultural diversity result from interactions between people. During the Late Neolithic (ca. 5000-4500 BC), multiple groups inhabited the Great Hungarian Plain and interactions between these peoples can be identified through traded goods, specifically ceramics. Previous research in proveniencing ceramic material was met with little success due to the homogeneity of the clay from around the Plain. However, reanalysis of materials using LA-ICP-MS facilities at The Field Museum in Chicago, Illinois has identified more variation, thereby allowing for a greater understanding of prehistoric interactions and their impact on societies.

Riel-Salvatore, Julien (University of Colorado Denver) and Fabio Negrino (University of Pisa)

[11] Variability in the Italian proto-Aurignacian: New data from Riparo Bombrini (Balzi Rossi, Liguria)

The proto-Aurignacian is a distinctive lamellar industries of the earliest Upper Paleolithic argued to represent a qualitative shift from earlier Mousterian industries. Often thought to be homogeneous, the increasing number of proto-Aurignacian assemblages found in the Italian peninsula reveals it displays considerable internal variability. Recent excavations at Riparo Bombrini (2002-2005) using modern recovery, positioning and analytical methods permit an empirically grounded discussion of this realization. We contrast the lithic technology and spatial organization of Bombrini's two proto-Aurignacian levels, and integrate from the rest of the peninsula to provide a critical assessment of this technocomplex.

Rieth, Christina (New York State Museum)

[24] In the Public Trust: Outreach and Education in the Protection of State-Owned Resources in New York

The management of archaeological resources on state lands is dependent upon a public that has interest in such cultural resources and see their preservation as being worthwhile. Public outreach and education surrounding such resources often results in positive collaborations between constituencies who act as advocates for the protection of such remains. This paper discusses two case studies from New York in which collaborative outreach efforts between agency managers and the public resulted in the preservation of fragile resources on state land.

Riggs, John [252] see Green, Thomas J.

Riley, Tim E. [37] see Aiuvalasit, Michael J.

Ringle, William (Davidson College) and Gabriel Tun Ayora (Universidad Autónoma de Yucatán)

[128] First Season's Reconnaissance at Yaxhom, Yucatan, Mexico

Bruce Dahlin's survey of the enormous site of El Mirador, Guatemala, demonstrated the complexity of Late Preclassic Maya urbanism in northern Guatemala. An initial season of work at the site of Yaxhom is a further indication that urbanism in the Puuc Hills of Yucatan was also a Preclassic development. Preliminary results suggest it covered at least 6 km² and possessed monumental buildings of impressive size. Also noteworthy is its reliance on man-made reservoirs, rather than the later household cisterns of the Classic period. Preliminary survey of one such reservoir date it to the Middle Formative period.

Rink, W. Jack [124] see Pluckhahn, Thomas J.

Rios, Jorge (Centro INAH Oaxaca)

[210] La presencia cerámica en Lambityeco-Yegüih: Consideraciones Integrales.

La Zona Arqueológica de Lambityeco, en Tlacolula de Matamoros, Oaxaca, comprende un área donde pueden observarse vestigios arqueológicos de diferentes épocas, donde podemos sugerir la presencia de dos momentos de expansión. El primero y menos estudiado, Brawbehl-Yeguih, uno de los primeros asentamientos urbanos del Valle de Tlacolula. El segundo momento, Lambityeco, posee una riqueza extraordinaria para comprender la reintegración de la región, después de los

tiempos de Monte Albán como centro rector. En este trabajo se presentarán los avances en el conocimiento de la presencia cerámica para las diferentes épocas de la arqueología de los Valles Centrales para el sitio.

[210] First Chair

Rissolo, Dominique (Waitt Institute), Pilar Luna Erreguerena (Instituto Nacional de Antropología e Historia), Alberto Nava Blank (Bay Area Underwater Explorers), James C. Chatters (Applied Paleoscience) and Fabio Esteban Amador (National Geographic Society)

[41] The Hoyo Negro Project: Recent Investigations of a Submerged Late Pleistocene Cave Site in Quintana Roo, Mexico

The cenotes of the Yucatan Peninsula represent a unique and promising frontier for Paleoindian research. In 2007, a team of underwater cave explorers discovered the skeletal remains of a human and a gomphothere, among other faunal materials, in a deep pit within the Aktun Hu Cave System. Subsequent investigations, involving detailed mapping and recording, have revealed a range of associated features including submerged fire pits and rope marks. Ongoing systematic, interdisciplinary, and minimally-invasive research efforts under INAH's Underwater Archaeology Sub-directorate are facilitating the reconstruction of the natural and cultural processes that have formed and transformed the site over millennia.

[227] Second Organizer

Rissolo, Dominique [227] see Glover, Jeffrey B. [227] see Goodman Tchernov, Beverly N.

Ristvet, Lauren (University Of Pennsylvania)

[130] Confronting Urartu: Local Identities, Integration and Resistance in the Iron Age Caucasus

Archaeological reconstructions of Urartu, Assyria's great rival, emphasize the uniformity of the material culture of its fortresses, which has been correlated with a this empire's distinctive political strategy. The recent discovery and excavation of fortresses contemporary with Urartu in Armenia and Azerbaijan, located at or just beyond this polity's borders, provide new insight into Urartu's imperial practices. These fortresses never became typical Urartian imperial centers. Instead, some of them maintained their independence, while translating elements of the Urartian state assemblage into their own political traditions. Other fortresses were incorporated into the empire, but their inhabitants eschewed Urartian material culture.

Rivera I., Arturo F. [243] see Skidmore, Maeve

Rivera-Collazo, Isabel (Institute of Archaeology, UCL)

[193] Angostura: a case study on coupling landscape change with multiscale human ecodynamics in the Caribbean

Understanding change in past landscapes and seascapes helps contextualize past human behaviour and address sociocultural flexibility or vulnerability to change. In this presentation I use Angostura, the earliest site identified on Puerto Rico to this date, as a case study to exemplify the coupling of multiscale, interdisciplinary data to address human ecodynamics in the Caribbean. Detailed geoarchaeological and paleoecological analyses

show that the landscape surrounding Angostura has changed drastically since the Mid-Holocene. Habitat diversity for resource exploitation, coupled with active membership to maritime trading networks and exploitation of inland resources, supported permanent long term occupation on a richly domesticated seascape.

Rizzo, Florencia [101] *see Scheinsohn, Vivian G.*

Robb, John (Cambridge University)

[267] *What do things want? Object design as a middle range theory of material culture*

Theories of material culture have tended towards philosophical abstraction, with little concrete application to everyday things. Yet paradoxically, until we understand routine human-thing interactions in concrete detail, we cannot really understand them philosophically either. This paper outlines steps towards a middle range theory of material culture based upon the idea of design. The starting point is the question of how things incorporate anticipated responses into their design; tracing the implications of this differentiates a wide range of human-thing interactions and authorises formal methods for understanding why archaeological things are the way they are.

[23] *Second Chair [23] Second Organizer*

Robb, John [23] *see Kohring, Sheila E.*

Robbins Schug, Gwen (Appalachian State University)

[60] *Peaceful for whom? Bioarchaeological perspectives on violence and subjectivity in the Indus Civilization*

The Indus Civilization was a South Asian state-level society (2600-1900 B.C.) with thousands of cities integrated by trade networks, technologies, symbols, standard weights and measure, and socio-political complexity. It is considered an enigmatically peaceful realm, without evidence for violence or social suffering. This paper reports prevalence and patterns of trauma in the skeletal population from Harappa. Results demonstrate interpersonal violence existed at Harappa and suggest that the Indus civilization can be understood using theories of structural violence—unequal power, uneven access to resources, systematic oppression, and exploitation that kills through the denial of basic needs and outright violence.

Roberts, Richard [117] *see Jacobs, Zenobia*

Robertshaw, Peter [159] *see Fenn, Thomas*

Robin, Cynthia (Northwestern University)

[236] *The Belize Valley and Community Scale Research: Celebrating the Legacy of Norman Hammond*

Norman Hammond was a pioneer of research into regional scale interaction in the Maya area. He sought to reach inside the black box of the Maya polity and inside the operation of Maya communities. This paper discusses recent research in the Belize Valley region of Belize where archaeologists have conducted detailed settlement surveys and community studies that allow a broad regional synthesis of Maya society in this region. Although Norman Hammond never worked in the Belize Valley, the legacy of his research approaches has had a clear influence on research agendas and interpretations.

[267] *Second Organizer*

Robin, Cynthia [267] *see Meierhoff, James W.*

Robinson, Brian [268] *see Ort, Jennifer*

Robinson, David (University of Central Lancashire, UK)

[23] *Legitimizing Space: Art and the Politics of Place*
Rock-art, graffiti, and other emplaced works of art bring people together at specific places. Art allows for encounters between people in their absence, and thus presents a range of possibilities for making statements about specific places and those who occupy or visit. This opens the possibility for issues of legitimization to become implicitly or explicitly expressed. However, the legitimate use of space, and the legitimate employment of art, can vary drastically across different contexts. Here, I discuss a range of different strategies of art and legitimization in three case studies from India, California, and Spain.

Robinson, Eugenia (Montgomery College)

[30] *The Late Postclassic Settlements Surrounding Iximché in the Guatemalan Highlands*

Iximché, the Late Postclassic capital of the Kaq'chik'el Maya has a defensive location in the Highlands of Guatemala. Survey at a distance of 2 km from the site has yielded data about the archaeology and local interpretations about the sites contemporary with Iximché. The presence of a hierarchy of sites at both defensive and non-defensive locations supports the hypothesis that there was a distribution of settlements around the central site and provides data by which to assess the historical map of Fuentes and Guzman, created more than a century after the abandonment of the site.

Robinson, Francis (UVM & University at Albany (SUNY))

[268] *Paleoindians and the Inland Sea: An Exploration of the Champlain Sea and Paleoindian Land Use in the Eastern Champlain Basin*

Recent research demonstrates that the Champlain Sea, an inland arm of the North Atlantic Ocean, was coeval with most or all of the Paleoindian period in the far Northeast. As part of a larger program of research, the author analyzed Paleoindian occupations relative to Champlain Sea margins in the eastern Champlain Basin. The results of these findings and what they suggest about traditional and emerging settlement and subsistence models will be briefly discussed.

Robinson, Lindsay (University of Wisconsin-Milwaukee) and Laura Villamil (University of Wisconsin-Milwaukee)

[70] *Investigation of Ceramic Deposits in Relation to Architectural Features at Margarita, Quintana Roo, Mexico*

Margarita is a Classic period Maya center located in south-central Quintana Roo, Mexico. Excavations in 2000 exposed a pattern of dense ceramic deposits in patios and plazas that appear to be contemporaneous with the architectural remains of a widespread reoccupation of the site during the Terminal Classic period. With the utilization of Geographical Information Systems (GIS), the geostatistical relationships between

these ceramic deposits and architectural features are examined. This analysis contributes to the understanding of the primary use of these ceramic deposits and further illuminates the ways in which the built environment was manipulated during the reoccupation of the site.

Robinson, Mark (Louisiana State University) and Heather McKillop (Louisiana State University)

[172] *Wood Selection Strategies and Resource Exploitation at Two Ancient Maya Salt Works, Paynes Creek National Park, Belize*

The preservation of wooden architecture at salt works in Paynes Creek National Park, Belize, provides a rare opportunity to document human-environment interactions in terms of how the ancient Maya selected timber resources. In this presentation we discuss wood from buildings at an Early Classic (A.D. 300-600) and Late Classic (A.D. 600-900) salt work, allowing a comparison and discussion of resource exploitation through time. Wood identifications reveal a change in dominant species selection from the mangrove species, *Avicennia germinans*, to the broadleaf species *Symplocos* sp., documenting a change in species selection and a change in ecosystem exploitation, suggesting anthropogenic deforestation.

Robinson, IV, Francis [268] see *Crock, John G.*

Robles Carrasco, Sonia [32] see *García Sanjuán, Leonardo*

Robles Garcia, Nelly (Instituto Nacional de Antropología e Historia)

[210] *La Cerámica ARQUEOLÓGICA De Oaxaca: Recobrando La Diversidad*

Los tipos y cronología de la cerámica arqueológica de los Valles Centrales de Oaxaca fueron establecidos por Caso, Bernal y Acosta en 1967, y por Flannery y Marcus en 1994, tanto como los de la Mixteca Alta lo fueron por Spores en 1972. A partir de esos estudios, una gran variedad de proyectos arqueológicos han contribuido a integrar en torno a esas tipologías, detalles finos de cerámicas regionales, y en otros casos, a proponer tipologías regionales pioneras. A la fecha, y mediante una larga lista de ejemplos que escudriñan sus condiciones, ha quedado demostrada la vigencia de esas propuestas.

[210] *Second Organizer*

Robles Salmerón, Amparo (Universidad de las Américas Puebla), Gabriela Uruñuela (Universidad de las Américas Puebla) and Patricia Plunket (Universidad de las Américas Puebla)

[73] *The Cost of Power: Investing in Monumental Architecture at Early Cholula*

One enormous differential between Teotihuacan and Cholula is the size of their pyramids. We analyze the human and material investment required to construct the Edificio de los Chapulines, the first monumental version of Cholula's Great Pyramid, as a measure of the young city's political power during the Formative/Classic transition.

Rock Sr, Duncan Standing [250] see *O'Boyle, Robert C.*

Rockwell, Heather (University of Wyoming)

[268] *The Feasibility of Microwear Analyses of Debitage: A Case Study from New Hampshire's Great North Woods*
Over the past 60 years the development of microwear analysis has allowed archaeologists to empirically determine tool functions. These studies have provided a wealth of information on the use of formal tools, but little attention is paid to the use of debitage. In this paper I will discuss the utility of performing microwear analyses on debitage using the Potter Site, a Paleoindian site in New Hampshire, as a case study. The results of these analyses suggest that not only are microwear studies of debitage a fruitful avenue of inquiry, but may be necessary in order to accurately reconstruct primary site activities.

Rodell, Roland (University of Wisconsin Rock County) and Norman C. Sullivan (Marquette University)

[139] *Trophy Taking and Warfare in the Northern Mississippi Valley*

The Diamond Bluff village is one of several sites with Oneota – Mississippian related components in the Red Wing – Pepin locality in northern Mississippi Valley. Among the human remains in the Diamond Bluff assemblage there is evidence of peri- and post-mortem trauma as indicated by cranial fragments and mandibles with tool cut-marks, and by teeth with notched roots. These modifications are indicative of trophy taking and display associated with warfare, which we hypothesize emerged as competition for resources and participation in an interregional exchange network intensified during the period of circa A.D. 1000 - 1300.

Rodning, Christopher (Tulane University) [50]
Discussant

Rodríguez López, Isabel [233] see *Lesure, Richard*

Roe, Lori (Murray State University) and Lara K. Homsey (Murray State University)

[124] *Patterns of Site Use at Raffman, a Coles Creek Period (AD 700 -1200) Mound Center in Louisiana*

Competing hypotheses about Coles Creek period mound centers state that 1) mound centers were chiefly compounds where small groups of elites lived, and/or 2) mound centers were vacant ceremonial centers where people periodically gathered for social and ritual events. Research at the Coles Creek period Raffman site appears to support the second hypothesis. Visual inspection of stratigraphy suggests mounds were constructed rapidly and some middens accumulated during large-scale, short-term events. We use micromorphological analyses of sediments to provide details about the timing and pace of mound construction and midden deposition and better evaluate patterns of site use.

Rogers, Alexander [100] see *Gorrie, Bryan F.*

Rogers, J. (Smithsonian Institution), Claudio Cioffi-Revilla (George Mason University), Sarah Wise (George Mason University) and Joseph Harrison (George Mason University)

[103] *From Households to Confederations: A Long-Range Agent Model of Inner Asia*

The evolution of Inner Asian polities on a long time-scale, sufficiently long to include climate change, presents multi-disciplinary puzzles that can be investigated through spatial agent-based modeling and related geospatial methodologies. How have pastoralist societies and politico-military hierarchies interacted with ecosystems over the millennia? Which new insights can be gained through simulation of these data-referenced complex adaptive systems? This paper describes HunnuLand, a coupled socio-natural agent-based model of Inner Asia built using the MASON simulation library. The main results of the model show correspondence between historical and simulated patterns, including population movements and formation and dissolution of alliances.

Rojas, Andrea [30] *see Paiz Aragon, Lorena*

Roksandic, Mirjana [202] *see Alex, Bridget A.*

Rolland, Vicki [136] *see Ashley, Keith*

Roman, Edwin [66] *see Houston, Stephen*

Román, Edwin [66] *see Garrison, Thomas G.*

Romandini, Matteo [202] *see Peresani, Marco*

Romano, David Gilman [274] *see Mentzer, Susan M.*

Roman-Ramirez, Edwin (The University Of Texas at Austin), Stephen Houston (Brown University) and Thomas Garrison (Brown University)

[66] *Ruling from a defensive landscape: The rise of an Early Classic dynasty at El Zotz and its vicinity.*

The Early Classic Period in El Valle de Buena Vista is characterized by the emergence of a lineage who built their ceremonial centers of El Bejucal and El Zotz on top of hills. Evidence collected over three field seasons by the El Zotz Archaeological Project established that these first inhabitants of the region settled in such locations after the abrupt ending of the Preclassic period, and chose to construct their cities in defensive locations, presumably to protect elites and their main politico-religious centers. This paper focuses on the emergence of the ruling lineages of El Zotz and its neighbors. Monumental buildings decorated with stucco masks, funerary architecture, tombs, and archaeological materials reveal a rich and complex local development. These developments are presented within a regional context, taking into account the possible relationships between these settlements during the Early Classic and the transition to the Late Classic.

Romero, Martha [235] *see Cordero, Maria-Auxiliadora*

Roney, John (Colinas Cultural Resource Consulting), Charles Smith (University of Texas at San Antonio), Robert Hard (University of Texas at San Antonio) and A.C. MacWilliams (Statistical Research)

[183] *Archaic Use of Playas in Southwestern New Mexico*

We recently surveyed areas adjacent to the Lordsburg playa in order to evaluate reports of a high frequency of Middle and Late Archaic projectile points found in

association with the ancient lake. In this paper, we consider paleoecological studies, previous investigations, and our survey data in order to offer some possible roles that ancient playas may have played in the human past in the region.

Roney, John [183] *see Hard, Robert J.*

Roos, Christopher (Southern Methodist University) and Scott Van Keuren (University of Vermont)

[274] *Singularized abandonment and closure of a plaza kiva at Fourmile Ruin, Arizona*

New religious practices were vital for integrating migrant and non-migrant communities in fourteenth-century Arizona but cultural diversity may also have resulted in factionalism. In this case-study, integrated geoarchaeological and assemblage analysis of abandonment and post-abandonment deposits from a plaza kiva built during the final expansion of Fourmile Ruin show that the structure was dismantled and purposefully buried at least two times while the surrounding village was still occupied. This singularized treatment of a structure that was associated with one portion of the community suggests that factionalism may have played a role in the fissioning and ultimate depopulation of the village.

[274] *First Chair*

Roosevelt, Anna (Univ. Illinois, Chicago)

[150] *Interpreting long term human landscape development in Amazonia*

In the mid 20th century approaches, Amazonian environment was a limitation and human adaptation was the unitary tropical forest culture. "New" archaeological research later revealed evidence of chronologically and regionally distinct prehistoric human cultures that had significant lasting effects on the habitat, even until today. Native Amazonians, as informants and as assistants, have had observations and interpretive insights on both ancient and modern human-environment, and nowadays Amazonian communities can contribute as project directors and contractors and have given holistic and nuanced views of human landscapes through time and space.

Roper, Donna (Kansas State University)

[223] *An Overview of Some Neglected Aspects of Steed-Kisker Pottery Analysis*

The Steed-Kisker phase dominant pottery is shell-tempered and is broadly attributable to Holmes' Middle Mississippi ceramic group. This, however, does not per se make Steed-Kisker a Mississippian culture, nor bring to an interpretation of Steed-Kisker society all the implications associated with that term. Steed-Kisker needs concerted, theoretically-informed and unbiased empirical analysis to better understand what it does represent. This includes previously neglected forms ceramic analyses that would yield considerable information for current research problems. I discuss recent work with compositional analysis, stylistic analysis, form/function analysis, and chronology and consider how they help lead to alternatives to worn-out culture-history scenarios.

Rorabaugh, Adam (Washington State University)

[160] *Impacts of Population Bottlenecks on the Cultural*

Transmission of a Neutral Continuous Trait: An Agent Based Model

Although there is increasing interest in the connections between copying error and the generation of variation of continuous cultural traits, the complex interplay between forces of evolutionary drift and copying error in continuous traits remains under-examined. Here, an agent based model is provided that examines the effects of population bottlenecks on the production of variation in a selectively neutral metric attribute under vertical, unbiased, and prestige biased modes of transmission. The provided model has implications for empirically assessing the presence of demographic change or restricted forms of knowledge in the production of technologies.

Rorabaugh, Adam [37] see *Bettencourt, Nichole S.*

Rosado, Roberto [172] see *Harrison, Jessica*

Roscoe, Paul (University of Maine)

[89] *The Bow and Arrow as a Weapon of War in New Guinea*

The bow and arrow were widely, though not universally, used as weapons of war in New Guinea. This paper reviews the general properties of these weapons, providing data on the materials used, manufacture, functionality, and range. Particular attention is paid to the four distinct types of arrow used in war and to the different contexts in which they were deployed. Overlaps with the use of the bow and arrow for hunting are also identified.

Rose, John (Salmon-Challis National Forest) [31]
Discussant

Rosen, Arlene (Institute of Archaeology (University College London))

[86] *Wetlands, Adaptive Cycles, and Sustainability among Foragers in the Late Pleistocene/Early Holocene Levant*

The Younger Dryas (~12.9–11.6ky BP) was a climatic event that impacted foraging societies world-wide. Much can be learned from adaptive strategies employed to overcome this stress on food resources. In the Southern Levant, phytolith evidence shows that one important strategy used by Late Natufians was intensive exploitation of wetland plants. Throughout the Epipaleolithic, an increase in the use of sedges, reeds and grass-seeds was employed for long-term sustainability whenever forest resources declined in the wake of climate change. This economic restructuring combining innovation and social memory was one element of an adaptive cycle that increased resilience over 15,000 years.

Rosenberg, Danny (Zinman Institute of Archaeology, University of Haifa), Ron Shimelmitz (Tel Aviv University) and Tatjana, M. Gluhak (Johannes Gutenberg University Mainz)

[63] *Basalt Bifacial Production and distribution in the southern Levant – Giv'at Kipod, Israel as a Case Study*
Giv'at Kipod in north-central Israel contains one of the most important records of groundstone tools manufacture in the Levant. The site, a Neolithic/Chalcolithic quarry and workshop for the manufacture of basalt bifacial tools,

reveals an intensive and complex history of bifacial tools production, suggesting it had a primary role in the region for the production of these items, bearing profound socio-economic meanings. The paper describes and discusses the site, the technological aspects of bifacial production and the first results of the geo-chemical analyses conducted, aimed at provenancing basalt bifacials found in habitation sites and source them back to Giv'at Kipod.

Rosenberg, Danny [63] see *Gluhak, Tatjana M.*

Rosenfeld, Silvana (University of South Dakota)

[26] *Ritual and Foodways during the Wari Empire (AD 600-900): a zooarchaeology perspective*

Food intersects the realms of nature and culture, as it is a vital requirement of human life but also an important element of social life. For the Wari (Peru, A.D. 600 - 900), meat feasts and animal offerings played different roles consolidating the empire in the provinces and the heartland. This paper compares faunal remains from the sites of Conchopata, Cotocotuyoc, and Chokepukyo. Expectations are developed to distinguish quotidian trash, feasting remains, and animal offerings deposits. The results show how different faunal indicators and associated settings can be used to interpret practices that served a variety of sociopolitical purposes.

[26] *Second Organizer*

Rosenstein, Dana (University of Arizona), Ronald H. Towner (University of Arizona), Gregory W.L. Hodgins (University of Arizona), Steven Baker (Centuries Research, Inc.) and Jeffrey Dean (University of Arizona)

[183] *Jutten Lodges: A Case Study Radiocarbon Dating Ute Sites*

The Jutten Lodges site is a Ute settlement located in southwestern Colorado and dated to the late Contact period by historic artifacts. It is within the study area of a broader research project assessing variability in firewood age across the northern Colorado Plateau. Two Ute teepee sheltered households were excavated at the site. In one, a pile of firewood survives approximately one meter from a hearth pit. This allows us to make chronometric comparisons between radiocarbon results obtained on charcoal from the hearth context and results obtained on deadwood that presumably was intended for burning in that same hearth.

Rosenstein, Dana [183] see *Towner, Ronald*

Rosenswig, Robert (University at Albany), Ricardo López-Torrijos (CasaAlba Consulting llc), Caroline Antonelj (University at Albany) and Rebecca Mendelsohn (University at Albany)

[62] *LiDAR and Surface Survey of Izapa, Mexico*

Recent LiDAR and pedestrian surveys have remapped the well-known Mesoamerican site of Izapa and the surrounding Soconusco piedmont. These data reveal: 1) new architectural features from the monumental site core, 2) significantly larger estimates of the site's size during both the Formative and Classic periods as well as 3) demographic estimates from the surrounding 40 sq km. Methodological issues are outlined for combining high precision LiDAR mapping with ground-truthing and traditional pedestrian settlement survey that focuses on surface collection of temporally diagnostic artifacts.

Preliminary results are presented for the more than 400 new mounds documented during the 2011 field season.

Rosenswig, Robert [233] *see Mendelsohn, Rebecca R.*

Rosenthal, Jeffrey [112] *see Whelan, Carly S.*

Rosenzweig, Melissa (University of Chicago)

[134] *Agriculture and Empire at Ziyaret Tepe: A Case of Late Assyrian Land-Use in Southeastern Turkey*

This presentation will review the latest findings from archaeobotanical studies being conducted with material from Ziyaret Tepe, a multi-period occupation in the Upper Tigris River Valley in southeastern Turkey. In the early first millennium BCE, this site rose to become a critical provincial center for Late Assyrian operations into Anatolia. The archaeobotanical data will be reviewed as a means of assessing the environmental and political impact of these activities within and around Ziyaret Tepe.

Rossen, Jack (Ithaca College)

[40] *Myers Farm and the Early Cayuga Landscape of Central New York*

A long-term research effort to understand the early Cayuga cultural landscape in central New York led to the Myers Farm site in Cayuga County. Our first field season (2011) revealed the site to be an isolated, unfortified homestead dating to the 13th century. This site type is previously undocumented in a time and place known for nucleated villages. The entire assemblage probably represents the seasonal materials of one family. Preliminary analysis is presented and implications for broader questions are explored regarding the history and settlement patterns of the Cayuga people and the Haundeonsaunee (Iroquois) Confederacy.

[40] *First Chair*

Roth, Barbara (UNLV), Kathryn Baustian (UNLV) and Doss Powell (Paradise Valley Community College)

[105] *Women, Kin Groups, and Social Power at the Harris Site, Southwestern New Mexico*

The Late Pithouse period in the Mimbres Mogollon region was a dynamic time during which many social changes occurred. One significant change appears to be related to the role of land-holding kin groups at some of the larger pithouse sites. We present bioarchaeological data from excavations at the Harris Site in the Mimbres River Valley to illustrate that women associated with these kin groups were gaining social power. We discuss the reasons for the power differentials and the implications they have for understanding the myriad of other social changes occurring valley-wide at the end of the Pithouse period.

Rothenberg, Kara A. [203] *see Mixter, David W*

Rothman, Mitchell (Widener University)

[130] *Changing Organization of Kura Araxes Culture*

The Kura Araxes cultural horizon encompassed the time from 3500 BC to after 2500 BC. Its homeland was the Transcaucasus. The culture was not limited to that area, however. Migrant groups from there settled in highland Turkey, Iran, and in the north Jordan Valley. Early researchers argued that the Kura Araxes culture was one of simple villagers and pastoral nomads. This paper will

argue from a broader regional level and a local level in the area of the Ararat Plain that a change to what Areshian calls incipient polities occurred during this period.

Rothschild, Nan (Columbia University) [188]
Discussant

Rots, Veerle [93] *see Hardy, Bruce L.*

Rouse, Lynne (Wash U in St. Louis)

[103] *Unearthing The Impact Zone: New Data on Bronze Age Mobile Pastoralists in the Murghab Delta, Turkmenistan, and Their Role in Local Socio-Production Systems*

Ancient pastoralist groups in the Murghab Delta of Turkmenistan are discussed as intrusive and disruptive to the 'local' Bronze Age system of sedentary agricultural communities. Given circumstantial evidence gathered from archaeological excavations at large agricultural villages this view is understandable, but incredibly biased. I offer new archaeological evidence to balance these assumptions in the form of data specifically related to the mobility, subsistence, and production technology of 'intrusive' pastoralists. Based on recent excavation of a multi-function pastoralist campsite in the northeastern Murghab, I argue that pastoral groups were a stable and productive part of the local socio-cultural and ecologic system.

Roussin, Lucille

[230] *Remembering What I never knew*

What happens when you grow up in a home where memories are deliberately repressed? Such is the case with many people in the 'Second Generation of the Holocaust,' the children of survivors whose parents never discussed what their families had lost during the Holocaust. In legal terms, the restitution of artworks looted by the Nazis concerns 'Cultural Property.' For Jewish families, the restitution of looted property is an intense experience, especially when the revelation of such property comes as a surprise to the potential claimants. As I discuss, these objects serve as a reification of family identity and lost memories.

Rowe, Matthew (William R Adams Zooarchaeology, Indiana University) and Jillian L. Kleiner (Indiana University,)

[36] *Revealing the path: using least-cost surface analysis to explore connections between the Black Mountain sheep trap and Late Prehistoric camp sites in northwestern Wyoming*

The Black Mountain sheep trap is a high-elevation communal hunting structure associated with terminal Late Prehistoric or Contact Period Mountain Shoshone occupations in northwestern Wyoming. Recent surveys identified a large, Late Prehistoric camp on an isolated butte adjacent to the trap. The camp has large distributions of chipped stone artifacts including obsidian arrow points, tools, and debitage indicating a wide range of activities that may have been associated with communal sheep hunting. Here we present the results of a cost surface analysis that explores the relationship between the camp site and sheep trap and indicates possible pathways between them.

Rowe, Sarah (University of Illinois) [235] *First Chair*

Royal, Jeffrey (RPM Nautical Foundation)

[119] *Maritime Archaeology off the Albanian Coast: a Report from the Illyrian Coastal Exploration Program*
Long closed to maritime archaeology, the Albanian coast has remained a mystery. A systematic archaeological survey began in 2007 with a goal of documenting this submerged cultural material. The program has completed the stretch of coastline from the Greek border to Vlore. Nine ancient wreck sites have been documented thus far with dates spanning the 6th century BCE through the 4th century CE. The growing data set indicates significant Corinthian/Corcyran trade activity in the 4th – 3rd centuries BCE, the various commodities moving along specific routes in the Roman era, and a shifting trend in overseas trade during Late Antiquity.

Roza, Jennifer (University of Chicago)

[92] *Transforming Landscapes and Peripheral Places: The People, Plants, and Pueblos of Spanish Colonial New Mexico*

Southwest colonial archaeology often focuses on sites where Spanish colonists worked and lived, particularly missions. There is a growing appreciation, however, of the need to also investigate 'peripheral' indigenous communities. This project focuses on one such ancestral Pueblo site, Paa-ko, and its surrounding agricultural fields and pastures. By examining the ecological impact, both intentional and unintentional, of changing land use practices, I explore the dynamic interrelationships of human, plant, and animal communities, and their effects on local landscapes. This exploration provides important context for looking at the daily experiences, economies, power dynamics, and aesthetics of a transformed Spanish colonial world.

Rubenstein, Meghan (University of Texas, Austin)

[191] *Reassessing the Study of Preclassic Architecture in the Maya Lowlands*

This presentation will explore the ways buildings have been analyzed in the past and the problems currently encountered when looking at ornamentation, building history and construction processes. This paper considers the previous approaches used in different regions in the Maya Lowlands. It will evaluate the methodologies implemented to "decode" building function and meaning based on chronology, iconography, and composition. Through this analysis and problem identification, we can move beyond the pervasive assumptions that so often constrain the study of Preclassic architecture.

Rubin de Rubin, Julio Cezar [277] *see Silva, Rosicler T.*

Rubino, Sara (Indiana University of Pennsylvania)

[170] *A Closer Look at the Lower Liebhart Site*
The Susquehannocks traded with the Swedish the most during the Swedish peak followed by the English and the Dutch. Eventually, however, the Swedes were defeated in 1655 and the Dutch in 1664 (Ward 1938, 130 and DeJong 1974, 27). The defeat of the Swedes and the Dutch were close enough in time to the occupation of the Lower Leibhart site where there should still be some items from trade with those countries. The Susquehannock were not trading much at this time due

to an economic and political decline (Kent 1993, 379) hence the artifacts should be the most necessary/important items assuming they could not get resources in other ways.

Rubinson, Karen (Institute for the Ancient World, NYU) [130] *Discussant*

Rubio, Efraín [58] *see Domínguez, María del Rosario*

Ruby, Bret [124] *see Lynott, Mark J.*

Ruby, Tara (University of Cambridge)

[202] *Middle Paleolithic pigment use: results of the use-wear analysis of Pech de l'Azé I pigments and its implications for the behavior of Neanderthals and early modern humans*

The Eurocentric paradigm on the origin of 'modern behavior' has been challenged in recent years by alternative models (africanist and social intelligence models and mediated symbolic contexts). An issue central to this debate is whether 'modern behavior' is species-specific and originated during the Middle-Upper Paleolithic boundary. Results of use-wear analysis on Pech de l'Azé I pigments indicate that Middle Paleolithic hominins from southwestern France used these pigments as proxies for a non-verbal communication. This non-verbal communication was becoming increasingly sophisticated and associated with simple graphic signs and images of the sort that would become fully symbolic, representational and anthropomorphic during the Upper Paleolithic.

Rucabado Yong, Julio [24] *see Billman, Brian R.*

Rucker, John [243] *see Cutright, Robyn E.*

Rudolph, Katie (Indiana University)

[94] *Found! Using photographs to sort out commingled museum collections*

Disarticulated human remains from the Aztalan site in southeast Wisconsin (AD 1000-1200) were recovered from refuse pits across the site. Since then, nearly 100 years of sporadic excavation and accession by various institutions has further commingled the remains. Moreover, no site notes from these projects have been located. Excavation photographs were used to reconstruct skeletal element organization within features, reestablish lost provenience of human remains, correct misinterpretation of osteological materials and rearticulate the "Aztalan Princess." Using Aztalan as a case study, this paper illustrates the value of using all available museum documentation in analysis of commingled human skeletal remains.

Rudolph, Katie Z. [187] *see Richards, John D.*

Rufolo, Scott [234] *see Zeder, Melinda A.*

Rühli, Frank [145] *see Warinner, Christina*

Ruiz, Christopher L. [161] *see Dexter, Jaime L.*

Ruiz, Joaquin [71] *see Thibodeau, Alyson M.*

Rusch, Bruce (NH SCRAP; Harvard University ext.)

[268] *Rush to Judgment: Preliminary modeling to infer behavioral settlement patterns at the Jefferson VI site of the Israel River complex.*

This paper uses the initial data derived from early investigations into the two loci at Jefferson VI site archaeological record from the 2010 and 2011 investigations. Quantitative and qualitative analytical models were applied to identify, classify, quantify and measure behavioral settlement pattern traits. Results inferred are classified into three broad categories: temporal aspects of site habitation including, locus occupation date ranges, length of locus occupation, and locus reoccupation; loci landscape activities conducted; and the technological organization of the site occupants.

Rush, Laurie (US Army, Fort Drum)

[99] *International Cooperation for Cultural Property Protection during Military Operations*

Cultural Property Protection is a critical component of successful and well planned military operations which include not just violent conflict, but also construction, infrastructure projects, and disaster response. Representatives of the United States military are finding that the most effective way to implement planning and education for protection of archaeological sites both at home and abroad is to work with international colleagues developing military education curricula, experiential learning opportunities, management guidelines, reference materials, and detailed mapping resources. This paper will summarize recent progress in international cooperation for cultural property protection with discussion of current regional challenges and accomplishments.

[99] *First Chair*

Russell, Kimberley

[109] *Advancements in Handheld XRF Technology for Archaeological Applications*

Portable XRF is used worldwide for research and discovery in a variety of academic disciplines. Handheld XRF has been shown to be particularly effective for field archaeological studies as these in-situ, nondestructive analyzers provide fast, simple, accurate and cost-effective elemental and compositional analysis. Recent advancements in Handheld XRF include optimization of beams, detectors, integrated cameras, and collimators. These technological advancements will be described in terms of how they pertain to archaeological applications. Examples of the use of these advancements for archaeological applications, including metals, ceramics, and soils, will be demonstrated.

Russell, Will [171] *see Snow, Benjamin V.*

Russo, Michael (National Park Service SE Archeological Center), Craig Dengel (Tyndall Air Force Base) and Jeffrey Shanks (National Park Service Southeast Archeological Center)

[97] *Public Plazas as Mediating Loci at Weeden Island Coastal Settlements*

We suggest that plazas of circular coastal Weeden Island (AD 600–800) villages in northwest Florida served double duty as loci for quotidian practices and memorial rites associated with kin-based burial mounds. Well known for their elaborate funerary pottery and exotic objects, the mounds have also commonly yielded everyday wares

and fauna typical of the village middens. Conversely, ritual objects have been identified in village contexts. The interchangeability of these materials between practical and ceremonial spheres suggests mediating purposes. Patterned processional path orientation between the villages and mounds suggests that mediating rituals between the spheres may have been formalized.

Russo, Michael [90] *see Shanks, Jeffrey H.*

Rutecki, Dawn (Indiana University Bloomington)

[125] *The Ethics of Iconography*

This paper addresses the concerns of how iconographic research must be critically aware of its impacts on living communities. Many times as scholars we are lost in the nuances of comparing symbols and their remnants left behind, all too often forgetting the people from whom these ethnographic parallels are drawn. This paper highlights the responsibility of researchers to not statically project the living into the past nor make overly-simplistic conclusions from dynamic living communities about past peoples. Furthermore, it calls for more inclusive forms of knowledge from which to think about and interpret the past.

Ruttle, April (Human Evolutionary Studies & Archaeology, SFU), Briggs Buchanan (Human Evolutionary Studies & Archaeology, Simon Fraser University) and Mark Collard (Human Evolutionary Studies & Archaeology, Simon Fraser University)

[84] *risk and technology: exploring the causes of toolkit variation among subsistence-level food producers*

Recent research suggests that risk of resource failure is a major determinant of toolkit structure among hunter-gatherers. Here, we report a study in which we examined the effect of risk on the toolkits of small-scale food producers. We collected toolkit and risk data for 45 ethnographically-documented, globally-distributed populations. Risk was represented by a series of environmental variables chosen for their expected influence on food-production. The relationship between toolkit structure and risk was investigated with simple linear regression analysis. The results of the study suggest that the toolkits of subsistence-level food-producers are subject to different influences than those of hunter-gatherers.

Ruuska, Alex (Northern Michigan University) and Ruth Ann Armitage

[101] *Whose Fault is it? The Rise and Fall of Spider Man Cave and Implications for Heritage Management in the Twenty First Century*

This paper explores the seemingly elusive question, 'Is it anyone's fault when a cultural site is destroyed?' To this end we interrogate the interdigitation of natural and cultural formation processes (sensu Schiffer 1983) underlying heritage management theory and praxis, and the critical role of cultural production (sensu Bourdieu 1993) in potentially catalyzing site preservation or destruction. Utilizing a case study of a pictograph site from the Upper Peninsula of Michigan, we chronicle the diachronic formation processes associated with a cultural site's physical degradation from the middle of the nineteenth century through the present (Skibo and Schiffer 2008:9).

Ryan, Jennifer (USACE) and Robert Lore (Richard Grubb and Associates)

[76] *Late Mississippian Adaptations in the Lower Delta: Faunal Analysis of the Rolling Fork Mounds Assemblage*
This paper presents the results of a faunal analysis performed on prehistoric material recovered from Rolling Fork Mounds (22SH506). This analysis examined eight samples from different contexts, containing over 11,000 bones and fragments, which provided evidence that site inhabitants acquired a significant portion of their diet from several fishes, mammals, and turtles. The low relative frequency of bird remains compared to fish and mammals suggests that birds did not play a substantial dietary role. Collectively, the assemblage provides information on the diversity of animals consumed, white-tailed deer procurement and processing techniques, and taphonomic factors related to the assemblage's composition.

Ryan, Karen (Canadian Museum of Civilization), Vanessa Oliver-Lloyd (Canadian Museum of Civilization), Matthew Betts (Canadian Museum of Civilization), Nicholas Clement (Idaho Museum of Natural History) and Robert Schlader (Idaho Museum of Natural History)

[129] *Determining the Cause of Trauma on a Pre-Contact Inuit Woman's Skeleton Using 3D Scanning Technology and a Comparative Virtual Zooarchaeological Reference Collection*
A pre-contact Inuit woman's skeletal remains were excavated from a site on Southampton Island, Nunavut, Canada in 1954. Damage to the cranium was at that time attributed to post-mortem site activities and the remains were not further examined until a request to repatriate Inuit human remains was recently initiated. This paper discusses how virtual technology, specifically 3D scanning and the comparative online reference collection known as the Virtual Zooarchaeology of the Arctic Project, were used to identify the true cause of the previously noted skeletal traumas, which were most probably the result of a fatal polar bear attack.

Ryan, Susan (Crow Canyon Arch. Center and University of Arizona) and Paul Ermigiotti (Crow Canyon Archaeological Center)

[216] *Reproducing Ancestral Pueblo Pottery Paint*
Ancestral Pueblo pottery production has been the focus of intensive research in the American Southwest for over a century. Pottery analyses have contributed to discussions of prehispanic social issues including migration, trade, identity, and resource acquisition. Despite this advance in knowledge, researchers have yet to thoroughly understand how mineral paint was produced, limiting our discussions and our overall understanding of pottery technology. This poster summarizes an experimental archaeology project in which mineral paints found on pottery vessels recovered from the central Mesa Verde region in southwest Colorado were reproduced. The methods, results, and findings of this experiment are presented.

Ryzewski, Krysta (Wayne State University), Hassina Bilheux (Oak Ridge National Laboratory), Lakeisha Walker (Oak Ridge National Laboratory) and Susan Herringer (Brown University)

[109] *Neutron Imaging of Archaeological Bronzes at Oak*

Ridge National Laboratory

This poster presents the initial results of 2-D and 3-D neutron imaging of bronze artifacts using the CG-1D prototype beamline at HFIR, Oak Ridge National Laboratory. In the United States neutron imaging is a new non-destructive technique capable of producing unprecedented 3-D information on archaeomaterials, including qualitative, quantitative, and visual data on impurities, contrast change, voids, and structure on micro- and nanoscales. The results of tests involving the CG-1D beamline in 2011 are presented. They highlight how information from neutron imaging can provide otherwise inaccessible details about the methods and materials that ancient craftspeople used in creating bronze objects.

Sablin, Mikhail [157] see Bazaliiskii, Vladimir I.

Sabo, George (Arkansas Archeological Survey)

[266] *Time and the Cosmos in Spiroan Art*
Among the splendid corpus of mythic scenes engraved on shell cups and gorgets from the Craig Mound at Spiro are several that depict specific characters distinguished by facial markings and regalia. This paper argues, first, that these artistic illustrations depict culture heroes whose actions bequeathed the living community with cosmological access. A following argument is made that the creation and dramatic utilization of these images provided a means for Spiroan communities to manipulate relationships between secular and eternal temporal registers and thus bring into the here and now powers associated with legendary ancestors.

[252] *First Chair*

Sabol, Donald [7] see Buck, Paul

Safi, Kristin (Washington State University)

[160] *Measuring Cultural Transmission: Implications and Applications*

Cultural transmission theory does not place concrete limitations on the mechanism of information exchange, the type information being transferred, the social relationship between entities involved in the transfer, the size of the parties involved (e.g., many to one), or even the time period in which the exchange must occur. As such, evaluating cultural transmission in the archaeological record is dependent on our ability to accurately measure instances of cultural transmission and formulate meaningful explanations about the archaeological record at the scale of time averaged populations. This paper reviews the issue of empirical sufficiency when evaluating cultural transmission within prehistoric populations.

[160] *First Chair*

Sagebiel, Kerry

[236] *Teasing Out Time: Ceramics and Stratigraphy at La Milpa, Belize*

During the La Milpa Project (LaMAP), few radiocarbon or hieroglyphic dates were produced. This necessitated a careful analysis of ceramics to prepare a relative sequence for cross-dating. This was particularly important for delineating the phases of the Late Classic. Before the LaMAP, it was thought that La Milpa lacked a Late Classic I phase, and the Late Classic II and III phases could not be differentiated. Dr. Hammond's

knowledge and appreciation of ceramic analysis, his masterful Harris matrices, and stratigraphic interpretations made it possible to tease out the phases of the Late Classic and expand our knowledge of that period.

Sakai, Sachiko (UC Santa Barbara)

[216] *Change in Clay Sources of Olivine-Tempered Ceramics in the Arizona Strip and Adjacent Areas in the American Southwest*

The ceramic assemblage in the Arizona Strip and adjacent areas is characterized by widely-distributed ceramics tempered with olivine between A.D. 100 and 1300. The ultimate goal for this study is to understand the evolution of production and distribution patterns of olivine-tempered ceramics among agricultural groups in the unstable environment. To investigate the source of olivine-tempered ceramics, LA-ICP-MS was used to analyze 1270 ceramics from both Mt. Trumbull and the lowland Virgin area, and 100 source clays. In his poster, I will particularly examine how many clay sources were involved and how the clay sources changed over time using luminescence dating.

Salavert, Aurelie [238] *see Chevalier, Alexandre*

Salazar, Lucy [156] *see Burger, Richard L.*

Salazar-García, Domingo Carlos (MPI-EVA Plant Foods Research Group), Joan Brenner-Coltrain (University of Utah), Mike Richards (University of British Columbia / Max-Planck Institute for Evolutionary Anthropology) and Amanda Henry (Plant Foods Research Group, Max-Planck Institute for Evolutionary Anthropology)

[145] *Stable isotopes from dental calculus*

Long-term dietary reconstructions rely heavily on stable isotope analyses of bones and teeth, though the collection of samples is destructive of the skeletal material. Previous work has shown that dental calculus may be an appropriate source for isotope analysis due to its composition, and that sampling the calculus does not damage teeth. We have tested dental calculus as a target for carbon and nitrogen stable isotope analyses, and compare the results from calculus to those from bone collagen and carbonate, from two Basketmaker II skeletal populations. Our results provide further insight into the role of dental calculus as dietary markers.

Saldana, Melanie (California State University Los Angeles)

[208] *Spatial Variation in Ritual Activity at Midnight Terror Cave*

California State University, Los Angeles conducted a three year survey of Midnight Terror Cave, Cayo District, Belize between 2008 and 2010 as part of the Western Belize Regional Cave Project directed by Dr. Jaime Awe. The project collected a sizable and varied artifact assemblage during the survey. Artifact distribution is a valuable reflection of activity within the cave context. This paper will examine the distribution of artifacts at Midnight Terror Cave and their relationship to ritual activities performed within to highlight different foci of activities.

Salgado, Silvia (Universidad de Costa Rica)

[259] *La Gran Nicoya: un concepto limitante para*

entender las dinámicas sociales de la historia antigua de América Central.

En 1964 Albert H. Norweb publicó su propuesta para una subárea denominada Gran Nicoya, que ha enmarcado la investigación arqueológica en el Pacífico de Nicaragua y el noroeste de Costa Rica. Entonces la investigación era escasa en esta zona y la definición se basó sobretudo en las descripciones históricas del siglo XVI. Luego de su reconsideración por varios investigadores en 1993, argumentamos que este constructo oscurece la complejidad y la diversidad de los procesos sociales del área. Las fuentes etnohistóricas del siglo XVI muestran su diversidad cultural y social, y la investigación arqueológica ha mostrado la variación en fronteras e interacciones a través de más de tres mil años.

Salgado, Silvia [122] *see Aguilar Bonilla, Mónica*

Sampeck, Kathryn (Illinois State University)

[166] *How Chocolate Came to Be*

This paper brings together archaeological and documentary data to examine chocolate as a case study in commodity production and exchange. 'Chocolate' was most associated with southern Mesoamerica and was but one of many pre-Columbian cacao beverages. Cacao was one of the earliest economic "boom" crops in colonial Spanish America. How then, did 'chocolate' come to be the dominant term to describe cacao-based foods by the eighteenth century? The fate of chocolate will be placed within the context of the Izalcos region of today's western El Salvador, a premier producer of cacao in the colonial period.

Sanchez, Hazel [227] *see Patterson, James W.*

Sanchez, Luis

[259] *Re-interpretando el periodo Tempisque de la Gran Nicoya (500 a.C. a 500 d.C.): La secuencia ocupacional del sitio Manzanillo (G-430Mz), Bahía Culebra, Pacífico Norte de Costa Rica*

Se exponen datos recientes sobre excavaciones realizadas en el sitio costero de Manzanillo entre 2007 y 2009 donde desechos estratificados permitieron inferir una secuencia preliminar de cinco fases regionales y describir distintas actividades productivas y rituales. Se confronta esta evidencia con la cronología actual de la Gran Nicoya relacionada a los periodos Orosi y Tempisque y se discuten sus implicaciones históricas en relación al desarrollo socio-económico de estas poblaciones y su interacción temprana con Mesoamérica.

Sanchez Balderas, A. Fabiola [233] *see Palka, Joel*

Sanchez Miranda, Guadalupe (Museo de Sonora INAH) and John Carpenter (Instituto Nacional de Antropología e Historia Sonora)

[55] *Vance Haynes and his contributions to the study of the first Americans in Mexico*

Mexico is a natural funnel-shaped corridor that is considered to contain the answer of how and when the first Americans reached Central and South America. Vance Haynes' interest in the geoarchaeological record of Mexico began with the discovery of the mammoths at Santa Isabel Iztapan, in 1952, and continued with the discovery of Tlapacoya and Valsequillo sites. His

research interest at Murray Spring and in the San Pedro River Valley in Southern Arizona (1966-1971) directed his attention south to the state of Sonora. Haynes' interest in the Paleo-indian occupation of Sonora has been fundamental for the ongoing research in Sonora.

Sanchez Polo, Romulo [137] *see Pugh, Timothy W.*

Sandgathe, Dennis [274] *see Goldberg, Paul*

Sandweiss, Dan [231] *see Rademaker, Kurt M.*

Sandweiss, Daniel (University of Maine)

[158] *Terminal Pleistocene to Mid-Holocene Settlement and Subsistence on the Peruvian Coast*

Human settlement of the Peruvian coast began in the Terminal Pleistocene (ca. 13,000-11,400 cal bp) and continues to the present. Sea level change and expansion of the urban and agricultural frontiers have compromised the record, especially through the Mid-Holocene stabilization of sea level. However, sites survive from all periods and indicate: early, sophisticated use of marine resources; complementary use of terrestrial foods and materials; inter-regional interaction, both within the coastal zone and between coast and highlands; and increases in population and complexity through time. This paper briefly reviews our current understanding of these patterns.

Sandweiss, Daniel [86] *see Quilter, Jeffrey*

Sanft, Samantha [40] *see Allen, Kathleen M.*

Sanger, Matthew [2] *see Napolitano, Matthew F.*

Sanhueza, Lorena [153] *see Giesso, Martin [112]* *see Cortegoso, Valeria*

Santiago, Emilio (Columbia University), Caroline Frosch (Barnard College), Emma Gilheany (Columbia University), Heather Atherton (Columbia University) and Severin Fowles (Barnard College)
[85] *The Archaeology of Uncertainty in Colonial New Mexico*

Recent excavations of an early eighteenth century torreon in the northern Rio Grande village of Dixon, NM, have highlighted both the defensive stance of many early Spanish villages as well as the remarkable uncertainty of life on Spain's distant northern frontier. Far from the empire's bosom, Spanish colonists lived in a land that continued to be dominated by native peoples, both economically and, to a great extent, politically. Here, we report on the torreon excavations as well as recent survey work that collectively bring to light the archaeology of colonial uncertainty in one corner of the Spanish empire.

Santiago, Louis [167] *see Fedick, Scott L.*

Santini, Lauren (Harvard University) and Willem VanEssendelft (Harvard University)

[258] *What Archaeology needs from Technology: Adapting to and overcoming problems with GIS and Remote Sensing*

As remote sensing technology improves, we are finding

new and innovative ways of applying it to archaeological research. However, there are challenges associated with our progress that have remained largely unaddressed. The same standards are not always maintained for using, processing, or interpreting data between archaeologists and other fields where remotely sensed data has been used for some time. Additionally, there are inconsistencies of the same nature different archaeological studies. This paper calls for a critical evaluation of the methods and theory behind processing and using remotely sensed data, and consistent standards to better facilitate communication between the disciplines.

[258] *Second Chair*

Sarabia, Alejandro [73] *see Sugiyama, Nawa*

Sassaman, Kenneth (Univ of FL - Anthropology) [271]
Discussant

Sassaman, Kenneth E. [199] *see Randall, Asa R.*

Sauer, Jacob (Vanderbilt University) and Tom Dillehay (Vanderbilt University)

[52] *Frontiers On-the-Move: A Meaning for Inca Influence in the Southern Araucania*

It is believed that the southern extent of the Inca Empire was in central Chile and that the Araucanians of south-central Chile have some roots in Inca culture. The mechanisms responsible for these roots are not known. Yet, south-central Chile apparently was never occupied by the Inca. We employ literature on frontiers to explain Inca influence among southern Araucanians. We argue that the migration of northern Araucanians from central to south-central Chile, prompted by sequential contact with the Inca and Spanish, accounts for this influence. We examine three frontier phenomena: factionalism, resiliency, and resource exploitation.

Saul, Gwendolyn [65] *see Jolie, Ruth B.*

Savage, Sheila [185] *see Hammerstedt, Scott W.*

Sawyer, Jesse [67] *see Galle, Jillian E.*

Sayre, Matthew (University of South Dakota)

[121] *Was Vilca the most widespread pan-Andean psychoactive plant?*

The highland Andean region is known for the many hierarchical societies that produced iconography with recognizable depictions of psychoactive (hallucinogenic) plants. One site in particular, Chavin de Huantar, is justly recognized for its clear depictions of San Pedro cactus. However, vilca is a common toponym used throughout the region and there is clear scientific evidence for the use of vilca from a wide variety of sites, across time and space. Thus, this paper will re-analyze the broader evidence for the use of vilca across the Andes.

[238] *Second Organizer*

Sayre, Matthew [238] *see Whitehead, William T.*

Scaglione, Richard [235] *see Cordero, Maria-Auxiliadora*

Scarborough, Vernon (University of Cincinnati)

[91] *The Rate and Process of Landscape Alteration*

The rate and process of landscape alteration is one measure of a society's identity. Because of the "palimpsest effect" of humans on any living surface, care is necessary in preventing the unwarranted mixing of temporally discrete human actions. Two examples are provided: one spatially restricted but identified by high resolution—Tikal—and the other more landscape expansive but of lesser resolution—the Maya Lowlands. The rate and process of landscape construction and its sustainability are dictated by degrees of population density as well as historical precedent—and, of course, the biophysical environment itself. Cultural meanings are optimized and constrained herein.

Scarborough, Vernon [87] see Tankersley, Kenneth B.

Scarry, C. Margaret (Univ. of North Carolina-Chapel Hill)

[238] *Food Storage, Consumption and Urban Politics at Azaoria an Archaic City on Crete*
Azoria (1200-500 B.C.E.) is a small city-state on the island of Crete. At the heart of the city is a massive civic complex with shrines, assembly halls, public dining rooms, and associated kitchens and storerooms. These buildings manifest the importance of food display and commensal dining in urban politics. Surrounding the civic complex are "townhouses" of important families: here too storage, preparation and consumption of foods were prominently displayed. This paper draws on archaeobotanical, ceramic and ground stone evidence to discuss issues about the control and flow of food into and within the urban center.

Schaafsma, Polly (Research Associate, MIAC\LOA)

[47] *Complexities of Color Usage in Pueblo Rock Art*
A review of colors in Pueblo rock paintings from the thirteenth to the early seventeenth centuries indicates that several factors determined color usage including the availability of pigments. Pigments were also chosen for their high visibility or the need for emphasis and contrast in complex figures. Of greatest interest is the choice of colors for their symbolic qualities, thereby increasing the meanings conveyed by the imagery. Color symbolism may involve colors used in tandem rather than a single hue. The degree of adherence to color codes appears to be indicative of varying social contexts in which paintings were made.

Schach, Emily (Arizona State University)

[104] *Ritual in Moquegua: An analysis of recently excavated offerings from Cerro Mejia.*

The use of construction and household offerings from recent excavations at the site of Cerro Mejia in the Moquegua Valley of Peru are discussed to assess the level of Wari control over and interaction with inhabitants. Offerings are contextualized through comparison with the neighboring site of Cerro Baúl, the center of imperial administration and settlement in the valley, as well as sites from other areas within the Wari Empire. Differences between the offerings on Cerro Mejia and those at other Wari sites make it possible to draw conclusions regarding which aspects of Wari rituals were deemed important by inhabitants.

Schachner, Gregson [85] see Wilshusen, Richard H.

Schaefer, Michael, Fernanda Neubauer (University of Wisconsin-Madison and CAPES Foundation) and Adriana Schmidt Dias (Universidade Federal do Rio Grande do Sul)

[99] *Guarani Land Repatriation in Southern Brazil: a multidisciplinary approach to identify archaeological sites and establish territorial reservation boundaries in collaboration with Guarani representatives*
Itapuã State Park was created in the 1960s and '70s through the forced removal of Guarani Indians. Land repatriation concerns led a multidisciplinary technical group to work with the Guarani tribes in Morro do Coco, Ponta da Formiga and Itapuã State Park in the southern Brazilian state of Rio Grande do Sul in 2008 and 2009. Guided by Guarani informants, these areas were surveyed and six new precolonial Guarani archaeological sites were registered. These data are being used in an application for land repatriation and to establish boundaries for a future reservation.

Schaefer, Michael J. [277] see Neubauer, Fernanda

Schaffer, William (Arizona State University)

[165] *A Reappraisal of Prehistoric Human Skeletal Remains from the Bahamas Housed at the Yale Peabody Museum of Natural History*

Researchers have delved into the Yale Peabody Museum of Natural History's collection of prehistoric human skeletal material from the Bahamas with great veracity. The present study is a reexamination of this assemblage in an attempt to provide a more robust interpretation of the material that includes taphonomic processes, non-specific infectious agents and degenerative disease changes. This paper will also provide a brief perspective of the concept of 'health' in the archaeological record and a review of the most current evidence for more specific diseases such as treponemal infection and tuberculosis from prehistoric contexts throughout the Caribbean.

Scham, Sandra (University of Maryland) [147]

Discussant

Scharf, Elizabeth (University of North Dakota)

[185] *Results of Pollen Work at the Poverty Point Site, Louisiana (USA)*

The Poverty Point site, in West Carroll Parish, Louisiana (USA), contains monumental earthen structures built by sedentary hunter-gatherers. Reconstructing the environment in which this unusual situation developed and the plants that the Poverty Point people may have used are important factors in understanding and explaining this site and the culture that built it. This poster reviews prior pollen work at Poverty Point and presents the results from new cores, taken in December 2010.

Schaub, Amelia (University of Florida), John Krigbaum (University of Florida), Scott Fitzpatrick (North Carolina State University) and Greg Nelson (University of Oregon)

[177] *Palau Paleodiet: New Insights From Stable Isotope Ratio Analysis of Human Bone*

Human skeletal remains recovered from three archaeological sites in Palau, Micronesia, dating between ca. 3000 – 1500 cal. BP, were tested for light stable isotope ratios to determine patterns of human paleodiet.

Bone collagen and apatite yields were good, with pooled results from bone collagen suggesting strong marine protein components with enriched nitrogen (avg. 11.1‰) and carbon (avg. -15.3‰) isotope values. Bone apatite carbon (avg. -8.5‰) isotope values suggest consumption of enriched dietary carbohydrates, which could potentially include sugar cane and/or seaweed. Results correspond well with complementary archaeological evidence demonstrating that early Palauans were heavily dependent on diverse marine food resources.

Scheder Black, Ash (The University of York)

[64] *Visualizing archaeological datasets in the context of past environments.*

The instantiation of a paleoclimate model within a multi-dimensional database and a temporally-sensitive rendering technique for radiocarbon dates has made possible the visualization of archaeological datasets in the context of past climatic and environmental changes. TemporalMapping.org is a pilot, non-commercial software application featuring a spatial-temporal data cube coupled with a Web-based visualization engine that allows any user to easily explore diachronic changes of spatially distributed data from a Web browser at a resolution of 30 arc seconds and 20 years. Specialists can readily import any data set featuring Lat/Lon coordinates, a valid radiocarbon date, and a thematic value.

Scheinsohn, Vivian (INAPL-CONICET/ University of Buenos Aires), Claudia Szumik (INSUE/CONICET), Sabrina Leonardt (INAPL/UBA) and Florencia Rizzo (INAPL/UBA)

[101] *Biogeography applied to rock art distributional patterns in Patagonia: considering SW Chubut*

In previous papers rock art distributional patterns from Patagonia were identified by means of cladistics and endemism analysis. Both techniques are usually employed in biogeographical studies to evaluate spatial distributional patterns. As cladistics was utilized in a series of archaeological works there is no previous record of endemism analysis applied to archaeological research until our first work. Here we will present advances in this research by the incorporation of a new area, not previously studied. Our results will contribute to identify the role of this area in terms of its connections with other Patagonian areas and past human circulation patterns.

Schepartz, Lynne A. [119] *see McIlvaine, Britney Kyle*

Scher, Sarahh (Upper Iowa University)

[195] *Who Wears the Pants? High-Ranking Women and Masculine Imagery in Moche Art and Burial Ensembles*

The focus on women in Moche iconography has mainly been on identifying them and defining their social position in terms of their gendered counterpoint to men. It should be noted, however, that high-ranking women all take on elements of costume and accoutrements that are otherwise part of the semiotics of masculinity. I will focus on the iconographic representation of the High Priestess, as well as the grave ensembles of the Priestesses of San José de Moro and Huaca Cao Viejo in order to explore the "semiotic masculinization" of women of power in Moche culture.

[195] *First Chair*

Scherer, Andrew (Brown University) and Charles Golden (Brandeis University)

[237] *Making the Kingdom, Breaking the Kingdom: Maya Border Lords and the Dynamics of Polity*

During the 7th and 8th centuries AD, kings of the Western Maya Lowlands grew increasingly concerned with territorial control, and dependent on subordinate lords to govern their expanding kingdoms. Some of these nobles rose through the ranks as local courtiers, and some were lesser kings whose realms were absorbed into the territory of their overlord. As military commanders and governors of border settlements these nobles were essential for building and maintaining the kingdom, yet their growing political prominence ultimately contributed to the disintegration of the body politic in the final years of the Classic period.

[237] *First Chair [237]* *Second Organizer*

Scherer, Andrew [237] *see Golden, Charles W.*

Scherer, Andrew K. [166] *see Sharpe, Ashley E.*

Schieber de Lavarreda, Christa (Ministerio de Cultura y Deportes Guatemala) and Miguel Orrego Corzo (Ministerio de Cultura y Deportes Guatemala)

[30] *The sacred axis at Tak'alik Ab'aj: the perennial return to the ancestor?*

Some of the highest achievements in the long history (800 B.C.-900 A.D.) of the ancient commercial center of Tak'alik Ab'aj, located on the Pacific piedmont zone of southwest Guatemala, appear to have occurred during Preclassic times. In this initial period of increasing social complexity, Tak'alik Ab'aj produced a sophisticated inventory of sculptural art which led from Olmec styles to those of the early Maya. This cultural continuity, evident in architecture as well as in the ceramics, probably reflects common ancestral origins. A consistent pattern was repeatedly expressed in "special" offerings, suggesting that a constant respect was maintained for what must have existed, in their perspective, an invisible sacred axis.

Schieppati, Frank [101] *see Hayward, Michele H.*

Schiffer, Michael (University of Arizona)

[241] *Material-Stimulated Invention as a Source of Technological Variants*

Robert C. Dunnell envisioned a scientific archaeology founded on the principles of Darwinian evolution. In his lifetime he and like-minded archaeologists, many of them his students, developed an evolutionary archaeology that has had an appreciable influence on the discipline. One element of evolutionary archaeology received little attention until recently: the source of variants.

Accordingly, this paper discusses and illustrates the process known as material-stimulated invention. This process is a major source of technological variants that comes into play in many contexts, especially culture-contact situations; material-stimulated invention is also prevalent in industrial societies. Directions are suggested for future research.

Schilling, Timothy (Washington University in St. Louis) and Timothy Baumann (Glenn Black Laboratory of Archaeology)

[239] *Interrogating the Adonis of Newburgh: Fluorite Crafting and Use at Angel*

The most dramatic and well-known discovery at the Angel site is the "Little Green Man," a kneeling figurine made of a single piece of carved fluorite. Although found in the early 1940s and ubiquitous in images since then, this object has received little systematic attention. At the same time, fluorite, in general, is an understudied component of the Mississippian material assemblage in the Midcontinent. This study addresses these deficiencies by characterizing the distribution and composition of fluorite objects at the Angel site, providing insight into the production and consumption of this colorful mineral.

Schilling, Timothy [184] *see* *Krus, Anthony M.*

Schindler, Bill (Washington College)

[174] *Location, Location, Location: The Archaeology of Prime Fishing Site Selection in the Delaware Valley*

The exploitation of the migratory fish resource has long been regarded as important to the prehistoric inhabitants of the Delaware Valley. What has received little attention, however, is the selection process for locations suitable from which to conduct fishing related activities. This paper presents a survey of the various factors that may have influenced the placement of prehistoric fishing sites in the Delaware Valley. The Abbott Farm National Historic Landmark is then evaluated for the suitability of its location for the exploitation of the migratory fish resource.

Schlader, Robert (Idaho State University), Nicholas Clement (Idaho State University) and Nicholas Holmer (Idaho State University)

[129] *Data Capture and Manipulation at the Idaho Virtualization Laboratory: Making the Physical Digital*
Before an object can be included in a digital repository or museum exhibit, that object needs to be "virtualized." The Idaho Virtualization Laboratory has established a process for laser scanning objects that produces archival quality digital surrogates while ensuring minimal disturbance to the original object. Utilizing a variety of technologies to capture a digital record in both 2-D and 3-D, we combine them to produce highly accurate and realistic reproductions, suitable for virtual displays and detailed metric analysis. In this presentation we will describe our process, from initial cataloguing, through data capture, editing, and production of the final model.

Schlader, Robert [129] *see* *Ryan, Karen [129]* *see* *Betts, Matthew W.*

Schlarb, Eric [124] *see* *Sharp, William E.*

Schleher, Kari (Crow Canyon Archaeological Center)

[47] *Colorful Glazewares: Use of Color on Northern Rio Grande Glaze Wares*

Within the north-central Rio Grande, major changes in pottery occur in the early A.D. 1300s, with one of the most notable changes reflected in the replacement of black-on-white types with more colorful bichrome and polychrome glazewares. Potters have more color options, with hues of red, yellow, and tan, available to create designs. Using a sample of vessels and sherds from over a dozen sites in the Galisteo Basin and

beyond, I evaluate the colors used to create geometric and iconographic motifs, variation of color use across the region, and implications for production practices as they relate to color choices.

Schleher, Kari [270] *see* *Eckert, Suzanne L.*

Schmader, Matthew (City of Albuquerque)

[25] *"The Peace that was Granted had not been Kept:" Coronado in the Tiguex Province, 1540-1542*

The 1540-1542 expedition led by Francisco Vazquez de Coronado was the first major contact by non-native peoples in the western United States and was the largest land-based enterprise launched by the Spanish crown in the sixteenth century. The expedition spent both winters in the Rio Grande valley near Albuquerque, NM. Recent investigations there have uncovered evidence of several skirmishes at a large pueblo village. Expeditionary tactics and assemblages, and native response to this first contact, are described. These events set the stage for the next 60 years of Spanish exploration, colonization of la Nueva México, and ultimately, the Pueblo Revolt.

Schmader, Matthew [132] *see* *Graham, Martha*

Schmalle, Kayla A. [169] *see* *Tune, Jesse W.*

Schmaus, Tekla (Indiana University)

[199] *Tangling the Networks: Elaborating on Processes of Culture Change in Central Eurasia*

Culture change in Bronze and Iron Age Semirech'ye (eastern Kazakhstan) is currently explained in terms of seasonal interactions between groups of mobile pastoralists. It is assumed that people's decisions to move are based on social factors and environmental constraints. This theory makes good sense, but does not take into account what we may consider non-rational actions. Non-human agents in the landscape, such as cosmological events or newly meaningful resources in the ground, can also influence people to alter their mobility patterns. These alterations would in turn bring groups into contact with new people and places and ultimately effect culture change.

Schmich, Steven (Arizona State University), Barry Wilkens (LeRoy Eyring Center for Solid State Science, Arizona State University) and Eduard Faus Terol (Centre d'Estudis Contestans, Cocentaina, Alicante, Spain)

[6] *Using Proton Induced X-ray Emission (PIXE) Analysis to Source Chert in Les Valls de la Marina Alt – Alicante, Spain*

PIXE is a non-destructive method of determining geochemical composition that can be used directly on artifacts. It can also be used more than once on any given sample as a cross-check. This project presents the results of PIXE analysis on 572 chert samples and includes data from 946 acquisition points. The samples are artifacts – primarily small retouch/resharpening pressure flakes from radiocarbon-dated levels in cave and rock shelter sites – and raw material gathered from chert sources in Les Valls de la Marina Alt, a region of natural corridors linking Spain's Mediterranean Coast with its interior plateau (La Meseta).

Schmidt, Caroline [185] *see* *Nichols, Caitlin E.*

Schmidt, Christopher and Lindsay Frazer (University of Indianapolis)**[184]** *Were Mississippians the apex of maize consumption: Evidence from the teeth*

A study of 93 of human dentitions from Angel and Ray sites in Indiana and Wickliffe in Kentucky has confirmed Mississippian maize consumption. Caries data indicate 81.3 % of adults had at least one lesion. Analysis of dental macrowear, SEM-based dental microwear, and dental microwear texture analysis indicate a soft (processed) diet. But, when compared to the non-Mississippian late prehistoric (i.e., the Oliver Tradition), they have fewer people with caries; just over 94 % of Oliver people had caries and a similarly soft diet. Maize was very important to Mississippian people but no more so than other Late Prehistoric groups.

Schmidt, Erin (New Mexico State University)**[137]** *An Examination of Hacienda Architecture in Yucatán, Mexico*

This paper presents the results of archaeological and historical research on haciendas in three regions of the Yucatán peninsula. Haciendas are agricultural estates that are maintained by a wealthy land-owner and a lower-class labor force to supply small-scale markets with goods and enhance the prestige and status of the owner. I compare the variation in the architecture of the haciendas before and after the Caste War (1847), in the areas around Campeche Yaxcabá, and Ebtun. Architectural variation reveals new details about labor organization and production during the volatile 19th century.

Schmidt, Isabell**[135]** *Archaeological Evidence and Culture-Environment Models – A look at the Solutrean of Southern Iberia*

The archaeological evidence of the Solutrean from Southern Iberia is extremely heterogeneous. This is especially true for the quality and size of the sites and assemblages; but also for the internal chronological resolution. This situation demands a critical reading of the sources. It is argued that the specific appearance of the evidence has implications for modeling ecological and cultural dynamics. By concentrating on defining tools, associated material we test the spatial and temporal scenarios. Adjusting the models to the specific setting and evidence of Southern Iberia will hopefully enlarge their explanatory value.

Schmidt, Isabell [135] *see Weniger, Gerd-Christian***Schmidt, Peter (University of Florida)****[91]** *Reflections on Place and Meaning as Changing Directions in Historical Ecology*

A case study in Historical Ecology (1994) explored the interface between belief systems and the way that the environment was venerated, managed, and exploited in East Africa. Sacred places played a key role in how physical environments were configured, conserved, made instrumental in everyday lives, and managed. Because of the ravages of HIV/AIDs, senses of place have been brutally erased. Sacred places are now meaningless, totally unknown to those less than 30 years of age. The implications are profound for historical ecology, demanding new ways of accounting for and

understanding change in today's globalized world.

Schmidt Dias, Adriana [99] *see Schaefer, Michael J.***Schmitt, Dave (Desert Research Institute) and Karen Lupo (Washington State University)****[157]** *Beyond Canid Taphonomy: the influence of hunting dogs and different dog deployment strategies on zooarchaeological assemblages*

The taphonomic impacts of dogs and related canids on the zooarchaeological record are well known. However, the impacts of dogs on compositional characteristics of faunal assemblages are less widely appreciated and often go unrecognized. In this paper, we use ethnoarchaeological, ethnographic and zoological data to explore how the use of dogs and different dog deployment strategies (i.e., single animal versus packs) influence subtle compositional characteristics of zooarchaeological assemblages, such as age-structure and animal body-size. These data can be used to interpret zooarchaeological changes and have implications for understanding the spread and use of domesticated dogs in the prehistoric past.

Schmitt, Dave [89] *see Lupo, Karen D. [38]* *see Kiahטיפes, Christopher A.***Schneider, Anna (Colorado College), Kirsten Delay (Vanderbilt University) and Danielle Kurin (Vanderbilt University)****[5]** *Mummy Dearest: Post-Mortem Mortuary Alteration in Andahuaylas, Peru (AD 1000-1400)*

This poster provides a general overview of mummified human remains from the Andahuaylas region of Apurímac, Peru. The sample consists of 16 individuals in various states of completeness. These remains are likely associated with the Chanka people who populated the region ca. AD 1000-1400. In our research, we examine unique aspects of Chanka mummification--such as body positioning, binding, bundling, and associated artifacts--as well as all visible skeletal pathology, trauma, and modification. This research identifies mortuary practices which indicate culturally mediated ways of interacting with the dead in the ancient Andes.

Schneider, Joan (Retired)**[159]** *Texture and the Selection of Stone for Milling Tools: Testing the Hypothesis*

Milling tools: lower milling stones (metates or querns) and handstones (manos or rubbers) made of coquina (analogous to beachrock) have been found, in quantity, at major late prehistoric settlements around large springs in the Colorado Desert, USA greater Southwest. The stone source is a fossil shoreline at some distance from those sites. In the past, I have hypothesized that stone texture directly influences the choice of stone for milling tools, and therefore enhances their economic value. I seek to test that hypothesis for this situation and to discuss the implications of superior function, as well as economic and social values.

Schneider, Seth (University of Wisconsin-Milwaukee) and Jessica R. Miller (Illinois State University)**[64]** *Cultural Interaction in the Western Great Lakes: A Compositional Analysis of Oneota Pottery in Wisconsin*

and Michigan

Pottery dating between A.D. 1200-1400 from 12 Oneota sites in Wisconsin and Michigan are compared to detect cultural interaction among Oneota localities in the Western Great Lakes Region. A model of interaction proposes that Oneota groups living in Illinois and Wisconsin influenced the shift in pottery production of groups living Southwestern Michigan. Ceramic petrography and chemical compositional analysis using energy dispersive X-ray fluorescence (ED-XRF) techniques are used to demonstrate variations in paste composition between sites. The movement of people, pottery, and ideas between two regions in the Western Great Lakes separated by approximately 600 km is clarified.

Schollmeyer, Karen (Simon Fraser University & Arizona State University) and Jonathan C. Driver (Simon Fraser University)

[272] *Hunting, Sustainability, and the Scale of Zooarchaeological Analysis in the Mesa Verde Region*
Archaeological data from the Mesa Verde region provide a long-term record of human hunting. We investigate temporal patterns in fauna from well-dated sites to identify aspects of prehistoric hunting that appear to have been more and less sustainable over different time scales. Some taxa (including artiodactyls and carnivores) were substantially impacted by humans at a local scale early in the sequence, but were more resilient at a regional scale. Wild fauna from most sites is characteristic of a highly anthropogenic landscape; the majority of assemblages consist of taxa relatively resilient to both human hunting and environmental changes related to farming.

Scholnick, Jonathan (Simon Fraser University)

[160] *Rapid stylistic change in historic New England gravestone style: Using the neutral model of artifact style to interpret decorative variation*

This study uses the neutral model of artifact variation to evaluate historic New England gravestone diversity and inter-assemblage distance. In this case, low stylistic diversity and convergence between the cemetery assemblages suggest periods of conformity among both carvers and consumers. Surprisingly, the gravestone motif diversity expected by the neutral model occurs during a transitional period between the dominance of two different motifs. Locally produced and distributed motifs increase diversity and inter-assemblage distance during the mid-eighteenth century, before the widespread adoption of an innovative style.

Schon, Robert (University of Arizona)

[206] *The Archaeology of Cooperation: A New Interpretation of Archaic States*

Archaeologists have traditionally viewed state formation and state dynamics as the results of coercive and exploitative practices by elites. In this paper, I argue that such top-down approaches provide inadequate explanations of how ancient complex societies were maintained. I adopt the perspective that the state is an arena in which groups and individuals vie for social positions and model the interaction of these agents as a set of iterated prisoner's dilemmas. Using the Late Bronze Age polity of Pylos in Greece as a case-study, I propose that a cooperative framework offers a more

complete explanation of archaic state dynamics.

Schott, Amy (University of Arizona)

[71] *Depositional Environment and Site Formation Processes at La Playa, an Early Agricultural Site in Sonora, Mexico*

The site of La Playa in Northwest Mexico is an Early Agricultural site located on a floodplain of the Rio Boquillas. This study uses geoarchaeological methods to reconstruct the formation processes and the depositional environment of the site before, during, and after occupation. This paper focuses on the area of Los Monticulos, whose stratigraphic history appears different from the rest of the site, and tests the hypothesis that the stratigraphy of this area reflects a more varied and energetic geomorphic and depositional history due to its location closer to the river. Implications for occupation and agriculture are explored.

Schou, Corey (IRI/Idaho State University), Jon Holmes (Informatics Research Institute), Michale (Informatics Research Institute), Herbert Maschner (Idaho Museum of Natural History - VZAP) and Matthew Betts (Canadian Museum of Civilization)

[129] *Flexible Visual Data Systems for Data Democratization and Sharing*

Growth of scientific research requires data sharing. However, frequently these data are constrained by discipline boundaries or are lost due to technology changes and limited tools for sharing. Democratization of research requires data availability and integrity as well as confidentiality. We have implemented an extensible secure repository storing archaeological collections digitally. The plasticity/flexibility of the system allows researchers to share/aggregate data across discipline and geographic boundaries. It supports VZAP data in addition to other types of Arctic research. It currently supports GIS, survey, cultural, economic, lithic, and botanical data. It provides data visualization tools in 2D/3D.

[129] *Third Organizer*

Schou, Corey [129] see Betts, Matthew W.

Schoville, Benjamin (Arizona State University) and Kyle Brown (University of Cape Town.)

[142] *Formation of Impact Fractures on Heat-treated Silcrete Backed Blades from Western Cape, South Africa*

The presence of fractures considered "diagnostic" of use as projectile armatures are frequently cited as hunting evidence in archaeological contexts. However, their occurrence on heat-treated silcrete has not been experimentally demonstrated. The frequency and distribution of fractures on heat-treated silcrete backed blades are compared between three samples: 1) unused, 2) trampled, and 3) hafted and shot with a calibrated crossbow. Impact fractures form frequently on hafted and shot replicates, and are present on unused and trampled replicates. Due to equifinality of individual fracture morphologies, a comparison of assemblage level distributions provides a more effective means of inferring function.

Schreyer, Sandra (California State University, Fullerton), Brenda Bowser (California State

University, Fullerton) and Hector Neff (California State University, Long Beach)**[235] *Economic Aspects of Inka Empire Consolidation from Pambamarca, Ecuador***

The northern Ecuadorian highlands experienced Inka occupation and indigenous resistance around 1500 AD. This research investigates economic changes that occurred when the rebellious Pambamarca region was consolidated into the Inka Empire. Obsidian acquisition is examined using new obsidian source samples, GIS trade route analysis, and p-XRF chemical sourcing. The elemental data separates the Mullumica and Callejones obsidian sources into several chemically distinct geographical regions, with differing accessibility from inside and outside the Inka frontier. The results are used to characterize economic patterns at multi-component residential sites and fortresses in the Pambamarca region during Pre-Inka and Inka Periods.

Schroeder, Sissel (University of Wisconsin-Madison)**[197] *From the Domestic to the Ceremonial: Reinterpreting New Deal Collections***

As the New Deal era came to a close, archaeologists began investigating domestic contexts at Mississippian sites. Jonathan Creek, in the lower Tennessee Valley, was the first of these excavations conducted with the explicit goal of exposing and mapping an entire village. Interpretive frameworks at the time sought to identify regional and temporal patterns in artifacts, features, and architecture. Today, Jonathan Creek and other old collections are being reinterpreted from new theoretical perspectives that eschew trait-list approaches to the definition of culture and rely on practice theory to build inferences about the origins of variation in material culture.

Schroedl, Gerald (University of Tennessee), Stephen J. Yerka (University of Tennessee,) and Nicholas P. Herrmann (Mississippi State University, and Middle Eastern Cultures)**[90] *The Application of Digital Information Systems to Archaeological Investigations at Cherokee Farm, Tennessee***

Archaeological studies, including surface reconnaissance, geophysical survey, shovel test pits, Geoprobe® soil coring, deep testing, and excavations were conducted at Cherokee Farm (80 ha) without a traditional archaeological grid. Instead all field work was directly recorded using established projected coordinate systems, such as UTM. This approach eliminated intermediate data transformations and permitted direct imaging of archaeological occurrences in a GIS format. This gave archaeologists and land managers simultaneous real time research results. The implication for archaeological studies in the Tennessee River valley is that small, widely dispersed contexts traditionally ignored in most research designs are given research priority.

Schuldenrein, Joseph [37] see *Aiuvalasit*, Michael J.**Schulting, Rick [75] see *Tresset*, Anne****Schultz, John [36] see *Walter*, Brittany S.****Schurr, Mark (University of Notre Dame)****[239] *Human and Faunal Isotopic Ecology in the Late Prehistoric Ohio Valley***

Human stable carbon-isotopes have been extensively employed to study dietary variation between and amongst Late Prehistoric humans of the Ohio Valley. Such studies have been extremely useful in helping us understand prehistoric maize consumption, but they have not reached their full potential because they have not considered the isotopic variation of the plants and animals consumed. Intra- and inter-site variations in human and faunal isotope ratios provide valuable clues about subsistence practices, inter-community interactions, and climate. Human and faunal isotopes from Late Prehistoric sites are used to illustrate the importance of currently neglected faunal isotope ecologies for understanding human ones.

Schurr, Mark R. [67] see *Webster*, Andrew J.**Schwake, Sonja (Franklin and Marshall College), Gyles Iannone (Trent University), Kendall Hills (Trent University) and Esther Beauregard (Trent University)****[61] *Preliminary Investigations at the Minor Center of Martinez, Cayo District, Belize.***

Minor centers demonstrate great variability in architectural form and function, reflecting a complex relationship between the occupants of the minor center and those of the other centers in the settlement continuum. This paper discusses the results of the first year of investigations at the minor center of Martinez, located in the periphery of the larger center of Minanha, Belize. The focus of this research is the E-Group shrine, the dominant architectural feature in the Martinez epicenter and the primary ritual locus at the site. The investigations are contextualized in terms of the primacy of ritual behavior for interaction between sites.

[61] *First Chair* [61] *Second Organizer***Schwartz, Christopher, Robin Cleland (School of Human Evolution and Social Change, Arizona State University) and Ben A. Nelson (School of Human Evolution and Social Change, Arizona State University)****[71] *Fauna as Ideology: Exploring Ritual Practices through Faunal Analysis at La Quemada, Zacatecas***

This project uses ethnographic analogy and patterning in the zooarchaeological record to understand ritual use of carnivores at La Quemada (AD 400-900), an important ceremonial center on the northern Mesoamerican frontier. Analyses of expansion of the frontier illustrate two-way flow of cultural practices. Mythology and utilization of carnivores amongst the Huichol people of northern Mexico and faunal analyses from the American Southwest and Teotihuacan are used to test for similarity of beliefs and practices amongst these locations. Deviations from expected frequency of canids in the American Southwest are more consistent with non-consumptive, ritual use of bone similar to Teotihuacan.

Schwartz, Douglas**[197] *W.S. Webb and the Leadership of TVA Archaeology***

To initiate the Depression-motivated TVA archaeology program a strong leader of this vast enterprise was required. After a search of available talent the

government officials chose W.S. Webb, a professor of physics at the University of Kentucky who had done some archaeology survey. The choice of Webb for this important position said a great deal about the status of Southeastern archaeology at the time and of Webb's unusual professional development. This paper traces Webb's personal, leadership and archaeological development and his contribution to the formulation and execution of the TVA archaeological programs.

Schwarz, Kevin [94] *see Duncan, William N.*

Schwindt, Dylan [272] *see Varien, Mark D*

Schwartz, Steve (UC Davis), Alex Mackay (School of Archaeology and Anthropology, Australian National University), Jayson Orton (Archaeology Contracts Office, , University of Cape Town and School of Archaeology & St Hugh's College, University of Oxford) and Teresa Steele (University of California, Davis)

[83] *Initial Results from survey for open-air Middle Stone Age sites along the Varsche River, southern Namaqualand, South Africa*

We present the initial results from survey for Middle Stone Age archaeology in open-air surface sites along the Varsche River, in southern Namaqualand, South Africa. This area has excellent preservation, high visibility, easy foot travel, limited recent human occupations, and limited annual rainfall. Initial work has identified several highly concentrated surface sites preserving dense accumulations of stone artifacts representing both earlier and later MSA technologies. Several locations have produced bifacial points, prepared core technologies, laminar flake production, and a wide range of raw materials. The area shows great promise for investigating spatial and environmental variability in the MSA.

Scoggin, William [20] *see Prasciunas, Mary M.*

Scott, Ann M. [208] *see Mirro, Vanessa A.*

Scott, Elizabeth (Illinois State University) [166]
Discussant

Scott, Randi (Forensic Archaeology Recovery (FAR)) [14] *First Chair [14] Second Organizer*

Scott, Robert J. [220] *see Collins, Joe D.*

Scott Cummings, Linda [113] *see Logan, Melissa K. [113] see Varney, R. A.*

Scott-Ireton, Della (Florida Public Archaeology Network)

[24] *Sailing the SSEAS: A New Program for Public Engagement in Underwater Archaeology*
Sport divers generally are interested in the work of underwater archaeologists, and often want to help with research. Programs enabling divers to volunteer on projects have proven effective in promoting the goals of archaeology while empowering the diving public to participate. Often, however, no projects are available for them to work on. Divers may lose interest, become disillusioned with archaeology, or join commercial

salvage projects. Florida Public Archaeology Network is embarking on a new program to address this need. Submerged Sites Education & Archaeological Stewardship is intended to train sport divers in non-disturbance recording and then give them a mission.

Scullin, Dianne (Columbia University)

[262] *Exploring an Empirical Phenomenology: Acoustic Mapping of Archaeological Sites on the North Coast of Peru*

In order to understand the actions of the past that created the archaeological record, one must understand the experiences that afforded and effected those actions. Utilizing both phenomenology and acoustic measurement techniques, this paper explores the intersection between experiential and empirical data concerning sound and its interaction with the spaces of archaeological sites. This paper presents analysis of acoustic maps of archaeological sites in order to illustrate the interaction between material and performance, architecture and sound and how these interactions manifest themselves in the architecture and organization of Moche sites on the north coast of Peru.

Searcy, Michael (Brigham Young University)

[88] *Astronomical Implications for the Mound of the Cross at Paquimé, Chihuahua, Mexico*

The fourteenth-century site of Paquimé represents the apogee of the Casas Grandes cultural tradition. Monumental architecture such as effigy mounds and ball courts contrast sharply with other sites in the U.S. Southwest/Northwest Mexico. In particular, the Mound of the Cross, a cardinal aligned mound structure, suggests that those at Paquimé were aware of and may have tracked celestial bodies as part of a seasonal round. Findings also suggest that the alignment of the cross can be attributed to solar patterns that are different than today's due to earth's precessional cycle.

Sedig, Jakob (University of Colorado)

[85] *Woodrow Ruin on the Upper Gila: Preliminary Research at a Large, Multicomponent Mimbres Site*
Woodrow Ruin, located on the Upper Gila in Southwest New Mexico, is one of the most important sites in the Mimbres region. Like most Mimbres sites Woodrow Ruin has not been spared from looting, however a 7' tall chain-link fence constructed around the site has protected it for forty years. Because it has been protected, archaeologists can examine numerous questions about Mimbres society that have otherwise been obscured by the destruction of sites. This poster presents the results of analysis of surface ceramics and high-precision GPS mapping conducted at Woodrow Ruin during June 2011.

Seeman, Mark (Kent State University), Aaron Comstock (Ohio State University) and Garry Summers

[261] *A morphometric analysis of end scrapers at Nobles Pond (33ST257), an early Paleoindian site in Stark County, Ohio.*

Our paper comparatively examines key variables associated with the production and depletion of end scrapers at Nobles Pond, an early Paleoindian site in northeastern Ohio. For this study, we make use of a large sample of complete tools (N=113) selected from two different spatial concentrations at the site. Results

show that while statistical routines can identify formal attribute patterning or “types” within the data, our sample is best interpreted as a single class of depleted tools. Much of the variability within this class is attributed to the multiple and creative flint working tactics employed to minimize time-stress.

[261] *First Chair*

Seeman, Mark [261] see *Loebel, Thomas [100]* see *Mullett, Amanda N.*

Seibert, Michael (NPS- Southeast Archeological Center)

[34] *Fields of Conflict: Battle and military objects from the Fort Rosalie excavations and their implications*

In 1729, the French soldiers and civilians living at Fort Rosalie were massacred by the local Natchez Indians, who were angry over their mistreatment by the French. This attack retarded French settlement coming from the Mississippi Gulf Coast and facilitated the opening of this region to other military powers. During the seven years of excavations numerous artifacts relating to the occupation of the fort and possibly the battle have been recovered. This paper presents these artifacts in context of the greater regional and world events.

Seidemann, Ryan (Louisiana Department of Justice)

[148] *What Happens When the River Dries Up? The Law of Shipwreck Protection on Dry Land in Louisiana*

Although strides have been made towards the legal protection of shipwrecks from salvage and looting in the United States, gaps in the laws persist. The passage of the Abandoned Shipwrecks Act of 1987 was a watershed event in the protection of maritime heritage. Still, the protection that exists is a patchwork of federal and state laws that even at its best is not spectacular. A review of the relevant law with examples from Louisiana is here undertaken, specifically focusing problems such as the protection of wrecks when a watercourse shifts.

Seidemann, Ryan M. [14] see *Hawkins, William T.*

Seinfeld, Daniel (Florida State University)

[121] *Intoxication Rituals and Gender among the Ancient Maya*

Analysis of vase paintings highlights how the ancient Maya depicted gender identities during intoxication rituals. These paintings generally show males using inebriating enemas and drinking. Females are typically depicted abstaining from intoxicant use and assisting males. Some scenes suggest that females may have acted as ritual specialists preparing and administering drug-filled enemas. These vase paintings demonstrate idealized complementarity and hierarchy in gender roles during ancient Maya rituals. This work highlights the significance of intoxicant use in constructing social identities in the ancient world, a phenomenon that continues to the present day.

Sekedat, Bradley (Brown University)

[200] *Making more sense: Survey archaeology, small quarries and integrated landscapes*

Survey archaeology has always successfully located sites and added texture to regional landscapes. Recently, however, survey has been asked to do more by exploring not just the location of sites, but the sites themselves.

This paper combines an introduction to the session with a case study of research undertaken in and around marble quarries in western Turkey as part of the Central Lydia Archaeological Survey. By applying a flexible set of methodological approaches, the project has made strides in turning seldom explored industrial features into fully integrated parts of the Lydian – Roman social landscape. [200] *Second Chair* [200] *Third Organizer*

Selden, Robert (Texas A&M University), Leigh Cominiello (University of New Mexico), Joel Lennen (New Mexico State University) and Richard Gatewood (Burned Area Emergency Response, National Park Service)

[245] *Burned Area Emergency Response (BAER): Fire and Archaeology at Carlsbad Caverns National Park*

On June 13-15, 2011, the Loop Fire burned 8,261 acres within the boundaries of Carlsbad Caverns National Park, and was subsequently found to be human-caused. This survey was conducted in compliance with the Burned Area Emergency Response (BAER) team led by Richard Gatewood from June 27 – July 22, 2011. Within the fire boundary, 45 archaeological sites were found to have the potential for damage from this event. This project focused upon those sites within the Walnut Canyon drainage and atop the southern ridgeline, and addresses stabilization and dating concerns.

Seldin, Abigail (University of Oxford)

[56] *Archaeology and the Religious Sphere: New Heritage Issues at the Los Lunas Mystery Stone in New Mexico*

Located 35 miles outside of Albuquerque, the Los Lunas Stone displays a Paleo-Hebrew carving of the Ten Commandments. Today, some in New Mexico contend that the carvers of the stone were “Solomon’s Jews,” ancient Hebrew explorers dispatched by the biblical king. The popularity of this theory signifies the primacy of contemporary local religious leaders over the academy and other secular sources of knowledge. Using the lens of pseudo-archaeology, this paper highlights key issues for bridging the gulf between the academy and the religious sphere.

Sellet, Frederic (University of Kansas)

[100] *Folsom Weaponry Manufacture at the Lindenmeier Site, CO*

This paper summarizes the results of a re-analysis of the Folsom points, preforms, and channel flakes of the Lindenmeier collection from the Smithsonian Institution. The Lindenmeier site was excavated by F. Roberts in the early 1930s. It was, however, never fully studied until E. Wilmsen published a summary report on the site’s stratigraphy and excavated material in 1974. Over the years, the points and preforms have received considerable attention from scholars, but their efforts have mostly focused on the Folsom fluting process. This study takes a different stance and investigates organizational and behavioral aspects of weaponry production at the site.

Semken, Holmes [38] see *Milideo, Lauren*

Semon, Anna (University of North Carolina), Lindsay Bloch (UNC-Chapel Hill) and Mary Elizabeth Fitts (UNC-Chapel Hill)

[214] Ceramic Chemical Characterization Studies in the Southeastern, US

Ceramic chemical characterization studies allow archaeologists to investigate the microstructure and composition of ceramics and clays. These studies enhance general ceramic analysis by identifying potential local and non-local clay sources. This poster presents the results of a compositional characterization pilot study on clays and diagnostic sherds recovered from several protohistoric and historic sites in Georgia, North Carolina, and South Carolina. In this study, we tested the sensitivity, precision, and accuracy of ICP-MS, XRD, XRF, and PXRF techniques in an effort to compare methods and identify analytic differences between indigenous and euro-american pottery sourcing.

Seramur, Keith (Appalachian State University) and Ellen Cowan (Appalachian State University)

[107] Geoarchaeology Investigation at Site 40MI70: Geochemistry, Magnetic Susceptibility and Stratigraphy of Buried Woodland and Archaic Occupation Surfaces
Geoarchaeology is used contributes significant data sets to aid in interpretation of archaeology sites and the lifeways of indigenous cultures. Particle size distribution is used to delineate stratigraphic horizons. Soil micromorphology provides evidence of pedogenesis, site occupation and bioturbation. Magnetic susceptibility of soil samples can be used to interpret human induced elevated magnetic susceptibility associated with deposition of organics, hearths and fires. Soil chemistry analysis identifies buried occupation surfaces and A-horizons. Horizontal grids assess activity areas across the buried sites. Vertical sampling identifies buried surfaces and distinguishes the magnetic and chemical signatures between Archaic and Woodland occupations.

Serangeli, Jordi (University of Tübingen) and Nicholas J. Conard (University of Tübingen)

[93] New results from large-scale excavations in Schöningen
Archaeological finds including spears and other wooden artefacts, lithic artefacts, broken bones, cut-marked bones, etc. document the repeated presence of hominins on the shore of a ca. 300,000 year old lake near Schöningen in northern Germany. Ongoing excavations have exposed multiple large surfaces with well preserved organic materials dating to the Middle Pleistocene. These finds document past environmental conditions in great detail, and the contextual analysis of archaeological materials provides a wealth of new information into the subsistence economy and settlement dynamics of the inhabitants of these brief lakeside occupations.
[93] Third Organizer

Serangeli, Jordi [93] see Julien, Marie-Anne [93] see Hardy, Bruce L. [93] see Conard, Nicholas J. [93] see Lang, Joerg [93] see Kuitens, Margot

Serech, Emanuel [30] see Paiz Aragon, Lorena

Serra Puche, Mari Carmen (IIA-UNAM)

[73] The Xochitecatl Ceremonial Center an example of power strategy of the Rulers, in the Late Formative period

A ceremonial center is a sample of power of the rulers, and in this case, Xochitecatl provides evidence of their

ideological strategies. In the construction of the main buildings, this power is symbolized, so, in the Pyramid the Flowers two monolithic basins were set at the base of the stairs, surely to worship the rain water and in the Building of the Spiral, built in the shape of a volcano, rituals to avoid eruptions were carried out. These actions manifest the ideological control of the population through the rulers' power over natural phenomena.

Seymour, Deni (Independent Research Archaeologist)

[120] Hospitality Theory and Socially Prescribed Mobile-Group Visiting Behavior

Hospitality theory is a way to understand mobile-group visitation at the Eastern-Frontier Pueblos. Guest-host relationships involve mutual obligations and common understandings. Visiting behavior involves a systematic set of rules for inter-group encounters that are especially practical when mistakes have costly or deadly consequences. Stable inter-cultural relations presuppose structured interaction. Visiting protocol establishes a safe, predictable basis for groups, including enemies, to interact for specific purposes, while shielding other aspects of society. Hospitality rules were widely shared in the historic Southwest and were spatially expressed. The archaeological parameters of mobile group-Puebloan landscape use are examined in the context of hospitality theory.

Sgarlata, Cosimo (Western Connecticut State University) and Bethany Morrison (Western Connecticut State University)

[280] All methods, Great or Small: Analytical Techniques Used in the Study of a Revolutionary War Winter Encampment.

Investigations by WCSU archaeologists of the "Middle Encampment" site in Redding, CT have incorporated modern as well as traditional methods. In addition to pedestrian survey, compass and tape mapping, and excavation, the project has incorporated geographic information systems (GIS), analysis of formation processes through micromorphology, ground penetrating radar (GPR), and residue analysis by Fourier transform infrared spectroscopy (FTIR). This paper will review these techniques, including their potential contributions to archaeological research and the limitations or difficulties involved in their field application. Finally, we will present the ways in which these techniques have furthered our understanding of the "Middle Encampment" site.

Sgarlata, Cosimo [280] see Morrison, Bethany A.

Shackley, M. (UC, Berkeley)

[112] The Secondary Distribution of Archaeological Obsidian in Rio Grande Quaternary Sediments, Jemez Mountains to San Antonito, New Mexico: Inferences for Prehistoric Procurement and the Age of Sediments
The secondary distribution of sources of archaeological obsidian through long term erosion is an extremely important factor in the understanding of procurement in the prehistory of the North American Southwest. In the New Mexico/Chihuahua region of the Southwest at least seven sources and chemical groups are present in different proportions along the Rio Grande from El Rechuelos in northern New Mexico to Chihuahua. This poster presents a summary the analytical results of more

than a thousand samples at primary obsidian sources at Mount Taylor, the Jemez Mountains, and secondary sources along the Rio Grande River from Española to San Antonio.

Shackley, M. Steven [260] see Clark, Jeffery J. [161] see Harper, Nathan K.

Shafer, Harry (Texas A&M University Professor Emeritus)

[17] *The Legacy of Dee Ann Story: Highlights and Caddo Archaeology at the George C. Davis Site*

Dee Ann Story (1931-2010) taught two generations of professional archaeologists and made lasting contributions in central Texas and Caddo archaeology. She teamed with Alex D. Krieger and Edward B. Jelks in producing the classic volume *An Introductory Handbook of Texas Archeology*. Much of her early work was in central Texas, and she later added the Caddo area as a major research focus. Her most important archaeological contributions were the excavations at the George C. Davis and Deshazo sites. Her lasting legacy is the number of professional archaeologists she trained and mentored and opening the door for women in Texas archaeology.

Shaffer Foster, Jennifer (University at Buffalo)

[155] *Poverty, Prosperity and Power in Early Medieval Ireland*

The lines between poverty and prosperity, power and powerlessness, were once starkly-drawn. Over the past ten years, many archaeologists have argued that socioeconomic status cannot be categorized in such simple terms. Likewise, conceptions of power exercised from the "top-down" and directed by elites, has been tempered with recognition that power held by ordinary people at the "bottom" of society is both legitimate and highly effective. This paper examines both the archaeological record and textual sources to arrive at new understandings of poverty, prosperity and power in Early Medieval (400-1200 AD) Ireland.

Shajan, Paul [173] see Kotarba Morley, Anna M.

Shakour, Katherine (CLIC), Casey McNeill (Boston University), Meagan Conway (University of Massachusetts Boston) and Ian Kuijt (University of Notre Dame)

[244] *Stories Shared Over Tea: Public Archaeology in an 18-20th Century Irish Fishing Village*

Public archaeology requires community collaboration, local partnerships, and the collection of personal life histories. This poster outlines our interactions with the islanders of Inishark and Inishbofin, Ireland, and addresses how their collective memory complements and expands upon 18-20th century archaeological and historical data. Our project has several community archaeology-based goals; to draw upon islander expertise to understand land use, landscape, and materials uncovered in excavation, to learn via oral history about changing social and economic ways of life, and to provide a forum for sharing new knowledge and research with islanders about the heritage and archaeology of their islands.

[244] *First Chair*

Shanks, Jeffrey (National Park Service), Craig Dengel (Tyndall Air Force Base) and Michael Russo (National Park Service)

[90] *Combining Low and High Technologies to Overcome Phased Survey Limitations*

Five CRM archaeological surveys conducted over 30 years failed to identify ring-shaped villages with central plazas and their associated burial mounds in NW Florida. Why? Not because archaeologists were unschooled in finding such sites, but because current CRM methodology required determining only the presence of artifacts. Combining traditional technologies of soil probes and shovel tests with new technologies including LIDAR, GPS, laser transit, and mapping software, we present case studies that overcame the limitations of "phased" survey requirements designed to only find artifacts in the first phase. We suggest initial survey can be designed to cost-effectively identify large settlement features in great detail.

Shanks, Jeffrey [97] see Russo, Michael A.

Shapland, Andrew (British Museum (Greece and Rome))

[251] *Shifting horizons and emerging ontologies in Bronze Age Crete*

Animals, objects and people flowed around the Mediterranean in ever greater numbers over the course of the Bronze Age. This movement has long been studied in terms of economic and cultural exchange, and the social significance of this trade has been increasingly appreciated. Yet this changing network of relations poses important questions for an understanding of past ontologies. The implications of Descola's scheme of ontologies will be considered for Minoan society. It will be suggested that the dominant analogistic ontologies of the elites emerged to incorporate diverse bodies and things, both creating and reinforcing a hierarchical social order.

Sharp, Emily (Arizona State University) and Tiffany Tung (Vanderbilt University)

[5] *Consequences of State Collapse: a Bioarchaeological Assessment of Post-Imperial Lifeways in the Ayacucho Basin, Peru*

Collapse of state institutions and subsequent changes in sociopolitical systems can lead to marked transformations in community health and daily life. This study examines consequences of Wari state disintegration (ca. 1000 CE) through analyses of human skeletal remains at Ayamachay rock shelter, located in the central Andes. Previous studies attest to significant increases in violent related trauma after state collapse at the imperial capital—Huari. Given Ayamachay's close proximity to Huari, did inhabitants of this area experience similar changes? Trauma frequencies and trepanation practices at the site are compared to other regional samples and assessed within a broader, post-imperial context.

Sharp, Kayeleigh (Southern Illinois University Carbondale) and Natalia Guzmán Requena (Museo Nacional Sicán)

[243] *Re-Defining the Gallinazo-Mochica Relationship: Technological Style as a Practice-Based Proxy to Their Identities*

Since the 1940s, relationships between Gallinazo and

Mochica 'cultures' have been matters of ongoing debate in Northern Coastal Peru. Diverse perspectives on the independence, interrelatedness, or antecedence of Gallinazo and Mochica groups leave many issues unresolved. Critical links between practice, context and technological style provide important conceptual and methodological frameworks for understanding the social situations in which identities were constructed, implemented and strategized. Recent work in the residential sector of the Songoy-Cojal site in the mid-Zaña Valley sheds light on mundane social contexts in which Gallinazo and Mochica identities coexist, offering insights on their significance in broader social domains.

Sharp, Robert (The Art Institute of Chicago)

[266] *Mythic Figures or Shamanic Practitioners: What New Additions to the Flint-Clay Corpus Suggest*
The flint-clay effigy pipes and figurines of the 12th century constitute a remarkable corpus of Native American art. While the female figures are surprisingly rich in iconographical significance, more than half the known examples of flint-clay works depict males, often with few accoutrements and surprisingly little regalia. Two new additions to this subgroup bring fresh material for examination and also invite a reconsideration of prior studies of these sculptures that have suggested they represent shamans in ritual practice or supernatural figures of cosmic significance. This paper reopens that discussion and hopes to stimulate further consideration of their function.

Sharp, William (usda-nrcs), Eric Schlarb (University of Kentucky/Kentucky Archaeological Survey), Greg Maggard (University of Kentucky/Kentucky Archaeological Survey) and David Pollack (University of Kentucky/Kentucky Archaeological Survey)

[124] *The Grassy Lake Site (15Ba144): A Terminal Late Woodland Dillinger Settlement in Ballard County, Kentucky.*

Limited excavations conducted at the Grassy lake site documented the presence of intact terminal Late Woodland deposits. Ceramic artifacts recovered from the site are indicative of a Dillinger phase occupation and are similar to those from the nearby Pettitt site in southern Illinois. In this paper we present the initial results of these investigations and examine the possible regional relationship of Grassy Lake site to nearby Late Woodland Twin Mounds and Wickliffe sites.

Sharpe, Ashley (University of Florida), Kitty F. Emery (Florida Museum of Natural History, University of Florida), Charles Golden (Brandeis University) and Andrew K. Scherer (Brown University)

[166] *Distinguishing Status in the Maya Menu: Zooarchaeological Evidence from Three Late Classic Polities*

Maya polities of the Late Classic period (A.D. 550 – 850) had complex social hierarchies that included ruling elite, lesser elite, and non-elite classes. Determining how animal resources were acquired, used, and controlled by status groups and between capitals and subordinate communities provides a means of understanding this complex social organization. This study examines faunal remains from three Maya polities: Piedras Negras, Yaxchilan, and Aguateca. Comparisons are assessed using measures of species abundance, diversity, habitat

fidelity, and deer skeletal distribution. These comparisons provide evidence of correlations in animal resource use among intra-site social ranks, sites of varying size, and different polities.

Sharpless, Megan (UW - Milwaukee), Lisa M. Zimmerman (University of Wisconsin-Milwaukee) and Robert A. Birmingham (University of Wisconsin-Waukesha)

[187] *History and Prehistory at the Aztalan Site: Excavation of an Early 20th Century Rock Feature*
Excavations in a ravine eroding into the Crawfish River in the northeast corner of the Aztalan site, exposed a concentration of large rocks (Feature 1) arranged in a rough arc. The feature appears to be related to Euroamerican activities as early 20th Century items including glass bottles, flat glass, and metal fragments were found throughout the rock matrix. However, similar aboriginal rock features were reported in this part of the site by Barrett during his 1919-1920 work at Aztalan, suggesting that Feature 1 may be the disturbed remnants of an aboriginal rock structure dismantled and used as a trash dump.

Sharratt, Nicola (Dept Anthropology, Field Museum) and Donna Nash (UNCG)

[104] *Ceramic Hybrids and Multi-ethnicity in the Moquegua Valley*

Wari and Tiwanaku occupations in the Moquegua Valley are distinguished by geography, architecture and material culture. Different ceramic styles, in particular, are used to define sites as either Tiwanaku or Wari. However, increasing evidence for Tiwanaku presence in Wari space and vice versa indicates that members of the two colonial populations engaged in social relations across traditional territorial boundaries. This paper discusses several ceramic vessels that potentially show the influence of both Wari and Tiwanaku. It considers what this unusual but noteworthy variant of craft production means and what these vessels suggest about multi-ethnic identities during the Middle Horizon.

[104] *First Chair*

Shaver, Douglas (University of Missouri Kansas City)

[223] *Steed-Kisker Archaeology: Cooperative Research on the Smith's Fork Site, Clay County, Missouri-*
Recorded in 1976 during development of Smithville Lake, Missouri, the Smith's Fork site (23CL223) has emerged as an significant locality for studying the Steed-Kisker culture. Archaeologists from the U.S. Army Corps of Engineers, the University of Missouri, Kansas City and the Center for Archaeological Research, Missouri State University have all contributed to this research. Archaeological survey and testing of the Smith's Fork site reveals well-preserved domestic features and artifacts related to the cultural adaptations of one of Missouri's earliest Native American farming societies. The Smith's Fork research offers a useful model of multi-agency research in Missouri archaeology.

Shaw, Leslie (Bowdoin College) and Eleanor M. King (Howard University)

[131] *Producing for Export: Economic Growth and Agricultural Intensification at Maax Na, Belize*
Maya communities in the Three Rivers Region of Belize saw rapid growth during the Classic period. Our ongoing

settlement survey of the Maya center of Maax Na has documented a pattern of residential diversification that we propose supported an economy based on the agricultural production of export goods, such as cotton, cacao, or other produce that is not highly perishable. Residential clusters around the wetlands show a great variability in size, structural complexity, and topographic location. We propose a model of economic strategizing that explores how Maya households formed "economic partnerships" that worked collectively to generate agricultural export goods.

Shaw, Leslie [128] see King, Eleanor M. [70] see Brennan, Michael

Shea, John (Stony Brook University)

[89] *The Origins and Antiquity of Complex Projectile Technology: A Global Perspective*

Complex projectile weapons are vital components of our species' broad ecological niche. Yet, Old and New World prehistory have contradictory views about their origins and antiquity. This paper reviews recent theories about the origins antiquity of complex projectile technology in the Old and New Worlds. It argues that we need better criteria for recognizing complex projectile weaponry in the archaeological record and improved models of variability in the use of hunting weapons derived from experiments and ethnoarchaeology.

[89] *First Chair*

Sheets, Payson (University of Colorado)

[167] *No it's not a forest fire on that mountain! It's a volcano and it's erupting! Let's go climb it!*

In 1969 Bruce and I awoke, in Guatemala City, and saw Pacaya erupting. So we decided to climb it, and we did everything wrong. But we survived and experiencing the awesome force of that eruption up close was a life-changing experience for both of us. Henceforward Bruce had an interest in major natural events, and how ancient societies coped with them, or not. A month later we found a tephra in Chalchuapa that we traced to Ilopango. Bruce explored the different reactions of Maya cities to the AD 536 worldwide phenomenon, and that probably was Ilopango.

Shehi, Eduard (Institute of Archaeology, Albania)

[119] *Terra Sigillata and local red slip ware in the southern Illyria (II cent. B.C. – II cent. A.D.)*

The Terra Sigillata offers a detailed view on the commercial routes that crossed the ancient regions of modern Albania. The finds from several cities indicate three periods of commercial trends: 150 B.C.–50 B.C. Imports oriented toward east - ESA. 50 B.C.–50 A.D. Imports oriented toward west (Italian Sigillata), following three commercial routes. 50–200 A.D. Imports reoriented toward east - ESB. I will present a comparison of imported versus locally produced Sigillata. This will further highlight the social aspects pertaining to Sigillata. The combination of traditional forms, imitation of imports, and original creations, expose a symbol of a commercial issue rather than evidence for Romanisation.

Shelton, China (Boston University)

[219] *Elite Foodways at Roman Kenchreai, Greece* Different kinds of food signal social meaning within different arenas of interaction— particular foods, or

assemblages of foods, send different messages depending on where, when, and by whom they are consumed Communal consumption serves to reify social structure through continued practice or thoughtful adaptation to changing circumstances. At the site of Kenchreai, Corinthia, Greece, we attempt to investigate these capacities by comparing the plant remains from different but contemporary contexts (elite households; elite chamber tombs; and the remains of crematory pyre and potentially processional activity) all dating to the 3rd c. A.D. when Greece was under Roman control.

Shepard, Ben (UCLA)

[83] *Regional Variability in Nephrite Ornaments from the Early Bronze Age Cis-Baikal, Russia*

This poster presents the results of a study of formal characteristics of disc- and ring-shaped nephrite ornaments recovered from cemeteries across the Cis-Baikal region of Siberia, Russia. During the 20th century, archaeologists documented the appearance of these labor-intensive ornaments, made from highly circumscribed "white" nephrite nodules, during the Early Bronze Age (3000 - 2000 BC). While recent studies of nephrite objects tend only to describe variability in their presence at single sites, here I investigate a large regional assemblage, allowing for a meaningful assessment of the production and distribution of white nephrite objects throughout the Baikal region.

Shepard, Emily (Portland State University) and Michael Morrison (Flinders University)

[35] *The Archaeology of Wild Honey Production: Quantitative and Spatial Analysis of Culturally Modified Trees on Western Cape York Peninsula, Northeastern Australia*

Archaeological surveys in the Weipa region of northwestern Cape York Peninsula have documented thousands of culturally modified trees (CMTs) created by Indigenous peoples during collection of honey and wax from the nests of Australian stingless bees. Oral histories and historical documents suggest collection methods and intensity altered during European colonization of the region (beginning in the 1880s). This study investigates CMT distribution and scar morphology using statistical and spatial analytical techniques. This information is applied to investigate trends in honey collection and to explore these patterns in relation to economic and social shifts experienced by the Indigenous community.

Sheridan, Thomas (University of Arizona) and Stewart Koyiyumptewa (Hopi Tribe, Cultural Preservation Office)

[25] *Moquis and Kastilam: Hopi Oral Traditions of the Spaniards and the Trauma of History in Hopi Society* Moquis and Kastilam: The Hopi History Project compares and contrasts Spanish documents about the "Moqui" and Hopi oral traditions about the "Kastilam" to better understand how eight decades of conquest and missionization (1629-1680) four centuries ago still sear Hopi social memory today. Two examples -- the first "encounter" between Hopis and Spaniards in 1540 and the whipping, scalding to death of a Hopi by a missionary -- reveal how Hopi oral traditions contradict and complement the Spanish documentary record, and how remembering the past reveals patterns of intergenerational trauma that still stalk Hopi society

today.

Sherman, Jason [22] see *Villamil, Laura P.*

Sherwood, Sarah (Sewanee: The University of the South), Stephen B. Carmody (University of Tennessee), Nicholas P. Herrmann (Mississippi State University), Martin M. Knoll and Sierra M. Bow (University of Tennessee)

[6] *Sandstone Rockshelter Site Formation on the Southern Cumberland Plateau of Tennessee: Geoarchaeology, Archaeobotany, Artifact Analysis and Remote Sensing.*

The sandstone rockshelters perched high along the rim of the Cumberland Plateau contain a rich and complex archaeological record. Existing models of the formation and infilling of sandstone shelters do not adequately reflect the development of these sites. An interdisciplinary project is underway to decipher their history, especially how they form and infill and the role these upland sites played in the processing and storage of indigenous cultigens and mast crops. The presentation will focus on one site in particular, Michaels Shelter (40FR276); that contains Early Archaic through Late Woodland deposits.

Sherwood, Sarah [274] see *Kidder, Tristram R.*

Shillito, Lisa-Marie (University of York)

[37] *Ecology of Crusading – geoarchaeological investigations of site formation processes and environmental change in the Medieval Baltic*

The Ecology of Crusading project is investigating the environmental transformations in the eastern Baltic following the crusades against indigenous tribes in the 13th century. What was the impact on the landscape associated with castle construction and maintenance, and how did European colonists adapt to the local environments? A key aspect is to investigate whether the success of colonisation was related to environmental exploitation strategies, through targeted botanical, zooarchaeological and geoarchaeological analyses. Preliminary results from geoarchaeological investigations are reported here, and the importance of integrating macro, micro, geochemical and molecular methods is discussed.

Shimada, Izumi (Southern Illinois University) and Barbara Winsborough (Winsborough Consulting)

[175] *Tsunamis and Coastal Peruvian Prehistory*
As a part of the circum-Pacific "Ring of Fire," Peru faces the constant threat of earthquakes and resultant tsunamis from both sides of the Pacific. Although tsunamis of the recent past have painfully demonstrated their devastating and extensive impacts, prehistoric tsunamis have hardly received archaeological attention due to their scant documentation. Our deep sediment coring at the Urpi Kocha Lagoon at Pachacamac on the Central Coast of Peru has documented three major tsunami events over the past 2300+ years. We discuss specific lines of evidence for their occurrences and their archaeological significance in comparison with historically known cases.

[175] *First Chair*

Shimada, Izumi [215] see *Wagner, Ursel*

Shimelmitz, Ron [63] see *Rosenberg, Danny*

Shinde, Vasant [217] see *Valentine, Benjamin*

Shiratori, Yuko (The Graduate Center, CUNY), Timothy Pugh (Queens College, CUNY) and Christina Halperin (Princeton University)

[87] *Exploring Postclassic Community and Architecture in the Peten Lakes Region, Guatemala*

This paper presents recent data from Postclassic settlement at Tayasal, Guatemala, and explores community organization around Lake Peten Itza during the Postclassic period. During this period, the Itza Maya occupied the western side of the lake including the capital Nojpeten and the archaeological site of Tayasal. Recent research at Tayasal shows that the Itza Maya had different architectural and material patterns from those of the Kowoj Maya in the east. Identifying the differences and similarities of these patterns help to reconstruct Postclassic community organization in this region.

Sholts, Sabrina (University of California, Berkeley) and Sebastian Wärmländer (Division of Biophysics, Arrhenius Laboratories, Stockholm University)

[164] *Morphometric variation in human crania from prehistoric California*

For more than a century, museum collections of ancient human skeletal remains have produced valuable information about human population history across the prehistoric landscape and coastlines of California. Although early anthropometric studies of native Californians identified inter-regional differences in cranial form, modern technology and statistical techniques have become powerful tools to further investigate these patterns. Using 3D imaging and landmark-based morphometrics, this paper examines geographic variation in morphological cranial features throughout California. Potential factors of health, migration, and adaptation are discussed, providing a broad context for reconstructing ancient human microevolutionary processes over space and time.

Sholts, Sabrina [176] see *Warmländer, Sebastian*

Short, Kristina [181] see *Blomster, Jeffrey P.*

Short, Laura (Texas A&M)

[109] *Bringing cooking to light: using infrared spectroscopy to examine the effects of cooking on the chemical structure of wild foods*

Archaeologists primarily use infrared (IR) spectroscopy to study pigments and resins. Given that food science uses IR to accurately identify and source food components such as wine and olive oil, archaeological food processing residues are a potential application of IR. Archaeological residues, however, have many more "unknowns" and include wild foods, limiting the applicability of food science data. This paper explores the breakdown of chemical structures in wild foods: how cooking processes are expressed in the spectroscopic signature. This is part of continued preliminary work attempting to create a basis for identifying food types in the archaeological record.

[10] *First Chair*

Shott, Michael (University of Akron) and Brian Trail (Univ. of Akron)

[261] *How Much Are Scrapers at Nobles Pond? A Pilot Study in Measurement of Uniface Reduction*
Scrapers are a common formal type in Paleoindian and Paleolithic assemblages. How much size is reduced and form is changed from first use to discard are important to know but difficult to gauge. Using 3D laser scanning, we produce digital models of a sample of Nobles Ponds unifaces, measure platform area, predict original mass from platform area, and thereby estimate degree of reduction of specimens. We compare this reduction estimate to others. The better we can estimate original size of discarded retouched tools, the better we can gauge curation and exploit the value of this theoretical concept.
[123] *Discussant*

Shults, Sara (University of Alabama)

[70] *Uncovering Ancient Maya Exchange Networks: Using the distributional approach to interpret obsidian exchange at Actuncan, Belize*
This study seeks to understand the economy of the Maya during the Late and Terminal Classic period at Actuncan, Belize. Using the distributional approach proposed by Kenneth Hirth, 594 obsidian artifacts were analyzed across households of differing rank to determine whether elites had greater access to this long distance import. If obsidian is evenly distributed across households regardless of rank, then market forces might have worked to distribute goods to all. Additionally, a sample of the obsidian from the site was sourced using XRF to determine trade relationships and whether obsidian from certain geological sources were exchanged through inter-elite networks.

Sidebotham, Steven [173] *see Kotarba Morley, Anna M.*

Sidell, Nancy Asch [271] *see Asch, David L.*

Sierralta, Melanie [93] *see Urban, Brigitte*

Sievert, April (Indiana University)

[271] *The Daily Grind at Early Archaic Koster*
Early Archaic contexts at the Koster Site revealed an array of ground stone implements apparently used in activities that involved grinding, crushing, and pounding. The functions of these early ground stone implements and the roles they played in exploiting plant resources are assessed using experimental approaches and use-wear analysis. Replica manos and metates, anvils, and other implements were used in a range of tasks and the resulting wear compared to traces on materials from Koster (Horizon 11). The results reveal a variety of tool uses, and shed light on the day-to-day use of long-life tools during the Koster Early Archaic.

Sillar, Bill (Institute of Archaeology, UCL)

[201] *Supply on Command: The development of Inka pottery production in the Cuzco area*
Dean Arnold has shown how pottery production relates to the environment, social organisation and technical choices, promoting debate about how changes in these variables affect pottery output. I will discuss factors influencing the change from domestic to larger scale

production, by considering the development of 'classic' Inka pottery in Cuzco. Early integration and expansion of the Inka state gave access to new materials, labour and technical know-how that were used to increase the quality and quantity of pottery production. Other areas of state control facilitated cross-craft complementarity, such as the development of Inka stonework (which provided andesite temper).

[262] *Discussant*

Silliman, Stephen (University of Massachusetts Boston) [192] *Discussant*

Sills, Elizabeth (Louisiana State University) and Heather McKillop (Louisiana State University)
[172] *Activity Areas At Two Ancient Maya Salt Works: Underwater Excavations*

We discuss the distribution of artifacts and their relationship to wooden architecture at two ancient Maya salt works in Paynes Creek National Park, Belize. Wooden architecture is preserved in mangrove peat below the sea floor due to sea-level rise. Underwater excavations at Early Classic Site 24 and Late Classic Site 35 reveal activity areas associated with a massive salt industry for the Classic Maya. The artifacts are overwhelmingly briquetage—ceramic vessels used to boil brine to make salt. We evaluate the distribution of briquetage in relation to interior and exterior of buildings and the lines of palmetto palm posts.

[172] *First Chair [172]* *Second Organizer*

Sills, Elizabeth C. [172] *see Harrison, Jessica*

Silva, Fabiola (University of Oklahoma)

[85] *The Plundering of Paquimé: A History of Looting in Casas Grandes, Chihuahua, Mexico*

In this study, I explore the history of looting in Casas Grandes, Chihuahua, Mexico, a site well known for its complex architecture, elaborate pottery and which in the past century has witness severe looting. Through the analysis of Casas Grandes pottery collections housed in several museums across the U.S. Southwest, I was able to determine three distinct looting periods in the area: 1) Museum Period 1900-1940's, 2) Private Collector Period 1950's-1970, and 3) Present Period 1980- present. Each period provides an insight to the complex bi-national issue of looting and the antiquities market along the U.S./Mexico border.

Silva, Jorge (San Marcos University, Ricardo Palma University)

[209] *Archaeology, Cultural Heritage and Pedagogy in Peru*

This presentation will discuss archaeology, cultural heritage and pedagogy in Perú. Although archaeology began as a scientific discipline by the end of the nineteenth century in Perú, it was not until the decade of 1940 that it had become a career at San Marcos University. Today, Peruvian archaeologists ask how useful was archaeology for understanding the past and for developing concepts that help recover, preserve and properly teach cultural heritage. It is suggested that a positive attitude of people toward the past has developed in the last two decades.

Silva, Rosicler (Pontificia Universidade Católica de

Goiás), Julio Cezar Rubin de Rubin (Pontifícia Universidade Católica de Goiás), Maira Barberi (Pontifícia Universidade Católica de Goiás), Rute de Lima Pontin (ARS Consult Engenharia Ltda) and Tamiris Maia Gonçalves Pereira (Consórcio Arqueologia FIOLE)

[277] *Archaeological Stratigraphy in Morro do Frio Archaeological Site, Brazil*

The Morro do Frio site is on an alluvial terrace in the Brazilian northeast. The stratigraphic profile presents two well defined units, the superior with an average thickness of 1.40m, pedogenized and presenting intense bioturbation caused by roots, termites and ants to an approximate depth of 0,50m, and an inferior unpedogenized unit reaching a maximum depth of 3.0m. A number of vestiges, such as coal fragments, Core and flake concentration were identified in both units. These characteristics, besides the horizontal variety in organic matter in the superior layer, have impeded a precise archaeostratigraphic interpretation of the pits investigated so far.

Silverstein, Jay (JPAC/U of Hawaii), Robert Littman (University of Hawaii) and Joshua Trampier

[264] *Strategic Archaeology at the Mendesian Nome*
Project directors make strategic decisions about sites, choosing between preservation and destructive excavation. Methodological and scope of work decisions profoundly affect our ability to interpret the past as well as shape our future. At Tell Timai in the Egyptian Delta, a new archaeological initiative appears to have saved the majority of the site from imminent destruction. Decisions are now being made to design a future that integrates the quest for knowledge with the social, political, and economic development of the region. Here we present the Tell Timai Project strategic plan to manage this important archaeological resource.

[264] *First Chair*

Silverstein, Jay [264] see *Trampier, Joshua [264]* see *Leger, Jessica*

Simek, Jan (University of Tennessee) and Sierra Bow (University of Tennessee, Knoxville)

[241] *The Writing on the Wall: Late Prehistoric Paint Recipes in the Southeast*

Throughout his career, Robert C. Dunnell was a strong advocate for formal analyses of archaeologically derived materials as one way to empirically characterize artifacts and their relationships. In this paper, we examine the chemistry of some previously unanalyzed prehistoric (Mississippian) pigments from sites in the Southeast in order to determine if there was a consistent recipe used to produce paints of different colors. Specifically, white paint used to decorate exterior structure walls at Toqua (East Tennessee) are compared to red and black paints known from other contemporary contexts. Aspects of paint technology and site relationships are examined.

[101] *Discussant*

Simmons, Alan (University of Nevada Las Vegas)

[63] *The First Cypriot Villagers: the Case from Ais Giorkis, a Unique Early Neolithic Upland Site*
Conventional wisdom was that the Mediterranean islands were not occupied before the Late Neolithic. This is no longer the case, and much of the evidence for early

occupations comes from Cyprus, where both unexpected late Epipaleolithic and early Neolithic sites occur. The focus of this paper is Ais Giorkis, dating to ca. 7,800 cal. B.C. Ais Giorkis is unique in its upland rather than coastal location, its rich material assemblage, unusual architecture, the presence of cattle (previously not documented until the Bronze Age), some of the earliest directly dated plant domesticates in the Near East, and its evidence for feasting.

Simmons, Scott (University of North Carolina Wilmington), Elizabeth Graham (University College London), Jim Aimers (SUNY Geneseo), Isabel Median Gonzalez (INAH) and Linda Howie (University of Western Ontario)

[61] *Update on Recent Research at Marco Gonzalez and Lamanai, Belize*

Research in Belize at the sites of Marco Gonzalez, on Ambergris Caye, and at Lamanai continues to focus on the implications of artifact studies, particularly Postclassic ceramics. At Lamanai, Pendergast's early work on Lamanai's sugar mill has served as the jumping-off point for examining the wider range of British colonial activity as well as its impact on the landscape. At Marco Gonzalez, rescue excavations in 2010 contributed further information on Late Classic, Terminal Classic and Early Postclassic occupation phases. Both sites have also been the focus of tourism and development projects. In this session, we will summarize the results of study and excavation over the past year and share our goals for future work.

Simms, Stephanie (Boston University), Francesco Berna (Boston University) and George J. Bey, III (Millsaps College)

[22] *A Prehispanic Maya Piib?: Archaeological Evidence for a New Cooking Technology in the Puuc Region*
Excavations of a kitchen in the Puuc Maya region of Yucatán, Mexico, revealed concentrations of an enigmatic category of artifact: burned clay balls. The results of a suite of analyses support the hypothesis that the burned clay balls represent a cooking technology, akin to hot rocks and similar ceramic objects documented throughout the world. Micromorphology, FTIR, microbotanical residues, and experimental replication reveal aspects of clay preparation, cooking temperatures, repeated use of the balls, and specific food ingredients adhering to them. Based on ethnographic evidence, we propose that the burned clay balls were employed in pit oven cooking.

Simon, Katie [191] see *Fisher, Kevin D. [7]* see *Ernenwein, Eileen G. [194]* see *Weeks, Rex*

Simons, Susan [171] see *Lynch, Elizabeth M.*

Sims, Marsha (Nat Resources Conserv Svc)

[255] *Paleoindian Issues: Investigating Snake Hunting and Dancing, Kachinas, and Long-Nosed Effigies*
People vanish in time, but their ideas and symbols carry on. This study delves into recorded snake dances, snake hunting, and kachinas of the Hopi, as well as long-nosed effigies from Eastern North America and ties them to symbolism important to Paleoindians. Snakes are very important to cultures where cultivating plants is a way of life and symbolism is a link to the past. Long-nosed gods

and some Kachinas are reminiscent of proboscidiens. This study investigates rock effigies and incisions from an early time as symbolic representations compared to those of ethnographic documentation.

Sinelli, Pete (University of Central Florida)

[165] *Lucayan Exploitation of Small Cay Environments in Rock Sound, Eleuthera*

Excavations at three small cay sites in Rock Sound, Eleuthera have provided new insight into the behavior of pre-Columbian Lucayan populations in the region. Previous research in the Bahama Archipelago has indicated that small, currently uninhabited, offshore cays were a critical component of the Lucayan occupation profile. Results from Eleuthera support this hypothesis, and provide sound evidence that throughout the archipelago, the Lucayans were exploiting small cay environments to advance their economic agenda. This presentation will discuss not only the particulars of the excavations, but also these sites' contribution toward a more complete reconstruction of pan-regional Lucayan settlement strategies.

Sisk, Mathew [11] see *Garrett, Zenobie S.*

Sisk, Matthew (Stony Brook University)

[89] *Investigating the morphological constraints on stone projectile tips*

Several different measurements (e.g. TCSA/TCSP, tip convergence angle) can indicate if a given type of stone point is capable of serving as a projectile armature. But, these different measurements are often tracking a single morphological constraint on projectile effectiveness. For a stone point to function as a useful armature it must meet certain criteria of aerodynamics, penetration, durability, and ability to cause lethal hemorrhage. This paper uses three-dimensional modeling techniques to investigate how several of these simple proxies for projectile use function. Through this, it then proposes a more accurate holistic method for determining projectile plausibility.

[11] *Second Chair*

Skarbun, Fabiana (FCNyM. UNLP. Argentina / CONICET), Manuel Cueto (FCNyM. UNLP. Argentina/CONICET), Ariel D. Frank (FCNyM. UNLP. Argentina) and Rafael S. Paunero (FCNyM. UNLP. Argentina)

[231] *Lithic technology in early occupations of the southern tip of South America*

We present a synthesis of the research conducted during the last decade, regarding the lithic technology of the first human occupations in Patagonia, Argentina. We have studied the sites Casa del Minero, Cueva Túnel, Cerro Tres Tetas and La Mesada, which are dated in the Pleistocene/Holocene transition. Our goals are related to the research of the tool-making processes and their functions. These are linked to diverse uses of the landscape, expressed by the movement of raw materials, the exploitation of natural resources, the mobility of groups, the functionality of the sites and the way intra and inter-site space was structured.

Skibo, James (Illinois State University)

[120] *Behavioral Archaeology: An Historical Examination*
This year marks the 40th anniversary of the publication in

American Antiquity of "Archaeological Context and Systemic Context." This nine page paper by Michael Schiffer laid out the foundation of "formation processes" and introduced an artifact flow model that included procurement, manufacture, use, recycling, maintenance, and then discard. These concepts were at odds with the then common notion that the deposited artifact "leaves a "fossil" record of...an extinct society" (Binford 1964: 425). This short article, Schiffer's first publication, has been cited over 450 times. I examine the history of Formation Process theory and Behavioral Archaeology 40 years on.

[120] *First Chair* **[154]** *First Chair*

Skidmore, Maeve (Southern Methodist University) and Arturo F. Rivera I.

[243] *The evolution of a Wari colonial community: modification of domestic space through time at Hatun Cotuyoc, Huarco, Peru*

This poster traces the evolution of one sector of the community of Hatun Cotuyoc, part of the larger Wari colony in the Huarco Valley, which became a key stronghold of the Wari empire in the Cusco Region of Peru over the course of A.D. 600-1000. Modification of architecture and layout of domestic space, as well as material culture from different phases of site occupation will be presented. Preliminary investigation indicates that the community became more concerned with the standardization of architecture and the separation of different kind of space (e.g. funerary areas, neighborhoods) through time.

Skidmore, Maeve [141] see *Kennedy, Sarah*

Skinner, Anne (Williams College), Bonnie Blackwell (Williams College), F. Mashriqi (RFK Science Research Institute), Maxine Kleindienst (University of Toronto at Ississauga) and Jennifer Smith (University of Washington at St. Louis)

[37] *ESR Dating Proxy Indicators for Water in Arid and Semi-arid Environments in the Middle East and North Africa*

Fossils from freshwater snails and herbivores indicate the presence of water within paleoenvironments, making human habitation viable. Pleistocene tufas deposited by springs often fed ponds and lakes that the snails inhabited and that often house Paleolithic artefacts. ESR dating can pinpoint the times when abundant water existed by dating the fossils directly. ESR has been used to date both snails and teeth from several sites with materials ranging from Middle Stone Age or Mousterian to Aterian from North Africa and the Middle East. Results from several sites illustrate this method's utility for sites from the Middle and Late Pleistocene.

Skinner, Anne R. [117] see *Blackwell, Bonnie A. B.*

Skinner, Craig [111] see *Ellis, David V.* **[100]** see *Gorrie, Bryan F.*

Skinner, Craig E. [161] see *Binning, Jeanne Day*

Skousen, Benjamin (University of Illinois) and Meghan Buchanan (Indiana University)

[199] *Relationships, Movement, and Entanglement: Theories on Viewing the World*

For the past decade, Tim Ingold has developed a

perspective that views life as a tangle of intertwined relationships. These relationships exist in a dynamic world that is always on the verge of becoming and where movement among these interacting webs instigates continual reconstitution and transformation. In this paper we outline the tenants of what we call Theories of Entanglements. Following Ingold, these theories consider relationships, movement, and transformation the essence of life, the world, and human experience. Most importantly, these theories reject evolutionary, structural, and environmental determinist perspectives that have long dominated archaeological interpretations.

[199] *Second Chair* [199] *Second Organizer*

Skov, Eric (University of Nebraska - Lincoln)

[213] *The Forgotten Projectile Weapon: Ongoing experimentation in the capabilities of slings and slingstones.*

The sling is a simple, cheap and effective weapon that was widely distributed among prehistoric and historic populations. Archaeological and textual evidence attests to its widespread military usage in Europe, South and Central America. Accordingly, most research has focused on these contexts. However, ethnographic and archaeological evidence suggest that Native American populations were also familiar with this technology. Researchers on all continents will profit from an expanded knowledge of the capabilities of sling weapons, especially such variables as range, accuracy and terminal effect. My experimentation suggests that previous research may have significantly underestimated potential velocity and range.

Slater, Donald (Brandeis University & Robert S. Peabody Museum)

[208] *Linking the Depths of the Earth to the Sky: A Solar Observatory within Ikil Cave 1, Yucatan, Mexico*

In the Maya region scholars have long noted the connection between solar alignments and radial pyramids at sites such as Chichen Itza, Dzibilchaltun, and Uaxactun. Just 26km WSW of Chichen, the site of Ikil also contains a massive radial pyramid. In May 2011 investigations at the cave within Ikil's main complex revealed that this pyramid also figures in a solar hierophany – the May zenith sunrise over the pyramid's summit as viewed from a unique observation point inside the cave. This paper will present documentation of the alignment, as well as preliminary interpretations of its significance.

Slater, Philip (University of Illinois Urbana-Champaign), Stanley H. Ambrose (University of Illinois, Urbana), Ian Steele (University of Chicago), Jeffrey Ferguson (University of Missouri, Columbia) and Michael Glascock (University of Missouri, Columbia)

[254] *Chemical fingerprinting of Kenyan obsidian sources and Late Quaternary artifacts with Electron Microprobe*
We resampled many previously known obsidian sources analyzed by Merrick and Brown (1984-1994) and collected many new sources in the Kenya Rift Valley for Electron Microprobe analysis, adding 15 new chemical source groups to the 30 known previously. Obsidian artifacts were analyzed from Six Middle Stone Age and three early Later Stone Age assemblages (N=2800) at four archaeological sites ranging in age from 240 to 16

ka in the central Rift and southwest Kenya. They provide insights into the scale of mobility and interaction in response to climate change during the last stages of the evolution of modern human behavior.

Slater, Philip [254] *see Ambrose, Stanley H.*

Sload, Rebecca

[179] *Caves in hill sign toponyms*

Hill sign toponyms of the Aztec, Mixtec, and Zapotec are characterized by a basal element that most agree is an earth referent derived from a gaping maw. Evidence is presented that "cave" is the more specific referent of this basal element, with the attendant meaning of entrance or access to the earth's interior. It is also argued that this element has a long history as a standalone icon having the same meaning. The continuity through time and cultures of the icon, its meaning, and its subsequent incorporation into hill sign toponyms illustrate the profound significance caves had in ancient Mesoamerica.

Small, David (Lehigh University) and John Powell (Pennsylvania State University)

[206] *Political Economies in Small Polities: Comparing the Maya and the Ancient Greeks*

The economies of small polities challenge accepted concepts of political economies. Because of their limited size the economies associated with ruler ship or government are challenged by "interpolital" economies associated with large kinship groups. Two regional examples highlight this issue – the Classical Maya and Classical Greece. The Maya shed light on this issue within a prestige economy, while the Greek operate within a staple one. Examining this issue within cross-cultural analysis throws light on its operation and allows for analytical expansion to other polities.

[206] *First Chair*

Smallwood, Ashley (Center for the Study of the First Americans Texas A&M University) and Thomas A. Jennings (Center for the Study of the First Americans Texas A&M University)

[20] *Learning from Legends: Case Studies in Experimental Paleoindian Archaeology*

Frison and Haynes's pioneering work continues to guide the way we, as archaeologists of a new generation, approach Paleoindian research. Among the many questions they helped answer over the past half-century, their work on chipped-stone studies and experimental archaeology remains a fundamental contribution. We present two experimental programs replicating Paleoindian tool use and production and distinguish these from unintentional or natural damage. We first discuss a use-wear analysis that documents wear traces acquired on Clovis point replicas. Next, we compare intentional tool production to core reduction and trampling. These studies highlight the importance of experimental approaches to understanding Paleoindian technology.

Smeltzer, Marion (Indiana U of Pa)

[170] *Reconstructing the Inaccessible Past*

Historical moments and places are now being recreated and shared through virtual world platforms. A virtual world is an internet-based, simulated environment where motion able avatars, graphic images and 3D models

represent people, places and objects. In this presentation the Laurel Hill /Brown farm is created in a virtual world platform. The farm established in 1790 and occupied until the 1960s, was the site of an antebellum community of former slaves. Because of its inaccessibility, the area has been virtually reconstructed to show the landscape, buildings and stone marking the graves of Civil War Colored Troops.

Smeltzer, Marion [170] *see Poeppel, Emily*

Smiarowski, Konrad (Graduate School, University Center CUNY)

[263] *Economy and Diet at E172 - Tatsip Ataa. Zooarchaeology of Vatnahverfi region in Norse Eastern Settlement, Greenland.*

As part of the IPY 2007-2010 project, three seasons of excavations were completed on a Norse site in the Eastern Settlement in Greenland. E172 Tatsip Ataa is a medium-sized farm site located in Igaliku Fjord (coastal Vatnahverfi), in close proximity to the Bishop's seat at Gardar. Multidisciplinary studies into economy and subsistence strategies of the Greenland Norse settlement are being conducted. This paper is a preliminary report of the excavation results, with emphasis on the zooarchaeological patterns in relation to other regions of Eastern and Western Norse Settlements, and other islands in the North Atlantic.

Smiarowski, Konrad [263] *see McGovern, Thomas H.*

Smit, Douglas

[104] *"Examining Estuquiña Architecture in the Upper Osmore During the Late Intermediate Period"*

Toward the end of the Late Intermediate Period (AD 1000-1400), settlement patterns in the Upper Osmore drainage exhibited a shift to defensible agglutinated settlements that have been broadly defined as the Estuquiña culture. Previous research has suggested that domestic architecture is a reliable archaeological correlate for studies of ethnicity and social organization, noting data from two Estuquiña sites appear to display two distinct forms of domestic architecture. This paper extends this research across a wider regional context, presenting settlement mapping data from multiple Estuquiña sites throughout the Upper Osmore drainage in order to examine the diversity of built environments during the LIP.

Smith, Adam (Cornell University) [19] *Discussant*

Smith, Adam T. [130] *see Leon, Jeffrey F.*

Smith, Alexa [24] *see Gabler, Brandon M.*

Smith, Alexander [213] *see Heringer, Susan N.*

Smith, Benjamin (Rock Art Research Institute, Wits University)

[194] *The Place of Rock Art in South African Society Today*

Prior to the coming of democracy in 1994, out of some 15,000 rock art sites within South Africa, only 10 sites had been declared as National Monuments. A handful of sites were open to the public, but South Africa was one of the few countries in the world where political ideology

had closed down the development of any truly 'public' archaeology. This paper considers this history and reviews the impact of 18 years of liberation politics upon the place of rock art with South African society.

Smith, Beth [234] *see Hockett, Bryan*

Smith, Beverley (University of Michigan -Flint)

[143] *Bioarchaeology of the Stone Street Ancestral Population*

Despite extensive damage as a result of construction and taphonomic forces to bone elements from this disinterred cemetery, the ancestral human remains from the Stone Street site contribute to our knowledge regarding the nature and structure of the population including indicators of age, sex, and health in the Late Woodland period in Michigan. The limitations of the assemblage and the results of the analysis are considered in terms of comparability with findings from other regional cemetery sites.

[143] *First Chair*

Smith, Bruce (Smithsonian Institution) [234]

Discussant [271] Discussant

Smith, Bruce D. [238] *see Fritz, Gayle J.*

Smith, Burton (University of Minnesota)

[214] *Reconstructing the Provenance of an Orphaned Pottery Vessel Collection: A Missing Assemblage from the Middle Mississippian Type Site of Cherry Valley?*

This poster explores a variety of evidence linking an orphaned collection of Mississippian pottery vessels from a museum in St. Paul, Minnesota, with the Middle Mississippian type site of Cherry Valley. This evidence includes documentary evidence, as well as some preliminary comparisons between the orphaned collection and a sample of vessels from the Cherry Valley site.

Smith, Calvin [84] *see Condon, Peter C.*

Smith, Cecilia (University of Illinois at Chicago), Eusebio Dizon (National Museum of the Philippines) and Clyde Jago-On (National Museum of the Philippines)

[177] *The Bacong Archaeological Project: Investigating Metal Age Landscape Use on Negros Oriental, Philippines*

The Bacong Archaeological Project, directed by Dr. Laura Junker (University of Illinois Chicago) and Dr. Eusebio Dizon (National Museum of the Philippines), includes regional survey to reconstruct settlement systems of the Metal Age (500 BC–AD 800). The dynamics of landscape use in the Philippine Metal Age are not well understood, but the period is significant in the emergence of increasingly complex societies with status competition and use of foreign trade objects as prestige items. This report describes a GIS-based analysis of geographic and ecologic characteristics of identified sites, preliminary results, and plans for future field seasons.

Smith, Charles [183] *see Roney, John*

Smith, Craig (Cardno ENTRIX) and Lance McNees

(Cardno ENTRIX)**[100] Folsom Structures in the Wyoming Basin of Southwest Wyoming**

Folsom adaptation is typically thought to consist of highly residentially mobile, specialized bison hunters focused on the grasslands of the Great Plains. Recent research has begun to show greater variability in Folsom land-use patterns and mobility. The excavation of the remains of two structures consisting of roughly circular arrangements of cobbles associated with Folsom points on a juniper-covered ridge in the high semi-arid Wyoming Basin of the Middle Rocky Mountains adds to this growing evidence of variability. The presence of these structures suggests a reduced residential mobility and occupation and use of areas not typically associated with the Folsom.

Smith, Derek (University of Washington)**[227] *Proyecto Costa Escondida: Coastal Ecology at Vista Alegre***

The contemporary ecological zones of the Quintana Roo coastline are a complex mosaic of habitat types influenced by dynamic environmental processes and historical socio-economic land use. Initial ecological investigation of the Vista Alegre site included GPS-driven terrestrial transects quantifying forest plant species richness and abundance as well as subtidal transects to quantify the percent cover of seagrass and algal species. Shell artifacts found in middens and in archaeological excavation units were also quantified so we can begin to assess the historical impacts of human predation on marine resources in the coastal waters surrounding Vista Alegre.

Smith, Erica (University of West Florida)**[18] *Chemical Characterization of Spanish and Mexican Indian Artifacts from the Emanuel Point Shipwrecks***

Tests to determine the provenance of selected artifacts from the 1559 Tristán de Luna shipwrecks through chemical characterization and historical research has yielded successful results. Excavation and laboratory analysis of the two ships (Emanuel Point I and II) have identified a number of artifacts that are now known to have originated from Mexico and Spain. This presentation will outline the results of my thesis research, which employed the use of Instrumental Neutron Activation Analysis on brick and ceramics, as well as Chemical Ionization-Mass Spectrometry and Gas Chromatography-Mass Spectrometry to identify resinous material.

Smith, Erin (Washington State University, Pullman)**[278] *Mat Kulaaxuuy and the Land of the Holes: Burials, Landscape, and Historical Process***

As hunter-gatherer archaeology continues to expand and incorporate more humanistic and historicizing theories, our understanding of hunter-gatherer actions, behaviors, and organizational system dynamics has been greatly enhanced. This paper revisits a cluster of sites along the coastal bluffs of La Jolla, San Diego County, California that contained numerous burials exhibiting little evidence indicative of marked status differentiation. Although previously cast as the homogenous burial practices of a simple egalitarian society, the placement of the burials appears to follow a cohesive pattern that may have been expressed during the construction of this place over the

duration of the Holocene.

Smith, Geoffrey (University of Nevada, Reno), Teresa Wriston (University of Nevada, Reno) and Kristina Wiggins (University of Nevada, Reno)**[100] *A First Glimpse into Deep Time in Warner Valley: Preliminary Results of a Survey for Paleoindian Sites in South-Central Oregon***

In 2011 a crew from the University of Nevada, Reno initiated pedestrian survey in Warner Valley, Oregon, to determine if it contains evidence of Paleoindian occupations. Our work revealed a high density of fluted and stemmed point sites occupying a series of relic beach ridges. Here, we describe our initial findings including radiocarbon dates for the landforms on which the fluted and stemmed point sites are located, XRF data for Paleoindian points, and the spatial relationship between the fluted and stemmed point sites. We conclude by outlining our plans for additional work in Warner Valley in the coming years.

Smith, Geoffrey [161] see Wiggins, Kristina M. [84] see LaValley, Stephen J.

Smith, Heather (Center for the Study of the First Americans)**[169] *Preliminary Analysis of Fluted-Point Technology at Serpentine Hot Springs, Alaska***

Two new fluted points were recovered during the 2011 excavations at Serpentine Hot Springs (BEN-192), Bering Land Bridge National Preserve, Alaska, bringing the total number of fluted points from the site to eight, the most fluted points yet recovered from a single Alaskan site. Four are from buried and secure contexts associated with hearth features dating to about 12,200-12,000 cal BP. This poster presents results of a technological and morphological analysis of the Serpentine fluted point collection, and considers the results in the greater context of fluted-point technology across North America.

Smith, James, Martin Stein (Bureau of Land Management), James Renn (Bureau of Land Management), Jeremy Iliff (Bureau of Land Management) and Bruce Boeke (Bureau of Land Management)**[245] *Permian Basin MOA - Year Three of Alternative Section 106 Compliance in Southeastern New Mexico***

To date, the Oil & Gas Industry has submitted over 1600 projects (well-pads, roads, pipelines, etc.) and contributed over \$3.5 million into a fund for archaeological research projects. A workgroup including members of BLM, NM SHPO, and academia select research projects. Projects completed include a synthesis of existing archaeological data, targeted inventory, and an ethnographic study. Current projects include an Historic Context for Oil & Gas and a National Register evaluation of properties along the Delaware River. Future projects across the Permian Basin MOA will include baseline testing of archaeological sites, a lithic and ceramic sourcing project, and targeted excavation.

Smith, Jennifer (Washington University in St. Louis), Jonathan Lewis (Washington University in St. Louis) and Elena Garcea (University of Cassino)

[37] *Reconstructing Nile margin environments during the Holocene: Geoarchaeology at Sai Island, Sudan*

To characterize environmental change and resource availability during the transition from foraging to food production along the Nile River in northern Sudan, a broad-based geoarchaeological investigation of Sai Island was undertaken in early 2011. Geomorphological, sedimentological and stratigraphic analysis of Holocene alluvial sediments documents changes in channel location, and allows for reconstruction of channel margin environments. Pedogenic carbonates were prominent components of soils developed on both Pleistocene and Holocene channel and overbank sediments; geochemical analyses of these carbonates may allow for a refinement of environmental conditions during times of active soil formation (most likely under conditions more humid than today).

Smith, Jennifer [37] see Skinner, Anne [37] see Wreschnig, Andrew

Smith, Karen (Monticello), Sara Bon-Harper (Monticello), Derek Wheeler (Monticello) and Fraser Neiman (Monticello)**[67] *Non-Site Survey on Monticello Mountain***

This poster describes current results from an ongoing systematic, non-site survey of Thomas Jefferson's Monticello Plantation. We construct continuous density surfaces from artifact counts in roughly 17,000 shovel test pits (STPs) on Monticello Mountain and use the results to isolate high-density patches, low-density scatters, and the assemblages they contain. Analysis of assemblage variation allows us to chart change and functional variation in land use. This in turn yields insights into the shifting strategies employed by Jefferson and his slaves during the transition from tobacco to wheat cultivation at the end of the eighteenth century.

Smith, Karen [97] see Stephenson, Keith

Smith, Kevin (Middle Tennessee State University)**[197] *The Tennessee Archaeological Society (1944-1988): Legacy and Consequences of the New Deal in Tennessee***

Efforts to create a statewide Tennessee Archaeological Society (TAS) began in the 1920s in response to national goals of sponsoring professional southeastern organizations. The 1920s TAS was shortlived with few legacies. The followup came in the 1940s, when federal relief programs funded an unprecedented amount of archaeology in rural Tennessee. Disappearance of those funds at the onset of World War II led Tom Lewis and Madeline Kneberg to revive the TAS through their New Deal network -- this second effort was extraordinarily successful, spanning five decades and involving as many as 15 chapters and 800 members at its peak.

[266] First Chair

Smith, Kevin [197] see Moore, Michael C. [266] see Beahm, Emily L.

Smith, Larissa (University of Illinois at Chicago) and Laura Junker (University of Illinois Chicago)**[57] *Feasting Across Social Boundaries in the Pre-hispanic and Recent Philippines***

Archaeological, ethnographic and historical studies of feasting have generally emphasized societies at similar scales and with similar forms of socio-political complexity, and often involving societies with largely shared understandings of the social meanings and political agendas embedded in feasting events. Long-term archaeological and ethnographic fieldwork, along with historical analysis, in a region of the Philippines that was occupied conjointly by lowland maritime trading chiefdoms, upland swidden farming tribal peoples, and mobile hunter-gatherers shows that the objects and spatial contexts of feasting change meaning when transferred between interacting members of these groups, materially encoding differing views of their social worlds.

Smith, Lisa (University of Montana) and Eric S. Carlson (Historical Research Associates)**[110] *Preliminary Results of Investigations at the s7i7stkn (Little Pit House) Site, Middle Fraser Region, British Columbia***

The hunter-gatherer-fisher people of the Canadian Plateau are renowned for having occupied large, densely populated winter pit house villages. This poster outlines results of test excavations conducted at the s7i7stkn site, a small pit house village located in the Bridge River Valley, with particular focus on a house occupied during the late pre-historic and early contact periods. Preliminary results suggest this household, like others in the region, were highly dependent on anadromous salmon, and may have intensified the use of this resource during the early contact period, likely due to increased participation in the growing trade economy.

Smith, Lisa [132] see Prentiss, Anna Marie [110] see Nauman, Alissa L.

Smith, Michael S. [162] see Herbert, Joseph M.

Smith, Monica (UCLA)**[57] *Networks of provision, networks of disposition: The potential for "feast failure"***

Ancient feasting events often are analyzed as though they were uniformly linear, successful occurrences. However, anthropological examinations of this same subject illustrates the potential for "feast failure": people may or may not contribute, may or may not come to the feast, may or may not be satisfied, and may or may not repay the feast-giver in labor or obeisance. A network approach reveals the complexities of managing the circuits of food and other items that are transformed into feasting provisions, and how we can look for archaeological evidence of tension, negotiation, and consensus among the givers and recipients of feasts.

[92] Discussant

Smith, Samuel [42] see Fruhlinger, Jake C.

Smuin, Michale [129] see Schou, Corey D.

Smyth, Michael (Foundation for Americas Research/U. at Buffalo)**[132] *Lewis Binford's Legacy to Processual Archaeology in the Maya Lowlands***

It may seem strange that Lewis Binford was the chair of a Maya archaeology Ph.D. committee at UNM. The topic

was storage and of great interest to Lew who shared many innovative ideas. Storage as an economic process is fundamental and has not been treated adequately in the Maya lowlands where processual archaeology is not widely practiced. This paper will discuss these topics and climate change and human ecodynamics research at Xcoch and the Puuc region of Yucatan. Processual approaches allow the systematic reconstruction of statics to dynamics and an understanding of archaeological variability; all issues championed by Lew.

Smyth, Michael [22] *see Weaver, Eric M.*

Snead, James (California State University Northridge)

[205] *The Original Jones Boys: Archaeologies of Place, Race, and Identity in the Reconstruction South*
Histories of archaeology traditionally emphasize presentist narratives that prefigure today's professional foci. Voices in the archaeological past that emphasize different perceptions of archaeology and its social/cultural role are rarely investigated. Such is the case with Charles and Joseph Jones, two brothers from Savannah, Georgia, who were active in American archaeology after the Civil War. Shaped by their Antebellum and wartime experiences, the Jones brothers shared a passion for collecting and were steeped in the complex sectional politics of the Reconstruction era. Their archaeologies of place and identity represent visions of American archaeology reflecting the complexity of their era.

Snetsinger, Andrew [203] *see Lamoureux St-Hilaire, Maxime*

Snow, Benjamin and Will Russell (Arizona State University)

[171] *Petroglyphic Analysis on Perry Mesa*
Hopi migration histories discuss the coalescence of numerous clans in northeastern Arizona. Some originated in Palatkwapi to the south, traveled in groups known as phratries, and systematically marked their passage with clan symbols. Hopi elders have identified Perry Mesa as an ancestral Hopi place. If the Perry Mesa Tradition included proto-Hopi peoples among its diverse settlers, we might expect to find petroglyphs that are consistent with documented Hopi clan symbols. Using data from past and ongoing fieldwork, we demonstrate the compelling presence of Palatkwapi clan symbols, clustered in phratries among a paucity of petroglyphs that are consistent with non-Palatkwapi clans.

Snow, Dean (Pennsylvania State University)

[51] *Living on the Edge: The Limits of Northern Iroquoian Farming*

A demographic explanation for the appearance of longhouse villages, maize cultivation, and Northern Iroquoian speech in the Northeast after 600 CE fits the known data better than alternative explanations. The expansion of agriculture into the Northeast was coincident with a demographic expansion, as was so often the case elsewhere in North America. The expansion was facilitated by the advent of the climatic warming episode known as the Medieval Maximum. When the more favorable conditions of that episode waned, Iroquoian farmers retreated from more marginal

environments, but remained in the region.
[253] *Discussant* **[257]** *Discussant*

Snow, Frankie [97] *see Stephenson, Keith*

Snow, Susan (San Antonio Missions National Historical Park) and James Oliver (San Antonio Missions NHP/National Park Service)

[33] *Continuity of Use and Community on the San Juan Acequia*

The National Park Service has been working since the early 1990s to restore water to the San Juan Acequia. Construction of the flood control channel in the early 1970s interrupted the flow of water from the San Antonio River into the San Juan Acequia. Later damage by vandalism, storm water blow-outs etc. have necessitated repair and restoration in order to return water to the ditch. These repairs have revealed a number of features along the acequia which show Spanish Colonial repairs that were later augmented by late 19th century and early 20th century repairs. These archeological features of the ditch show the continuity of community from Spanish Colonial times until the 20th century. With restoration of water to the San Juan acequia these features will not be visible but the continuity of community will be continued with water flowing once again to the Spanish Colonial labores of Mission San Juan.

[33] *Second Chair*

Snow, Susan [33] *see Tomka, Marybeth S F*

Snyder, Amanda (Indiana University of Pennsylvania) and Lydia DeHaven (Indiana University of Pennsylvania)

[170] *Stuck in a Rut: The Search for Historic Forbes Road*

Forbes Road was commissioned in 1758 to allow a surprise attack on the French. It was later used as a major conduit for settlers heading west through the Allegheny Mountains. Although some sections of Forbes Road have been preserved, its exact course through Historic Hanna's Town is unknown. The 2011 IUP advanced field school at Hanna's town attempted to locate a segment of the original Forbes Road. Excavations revealed cultural material and features dating to the mid 19th and early 20th centuries, with traces of late 18th century material, and one feature possibly indicative of a wagon rut.

Snyder, Lynn M. [245] *see Hull-Walski, Deborah A*

Sobur, Marta (Harvard University)

[65] *Near Eastern Archaeology in Popular Film.*

The Near Eastern archaeological theaters lend themselves readily to fictionalized portrayal in popular motion pictures. The perception of the Orient as so exotic that it's governed by supernatural forces accounts for the majority of the productions. Presently, archaeologists create scientific content with digital media ubiquitously, while the same media screens archaeo-errors to the general audiences. Through a closer look at select popular motion pictures (10 000 BC, Year One and others) I will examine this paradox and the main conceptual trends (anachronism, syncretism, familiar past and archaeo-errors), which shape the mainstream portrayal of ancient Near Eastern civilizations in film.

Sofaer, Anna (Solstice Project) and Richard Friedman (City of Farmington)

[198] *Chaco Roads: New Insights to their Significance*
The Chaco people engaged in massive construction and engineering feats to develop hundreds of miles of roads throughout the Four Corners region. The thirty-five mile Great North Road, recently studied in depth with LiDAR technology, connects the primary architecture in Chaco Canyon's central ceremonial complex to the direction North and prominent landscape features in the North. The Chaco roads may suggest a fabric of ideological beliefs connecting the Chaco society with prominent landscape (buttes, springs, lakes) and in some cases with key astronomical directions.

Soffer, Olga [202] see *Adovasio, James M.*

Solar Valverde, Laura [98] see *Jimenez, Peter F.*

Solis, Kristina (University of Texas at San Antonio)

[36] *The Graveyard Shift: Spatial Analysis of South Texas Hunter-Gatherer Cemetery Sites*
During the Middle and Late Archaic, the hunter-gatherers that occupied South Texas began to bury their dead at specific locations rather than isolated burials. These cemetery sites are marvels of the South Texas Archaic as they show signs of repeated use, occupational differences, and trade with Mesoamerica. This poster will use ArcGIS to perform spatial analysis of these cemetery sites. The hunter-gatherer cemetery sites will be compared against environmental data in order to understand what factors were important to these hunter-gatherers for choosing ideal burial locations.

Somers, Lewis [7] see *Greenlee, Diana M.*

Sosa, David (California State University Monterey Bay)

[255] *Graffiti and Urban Subcultures: An Archaeological Perspective*

Media and law enforcement sources report that Chicano graffiti has spiked in concert with the escalation of gangland violence in Salinas, California. Differentiating the social and artistic types arising within this urban art form presents a formidable challenge, however, interpreting the writing on the walls may assist community agencies with effectively gauging the dynamics of barrio youth identity and conflict. Concomitantly, grouping all taggers with gang members via the misinterpretation of graffiti continues to fuel the subordination of Chicano youth, and significantly, serves to criminalize the perceived behavior of taggers in the eyes of both the community and law enforcement.

Souther, Lauren (East Carolina University) and Megan Perry (East Carolina University)

[139] *A Comparative Analysis of Paleopathology and Mortuary Practices of West Site 31CK22 in Currituck County, North Carolina*

Archaeologists of prehistoric North Carolina have focused on exploring Late Woodland biological adaptations to the region's unique coastal microenvironments. Recent excavations at the West site (31CK22) have produced new skeletal data (N=5) and

evidence for varied modes for disposing of the dead. The data on these individuals' health and disease are considered in their broader regional context to underscore these populations' unique adaptations to their coastal environment. We then integrate biological and material cultural data to identify underlying biological or demographic issues for differences in burial programs and patterning in other aspects of the mortuary ritual.

Souza, Joanne [123] see *Bingham, Paul M.*

Spalding, Karen (Univ. of Connecticut emeritus & PUCP - Lima, Perú)

[156] *Revisiting Huarochirí: forty years later*
The Central Andes, and in particular the region of Huarochirí, have been the focus of archaeological and ethnohistorical work that has made important contributions to the understanding of Andean society and its transformations. Drawing on field notes and survey reports prepared in 1972 as part of the NSF project, "Archaeology of the Central Andes of Perú," directed by Thomas C. Patterson, this paper will examine the changes in the model of native society beyond the core of the Inca political system that have been proposed since the Lurin Valley project, forty years ago.

Spann, Tamara (Louisiana State University), Rachel Watson (Louisiana State University) and Heather McKillop (Louisiana State University)

[172] *Underwater Transect Excavations: Searching for Salt Production at the Eleanor Betty Site, Paynes Creek National Park, Belize*

A transect was excavated at the underwater salt work site of Eleanor Betty in Paynes Creek National Park. The site is associated with a massive salt industry for the Classic Maya. The transect was excavated along the inside of a wooden structure hypothesized to be an area of salt production based upon an area of dense briquetage—ceramic pots used to boil brine to make salt. The wooden architecture is preserved in mangrove peat. We describe the underwater excavations and report the ceramic analysis carried out at our field lab in Punta Ycacos Lagoon.

Sparks, Janine and Kenneth Tankersley

[127] *A Case Study of Chert Sourcing in the Ohio River Valley: Site 33HA49*

Petrography remains the single most accurate, cost effective, and non-destructive method to determine chert source areas. Petrographic identification requires (1) comprehensive comparative sampling of cherts from primary stratigraphic and geographic provenienced sources, secondary deposits, as well as all look-alikes, and (2) macroscopic and microscopic examination of the cherts to determine rock color, texture, and fossil and non-silica mineral content. The resulting information can be used to determine the procurement sources of cherts. This technique is used to determine the chert source areas of more than 10,000 flaked-stone artifacts from site 33Ha49.

Speakman, Robert, R. Game McGimsey (United States Geological Survey, Alaska Volcano Observatory), Richard Davis (Bryn Mawr College), Michael Yarborough (Cultural Resource Consultants, LLC) and Jeff Rasic (University of

Alaska)**[112] *Obsidian in the Aleutians Islands and Alaska Peninsula***

The Aleutian Islands and adjacent Alaska Peninsula span a 1700 mile arc at the apex of the Pacific Rim. This immense, linear, island chain is ecologically rich and the logistically risky environment provides an interesting case study for examining 8000 years of human mobility and resource procurement strategies in a high latitude maritime setting. Through geochemical sourcing of obsidian, which occurs in tool assemblages throughout the region, we examine these issues. We analyzed 1500 obsidian artifacts from 97 sites, and identified one major source of obsidian and at least five minor geochemical groups that were used prehistorically.

Speakman, Robert J. [153] *see Rasic, Jeffrey T.*

Speer, Charles (University of Texas at San Antonio)**[127] *Investigation of the Edwards Plateau Chert Resources Using LA-ICP-MS***

This research focuses on advancing chert sourcing using non-destructive LA-ICP-MS to characterize chert resources within the Edwards Plateau through combination of in-depth testing of inter- and intra-formation chert variability. Three chert bearing Early Cretaceous Edwards Limestone formations were identified, classified, and distinguished through geochemical composition to document inter- and intra-formation variability. The three primary geologic areas (Callahan Divide, Fort Hood, and Leon Creek) of the Edwards Plateau were analyzed and compared with Clovis period artifacts, also analyzed using LA-ICP-MS, from the Gault site. The Gault site is an important multi-function archaeological site with rich deposits of Clovis artifacts.

[127] Second Chair [127] Second Organizer

Speller, Camilla (Simon Fraser University), Brian Kooyman (University of Calgary), Gwyn Langemann (Cultural Resource Services, Western and Northern Service Centre, Parks Canada) and Dongya Yang (Simon Fraser University)

[141] *Documenting former elk (*Cervus elaphus*) populations and exploitation in Alberta, Canada through archaeological and ancient DNA analysis*
North American Elk are an important component of Alberta's natural ecosystems, and were hunted both by indigenous peoples and European colonists. Overhunting and habitat decline in the 19th century led to the near eradication of Alberta's elk. Though elk have been restored within Provincial and National Parks, there has been ongoing controversy as to past population sizes and distributions. This project conducted an archaeological literature review and analyzed 50 archaeological elk remains using ancient DNA techniques to document elk exploitation by native peoples and assess the distribution, abundance and diversity of elk populations through time and space.

Speller, Camilla [70] *see Thornton, Erin Kennedy*

Spenard, Jon (University of California, Riverside)

[15] *Making Place: An Analysis of the Classic Period Maya Use and Modification of the Karst Landscape in the*

Pacbitun Region, Cayo District, Belize.

This paper offers a discussion and interpretation of the Classic Period Maya use of the karstic landscape that surrounds the Ancient Maya site of Pacbitun. It focuses on a large hill containing several caves, rock shelters, bedrock outcroppings, and boulders all of which were the foci of past activities. The argument presented in this paper is that the construction of features such as terraces, rock walls, blocked passages, etc. transformed the landscape into a series of meaningful places, which in turn were used as stages for various ritual activities that formed and reinforced community identity on local and polity levels.

Spenard, Jon [15] *see Reece, Robert B.*

Spence, Michael [139] *see Wells, Emily E.*

Spencer, Kaylee [275] *see Wren, Linnea H.*

Spencer, Susan (University of Southern Indiana) and Robert Mahaney (Indiana University, Bloomington)

[139] *What to do with presence/absence data?: the benefits of cluster analysis in estimating the timing of trauma at a pre-Columbian site in west-central Illinois.*
Discrete trait analysis is a fundamental analytical technique. Using PAST, we demonstrate the benefits of cluster analysis in a case study estimating the timing of cranial trauma using ten patterns of cultural and taphonomic bone alteration. This technique shows how an observation clusters from theoretical category exemplars. Of the seventeen cases previously identified as perimortem trauma, nine could be attributed to non-violent causes, seven were possible perimortem blunt force trauma, and one could be attributed to a belt-wound. We recommend this method for exploring potential etiologies and for addressing ambiguity in a way that is transparent to scientific audiences.

Spengler, Robert (Washington University in St. Louis)**[134] *Ecotopes and Herd Foraging Practices in the Bronze and Iron Age, Steppe and Mountain Ecotone of Central Asia***

Exchange and mobility have been core concepts in Bronze and Iron Age research in Central Eurasia. Using Begash in southeastern Kazakhstan as a case study, this paper examines the wild seed component of the archaeobotanical assemblage, arguing that herd animal dung, burned as fuel, can provide a clearer picture of herd diet and mobility patterns. Mobile pastoralists in semiarid environments focus on specific locations on the landscape where herd forage and water are abundant. These ecotopes are vital components in the herding system; herders focused their herding practices in a network of ecological nodes across a vast mosaic landscape.

Speth, John (University of Michigan) [234] *Discussant*

Spielmann, Katherine (Arizona State University)

[23] *Art, Community, and the End of Ohio Hopewell*
By the mid-AD 400s the creation and use of the distinctive art objects that are emblematic of Ohio Hopewell had ceased. Artisans no longer crafted copper plates and

ears, mica and copper cut-outs, obsidian blades, elaborate flint bifaces, or decorated ceramics. Nor did people continue constructing the earthworks within which such items had been made, used, and decommissioned. Villages grew, but the nature of the collectivity had changed significantly. This paper explores changes in southern Ohio communities from the Hopewell to the early Late Woodland period and discusses the relationship between change in community, ritual performance, and art.

[257] *Discussant*

Spiess, Arthur [268] *see Bartone, Robert N.*

Spigelman, Matthew (New York University)

[134] *Attempts at the Revitalization of Society in Late Bronze Age Cyprus*

Wallace's "Revitalization Movement" model is used to investigate new cultic practices and material culture that appear in Cyprus at the close of the Late Bronze Age (LBA), ca. 1200 BCE. This model has been productively employed by archaeologists in historical contexts; here it is utilized in an effectively pre-historic setting. The novel practices and material culture of LBA Cyprus bear the marks of both originality and archaic iconography that suggest the Revitalization Movement model to be useful. Previous explanations have presented narratives of invasion or long term processual development, neither of which provides a convincing fit with the archaeological evidence.

Spradlin, William [243] *see Cutright, Robyn E.*

Sprajc, Ivan (ZRC SAZU)

[269] *Pyramids marking time: Tony Aveni's contribution to the study of astronomical alignments in Mesoamerican architecture*

While the study of astronomical practices in ancient Mesoamerica has a long history, it is Anthony F. Aveni's work that defines the beginning of systematic, methodologically coherent and anthropologically oriented archaeoastronomical research. Particularly pathbreaking has been his study of architectural orientations. The huge corpus of alignment data he collected represented the first compelling evidence of the largely astronomical rationale of orientations in Mesoamerican civic and ceremonial architecture. As exemplified in the paper, recent advances in the understanding of the role of astronomy and cosmology in Mesoamerican architectural and urban planning derive, to a substantial degree, from Aveni's pioneering work.

Springate, Megan and Amy Raes (Monmouth University)

[166] *Power of Choice: Reflections of Economic Ability, Status, and Ethnicity in the Foodways of a New Jersey Free Black Family*

Four generations of the free black Mann family owned and occupied their small house in historically white Sussex Borough in northwestern New Jersey from 1862-1909. The foodways assemblage recovered archaeologically included faunal remains, tablewares, and food preparation vessels. Analysis indicates a dramatic shift in the family's economic status in the late nineteenth century, accompanied by changing negotiations of ethnicity, social status, and consumer

choice that engaged both white and black communities. The foodways assemblage from the Mann site is compared with other contemporary free black house sites in the Mid-Atlantic, and reasons for the observed differences are proposed.

Sprowles, Michael [99] *see Quates, Duane*

Stack, Adam (Harvard University) and Emily Hammer (Harvard University)

[91] *Future Directions for Historical Ecology Research in Archaeology*

Historical ecology focuses on changing relationships between communities and landscapes, both natural and manufactured. We argue for greater emphasis on the concepts of "sense of place" and "landscape capital" within this framework. Pre-modern peoples intentionally and positively transformed the environment, and in doing so produced historically particular senses of place based on classifications, associations, and histories of landscapes. Indigenous senses of place are critical to understanding how landscape capital — accumulative systems of highly visible, as well as small-scale and ephemeral, landscape features — works in different societies. We examine the prospects and problems of these concepts in archaeological research.

[91] *Second Chair* [91] *Second Organizer*

Stafford, C. (Indiana State University) and Mark Cantin (Indiana State University)

[261] *Unifacial tool design, depletion, and recycling at the Early Archaic James Farnsley site in the central Ohio River Valley*

A large sample of endscrapers (n= 583) was recovered from a series of Kirk residential camps at the Farnsley site. This study focuses on a metric analysis of end scraper attributes to identify patterns of design, hafting, and depletion. Farnsley scrapers are typically made on large blade-like flakes and often exhibit evidence of hafting. Wyandotte chert (semi-local) accounts for over 79 percent of the assemblage. Lack of blade cores suggests that blanks/scrapers were not made onsite. A comparison of occupation zones and disposal contexts are made (including a secondary trash deposit) to examine degrees of scraper depletion and recycling.

Stafford, Thomas [164] *see Johnson, John R.*

Stafford, Thomas W. [20] *see Jenkins, Dennis L.*

Stahl, Ann (University of Victoria)

[267] *Metal working, ritualization and the rhythms of village life in Banda, Ghana*

Village sites occupied ca cal AD 1300 to 1650 in the Banda area, Ghana have yielded evidence of both copper alloy and iron metal working at a time when Saharan exchange networks were giving way to Atlantic ones. Shifting spatial relationships and ritualization of metallurgical practice through this period provides a lens through which to explore implications for the materiality of everyday life in a time of shifting interregional connections. Discussion will focus particularly on the implications for how metal working fit into the rhythms and practices of village life.

Stahl, Ann [92] *see Logan, Amanda L.*

Stahl, Peter (University of Victoria)**[157]** *Fox, Dog, Amazonian Animism, and Non-Domestication*

Although widely recognized as an important hearth of plant domestication, the pre-Columbian Amazon has long puzzled anthropologists for its paucity of native animal domesticates. With the possible exception of the Muscovy duck (*Cairina moschata*), no native animal domesticates were known to have been domesticated in the way that we normally think of domestication.

Although possible candidates for animal domestication were always present in Holocene Amazonia, the reason for their non-domestication is most likely to be found in concepts of native Amazonian perspectivism and key relational features that dominate indigenous cosmologies of the region today.

Stahlschmidt, Mareike (University of Tübingen), Bertrand Ligouis (Institute for Archaeological Sciences, University of Tübingen) and Christopher E. Miller (Institute for Archaeological Sciences, University of Tübingen)**[93]** *The depositional environments of Schöningen 13II-4 and their archaeological implications*

The depositional context of any site is key to the interpretation of its archaeological remains. In the case of Schöningen 13 II-4, the Horse Butchery Site, it is vital to understand how the remains of this butchery event were deposited and how post-depositional processes influenced the preservation. The micromorphological and organic petrographical analyses presented here apply evidence at the microscale to decipher the geogenic and anthropogenic processes that led to the formation of this world famous site. These results provide a contextual basis for the interpretation of the site including essential information for the faunal, botanical and lithic analyses.

Stahlschmidt, Mareike [93] *see Miller, Christopher E.***[93]** *see Julien, Marie-Anne***Stair, Joseph (University of Kentucky) and Scott Hutson (University of Kentucky)****[229]** *Dedicatory Offerings from 21 de Abril and Kancab, two Maya sites along the Causeway between Uci and Cansahcab, Yucatan, Mexico.*

This paper reports and analyzes several offerings found at the Maya sites of 21 de Abril and Kancab along the intersite causeway between the larger sites of Uci and Cansahcab on the Yucatan Peninsula. These offerings include broken ceramic vessels from domestic contexts and projectile points from an altar located in a plaza. I argue that these material offerings dedicated the structures that they are associated with for use, allowing individuals and groups to occupy, use, and experience them, creating a ritually sanctioned built environment that can be employed in the continual creation and maintenance of social identity.

Staller, John (The Field Museum)**[166]** *Nixtamal: Maize, Food, Symbol and Meaning in Ancient Mesoamerica*

Nixtamal, the preparation of maize through soaking and grinding the kernels is perceived as a ritual act or performance among pre-Columbian cultures. Imagery of women grinding maize kernels over a mano and metate

has powerful symbolic references to female sex in ancient mythology, legend, folklore. Adoption of the nixtamalization process in the Americas accompanied the spread of maize cultivation. The religious and cultural importance of preparing and grinding maize is made comprehensible through food science and has broader implications for human nutrition and economic dependence. Significantly, the earliest maize grinding implements from southern Mexico and Guatemala date to 1500-1200 B.C.

Stanchly, Norbert (Trent University) and Darcy Wiewall (Antelope Valley College)**[137]** *Colonial Period Maya Animal Resource Utilization: Evidence from Commoner Household Excavations at Lamanai, Belize*

We present zooarchaeological data from commoner household contexts at Lamanai during the Late Postclassic to Colonial period transition to assess the effects of Spanish colonization on Maya foodways. The data is compared to elite animal resource use at Lamanai from similarly dated deposits. The data suggest that variability in elite vs. commoner access to animal resources observed during the Classic period persisted into the Colonial period. The Lamanai data provides insight on the gendered relations of household production involved in the preparation and procurement of animal resources in response to the demands of the Spanish State.

Stanford, Dennis [225] *see Lowery, Darrin L.***Stanish, Charles (Cotsen Institute, UCLA) [12]** *Discussant***Stanley Guenter, David Lee [151]** *see Eppich, Keith***Stark, Barbara (Arizona State Univ) and Krista Eschbach (Arizona State University)****[21]** *Population Movement Issues in the Classic and Postclassic of the Gulf Lowlands*

Migration, ethnicity, and colonial studies offer overlapping and contrastive concepts for understanding population movement in the Classic and Postclassic archaeological record of the Gulf lowlands. We consider the utility of these diverse perspectives for Gulf lowland archaeology. Our assessment of the general state of population movement studies in this region includes the nature of archaeological evidence, timing, the causes and consequences of population movements, and key topics for future research. Linguistic evidence also plays a role in the assessment, but the focus is archaeology.

Starnini, Elisabetta [176] *see Mannino, Marcello A.***Starzmann, Maria Theresia (Freie Universität Berlin)****[230]** *Remembering Landscapes of Violence: Doing Justice in Archaeology*

The attachment of memories to specific sites not only creates a sense of place, belonging or identity, but also produces ideological landscapes that are highly contested. Looking at the African Burial Ground in Lower Manhattan, this paper explores how archaeology figures in the memorialization of landscapes of trauma and violence. Discussing some of the ways in which archaeology serves economic and political interests, I

develop ideas for an archaeology that 'does justice,' thus moving beyond concerns with advocacy and toward the radical emancipation of those who are traditionally silenced in and excluded from our academic work.

[230] *First Chair*

Stawski, Christopher (Michigan State University)

[98] *Modeling Settlement in the Prehispanic Lake*

Pátzcuaro Basin, Michoacan, Mexico

Current models of settlement for the Prehispanic Lake Pátzcuaro Basin (LPB) are based heavily on Pollard's ethnohistoric and archaeological research of the Tarascans. Using new data from survey, excavation and satellite imagery, as well as utilizing technologies that enable a finer scale analysis for landscapes and communities, this paper illustrates the expansion of Pollard's original work into a fuller understanding of settlement and human-environment relationships from the Preclassic to Late Postclassic in the LPB.

Steadman, Dawnie (University of Tennessee, Knoxville)

[105] *Victim, Warrior, Mother: Health consequences of female positions in Mississippian societies*

Recent hazard model analyses of Mississippian samples demonstrate that reproductive-age females have a greater risk of death than their male cohort. Reproductive-age morbidity and mortality among females is often attributed to child-bearing stresses while cohort male morbidity and mortality is largely ascribed to cultural factors, such as warfare. Undue emphasis on a purely biological interpretation of female well-being ignores how gender-specific risks and cultural roles (captives, warriors, abuse victims and labor responsibilities) can directly contribute to mortality. Biological, ethnographic and archaeological data from Southeastern Mississippian groups demonstrate that more integrated models can explain the complexities of female frailty.

Stech, Edward [216] see Steier, Andrew

Steele, Ian [254] see Slater, Philip

Steele, James (University College London)

[158] *'Modelling dispersal dynamics from radiocarbon data'*

This paper reviews some methodological problems in the use of radiocarbon dates to reconstruct episodes of archaeologically-recorded human dispersal. Much effort has been expended estimating speeds and directions of spatial population expansion in such cases. An appropriate application for these techniques is the first peopling of the Americas. We discuss techniques for estimating front speeds and dispersal vectors, and consider some limitations due to incomplete archaeological sampling and imprecise radiocarbon dating. We also summarise results from a recent collaborative compilation of dates from previously-excavated sites in South and Central America.

Steele, Teresa (UC Davis)

[96] *How studies of shell remains can contribute to our understanding of faunal landscapes*

While traditionally most discussions of taphonomy have focused on skeletal remains, the increasing interest in the exploitation of coastal resources means that

archaeologists should apply similar principles when considering the taphonomic history of shells. Mollusks can provide data about a site's chronology and environmental context, as well as the diet and density of the occupants, as seen in examples from Morocco and South Africa. Interpreting the mollusks requires many of the same principles traditionally employed by taphonomists, including the importance of actualistic studies and multiple samples for comparisons. The special problems of shell beads, landsnails and ostrich eggshells are raised.

Steele, Teresa [83] see Schwartz, Steve

Steele, Teresa E. [117] see Álvarez-Fernandez, Esteban

Steelman, Karen (University of Central Arkansas), Josephine McDonald (Australian National University) and Peter Veth (Australian National University)

[255] *Radiocarbon Dating Rock Art in the Western Desert of Australia*

Over 50 paint samples were collected from rock art in the Calvert and Carnarvon Ranges of the Australian Western Desert for radiocarbon dating. Background samples demonstrated insignificant organic contamination, allowing successful analyses. Art ages ranged from 10±35 years BP (modern) to 3190±60 years BP consistent with prehistoric occupation patterns. These results allow us to associate images on shelter walls with excavated cultural finds, as well as understand the chronology of artistic styles. The traditional Martu will be able to use this information to assist in their management of tourism on the Canning Stock Route.

[255] *First Chair*

Steelman, Karen L. [255] see Bates, Lennon N.

Steere, Benjamin (Coweeta LTER, University of Georgia) and Russell Townsend (Eastern Band of Cherokee Indians Tribal Historic Preservation Office)

[65] *Collaborative Cherokee Archaeology: The Western North Carolina Mounds and Towns Project*

Western North Carolina has a rich history of archaeological research. However, archaeological data regarding Cherokee mound and town sites have not been systematically compiled, hindering research and preservation. The EBCI THPO and the CWT LTER recently began a project to build a database and GIS containing locational and archaeological information for all mound and town sites in western North Carolina. This project involves close collaboration among the Cherokee community, the EBCI THPO, the Cherokee Preservation Foundation, the Coweeta LTER, and archaeologists. Our preliminary research has produced new data for interpreting settlement patterns and new opportunities for preservation and public outreach.

Steffen, Anastasia (Valles Caldera National Preserve)

[112] *Shattered: Direct Effects of the Las Conchas Fire at Jemez Obsidian Quarries*

The 2011 Las Conchas Fire swept through the Jemez Mountains burning more than 150,000 acres. This conflagration included obsidian quarries located at deposits from all three of the major Jemez geochemical groups (Valles Rhyolite, Cerro Toledo Rhyolite, and El

Rechuelos Rhyolite). Included were all of the quarries on Cerro del Medio and all of the Dome quarries (including Obsidian Ridge and Rabbit Mountain). This poster reports on the diverse "direct effects" of the fire on obsidian, including fire fracture, vesiculation, and crazing, and capitalizes in this unparalleled opportunity to investigate the causes of variation in obsidian fire effects.

Stefka, Brad [140] see *Byers, David A.*

Stehman, Kelly (National Park Service)

[171] *Rock Art Revisited*

This poster presents the results of a comprehensive rock art analysis at Walnut Canyon National Monument, Arizona. Northern Arizona rock art continues to be well documented by both scholars and the interested public, yet little is known about the rock art located within Walnut Canyon NM. The initial documentation project provides an important first step in identifying the extent and condition of rock art located within the monument. Moreover, it provides an avenue for an increased understanding of the prehistoric occupants of the monument.

Steier, Andrew (University of Notre Dame), Donna Glowacki (University of Notre Dame) and Edward Stech (University of Notre Dame)

[216] *Investigating Paint Recipes of Mesa Verde Black-on-White Bowls through PIXE Analysis*

Particle Induced X-Ray Emission (PIXE) is used to analyze the paints and slips on 45 Mesa Verde black-on-white bowls (A.D. 1150-1300) from Aztec Ruins National Monument, New Mexico. In addition to developing analytical methods, including the use of standards to allow comparison between runs, preliminary analysis of a larger sample size than previous studies supports the finding that ancestral Pueblo potters at Aztec were using several recipes to make their paints. We add to this assessment by examining 15 samples of one of the possible source materials, Beeweed, showing that composition is affected by the associated geology of the plant.

Stein, Martin [245] see *Smith, James B.*

Steinbach, Penny

[242] *A Revised Definition of Late Classic Maya Codex-style Pottery*

Late Classic Maya Codex-style pottery originates from sites in Guatemala's Mirador Basin. Coe described it initially in 1973, and Robicsek and Hales defined it extensively in 1981. Their definition, however, was too broad until Reents and Bishop refined it shortly thereafter. Since then, it has become evident that the traditional corpus of Codex-style vessels includes three distinct stylistic variations, each evincing a particular combination of vessel form, pictorial composition, color use, and characteristic content. Consequently, I am proposing a revised definition that addresses the variations and offers a different template for defining Classic Maya pictorial pottery styles.

Steinbrenner, Larry (Red Deer College)

[259] *Warriors and Jaguars and Step-Frets, Oh My! Making Sense of Pataky Polychrome*

Pataky Polychrome, one of most spectacular and

elaborately decorated Nicoya polychrome ceramic types of the Sapoá Period (AD 800-1350), is also one of the least satisfactorily described and least well understood ceramic types in the archaeological literature pertaining to Pacific Nicaragua and northwestern Costa Rica. Drawing on a database of material recovered from archaeological contexts in Pacific Nicaragua and complete vessels in museum and private collections, this paper applies a more systematic approach for the classification of this important ceramic type to provide new insights into its relationship with other Nicoya polychromes as well as its long-presumed Mesoamerican affiliations.

[259] *First Chair*

Stelle, Lenville (Illinois State Archaeological Survey)

[101] *First Chair*

Stemp, James [153] see *Grant, Sarah*

Stemp, W. James [61] see *Peuramaki-Brown, Meaghan M.*

Stemp, William (Keene State College) [61] *Second Chair*

Stephenson, Keith (USC Institute of Archaeology and Anthropology), Frankie Snow (South Georgia College) and Karen Smith (Monticello)

[97] *Connectedness and Ceremonialism in Swift Creek Societies of the Interior Georgia Coastal Plain*

Interior Georgia witnessed cultural modifications to the natural landscape for sociopolitical ends where mounds and civic-ceremonial buildings incorporated dispersed populations. At one of these locations, the Hartford site, ritual and competitive feasting demanded material provisioning for surplus redistribution. Zooarchaeological and archaeobotanical remains indicate that labor allocation was ramped-up on a multiseasonal basis in a ceremonial mode of production. Escalating social contradictions inherent in displays of costly signaling transformed the relations of production. Exotic artifacts indicate long-distance exchange and analysis of Swift Creek complicated stamped designs reveals connections between Hartford and contemporaneous ceremonial sites.

Steponaitis, Vincas (UNC-Chapel Hill), Megan Kassabaum (UNC-Chapel Hill) and John O'Hear (University of Mississippi)

[185] *Coles Creek Earthworks and Ritual at the Feltus Mounds in Southwest Mississippi, AD 700-1100*

The Coles Creek period in the Lower Mississippi Valley represents a time (ca. AD 700-1000) when mound-and-plaza arrangements typical of later Mississippian centers first appear in the American South. Three seasons of excavations at the Feltus Mounds (22Je500) have revealed how the mounds and plaza were constructed, as well as other aspects of public ritual, such as feasting and the repeated placement of large posts with dedicatory offerings. Some aspects of this architecture and ritual are precursors to later practices adopted at Cahokia and elsewhere.

[266] *Discussant* **[239]** *Discussant*

Sterling, Kathleen (Binghamton University) [28] *First*

Chair [28] *Second Organizer*

Sterling, Sarah [253] *Discussant*

Sterner, Katherine

[78] *Oneota Lithics: A Functional Analysis of the Crescent Bay Hunt Club Assemblage*

The lithic assemblage from the Crescent Bay Hunt Club site (47Je904), an Oneota habitation site on the shore of Lake Koshkonong in Southeastern Wisconsin, provides valuable insight into 13th-14th century material culture and technology in the Great Lakes. Resource procurement, tool assemblage complexity and diversity, and energetic efficiency are addressed in this study. Low power (10-40x) microscopic use wear analysis addresses issues of tool form and function, including the traditional categories of Madison points, humpback bifaces, and thumbnail scrapers.

Stevenson, Chris [177] *see Ladefoged, Thegn*

Stevenson, Christopher (Richard Bland College)

[112] *Obsidian Hydration Dating by Infrared Photoacoustic Spectroscopy*

Obsidian hydration dating is generally applied through the use of high magnification (500-1000X) optical microscopy to measure the hydration layer found on natural glass artifacts. Unfortunately, optical methods are poorly suited for this application because the birefringent optical image does not reflect the true penetration depth of diffused water. Photoacoustic spectroscopy is an alternate approach that relies upon infrared heating of water molecules in the hydration layer and the thermal response is recorded as an infrared spectrum. Both diffused molecular water and structural water (hydroxyl) are recorded; two key variables in the hydration dating calibration.

Stevenson, Christopher [37] *see Cajigas, Rachel*

Stewart, Caitlin (University of Mississippi), Nicholas Herrmann (Mississippi State University) and Gabriel Wrobel (University of Mississippi)

[203] *Skeletal Remains from Caves Branch Rockshelter: A GIS-approach*

Excavations at Caves Branch Rockshelter have revealed over 100 primary Maya burials of both sexes and all ages spanning the Classic period. Numerous taphonomic factors, including repeated intrusive burials and looting, have created a matrix with highly fragmented and commingled bones, thus complicating estimates of the minimum number of individuals and reconstructions of mortuary ritual. We use a new GIS-approach focusing on identification of overlapping features in this complex context to create an inventory of skeletal elements. This approach increases the accuracy of MNI estimates and thus expands the potential of CBR as a biological and mortuary sample.

Stewart, James (University of South Carolina)

[107] *40MI70: A Multicomponent Archaic and Woodland Site on the Tennessee River*

This paper will summarize the 2009 - 2010 data recovery at 40MI70. Five Archaic and Woodland components were identified and excavated. Ground penetrating radar influenced a research methodology that minimized site

disturbance and targeted specific resources for excavation. Components were identified and interpreted following: archaeobotanical, faunal, soil chemistry, microdebitage and ceramics analysis.

Stewart, R (Temple University), Jeremy Koch (Temple University), Kurt Carr (State Museum of Pennsylvania), Del Beck (American Society for Amateur Archaeology) and Gary Stinchcomb (Baylor University)

[268] *The Paleoindian Occupation at Nesquehoning Creek (36CR142) Carbon County, Pennsylvania*
An overview of stratigraphy, geomorphology, artifact assemblage and preliminary interpretations are presented. The site is situated on a low, late Wisconsin age terrace in the Lehigh River Gorge, Valley and Ridge province. Paleoindian deposits occur to depths of 8.5 feet (2.59m), are associated with an uncalibrated AMS date of 9940±50 RCYBP, and are stratified beneath Archaic, Woodland, and Historic occupations in a package of vertical accretion deposits. Paleoindian artifacts occur in weathered A horizon overlying Late Pleistocene gravels. A Crowfield fluted point base, debitage, channel flakes, and flake tools are part of an assemblage dominated by micro/cryptocrystalline tool stone.

Stewart, R. Michael [174] *see Lattanzi, Gregory D.*

Stich, Kyle (Louisiana State University), Gabriela Bertone (Museo de Historia Natural, Universidad Nacional Mayor de San Marcos), Giancarlo Marcone (University of Pittsburgh), Li Jing Na (Museo de Historia Natural, Universidad Nacional Mayor de San Marcos) and Paula Esposito (Museo de Historia Natural, Universidad Nacional Mayor de San Marcos)

[39] *A paleoethnobotanical analysis of Lote B, a Lima culture site on the central coast of Peru*

Despite decades of research, little has been published regarding plant use by the Lima, an Early Intermediate Period culture from the central coast of Peru. A recent University of Pittsburgh excavation at the site of Lote B provided an opportunity for paleoethnobotanical research on the Lima Culture. This investigation consisted of an analysis of macrobotanical remains coupled with the stereoscopic scanning of soil samples taken from floor and feature contexts. Our presentation will summarize the results of this study and provide an outline of the variation in botanical remains that was observed between sectors of the site.

Stinchcomb, Gary [268] *see Stewart, R Michael*

Stine, Linda (University of North Carolina Greensboro)

[28] *A cultural negotiation: gender, class, preservation law and opportunity*

Gone are the days when women archaeology students are regulated to piecing pots in the basement laboratory. The American upheaval in gender relations in the 1960s-1970s helped expand archaeological student pursuits. It is argued that the National Historic Preservation Act of 1966 as amended and subsequent CRM regulations created burgeoning institutional structures, private and public, which followed government dictates for equal opportunity. Teasing apart sexism from classism is

crucial to understanding if archaeological teaching, research, mentoring and employment opportunities have changed in the last 50 years.

Stiver, Laura [181] see *Brannan, Stefan P.*

Stockton, Trent (Tulane University), T. Kam Manahan (Kent State University) and Traci Ardren (University of Miami)

[58] *Patterns of Variability in Slateware Pottery at Ancient Xuenkal: Implications for Archaeological Interpretation*

Archaeological investigations at the ancient Maya site of Xuenkal, Yucatan, Mexico, seek to uncover how the rapid growth of Chichen Itza during the 9th and 10th centuries A.D. affected existing regional economic and political configurations. Interpretations hinge on assessing chronological, spatial, and social variability in samples of Cehpech and Sotuta slateware pottery recovered from excavated contexts. We report preliminary results of a multivariate exploratory study of macroscopic attribute variability of slateware sherds (n=100) and chemical compositional patterns as revealed by non-destructive portable x-ray fluorescence spectrometry.

Stodder, Ann (Field Museum) and Anna Osterholtz (University of Nevada, Las Vegas)

[94] *Interpreting Sacred Ridge: Behavioral Taphonomy, Quantitative Taphonomy and Regional Context*

The assemblage of commingled processed human remains from Sacred Ridge is the earliest and largest in the Southwest. The early Pueblo I event provokes a range of questions about the nature and purpose of the violence, and the larger history of perimortem violence in the region. Analysis combining quantitative taphonomic characterization of the assemblage, fragment conjoining and provenience control, and behavior oriented reconstruction of body processing affords several dimensions of comparison with Mancos Canyon, Cowboy Wash, and other sites, elucidating unique aspects of the Sacred Ridge assemblage and some constants in the practice of violence across several centuries here.

[72] *First Chair [72] Second Organizer*

Stoessel, Luciana, Gustavo Flensburg (CONICET-INCUIAPA-FACSO-UNICEN), Gustavo Martínez (CONICET-INCUIAPA-FACSO-UNICEN), Alcaráz Ana Paula (CIC-INCUIAPA-FACSO-UNICEN) and Santos Florencia (FACSO-UNICEN)

[273] *Archaeofaunas, oral health, and human stable isotopes: exploring intensification in hunter-gatherers subsistence during the Late Holocene in arid North-eastern Patagonia (Argentina).*

In the arid-semiarid lower basin of the Colorado River (eastern pampean-Patagonian transition, Argentina) subsistence patterns of hunter-gatherers groups underwent a change towards the Final Late Holocene (1000-250 years BP). Archaeofaunal analysis indicates the development of a resource diversification strategy, including terrestrial, marine and freshwater species to diet. A process of economic intensification on some of these resources and also probably on vegetable resources is proposed. In this paper, other lines of evidence such as oral health and human stable isotopes are discussed for the purpose of exploring more deeply

the effects of intensification in subsistence patterns.

Stokes, Robert (Archaeological Consulting Services) and Joanne Tactikos (Archaeological Consulting Services)

[222] *A Protohistoric to Historic Yavapai Persistent Place on the Landscape of Central Arizona: Evidence from the Lake Pleasant Rockshelter Site*

Excavations at a rockshelter site in Lake Pleasant Regional Park revealed sequential occupations beginning with the prehistoric Hohokam and terminating in the 1940s. It was assumed that the protohistoric occupation would be Yavapai, who moved into this area at this time, and the late historic occupation would be Euroamerican. However, analyses of the material culture, especially lithic tools, revealed that the Yavapai were still using the rockshelter into the Late Historic period. The excavations therefore provide not only material cultural and subsistence pattern data for the Yavapai, but demonstrate the power of persistent places on the landscape for indigenous peoples.

Stoll, Marijke (University of Arizona)

[181] *Urbanization and the Transformation of Society in the Mixteca Alta*

Urbanism is a dynamic process indicating a radical change in settlement patterns and social relations. The impetus for urbanism in the Mixteca Alta region of Oaxaca was previously linked to the founding of Monte Alban in the Central Valley area. However, recent arguments have been made that urbanism was more of a direct result of endogenous processes, rather than strictly emanating from outside influences. This paper will examine the phenomenon of urbanism and the transformation in settlement patterns from the Late Cruz to the Early Ramos (Terminal Formative) phases using new evidence from the Coixtlahuaca Valley in northern Oaxaca.

Stone, Andrea (Univ of Wisconsin-Milwaukee)

[152] *Classic Maya Iconography Re-envisioned: the Terminal Classic Cementerio Platforms, Uxmal, Yucatán*

Stone reliefs on four platforms in Uxmal's Cemetery Group are typically seen as a hallmark of Central Mexican influence on Terminal Classic Maya art because of their glaring death symbols, including crossed bones, eyeballs, and skulls. However, closer examination of this imagery reveals unequivocal derivation from Classic Maya precedents. Furthermore, woven bones suggest connections to the old Goddess O, but conceptualized in new ways, paralleling depictions at Chichen Itza. These transformations of Classic Maya iconography may, indeed, have a foreign stimulus. Thus, the Cementerio Platforms offer insights into processes of iconographic retention and innovation characteristic of this period.

Stone, Jane [42] see *Nelson, Shaun R.*

Stone, Jessica (North Carolina State University), Scott Fitzpatrick (North Carolina State University) and Scott Burnett (Eckerd College)

[35] *Paleodiet and nutrition at Grand Bay, Carriacou, West Indies*

Research was conducted to examine paleodiet and health of 15 prehistoric individuals from the island of Carriacou (West Indies) as inferred from stable isotope,

zoarchaeological, and paleobotanical analyses, and frequencies of linear enamel hypoplasia (LEH). It was hypothesized that subsistence would follow a pattern of marine protein and horticultural crop consumption seen throughout the Caribbean and that diverse dietary components would fulfill nutrient requirements resulting in low LEH frequencies. Results indicate that early Carriacouans exploited marine and terrestrial resources. LEH occurred in about 47% of the sample, mostly between ages 2 and 4, suggesting that weaning was a factor.

Stone, Jessica [141] *see Clark, Meagan E.*

Stone, Pamela (Hampshire College)

[105] *Beyond Reproduction – Life Herstories and the Bioarchaeological Women*

Bioarchaeological signatures offer a transcript of life when examined in broader contexts than only through the lens of reproduction. Though challenging, it is crucial that multiple lines of inquiry (skeletal, ethnohistoric, archaeological) are examined and used to guide the discussion of gender, ideology and power, to reveal more about females' activities in community and show that they were not limited by their reproductive roles. The papers in this session, and the research presented here from Ancestral Puebloan populations, utilize data from material and human remains to engender expanded understanding of the roles and responsibilities that women held in the past.

[105] *Second Organizer [105] First Chair*

Stone, Tammy (University of Colorado Denver)

[88] *Diasporas, Migrations, and Ethnic Enclaves in the American Southwest*

A series of Kayenta Anasazi ethnic enclaves have been identified in southern Arizona and New Mexico dating between A.D. 1200 and 1400. The ethnographic concept of a diaspora has been invoked recently to explain both the appearance of these enclaves and the nature of the interaction between the migrants and host populations. This paper exams the theoretical literature on diasporas to better understand the relationship of the enclaves to each other, to their motherland, and to their host communities. Data from enclaves at Point of Pines Pueblo, Reeve Ruin, Goat Hill and the Davis Site are used.

[88] *First Chair*

Stoner, Edward (Western Cultural Resource Management, Inc.), Geoffrey Cunnar (Western Cultural Resource Management, Inc. (WCRM)) and Luan Fengshi (Shandong University)

[159] *The Symbolic Importance of Color Choices in Stone Raw Material*

There are many factors that a prehistoric craftsperson might have considered when selecting raw material for the construction of stone tools including raw material quality, package size, availability, and source location. In this paper, we consider the importance of color in toolstone selection. We examine evidence for the importance of green in Neolithic China (ca. 7,250-3,500 BP) and the importance of black in the selection of toolstone for the manufacture of projectile points during the Paleoarchaic Period (ca. 11,500-7,500 BP) in the Great Basin, United States. Potential cross-cultural

relationships between color, status, ritual, and gender are explored.

Stoner, Wesley (University of Missouri Research Reactor)

[71] *The Cipactli Cult Of Totocapan: Strategies Of Politico-Ritual Control In The Classic Period Tuxtla Mountains, Southern Veracruz, Mexico*

The Totocapan regime controlled settlements within the Tepango Valley during the Classic period. This poster examines one strategy of control employed by the Totocapan regime. Early excavations in an altar at Totocapan recovered a pair of bowls engraved with stylized images of a saurian figure, which probably portrays the mythical creature, cipactli. Recent survey of the Tepango Valley, found these engraved images on a highly standardized ceramic type distributed throughout the Valley. This poster explores the role of cipactli in local religion, and the ways in which Totocapan regime officials used these beliefs to subjugate the valley.

Storey, Rebecca (University of Houston)

[105] *Reproductive versus Post-Reproductive-Age Women Among the Formative Maya*

The Formative Period (c. 100 BCE to CE 250) is when many of the famous traits of Maya civilization were developed, and the period is one of increasing stratification among individuals, as evidenced by mortuary treatment as well as the built environment. These Maya are hypothesized to be a patrilineal society, so it is possible that the mortuary treatment of women who married into lineages would be impoverished compared to males. Actually, the main difference appears to be between reproductive age and post-reproductive age women, as samples from Copan, Honduras, and K'axob, Belize, indicate.

Storey, Rebecca [102] *see Widmer, Randolph J.*

Storlie, Curtis [144] *see O'Brien, Matthew J.*

Storozum, Michael (Washington University in Saint Louis) and T.R. Kidder (Washington University in Saint Louis)

[6] *Micromorphological Features of Ancient Agriculture in China*

Although soil micromorphologists have identified diagnostic features of ancient fields in European contexts, few studies exist concerning farming in ancient China. Recent excavations at the site of Sanyangzhuang, Henan Province, China, unearthed a sequence of buried fields, dating to the Neolithic, Warring States, and Western Han periods. This paper presents the record at Sanyangzhuang as a longitudinal case-study on changes in early Chinese agricultural practice and technology. Using micromorphological techniques as one part of a broader geoarchaeological study, these data enrich our current understanding of field management, and more broadly, landscape modification, in ancient China.

Stout-Evans, Rachel [50] *see Mehta, Jayur M.*

Stoutzenberger, Halle [227] *see Patterson, James W.*

Stovel, Emily (IIAM-UCN and Ripon College) and Christina Torres-Rouff (IIAM-UCN/Colorado College)

[29] *Exploring the Expression of People vs. Pots in the Late Intermediate Period (c. AD 1000- 1500) Chilean Atacama Desert*

Late Intermediate Period San Pedro de Atacama communities shared household ceramic styles with their Salado River Valley neighbors. However, cranial non-metric traits demonstrate clear biological differences between contemporary Salado River and San Pedro populations. In the context of LIP burial practices, which held a special role in the expression of identity, this biological divergence and ceramic convergence suggests that pottery differed in social meaning and in its function in identity formation from the intimate practice of shaping infant heads. We argue here that the relationship between biological and cultural identities was complex, frequently manipulated, and expressed using specific material vectors.

Straight, Kirk (Penn State)

[102] *The Production, Exchange, and Consumption of Pottery Vessels during the Classic Period at Tikal, Petén, Guatemala*

The results from a distributional study of Classic Period serving vessels recovered from a 2005-2006 testing program in peripheral Tikal are reported. Ceramic samples derive from settlement within a 250 m corridor running the 12.8 km length of the northern earthwork as well as settlement associated with the minor center of Ramonal/Chalpate. A representative sample of 162 ceramic sherds and 8 figurine fragments were subjected to Instrumental Neutron Activation Analysis (INAA) in order to formulate compositional reference groups reflecting different ceramic production traditions. Coding of metric variables expressed as diversity measures permit evaluation of the relative number of production units.

Straus, Lawrence Guy [202] see *Fontes, Lisa M.*

Strauss, André (MPI-EVA), Pedro Da-Gloria (The Ohio State University) and Walter Neves (São Paulo University)

[158] *Beyond Lund's dilemma: new perspectives from Lagoa Santa region, central Brazil*

By the time Hrdlicka's "Early Man in South America" was published, Lagoa Santa was already well-known among scholars. From the beginning, their main interest in the region was centered on the evidence suggesting man's "great antiquity" in the New World. For more than a century, two topics have dominated the discussion: the co-existence of man and mega-fauna, and the non-Amerindian cranial morphology of Lagoa Santa's man. Today, however, these issues have been exhausted. The study of Lagoa Santa's archaeological record has shifted towards mobility patterns, life style, and mortuary rituals, unveiling a complex scenario for the occupation of the continent.

[158] *Second Chair [158] Second Organizer*

Strauss, André [158] see *Hubbe, Mark*

Strawhacker, Colleen (Arizona State University)

[25] *Response of O'odham Irrigated Agriculture to Colonial Forces on the Middle Gila River, Southern Arizona*

Responding to new economic forces introduced by

Spanish missionaries and the United States military, O'odham farmers on the middle Gila River adapted their agricultural system throughout the historic period (AD 1694 – 1950), shifting to a barter and cash based economy. This paper will explore how the nature of agriculture changes during the historic period and how these changes affected the quality of agricultural soil. By comparing prehistoric irrigated agricultural fields (primarily subsistence based) to historic irrigated agricultural fields (primarily barter and cash based), the effects of these new colonial forces on O'odham agriculture and soil quality will be determined.

Strawinska, Urszula [128] see *Brown, Clifford T.*

Strezewski, Michael

[239] *Mississippian Origins in the Middle Ohio River Valley: A View from the Kuester Site*

The Late Woodland to Mississippian transition in southwestern Indiana is not well understood. Recent analysis of the Kuester site (12-Vg-71) excavations, which were conducted in the 1970s, sheds some light on this matter. Late Prehistoric features, including a Mississippian-style wall-trench structure, have been dated to A.D. 1100. Ceramics within the structure, however, are predominantly Terminal Late Woodland Yankeetown varieties, with Mississippian pottery found only in small quantities. The Kuester site may represent a brief period of overlap between the latest Yankeetown peoples in southwestern Indiana and the earliest Mississippian residents, who likely moved to southwestern Indiana from elsewhere.

Striker, Michael (Gray & Pape)

[239] *The Cosmological and Social Significance of Palisades*

Palisades are more than simply defensive structures. In addition to controlling access to a village or a temple complex, palisades are a meaningful component of the village as microcosm, constitute a significant public works project that can help forge collective identity, and are a significant part in the contexture of the social life of the village.

Striker, Sarah (Arizona State University)

[185] *Artifacts and Space in Iroquoian Longhouses*

While the architectural features of Iroquoian longhouses are relatively well understood, the spatial patterning of artifacts within excavated longhouses are often overlooked in comparative research. This study examines the spatial distribution of common artifact classes such as pottery, stone and bone tools, and pipes within several longhouses representing three centuries and several regional Iroquoian traditions. Quantitative analyses characterize these distributions, including a novel method to quantify the degree to which objects are clustered on the periphery of a given space. These methods provide a new perspective on regional and temporal differences in the use of space within Iroquoian longhouses.

Stuart, David (The University of Texas at Austin)

[118] *Sorcery, Disease and the Dark Side of Ancient Maya Political Ideology*

The fantastical beings portrayed on many Classic Maya ceramics are known collectively as way, a term

deciphered by Stephen Houston, Nikolai Grube and myself in 1989. As more recent work has shown, many if not most of them now prove to be representations of animated diseases and demonic "spooks" familiar from ethnographic and ethnohistorical literature. Here I reexamine the way concept, emphasizing how sorcery and witchcraft were central themes of Maya ceramic decoration. Contextualizing such imagery shows the importance of sorcery in political machinations among competing kingdoms, and in the general expression of Classic Maya royal ideology.

[269] *Discussant*

Stuart, George (Boundary End Archaeology Research Center)

[4] *Our Debt to David Kelley, My Friend and Colleague*
My relationship with David Humiston Kelley began in 1966 and endured for the next 55 years. During those years, and beginning with a key meeting in Mexico City, I became continually aware, not only of Dave's brilliance in the broad field of Americanist studies, but also of the unique scope of his intellect and his incredible innovation within the bounds of rigorous scholarship. Here I will review his influence on me and on the fields of our shared endeavors in the study of Mesoamerican culture, with particular emphasis on its epigraphy, iconography, and astronomy.

Stump Sr, Vidal [250] *see O'Boyle, Robert C.*

Stup, Jeffrey (University of South Dakota)

[65] *Practicing Archaeology in Romania: Adapting to different methods*

This presentation and the research leading to it address the importance of comparing the methods developed by American archaeologists those used by Romanian Archaeologists. Participating in an excavation of the Piatra Detunata site in Racos, Romania, led by a Romanian archaeologist, was a change in methodology for an American student in archaeology. The Romanian methodology is more contextual while North American Archaeology tends to be a standardized and repetitive process. Although there were numerous transferable skills, the archaeological process in Romania proved to be a learning experience for methodological adaptation.

Stvan, Jeffrey (University of Chicago)

[65] *A Storied History: Transformation in Museum Narratives*

Museum exhibits have long constituted an important medium for the construction and public dissemination of archaeologically-informed narratives. Necessarily contingent, these narratives are also situated in specific social, political, and economic milieus. Thus, over time, these narratives are increasingly subject to transformational pressures, the results ranging from minor edits to outright replacement. Such transformations often involve a significant rethinking of didactic strategies, as well. Referencing a selection of exhibits focused on the pre-Columbian Americas, this paper examines the nature of these revisions and considers what a more thorough documentation of these institutional narrative/didactic shifts might have to offer our field.

Suarez, Rafael (Depto. Arqueología, Universidad de

la República.)

[231] *Blade Technology in Southeast of South America by 10,930-10,880 yr BP: Evidence for Pay Paso 1 site, Northwest Uruguay*

The research at multicomponent Pay Paso 1 Paleoindian site allowed the generation of a solid chronological base with 32 AMS dates and a stratigraphic sequence of three successive human settlements in the Northwest of Uruguay (ca. 10,930 – 8,500 yr. BP). The site is remarkable because it yielded evidence of a blade technology for 10,930 – 10,880 14C years BP, with blades and depleted blade core. The paper describes and discusses the blade technology, the variability in the early projectile points and the lithic assemblage of early hunter-gatherers of Uruguay in the context of the peopling of America.

Suarez, Raphael [225] *see Bradley, Bruce A.*

Sugandhi, Namita [211] *see Raczek, Teresa P.*

Sugiyama, Nawa (Harvard University), Saburo Sugiyama (Aichi Prefectural University & Arizona State University), Enrique Pérez Cortes (Instituto Nacional de Antropología e Historia) and Alejandro Sarabia (Instituto Nacional de Antropología e Historia)

[73] *Beginning of Teotihuacan State Ideology Reconstructed from the Earliest Offerings/Burials in the Sun Pyramid*

Excavations inside the Sun Pyramid in 2009-11 discovered 2 substructures, 4 burials, and 2 offering complexes corresponding to the Tzacualli or earlier periods. We particularly describe the earliest offerings found to date inside the monument and discuss the ritual context that integrated greenstone, obsidian, slate, pyrite, shell, ceramic, organic materials and animals sacrificed and buried together near the center of the pyramid. Socio-political implications are interpreted with architectural sequence and the possible royal tomb located in the ancient tunnel found in 1971. The data demonstrate innovative ideology and powerful rulership competitive to other emerging complex societies in the Mexican Highlands.

Sugiyama, Saburo (Aichi Prefectural U./Arizona State U.)

[73] *How did Teotihuacan Rulers Set Religious Order to Dominate Mexican Highland Communities?*

Early architectural sequence associated ceramic analysis and C14 data from the Moon Pyramid, the Sun Pyramid, and Ciudadela are analyzed to elucidate cultural changes and continuities in Teotihuacan socio-political contexts. Teotihuacan's grand scale city-layout is also discussed in terms of standardized orientation and spatial distribution as a result of the Teotihuacan measurement unit study. Worldview uniquely and precisely materialized by the state can be understood as a successive path to power among the increasingly varied Highland centers during the Terminal Formative periods. The paper stresses ideology, or human's cognitive capacities, as an interlocked key factor that lead to social complexities.

[73] *Second Organizer*

Sugiyama, Saburo [73] *see Sugiyama, Nawa*

Sullivan, Elaine (UCLA)

[129] *3D Saqqara: Exploring landscape and memory at the ancient Egyptian necropolis*
3D Saqqara integrates GIS and 3D modeling to create a truly 4-dimensional exploration of the important necropolis of Saqqara, Egypt. By simulating the original built and natural landscape of the site, the project investigates the visual environment that shaped (and was in turn shaped by) the experience and choices of ancient peoples. Through the recreation of lines of sight between important cult places, 3D Saqqara specifically traces how decisions over time at the cemetery and surrounding sites transformed the meaning of these spaces and altered ancient peoples' perception of the ritual landscape.

Sullivan, John [139] see *Martin, Paul S.*

**Sullivan, Lynne (University of Tennessee),
Donna McCarthy (University of Tennessee) and
David Echeverry (University of Tennessee)**

[197] *Reconfiguring the Chickamauga Basin*
New Deal-era excavations for TVA's Chickamauga Reservoir literally laid the groundwork for subsequent archaeology in the Upper Tennessee Valley. Chickamauga sites like Hiwassee Island and Dallas became type sites for archaeological phases and the basis for comparisons with sites in other reservoirs. The well-documented collections from the Chickamauga sites continue to provide data for interpretations of Mississippian Period cultures. Reworked site chronologies developed with modern dating methods are enabling significant new insights to regional dynamics during this timeframe, including interactions with adjacent regions. Both archaeological and bioarchaeological data contribute to new ideas about social, political, and biological relationships.

[164] *Discussant* **[48]** *Discussant*

Sullivan, Norman C. [139] see *Rodell, Roland L.*

Sullivan, Timothy (University of Pittsburgh)

[19] *Shifting Strategies of Political Authority in the Middle Formative through Terminal Formative Polity of Chiapa de Corzo, Chiapas, Mexico.*

The performance of large scale ceremonies appears to have been a central strategy employed by the Middle Formative founders of Chiapa de Corzo. Towards the Terminal Formative, rulers at the site constructed a more restricted ceremonial setting, likely restricted to elite participants. Continued use of the older ceremonial zone suggests that earlier more inclusive large-scale rituals persisted throughout the occupation of the site. Through the analysis of changes in architecture at Chiapa de Corzo, and of evidence from the hinterland, this paper addresses the development of several political strategies through the evolution of this early Mesoamerican capital.

Summers, Garry [261] see *Seeman, Mark F.*

Sun, Guoping [60] see *Lauer, Adam*

Sun, Lei [60] see *Pechenkina, Ekaterina*

Sundman, Elin [176] see *Warmlander, Sebastian*

Sunseri, Jun (University of California, Berkeley)

[25] *Frontline Tactics and Homescape Strategies in Biomechanical Perspective: Equine travel along the raiding frontier of Colonial Northern New Mexico*
Archaeologists of the colonial period investigate the lived experiences of communities who inhabited landscapes alive with commerce, communication, and violence. Traditional GIS studies of settlement patterning and least cost pathways are only now coming into their own as analytical tools to model human pedestrian movement accurately. However, equestrian mobility in the colonial era was an even more important vector for slave raiding, communication, transport, and trade. An experimental approach for interpolating equestrian/topographical dynamics for integration in GIS analyses of archaeological landscapes is proposed.

Supak, Karen

[46] *Where Beginning Meets End: Local Variation in Chert Procurement at Noah's Springs Cave, Fort Campbell, Kentucky.*

A decade of research has demonstrated a distinct pattern of casual, localized prehistoric chert procurement and processing at Fort Campbell, particularly when compared with regional patterns of toolstone acquisition and distribution. Noah's Springs Cave (15CH57), a prehistoric quarry, habitation, and burial site utilized from the Early Archaic through Mississippian periods, offers a rare and noteworthy exception to this localized pattern. This paper examines potential motivations for the differences documented at 15CH57 and discusses how they relate to contemporaneous toolstone procurement at Fort Campbell and throughout the southeastern United States.

[147] *Discussant*

Supernant, Kisha (University of Alberta)

[36] *Tracing Spaces of Ethnogenesis: Exploring the rise of Métis identity in Canada, 1750-1900*

The ability of archaeologists to query the spatiality of social identities is becoming increasingly sophisticated with the advent of advanced mapping and GIS techniques in archaeology. Combining nuanced applications of social theory with appropriate spatial methods is leading archaeologists to deeper understandings of how social boundaries and identities are constituted by social action. Much work, however, remains to be done to understand the factors that contribute to how new identities arise in past societies. In this paper, I explore the possibility of applying spatial techniques to trace the rise of Métis identity in Canada via archaeological and historical records.

Surface-Evans, Sarah (Central Michigan University)

[16] *Climate Change and Archaic Hunter-Gatherer Adaptations in the Ohio Valley*

Many the adaptive strategies observed among Middle Archaic hunter-gatherers in the American mid-continent, such as increased sedentism and subsistence intensification, appear to be interwoven with mid-Holocene hypsithermal climate change. While paleoecological data from the upper Midwest and Southeast support this hypothesis, local-level data necessary to evaluate the extent of climate change are lacking for other regions. Pollen core data collected from an Archaic Shell Midden in the central Ohio valley

provides a glimpse of mid-Holocene botanical resource availability. Adaptive decisions made by Middle Archaic peoples are discussed vis-à-vis this new paleoecological data.

[16] *Second Chair*

SurrIDGE, Evan [243] *see Mullins, Patrick James*

Sutter, Richard (Indiana University-Purdue University Fort Wayne)

[5] *Class-Structured Gene Flow During the Moche Occupation of San José de Moro (AD 500 – 850), Jequetepeque Valley, Perú*

The mortuary site San José de Moro, located within the Jequetepeque Valley, Perú, was used throughout the Moche (AD 500 – 850) and Lambayeque (AD 950 – 1200) periods. The ability to infer class distinctions based upon mortuary data for more than 900 individuals provides a unique opportunity to explore class-structured gene flow at the San José de Moro, where, over time, there is an increased presence of exotic grave offerings in elite tombs. This paper explores class-structured gene flow using R-matrix analyses of phenetic tooth trait frequencies during the Moche occupation of San José de Moro.

Sutton, Elizabeth (University of California, Santa Barbara)

[126] *Considering Nimatlala: Revisiting the Organization of Historic Period Chumash Settlement Systems*

All Historic period Chumash villages are thought to have been occupied by sedentary populations, with the majority of villages positioned along the coastline of the Santa Barbara mainland and Northern Channel Islands. No significant occupation was believed to have existed in the interior regions of the Islands. However, the village of Nimatlala is located in the very center of Santa Cruz Island in the Central Valley. The discovery of this Historic period village and the results of excavations there suggest that the Chumash settlement system during the Contact and Historic periods is more complex than previously believed.

Suvrathan, Uthara (University of Michigan) [82]
Discussant

Swarts, Kelly (Cornell University), Feiyan Yan (Cornell University) and Edward Buckler (Cornell University)

[35] *A genetic comparison of 38 modern maize landraces from the southwestern US and northwestern Mexico*

Modern maize landraces, or native varieties, derive from the complex intersection of plant genetics, environment, and the interactions and cultural preferences of the people or peoples who developed and managed these populations. This study presents preliminary results from high-throughput DNA sequencing of 38 maize landraces from publicly curated collections of southwestern US and northern Mexican named accessions. Equifinality has historically confounded ethnobotanical inquiries into the nature and timing of the spread of maize agriculture throughout the Americas. Molecular studies provide a genetic baseline for which to understand environmentally and culturally-informed selection and, by proxy, past human interactions.

Swenson, Edward (University of Toronto)

[262] *Theorizing the Particular: Engaging Andean Archaeology with Theories of Place and Landscape*
Theory-building in archaeology relies on general concepts, whether ritual, social memory, practice, etc. However, such constructs are of interpretive value only when empirically contextualized in space and time. In fact, place-sensitive heuristics are better suited to illuminate the historical particulars of power relations than taken for granted typological models, including most notably chiefdom or state. In other words, analyzing social dynamics as constituted in specific landscapes intends to historicize past societies in a manner that abstract institutional generalizations fail to accomplish. By investigating diverse constructions of social space, Andean archaeologists are in a position to make important theoretical contributions.

Swenson, Fern (State Historical Society of North Dakota)

[186] *Pottery Function at Extended Middle Missouri Sites in North Dakota*

Vessels from Middle Missouri sites in North Dakota have been studied over the last several decades by numerous researchers utilizing a variety of methods for establishing taxonomies reflective of temporal and spatial variations. More detailed attribute analysis studies involving multivariate statistical techniques have more recently been undertaken in order to address stylistic and technological variation. Building on these studies, vessels from house contexts are examined to explore functional variation as indicated by vessel size, shape, residues, and use-alteration variables from multiple Extended Middle Missouri sites.

Swihart, George (University of Memphis), Emily Hassler (University of Memphis), David Dye (University of Memphis) and Ying-Sing Li (University of Memphis)

[127] *Infrared Reflectance Microspectroscopy of Chert: A Non-destructive Analysis Method for Archaeological Artifacts with Potential for Sourcing*

We explore the potential of non-destructive Infrared reflectance microspectroscopy (IRRMS) for the characterization of chert samples from 10 different geological outcrops in North America with emphasis on the Midcontinent. The study documents the level of spectral variation introduced by the instrument, natural intra-sample variation at the hand sample scale, and variation of minor and trace minerals in chert that may provide sufficient chemical characterization for chert sourcing. The preliminary results of IRRMS analysis are promising. We suggest that a concerted effort to compile an IR database for the Midcontinent will allow for better delineation of indigenous chert exchange patterns.

Swogger, John (Freelance Archaeological Illustrator) and Quetta Patricia Kaye (UCL)

[24] *Showing What We See: Re-presenting archaeology in the Caribbean*

Presenting archaeology to communities with limited engagement with the past presents challenges – particularly to small archaeological projects. Traditional platforms can be overlain by existing cultural preconceptions and prejudices. The paper will survey six seasons of public engagement by the Carriacou

Archaeological Field Project, and demonstrate simple visualisation techniques which potentially enhance communication with a wide variety of audiences by use of non-traditional educational media, e.g. serialised comic strip, to raise awareness of archaeology in the Caribbean. This paper assesses the role of re-presenting archaeology in the context of the project's commitment to a long-term strategy of public engagement.

Szpak, Paul (University of Western Ontario), Trevor Orchard (University of Toronto) and Iain McKechnie (University of British Columbia)

[207] *Historical Ecology of Late Holocene Sea Otters (Enhydra lutris) from Northern British Columbia: Isotopic and Zooarchaeological Perspectives*

We examined the isotopic composition of sea otter bone collagen from ten late Holocene archaeological sites in northern British Columbia, Canada. The isotopic data suggest a diet composed primarily of benthic invertebrates, with a very low reliance on epibenthic fish, as well as an unexpected lack of dietary variability in British Columbia sea otters during the late Holocene, suggesting a lack of individual dietary specialization. This focus on a small number of low trophic level prey, and lack of individual dietary specialization may reflect top-down impacts on sea otter populations through hunting by aboriginal peoples.

Szumik, Claudia [101] see Scheinsohn, Vivian G.

Szumilewicz, Amy (Southern Illinois University Carbondale)

[215] *Size Matters: Functional and Symbolic uses of Miniature Vessels in Middle Sicán, Peru.*

Finely made, miniature ceramic vessels occur consistently yet sporadically in many Middle Sicán burials and offering caches. This study focuses on 3 clusters, approximately 15 anthropomorphic vessels each, from 3 distinct contexts in the West Cemetery at Huaca Loro on the North Coast of Peru. Systematic analysis of formal qualities, size and comparison to larger "twin" vessels provides insights towards function of miniatures in general, while composition in situ reveals deliberate placement and patterning of a limited number of representational human and animal types. Discussion offers possible symbolic uses of miniatures in funerary contexts of the Sicán culture.

Szuter, Christine (Arizona State University)

[120] *Reading, Technology, and Research in the Digital World*

The digital revolution has been described as a series of disruptive technologies. At the core of this cultural transformation is how scholars read, research, and publish scholarly works for the academy and the public. An understanding of the history and development of new technologies in reading, research, and publishing through the lens of behavioral archaeology offers insights into the future world of scholarly communication within and beyond the academy.

[149] *Discussant*

Szymanski, Ryan (Washington State University) and Craig Morris (USDA ARS, Western Wheat Quality Laboratory, Washington State University)

[64] *Imaging of Carbonized Wheat Endosperm Using Field Emission Scanning Electron Microscopy: Archaeological Applications*

The ability to distinguish between wheat species after carbonization is critical to understanding the economic, technological and environmental contexts from which archaeological grains are derived. In an experimental study, the carbonized endosperm of wheat species bearing hard, very hard and soft textural phenotypes were analyzed using field emission scanning electron microscopy (FESEM). The internal endosperm structure and fracture pattern of each textural type is characterized in an effort to identify observable patterns usable in the identification of carbonized wheat grains at the species level. Archaeological applications and avenues for further research are proposed.

Tache, Karine (University of York)

[164] *Delving into Old Collections and Scratching the Surface of Early Pottery Uses in Northeastern North America*

Archaeological remains accumulated over the years are a valuable source of information, but collections research also entails its share of difficulties. This paper discusses the contributions and limitations of using old collections for a research program focusing on the initial uses of pottery in Northeastern North America. Potsherds housed in research institutions across Eastern Canada and the United States are sampled and analysed using state-of-the-art methods in residue analysis. Such a project exemplifies how revisiting curated materials can produce new knowledge when new analytical techniques are available, in this case greatly enhancing our understanding of early pottery-using communities.

Tacon, Paul (Griffith University), Ronald Lamilami (Kakadu Health Services), and Sally K. May (Australian National University)

[194] *The contemporary significance of Djulirri and related Wellington Range sites for the people of northwest Arnhem Land, Australia.*

Since 2008 we have been recording the rock art of the Namunidjbuk clan estate in the Wellington Range of northwest Arnhem Land, Australia with a large multi-disciplinary and multicultural team. The art dates from about 15,000 years to 50 years ago but all of it is important for contemporary Aboriginal people of the region. For the Lamilami family these places are of local and world significance, likened to history books and libraries. Thus we have also made films so that oral history can be recorded for posterity, implemented a new database management system and initiated a 3D recording program.

Tactikos, Joanne [222] see Stokes, Robert J.

Tafilica, Zamir [119] see Deskaj, Sylvia

Tagliacozzo, Antonio [176] see Mannino, Marcello A.

Taimagambetov, Zhaken [38] see Horton, Katharine

Tamberino, Anthony [70] see Nagy, Andras

Tani, Masakazu (Kyushu University)