

ABSTRACTS OF INDIVIDUAL PRESENTATIONS

Abbott, David (Arizona State University) and Katherine Spielmann (Arizona State Univ.)

[100] *Alliance and Landscape on Perry Mesa, Central Arizona*
Compelling evidence for endemic warfare has been documented in many areas of the Southwest. Among them is the Verde Confederacy, described as a highly coordinated alliance that encompassed much of central Arizona. In the late 1200s, pueblos were built above the sheer cliffs of Perry Mesa and overlooking access routes onto the mesa top. Was this migration a strategic deployment to create an integrated "castle defense" atop the mesa and bolster the western flank of the confederacy? Or did climatic change attract migrants to a landscape with improved agricultural capacity? Multiple lines of evidence are mustered to evaluate these ideas.

[100] *First Organizer*; [100] *First Chair*

Abrams, Elliot [30] *see Weaver, Sarah A.*; [241] *see Freter-Abrams, AnnCorinne*

Abramson, Corey [181] *see Modzelewski, Darren*

Acuna, Mary Jane (Washington University in St. Louis), Carlos Chiriboga (Yale University), Marcello Canuto (Tulane University) and Tomas Barrientos (Universidad del Valle)

[54] *Outlier, Port of Trade, or What? New Preclassic evidence from El Achiotal in Western Peten, Guatemala*

Little is known about the Preclassic in the western Maya Peten lowlands. Recent research at the site of El Achiotal begins to shed light on this important time period, when early Maya states were emerging. Unlike many Preclassic sites in the central Peten lowlands, El Achiotal does not fit within the pattern. Its distinct features and its location suggest the center played a significant role with other regions to the west. Its individuality also raises questions about the archaeological understanding of the central Peten lowland Preclassic Maya.

Adair, Mary (University of Kansas), Donna C. Roper (Kansas State University) and Jack L. Hofman (University of Kansas)

[72] *Pawnee Life and Technology at 1800: A Perspective from the Kansas Monument site, 14RP1*

The interrelated systems of material culture, technology, economy, group interactions, gender roles and status changes are variously expressed in the archaeological record of the Pawnee during the contact and fur trade period. Many traditions apparently persisted, perhaps in modified form, through this period of change, others may have been greatly modified or lost completely. We address the potential relationships between technological changes and other aspects of Pawnee life using material culture from the Kansas Monument site (14RP1) to explore the implications for changes in value systems, status differentiation, gender roles, social organization, and intertribal relationships.

Adam, Jagich [184] *see Kindler, Lutz*

Adams, Christopher D. [42] *see Big Owl-McArdle, Germaine F.*

Adams, E. (University of Arizona)

[128] *Termination Ritual and Migration at Chevelon Pueblo, Arizona*

This paper explores the material patterns of structure and village abandonment of the ancient Hopi village, Chevelon Pueblo, located on the Little Colorado River in northeastern Arizona. Excavation of 8% of the structures of the 500-room village revealed repeated and extensive practices of structural burning and object placement related to abandonment of individual structures and of the village as a whole. These patterns are discussed in terms of individual, household, and corporate ritual practices. It is argued that these practices are part of lengthy Pueblo tradition related to closure or termination practices associated with long distance migration.

[110] *Discussant*

Adams, Jenny (Desert Archaeology, Inc.)

[40] *Editing Kiva: 75 years of Past Participles and Future Tense*

Some of the biggest names in southwestern archaeology began their careers as KIVA editors. In the early days of KIVA, most editors were graduate students in the Anthropology Department at the University of Arizona. Since 1935, the size, complexity, and stature of KIVA has grown, as have the responsibilities of the Editor. It now requires several people to shepherd an issue through, from article acquisition to final production. This poster outlines the progression of editors with commentaries from some about their tenure, the issues-of-their day, and their vision for the journal.

[216] *Discussant*

Adams, Kenneth [224] *see Goebel, Ted*

Adelsberger, Katherine (Knox College), Benjamin W. Porter (University of California, Berkeley), Bruce Routledge (University of Liverpool), and Danielle S. Fatkin (Knox College)

[259] *Geoarchaeology at Dhiban: Research Potentials of a Multiperiod Site in Central Jordan*

The multiperiod site of Dhiban, west-central Jordan, is situated on the semi-arid Dhiban Plateau. Remains from the Iron Age, Classical, and Islamic periods indicate prolonged habitation despite environmental challenges due to limited water availability as well as probable environmental degradation, as indicated by evidence of slope erosion and stabilization measures. Cisterns and a small wadi system provided the only water sources throughout Dhiban's occupation, making agriculture a challenging prospect and water-catchment a necessity. Geoarchaeological approaches to understanding the influence of these environmental stresses on populations at Dhiban provide the most promising avenues of investigation into human-environment interactions in this region.

Adelsberger, Katherine [92] *see Fatkin, Danielle S.*

Adkins, Larry (Cerritos College, Norwalk, California) and Robert A. Benfer (University of Missouri)

[89] *Lunar Standstill Phenomena at the Pre-ceramic Buena Vista Site in Perú*

We have previously reported lunar standstill alignments from the site of Buena Vista, Perú. Two principle observing centers in the complex are aligned with horizon markers, which identify the onset of the major southern standstill seasons. Here new data show there is an alignment from the temple entryway stairs to the highest nearby mountain peak (Apu) which also correlates well with the extreme limit of the major standstill azimuth. The results are consistent with both a flat horizon moonrise and the "visible" moonrise over a ridge line which blocks off approximately 26° of the eastern sky.

Adler, Michael (Southern Methodist University)

[128] *You're Fired: Abandonment Signatures in Ancestral Pueblo Village Contexts*

This paper reviews the diversity of abandonment signatures from a northern Rio Grande pueblo, Pot Creek Pueblo, with a focus on destructive burning. Archaeological models of site abandonment tend to particularize strategies of site occupants, but we can't lose sight of forces outside the control of those occupants. This paper expands considerations of prehistoric practice to include physical parameters modeling cultural practices and natural forces. Evidence at Pot Creek Pueblo supports a relatively brief, possibly violent set of "burning events" involving domestic and ritual architecture associated with the demise of occupation, followed by a period of scavenging and artifact recycling.

Adovasio, James (Mercyhurst Archaeological Institute)

[86] *Forensic Sedimentology: Past, Present, and Promise*

During the 1970s, high-resolution analytical and descriptive protocols were developed for the characterization and description of microstrata

at Meadowcroft Rockshelter, Washington County, Pennsylvania. Beginning in the 1980s, these same protocols—collectively subsumed under the rubric forensic sedimentology—were applied in a succession of successful ARPA prosecutions. The ability to essentially “fingerprint” sediments was a critical element in all of the cases, which included both open and closed archaeological loci. Highlights of past cases are presented and current descriptive/analytical methodologies are discussed. New developments in instrumentation are also detailed in terms of their applicability to future cases.

[90] *see Illingworth, Jeff*

Aguero Reyes, Adriana (Independent)

[260] *Stone or Clay?: The Significance of Power Elements in the Olmec Ballgame Attire Iconography*

The ballgame is one of the most important ritual events in ancient Mesoamerica. This paper discusses the sociopolitical importance of ballgame in Olmec society. We will review the iconographic elements that identify ballplayer attire and analyze their context to interpret the ritual. In Classic period Mesoamerica, ballplayers are considered to have been high ranking individuals, but during the Formative, ballplayers were also represented in clay figurines, a medium generally related to the domestic context in Mesoamerican archaeology. Depending on the medium and the context, we can interpret the sociopolitical importance of ballgame in different, contrasting ways.

Aguilar, Ana (Ecodesarrollo Papagayo S.A.) and Elisa Fernández León (Universidad de Costa Rica)

[191] *Questioning the Historical Sources from a Linguistic and Archaeological Perspective in Lower Central America*

In 16th century Pacific Nicaragua, languages from the Mesoamerican and Isthmo-Columbian linguistic areas were spoken. We believe the stories regarding migration have a strong historical basis; however, there hasn't been an agreement among the archaeologists regarding the fact that these historical descriptions reflect the actual reality of the archaeological societies or if what Kirchhoff once suggested about Pacific Nicaragua being a part of Mesoamerica is true. Here we conduct a conceptual exercise, using already documented cases from Northeastern Costa Rica and Pacific Nicaragua, to present an interpretative model of how this process could have taken place.

[191] *First Chair*

Aguirre Molina, Alejandra [64] *see* López Luján, Leonardo

Ahler, Steven (University of Kentucky)

[146] *Settlement Pattern Correlations in Dalton and Early Archaic Period Site Use in Southwestern Illinois*

Initial settlement pattern analyses conducted near Modoc Rock Shelter in southwestern Illinois showed strong spatial correlation of Dalton and Early Archaic components. An expanded site sample was analyzed using finer temporal ranges to determine if Dalton components correlated better with early or late Early Archaic period segments. Assuming that environmental changes provide the impetus for settlement pattern shifts, the correlations provide information about the timing of changes in resource distributions and use of the Early Archaic landscape. A shift in settlement locations to valley margins that characterizes the Middle Archaic period may have started in the late Early Archaic.

[146] *Second Chair* [146] *Second Organizer*; [146] *see Koldehoff, Brad*

Ahlstrom, Richard [248] *see* Roberts, Heidi

Ahrens, Corrie (Colorado State University), Christopher Fisher (Colorado State University), and LORE-LPB Team

[135] *Thresholds and Tipping Points: The Origin of the Late Postclassic Purépecha (Tarascan) Empire*

The Origin of the Purépecha (Tarascan) State has been a long-standing archaeological question. Here I present basic questions, methodologies, and new directions for the Legacies of Resilience:

The Lake Pátzcuaro Basin Archaeological Project.

Aimers, Jim (SUNY Geneseo)

[218] *Stockholm Syndrome and Maya Archaeology*

When I arrived at Tulane in 1992 I was obsessed by Maya architecture and planned to write an interdisciplinary dissertation on that topic. By 1996 that dream had been crushed by the Department of Anthropology and I realized that to graduate from Tulane I would have to find another topic. Unexpected Postclassic period finds at Baking Pot, Belize, sparked my interest in ceramics and since then most of my research has been about Maya ceramics. In this paper I discuss some current debates and approaches in Maya ceramic analysis with reference to the work of E. Wyllys Andrews.

[258] *Discussant*

Aiuvalasit, Michael (Geoarcheology Research Associates), Donald M. Thieme (Valdosta State University), Joseph Schuldenrein (Geoarcheology Research Associates), and Suanna Selby Crowley (Geoarcheology Research Associates/Massachusetts Archaeological Society)

[252] *Alluvial Geoarchaeology of the Susquehanna River sites*

Geoarchaeological investigations undertaken as part of the Millennium Pipeline Project culminated in a stratigraphic model of the alluvial stratigraphy of the Susquehanna River near Windsor, New York. Examining the Susquehanna crossing sites through phased resource assessments afforded an opportunity for staging geoarchaeological research within the structure of the CRM process. This cross section provides an important connection between the better understood segments of the basin further upstream and segments located downstream along Upper Main Stem of the Susquehanna Basin.

Aiuvalasit, Michael [252] *see* Schuldenrein, Joseph

Akai, Fumito [177] *see* Nakazawa, Yuichi

Akoshima, Kaoru (Tohoku University)

[119] *Technological Organizations and Lithic Use-wear: Impacts on East Asian Prehistory*

This paper investigates one of Binford's wide ranging theoretical concepts, "organization of technology", in the context of microwear analysis in general. The examples also shed light on impacts of Binford's work on archaeological scenes of East Asia, especially in Japan. Ambivalent relations between the processual archaeology and historical orientation of archaeology there are discussed. The theoretical standpoint of technological organizations would alleviate inadequacy in use-wear research strategy which has been influenced by "behavioral reconstruction schools" since 1970s. Observed use-wear traces must be recognized as palimpsest phenomena to understand cultural systems movements, rather than as traces from individual behavioral episodes.

Akridge, Glen [38] *see* Davis, Hester A.

al Sakhel, Heba [58] *see* Boeda, Eric

Alconini, Sonia (University of Texas At San Antonio) and Lynn Kim (University of Texas at San Antonio)

[45] *The Province of Kallawayá: Forms of Interaction with Tiwanaku and the Inkas*

In this paper, we will explore the evolution of the Kallawayá province in the eastern Bolivian valleys. This region, located to the east of the Titicaca Basin and nearby the tropical piedmonts, was an important node of interaction between two distinct environments. Based on a regional survey and excavations, we will present data showing the different ways in which Tiwanaku and the Inka sought to gain access to such valuable valleys, the nature of their control, and the complex relations that Inkas and Inkas-of-privilege from the Titicaca Basin maintained with the Kallawayá.

[45] *First Chair*

Aldeias, Vera (University of Pennsylvania), Dennis Sandgathe (Simon Fraser University), Harold Dibble (University of Pennsylvania), Paul Goldberg (Boston University) and Shannon McPherron (Max Planck Institute)

[8] *The Mousterian Combustion Features at Roc de Marsal*
Recent excavations have revealed numerous hearths in the lower levels of the sequence, especially in archaeological layers 7 and 9. These surprisingly well-preserved fire residues, rare in Mousterian contexts, are comprised of cm-thick lenticular features composed of couplets of ash resting on organic-rich substrates, which are between 20 cm up to ~100 cm across. Their detailed study in the field and in the lab (e.g., micromorphology, FTIR) can potentially provide important insights into past human activities and behavior. This paper outlines methods of excavation and documentation in the field and laboratory, and presents preliminary results about their possible uses.

Aldenderfer, Mark (University of Arizona)

[245] *Animal utilization during the Late Archaic-Early Formative Transition: The Evidence from Jiskairumoko*
Faunal materials as well as complex archaeological features from Jiskairumoko during the Late Archaic-Early Formative transition (ca. 2200-1800 BCE) suggest the presence of herded, possibly domesticated, animals at this critical period. The evidence for this assertion is presented, and the implications of these data within a context of increasing sedentism and emerging sociopolitical complexity are explored.

Alex, Lynn (University of Iowa) [238] Discussant

Alexander, Rani (New Mexico State University)

[178] *Maya Collapse or Resilience? Lessons from the Spanish Conquest and Yucatan's Caste War*
Recent calls to extricate the Maya from the stereotype of collapse have singled out cultural resilience as the viable new brand for the political present. In this paper I examine two episodes of Maya collapse and resilience in Yucatan—the Spanish invasion (1511-1546) and the Caste War (1847-1901). I compare archaeological evidence of the strategies and resistances enacted before each catastrophe with those of the aftermath. My evidence suggests that some of the things the Maya did to survive, resist, and accommodate the Spanish colonial regime and Mexico's 19th-century progressive agenda were similar to what they did before.

Allard, Francis (Indiana University of Pennsylvania) [95]

Discussant; [95] First Chair, [95] First Organizer

Allen, Mark (California State Polytechnic University, Pomona)

[127] *Of Earth and Stone: Landscapes of Power in New Zealand and the Western Mojave Desert*
Lush, yet marginal by the standards of Polynesian horticulture, prehistoric New Zealand saw Maori chiefs' tactical and strategic use of terrain and earthwork fortifications to vie for political and economic influence. California's Mojave Desert, arid and forbidding, offers cultural landscapes of greater time depth. More subtle, they nevertheless reveal hunter-gatherers' concerns with economics, fertility, and social power. Here, it is rock and stone that tell of place and power. Both regions have seen much archaeology, but usually with a focus on specific sites. It is argued that a contextual approach brings fresh insights to these contrasting natural and cultural landscapes.

Allgood, Jessica

[172] *Analysis of Faunal Remains from the Carskadon Site (23LE348), a Middle Woodland Havana Hopewell Site in Lewis County, Missouri*

Significant Middle Woodland (Havana Hopewell) and minor Late Woodland occupations were represented at the Carskadon Site (23LE348). Of note from the recovered materials was a very large and remarkably well-preserved sample of faunal materials. The site offers a unique opportunity to better understand faunal subsistence activities from a Middle Woodland Havana Hopewell occupation, as

well as identifying shifts in subsistence behavior through time. This paper summarizes results of the faunal analysis and explores the Middle Woodland subsistence adaptation through comparison with contemporaneous sites in the region.

Allison, James (Brigham Young University)

[253] *Puebloan Sites in the Hidden Hills*
In 2006 and 2007, the Brigham Young University Archaeological Field School worked in the Hidden Hills area of the Shivwits Plateau, in the western part of the Arizona Strip. The field school mapped, surface collected, and tested a number of Puebloan habitation sites dating from about A.D. 800 to the late 1200s. Architecture includes surface roomblocks, stand-alone circular structures, and pit structures, including one deep masonry-lined pit structure that may be a kiva. Ceramic analysis shows that the Hidden Hills residents participated in ceramic exchange networks encompassing other parts of the Arizona Strip as well as more distant places.

Ameida, Francisco [177] see Bicho, Nuno

Alonso, Alejandra [17] see Ardren, Traci

Alt, Susan (Indiana University Bloomington)

[15] *How Many People Does it Take to Change a Polity: Immigration, Complexity and Cahokia*
Migration helped Cahokia grow into the largest pre-Columbian center in North America. There are confounding issues in identifying migrants, as persons, objects, places, and identities interact in complex and interdependent ways. However, based on pottery evidence, a significant number of those who would become the Cahokians originated from points within a 200-300 km radius to the south and east. Preliminary estimates of Cahokia's immigrant community size are provided.

[15] *First Chair, [225] see Buchanan, Meghan E.*

Altizer, Valerie (University of Tennessee, Glenn A. Black Lab) and Timothy Baumann (Glenn A. Black Laboratory of Archaeology, Indiana University)

[62] *Revisiting Gourd Creek Cave (23PH14) in the Northern Missouri Ozarks*
Complexes of caves, rock art, and cairns in the northern Ozarks have been interpreted as ceremonial centers and markers for the Late Woodland Maramec Spring-phase. Gourd Creek Cave underwent excavations in 1918 and the 1960s; however, these investigations did not undergo detailed analysis. A revisit revealed that it may be the center of a similar Late Woodland complex. Artifacts obtained in earlier excavations were analyzed to determine the cave's cultural history and to better understand Ozark settlement. The placement of these complexes on the landscape may be a reflection of cosmological principles by which prehistoric peoples viewed their universe.

Altschul, Jeffrey (Statistical Research, Inc./SRI Foundation) and William M. Graves (Statistical Research, Inc.)

[14] *Chasing our Tails: A Look Forward in Southwest CRM*
We will focus on the practice of CRM in Southwest archaeology over the next 10 years. We begin with how many dollars will be spent on Southwest archaeology, where these dollars will be spent, and the types of projects that will be performed. Next, we point out that in large parts of the Southwest method and theory have followed practice with the findings of CRM often dictating theoretical and methodological research objectives. We see this trend continuing and providing a foundation for envisioning the role of CRM in the archaeology of the future.

Altschul, Jeffrey [253] Discussant; [130] Discussant; [164] see Heilen, Michael

Alvarado, Carlos [229] see Popenoe Hatch, Marion

Alvarado, Claudia [195] see Garza, Silvia

Alvarez, Jose (University of Arizona)

[136] *Art on Rejoneado Walls: Reexamining Symbolism, Expression, and Ideology*

Iconographic works of art (e.g., frescoes, sculptures or retablos), and other forms of colonial art during the seventeenth-eighteenth centuries suggest that the process of cultural interactions between Spaniards, missionaries, and indigenous peoples after European exploration of present-day central and northern Mexico and southern Arizona was gradual. A type of indigenous artwork that has not received the attention it merits is rejoneado panel art, also referred to as panel art, paneling, folk art, or rejoneado (Eckhart 1975:56-57; McAndrew 1965:190). Exploring whether rejoneado panel art is explained by the process of ethnogenesis and/or syncretism is the principal topic of this study.

Amadio, Ayla (Southern Illinois University-Carbondale)

[13] *Ritual Use of Animals at Formative Period Tayata*

Zooarchaeology encompasses more than subsistence when it is used to study ritual activity including seasonal celebrations, feasting, funerary observances and autosacrifice. My analysis focused on faunal remains excavated from Early and Middle Formative contexts at the Mixteca Alta site of Tayata, Oaxaca, and comparisons with contemporary sites elsewhere in Mesoamerica. The context of non-exotic fauna provided insight into their use in rituals; when compared regionally, the patterned use of animals in Mesoamerica is pervasive. This study provides a more thorough understanding of the multidimensional utility of faunal analysis within Mesoamerican archaeology.

Amador, Edgar [162] see *Davis-Salazar, Karla L.*

Amador, Fabio (National Geographic Society), Dominique Rissolo (Waitt Institute for Discovery), Jeffrey Glover (Georgia State University) and Joe Ball (San Diego State University)

[109] *Who Were the Middle Preclassic Settlers of Quintana Roo's North Coast? New Evidence from Vista Alegre*

Recent research by the Proyecto Costa Escondida at the coastal site of Vista Alegre has revealed surprising new data about the island's earliest inhabitants. Current models of population movements during the Middle Preclassic have that the original ceramic producing populations moving into the northeast corner of the Yucatan from the west. Evidence for this is based on the similarities between ceramic traditions across the peninsula. The Middle Preclassic materials from Vista Alegre, however, present a more complex picture of these early population movements and show strong affinities to the Mamom tradition of the eastern Petén-Belize area.

Amador, Julio (UNAM) and Julio Amador Bech

[22] *Self-images or Images Beyond the Self? Anthropomorphic Figures in the Rock Art of Northwestern Sonora*

The meaning of many rock art depictions belonging to disappeared cultures eludes us. In the main Trincheras rock art site of northwestern Sonora (La Proveedora-Cerro San José), while anthropomorphic figures are just 10 percent of all petroglyphs, they are nonetheless, intriguing: their corporal attitudes, gestures, apparent movement, and facial dispositions constitute a source of invaluable information about some of their potential cultural and symbolic meanings. As some specialists have attributed a shamanistic ritual origin to the figures, an origin that implies the representation of supernaturals, shamans' spirit helpers, visions of "the world beyond", we raise questions regarding these interpretations.

Amaroli Bertolucci, Paul [191] see *Bruhns, Karen O.*

Ambrose, Stanley (U. Illinois, Urbana-Champaign), Aimee Carbaugh (University of Illinois, Urbana-Champaign) and Elizabeth Arnold (Grand Valley State University)

[214] *Identifying Birth Seasonality in Masai Sheep and Goats with Tooth Enamel Oxygen Isotopes*

Masai pastoralists in southwest Kenya allow goats to breed anytime because their browsing diet is available all year. Mating of sheep is restricted to July and August in order to optimize access to fresh grass during gestation and weaning. Variation in enamel oxygen isotopes within teeth is controlled by rainfall, and can reflect seasonality of birth. Teeth of goats from one Masai herd show a non-modal pattern of isotopic variation, reflecting birth in all seasons, while sheep teeth show a unimodal pattern, reflecting a single birth season. This method can be used to investigate prehistoric African caprine herd management strategies.

[214] *Discussant*

Ambrose, Stanley [214] see *Betts, Colin*; **[214]** see *Dong, Yu*; **[214]** see *Waskiewicz Pugh, Christina*

Ames, Kenneth (Portland State University) and Cameron Smith (Portland State University)

[203] *Ground Stone, Metallurgy and Embedded Specialization on the Southern Northwest Coast*

Specialized production has long played an important role in theories on the evolution of cultural complexity. It is often associated with high levels of artisanship and extra-household exchange and consumption. Artifact replication and morphological and distributional analyses of large artifact assemblages recovered from three large contemporaneous Northwest Coast corporate households shows specialization in ground stone production in elite residential areas. The same tools are concentrated in lower status areas thought to be copper working locales. This consistency contrasts with other production emphases that vary from household to household. These patterns suggest the presence of embedded specialists.

Amici, Randy [89] see *Scardera, Francis*

Amick, Daniel S. [146] see *Morgan, Brooke M.*

Amirkhanov, Hirzi [161] see *Blickstein, Joel IB*

Amrhein, Laura (University of Arkansas-Little Rock)

[109] *Priests, Warriors, and Captives: The Platform Benches and Ritual Spaces at Chichén Itzá, Yucatán*

Five platform benches at Chichén Itzá contain similar stylistic and iconographic programs. They are located in similar structures, have the same basic architectural configurations, and depict processional figures. However, variations in the clothing of the figures and objects accompanying them make them distinct enough to raise certain questions about their function within particular structures. An in-depth analysis reveals that they likely served symbolic purposes which refer to ancient Maya cosmology and rituals involving priests, warriors, and captives. Further, they likely demarcated sacred spaces that have historical relevance at the site.

Anaya Hernandez, Armando (Universidad Autonoma De Campeche) and Lorraine A. Williams-Beck (Centro de Investigaciones Históricas y Sociales, Universidad Autónoma de Campeche)

[241] *Jaina: Gateway to the Underworld*

In this paper we postulate a series of hypotheses that reconsider fundamental aspects regarding the creation, function, and geographical location of Jaina during pre-Columbian times. Recent review of burial contexts and the number of individuals interred in them shows that the vast majority documented to date is infants and children placed in a fetal position, within large unslipped jars or alone and with few grave goods. These contexts tend to be found in terrain-leveling platform fill, low platforms, and in close proximity to the ballcourt. While other authors have emphasized the nature of a high pressure demographical situation for the pre-Columbian residents there and in other surrounding areas within the Yucatan Peninsula as an answer to this problem, it would be a worthwhile endeavor to consider another interpretation which revolves around a mythical them frequently found in Maya iconography. If this be the case, then the myth could have been restaged during specific annual time frames

through ritual infant sacrifice at Jaina. Including information from urban design elements and the surrounding natural and cultural environments to the former helps better explain the ideological reason for building an island in this definitive place, instead of other former functional interpretations to date.

Anchukaitis, Kevin [153] see Buckley, Brendan M

Anderson, Christine B. (University of Massachusetts Amherst)

[117] *Scottish Space: A Multidisciplinary Approach*

Attempts to understand the rural transition of Scotland during the 18th and 19th centuries has been approached archaeologically, historically and geographically with research positioned mainly in the Highland and Island regions. I argue that space should be used as a critique to address the failure of researchers to incorporate the regional variation of Scotland in terms of the process of transition and is the common ground upon which multidisciplinary research should be carried out. I believe this involves exploring how populations in the past understood, created, and manipulated space as well as how present researchers have interpreted changing spatial dimensions.

Anderson, David A. (University of Wisconsin-La Crosse) and Timothy L. McAndrews (University of Wisconsin-La Crosse)

[162] *Structure and Choice: Undergraduate Education in Archaeology at the University of Wisconsin-La Crosse*

The Archaeological Studies Program at University of Wisconsin-La Crosse has been extremely successful in ushering undergraduate students into employment upon graduation and into some of the top graduate programs in the country and abroad. This poster presents the curricular parameters within which undergraduate students explore the fundamentals of archaeology while making individual choices that tailor their experience to their individual interests and career goals.

Anderson, David (Tulane University)

[178] *The Middle Preclassic Ballgame: Yucatan and Beyond*

The Mesoamerican Ballgame is a subject that has received a great deal of attention by scholars, largely focusing on the game's political and societal role amongst Classic and Postclassic period Mesoamerican cultures. Discussions of the game's antiquity often focus simply on the oldest known Early Preclassic examples of ballcourt architecture, and assume the courts held a similar role as their later counterparts. Recent discoveries of more than 20 examples of Middle Preclassic ballcourts from Maya sites in Northwest Yucatan, Mexico, provide a new source of data on the early Mesoamerican ballgame and a new perspective on its societal role.

Anderson, David (University of Tennessee)

[61] *The Development of Complex Society in Eastern North America: Lessons from Temperate Europe*

Complex societies characterized by cemeteries and elaborate ceremonialism were present in Eastern North America as far back as the terminal Pleistocene. The construction of massive mound complexes appeared in many areas in the Mid-Holocene, a tradition that persisted until contact. Unlike temperate Europe, domesticated animals were rare, and agricultural food production only became important late. While state societies like those in western South America and Mesoamerica did not develop in the East, most scholars believe they would have eventually. Indeed, some believe that a state did emerge briefly at Cahokia in the central Mississippi Valley around AD 1050.

[61] *First Organizer*; [90] *Discussant*

Anderson, David [24] see Johanson, Erik N.; [224] see Meeks, Scott C.; [224] see West, Allen

Anderson, Derek (University of Arizona)

[21] *Paleoindians and Power Laws*

The Paleoindian Database of the Americas (PIDBA—<http://pidba.utk.edu>) is a large online database that can be used to explore patterns of land use and demographic trends during the Late

Pleistocene and Early Holocene. This paper examines the structure of the PIDBA projectile point data as a whole, showing that it conforms to a power law distribution. This suggests that areas of high and low densities of projectile points should be expected rather than problematic, and that they provide evidence of preferential attachment to certain areas on the landscape both in prehistoric hunter-gatherer groups as well as in modern collectors.

[24] see Johanson, Erik N.

Anderson, Gail (Center for American Archeology)

[215] *Rocky Fork, a Rural Free Black Underground Railroad Community in Southwestern Illinois*

Written histories of the Underground Railroad detail the self-identified contributions of the primarily white stationmasters. Although the exploits of a few black heroes like Harriet Tubman have been documented, the actions of many black participants in the UGRR, for whom discovery might result in enslavement, have remained unknown. Rocky Fork was a rural free black community near Alton, IL, whose origins stretch back to the early 1800's. This vibrant community lasted over 150 years, but today is represented by archeological remains. Oral histories, government records and abolitionist evidence point to Rocky Fork as a way-station on the UGRR.

Anderson, J. Heath (Shippensburg University)

[156] *The Tepeaca Marketplace and the Distribution of Postclassic Polychrome Ceramics*

One of Ken Hirth's enduring interests has been the interpretation of archaeological signatures that reveal past economic behavior. His well-known distributional approach predicts that goods procured through marketplace exchange should be distributed homogeneously among household assemblages. In this paper, I explore the distribution of polychrome ceramics in the Tepeaca area. Tepeaca was the capital of an Aztec tributary province and site of an important prehispanic marketplace. The distribution of polychrome pottery within the survey area suggests that most households would have had access to polychromes through marketplace exchange during the Late Postclassic (AD 1200 – 1519).

[156] *First Chair* [156] *Third Organizer*

Anderson, Jamie (RLAHA University of Oxford)

[175] *Dating the Interaction between Human Settlement and the Climatic/Environmental Change in the Norse North Atlantic, AD 800-1600*

At two archaeological sites, Snusgar, Orkney, and Vatnsfjörður, Iceland, I employ several geochronological methods, including tephrochronology, radiocarbon dating, and OSL, and integrate these within a Bayesian framework to align the timing of environmental conditions with archaeological data about human settlement patterns. The environmental data that I use comes from interdisciplinary collaboration with researchers studying palynology and Quaternary sea-level change, while my own research draws upon the geosciences, landscape archaeology, and anthropology. The ultimate outcome of developing detailed chronological models for each site is to describe the inhabitants' coping strategies from climatic impacts, related to changing sea-level and coastline conditions.

Anderson, Karen

[94] *Late Formative through Late Horizon Occupations Patterns in the Central Valley of Cochabamba*

The site of Piñami was a long term habitation site in the Central Valley of Cochabamba, occupied from the Formative through the Late Horizon. In this presentation I present evidence of changes in domestic patterns during more than 1000 years of occupation at Piñami with special focus on the ceramic evidence. I then discuss the implications of this information for our understanding of social and political changes in Cochabamba and the larger region.

Andonie, Oscar [23] see Falabella, Fernanda

Andrade, Agustin (Zona Arqueológica de Monte Albán, INAH)

[103] *El Análisis Espacial del Conjunto Monumental de Atzompa*
La presente ponencia versa sobre el análisis espacial del Conjunto Monumental de Atzompa, el cual, con su zona nuclear y área periférica, abarca casi la totalidad de la superficie del cerro El Bonete. Ubicado al Norte de la Plaza Principal de Monte Albán, sus constructores generaron conjuntos arquitectónicos monumentales, asociados a terrazas culturales, unidades habitacionales y áreas de acceso, en las laderas y estribaciones del mismo cerro, cuyas funciones probablemente fueron como área administrativa y puntos de observación hacia los valles.

Andrefsky, William (Washington State University), Jennifer Ferris (Washington State University), Justin Williams (Washington State University) and Nathan Goodale (Hamilton College)

[120] *Geologic Context and Diagnostic Provenance of Chert*
Geochemical characterization of cherts has generally been ineffective for determining small scale provenance of tool-stone source locations. This is typically due to large scale formation ranges of cherts and multiple phases of genesis in submarine contexts. Recent geochemical characterizations of cherts in the Owyhee Uplands of southeastern Oregon and southern Idaho show promise for diagnostic source locational distinctions. Our study suggests that chert sources that originated as a result of localized volcanic venting through sedimentary parent materials result in reliable geochemical provenance. Differentiating between chert provenance will ultimately increase our knowledge of archaic peoples procurement patterns.

Andrefsky Jr, William [232] see Fisher, Philip R.

Andres, Christopher (Indiana University - Purdue University Fort Wayne), Gabriel D. Wrobel (University of Mississippi) and Shawn Morton (University of Calgary)

[112] *Introducing Tipan Chen Uitz: A Major "New" Civic-Ceremonial Center in the Cayo District, Belize*

In this paper, we discuss Tipan Chen Uitz— a large pre-Hispanic Maya center recently documented by the Caves Branch Archaeological Survey in central Belize. Previously known only to local hunters, the site lies in a strategic zone between the Caves Branch and Roaring Creek drainages. In this presentation, we consider issues of site location, scale, configuration, and access to nearby caves and rockshelters relative to implications for regional political, economic, and ritual organization in the southern Maya Lowlands.

Andres-Lacueva, Cristina [55] see Lamuela-Raventos, Rosa M.

Andrews, Anthony (New College of Florida) [178] *Discussant*

Andrews, Bradford (Pacific Lutheran University)

[156] *Calixtlahuaca Obsidian: Initial Reflections of Lithic Technology on the Western Aztec Periphery*

This paper discusses the initial technological impressions identified during the ongoing analysis of flaked stone artifacts from the city of Calixtlahuaca. At present, three notable patterns are evident. First, households appear to have provisioned themselves with finished blades and flake blanks via some form of exchange. Second, many households appear to have produced their own finished bifaces. Third, an intensive bipolar technology was ultimately applied to many of the obsidian artifacts. Finally, the sources represented imply a measure of economic independence even after Calixtlahuaca became part of the empire. These data provide important new comparative information on Central-Mexican lithic technology.

Andrieu, Chloé (Université Paris X Nanterre) and Olaf Jaime Riveron (University of Kentucky)

[229] *A History of Jade: A Diachronic Approach to the Lowland Importation of Jade along the Chixoy-Pasion Routes during the Maya Classic Period*

The Chixoy-Pasion river system was one of two principal routes employed to transport highland goods such as jade or obsidian to the

lowland Classic Maya cities, yet contrarily to the obsidian little is known about the specific way each jade source was distributed and transported. This paper proposes a first diachronic understanding of the jade exchange systems in that region, based on geochemical information source analysis of Classic period jade found at three principal sites along this trade route (Cancuen, Tres Islas, and Seibal). It also shows how the trade of this symbolic material impacted local political and economic organisations.

Andrieu, Chloé [229] *First Organizer*

Andrus, C. Fred T. [250] see Keene, Deborah A.; [5] see Rich, Kelley W.

Angel, Jules (The Ohio State University, Dept. of Anthropology)
[244] *Location, Location, Location: Earthwork Placement within the Central-Ohio Landscape*

Using aerial photography, environmental data and a GIS, this research finds some significance regarding where Pre-historic persons built their earthworks in Central Ohio. A comparison between nine large known earthwork sites and nine randomly placed points shows some choice of certain environments to build in. Soil rarity, elevation difference within 1km of the sites, underlying glacial settings, and soil drainage all show significance when the nine known sites are compared to the nine random points. Thus, earthwork placement within a landscape containing a specific suite of environmental traits may well have been intentional.

Anschuetz, Kurt F. [19] see Bellorado, Benjamin A.

Anselmetti, Flavio [153] see Brenner, Mark

Anselmi, Lisa (Buffalo State College) and William Engelbrecht (Buffalo State College, SUNY)

[38] *Jack Holland, Chert Expert*

Jack Holland's lifelong interest in archaeology began as a boy collecting arrowheads along the flood plains of the West Branch of the Susquehanna River near Lockhaven, Pennsylvania. Upon early retirement from his job as an industrial electrician at the Ford Stamping Plant south of Buffalo, NY in 1985, he began amassing a comparative lithic collection. The collection is now housed in the Buffalo Museum of Science and consists of 22,000 samples from more than 1,500 lithic types from the U.S. and Canada. In recognition of his contributions, Jack received the Crabtree Award from the SAA in 2001 and most recently was named a Pioneer of Science by the Hauptman-Woodward Institute of Buffalo.

Anthony, David (Hartwick College)

[32] *Before the Argonauts: Long-distance Exchange between the Black Sea and the Aegean in the Copper and Early Bronze Ages*

The Aegean and the Black Seas were two separate cultural and economic spheres throughout prehistory. The Aegean Bronze Age opened with the rise of citadels in the northern Aegean, usually interpreted as owing their wealth to control over trade with the Black Sea. But hard evidence for this trade has been lacking. This paper reviews the evidence for trade between the Aegean and the Black Seas prior to the Aegean Bronze Age, between 5000-3000 BC, with emphasis on the Usatovo culture in the Dniester-Danube steppe corridor, which seems to have been a center for such trade beginning 3300 BC.

Anti-Weiser, Walpurga [184] see Bosch, Marjolein D

Antón, Susan C. [206] see Quinn, Rhonda L.

Antonaccio, Carla (Duke University)

[78] *Feast or Famine? Cross Cultural Analogy in Mediterranean Archaeology*

In the last decade much attention has been focused on ritual drinking and feasting behavior in ancient Mediterranean societies, both among the living and in funerary contexts. There has been increasing emphasis on such behavior as a vector for mutual comprehension

and exchange among elites of different cultures in an interconnected Mediterranean. In addition, comparisons have been drawn with other, very different societies in disparate places and times. This paper explores the limits of 'localized' cross cultural analogies of this type in the Mediterranean, and examines how to deploy wider cross cultural analogies effectively.

Antonelli, Caroline (University at Albany - SUNY)

[20] *Analyzing Ceramic Production and Consumption at Mayapan*
Craft production at Mayapan is well-documented, with the exception of pottery-making, about which little is known. This paper utilizes a modal approach to document the variability of production characteristics of a variety of major types and forms of Late Postclassic pottery assemblages from several Mayapan houselots. Domestic contexts come from neighborhoods near to and distant from the monumental center of the city. Most houses were inhabited by pottery consumers, although one pottery production houselot is represented. Metric and on-metric attributes of ceramic rims permit an evaluation of production standardization and variation in assemblages and types at different Mayapan residences.

Anyon, Roger (Pima County CRHPO) [192] Discussant; [128] see Creel, Darrell G.

Aoyama, Kazuo (Ibaraki University)

[221] *Symbolic and Ritual Dimensions of Preclassic and Classic Maya Obsidian*

The results of over 20 years analysis on over 130,000 chipped stone artifacts from the Copán region, Honduras, and the Seibal and Aguateca region, Guatemala are summarized and discussed. The objectives of this regional-scale analysis were to elucidate symbolic and ritual dimensions of (1) procurement, exchange, and production of obsidian utilitarian goods; (2) chipped stone weapons and warfare; (3) the variability of artistic and craft production; as well as (4) elite ritual as theatrical performance.

Applegate, Darlene (Western Kentucky University)

[244] *Contemporary Archaeological Systematics: Perspectives from Kentucky*

Among the many things I learned from William Dancey is an appreciation for critical evaluation and application of archaeological units. Systematics is not just a theoretical endeavor. Systematics shapes the archaeologist's formulation of research questions, selection of field methodologies, approach to artifact analysis, and, ultimately, data interpretation. In this paper, I consider the current state of archaeological systematics in Woodland research in Kentucky, focusing on Adena and Hopewell.

Arakawa, Fumi [19] see DeFrank, Laura

Arakawa, Fumiyasu (Crow Canyon Archaeological Center) and Jamie Merewether (Crow Canyon Archaeological Center)

[235] *Evaluating Chaco Influences in the Central Mesa Verde Region Using Material Culture*

Archaeologists have assumed that residents of the Mesa Verde region had a more open, frequent interaction with people outside during Chaco Phenomenon (A.D. 1050–1150), but that interaction declined afterward. To investigate this assumption, we compile several artifact types—non-local pottery and lithics, perishable materials, and ornaments—from solid contexts in the late Pueblo II, early Pueblo III, and late Pueblo III periods. Our null hypothesis is that these data support the common assumption about frequent trades during the late Pueblo II period; our alternative hypothesis is that residents of the region may have maintained their own tradition through time.

Arav, Reuma [147] see Nadel, Dani

Arazi-Coombs, Sandra (University of New Mexico)

[131] *Analysis of Decorated Ceramics from the Pueblo Bonito*

Mounds.

This presentation will provide an overview of data from the analysis of decorated ceramics from the Pueblo Bonito mounds. Approximately 50,000 black-on-white sherds were analyzed over the course of two years. Initial results regarding ceramic production and exchange are outlined, including comparisons with ceramic data from Pueblo Alto and 29SJ629.

Arbuckle, Benjamin (Baylor University)

[64] *Producing, Distributing and Consuming Animals: Evidence for Emerging Complexity in Chalcolithic Anatolia*

In this paper we explore evidence for complexity within systems involved in the production, distribution and consumption of animal resources in Chalcolithic Anatolia. Although evidence for material differentiation within early and middle Chalcolithic communities is generally lacking faunal evidence suggests that animals may have been important symbols as well as sources of inequality in these early communities. The Early Chalcolithic animal economy therefore may represent a unique 'social theater' to which the expression of inequality, competition, and emerging complexity were confined prior to their expression in other types of material culture in the later Chalcolithic.

[62] see Ereke, Cevdet Merih; [64] *First Organizer*; [214] see Meiggs, David C.

Arco, Lee (Washington University in St Louis) Anthony Ortmann (Murray State University)

[251] *Jaketown's Buried Landscape: Recent Research at a Poverty Point Settlement in the Yazoo Basin, Mississippi*

The Jaketown site in west-central Mississippi is the second largest extant Poverty Point settlement. Despite previous study, a lack of reliable chronometric data and deficient knowledge of the complex stratigraphy have led to varied interpretations of the site's cultural and geomorphologic history. Geoarchaeological datasets recently acquired through excavation and coring provide a new perspective on the chronology of Poverty Point habitation and earthwork construction at Jaketown, as well as on flood-related events associated with the end of the Late Archaic occupation.

Arco, Lee [26] see Lizarralde, Marina I.; [26] see Carignano, Micaela

Ardelean, Ciprian (University of Zacatecas, Mexico)

[139] *El Chechén Archaeological Project: General Considerations about Settlement Patterns and Cultural Dynamics in several Terminal Classic Mayan sites around the El Chechen Wetlands, Middle Candelaria River, Campeche, Mexico*

The goal of this research was to explore an area around the rich wetland ecosystem on the Candelaria River surviving in the middle of cattle-raising savannas in order to identify unknown Mayan sites. Fieldwork led to the discovery of five Late and Terminal Classic settlements sharing spatial and artifactual features. Topographic mapping, surveys and surface collecting allowed us to reveal a cultural portrait of an area that used to remain blank on the Maya world maps. An extensive rescue digging exposed a funerary complex of simple pit burials that probably connect to the phenomena usually referred to as the "collapse".

Ardren, Traci (University of Miami) and Alejandra Alonso (Instituto Nacional de Antropología e Historia/ University of Calgary)

[17] *Engendering Craft Producers During a Period of Economic Change: The Shell, Textile, and Lithic Artisans of Terminal Classic Xuenkal, Yucatan, Mexico*

Economic intensification is a key component in theories used to explain the rise of the later Maya city Chichen Itza. Recent excavations at a site along trade routes that connected Chichen Itza to its port have revealed evidence for intensification of craft production within the elite domestic sphere. Goods traditionally gendered female, such as textiles, but also those overlooked in engendered research were produced at an elite residential platform

within Xuenkal. This paper attempts to more fully engender craft production and thus to explore the involvement of women's labor within the economic intensification that drove Terminal Classic Chichen Itza.

Argo, Lindsay [54] *see Jackson, Sarah E.*

Ariztegui, Daniel [153] *see Brenner, Mark*

Arkush, Elizabeth (University of Virginia)

[1] *Pre-Columbian Warfare and the Problem of Rationality*
Archaeologists debate whether decisions in warfare are driven by necessity or shaped by culture. This paper discusses the results, methods, and theoretical underpinnings of an archaeological project on late pre-Columbian hillforts in southern Peru. Several seasons of survey and mapping have given fruitful information about conflict and political process in the region. The project has also made fundamental assumptions about the rationality of past populations at war, for instance in the use of GIS analysis, which implicitly privileges environmental over cultural factors. I discuss this and alternative visions of pre-Columbian warfare, and speculate on the ways we arrive at them.

[220] *Discussant*; [127] *see Plourde, Aimee M.*

Armitage, Ruth Ann (Eastern Michigan University) and Suzanne Baker (Archaeological/Historical Consultants)

[62] *Cueva La Conga: First Cave Archaeology in Nicaragua*
Cueva la Conga is the first limestone cave with paintings and modified speleothems found in Nicaragua and is the furthest south in the Mesoamerican periphery that such a cave has been reported. It is thus of major significance for Nicaraguan and regional archaeology. Charcoal paint samples from some of the images in the cave have thus far produced radiocarbon dates spanning from ~1200 B.P. to ~300 B.P. Rock art motif comparisons are being made to attempt to better establish the cultural associations of the cave. The results of these studies provide some of the first archaeological information for northern Nicaragua.

Armstrong-Fumero, Fernando (Smith College)

[212] *When Does it Stop Being Heritage?: Pre-Hispanic Ruins and Contemporary Vernacular Architecture in Yucatán, Mexico*
The re-use of pre-Hispanic materials to construct house platforms, fences and other everyday structures has a deep history in the lives of rural Yucatec Maya communities, with evidence of selective re-use and transformation of structures spanning from the Pre-Hispanic period to relatively recent times. However, this involves a series of practices that are coded as looting or illegal excavation in the official legal frameworks of the INAH. Reconciling the kind of cultural tradition embodied by the re-use of stone with the demands of contemporary antiquities laws offers a particular series of challenges for thinking about cross-cultural dialogues on heritage.

Arnould, Charlotte (CNRS)

[229] *New Models to Address an Old Question*
Classic Maya Highland-Lowland trade relations developed along routes to be defined geographically, but also in socio-political terms. Topography was determinant, but "centers" operated exchange mechanisms. As it now appears, in both Highlands and Lowlands large settlements were each internally organized according to the atepetl model, an alliance of distinct groups united under one king in one head-city located where their respective territories intersected and where the king lived. Such capitals were "gateways" locally, some of them were also "gateways" regionally between Highland and Lowland entities. Such a novel view helps integrate distinct trade modes at several spatial and social scales.

[229] *Discussant*

Arnold, Elizabeth [214] *see Ambrose, Stanley H.*

Arnold, Philip (Loyola University Chicago) [133] *Discussant*

Arnold, Phillip [85] *see Thompson, Victor D.*

Arnold III, Philip J. [254] *see Wilson, Nathan D*

Arntzen, Kristen (Washington University - St.

Louis) and Julieann Van Nest (New York State Museum) [259] *A Case Study of Mid-Holocene Landscape Evolution and Archaic Lifeways in the Midwestern Uplands: The Allscheid Rockshelter in Monroe County, Illinois*

Attempts to model the long-term trajectories of economic and social intensification among Midwestern hunter-gatherers are intricately tied to understanding a series of post-Pleistocene paleoenvironmental shifts in climate, seasonality, vegetation, sedimentation and soil regimes. The general landscape picture is one of long-term paraglacial response superimposed by numerous short-term deviations. Unraveling geogenic causes of observed stratigraphic changes from equally plausible anthropogenic causes remains a challenging task for geoarchaeological research. We focus on the small, upland Allscheid section, close to the bluff-base Modoc Rock Shelter, for a measure of independence in evaluating some of the choices made by the region's Archaic inhabitants.

Arratia Velasco, Elizabeth (UMSA)

[245] *The Economic Role of Fish in Mollo Kontu, Tiwanaku, Bolivia (600-1100 AD)*

This paper offers an introduction to the study of economic organization and ichthyological resource management at Tiwanaku, Bolivia, where fish was an important food source in both quotidian and ritual society during the years AD 600-1100. The author presents preliminary results of an ichthyoarchaeological analysis of residential and mortuary contexts from Mollo Kontu, conducted by the Jach'a Marka Archaeological Project, and will discuss patterns of state participation in resource management and processes of socio-political centralization in a Tiwanaku neighborhood.

Arribalzaga, Victor (INAH)

[242] *El Agente Social en el Paisaje del Monte Tláloc, Estado de México*

En el edificio prehispánico ubicado en la cima de la montaña de 4150 metros sobre el nivel del mar, rodeado de volcanes nevados, se encuentran las huellas de los agentes sociales que dejaron sus mensajes en la arquitectura, donde con ciertos detalles plasmaron su forma de ver el mundo, su culto a la montaña, que al parecer se venía construyendo desde la época neolítica, específicamente el integrar la agricultura a su vida.

Arroyave Prera, Ana Lucia [77] *see Navarro Farr, Olivia C.*

Arroyo-Cabrales, Joaquin (Instituto Nacional De Antropología E Historia), Alejandro López-Jiménez (Instituto Nacional De Antropología E Historia, México), Guadalupe Sánchez-Miranda (Instituto Nacional De Antropología E Historia, México) and Vance T. Holliday (University Of Arizona)

[235] *"Fin Del Mundo" Pleistocene Fauna, Sonora, México*
Locus 1, at "Fin del Mundo" Clovis site, Sonora, México, has an interesting species complex, which could be divided in two faunules. The upper stratum, dated at 11,040±580 cyBP, contain a juvenile gomphothere (Gomphotheridae), tapir (*Tapirus haysii*), and mammoth lamellae, probably meaning humid, warm forested habitat at the site. The lower stratum, relatively dated between 11,000 and 15,000 cyBP, may have formed on different conditions (cold, dry grassland habitat), with mastodont (*Mammuth americanum*), and horse (*Equus sp.*). Small vertebrates were also found at Locus 1, including hare (*Lepus sp.*), woodrat (*Neotoma sp.*), desert tortoise (*Gopherus sp.*), and frog (*Amphibia, Anura*).

Arroyo-Kalin, Manuel (Durham University), Cristiano Nicosia (University of Milano), and Yannick Devos (Centre de Recherches Archéologiques, Université Libre de Bruxelles, Belgium)

[259] *The Geoarchaeological Study of Anthropogenic Dark Earths*

Until recently dark earths embedding archaeological remains have been considered as homogeneous, dark-colored, poorly-stratified deposits of secondary interest for archaeological understandings. However in past years geoarchaeology has begun to show the enormous potential of studying these soils. In this paper we offer a perspective on the subject based on the comparison of soil micromorphological, textural and geochemical evidence compiled in independent studies of Amazonian and European dark earths. A discussion of questions and observations unpacks the importance of our findings and outlines a framework for the future study of these and other archaeological soils.

Arthur, Kathryn (USF St. Petersburg)

[17] *Reevaluating Gender Roles and Stone Tool Technology in Prehistoric Economies*

Paleolithic studies continue to describe Stone Age women's labor as low-skilled, expedient, and homebound including their lithic technologies. This paper reveals a detailed ethnographic study of women and stone tools focusing on the lives and histories of a select group of Konso women, who procure high quality stone from long distances, produce formal tools with skill, and use their tools efficiently and effectively. These Konso women are skilled knappers, who developed their expertise through long-term practice and apprenticeship. Konso stone tool-using women serve as an alternative to the man-the-toolmaker model redefining Western naturalized gendered division of labor in craft production.

Artz, Joe [150] see Scholl, Nathan C.

Asbury, Sophia (Washington State University)

[200] *Rim Arcs of Cibola: Feasting on the Pueblo/Mogollon Interface*
In the Southwest, feasting has been characterized as either communal or aggrandizing. In the Mogollon area it is thought to have been communal, while in the Pueblo world it seems to be aggrandizing. Located in the Southern Cibola region, the Chaco era (A.D. 1050-1130) great houses of Cox Ranch Pueblo and Cerro Pomo provide the opportunity to characterize feasting at the border of the Pueblo and Mogollon worlds. Rim arc analysis of plain and painted wares from the great houses and surrounding communities provide inferences about the intra- and inter-site feasting dynamics of Cibola communities.

Asch, David (New York State Museum) and Nancy Asch Sidell (Center for American Archeology)

[173] *Lower Illinois Valley Archeobotany: 1970–1985*

By 1970 the Illinois Valley Archeological Program's flotation system was recovering carbonized plant remains in prodigious quantities. But how was one to use these materials? Between the performance of a prehistoric activity and preservation of an archeobotanical assemblage, so many events of selection, reduction, and disorganization intervene that inferences from excavated remains to prehistoric behavior or environment may seem scarcely feasible. Nevertheless, as sampling, analytical, and interpretative methods advanced, patterns emerged that almost certainly are signals of behavior and environment. Investigation of the economic potential, systematics, and morphology of key species contributed significantly to interpretations of the region's archeobotanical record.

Asch, David [215] see Asch Sidell, Nancy

Asch Sidell, Nancy (Center for American Archeology Research Associate) and David Asch (New York State Museum)

[215] *Early Archaic Archeobotany of the Koster Site, Illinois*
Archeobotanical studies of lower Illinois Valley components span more than 8000 years and record a sequence of plant utilization at first involving minor levels of plant-food harvesting and food storage, followed by major reliance on (managed?) nut masts and (over several millennia) gradually increasing reliance on an annual-plant horticulture. Significant changes in the region's vegetation (anthropogenically induced in part?) occurred during this time. Multiple stratified occupations at the Koster site open a window on

long-term trends at one locality. This paper reports new archeobotanical analyses from Koster Horizons 11-12, the site's earliest major occupational unit (8700-8100 RCYBP).

Asch Sidell, Nancy [173] see Asch, David L.

Ash, Richard [161] see Inanez, Javier G.

Asher, Brendon (University of Kansas)

[111] *Historic Pawnee Chipped Stone Technology*

Chipped stone materials from two Kitkahahki sites are considered; site 14RP1 in Republic County, Kansas, and the Hill site (25WT1) in Webster County, Nebraska. These two assemblages represent the only Kitkahahki chipped stone collections from known contexts with substantive documentation and adequate recovery for analysis. Stone sources and artifacts types are reviewed, and significant changes in chipped stone technologies are reviewed. Research at these two sites will provide a foundation for future studies in Kitkahahki chipped stone technologies and beyond.

Ashmore, Wendy (University of California, Riverside)

[218] *Just the Facts, Ma'am*

A consistent theme across Will Andrews' career is his insistence (like Joe Friday's) on interpretive rigor, on a just and thoroughly critical evaluation of all available evidence in each and every case. In this paper, I examine Andrews' interpretations of evidence from two places he's worked in southeastern Mesoamerica—at Quelepa and later, at Copan—and discuss some of the impact his thinking continues to have on work elsewhere in the region. My choice of analytical focus is spatial organization, as expressed in architecture, settlement patterns, and landscape. Andrews' findings have profoundly constructive implications for modeling ancient lifeways.

Asner, Greg [230] see McCoy, Mark D.

Atalay, Sonya (Indiana University)

[7] *Grandmothers and Grandfathers[Culturally Unidentifiable: NAGPRA and The Power of Naming*

In 20 years NAGPRA has resulted in the repatriation of ~31,995 ancestral remains. Still ~120,000 individuals remain in possession of Federal Agencies or museums; having been labeled "culturally unidentifiable". Many Native American communities view these as ancestors— naming them "grandmothers and grandfathers". The power to determine cultural affiliation and the data required to make such determinations is the central focus of this paper. I argue that if we take repatriation and the intent of NAGPRA seriously, the next 20 years requires focused effort to erase the cultural space existing between naming these individuals "culturally unidentifiable" and restoring their status as "grandparents".

[66] *Discussant*; [159] *Discussant*

Atherton, Heather (Columbia University) and Jun Sunseri (University of California, Berkeley)

[193] *Vecino "Status" in Two 18th-Century Border Communities*

This paper explores vecino identity as it was expressed in two 18th-century villages: LA917 (or "Casitas Viejas") in the Northern Rio Grande and San José de las Huertas in the Middle Rio Grande. Although these settlements were a product of similar historical forces (such as the Bourbon Reforms), archaeological, archival and oral historical research on the two communities reveal that some degree of diversity existed at the local level. As such, villagers in both communities employed a variety of strategies to deal with the precariousness of frontier life.

Atherton, Heather [181] see Rothschild, Nan A.

Atici, Levent (University of Nevada, Las Vegas)

[64] *Animal Bones vs. Clay Tablets: Zooarchaeology of the Kultepe/Kanesh and Kaman-Kalehoyuk sites, Turkey*

This paper probes whether there is a correlation between patterns of sociopolitical organization and animal exploitation using

archaeofaunal assemblages from two Turkish sites. Developing a picture of animal exploitation at Kultepe/Kanesh and Kaman-Kalehoçuk, a major urban center and a small town, respectively, I seek to identify zooarchaeological signatures of socioeconomic inequalities. A large number of cuneiform tablets unearthed at Kultepe/Kanesh offer direct evidence for many aspects of life and hint about food production and consumption during the Middle Bronze Age (2000-1750 BC) in central Anatolia, providing us with a unique opportunity to test the relationships between textual and zooarchaeological evidence.

Atkins, Ashley (College of William and Mary), Christopher Shephard (College of William and Mary) and Martin Gallivan (College of William and Mary)

[225] *Memory and Social Reproduction in the Algonquian Chesapeake*

Native communities in the Chesapeake have recently invoked memories of places and events of the precontact past in more public ways. We draw connections between these invocations and the circa AD 1300 establishment of several communities with prominent landscape features that served as centers of social construction. During the colonial-era Chesapeake Algonquians continually revisited and reconfigured these places to bury ancestors, sacrifice animals, and inter objects, even after the residential population departed. We conclude by discussing the roles that memory, materiality, and landscape play in precontact social reproduction and the social engagement of contemporary Native communities with the deep past.

Atkins, Victoria (Bureau of Land Management)

[75] *Beyond NAGPRA: Native Voice Interpretation at the Anasazi Heritage Center & Canyons of the Ancients National Monument*

This presentation will describe the interpretation/consultation template which has been used successfully on such projects as Ancient Images & Pueblo Perspectives, the Visit With Respect film project, and the 2009 Sand Canyon Trail brochure. This poster will illustrate the critical roles of partnerships, developing trust relationships with American Indians and partners and working together on common ground by making presentation to tribal cultural preservation offices and advisory teams.

Audouze, Françoise (CNRS- France)

[104] *Mobility and Social Organization in the Late Magdalenian of the Paris Basin (France)*

Comparing several Magdalenian settlements of the Paris Basin and the two Swiss settlements of Champréveyres and Monruz sheds light on the part played by reindeer and horse hunting in organizing the regional mobility system. In the Paris Basin, family units move around from one residential hunting camp to the next according to a system of varying mobility with more durable settlements during the winter and camps of shorter duration during the other seasons. Residential hunting camps occupied by one to less than half a dozen family units are the only known type of settlement without base camps or logistic camps.

Auerbach, Benjamin (The University of Tennessee) and Thaddeus Bissett (The University of Tennessee)

[15] *One from many? Mississippian Morphological Variation in Body Shape and Proportions*

This study compares body shape variation reconstructed from skeletal remains among and within three broadly stylistically distinct Mississippian regions. We hypothesize there is no significant morphological variation among the regions, assuming gene flow accompanied cultural exchange regardless of stylistic regional differences. Results show significant differences between western Caddoan populations and groups from the east, which did not differ from each other. There is significant variation in morphology within the two eastern regions. Comparisons of Mississippians with samples from neighboring Plains Village and Fort Ancient cultural regions, however, indicate relative homogeneity in Mississippian peoples' morphologies, with the exception of the Caddoans.

Aura, J. Emili (Universitat de València), Jesús F. Jordá (Universidad Nacional de Educación a Distancia, Madrid), Lourdes Montes (Universidad de Zaragoza) and Pilar Utrilla (Universidad de Zaragoza)

[177] *Younger Dryas in Eastern Spain: The Ebro Basin and the Mediterranean Zone*

There are two macro-biogeographic regions represented on the Iberian Peninsula: the Mediterranean and the Eurosiberian. Prehistoric hunter-gatherer societies have been well-studied in both, generally from the perspective of linking cultural changes with paleoenvironmental shifts. Between these two regions is the basin of the Ebro River, which flows NE to SW along the southern edge of the Cantabrian-Pyrenean mountain chains and down to the Mediterranean Sea. Its importance as an avenue of communication has long been understood in Spanish prehistory. The goal of this presentation is to compare the Ebro and Mediterranean regions during Greenland Stadial 1--Younger Dryas--focusing on the record of the transition between the Upper Palaeolithic and Epipaleolithic, drawing notably on site distributions, radiocarbon chronology, paleoenvironmental reconstructions and the sequence of archaeological evidences for human adaptations in this southerly part of Europe the end of the Pleistocene.

Ausel, Erica and Della Cook (Indiana University Bloomington)

[30] *Sit Like a Lady: Sexual and Temporal Dimorphism of Femoral Morphology of Midwest Prehistoric Native American Sites*

Markers of occupational stress are understood to be caused by repetitive and long-term mechanical stress loads on the skeleton. Previous archaeological, ethnographical, and osteometric analysis of two Illinoian prehistoric Native American sites has suggested temporal and sexual dimorphism of femoral morphology related to culturally influenced postural habits. This study expands on the previously presented data to include analysis of femora from the Angel Mounds site, located in Southern Indiana. The presented research works to expand our knowledge of the effects of continued behavior and mechanical stress on the skeleton.

Ausel, Erica [257] see McGill, Dru

Austin, Robert (Southeastern Archaeological Research Inc.)

[170] *Doing Archaeology Publicly: The Bayshore Homes Project*

The Bayshore Homes archaeological site is a large mound and midden complex located in the Parque Narvaez subdivision of St. Petersburg, Florida. Over the past decade, archaeological excavation and research has been conducted in a very public environment: the front and back yards of the subdivision's residents. Involving the residents as partners in the process of discovery about the neighborhood's ancient past has been an essential component of the project since its inception. This paper discusses the results of such involvement, from the use of volunteers to educating residents about the importance of preserving the neighborhood's Native American heritage.

[170] *First Organizer; [170] Discussant*

Authier, Martin (Southern Methodist University) and Manuel Perales Munguía

[114] *Processes of Architectural Intrusiveness at the Castillo de Huaricanga (PV38-333), Fortaleza Valley, Peru, during the Formative Period (~1800 BC – 200 AD)*

We seek to define several processes of architectural intrusiveness that can be identified in the archaeological record, such as excavation, remodeling, and redesigning, as a first step toward explanation. We will offer examples from archaeological sites from around the world, while focusing on the architectural intrusiveness at an early stone monument on the Peruvian coast. The Castillo de Huaricanga (PV38-333) was constructed in the middle Fortaleza Valley during the Initial Period (~1800-900 BC). Following its construction, massive alterations were made to the architecture of the monument, ranging in both degree and nature of architectural intrusiveness.

Avery, George [73] *see Ernenwein, Eileen G.*

Avery-Quinn, Samuel (University of Tennessee, Knoxville)

[219] *Seeking the Tents of Zion: Landscape and Performance in an Archaeology of Camp-Meeting Revivalism*

This presentation explores the landscapes and material culture of a late 19th century revivalist organization, the National Camp-Meeting Association for the Promotion of Holiness, at three sites in Pennsylvania, New Jersey, and New York. Differences in landscape, historical reports, and material culture deposits at the sites have important implications for the archaeology of "ritual" at historic period "religious" sites in North America.

Awe, Jaime (Institute of Archaeology, Belmopan, Belize)

[107] *Messages from the Dark: The Ideological Significance of Ancient Maya Cave Art in Belize*

A decade of intensive research by the Western Belize Regional Cave Project recorded substantial evidence of ancient Maya cave art in Belize. Our research also established that the corpus of cave art in this area was produced on diverse mediums, and that the images represented were executed in styles that may range from the abstract to the real. Despite the diversity in style and execution, however, a careful study of the corpus indicates the recurrence of particular images, and notes that much of the subject matter is intrinsically associated with pervasive underworld themes in the Maya area.

[54] *see Powis, Terry G.*; [107] *Second Organizer*; [153] *see Iannone, Gyles*; [159] *Discussant*; [221] *see Stemp, William James*

Ayers, Harvard (Appalachian State University)

[167] *Blair Mountain Archeology and Listing Defense*

I led the first professional archeological research effort at the site of the 1921 Battle of Blair Mountain in 2006. I co-authored the successful nomination for the site to the National Register of Historic Places, and led the fight to prevent the delisting of the site by the state of West Virginia and the coal industry. This paper will discuss these activities.

[167] *First Chair* [167] *Second Organizer*

Ayers-Rigsby, Sara (The Public Awareness in Archaeology Group)

[24] *Issues of Access-Does Publicly Available GIS Information Help or Hinder the Archaeological Record?*

This paper deals with issues between security and open access to scientific information. Many State Historic Preservation Offices, such as the NYSHPO, the PHMC, and IHPA, have made archaeological data and GIS maps of site locations available online. In many cases, access to these databases is limited to archaeology professionals, and the general public can only view a soft version where site locations are not given, and artifacts are not specifically mentioned. These databases are an invaluable tool for the CRM professional, as they limit the need to go physically to an office and pour through past reports, but they also seem to limit the information they provide, often only giving an abstract of prior reports for the area. In addition, while they inform the general public about loosely defined 'archaeologically sensitive areas,' they do not go further than that and provide no guidance for the avocational archaeologist or history buff that is acting in accordance with the law. This paper addresses who the current users of systems like HAARGIS or CRGIS are, and how they can be improved to promote archaeology and attract a wider audience.

Ayvaz, Melissa [26] *see Ruhl, Donna L.*

Baca Marroquin, A. Emily

[137] *Political Transformations in the Central-South Coast of Peru, Asia Valley*

Political changes and social transformations occur when imperial and non imperial societies meet and this can be observed when Incas conquered regions along the Tahuantinsuyo. However, everything is not rigid in politics and different situations in between take place determining the strategy of domination. This situation can be

observed in Central-South coast of Peru where particular policies were employed during the Inca conquest of Asia Valley. In this presentation I will explore this problematic in the archaeological site of Uquira, Asia Valley and attempt to reconstruct the political scenario of the conquest of this area.

Baena Preysler, Javier (Professor of Prehistory), Elena Carrión Santafé (Subdirección General de Museos Estatales; Ministerio de Cultura. Madrid) and Felipe Cuartero Monteagudo (Universidad Autónoma de Madrid)

[58] *North Iberian affairs: Neanderthals at the End of Mousterian*

The particular ecological and physiographic conditions of Cantabria draws an especially interesting picture of human adaptations in the final part of the Mousterian. The Esquilleu Cave site shows one of the most complete chronological sequences of the Cantabrian Mousterian, beginning in early OIS 3, including OIS 3c and the OIS 3b and the environmental events H5 and H4, until the H3. All of this reinforces the "Cantabrian singularity", namely the possible co-existence of the earliest Aurignacian of southern Europe and some of the most recent Mousterian.

Bailey, Katri (PARC) and John Kelly (Washington University)

[140] *The Moorehead Moment and the Medium is the Message: the Historical and Distributional Significance of Wells Incised Plates*
Ceramics provide a medium conveying messages that extend well beyond their use in the construction of chronologies. In this paper we will explore the Moorehead Phase ceramic assemblage and the nature of continuity, change and the way in which social and ritual messages are contained and displayed by focusing on Wells Incised Plates and the shift away from the decorated jar, Ramey Incised. Incised plates are an important horizon marker over a broad geographic area of the Southeast and, as a serving vessel accentuate the way in which the Mississippian world of the 13th century is connected.

Baillie, Hal [13] *see Joyce, Arthur A.*

Baine, Keelin (University of Iowa) and Matthew E. Hill, Jr. (University of Iowa)

[234] *Procurement on the Plains: An Analysis of Large Bodied Mammals at the Scott County Pueblo*

Excavations of the Scott County Pueblo, a Protohistoric-age site in western Kansas, has recovered large quantities of faunal remains of large bodied mammals, namely bison and antelope. This analysis examines the bison procurement and processing strategies used by the site's inhabitants. Documentation of the faunal remains and taphonomic life history of the assemblage are also discussed. Conclusions are made pertaining to the relative importance of hunting in the group's subsistence strategy, preferential selection and transport of certain carcass parts, and the cultural adaptation of the people living on the plains.

Bair, Daniel [20] *see Terry, Richard E.*

Baitzel, Sarah [226] *see Johnson, Kent M.*; [226] *see Plunger, Elizabeth*

Baker, Bryan [135] *see Batista Martinez, Raquel*

Baker, Larry (San Juan County Museum Association/Salmon Ruins) and Brooks M. Marshall (San Juan County Museum Association/Salmon Ruins)

[213] *The Anatomy of an Ancient Observatory at Salmon Pueblo*

The implications that observations made by prehistoric astronomers were incorporated into the construction of Ancestral Puebloan structures have been suggested. It has been proposed that architectural floor plans of several buildings in Chaco Canyon, New Mexico and its outliers are the result of astronomical geometry being used. Such relationships have been interpreted for Salmon Pueblo, a Chacoan satellite on the San Juan River. Continuing research on archaeoastronomy at the site has revealed a single room that

functioned as an observatory for making celestial observations. Data on the room's constructional features as related to astronomy are presented to support this conclusion.

Baker, Lori [138] *see Benz, Bruce*

Baker, Suzanne (Archaeological/Historical Consultants)

[22] *Classification, Quantification, and Regional Comparisons of the Rock Art of Ometepe Island, Nicaragua*

Maderas Volcano on Ometepe Island, Nicaragua, has the largest concentration of petroglyphs yet reported in Central America. Motifs on over 700 boulders—a small portion known on the island—were subjected to typological and quantitative analyses. Abstract curvilinear designs are predominant. Representative images exist but in far fewer numbers. Comparisons with petroglyph motifs in regions to the south and north indicate that Ometepe petroglyphs were more affiliated with a widespread abstract curvilinear tradition found in rock art in lower Central America and probably associated with Chibchan cultural. Indicators of Mesoamerican contact and influence were found, but are a relatively weak presence.

[62] *see Armitage, Ruth Ann*

Balam, Pakal [212] *see Ishihara, Reiko*

Baldia, Christel [255] *see Levine, Mary Ann*

Baldwin, Derrick [75] *see Martin, Dan W.*

Balkansky, Andrew K. [169] *see Meissner, Nathan J.*

Ball, Joe [109] *see Amador, Fabio E.*

Ball, Stephen (USDANRCS)

[257] *Forty Years in the Wilderness: Sporadic Excavations at the Angel Site (1965-2005)*

The Angel Site is known primarily from the excavations of Glenn Black (1939-1962) posthumously assembled and published by James Keller in 1967. After 1965 there was a hiatus in excavations at the site but, several Indiana University field schools were conducted at the Angel site prior to resumption of annual excavations by Indiana University in 2005. This paper will present the findings of these neglected field schools (1976, 1977, and 1989) and discuss their relevance in light of both Glenn Black's work and the greater understanding of the Angel site that has developed over the last forty years.

Ballenger, Jesse (University of Arizona), C. Vance Haynes, Jr (University of Arizona) and Vance T Holliday (University of Arizona)

[21] *Palominas Arroyo: A 13 ka Paleoenvironmental Record from the Upper San Pedro Valley, Southeastern Arizona, USA*

Three cores and a suite of 20 14C dates show that wetlands occurred in the inner valley at 13-9.44 ka, bracketing Clovis occupations and "black mat" formation. At 9.44 ka the wetland was catastrophically buried. This event was prefaced by a switch to C4 grasses (9.95 ka). Nearly 4 m of sediments accumulated in the arroyo between 9.44-7.34 ka. Clovis-age pollens and environmental isotopes are compared to a nearby high-resolution speleothem record. The paleoecology and archaeology of the valley is discussed in relation to the BA/YD transition and the development of the N.A. Monsoon.

Ballenger, Jesse [234] *see Zedeno, Maria N.*

Baltus, Melissa (University of Illinois Urbana-Champaign)

[15] *Community in Conflict? Warfare and Violence in Cahokian History*

Construction of a palisade at Cahokia in the mid-twelfth century signals to many archaeologists the initiation of conflict. However, aside from a handful of fortified sites, some burned structures, and warrior iconography (created at and dispersed from Cahokia), more conclusive evidence for conflict is lacking in the American Bottom.

This contrasts with the larger region within Cahokia's influence where there is unquestionable evidence for violence. This paper will explore possible sources and directions of conflict with the goal of understanding how violence became reiterated throughout Cahokia's history, and, in fact, may have been written into the Cahokia's history from its inception.

Balzotti, Chris (Brigham Young University), Richard Terry (Brigham Young University), Ryan Jensen (Brigham Young University) and Steven Peterson (Brigham Young University)

[160] *Modeling the Maize Agriculture Potential of Landforms in the Sierra del Lacandon and Tikal National Parks, Guatemala*
Models provide a means to better understand spatial patterns found in and around archaeological sites. With much of the Sierra del Lacandon National Park currently inaccessible due to illegal settlement, an agricultural potential model was created. The model identifies areas with varying potential for maize agriculture. The model is based on data derived from the AIRSAR digital elevation model (DEM). We tested the model against ground-referenced soil and vegetation data collected in the Sierra del Lacandon and Tikal National Parks.

Bamforth, Douglas (University of Colorado)

[220] *What Do We Know About Warfare on the Great Plains?*

Archaeological data from the Plains unambiguously document a long history of community-level violence in the region. The fact of war, though, opens a wide range of other questions. Who was fighting? How was violence organized? Why did communities get along at some times and attack each other at other times? This paper identifies a series of important aspects of war on the Plains and considers what we do and do not know about them.

[256] *Discussant*

Bandy, Matthew (SWCA Environmental Consultants)

[222] *Titicaca Basin Archaeolinguistics and Farming/Language Micro-Dispersals*

David Browman made an early and important contribution to the study of the linguistic history of the Titicaca Basin with his 1992 article "Titicaca Basin archaeolinguistics: Uru, Pukina and Aymara AD 750-1450". In this paper, he explored relationships between archaeological cultures and protohistoric language distributions in more depth than had previously been attempted. I revisit this issue from the perspective of the Farming/Language Dispersal Hypothesis. I hope to demonstrate that protohistoric language distributions in the South-Central Andes can be adequately explained by a combination of Farming/Language Micro-Dispersals and sociolinguistic processes associated with the Tiwanaku state.

[87] *see Railey, Jim A.*

Banffy, Eszter (Archaeological Institute Has, Budapest, Hungary)

[61] *Same People, Different Environment: The Neolithic Transition in the Carpathian Basin*

The first farmers, originally part of a large Balkanic cultural complex, separated into well distinguishable groups in the northernmost part of their distribution (6th Mill. BC). The group in Transdanubia distributed in hilly woodlands, while east of the Danube, they lived along flat riversides. Soon, profound changes appear in the Western, woodland culture. These changes can partly be explained as adapting to the new, temperate environmental and ecologic conditions. However, the changes also resulted in different cultural habits, as in differences of their group identities. The reasons may help understanding, why various Neolithisation models existed within a rather small region.

Baram, Uzi (New College of Florida)

[170] *Organizing Archaeology: Community Outreach and Civic Engagements in the Commemoration of the Past*

Looking for Angola, an interdisciplinary research project seeking material remains of an early nineteenth century maroon community, has faced the challenges of locating archaeological remains in an urban environment. Public outreach and community involvement in Bradenton, Florida, since 2004 has intersected with public

archaeology as applied anthropology, service learning, and civic engagement. The role of the archaeologist in these endeavors deserves continuing attention. One of the survey areas faced development that threatened historic structures and the homes of its working-class inhabitants; its implications suggest a model for the outreach in terms of community organizing, with its implications for the scholar/citizen.

[170] *First Chair*; [170] *Second Organizer*

Barba, Luis (Nal University Of Mexico)

[156] *The Role of Phosphate Analysis in Mexican Archaeology*
For many years, Eid's procedure for phosphate analysis was the most widely used chemical technique in archaeology. Ken Hirth was the person who brought this technique to Mexico and successfully applied it. During his visit to Mexico City in 1978 he provided a brief training to the personnel working in the Chemistry Laboratory, IIA, UNAM. For the last three decades, this laboratory has been intensively using this technique that is presently providing important information concerning the chemical residues preserved in the pores of floors and ceramics and allowing the interpretation of the use of architectonic surfaces and ceramic containers.

[23] *Discussant*

Barbaza, Michel (Université de Toulouse-CNRS)

[177] *Glacial Rhythms and Cultural Changes in the Terminal Upper Paleolithic of the northern Pyrenees*

The global warming marking the end of the last finishing glaciation, not without reason, considered as the main factor which had changed the behavioral, technological and cultural customs of hunters during the terminal european Upper Palaeolithic. Recent data established from sites in the north hillside Pyrenees allow to specify and to qualify connections between the people and their environment during the moderated oscillations contemporary with the last magdalenian and during the Younger Dryas damage which puts an end to the ultimate palaeolithic culture with the classic azilian accomplishment.

Barber, Sarah [13] see Joyce, Arthur A.

Bardolph, Dana (University of California Santa Barbara)

[151] *Finding Food in Features: A Spatial Analysis of the Lamb Site*
Regional comparisons of plant subsistence can obscure understandings of food production, consumption, and disposal by lumping contexts together into site assemblages. This paper presents an intrasite analysis of the Lamb site in the Central Illinois River Valley, where little is known about Mississippian-period subsistence. Exploratory data analysis is used to tease stages of the food process apart by using plant refuse to define feature function. As the Lamb site has no visible architecture, such an analysis can ultimately lend a better understanding of site function as well as everyday subsistence practices in the region.

Bardolph, Dana [110] see Wilson, Gregory D.

Baret, David [206] see Kahn, Jennifer G.

Barham, Larry [27] see Shuttleworth, Andy

Barkai, Ran [58] see Shimelmitz, Ron; [58] see Gopher, Avi

Barker, Alex (University of Missouri)

[115] *Spatial Patterning and the Circulation of Iconographic Forms in the Southeastern Ceremonial Complex*

Iconographic and stylistic details of SECC gorgets from the American midcontinent exhibit statistically significant spatial patterning. These style divisions, to borrow an apt term from Jim Brown's earlier work on the broad corpus of SECC materials, suggest that despite widespread exchange of SECC objects there were specific and discrete centers of circulation of individual iconographic or stylistic forms. Analysis of these patterns--both spatial and iconographical--provide opportunities to better understand both the role of SECC objects in antiquity and, more generally, how meaning is conveyed,

construed and constrained by individual iconographic objects.

Barker, Andrew (University of North Texas), Barney Venables (University of North Texas), Stanley Stevens (University of South Florida) and Steve Wolverton (University of North Texas)

[4] *Exploring Protein-Ceramic Interactions Using TOC Analysis, Protein Assays and LC-MS*

Despite studies demonstrating the potential for proteins to bind to, and theoretically preserve within, ceramic matrices, consensus is lacking regarding the exact nature of this interaction. In order to improve understanding of this topic, we employ a novel methodology based on total organic carbon analysis, protein assays and LC-MS to test experimentally prepared, protein-spiked pottery. Further, we evaluate several extraction protocols to determine an optimal approach. In addition to independently replicating previously reported results, our data shed new light on the nature of protein-ceramic interactions and enable us to provide methodological suggestions for future proteomics-based studies.

Barker, Thomas [73] see Douglass, Matthew J.

Barlow, K. Renee (College of Eastern Utah Prehistoric Museum)

[248] *Farming and Foraging in Range Creek: Shifting Strategies of Maize Cultivation, Residential Mobility and Remote Storage in Cliff Granaries among the Fremont of the northern Colorado Plateau*
Foragers and farmers began cultivating and storing maize in Range Creek, a deep tributary of the Green River below Desolation Canyon, circa AD400. Maize farming and storage strategies are modeled within the context of behavioral ecology, and granaries are examined as another dimension of subsistence. By the 800s these people had acquired all the hallmarks of "Fremont" culture and occupied small, seasonal household farms on benches and knolls overlooking Range Creek. A dramatic change in farming and storage practices is indicated circa AD1000, when Fremont began storing large quantities of maize in remote cliff granaries, along with some wild crops.

Barnard, Hans (Cotsen Institute of Archaeology at UCLA), Alek Dooley (Integrated Gulf Biosystems), Kym Faull (UCLA Pasarow Mass Spectrometry Laboratory)

[55] *The Search for Molecular Evidence of Ancient Wine*
Reports on the presence of archaeological residues of ancient wine have often been based on indirect evidence, most notably indications for added resins. New methods and techniques, including tandem mass spectrometry after liquid chromatography, may be able to show the presence of components of wine in samples of archaeological pottery and thus allow more firm conclusions to be drawn.

Barnard, Hans [55] see Barnard, Hans; [188] see Nigra, Benjamin T.

Barnes, Monica (Andean Past)

[94] *The Life and Work of an Andean Archaeologist: Craig Morris' Contributions to our Understanding of the Inca*

Given its status as an expansionist state, the Inca polity cannot be viewed only from its center. Craig Morris pioneered the study of Inca provinces, concentrating for many years on Huánuco Pampa. Then, for almost two decades, he focused on the coastal site of La Centinela, capital of the Chincha kingdom, a very different part of Tawantinsuyu. In 1993-94 he explored the Inca occupation of Cochabamba, Bolivia. Prior to his 2006 death his field research encompassed Tambo Colorado, in Peru's Ica Valley. This paper highlights Morris' contributions to our understanding of Inca culture and administration.

Bar-Oz, Guy (University of Haifa), Mina Weinstein-Evron (University of Haifa) and Reuven Yeshurun (University of Haifa)

[16] *Trends in Ungulate Exploitation in the Epipalaeolithic of the coastal plain, Israel*

Mountain gazelle (*Gazella gazella*) is the main hunted ungulate species in the Natufian, a late Epipalaeolithic culture of the southern Levant (13-11.5 ky BP). We present a broad chronological view of the

development of gazelle dominance in the Natufian while examining zooarchaeological data from six Epipalaeolithic assemblages from the northern coastal plain, Israel, altogether spanning the period between ca. 20-11.5 ky BP. Natufian ungulate assemblages are more heavily dominated by gazelles than preceding assemblages. These differences are not consistent with climatic fluctuations or climatically-driven landscape changes to which Natufian populations were responding. Thus, our results accord the cultural filter hypothesis.

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

[129] *Taphonomy and Paleoecology of La Grotte des Contrebandiers (Témara, Atlantic Coast, Morocco): Evidence from the Pleistocene Rodent Fauna*

La Grotte des Contrebandiers is a Middle Stone Age site preserving hominin remains in an Aterian context. The rodent sample exhibits gastric etching and extensive fragmentation; this evidence is consistent with the activity of a small mammalian carnivore. The rodent fauna is dominated by *Meriones* cf. *maghrebianus*, a taxon indicative of a xeric habitat, but not true desert. The presence of *Dipodillus campestris* reinforces the xeric habitat interpretation. The murine *Mus spretus* is also present, but is relatively uninformative in regards to habitat. This taxonomic composition suggests a Mediterranean biome comparable to that of the present-day site.

Barrett, Jason W. [139] see *Dickson, D Bruce*

Barrientos, Gustavo (Facultad de Ciencias Naturales y Museo, Universidad Nacional de La Plata), Cecilia Panizza (CONICET, Universidad Nacional de La Plata; República Argentina), Fernando Oliva (Universidad Nacional de Rosario, Universidad Nacional de La Plata; República Argentina), Luciana Catella (CONICET, Universidad Nacional de La Plata; República Argentina) and Rodolfo Barrientos (Universidad Nacional de Salta; República Argentina)

[138] *Late Holocene Hunter-Gatherer Population Dispersal in Central Argentina: Evidence from the Southern Pampean Region*

An increasing number of evidence suggests a population dispersal from northeastern Patagonia (ca. 40° S, 63° W) towards northern regions beginning shortly after 1000 cal years BP. Such a dispersal purportedly reached areas situated as far as 500 km away from the most likely dispersal center, well deep into the Pampean Region. The aim of this paper is to review the available evidence about this process, as well as to present the first results of simulation models intended to estimate dispersal rates under different scenarios defined on the basis of various demographic and ecological assumptions.

Barrientos, Gustavo [47] see *Belardi, Juan B.*

Barrientos, Rodolfo [138] see *Barrientos, Gustavo*

Barrientos, Tomas [54] see *Acuna, Mary Jane*; [229] see *Popenoe Hatch, Marion*

Bartelink, Eric (California State University, Chico) and Phillip Johnson (American Samoa Power Authority)

[161] *Paleodietary Patterns on Tutuila Island, American Samoa: Evidence from Stable Carbon and Nitrogen Isotope Analysis*

In this presentation, we examine temporal and regional variation in prehistoric diet on Tutuila Island, American Samoa. The study sample includes 32 burials recovered from six archaeological sites, excavated by the Archaeology Department of the American Samoa Power Authority. Using stable carbon and nitrogen isotope data derived from bone collagen in conjunction with carbon isotopes of bone apatite, we examine the relative importance of marine versus terrestrial resources to the diet (ca. 1200-100 B.P.). Nonhuman archaeofaunal remains were also analyzed to provide baseline data for interpreting the human diet. Preliminary data indicate geographic differences in diet on Tutuila.

Barton, C. Michael [205] see *Miller, Alexandra E.*

Barton, Loukas (National Park Service)

[197] *Disaster and density-dependent habitat selection in southwest Alaska*

Prehistoric sites in southwest Alaska are strongly clustered around spatially delimited, resource-rich areas characterized by high taxonomic diversity today. Yet severe ecological turnover driven by volcanoes, tsunamis, and tectonic uplift or subsidence characterizes the environmental history of the region. These punctuated disasters frequently force local populations of people, plants and animals into prolonged exile. Because re-colonization episodes are commonplace, the region is an ideal setting to evaluate and refine the logic and assumptions of density-dependent habitat selection and the ideal free distribution. This is an effort to examine the patterns of resource intensification in a spatially-structured but temporally volatile environment.

[27] see *Chisholm, Linda C.*; [155] see *Morgan, Chris*

Barton, Michael [184] see *Bergin, Sean M.*

Bar-Yosef, Ofer (Harvard University)

[155] *The origin(s) of East Asian Pottery*

Pottery making emerged in East Asia began at least by 18 ka cal BP as established by a joint project with the Hunan Institute of Archaeology. The early appearance of pots within the context of hunting and gathering societies in well-dated in South China, Japan, North China and East Siberia and stands in contrast to the record of Western Asia where the making of such clay recipients began long after the emergence of full agricultural system. The presentation discusses alternative interpretations of East Asian records and whether pottery was invented independently or spread from a "core area".

[126] *Discussant*; [177] *Discussant*

Basalik, Kenneth

[180] *Dressing Up the Public Dissemination Document: Do We Go "Off the Rack" or "Tailor-Made"?*

Dissemination of archaeological data to the public has been an important part of cultural resources management archaeology. The inexpensive standby for a public dissemination document has been the brochure or the booklet. Newer technologies that continue to become available allow for more sophisticated and elaborate public dissemination documents to be produced for substantially less money. The use of these tools is limited more by our imagination and our ability to communicate with the general public than the cost outlay. Booklets, pamphlets, brochures, web pages, video productions, exhibits, signs, posters, lectures, etc. are all means of providing the public with information concerning archaeological resources. Each of these mitigative elements, or a combination of several, may be the most appropriate mitigation measure on a specific project. It is important to identify whether the archaeological story can be appropriately disseminated with an "off the rack" solution, or whether a "tailor-made" approach is more appropriate. This paper provides examples of varying uses of media and products that have been successfully employed in an effort to appeal to the varying levels of knowledge and interest represented by the potential target audience. The work is considered within the context that of how the dissemination document can meet the needs of the project, be produced at a reasonable cost, as well as provide information and insights into the past that resonate with the public.

Bate, Emma (Indiana University)

[97] *Lucayans and Spaniards: Early Contact at the Long Bay Site, San Salvador, Bahamas*

The Long Bay Site, San Salvador, Bahamas, was the location of early contact between the Lucayan inhabitants of the Bahamas and early Spanish explorers, yet the circumstances and effects of this early interaction are poorly understood. This paper will discuss the Lucayan settlement at Long Bay and the effects that contact with Spanish explorers had on the native way of life at the site. Particular emphasis will be placed on understanding the ceramic assemblage recovered

during excavations at the site.

Bates, Lynsey (University of Pennsylvania)

[201] *GIS-based Analysis of Provision Grounds on Jamaican Sugar Plantations*

The provision ground system, which required enslaved laborers to cultivate perishable foodstuffs, was an integral part of labor control in British colonial Jamaica. By quantitatively analyzing the spatial characteristics of provision grounds using GIS-based modeling, this poster explores the factors influencing variability among Jamaican sugar plantations. Specifically, comparisons drawn between two historic estates based on the size, location and quality of the provisioning land shed light on the relative importance of several factors governing a plantation's economic productivity, including the plantation's proximity to large market centers, the number of acres planted in cane and the size of the workforce employed.

Batista Martinez, Raquel (Colorado State University/LORE-LPB), Bryan Baker (Frontier Precision), Christopher Fisher (Colorado State University), and LORE-LPB Team

[135] *Measuring Space: The Application of Geo-Spatial Technologies to Full-Coverage Survey*

As part of the LORE-LPB project recent full-coverage survey encountered dense occupations with intact architectural concentrations in rugged topography and heavy vegetation cover. Here we present the methodologies and hardware we utilized including GPS equipment, Trimble Terra-Sync and Pathfinder software, GIS development and use, basic categorization, and database management.

Battillo, Jenna (Washington State University)

[74] *An Investigation into the Preservation of Saw Marks and Cut Marks on Burnt Bone*

This experiment was conducted to examine preservation of tool marks in burnt bone. Twenty-four specimens from six *Sus scrofa* forelimbs were cut using three saws and a knife. Specimens were weighed, photographed, and tool marks were analyzed before and after burning. They were burned in an outdoor fire (277- 770°C) or in a kiln at 600, 800, or 1000°C. Preservation of saw marks was scored on a scale of 1 to 3 (3 being least preserved) using photographic comparison. As hypothesized, higher temperature correlated to degradation. However, retention of saw marks was adequate for some analysis up to 1000°C.

Bauder, Jennifer [83] see *Wilson, Jeremy J.*

Bauer, Andrew (University of Chicago)

[11] *An Archaeology of 'Nature': South Indian Landscape History and the Construction of the Natural*

A series of environmental features (e.g., rock pools, weathering pits, and soil distributions) were produced during the South Indian Iron Age as a means of appropriating space for politically instrumental ritual activities and privileged access to agro-pastoral production. Yet, despite a long history of human-environment interaction, 19th and 20th century colonial naturalists would later classify many of these same objects as characteristic elements of an a-priori people-less "Nature." What were politicized objects to Iron Age inhabitants became equally political (sensu Latour's "political epistemology") in a different context when natural science paradigms began categorizing them as "natural" elements of tropical landscapes.

Bauermeister, Ann (NPS, Midwest Archeological Center)

[176] *The Riverbank Site: A Non-Earthwork Hopewell Site in Ross County, Ohio*

The Riverbank site is a non-earthwork site that contains archeological materials that are dated to the Middle Woodland period and consistent with use by those of the Hopewell Culture. This important site is located adjacent to the renowned Hopewell site, a large earthwork complex. The site's location on a high terrace overlooking a river and next to an earthwork may have attracted many different types of uses by the Hopewell. A recent data recovery project

undertaken at the Riverbank site was a significant opportunity to comprehensively investigate just what was happening outside of those walls some 2000 years ago.

Baumann, Timothy (Glenn A. Black Laboratory, Indiana University) and Andrew Hurlley (University of Missouri-St. Louis)
[187] *Brick by Brick: Building Sustainable Communities in St. Louis with Archaeology*

Archaeology has assisted two St. Louis neighborhoods, Old North and Jeff-Vander-Lou, in their efforts to build sustainable communities. St. Louis, like many established cities, has been impacted by failed urban renewal programs and by the development of the interstate system, which fostered "white flight" and the suburbanization of America. Archaeological research has attempted to create a "sense of place" for those that remain, providing a link between the past and the present. Neighborhood residents have guided and assisted in various heritage projects (e.g., oral histories, exhibits, a documentary, excavations, K-12 programming) with a desired outcome of economic and cultural revitalization.

Baumann, Timothy E. [62] see *Altizer, Valerie*; [257] see *Marshall, Joel*

Bausch, Ilona (Leiden University) [95] *Discussant*

Baxter, Carey [164] see *Carlson-Drexler, Carl G.*

Baxter, Erin (University of Colorado, Boulder) and Ruth Van Dyke (Binghamton University)

[51] *Cynthia Irwin-Williams Augers the Dirt Ceiling*

Fifty years ago, Cynthia Irwin-Williams collided with the "dirt ceiling" in the form of a closed Harvard classroom door. Cynthia persisted — a trademark throughout her career -- with equal parts, gumption, panache, and doggedness. Along the way, in spite of the status quo, she became a professor, directed seminal excavation work, contributed a groundbreaking model of the Archaic sequence, defined the Chaco Phenomenon, and headed the SAA. Throughout, she befriended, entertained, and enthralled all with her joie de vivre and colorful character. Cynthia left an indelible mark on the field that still resonates. Her story is one of achievement on her own terms.

Baxter, Jane Eva (DePaul University)

[225] *Becoming Bahamian: Constructing Native Identities in the Recent Past*

The Bahamian Archipelago was depopulated in the 16th century when Spanish colonizers removed the native Lucayans to Hispaniola and elsewhere in the new colonies. In the late 18th and early 19th centuries, British Loyalists moved with their slaves to the Bahamas and repopulated the archipelago. The descendants of these slaves are now the majority population of the Bahamas and consider themselves and present themselves as the native population of the island. This paper explores how history, archaeology, and memory are integral parts of establishing a native identity for a population who came to the Bahamas within the past 150 years.

Baxter, Jane Eva [51] see *Neal, Lynn A.*

Bayham, Frank [120] see *Ramirez, Nicole A*

Bayman, James [163] see *Euber, Julie K. .;* [68] *Discussant*

Beach, Timothy [91] see *Luzzadder-Beach, Sheryl*

Beahm, Emily L. [115] see *Smith, Kevin E.*

Beasley, Virgil (Geo-Marine Inc.), Duane Peter (Geo-Marine Inc.), Myles R. Miller (Geo-Marine Inc.) and Tim Graves (Geo-Marine Inc.)

[235] *Madera Quemada Pueblo: Investigations of a Fourteenth-Century Jornada Mogollon Pueblo on Fort Bliss Military Reservation, South-central New Mexico*

Excavations at Madera Quemada pueblo were sponsored by the Environmental Division of Fort Bliss and provided a rare opportunity to investigate a Jornada Mogollon pueblo in southcentral New Mexico. The pueblo consisted of a single roomblock of 13 rooms. Several rooms were burned, and deposits of burned roofing debris and support beams were present on floors. Floor and subfloor features were in an outstanding state of preservation and contained intact floor assemblages. The excavations provided important information on architecture, room function, social organization, and ritual abandonment of the pueblo.

Beaubien, Harriet (Smithsonian / Museum Conservation Institute)

[77] *Burial Offerings Made of Painted Perishable Materials at Waka'* Ornate objects once made of painted wood, gourd and other organic materials were among the special offerings recently found in several elite tombs at El Perú-Waka'. What has challenged our understanding and appreciation of these types of artifacts is their degraded state when found – typically as dense concentrations of paint flakes resulting from complete degradation of the organic substrates. At Waka', field conservation techniques used to recover some of the deposits and technical study of paint flakes from a range of objects are yielding important new data about how they were produced and what kind of offerings they might have been.

Beaver, Joseph (University of Minnesota Morris)

[73] *Hunter-Gatherer Ethnology and the Tyranny of Linear Analysis (with Apologies to H.M. Wobst)* Large-scale analyses of ethnographic data are an important source of insight into hunter-gatherer adaptations and social organization. Such analyses almost invariably involve regression or correlation. Even with multiple regression and partial correlation analyses, there is an implicit assumption that causal variables act independently of one another—that their contributions to outcome variables can be combined linearly. Much recent research in and outside of archaeology suggests that many aspects of human organization and adaptation behave non-linearly. This paper applies fuzzy-set theory to a large ethnographic data set compiled by Lawrence Keeley, demonstrating an alternative to linear analyses.

Bech, Julio Amador [22] see Amador, Julio A.

Beck, Brenda (ITARP - University of Illinois), Amanda Butler (Illinois Transportation Archaeological Research Program) and Madeleine Evans (Illinois Transportation Archaeological Research Program)

[83] *Distance Makes the Rocks Grow Fonder: A Comparative Look at the Cahokian Influence (or Lack Thereof) on the Orendorf Lithic Assemblage*

The relationship between the Mississippian population of the Central Illinois River valley and that of Cahokia has been of longstanding interest to area researchers. Roughly 100 miles separate the Orendorf site, a Mississippian town, from the American Bottom, and evidence of Cahokian influence is seen in assemblages from more distant Mississippian sites. This paper compares the lithic assemblage from settlement "D" at the Orendorf site with those of American Bottom Mississippian sites, including Cahokia. We address raw material use, a lack of centrally organized and rigid production standards, and the relative obscurity of interregional exchange in the settlement "D" assemblage.

Beck, Brenda [83] see Butler, Amanda

Beck, Charlotte (Hamilton College), David B. Madsen (University of Texas, Austin) and George T. Jones (Hamilton College)

[118] *The Crescent and the Millingstone: Early Holocene Technological Changes in the Eastern Great Basin* North American Paleoindian populations long have been characterized predominantly as hunters, but contemporaneous populations of the intermountain region are known to have been generalists, particularly emphasizing dietary resources associated

with shallow water settings. With diminished mesic landscapes owing to early Holocene climate change, human populations adjusted by diet breadth expansion. The surface lithic record of the eastern Great Basin is used to monitor two corollaries: shifts in the scale and configuration of mobility and a simplification of stone tool technology.

Beck, Margaret (University of Iowa)

[200] *Current Investigations at the Scott County Pueblo (14SC1)* Scott County Pueblo (14SC1), otherwise known as El Cuartelejo, is an unusual site in western Kansas with a 7-room stone and adobe pueblo dated to the period around 1700. Originally investigated in 1897-1898, previous researchers attributed the site to either Puebloan refugees from Taos or Picuris or to Plains Apache groups who had significant interaction and exchange with these pueblos. This poster summarizes ongoing research at 14SC1, including updated ceramic data from analysis of the Kansas State Historical Society collection. In addition to Dismal River sites and painted southwestern ceramics, some sand-tempered sherds suggest local manufacture of southwestern vessel forms.

Beck, Robin (University of Michigan), Chris Rodning (Tulane University), David Moore (Warren Wilson College)

[52] *The Architecture of Contact: Comparing Burned Structures at the Berry Site, North Carolina*

In January 1567, a Spanish expedition under Captain Juan Pardo arrived at the native town of Joara, located at the Berry site in the upper Catawba Valley of western North Carolina. Here, Pardo established Fort San Juan and manned it with 30 soldiers who lived at Joara for a year and a half. From 2007-2008, excavations at Berry focused on two of the five burned buildings that are believed to have housed Pardo's soldiers. This paper compares these buildings and links architectural distinctions between them to deteriorating relations between Joarans and Spaniards during the eighteen months of the garrison's occupation.

Beck, Robin [52] *First Organizer*; [52] see Moore, David G.; [52] see Rodning, Christopher B.

Beck, Jr., Robin A. [52] see Sanders, Merritt M.

Becker, Mark [161] see Daniels, James T.

Becker, Rory (USDA-NRCS)

[249] *Lasers on the Landscape: Using LiDAR Data in Cultural Resource Management*

This paper provides a brief discussion of how LiDAR works and some of the potential uses/benefits it may provide to the cultural resource management community. Specifically, the use of LiDAR data to assist with site recordation during Emergency Watershed Planning in northeastern Wyoming will be discussed.

Beebe, Caroline (Digital Library Consulting)

[24] *Digital Chau Hiix: Principles, Problems and Simple Cost Effective Solutions*

Digital recordkeeping has become ever more complex and its security no longer protected by paper-based archival methods. For fifteen years the Chau Hiix Belize Project has been applying digital collection tools, addressing problems and solutions such as cost effectiveness, training, tool maintenance, error checking, version and format establishment, controlling vocabularies, data migration, and now: where are data preserved and on what media? This paper describes Chau Hiix practices and current thinking on digital archiving as well as adopted systems and technologies providing the most likely scenario for digital data to survive the next century in a simple manner.

Bejay, Timothy [235] see Marek-Martinez, Ora V.

Begley, Christopher (Transylvania University)

[65] *Traditional Questions in the Archaeology of Eastern Honduras: Misled by 'Center' and 'Periphery'*

Research in eastern Honduras has been directed by the assumption

that this 'periphery' is best understood by looking at it in relation to its larger Mesoamerican neighbors. Here, the ways in which my research in the Mosquitia of eastern Honduras had to address issues such as influence from Mesoamerica before looking at more isalient questions about sociopolitical transformations in the Mosquitia. Ultimately, I move beyond questions about cultural affiliation and explore the ways in which power is acquired, applied, and maintained by newly emerging elites beginning around AD 500, and how long-distance relationships were converted in political capital.

Beisaw, April (Heidelberg University)

[181] *Knowledge, Power, and the Cultures of Repatriation*
The Native American Graves Protection and Repatriation Act challenges archaeologists to make determinations of cultural affiliation in consultation with Native Americans. To determine affiliation, identity is reduced to a checklist of evidential sources. One loophole is given, expert opinion, but never defined. Archaeologists often rely on culture history and its labels of identity while Native Americans often rely on oral traditions and its identity labels. A case study provides a context for considering the genealogy of knowledge inherent in such a claim and the imbalance of power that may lead to epistemic injustice.

[180] see *Gibb, James G.*

Belardi, Juan (Univ Nac de la Patagonia Austral), Gustavo Barrientos (CONICET, UNLP, UNCPBA), Rafael Goñi (INAPL, UBA, UNCPBA) and Silvana Espinosa (CONICET, UNPA)

[47] *Temporal Trends in the Hunter Gatherer Occupation of the Tar-San Martín Lakes Basin (Southern Patagonia, Argentina)*
The Tar and San Martín lakes fill a glacial basin on the eastern slope of the Andes. Like in similar Patagonian environments, the first recorded occupation occurs at the beginning of the Holocene. The basin seems to have been only occasionally used until 5.5 ky cal BP, when the frequency of radiocarbon dates increases, coincident with the stabilization of the local environmental conditions. The summed probability distribution of the calibrated radiocarbon dates corresponding to Late Holocene ages differs from those recorded at neighboring areas, thus suggesting a rather decoupled pattern of occupation at the mesoscale, whose likely meaning will be discussed during the presentation.

Belfer-Cohen, Anna [186] see *Hovers, Erella*

Belisle, Veronique [145] see *Williams, Patrick R.*

Belknap, Lori (Southern Illinois University Edwardsville), James A. Brown and John E. Kelly

[140] *Moorehead Phase Ritual Landscape at Mound 34, Cahokia*
Armed with the hypothesis that Mound 34 was an area of ritual activity, Dr. Brown began a joint venture with Dr. John Kelly to investigate this inconspicuous mound on the western edge of the Ramey Plaza. A culmination of 12 years of excavations, demonstrates that Mound 34 is an exemplar of the distinct characteristics of the Moorehead Phase. This paper reports on the excavations and the sequence of ritual activity conducted at the site, and how the context of the findings makes Mound 34 an exceptional place on the cultural landscape of AD 1200.

Belknap, Lori [36] see *Holt, Julie Zimmermann*

Bell, Alison (Washington and Lee University), Alexandra Massey (Washington and Lee University) and Karen Smith (Monticello)

[166] *Material Culture and Social Liminality: Variation in Ceramic Consumption among Monticello Residents*

Our poster conveys results of recent archaeological testing at the residential site of one of Thomas Jefferson's free Euro-American overseers. Ceramic seriation and a mean ceramic date of c. 1797 suggest an occupation earlier than that indicated by historical documents (c. 1806-1822). We use data from nearby contemporary sites – including several occupied by enslaved African-American laborers – to consider whether this discrepancy reflects a flaw in

archival records or whether the seemingly early assemblage date, in this and somewhat comparable cases, reflects strategies in ceramic consumption frequent among socio-economically middling families.
[166] *Second Organizer*

Bell, Ellen (California State University, Stanislaus) and Marcello Canuto (MARI, Tulane)

[258] *Rural Settlements, Regional Ties: Administrative Strategies and Prestation Goods in the Copan Kingdom*

The El Paraíso Valley provided a vital route of access, trade, and communication in southeast Mesoamerica during the Classic period (AD 250-900). Two large centers, El Cafetal and El Paraíso, located 1.5 km apart, formed nodes in Copan's network of interaction, and together they provide insight into Copan's regional administrative strategies. In this paper, we explore these strategies to suggest that, while El Paraíso was established by Copan to exert control in the region, and El Cafetal was a local, autochthonous center, patterns seen in rural settlements suggest a complex and contested web of affiliations in the valley and beyond.

Bell, Ellen E. [65] see *Canuto, Marcello A;* [258] *First Organizer;* [258] *First Chair*

Bell, Julie A. [19] see *Glowacki, Donna M.*

Bello, Charles [60] see *Dillian, Carolyn*

Bellorado, Benjamin (Crow Canyon Archaeological Center), Kurt F. Anschuetz (Rio Grande Foundation for Communities and Cultural Landscapes) and Rory P. Gauthier (Bandelier National Monument, National Park Service)

[19] *Plant Seeds and Village Needs: Modeling Village Agriculture in the Central Mesa Verde and Northern Rio Grande Across the Dimensions of Time and Space*

There is no singular way to grow corn, beans, squash, and other economically important crops, such as cotton, in the northern Southwest. Ancestral Pueblo populations in the Central Mesa Verde (CMV) region and the Northern Rio Grande (NRG) developed diverse farming techniques to sustain their communities in the face of ever-changing natural environmental and demographic circumstances. Research undertaken as part of the Village Ecodynamics Project-II is examining the similarities and differences between the agricultural systems upon which the pre-Columbian CMV and NRG Pueblo populations relied. This presentation reviews these farming systems and outlines methods for evaluating their agricultural productivity. Three key Words: Agriculture, Mesa Verde/Rio Grande, Modeling

Bellucci, Jeremy [161] see *Inanez, Javier G.*

Belmaker, Miriam (Harvard University) and Sabrina Curran (University of California, Santa Barbara)

[205] *Paleolocomotion and Paleodietary Studies of the Cervid Guild in the Lower Paleolithic site of 'Ubeidiya, Israel: Implications of Early Homo Landscape use in Mid Latitudes*

Early Homo dispersed during the Early Pleistocene from Africa to Eurasia. 'Ubeidiya, Israel (1.6-1.2 Ma) is one of the earliest site to attest to this dispersal. The cervid guild at the site bears marks of utilization by hominins for meat consumption and may be used as a proxy for landscape use by Homo. We describe the range of environments utilized by the cervid guild using paleodietary (mesowear) and paleolocomotion (3D geomorphometrics). Results suggest a range of mosaic woodland and open environs and emphasize the role of closed habits in early hominin behavior in contrast in those in East Africa.

Bement, Leland (Oklahoma Archeological Survey, OU) and Cody Kiker (University of Oklahoma)

[210] *Construction and Destruction of the JS Clovis Cache, Oklahoma Panhandle*

Recent study of the 112 objects contained in the JS Clovis tool cache from Beaver County, Oklahoma describes the cache's composition,

origin of the implements, and postulated home of the Clovis group responsible for making the implements. Key attributes including overshot flakes, fluted preform, and ochre staining aid in identifying a Clovis affiliation for the cache contents. The various tools can be grouped according to defined Clovis lithic reduction sequences, including biface, blade, and flake technologies. Edge angle measurements hint at tool uses. Overall tool condition provides clues to use-history of certain implements and an overall history of cache utilization.

Benden, Danielle [70] *see Boszhardt, Ernie*

Bender, Susan (Skidmore College) and Ben Perlmutter (Skidmore College)

[72] *Archaic Architecture at a Forager Base Camp in South Park, Colorado*

A series of superimposed house floors dating from the Early to Middle Archaic are compared with architectural features from other Archaic sites in the southern Rocky Mountains. While the dimensions of the floors coincide nicely with other house features in the region, other elements of them are unique. These architectural features thus yield new insight into forager interaction with this mountainous landscape.

Benfer, Bob (University of Missouri-Columbia)

[89] *New Solar Alignments from Buena Vista, Peru*

Solstice orientations are widespread in architecture of Late Pre-ceramic monumental sites in western South America. By 2,200 BC, at Buena Vista, Peru, solstice alignments were embedded in: sculptures, offering chambers, stone walls and heads, pillars, quartz mine. One line has seven reference points. Two points, at its extremes, capture light cast by the solstice sun. A personified disk gazes at the setting sun, which casts light on its face. Another line, 2,200 BC, shows helical rise of Andean water constellations over one rock, set on a ridge, and the solstice sunrise over another. Deduced alignments for nearby sites were found.

[89] *First Organizer*, [89] *see Adkins, Larry R.*

Benn, David W. [29] *see Hajic, Edwin R.*

Bennett, Gwen (McGill University)

[155] *Xianbei, Khitan, Liao or Jin? Archaeological Investigations of the Chifeng Border Regions*

The Khitans were the first northern group to conquer the Chinese Empire, establishing the Liao dynasty in 907. Their cultural accomplishments are exemplified by pagodas, tombs, and city ruins that still stand in northern China, and histories document their political and military events. Yet little is known about non-elite Khitan activities and organization. This paper presents the on-going re-analysis of non-elite ceramics dating between 200-1,200 C.E. from Chifeng Inner Mongolia that will allow us to look at changes in regional settlement patterns, activities, frontier and border interactions, and processes involved in Liao state formation.

[155] *see Flad, Rowan K.*

Bennett-Rogers, Ann (USDA-NRCS)

[249] *Forest Practices in the Douglas Fir Region and Archaeological Resources*

Forest practices have impacted the landscape and archeological sites of the Pacific Northwest for over hundred years. Changes in forest practices over the last 20 years have altered the degree of impacts to archaeological sites. This paper will look at case studies of forest practices and the no adverse impact to the archaeological sites.

Benson, Buck [175] *see Maschner, Herbert*

Benz, Bruce (Texas Wesleyan University), Lori Baker (Baylor University) and Michael Blake (University of British Columbia)

[138] *Early Maize in Latin America: AMS Dating, Morphology and Ancient DNA*

New analyses of maize macro-remains from Mexico to Chile, including morphological analysis, ancient DNA, and AMS dating are contributing fresh perspectives on the spread of domesticated maize.

Working with some of the earliest known macro-samples collected and contributed by colleagues in Mexico, Belize, Honduras, Peru, and Chile, we have recovered several domestication genes and analysed the cob morphology of AMS-dated specimens. We explore the implications of these data for understanding the spread of maize out of Mexico on its southward journey into South America.

Benz, Bruce [163] *see Blake, Michael*

Benz, Emily (Washington State Univ.), Colin Grier (Washington State University) and John Jones (Washington State University)

[201] *A Statistical Approach to Pollen: Quantifying Environmental Change on Grenada*

Analysis of a core collected from Meadow Beach in northeast Grenada reveals details of past environmental conditions. Well-preserved fossil pollen documents changes in vegetation, increased salinization, and possible episodes of human occupation in the site area reflected by increases in economic plant taxa. An applied statistical approach including the use of correspondence analysis has been used on baseline data and pollen concentration values, providing a quantified look at the apparent trends within the pollen record. The use of statistics to quantify pollen data helps to provide important archaeological details for this important but understudied island.

Berg, Caryn (Left Coast Press) and Barbara Roth (University of Nevada, Las Vegas)

[51] *Introduction: Celebrating Women in Archaeology*

In this symposium, we seek to do two things: to honor the careers of women who have helped develop the discipline, and to showcase the potential of archaeology for women early in their careers. This paper summarizes some of the highlights of the contributions of women to our discipline and celebrates the way that they paved for later generations.

[51] *First Organizer*, [51] *First Chair*

Berg Vogel, Michelle (U of Illinois Extension / McCully Heritage), Gregory Vogel (Southern Illinois University Edwardsville), and James Powers (Southern Illinois University Edwardsville)

[215] *Picturing Change: Documenting Environments and Culture of the Lower Illinois River Valley Through Historic Images*

Picturing Change documents historic-era environmental modifications and material culture in the Lower Illinois River valley through early images. The visual record in this area extends to the mid 1800s, when artists, portraitists, professional landscape photographers, and amateur photographers documented their surroundings. Images record information in fundamentally different ways from written documents, recording not only the intended subject, but also unintended material within the frame. To date, the project has digitized and cataloged over 700 images, documenting both environmental and cultural change, and providing an invaluable resource to researchers in archaeology and many other disciplines.

[238] *Discussant*

Bergevin, Jesse (Oneida Indian Nation)

[164] *The Oneida Indian Nation Archaeology Program*

The Oneida Indian Nation maintains a History program that has examined and preserved Oneida History from time immemorial through the present, engaging in the identification of historic resources on Oneida Indian Nation lands by using archaeological survey, historic building inventories, document research and oral histories. The Oneida Indian Nation maintains and preserves not only the history in the earth but also preserves materials reacquired by the Nation in a modern archival facility. The History department engages in cooperative efforts both within the Nation and with the local community to promote education and awareness of Oneida history.

Bergh, Sarah (University of Georgia)

[250] *Intra-site Variability in Seasonal Occupation at Back Creek Village, St. Catherines Island, Georgia*

It is important to investigate multiple proxies of seasonal occupation

from multiple contexts of a single site. In the past, the middens at Back Creek Village (AD 1200-1600), on St. Catherines Island, Georgia, were attributed to refuse that accumulated outside structures occupied by sedentary households. However, intra- and inter-midden variation must be evaluated to determine if these middens represent similar modes of accumulation. This study uses seasonal presence of fishes in the estuary and seasonal growth of *Mercenaria* spp. to explore seasonal patterns of midden deposition. This will facilitate an assessment of site function and seasonal occupation.

Bergin, Sean (School of Human Evolution and Social Change, ASU), Gary Mayer (Southern Illinois University Edwardsville), Hessam Sarjoughian (Arizona State University), Isaac Ullah (School of Human Evolution and Social Change, ASU) and Michael Barton (School of Human Evolution and Social Change, ASU)

[184] *Coupled ABM-GIS Modeling of Agro-Pastoral Systems in Eastern Spain*

We present results of a new approach to computational modeling of small scale farming in archaeological contexts that couples an agent-based model of farming households with GIS-based models of landscape change. Agents make decisions about farming and herding strategies based upon landscape characteristics (drawn from the GIS) and household subsistence needs. In turn, agent agricultural practices contribute to simulated landscape dynamics. This allows us to carry out 'experiments', as multiple model runs with variable initial conditions, to explore the impact of household subsistence decisions on Holocene landscape evolution in the Penaguila Valley of eastern Spain.

Berkson, Alice (University of Illinois, Urbana-Champaign)

[38] *Lifetime Volunteers in Illinois Archaeology*

The Illinois Association for Advancement of Archaeology, founded in 1969, unites all those interested in the state's archaeology – amateurs, professionals, students and the public at large. With ten chapters throughout the state, our members foster site preservation, educational projects, and research through local programs and our quarterly publication *Illinois Antiquity*, our journal *Rediscovery*, and grants from our Permanent Fund. Our poster features recipients of our Lifetime Volunteer award for the past decade, individuals who have made a lasting contribution to the archaeology of Illinois.

[238] *First Organizer*; [238] *First Chair*

Bernardini, Wesley (University of Redlands)

[100] *Ceramic Connections: Documenting Ties between the Hopi Mesas and the Verde Region in the 14th Century A.D.*

This analysis investigated contacts and movement between sites in the Perry Mesa/Verde regions and sites on the Hopi Mesas through chemical sourcing of Jeddito Yellow Ware pottery. Results indicate that all of the analyzed Perry Mesa/Verde sites shared a similar set of exchange ties with Hopi villages. These ties were dominated by Second Mesa villages, with secondary ties to Antelope Mesa. The relatively homogeneous pattern of non-local pottery acquisition across the area suggests some degree of coordinated interaction with external groups. While similar exchange patterns across Perry Mesa might seem to support the existence of the hypothesized "Perry Mesa confederacy", the fact that neighboring villages in the supposedly antagonistic Verde region share the same exchange patterns suggest that a broader regional phenomenon is at work.

Bernardo, Danilo [47] see Strauss, André

Bernbeck, Reinhard (Freie Universitaet Berlin)

[114] *Materiality as Intrusive Temporal Surplus*

Archaeology is fundamentally concerned with human actions that produce an effect lasting beyond themselves, in Aristotelian terms, with poiesis. Based on our own, consumer based predilection for a world of full of things, we often assume that the making and enduring of things was desirable as well in the past. Based on an example from Neolithic Iran, I claim that we have to consider the possibility of past

societies that were opposed to what I call the temporal surplus of objects. Temporal surplus was seen as restrictive for a society that may have been based on spontaneity and immaterial production.

Berrey, Charles (University of Pittsburgh)

[73] *Domestic Activities and Social Relations: Comparing Household Artifact Assemblages using Multidimensional Scaling*

Multidimensional scaling (MDS) is an effective analytical tool in archaeology. One of its particularly useful features is the ability to examine how values for different variables might generally increase or decrease across an MDS configuration. Identifying these 'trends' and the orientations in which they are aligned provides valuable insight into the relationship between variables, and a systematic way to do so would allow for greater utility of MDS in comparative studies. One such method is presented here, and is used to compare household artifact assemblages so as to explore the nature of activities and social relations within different prehistoric communities.

Bethard, Jonathan (Mississippi State Community College)

[226] *Inka Imperialism and Biological Variation: A Bioarchaeological Perspective*

Prior to European contact, the Inka empire was unarguably the largest civilization ever to emerge in the New World; however, relatively few Late Horizon/Inka burials (AD 1400-1532) have been recovered, making bioarchaeological analyses difficult. Recent excavations, however, are beginning to change what researchers know about those who administered and lived under imperial Inka rule. The research presented here investigates intra/inter-phenotypic variability of several Inka sites in Peru. These findings are interpreted in context of the Inka's socio-political organization as an empire and will add to a growing body of literature surrounding the bioarchaeology of pre-colonial imperial societies.

Bettencourt, Nichole (Washington State University) and Melissa Goodman-Elgar (Washington State University)

[259] *All Fired Up: The Geoarchaeological Investigation of Adobes from Chiripa, Bolivia*

This paper examines adobes and the processes that affected them at the Formative tell mound site of Chiripa on Lake Titicaca, Bolivia. It utilizes geoarchaeological methods to investigate anthropogenic activity associated with the adobes, including: the manufacture of the adobes, and the design, construction, burning and razing of the structures at Chiripa. The data set is comprised of thin sections made from a soil column collected from the Chiripa mound and adobes collected at the site, as well as parallel bulk samples. This enables the paper to use more than one line of geoarchaeological data during its investigation of Chiripa.

Bettinger, Robert (University of California-Davis)

[197] *Technological Investment and Intensification*

The simplified model of technological investment developed by Bettinger, Winterhalder, and McElreath anticipates diverse trajectories of intensification. The most common is via investment that increases returns at a decreasing rate within an extant technological design. Less common is the introduction of a novel design that renders existing alternatives obsolete or fills a niche between them. As in Sewall Wright's shifting balance theory, the first trajectory is that of simple peak climbing in response to economic demand, the second that of peak shifting governed by less predictable forces including the advent of novel technologies and their match with existing sociopolitical structures.

[118] *Discussant*; [155] *see Morgan, Chris*

Bettis, III, E. Arthur [29] see Hajic, Edwin R.

Bettison, Cynthia (Western New Mexico University Museum)

[56] *Beyond Subsistence: Defining the Mogollon of West-central New Mexico*

Nearly seventy-five years after Emil Haury defined the Mogollon Culture, the debate continues—just who are the Mogollon? Building upon previous research, published data are reconsidered and new

data are incorporated to explore prehistoric social dynamics and group formation in west-central New Mexico from A.D. 200 to 1400. Through systematic analyses, co-residency, migration, architecture, settlement patterns, regional interaction, warfare, population distribution, and environment are examined to explain the unique social aggregations, community integrations, ceramic variability, and architectural expressions that contribute to the distinctive, shared identity defined as the Mogollon.

Betts, Alison [155] *see Jia, Peter Weiming*

Betts, Colin (Luther College) and Stanley Ambrose (University of Illinois)

[214] *Spatial, Temporal, and Seasonal Sources of Isotopic Variability in Plains Bison*

Bison represented an important, yet variable, food resource for indigenous groups on the Plains. Stable isotope analysis represents an important means of ascertaining the dietary importance of bison – however, its use is complicated by significant spatial and temporal variability in bison isotope values. The nature and causal factors of this variability are systematically ascertained using a large comparative set of carbon, nitrogen, and oxygen values from archaeological bison.

Betts, Matthew (Canadian Museum of Civilization), David W. Black (University of New Brunswick) and Susan E. Blair (University of New Brunswick)

[60] *Ancient Men and the Sea: Shark Remains in Prehistoric Mortuary Contexts on the Maritime Peninsula*

Shark teeth are commonly found in burial contexts throughout the Northeast. On the Maritime Peninsula, shark teeth have been identified at Cow Point, a Moorehead cemetery dating to ca. 3900 BP, Ministers Island, in an Adena-related burial context dating to ca. 2300-1900 BP, and in multiple Early Woodland ceremonial deposits in Nova Scotia. Beyond the Maritime Peninsula, shark teeth have been recovered from Adena contexts ranging from Chesapeake Bay to the Ohio River. In this paper, we explore how sharks were signified in mortuary contexts in the Maritime Peninsula, and what these human-animal relationships reveal about Late Archaic and Early Woodland Period societies. We address how local human-animal relationships were expressed in regional ritual complexes, and more importantly, how these local relationships became entangled in greater Northeastern funerary practices.

Betzenhauser, Alleen (University of Illinois)

[29] *Transforming Places and Persons: Community and Personhood at the Mississippian Transition in the American Bottom*

Researchers now recognize the active role space, architecture, and monuments play in constructing personhood and community identities. In this paper I will measure the degree to which communities and spaces were altered at the onset of the Mississippian period in the American Bottom of Illinois through analyses of settlement histories and production activities and techniques at several Mississippian transition sites located near Cahokia. These investigations will provide evidence for alterations or continuity in daily practices as demonstrated through changes in spatiality.

Bey, George (Millsaps College) and Rossana May Ciau (Universidad Autonoma de Yucatan)

[178] *The Reality and Role of Popol Nas in Northern Maya Archaeology*

Popol nas or council houses have been identified for the Early, Late and Terminal Classic periods in the northern Maya lowlands. This paper focuses on the earliest proposed examples, examining the characteristics and assumptions used to define them as popol nas and their possible role in the evolution of Classic Maya society. Examples from Ek Balam, Kiuic and Labna are discussed in detail in order to consider the reality of popol nas, their function in the development of social stratification in the northern Maya lowlands and how they may also reflect changes in social organization during the

Late Classic.

Bey, George [78] *see Galaty, Michael L.*

Beyries, Sylvie (CNRS)

[17] *Domestic Activities, Craft and Environment*

Ethnographic research has demonstrated how in many traditional communities (such as Siberian communities), craft production and domestic activities are gender specialized. The organization of craft production within these communities is both economically and socially motivated. However, when these communities are under extreme environmental and social pressures (climate, economy and crisis), the rules of gendered division labor become more flexible. These ethnographic studies enable us to be more flexible for archaeological interpretations.

Bezerra De Almeida, Marcia (Universidade Federal do Pará/Brasil)

[196] *Signifying Heritage in Amazon: A Public Archaeology project at Vila de Joanes, Ilha do Marajó, Brazil*

The paper examines what archaeological heritage means to the local communities at Vila de Joanes, in Amazon, considering a historic site assigned to a religious mission from the XVIIth Century. By reflecting about the social representations of the ruins and the role of these representations to the community's attitudes towards the site, I explore the underlying logic of looting – a common practice - and the subsequent organization of "small domestic collections". My purpose is to understand the relationship between small scale communities and the patrimony as well as to contribute to the political policy concerned to heritage preservation in Amazon.

Bicho, Nuno (FCHS), Francisco Almeida (IGESPAR - Portugal) and Jonathan Haws (University of Louisville)

[177] *The Dryas III event in central and southern Portugal: Evidence of Absence or Absence of Evidence?*

Only a small number of Portuguese archaeological sites are dated to Dryas III (12,800-11,600 cal BP). In contrast, many sites are dated prior to or after the event. Because highly flexible cultural, economic and technological systems characterize the regional Upper Paleolithic, it seems humans were able to adapt to increased aridity, lowered temperatures, and important changes in vegetation. Here we will focus on: the lack of evidence for human occupation (population decline or formation processes affecting the archaeological record?); climatic and geological processes resulting in the erosion and loss of sites; abandonment and relocation of humans as resource availability shifted.

Bicho, Nuno [16] *see Manne, Tiina H.*

Bies, Michael (BLM Worland FO), Danny Walker (Wyoming State Archaeologist's Office), Marit Bovee (Worland F. O. BLM) and Neffra Matthews (BLM National Operations Center)

[22] *Recent Research at Legend Rock Petroglyph Site (48HO4) Wyoming, USA*

This paper presents the results of recent research and recordation at Legend Rock Petroglyph Site (48HO4). Recordation efforts in 2008 documented the two localities within the site which had not been previously studied in detail. It includes an analysis of the pigments utilized to produce pictographs at the site and other sites in Wyoming. This includes analysis of pigments from several raw material sources as well as pigments recovered from site excavations in the Bighorn Basin.

Big Owl-McArdle, Germaine (Indiana University of Pennsylvania) and Christopher D. Adams (Gila National Forest-Black Range District)

[42] *Battlefield Archaeology in New Mexico: Victorio's (Chiricahua Apache) Fight For Freedom*

Several undiscovered battlefields from the U.S. Army's campaigns against Victorio in the late 1800's were located in Southern New Mexico. We have searched the sites by using historic accounts from

both the Army and Apache participants, historic and current maps, and electronic equipment. In this poster, we will show the location of cartridge samplings that indicate a battle may have taken place. A GeoHX handheld Trimble device was used to sketch out a map. Through the use of technology and more traditional archaeological methods we hope to gain a clearer understanding of what took place during the campaign.

Bigelow, Nancy [224] *see Graf, Kelly E.*

Bill, Cassandra (Middle American Research Institute)

[218] *A Ceramic Perspective on the Culture History of Copán*

The significance of Copán's physical and cultural position on the southeast frontier of the Maya area has long been recognized and is reflected in the site's ceramic assemblages that represent an eclectic mix of different regional styles and local conventions. Over time, both subtle and salient shifts within this ceramic mosaic provide a window through which to view certain developments in the sociocultural history of Copán, including the nature of relationships between Copán and other regions, as well as the development, maintenance and character of alternative social identities associated with different phases of occupation and different elements of Copán society.

Billeck, William (Smithsonian Institution)

[102] *Seventeenth Century Glass Beads from the New Lenox Site in Will County, Illinois*

The glass bead assemblage from the New Lenox site consists of 32 beads that date to the seventeenth century. Small bead assemblages can be a challenge to precisely place in time because of limited diversity and the temporal sensitivity of the beads. Nonetheless, even small assemblages from this time period are highly significant, especially for this region. The New Lenox glass bead assemblage is compared to other contemporary assemblages to date it more precisely and to reveal its geographical relationships.

Billman, Brian (UNC & MOCHE, Inc) and Jesus Briceno Rosario (Instituto Nacional de Cultura)

[98] *Preserving Archaeological Sites by Forming Community Partnerships: A Case Study from the North Coast of Peru*

As you read these words archaeological sites in Peru are being destroyed at an unprecedented rate. If we do not act now, most of the archaeological sites in many regions of Peru will be destroyed within the next 10 years. Results of our preservation efforts in the Moche Valley since 1998 indicate that destruction of sites can be averted by forming community partnerships that integrate development, education, and preservation. This community-based approach may be a key to stemming the tide of destruction in Peru and beyond.

[159] *Discussant*; [98] *First Chair*

Billman, Brian [138] *see Boswell, Alicia*

Binning, Jeanne (California Department of Transportation), Alan P. Garfinkel (California Department of Transportation), C. Jill Minar (Fresno City College), Clifford J. Walker (Mojave River Museum) and Robert M. Yohe II (California State University)

[232] *A Biface Cache from Paradise Springs, Central Mojave Desert*
A cache of eight pressure-flaked bifaces, including two Humboldt Basal-Notched knives of Coso obsidian and six chert, dart-point performs, was found at Paradise Springs, south of Fort Irwin in the Central Mojave Desert. Hydration rinds on the two Humboldt bifaces indicate that the cache dates to about 600 AD. The function of the cache within its social context, the special role of the Humboldt Basal-Notched knife, and the persistence of the atlatl and dart into bow and arrow times are discussed.

Birch, Jennifer (McMaster University), Andrea Carnevale (Archaeological Services Inc.), Debbie Steiss (Archaeological Services Inc.), Rob Wojtowicz (Archaeological Services Inc.) and Ronald F. Williamson (Archaeological Services Inc.)

[60] *Aggregation and Integration in Iroquoian Ontario: Recent Insights from the Mantle Site*

Northern Iroquoian societies underwent a macro-regional process of coalescence during the fifteenth and sixteenth centuries A.D. Settlement data indicate that large, well-planned and heavily fortified communities formed out of previously distinct local groups. One such community inhabited the Mantle site, an early sixteenth century ancestral Wendat (Huron) village in southern Ontario. Recent archaeometric analysis of ceramic material combined with analyses of lithic and settlement pattern data indicate that the Mantle community was also involved in interactions that crossed linguistic, social and political boundaries. This paper demonstrates the efficacy of multi-scalar analytical and theoretical frameworks in elucidating patterns of interaction.

Bird, Douglas [118] *see Zeanah, David W.*

Bird, M. Catherine (Midwest Archaeological Research Services, Inc.)

[102] *Ceramic Traditions Identified at the New Lenox Site (11-Wi-213)*

Thousands of sherds and 102 ceramic vessels were recovered from the New Lenox Site including those affiliated with Late Woodland, Upper Mississippian, and protohistoric periods. Radiocarbon assays associated with Late Woodland and Langford Tradition ceramics suggest coeval occupation. Assays associated with Oneota Tradition and protohistoric ceramics postdate the others. Radiocarbon assays, a newly defined protohistoric ware (D'Friant) and European trade goods allow us to separate some features into temporal categories and provide information about the spatial distributions of the site's components. Presence of D'Friant leads us to consider the complicated question of ethnic identification of peoples living here.

Birnbaum, Michelle (University of Wisconsin - Milwaukee)

[102] *More Than Just a Box of Rocks: Mineralogical and Use Analysis of Fire-Cracked Rock from the Late Prehistoric/Proto-Historic New Lenox Site, New Lenox, Illinois*

For those working on prehistoric sites in North America, fire cracked rock (FCR) is a ubiquitous artifact. In some cases FCR is the only cultural indicator of human activity, but in the Midwest rarely is FCR collected and analyzed. Due its ubiquity and significant volume this material class is often discarded with only cursory documentation. Mineralogical and use analysis of FCR from the New Lenox Site provides interesting insights into raw material use, reuse and collection strategies as part of a larger pattern of resource exploitation.

Bishop, Ronald (Smithsonian Institution)

[51] *Facing Anna Shepard*

Anna O. Shepard may be best known by her groundbreaking textbook and her quest for objectivity in ceramic analysis. She is variously referred to as brilliant, scathingly harsh, dedicated, mean, strange, and loving. Undeniably, she fought her way through blatant bias, achieving archaeological fame in her pioneering work as a laboratory specialist. In the end, her unwavering dedication to the role of objective analysis left her despondent, outside of archaeology's thirst for abstraction through an emerging contagion of ceramic taxonomy. This paper examines the life and times of this diminutive fighter who attempted to further archaeology as a scientific pursuit.

[229] *see Forne, Melanie*

Bissett, Thaddeus [15] *see Auerbach, Benjamin M.*

Bisson, Michael (McGill University)

[186] *The Middle Paleolithic of the Wadi Enqiqiyya, Jordan*

The Wadi Enqiqiyya, Azraq Basin, Jordan, first surveyed in the 1980's, yielded the largest sample of MP lithics from Jordan at the time. That collection, a palimpsest from multiple sites along the wadi, included some Acheulian and UP elements. Our 2008 resurvey located an isolated pristine MP site (WE-2) around a spring seep east of the wadi. Systematic collection yielded over 9,000 artifacts. A u/th date associated with MP lithics was also obtained from the wadi itself. This collection is compared to other Levantine MP assemblages, and hominin adaptations to oasis conditions during OIS-5 are discussed.

[186] *First Chair*

Black, David W. [60] *see Betts, Matthew W.*

Black, Kevin (Colorado Historical Society)

[28] *Avocational Contributions to Colorado Archaeology*
Avocational archaeologists have been active participants in Colorado for decades. Organizationally, they have been integral to the formation of support groups such as the Colorado Archaeological Society—one of the oldest such organizations in the country, founded in 1935—and the San Luis Valley Archaeological Network, and were indispensable lobbyists for the creation of Colorado's Office of the State Archaeologist in 1973. Avocationalists continue to contribute to the study and preservation of the state's cultural resources through activities and programs such as site stewardship, volunteer field and laboratory work, publication in local and regional journals, sponsoring college scholarships, and project fund-raising.

Blackhorse, Taft [235] *see Marek-Martinez, Ora V.*

Blackman, M. James [229] *see Forne, Melanie*

Blackmore, Chelsea (UC Berkeley)

[181] *Shaping the Past to Shape the Future? Archaeological Knowledge and the Politics of Modern Maya Identity*
How archaeologists define the past directly affects the relationships and identities created within and between archaeologists and descendant communities. Ancient Maya research, for example, particularly in its public presentation, often exoticizes the past by emphasizing the material culture of the elite. Such "top-down" perspectives not only homogenize archaeological representations but affect the social and political trajectory of indigenous groups such as the Maya. This paper examines the relationship between archaeological research, the production of knowledge, and the creation and recreation of both ancient and modern Maya identities.
[181] *Second Chair [181] Second Organizer*

Blackwell, Bonnie (Williams College), Aislinn E. Deely (RFK Science Research Institute), Anne R. Skinner (Williams College), Christopher Hill (Boise State University) and Thomas M. Truongchau (RFK Science Research Institute)

[259] *ESR Dating Pluvial Events at Paleolithic Sites in the Egyptian High Desert Oases*
During Pleistocene wet phases, hominids left Paleolithic artefacts at Kharga, Dakhleh, and Bir Tarfawi Oases. Today, these hyperarid areas lack naturally occurring surface water. ESR dating ungluate fossil teeth and molluscs found in Pleistocene lacustrine sediment and on deflated surfaces pinpoints times when surface water existed. Although surface water may have been available at other times, small freshwater lakes did occur at ~9 ka (earliest Oxygen Isotope Stage, OIS, 1), ~86 (OIS 5b), 100-130 ka (OIS 5d-5e), and ~2.0 Ma (Early Pleistocene). Herbivores inhabited the oases at ~60 ka (OIS 3), ~159-171 ka (OIS 6c-6d), and ~184 ka (OIS 6d).

Blackwell, Bonnie A. B. [8] *see Skinner, Anne; [161] see Blickstein, Joel IB*

Blahe, Alissa (University of Wisconsin Milwaukee)

[29] *Spatial Analysis of Effigy Mounds and Late Woodland Habitation Sites in the Lake Koshkonong Region, Wisconsin*
Archaeologists have presented numerous models to explain the locations and functions of Late Woodland effigy mound sites. Many of these explanations are environmentally oriented, but are limited by the data available at the time they were developed. In this poster, GIS is used to document the environments surrounding effigy mound sites near Lake Koshkonong, and to compare those locations to other Late Woodland sites in the same region. The analysis will also attempt to take into account change through time in site location. The final goal is to highlight the complexity of Late Woodland period in settlement Southeastern Wisconsin.

Blair, Elliot [154] *see Mahar, GiNESSA J.*

Blair, Susan E. [60] *see Betts, Matthew W.*

Blake, Karry L. [33] *see Wegener, Robert M.*

Blake, Michael (University of British Columbia), Bruce Benz (Texas Wesleyan University), Kisha Supernant (University of British Columbia) and Sue Formosa (University of British Columbia)

[163] *A Web-Based Method for Mapping: An Example Showing the Spread of Early Maize in the Americas*
We present a method for producing interpolated distribution maps of archaeological data that can be quickly and easily exported to web-based mapping platforms such as Google Earth API. The method integrates several software programs (FME and ArcGIS) in order to convert point data into contour or surface maps that show age, density, ratio, or other types of distributions on the landscape. We illustrate the process by mapping all available early AMS dates for maize macro-remains in the Americas. Changes and updates can be quickly made with this automated process and the results instantly updated on websites for rapid sharing of research results.

Blake, Michael [138] *see Benz, Bruce*

Blanco, Mónica [221] *see Serra, Mari C.*

Blankenship, Sarah A. [22] *see Sherwood, Sarah C.*

Blankenship, Sarah (University of Tennessee), Alan Cressler (USGS), Jan Simek (University of Tennessee) and Joseph Douglas (Volunteer State Community College)

[62] *A World Below: New Dark Zone Cave Art from 62nd Unnamed Cave, Tennessee*
A complex, rich and diverse cave art assemblage from a small, dry cave in south-central Tennessee is reported. This assemblage has a certain subject matter that suggests a prehistoric, and thus Native American, origin, but its context may indicate an early historic age. The implications of each of these possible ages are important, and how to place the art in proper chronological context is a fundamental puzzle in this site that requires technological resolution. Absolute dating, historical analysis, spatial analysis, and chemical analysis are all brought to bear on this art to try to identify its temporal and ethnic origin.

Blanton, Dennis [259] *see Thieme, Donald M.*

Bleed, Peter (University of Nebraska-Lincoln) and Douglas Scott (University of Nebraska - Lincoln)

[220] *A Contested Terrain: Archeological Reflections of the North Platte Campaign of February 1865*
In the wake of the 1864 Sand Creek massacre, a large Cheyenne and Lakota community moved into the North Platte valley where small units of U. S. volunteers protected the overland trail. Combat that resulted when they met involved establishment of temporary positions, strategic movements, and the pitched battles of Mud Springs and Rush Creek. Viewed in the context of historical sources and local terrain, archeological reflections of these activities offer original insights into the strategic behavior of the two sides. Archeological information also contributes to understanding of conflicts that followed the North Platte campaign and perceptions that guided conflicts of the Indian Wars.

Bleed, Peter [171] *see Scott, Douglas D.*

Blickstein, Joel (RFK Science Research Institute), Anne R. Skinner (Williams College), Bonnie A.B. Blackwell (Williams College), Hirzi Amirkhanov (Institute of Archaeology, Russian Academy of Sciences, Moscow)

[161] *ESR Dating an Oldowan Site in Dagestan, Southern Russia*
In Dagestan, southern Russia, the site of Ainikab I contains 13

recognizable geologic layers grouped into four geological units. The lowermost gravel-rich unit has yielded typical Oldowan tools associated with diagnostic Early Pleistocene (Apsheonian) pollen and fauna. Paleomagnetic analysis for the site suggests that the slightly brecciated lower unit, which contains lens of siltier material, predates the Jaramillo Subchron (0.99-1.07 Ma). One equid tooth from the Layer 11 in the older unit yielded seven subsamples that have been dated by standard and isochron ESR. Sedimentary components from Layer 11 was analyzed geochemically to determine the volumetrically averaged sedimentary dose rate.

Bliege Bird, Rebecca [118] see *Zeanah, David W.*

Blom, Ronald (Jet Propulsion Laboratory), Andrew Yatsko (Naval Facilities Engineering Command, Southwest), Douglas Comer (Cultural Site Research and Management) and Scott Hensley (Jet Propulsion Laboratory)

[160] *Remote Sensing Data and Archaeology: Ingredients for Success*
Applications of remote sensing data in archaeology range from indications of areas favorable for archeological prospection, to direct detection and characterization of potential sites. Remote sensing data are particularly useful in providing spatial context for resources and infrastructure supporting past populations. Accordingly, remote sensing data can be a powerful tool for increasing efficiency of archaeological investigations when systematically integrated into investigation protocols. Projects successfully applying remote sensing data have common characteristics including partnerships between archaeologists, remote sensing specialists, and those with GIS expertise. We discuss successful examples of remote sensing data applied to archaeological efforts in diverse environments.

Blomster, Jeffrey (George Washington University)

[260] *The Naked and the Clothed: Embodiment, Gender and Social Identity in Formative Oaxaca and Olman*

I explore the roles of costume and embodiment in expressing gender and social identity primarily in Formative Oaxaca, Mexico. Examining figurines reveals distinct patterns in how the body is conceived, elaborated and ornamented. Early in the Formative, costumes rarely cover the bodies on these figurines, while headdresses and iconography located on the head occur more frequently; changes in materialization of bodies and their ornamentation during the Formative reflect ongoing negotiations of social identity. Finally, I consider methodological issues in comparing gender and social identity evinced on clay figurines with that expressed in monumental art in Olman.

Blong, John (Texas A&M University)

[90] *Paleoindian Toolstone Provisioning and Settlement Organization at the Higgins site, 18AN489*

The Higgins site is a multi-component prehistoric site in Ann Arundel County, MD, excavated by Carol Ebright in 1987-1988. In 2009 I analyzed the lithic artifacts from the fluted point horizon. Goals of analysis were to determine the technological choices made by the site's earliest occupants and how these related to toolstone provisioning and settlement organization. In this paper I present details on the stratigraphic context, lithic technology and raw material sources of the Higgins artifacts. The earliest occupants of the Higgins site employed a combination of expedient and formal technologies that were tied to variable toolstone quality and availability.

Boatwright, Mark (BLM) and Andreas Charest (BLM)

[211] *Prehistoric Paiute Use of Yucca in Southern Nevada*

Ethnographic data suggest that annual plants such as Indian Rice grass formed a substantial part of the Paiute diet in the Great Basin. Optimal forager theory predicts that resources from more reliable perennial plants such as Yucca species would have been more highly ranked by the prehistoric Southern Paiute bands that lived in the Mojave Desert. Ethnobotanical and ceramic residue analyses associated with rock ring features confirm that the prehistoric Southern Paiute sought out locally occurring perennial Yucca species in favor of patchy and unreliable annual plant resources over an

identifiable period of time.

[211] *First Chair [211] Second Organizer*

Bocherens, Hervé (Universität Tübingen), Dorothee Drucker (Universität Tübingen), Elisabeth Stephan (Landesdenkmalamt Baden-Württemberg), Nicholas Conard (Universität Tübingen) and Susanne Münzel (Universität Tübingen)

[157] *The Aurignacian of the Swabian Jura, southwestern Germany: Palaeoenvironmental Reconstruction using Bone Stable Isotope Signatures (13C/12C, 15N/14N, 18O/16O)*

Stable isotope signatures of Late Pleistocene large mammal bones yield valuable palaeoenvironmental information. They provide information on vegetation type (13C/12C), trophic web structure (13C/12C, 15N/14N), precipitation and temperature (18O/16O). Bones from various species excavated in caves from the Swabian Jura exhibit excellent preservation. The isotopic data from the Swabian Jura Aurignacian fauna will be compared to those of older and younger periods in the same region, and to those of other regions during the same period. This will help us determining whether the Swabian Jura presented unusual environmental conditions during the Aurignacian period related to exceptional cultural development.

Bocinsky, R. Kyle (Washington State Univ.), BreAnne Nott (Washington State University) and Brian Kemp (Washington State University)

[19] *Plop!: 'Unorthodox' aDNA Studies for Reconstructing Domestication and Migration*

Archaeogenetic research continues to expand as a novel means to deciphering the archaeological record. This paper introduces three lines of genetic research taking place at Washington State University that have the potential to be major contributions to the VEP: turkey coprolite mtDNA analysis at Turkey Pen Ruin, Utah; regional maize strain identification; and mtDNA analysis of archaeological turkey eggshell recovered from Salmon Ruins, New Mexico. We provide an argument for the explicit incorporation of genetic lineages (human and domesticate) into the Village simulation, and outline potential archaeogenetic datasets that could spring from the expansion of studies like these.

Bocinsky, R. Kyle [19] First Organizer, [19] see Glowacki, Donna M.; [235] see Reed, Charles A.

Bodily, Mark [118] see *Yoder, David T.*

Boeda, Eric (Université de Paris X), Christophe Griggo, Heba al Sakhel and Stéphanie Bonilauri

[58] *The Pleistocene Sequence of Umm el Tlel, Syria*

The site of Umm el Tlel, excavated since 1991, includes more than 140 archaeological beds dating from the Acheulean to the Neolithic. The site's many unique features include the interstratification of Aurignacian and Ahmarian assemblages, a series of industries « transitional » between Middle and Upper Paleolithic, and more than 60 distinct Levallois-Mousterian layers. Additionally, there are two Yabrudian sequences, separated by laminar Levallois and Hummalian industries, as well as some distinctive assemblages of Caucasian affinity. The essentially lacustrine depositional environment leads to excellent preservation of lithic, osseous, and vegetal materials, as well as bitumen, permitting diverse behavioral interpretations.

Boehm, Andrew (Southern Methodist University),

Conor Hall (Iowa University) and Erik Otarola-Castillo (Iowa State University)

[123] *Experimental Bison Butchery: Is Marrow Extraction Worth It?*

Experimental studies have quantified the amount of marrow extracted from ungulate long bones per unit time. However, the amount of human energy required to extract the marrow has previously not been quantified. This study measures both the amount energy (calories) expended during 'cold marrow' extraction and the impact forces (Newtons) required to break each bone element. Our results demonstrate that cold marrow extraction is energetically twice as

costly as the calories obtained from the marrow. Given that marrow processing is not energetically cost-effective, our results quantitatively demonstrate that marrow extraction is driven by alternative dietary or non-dietary needs.

[123] *First Chair*

Boehm, Andrew R. [74] *see Willis, Lauren M.*

Boeka Cannon, Molly [234] *see Cannon, Kenneth P.*

Bogges, Douglas (Lone Mountain Archaeological Services, Inc.), Chad Yost (Paleo Research), David Hill (Center for Big Bend Studies Alpine, Texas), Linda Cummings (Paleo Research Institute) and Mary Malainey (Brandon University)

[87] *What's For Supper: The Contents of a Complete Vessel found in Southeast New Mexico*

During the course of data recovery at LA 149260 (the Rascal Rabbit Site), located to the east of Carlsbad, New Mexico, Lone Mountain archaeologists recovered a complete Jornada Brown bowl that had been left in place within a thermal feature. We submitted sherds from the vessel and the fill from within and beneath the vessel for a variety of analyses. These results indicated that the Formative period occupants of LA 149260 consumed not only locally available resources but made use of wetlands plant and faunal materials, including a member of the marantacea family and fish.

Böhner, Utz [205] *see Serangeli, Jordi*

Boisvert, Richard (NH Division of Historical Resources)

[90] *The Potter Site, Randolph, NH: A Multipurpose Paleoindian Encampment in the White Mountains*

A chance find in 2003 provided the discovery of an extensive Paleoindian site in northern NH and annual field investigations have followed. Shovel test pit survey over three acres with attendant small block excavations reveal a mosaic of special purpose loci.

Additionally, all diagnostic artifacts recovered indicate that the site was occupied exclusively by makers of the Michaud-Neponset variety of fluted points, associated with the Middle Paleoindian period in New England. A summary of the contents and context of the assemblage and preliminary assessment of the Potter Site's place in the broader settlement pattern is presented.

Bolé, Jaques [206] *see Kahn, Jennifer G.*

Bolender, Douglas (University of Massachusetts, Boston)

[246] *Integrated Archaeogeophysics and Excavation as a Method for Regional Household Archaeology*

Icelandic Viking Age household sites are large, complex and expensive to excavate. Effective regionally-based household archaeology programs require a means to target elements of the archaeological record within individual sites and for comparison among sites that does not entail complete excavation. Coring and archaeogeophysics are critical tools in targeting small excavations to ensure better representation of the site and comparability among sites. In addition to assisting the positioning of small excavation units, proper subsurface reconnaissance of a site allows archaeologists to understand the context of small excavations and how they relate to the site and region.

[246] *Second Organizer*

Bolus, Michael (Heidelberg Academy of Sciences)

[157] *Contextualizing Cultural and Technological Trends in the Swabian Aurignacian*

The Swabian Aurignacian dates between 40,000 and 30,000 years ago and is characterized by numerous innovations in nearly all cultural systems. The archaeological record documents radical changes between the adaptations of Neanderthals and modern humans in southwestern Germany. Increasingly, the Swabian record is being viewed as a key case study for examining cultural evolution associated with the beginnings of the Upper Paleolithic and the

spread of modern humans across Europe. This paper examines the patterns of cultural variation in the Swabian Aurignacian in their local and interregional contexts.

Bomalaski, Anne [183] *see Massey, David*

Bon-Harper, Sara (Monticello)

[166] *Yard Space: Comparisons of General Activity Areas between Historic Period Social Groups*

Recent research by the author has established a statistical method for identifying maintained spaces and peripheral refuse areas on archaeological sites. The method was developed as a first step in examining a prior assumption about historic African-American yard spaces. This poster applies the new method to a range of eighteenth and nineteenth century archaeological sites to examine site maintenance between socio-economic groups. The work bridges ethnoarchaeological studies of site maintenance and archaeological observations of artifact distributions.

[166] *First Organizer; [166] First Chair*

Bonilauri, Stéphanie [58] *see Boeda, Eric*

Bonsall, Clive (Professor)

[61] *Climate, Complexity and the Transition to Farming in the Iron Gates*

The post-glacial hunter-gatherers of the Iron Gates are widely regarded as a classic example of a complex foraging society. But just how "complex" were they, and did this hasten or hinder the transition to farming in the region? This paper will look for trends in the archaeological record of the Iron Gates from c. 14,000 to 5500 BC, and consider whether social or environmental factors were the key driver of culture change in the region.

Boone, James L. [259] *see Worman, F. Scott*

Borck, Lewis (University of Arizona)

[152] *To the Heart of the Matter: Evidence of Trade in the Gallina Heartland*

A phase II survey was conducted on the Cuba and Coyote ranger districts of the Santa Fe National Forest as part of the Rio Chama Prescribed Burn Project. During the course of field work, portions of the Rio Chama Wilderness, which had never before received archaeological survey, were examined. Over 60 unknown/unrecorded sites were located and recorded. This presentation will focus on the evidence of trade from these sites in the form of a foreign ceramic tradition. In addition, the settlement patterns and viewsheds of these new sites, which are predominately located on two inaccessible mesas, will be analyzed in the hopes of attaining a better understanding of how the people living on these mesas interacted with both their neighbors and the landscape.

Boreham, Julie

[161] *Hidden Worlds made Visible*

"Look around you - all you can see is really there. Yet, behind each thing lies a mystery, hidden from view. If you try hard, you may get a glimpse of that world, but never will you be able to see it all." -'Life as a Geological Force - Dynamics of the Earth' by Peter Westbroek In 'Hidden Worlds', I would like to invite the viewer to see the extraordinary - the detailed stories that are not normally seen or told within the confines of standard archaeological field practice. Soil micromorphology, although time-consuming and labour intensive can sharpen, bring forward and separate the threads that make up the tapestry of the past. It is our responsibility as 'Archaeological scientists' to communicate in a easily understandable language what we are privileged we see under the microscope.

Borojevic, Ksenija (Boston University)

[151] *Investigating Modes of Arrival of Charred Seeds at tel Kedesh, Upper Galilee*

Plant macro remains were systemically collected and floated from the multi-layer site Kedesh. The samples retrieved from the various

contexts within the large Hellenistic administrative building are dominated by wild/weedy seeds (e.g., small grasses, melloes, and daisies), regardless of the location within the building or phase. No concentrations of crop remains were found. This is an unexpected discovery since some of the jars and rooms were believed to be used for grain storage. The likely modes of arrival of the plants were examined in order to reveal if they may have been the result of bioturbation.

[151] *see Mountain, Rebecca*

Borrero, Luis (CONICET)

[119] *The Impact of the Work of Lewis Binford in the Archaeology of Argentina*

Geographically speaking, Argentina is -together with Chile- on the most southern marginal position within America. Thus, it is not surprising that in the pre e-mail world of the 20th century Binford's influence on the archaeology of Argentina took a few years. However, when his work was finally known, his faunistic, lithic and hunter-gatherer studies produced a major impact in the reorganization of the archaeology of mid-Argentina, Patagonia and Tierra del Fuego.

Bosch, Marjolein (MAX-Planck-Institute for Evolutionary Anthropology), Florian Fladerer (Universität Wien, Institut für Paläontologie), Philip Nigst (Max-Planck-Institute for Evolutionary Anthropology) and Walpurga Antl-Weiser (Naturhistorisches Museum Wien)

[184] *Bones, fire, and humans: Zooarchaeological, taphonomic, and spatial analysis of a Gravettian mammoth bone accumulation at Grub-Kranawetberg (Austria)*

At Grub-Kranawetberg, a multi-layered Gravettian open-air site located northeast of Vienna (Austria), an area with large animal remains in the vicinity of a campsite was excavated. This area is characterized by numerous and large faunal remains, only a few lithics, and evidence of burning. This bone accumulation is dominated by mammoth. Our research focuses on zooarchaeological, taphonomic, and spatial analysis with the goal to test different models explaining formation of the bone accumulation and the role of humans in it. Here we present first results and argue for intentional burning by humans of the large mammal remains.

Boswell, Alicia (UCSD), Brian Billman, Camila Capriata Estrada and Jesus Briceño Rosario

[138] *Settlement Patterns in the Sinsicap Valley, Peru*

The Sinsicap Valley, a tributary of the Moche River, is located in the Chaupiyunga, a desirable ecological zone located between the north coast of Peru and the highlands. This area is not only capable of producing a large variety of agricultural products but also serves as a natural communication corridor between these two regions. Survey by the Moche Origins Project in 2007, 2008, and 2009 provides new information about the region, providing evidence of highland/coastal relationships in this area.

Boszhardt, Ernie, Danielle Benden (University of Wisconsin-Madison), James Theler (University of Wisconsin-La Crosse), and Timothy Pauketat (University of Illinois)

[70] *Early Mississippian Colonists to an Effigy Mound No-Man's Land in the Upper Mississippi Valley*

Toward the end of the Late Woodland stage in the Upper Mississippi Valley, increased populations likely caused over-exploitation of crucial natural resources and led to social territories that were demarcated by a surge in the construction of effigy mounds. One such boundary involved a no-man's land that separated Eastman and Lewis phase effigy mound peoples. Around A.D. 1050, a colony of early Middle Mississippians travelled over 500 river miles from the American Bottom to establish a short-lived, but apparently peaceful settlement within this no-man's land. Why the Mississippians left their homeland, how they selected the colony site, and what was their effect on the local Late Woodland populations are topics of ongoing NSF sponsored research.

Bouchard-Perron, Julie-Anne

[48] *The World is on the Menu: Discourse and Colonialism at Quebec City Tables*

From the field to the table, from table to meal, food accumulates a biography. Its geographic origins, its link with particular systems of production and exchange, its colour, and its taste, are all characteristics through the recognition of which people create social bonds across time and space. By putting together food at dinner time, some of these characteristics and bonds are integrated to differing extents creating a new social discourse relating to food and culture. This paper addresses questions relating to colonialism as seen through the food chosen at Quebec city tables across a period of over 300 years.

[132] *Third Organizer*

Boulanger, Matthew (University of Missouri) and Peter Thomas

[60] *Seventeenth-Century Native-American Social Dynamics on the Fringe of Colonial Empires: Analysis of the Ceramic Assemblage from Fort Hill, Hinsdale, New Hampshire*

Analysis of the ceramic assemblage from Fort Hill, a fortified Native American village occupied by Sokoki/Squakheag Indians for roughly eight months during the mid-seventeenth century, reveals greater diversity in ceramic technology than predicted. Integration of ethnographic/historical records suggests Native social dynamics were far more complex than archaeologists have previously assumed. Situated on the periphery of the colonial empires of the Northeast, Fort Hill provides an opportunity to examine Indigenous responses to rapid social change instigated by European colonization. We explain these data as representing evidence for amalgamation and unification among Northeastern Algonquins.

Boulanger, Matthew T. [161] *see Woods, Julie A.*

Bovee, Marit [22] *see Bies, Michael*

Bowser, Brenda (CSU-Fullerton), Daniel Grijalva (CSU-Fullerton), Holly Eeg (CSU-Fullerton), Nhi Truong (CSU-Fullerton) and Paul Langenwaller (Biola University)

[81] *Early-to-Middle Holocene Fishing: The Importance of Estuarine Resources from the Perspective of Archaeological Site CA-ORA-64*
CA-ORA-64, also known as the Irvine Site, is one of the oldest and largest coastal shell middens in southern California. Located on a bluff overlooking an estuary, the site was occupied over a period of more than 4,000 years, spanning the Early Holocene and Early-to-Middle Holocene transition. Throughout the coastal regions of southern California, abandonment of coastal estuarine sites like CA-ORA-64 at the end of the Early Holocene has been attributed hypothetically to the silting of estuaries and declining availability of estuarine resources. This paper examines temporal trends in the relative importance of estuarine resources in the diet, based on analysis of faunal remains excavated from CA-ORA-64 in the 1990s, to test the applicability of the Coastal Decline Model.

Boyce, Joseph [29] *see Sonnenburg, Elizabeth P.*

Boyd, Carolyn (SHUMLA/Texas State University) and Marvin Rowe (TAMU)

[104] *Over and Under: A Re-Examination of Red Linear Rock Art*
Red Linear style rock art is one of three recognized styles of prehistoric rock art in the Lower Pecos Canyonlands. During recent rock art recording efforts, multiple examples of Pecos River style rock art superimposing Red Linear style pictographs have been documented. The superimposition of "older" Pecos River style images over "younger" Red Linear images highlights the need for further dating research and a re-examination of the stylistic classifications of prehistoric rock art in the region.

Boyd, Carolyn [22] *see Johnson, Angela K.*

Boyd, Charles (Radford University) and Donna Boyd (Radford University Forensic Science Institute)

[88] *Exploring the Theoretical Basis of Forensic Archaeology*
Forensic Archaeology has recently gained prominence as an important form of applied archaeology. However, development of a theoretical basis for forensic archaeology has been limited largely to the exploration of taphonomic processes. In this paper, we examine the relationship between archaeological theory and forensics. Specifically, we discuss both agency theory (in terms of the actions of individual and collective agents) and behavioral archaeology (the behavioral chain concept) as useful theoretical models for more broadly explaining and interpreting the roles of perpetrators, victims, investigators, and environmental factors in the creation of a forensic scene.

Boyd, Donna [88] see *Boyd, Charles C.*

Boyd, Robert [197] see *Richerson, Peter J*

Boytner, Ran (UCLA) [188] *Third Organizer*; [188] see *Cardona, Augusto*

Bradbury, Andrew (Cultural Resource Analysts, Inc.), Brian DelCastello (Cultural Resource Analysts, Inc.) and Steven Creasman (Cultural Resource Analysts, Inc.)

[150] *Site Structure Analysis of a late Middle Archaic Upland site in Morgan County, Illinois*

Data recovery investigations at a buried upland site in Morgan County, Illinois documented a late Middle Archaic component. Five hearths were documented and represent three hearth-related activity areas. Three additional activity areas were defined: freehand core reduction area; bipolar core reduction area; and a general dumping/disposal area. The activity areas appear to be tethered to the hearths. A single occupation is indicated by soil micromorphology, refits, and spatial data. Analysis of the recovered materials indicated that the site represents a short-term residential site. This paper summarizes the results of the analysis of site structure.

Bradbury, Andrew [172] see *DelCastello, Brian G.*; [236] see *Carr, Philip J.*; [172] see *Martin, Andrew V.*

Bradley, Bruce (University of Exeter) [256] *Discussant*

Bradley, James [224] see *Lothrop, Jonathan C.*

Brady, James (Cal State L.A.) and Christophe Helmke (University of Copenhagen)

[148] *Evidence for Cave Desecration in Ancient Maya Warfare: Extending the Hypothesis*

Five years ago the idea that caves, as sacred places, were the target of desecration as a provocation for warfare or as a result of military defeat was advanced but the idea was controversial and not well accepted. Since then, both epigraphic and archaeological evidence for the hypothesis has mounted leaving little doubt that war related cave desecration was common. This paper examines the evidence and provides an extended discussion of new evidence for cave desecration that suggests that the practice occurred on a larger scale than has heretofore been appreciated.

Brady, James [107] *First Organizer*

Brady, Kathleen (Hopewell Culture NHP) and Jennifer Pederson Weinberger (National Park Service)

[176] *Investigations of a Hopewell Structure and Associated Features Outside the Mound City Earthworks*

Park staff and volunteers have conducted investigations at a site located just outside of the Mound City Earthworks. AMS dates place the structure and associated features within the period of construction and use of the adjacent earthworks. Structures both within and adjacent to Hopewellian earthworks have been interpreted as places of craft production, sites of domestic habitation, and places of ritual. We cannot fully understand the intent of Hopewell earthworks or their modes of construction without determining what activities did and did

not take place within their immediate vicinities. This research is one contribution to that large and complex question.

Brady, Kathleen [244] see *Pederson Weinberger, Jennifer*

Braje, Todd (Humboldt State University) and Torben Rick (Smithsonian Institution)

[56] *Transition and Evolution During the Middle Holocene on the Northern Channel Islands*

Channel Island archaeologists have demonstrated that the Middle Holocene was a time of cultural transition in southern California. During this interval, Islanders developed new technologies and bead types, participated in long-distance trade networks, and expanded and intensified subsistence activities. This phase in Chumash history has often been interpreted as a period of gradual cultural evolution when islanders steadily adapted to increasing populations and climatic fluctuations. Recent research suggests, however, that Middle Holocene island peoples played an important role in shaping island land and seascapes, possibly including the introduction of the island fox and modification of near-shore and kelp forest ecosystems.

Braje, Todd [16] see *Rick, Torben C.*; [122] see *Erlandson, Jon McVey*

Brake, Jamie [147] see *Curtis, Jenneth E.*

Branch, Nick [18] see *Meddens, Frank*

Brandoff-Kerr, Joan (USFS retired)

[56] *Archaeological Investigations in the Santa Barbara Backcountry*
Two sites in the mountains of the upper Santa Ynez River watershed shed light on subsistence patterns and trade with the coast from two widely separated time periods. Preliminary findings from the ethnohistoric ranchería of Najalayegua indicate a heavy reliance on coastal resources. The second site is a recent and rare discovery of a buried shell midden dating to the mid-Holocene, so far being the only site of this period discovered in the Santa Barbara backcountry. This finding challenges conventional perceptions that early California populations were confined to the coastal zone.

Brandt, Elizabeth (Arizona State University)

[158] *Death and Burial in the Southwest*

Using ethnographic and ethnohistoric data, this paper addresses the behaviors that surround death in the U.S. Southwestern communalities. It focuses on behaviors related to the presence of death and dead themselves in the community. The ethnographic analysis examines the changed status of the dead and their potential interactions, both positive and negative, with the living. These include prohibitions against sleeping with the feet in the same direction as the burial position of the dead and measures to prevent the dead from taking others in the family on this same journey.

Brandt, Steven (University of Florida) and Catharine D'Andrea (Simon Fraser University)

[53] *Pre-Akumite Lithics from Mezber Ethiopia: Implications for Early State Formation in the Northern Horn of Africa*

The Eastern Tigray Archaeological Project is a long-term program concerned with documenting and explaining early State formation in northern Ethiopia. The 2009 field season focused upon Mezber, a large "Pre-Akumite" community of the last centuries B.C. Thousands of chert, obsidian and other lithics reduced by direct, indirect and bipolar percussion were recovered in differential frequencies from various rooms and other features. The assemblages suggest little if any connection to Arabia and point to indigenous developments in the northern Horn. We conclude with a discussion of their importance for understanding the origins of complex societies in the Horn of Africa.

Branstner, Mark

[219] *Hog Capital of the Nation: The Rise and Fall of the East St. Louis Stockyards*

Opened in 1873 and incorporated as National City, Illinois in 1907,

the Saint Louis National Stock Yards represented one of the largest livestock processing facilities in the world. At its peak, the facility encompassed 650 acres, employed more than 10,000 workers and processed 30,000 cattle, 50,000 hogs, 20,000 sheep, and 8,000 calves daily. Abandoned in 1997, the last vestiges of the complex will soon be replaced by the new I-70 Mississippi River bridge. Archaeological salvage work associated with this project has prompted this retrospective and a brief discussion of what remains to be discovered under the ruins.

Braswell, Geoffrey (UC San Diego) and Lauren Hahn (UCSD)

[178] *In the Shadow of the Pyramid: Excavations of the Great Platform of Chichen Itza*

The Great Platform of Chichen Itza is often viewed as empty or negative space between the large monuments built upon it. In fact, it has a long history of construction and contains many platforms, buildings, and other features that are now buried. From April through July of 2009, a team from UCSD conducted archaeological excavations of the Great Platform of Chichen Itza as part of the INAH-sponsored Proyecto Chichen Itza, directed by Rafael Cobos. Our work concentrated on two areas: the western portion of the Muralla that encloses the Great Platform and the area between the Pyramid of Kukulcan and the Group of 1000 Columns. Our excavations provide a complex view of how Chichen Itza appeared before about AD 1050.

Braswell, Geoffrey [178] *First Organizer*

Braswell, Jennifer (UC San Diego Stem Cell Program)

[218] *The Creation and Destruction of Structure D-7 at Xunantunich, Belize*

The Maya nobility of Group D, Xunantunich saw the erection of stelae, extension of a sacbe, and the erection and destruction of its principle elite residence. This paper describes fire pits encountered in excavations, their location, architectural context and associated artifacts. Were these burning events public ritual events, or private actions of intentional destruction by the occupants? In honor of E. Wyllys Andrews V, little speculation is offered about symbolic intentions and rather more is made of archaeological evidence for burning at sites such as Seibal and Copan. Symbolic speculation is strictly limited in favor of focus on accurate placement of recovered data in a defensible temporal and geographic framework.

Bravo Torres, Eva Angelica [57] *see Zavala, Bridget M.*

Bray, Tamara (Wayne State University)

[18] *Putting Huacas in Context*

Whatever else huacas may have been, they were clearly regarded as both powerful and efficacious by the Andean communities that revered them. This paper considers the general category of huaca in light of recent theoretical discussions on materiality, animacy, and personhood. Whether huacas were understood as persons, how this may have been expressed, how we approach such questions archaeologically, and what new insights into native Andean ontologies may obtain are outlined in the paper.

[18] *First Organizer*, [225] *Discussant*

Breetzke, David (GAI Consultants, Inc.)

[179] *No Feature, No Midden, No Problem: Ceramic Residue Analysis from a Middle Woodland Component in Southwest Ohio.*

A data recovery excavation on Site 33Wa797, a multi-component site in southwest Ohio, yielded valuable information on Middle Woodland exploited resources. Although no features were encountered, ceramic residue analysis revealed information on exploited EAC resources. One notable result from the analysis was the identification of angular starch typical of starches produced by *Zea mays*. It should not be assumed that due to the recovery of corn on a Middle Woodland site that corn was heavily exploited during this period. However, this discovery may document the early, slow progression of corn's movement from south to north during the Middle Woodland period.

[179] *First Chair*

Bremer, J (Santa Fe National Forest)

[152] *The Big Picture: Thirteenth Century Gallina Archaeology in Northern New Mexico Along the Continental Divide*

Recent archaeological investigations in northern New Mexico in the Llaves Valley and in the southern San Juan Basin suggest differences with regard to Gallina cultural development between the two areas. Llaves Valley populations appear to perpetuate a conservative lifestyle for 200 years with little or no contact with local populations while a short distance away to the west and south, populations with similar material culture, architecture and settlement patterns show evidence of interaction with adjacent populations in the Basin. This paper summarizes the current status of Gallina archaeology and explores potential explanations for the differences between the two areas.

Bremer, J. Michael [19] *see Kulisheck, Jeremy R.*

Brems, Jillian [185] *see Tynan, Collins P.*

Brenner, Mark (University of Florida), Daniel Ariztegui (University of Geneva), David Hodell (Cambridge University), Flavio Anselmetti (EAWAG) and Jason Curtis (University of Florida)

[153] *Paleoclimate and Paleoenvironment of the Maya Lowlands* Archaeologists and earth scientists are collaborating to investigate interactions among climate, environment, and culture in the Maya Lowlands. Insights into past climate and environment in the region are gleaned from lake and marine sediment cores, speleothems, tree rings, and corals. Paleolimnological studies in the Maya region began in the 1950s. New field and laboratory techniques enable collection of very long cores and high-resolution analysis of proxy variables for climate and environment. We summarize results of paleolimnological studies in the Maya Lowlands, covering the last ~85,000 years, and focus on environmental changes during the Maya Period (~3000-1000 BP).

Brezine, Carrie (Harvard University)

[256] *From Spinning to Stitching: Reading Skill through the Colonial Textiles of Magdalena de Cao, Peru*

What effect do existing skills have on the adaptation of new technologies? Under the influence of the Spanish invasion, Andean textile craftsmanship changed drastically in the 16th and 17th centuries. The collection of colonial textiles and garments from the site of Magdalena de Cao Viejo on the North Coast of Peru allows an unprecedented look at the range of qualities found in indigenous cloth, and how existing practices were adapted to new materials (wool, linen) and influenced by new techniques (knitting, lacework).

Briceno Rosario, Jesus [98] *see Billman, Brian R.;* [138] *see Boswell, Alicia*

Bridges, Sarah (USDA Natural Resources Conservation Service) [249] *Discussant*

Briese, Christian [61] *see Doneus, Michael*

Bringelson, Dawn (NPS - Midwest Archeological Center)

[29] *Exploring the Archaic in the Great Lakes: Investigations at Apostle Islands National Lakeshore*

The record of prehistoric occupation of the Apostle Islands (APIS), in southwestern Lake Superior, mirrors that in other areas bordering the Great Lakes: comprised largely of sparse lithic scatters. Until recently, most precontact sites at APIS were characterized as "general prehistoric," but investigations over the past decade have provided more specific data. Application of relatively intensive traditional techniques and a variety of other tools have led to the discrimination of archaic-age deposits across several Great Lakes NPS units. Current work at APIS illustrates this expansion in our understanding of the Archaic Tradition in this region.

Brite, Elizabeth (University of California, Los Angeles) and

Ghairadin Khozhaniyazov (Institute of History, Archaeology, and Ethnography, Karakalpak Branch, Uzbek Academy of Sciences, Nukus)

[32] *Local and Global Patterns of Socio-Political Integration in Khorezm, Uzbekistan*

Monumental sites appeared in Khorezm by the sixth century BCE, but strong evidence for domestic habitation remains conspicuously absent from the archaeological record for nearly a millennia. When habitation structures appear more prominently in the fourth century CE, the pattern is one of small, heavily fortified homesteads dispersed along irrigation canals with little evidence for concentrations around monumental sites. This pattern raises significant questions about the relationship between local and global spheres of interaction within the Khorezmian polity, in particular questions about the socio-political integration of domestic communities and their relationship to monumental site activities. Recent excavations at the site of Kara-Tepe in Khorezm suggest two different patterns of change in Khorezm: a possible continuity in the local-level social order that occurred alongside dramatic and rapid changes in the monumental complexes. This paper presents new research from Kara-Tepe that reveals how local inhabitants were integrated within this larger system of shared social order.

Brooks, Alison [151] see Henry, Amanda G.

Brooks, James (School for Advanced Research, Santa Fe) [193] *Discussant*

Brooks, Katherine

[200] *Determining Variation in Mogollon Ceramic Vessel Use in Southwestern New Mexico Through Fourier Transform Infrared Spectroscopic (FT-IR) Analysis*

Fourier Transform Infrared Spectroscopy (FT-IR) was used in the identification of organic surface residues found on the interior vessel walls of two contemporary ceramic wares produced by the Mogollon and Jornada Mogollon between A.D. 200 and A.D. 1150. FT-IR analysis was conducted in an attempt to determine if differences in resource utilization existed between the two sub-cultures. Analysis conducted in this study was performed using a Perkin Elmer 1720X FT-IR Spectrometer. Results from laboratory testing support sub-cultural variation in the types of food and non-food substances that the ceramic vessels held.

Brosnan, Patrick G. [86] see Matovich, Jeanette

Broughton, Laurid (Caprock Environmental, LLC) and J. Sanderson Stevens (JMA)

[150] *A Ceramic Unconformity in the Lower Illinois River Valley: The View from Site 11ST544*

Site 11ST544 occupies the interface of the Little Sandy Creek alluvium and the toeslope of a colluvial fan. The site, located east of Sandy Creek and 3.5 miles east of the Illinois River, produced seven C-14 dates with intercept dates ranging from AD 770-1020. Archeobotanical remains produced evidence of domesticated plants including goosefoot, knotweed, maygrass, pigweed, little barley, and squash. Ceramic types from the site do not conform to known types in the region, but rather they share attributes with several types including Egan Zoned, Jersey Bluff, and Bauer Branch. Ceramic diversity at 11ST544 suggests the site occupied a frontier or crossroads setting among several cultural groups during the later stages of the Late Woodland period.

Brown, Claire [185] see Kuijt, Ian

Brown, Clifford (Florida Atlantic University), April Watson (Florida Atlantic University) and Ashley Gravlin-Beman (Florida Atlantic University)

[178] *Wealth and Society at Mayapán*

Late Postclassic lowland culture at Mayapán used to be described as "decadent." Decadence is, however, a subjective quality that has been widely rejected as an explanation. Rathje subsequently

suggested that the unattractive qualities of the culture derived from a highly efficient mercantile economic system that created a more egalitarian distribution of goods in society. We argue that widespread poverty caused Mayapán's poor material culture. The distribution of wealth in Maya society indicates that Mayapán society was less egalitarian than Classic Maya society. Mayapán experienced a greater concentration of wealth in a small elite, while the previously robust middle class declined.

Brown, Clifford T. [178] see Witschey, Walter R. T.

Brown, David (Anthony & Brown Consulting)

[45] *Written in Stone... and Adobe and Sod and Earth and Ash: Assessing Inka Flexibility in Construction*

While much has been written about elaborate, high-status styles of Inka stonework, it may be the more mundane styles that truly represent the architectural genius of the Inka – their flexibility in meeting the challenges of building a massive infrastructure across the empire in an amazingly short period of time. Inka constructions used many types of stone as well as adobe, earth, sod, and other materials. The variety of styles and building materials associated with Inka constructions has occasionally frustrated archaeological interpretation and raises the question of how to define stylistic trends under the conquest state.

Brown, James (Northwestern University) [102] *Discussant*; [173] *Discussant* [140] *Second Organizer*; [140] see Chastain, Matthew L.; [140] see Kelly, John E.; [140] see Belknap, Lori

Brown, Kyle [129] see Schoville, Benjamin J.

Brown, Linda (The George Washington University)

[221] *The Meanings and Uses of Obsidian Collected by Contemporary Maya Ritual Practitioners*

Contemporary Tz'utujil Maya ritual practitioners in the highlands of Guatemala routinely collect and curate archaeological materials—including obsidian – for reuse in ceremonies. Collected artifacts, assigned new social lives as *sacra*, are active agents assisting curators in the performance of various ritual activities. In this paper, I discuss recent research combining archaeology and cognitive anthropology to: (1) identify the types of obsidian artifacts collected; (2) elucidate the uses and symbolic complex associated with obsidian; and (3) delineate the social lives of obsidian artifacts once they reenter use-contexts as sacred materials.

Brown, Sean

[6] *Trans-Holocene Mussel Procurement Strategies on Isla Cedros, Baja California*

This study represents the first examination of trans-Holocene California sea mussel (*Mytilus californianus*) procurement strategies. With Isla Cedros, Baja California, as the geographic region of interest, mussel hinge measurements have facilitated the comparison of three time periods: the terminal Pleistocene/Early Holocene, the Middle Holocene, and the Late Holocene. Within the framework of cultural ecology and optimal forging theory, this study of trans-Holocene *Mytilus californianus* procurement strategies addresses various issues such as the applicability of optimization models, hunter-gatherer adaptive strategies, resource intensification, conservation among hunter-gatherers, and the role of shellfish, especially California sea mussels, in prehistoric economies.

Browne Ribeiro, Anna (University of California, Berkeley)

[142] *Spaces, Places, and Deeds: A Geoarchaeological Study of Sítio Antônio Galo, a Terra Preta site in the Central Amazon*

Expanding upon regional, ceramic-based chronological and settlement-pattern work, archaeologists in the Central Amazon have adopted a site-based approach to understanding pre-Columbian occupation in the Negro-Solimões Rivers' confluence region. Well-preserved sites in the micro-region around Lake Limão, located in the interfluvial, make possible the use of organic and contextual evidence in intra-site analyses. This study uses soil signatures, microartifacts,

and geomorphological work to elucidate site formation processes at Sítio Antônio Galo (Lake Limão) from the moment of deposition through to the present. The result is a fine-grained understanding of site chronology, landscape morphology, and use of space at the household level.

[142] *First Organizer*; [142] *First Chair*

Brugam, Richard (Southern Illinois University Edwardsville), Donald Goss (Southern Illinois University Edwardsville), Luci Kohn (Southern Illinois University Edwardsville) and Matthew Wilson (Southern Illinois University Edwardsville)

[215] *Paleolimnology at the Mound House and Koster Sites*
Both the Koster and Mound House sites on the lower Illinois River are located adjacent to formerly extensive drained lake systems. We used prehistoric and historic remains to track changes in aquatic ecosystems in the at the sites We took sediment cores from the drained lake beds. Radiocarbon dates for the establishment of the lakes was 7860 BP for the Koster site and 5530 for the Mound House site. We contrast carbon and nitrogen isotope ratios from prehistoric, early historic and modern fish bones from midden samples. The results show the impact of human activities at these sites over time.

Bruhns, Karen (Fundacion Nacional de Arqueologia de El Salvador) and Paul Amaroli Bertolucci (Fundacion Nacional de Arqueologia de El Salvador (FUNDAR))

[191] *A Council House of the Acropolis at Cihuatlan, El Salvador*
Excavations in 2008-2009 uncovered a 40 x 8 m. roofed structure on the 5th of the Western Terraces of the Acropolis Cihuatlan, an Early Postclassic urban site in north central El Salvador. This structure, of elaborate construction and nested into a series of ritual and other structures, contains the remains of religious and other activities and shows a careful, patterned "desanctification" when the site was invaded and burned by invaders ca. AD 1100. The rapid destruction of the site has led to unparalleled preservation of archaeological context and permits us to see what activities were carried out in specific structures.

Bruhy, Mark [70] see Egan-Bruhy, Kathryn C.

Brum, Misty (Ripon College), Abigail Levine (UCLA), Charles Stanish (UCLA Cotsen), Misty Brum (Ripon College) and Ryan Williams (Field Museum of Natural History)

[121] *Basalt Sources in the Andean Altiplano*
Recent research in the South American Andes has focused on geochemically characterizing basalt outcrops in the Western Titiaca Basin. Using technologies including Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS) and portable X-ray fluorescence spectroscopy (pXRF) we have characterized approximately twenty distinct basalt formations in a minimally, almost non-intrusive manner. Comparisons with basalt artifacts and monoliths from archaeological sites across the basin will permit us to track exchange patterns of this important lithic resource through prehispanic history. Pairing the two techniques allows us to take advantage of the in situ and non-destructive nature of pXRF, while utilizing the higher resolution and broader spectrum of elements offered by LA-ICP-MS when necessary.

Bruning, Susan (Southern Methodist University)

[237] *Cultural Heritage Stewardship in the 21st Century: Legal and Ethical Frameworks for Museums and Scholars*

Legal and ethical complexities affecting research and curation of indigenous objects and antiquities have forced museums and scholars to reshape their professional expectations. Museums serve as portals and plazas for scholarly research, cultural interaction, and stewardship activities. Scholars seek access to study and interpret materials. This paper will explore some key legal and ethical frameworks within which 21st century museums must work to meet the growing challenges of cultural heritage stewardship: preserving objects and associated archives; providing access to scholars and public; ceding authority to those whose interests take precedence; building relationships with source communities; and actively serving

diverse constituencies.

Bruno, Maria (Smithsonian Institution) and José Capriles (Washington University in St. Louis)

[222] *David L. Browman and the Study of Prehistoric Economies of the Lake Titicaca Basin (Bolivia/Peru)*

In this paper, we introduce this session, which examines the invaluable contributions of David L. Browman to New World archaeology and beyond. We provide a brief overview of his career and address several themes presented in the papers. We then turn to Browman's influence on our own current research of prehistoric economies in the Lake Titicaca Basin of the Andes. He was one of the first researchers to employ flotation in the Andes and to recognize the importance of paleoethnobotany and zooarchaeology in understanding the roles agriculture, camelid pastoralism, and fishing played in the cultural developments in the region.

Bruno, Maria [222] First Organizer; [222] Second Chair

Brunton, Miranda (Trent University)

[98] *Weaving in Context: Exploring the Socio-Political Interactions of Textile Production in Chan Chan, Peru*

Chan Chan, the capital city of the Kingdom of Chimor, offers an excellent opportunity to study the process of weaving in the context of ancient political economy. Textiles, as completed garments sets, played a critical role in the political relations of the Chimú government through reciprocal exchange with subordinate lords. In order to understand and quantify textile production at Chan Chan, a holistic perspective is used that integrates procurement and preparation of raw materials, complexity of weaves, and the impact of other activities, such as domestic duties, on the time devoted to craft production.

Brunton, Thomas (SUNY) and Tina Thurston (SUNY University at Buffalo)

[243] *Peoples, Boundaries, Stones and Soil: Political Identity along a Contested Border in Medieval Småland, Sweden*

During the Medieval era (AD 1000-1560) in what is today Småland, Sweden, various groups vying for regional control defined its borders in different ways. The political border between the warring states of Denmark and Sweden lay at Småland's southern edge, while the local inhabitants, consisting of 12 "small lands", each with a distinct cultural identity, recognized neither authority. Rather, in this heavily wooded plateau region, the identity of "forest farmer" trumped all claims of medieval or early modern kings. In this paper, we discuss historical and archaeological evidence elucidating this complex record of interaction.

Bryan, Karina (Bureau of Land Management) and Colleen Sievers (Bureau of Land Management)

[75] *Wyoming's National Historic Trails: Land Where the Wind Blows*
Wyoming has long, pristine segments of the National Historic Trails predominantly on public lands. The area surrounding the NHTs has high wind energy potential, generating a virtual "land-grab" on the part of wind companies. BLM must balance both conservation and multiple use mandates. Making the challenge more difficult is BLM's national wind policy, which excludes NLCS units from development. However, the national policy fails to identify what should be included in this exclusion area for NHTs. Is it trail ruts or the entire viewshed or something in between? Wyoming BLM struggles to answer these questions and develop consistent management strategies.

Bryner, Kyle [76] see Whittington, Stephen L.

Buchanan, Meghan (Indiana University) and Susan M. Alt (Indiana University)

[225] *Making Pottery and People: Materializing Shifting Mississippian Identities*

People have complex and multi-layered relationships with the things that they make. Pottery has long been used to create typologies and understand identities, as well as social and political change. But

typologies pick and choose traits to elevate as important and ignore the interplay of memory, tradition, creativity, place, social and political milieu that informs the construction of every pot. We present data from the Richland Complex and the Common Field site as a means for understanding how shifting identities were materialized in pottery as populations came into contact with new social, political, and physical environments during the Mississippian Period.

Buck, Paul (Desert Research Institute)

[253] *Are PII Site Densities near Mt. Trumbull Higher than Other Areas of the Arizona Strip?*

A remarkably high density of PII sites are now known from Mt. Trumbull-Mt. Logan area. More than 120 sites have been recorded in ~1,000 contiguous acres near Namapweap rock art site, including a dozen of the largest C-shaped pueblos found on the Uinkaret Plateau. Settlement location is closely related to proximity to suitable soils, adequate moisture for maize agriculture and sufficient length of growing season. The variable topography resulting from the volcanic history of the Uinkaret Plateau and proximity to raw materials for pottery manufacture (olivine) resulted in some of the highest site densities yet known from upland areas of the Arizona Strip.

Buckley, Brendan (Lamont-Doherty Earth Observatory), Aroonrut Wichienkeo (Chiang Mai Rajabhat University), Dan Penny (University of Sydney), Kevin Anchukaitis (Columbia University) and Nam Le Canh (Bidoup Nui Ba National Park)

[153] *Southeast Asian Megadroughts and Hydroclimate Extremes of the Past Millennium*

We present the longest and best-replicated tree-ring reconstruction of hydroclimate (PDSI) yet produced from Vietnamese cypress growing in a montane forest at 12° N latitude. Our record reveals that during the time of the demise of the Khmer civilization at Angkor, in the 15th century CE, the worst droughts of the past 7 centuries plagued mainland Southeast Asia. We hypothesize that, while Angkor had been undergoing a slow decline following its peak during the late 13th century, the mid-1300s drought introduced great stress to agricultural productivity in areas away from the main core of an elaborate water management system.

Budden, Sandy (University of Southampton, UK)

[256] *Practicing Skill: People Making Pots Making People*

When people make pots they also make an idea of themselves – of being. We are used, in archaeology, to examining the 'making up' of pots, but we are less used to examining the 'making up' of people through the act of potting. This paper explores the way in which an understanding of skill and making can allow us to develop nuanced ideas about the people who make pots. Case studies from the Bronze and Iron Ages in Central Europe draw on a skills methodology that references a profound understanding of potting technology and the physically embedded nature of procedural knowledge.

Buikstra, Jane (Arizona State University)

[173] *The Center for American Archeology: A Historical Perspective*

This presentation reviews the more than 50 years of archaeological scholarship in west-central Illinois by researchers affiliated with the Center for American Archeology and sets the stage for the other contributions to this symposium. Topics to be treated include both method and theory: especially interdisciplinary archaeology, including paleoethnobotany, zooarchaeology, geoarchaeology, and bioarchaeology. Other significant contributions include training programs for future archaeologists, public outreach, and Koster site research.

[215] see King, Jason L.; [215] see Rudolph, Katie Z.

Bukowski, Julie (University of Illinois - ITRAP)

[30] *Analysis of a Middle Woodland Mortuary Population from the Dickison South Mounds (11P787)*

In 1953 the University of Illinois excavated three Middle Woodland mounds near the town of Mossville in the Central Illinois River Valley. These mounds, Caterpillar, Renchville and McDougal-Hartmann, constitute the Dickison South Mound Group (11P787). The mounds

were constructed over sub-floor log tombs that contained extended and bundled burials. Analysis of the human remains according to current standardized methods was recently completed. Twenty-nine individuals, and isolated elements of at least another 16 individuals, were identified. This poster presents the results of the skeletal analysis including data on demography, pathology, taphonomy, post-mortem treatment and the burial program.

Bundy, Paul (Cultural Resource Analysts, Inc.) and Richard Herndon (Cultural Resource Analysts, Inc.)

[150] *Overview of the Late Woodland Occupations at 11PK1718*

Site 11PK1718 was an open habitation site situated on a narrow upland ridge, about 6 miles northeast of the Sny Bottom bluff-line. Following the removal of the plow zone, investigations within the project right-of-way identified 125 features indicative of a variety of activities dating to the latter half of the Late Woodland sub-period. Materials recovered from feature fill included: debitage, Klunk/Koster hafted bifaces, small to medium-sized thin-walled cordmarked jars, a few bowls, clay discoidals, clay animal effigies, and clay pipe fragments. This paper presents an overview of the excavations and analysis.

Bundy, Paul [172] see DelCastello, Brian G.; [172] see Martin, Andrew V.

Buonasera, Tammy (University of Arizona)

[216] *Preservation, Detection and Interpretation of Ancient Lipids in Ground Stone Materials*

For several decades, gas chromatography/mass spectrometry (GC/MS) has been used to identify lipids from resources cooked or contained in ancient ceramic vessels. Although the porous surfaces of some ground stone tools may also contain lipids from foods and organic materials processed in prehistory, similar analyses have rarely been applied to this class of artifact. This paper discusses results from an initial study on the presence of ancient lipids in prehistoric milling tools from California. Potential mechanisms of preservation and interpretative limitations are highlighted along with suggestions for future research.

[216] Second Chair [216] Second Organizer

Burdukiewicz, Jan (Institute of Archaeology, University of Wrocław)

[177] *Late Glacial Hunter-gatherer's Reaction against Younger Dryas Cooling Event in south and eastern Baltic Region*

Sudden climatic change of Younger Dryas appeared as much cooler and drier. Baltic region was treeless tundra and from north returned big reindeer herds. This environmental impact did visible changes in hunter-gatherer societies tool-kit in Central Europe. Feder-messer groups were limited to Bohemia and Southern Germany. In North European Plain, including Baltic area, appeared follower of Bromme – Ahrensburgian and Swiderian groups with various tanged points. They used blade technology to make straight blades for points. These groups hunted mainly on reindeer herds and possibly wandered after large reindeer herds. Tundra hunting is characterized by seasonal ambushes for huge reindeer herds.

Burger, Oskar [234] see Cannon, Kenneth P.

Burger, Richard (Yale University)

[23] *Three decades of sourcing Andean obsidians: changing collaborations, changing realities*

In this paper I would discuss my experiences working with the sourcing of Peruvian, Ecuadorian, Bolivian and Argentinean obsidian artifacts through my collaborations with scientists at the University of California Archaeological Research Facility, the Lawrence Berkeley Laboratory and the Missouri University Research Reactor. I will illustrate that while technologies have undergone important changes, the nature of my collaborations have likewise changed in character.

Burgess, Robin [75] see Eaton, Marietta

Burke, Adrian (Université de Montréal) and Pierre M. Desrosiers (Avataq Cultural Institute)[147] *The Naparutalik Siltstone Quarry, Nunavik, Canada*

The Naparutalik siltstone quarry represents the first systematically surveyed prehistoric chipped stone quarry in Nunavik (Quebec Arctic). Exploitation dates to the Paleoeskimo and possibly Neoeskimo periods, and may have begun during the middle Pre-Dorset, around 3000 BP. Quarrying tools, knapped tool blanks or preforms, as well as waste flakes are found mainly in primary contexts and in direct association with the bedrock outcrops exploited. Bedrock outcrops present clear evidence of percussion and extraction along bedded layers. Massive amounts of large size flakes over 200 linear meters demonstrate the extent and intensity of quarrying along this 500 meter bedrock exposure.

Burke, Adrian [60] see *Leclerc, Mathieu*; [60] *Discussant* [147] see *Curtis, Jenneth E.*

Burke, Ariane (Université de Montréal) [126] *Discussant*

Burke, Chrissina (University of Nevada - Reno)[74] *Applying Ethological Data to Carnivore Modification Research*

This poster presents the results of a pilot study in which the author utilizes extant North American carnivores to understand the specific physical feeding behaviors associated with modification marks present on ungulate appendicular skeletal materials. The carnivores analyzed in this research include, *Canis lupus*, *Canis latrans*, *Ursus americanus*, and *Felis concolor*. Video-recording, photography, and ethological methodologies were used to collect behavioral data. This research reinforces the importance of ethological data in taphonomic analysis, as well as pursues the effectiveness of employing carnivore modification studies as a proxy for identifying paleoenvironmental conditions surrounding faunal deposition events.

[232] see *Fenner, Lindsay*

Burkholder, Jo (University of Wisconsin – Whitewater) and Erika Simborth[188] *'Late' Discoveries at Pisanay, Sihuas Valley, Department of Arequipa, Peru*

Proyecto Arqueológico Pisanay was a pilot study of a single, large site in the Sihuas Valley. Of many sites, we identified Pisanay as a target of investigation based on observations of petroglyphs and textile fragments potentially dating to the Sigwas traditions of the Early Intermediate Period along with other material that suggested subsequent use in the Middle Horizon and Late Intermediate Period. This preliminary report discusses the results of six weeks of mapping and excavation at the site in August and September of 2009 revealing mostly Late Intermediate Period occupation with cultural connections to the Colca Valley. We assess the artifactual, architectural, and funerary evidence for local development within a regional context.

[174] *Second Organizer* [174] *Second Chair*

Burks, Jarrod (Ohio Valley Archaeology, Inc.)[176] *Exploring the Emergence of Earthwork Complexity in Southern Ohio: the Small and Unique Enclosures of the Scioto Valley*

The Scioto River Valley is home to many large Hopewell earthwork complexes. These monumental works of earth and wood exploded onto the scene after 200 A.D., many built to a common design. But from where did this idea of earthwork construction emerge and can we trace Hopewell design principles back in time? In this presentation I explore early earthwork sites in the Scioto Valley and show, with the help of geophysical surveys and LiDAR data, that (1) early sites are more complex than previously known and (2) the apparent sudden emergence of square enclosures was actually a long time coming.

[244] *Discussant*

Burns, Denver (Volunteer, Santa Fe National Forest)[152] *The Work of Herbert Dick in the Gallina Area*

The Gallina culture has been the subject of several episodes of field work and reporting. In particular the 1960s and 1970s saw long term field work. Dr. Herbert Dick devoted 10 field seasons to survey and

excavation in the Gallina District. Dr. Dick's artifact collection has recently been cataloged; however much of the field documentation remains missing. His excavations and observations both confirm and expand information previously available for the Gallina.

Burnworth, Barrett [88] see *Peacock, Evan*

Burrow, Ian (President, Register of Professional Archaeologist) [227] *Discussant*

Burt, Chadwick (New Mexico State University) and William H. Walker (New Mexico State University)[158] *Animacy and the Ritual Killing of Ceramic Vessels: A Late Prehistoric Mortuary Practice in the American Southwest*

How does the animacy of material objects, a cross-cultural pattern common in the prehistoric American Southwest, contribute to patterning in mortuary practices? When pursuing religious perspectives cross-culturally, the more evident it becomes that divisions between those subjects deemed material and those considered ideal are meaningless. In this paper we employ a nonanthropocentric model that extends animacy to objects, as well as people, in order to understand how animated objects shaped interactions between people and things, especially during times of dramatic social change. To illustrate this perspective we explore late prehistoric mortuary practices involved in the ceremonial "killing of ceramic vessels."

Burton, James (University of Wisconsin) and T. Douglas Price (University of Wisconsin)[214] *Multiple Isotope Systems In Determining Human Mobility*

While strontium isotopes in dental enamel are increasingly used to identify immigrants at archaeological sites, the addition of other isotopic measurements such as carbon and possibly oxygen isotope ratios, together with contextual data, can substantially enhance our ability to determine geographic origins of humans. Case studies from Campeche, Mexico and Anyang, China are presented as illustrative examples.

Burton, Margie (San Diego Archaeological Center)[216] *Understanding Hunter-Gatherer Grinding Technology through Experimentation*

Despite the acknowledged importance of ground stone tools in ancient economies, the development of middle-range theory that would help researchers link archaeological ground stone assemblages with prehistoric processing practices and technological choices is still at an early stage. This presentation describes a set of 27 grinding experiments using replica milling tool sets recently conducted at the San Diego Archaeological Center. Results are used to suggest relative processing efficiency of three different tool shapes for three different intermediate substances and to help define characteristic use-wear patterns related to specific processing activities.

[216] *First Organizer*; [216] *First Chair*

Bush, Jason (Colorado State University) and Kristen Deily (Colorado State University)[135] *Postclassic Architectural Types in the Lake Pátzcuaro Basin, Michoacán, Mexico*

The newly discovered site of Sacapu Angamucu, located in the Lake Pátzcuaro Basin, Michoacán, Mexico, presents a unique opportunity to characterize Postclassic architecture within the Lake Basin. Here, using the results from full-coverage survey, GIS modeling, and intra and regional site comparison I develop an architectural typology for the region.

[135] *First Chair* [135] *Second Organizer*

Bush, Jessica[72] *A Spatial Analysis of 24HL1085: A Prehistoric Site in the Bear's Paw Mountains*

This project was an attempt to discern the use areas of two prehistoric components, located within a site on the Rocky Boy

Reservation in Montana, through the identification of spatial patterns created by the excavated lithics, faunal remains, and fire cracked rock (FCR). In order to complete this analysis the three ring model developed by Stevenson (1985) was adapted and combined with the trend surface analysis created by Hodder and Orton (1976). Results from the study showed that both components were comprised of several discernible use areas, which indicated that both components were short-term residential campsites.

Butler, Amanda (Illinois Transportation Archaeological Research Program, University of Illinois Champaign-Urbana), Brenda Beck (Illinois Transportation Archaeological Research Program, University of Illinois Champaign-Urbana) and Madeleine Evans (Illinois Transportation Archaeological Research Program, University of Illinois Champaign-Urbana)

[83] *Profile of the Lithic Assemblage from a Central Illinois River Valley Mississippian Town Site*
Settlement "D" at the Orendorf site produced an unusually large lithic assemblage. The town's catastrophic burning resulted in the abandonment of much of the residue of daily life. These circumstances afford us the unique opportunity to examine a relatively complete set of household and civic lithic tools and debris. This paper offers a basic description of the artifacts recovered emphasizing a diverse suite of bitted groundstone tools and carved block pipes. We compare the standardized frequency of arrowpoints and endscrapers with that of other central Illinois Late Prehistoric sites, and discuss factors affecting the quantity of material recovered.

Butler, Amanda [83] see Beck, Brenda

Butler, Brian

[217] *Chert Sources and Hierarchy: Mississippian Chert Usage at Kincaid and its Surrounding Settlements*
Mill Creek and Dover chert were extensively employed for large biface production by Mississippian groups in the lower Ohio Valley. Earlier analysis had shown very different distributions of Mill Creek and Dover cherts in the Kincaid area. While Mill Creek appeared to be broadly available in the region the distribution of Dover chert was much more restricted, one that suggested that it was distributed through elite-mediated exchanges. Previously, the only Kincaid samples were from the 1930's excavations and of uncertain reliability. Here, the issue in the Black Bottom is revisited using data from recent excavations at the Kincaid site.

Buvit, Ian and Karisa Terry (Central Washington University)

[177] *The Twilight of Paleolithic Siberia: Human-Environmental Interactions at the End of the Ice Age*
Few sites in Siberia are assigned to the Younger Dryas (locally the Nor'ilsk Stade), but occupation persisted despite the re-advance of steppe biota beginning 11,400 BP. Sites are primarily associated with low-energy alluvial landforms where preservation is excellent. Fish bones and other direct evidence of aquatic resource exploitation appeared, while terrestrial animals still were hunted. Technologically there was continuation of microblades, bifaces, and burins, but also harpoons, fishhooks, composite tools, and even pottery in some areas. The Nor'ilsk in Siberia was a watershed between Upper Paleolithic lifeways of the late Pleistocene and more settled Mesolithic traditions of the early Holocene.

Buzon, Michele (Purdue University) [122] First Chair, [122] see Schrader, Sarah; [122] see Hubbell, Zachariah R

Byerly, Ryan (Colorado Archaeological Society), Charles Egeland (University of North Carolina at Greensboro) and Jason LaBelle (Colorado State University)

[256] *Anatomical Learning among Novice Butchers: Implications for Modeling Early Hominin Carcass Processing Behavior*
Early hominin butchers at times operated in highly competitive environments and maximizing nutrient return from mammal carcasses with minimal temporal expenditure may have been a primary processing goal. As such, greater anatomical knowledge of prey

carcasses probably offered a selective advantage at both intra- and inter-species levels of competition. This study presents experimental data assessing how gained experience affects nutrient acquisition under constraint and how varied butcher experience may be manifest in the zooarchaeological record. These data are discussed in the context of understanding change in hominin carcass processing behaviors through time.

Byers, A. Martin (McGill University)

[176] *The Ohio Hopewell as a System of Cult Sodality Heterarchies*
Treating the major Ohio Hopewell earthworks as peer-polity alliances is becoming widely accepted. I also treat them as manifesting alliances – not polities but mutually autonomous cult sodalities constituting incrementally organized first-order, second-order, and third-order alliances of mutualistic heterarchies that actively pursued the maintenance of cosmic balance through sacred ball games. These games re-enacted the world creation events as represented in historic Native North American myths. The great earthwork locales served as critical monumental symbolic pragmatic devices by which these games were constituted as postmortem sacrificial rituals by which sacred powers immanent in the deceased were recycled back to the world that fed and supported them in life.

Byers, David (Missouri State University) and Joan Coltrain (University of Utah)

[27] *Paleo- and Neo-Aleut Stable Isotope Chemistry*
We explore two questions important to understanding Aleut prehistory. First, if as Hrdlicka's craniometric data suggest, the Paleo- and Neo-Aleut were distinct groups, are differences reflected in their bone chemistry. Second, did subsistence vary between them and how did food preferences change through time. Our dataset includes isotope data from 80 human skeletons and two zooarchaeological assemblages. Our results suggest that Neo-Aleut pursued higher trophic level marine foods than Paleo-Aleut and that through time Paleo-Aleut diets shifted from offshore to nearshore resources. Finally, the trends in isotope chemistry appear closely linked to the spatial distribution of the human remains.

Byram, John (University Press of Florida) [93] Discussant

Byrd, Adam (University of New Mexico)

[152] *Intervisibility Among Towers in the Gallina Area of Northern New Mexico*
Numerous masonry structures of various heights throughout the Gallina area of Northern New Mexico have been described as "towers" by many researchers. Suggestions of intervisibility have been made in past studies, but these suggestions have not been systematically and quantitatively tested. In this study, tower sites were identified from a review of the ARMS database in Santa Fe, a subsequent review of the original site records, and selected site visits. Intervisibility between the towers was calculated by conducting a viewshed analysis in ArcGIS. The results of this analysis will be presented along with conclusions derived from this research.

Byrnes, Allison (Mercyhurst College) and David Pedler (Mercyhurst Archaeological Institute)

[247] *Lithic Technology at the Breinigsville Site Complex, Southeastern Pennsylvania*
A surface survey of the Breinigsville site complex, located in the Great Valley section of the Ridge and Valley physiographic province in Lehigh County, southeastern Pennsylvania, has yielded a wealth and diversity of chipped stone artifacts. The site's proximity to several distinctive raw material sources, combined with a material culture inventory that spans from Clovis to the Late Woodland period, makes the Breinigsville complex particularly amenable to time-transgressive cultural and technological studies. This paper characterizes the site's lithic artifact assemblage and employs GIS-based spatial analysis of its raw material distribution to identify spatiotemporal lithic resource-use patterns across the site.

Cadieux, Nicolas (Archéotec Inc. / McGill U.)

[60] *From Lithic Distribution to Distribution Network*

Since the 1950's, archaeologists have been finding pyroclastic stone artifacts on the shores of the Ottawa and Saint Lawrence rivers. With the discovery of site BiFw-20 (4000-4500 BP), many quickly concluded that we were dealing with a modest Late Archaic distribution network. By better understanding the space, time, lithic sources, fall-off curves and the "chaîne opératoire", this study points towards a somewhat more nuanced and complex story of the region. It poses some fundamental questions about archeological methodology involved in bridging the gap between lithic distributions and distribution networks.

Cail, Hannah (University of Montana), Anna M. Prentiss (University of Montana), and Michael P. Richards (University of British Columbia)

[39] *Cultural Implications of Dog Remains at the Bridge River site: Taphonomic and Isotopic Analyses*

Dogs represent a unique facet of the faunal assemblage at the Bridge River site, a prehistoric village in southern British Columbia. The skeletal remains of at least two dogs recovered from cache pits in Housepit 24 exhibit signs of trauma including perimortem fractures, cut marks, and periostitis. This case is different than the canid assemblage of Keatley Creek, where osteological analysis concludes many of the dogs died of natural causes. The pathologic and taphonomic evidence suggests that the Bridge River canid assemblage results from a single event perhaps associated with a symbolic display of status as associated with feasting.

Callaghan, Michael (University of Texas at Arlington)

[17] *Credit Where Credit's Due: Toward Engendering Preclassic Maya Ceramic Production*

Ethnoarchaeological and archaeological studies of pottery production in Mesoamerica have demonstrated a pattern of household production where labor is shared between genders or was gendered female. Despite these findings, production and use of ceramics associated with important Maya archaeological contexts is still commonly gendered male. This paper explores the gap between ethnoarchaeological data and archaeological interpretation, endeavoring to address a tacit androcentrism in the interpretation of archaeological contexts. A study of ceramics from Preclassic period caches from the Holmul Region, Guatemala is used to explore the potential role and significance of women in ancient Maya pottery production, exchange, and consumption.

Calligaro, Thomas [229] see Tenorio, Dolores; [147] see Jaime-Riveron, Olaf

Cameron, Catherine (University of Colorado) [131] Discussant

Cameron, Jan (Cultural Resources Office, City of St. Louis) [3] Discussant

Campana, Douglas and Pam Crabtree (New York University)

[64] *Secondary Animal Products, Wealth, and Trade in Middle Saxon England*

Our research at the Anglo-Saxon sites of West Stow and Brandon suggests that a shift in animal husbandry practices took place during the 7th-8th centuries CE. Here we present a broad survey of zooarchaeological data from over 30 Early and Middle Saxon sites in eastern England. These data suggest a shift from a pattern of relative self-sufficiency to one based on specialized production of commodities such as wool. We examine the relationship of this change in animal economies to the social and political transformations that took place in the Middle Saxon period including state formation, urbanism, and the intensification of trade.

Campbell, David

[241] *Contemporary Yucatec, Kekchi and Mopan Maya Home Gardens: What Do They Reveal about Carrying Capacity of La Selva Maya?*

Maya home gardens have long been recognized as repositories of

native species and the ethnobotanical traditions that pertain to them. We examined the phytosociology, alpha diversity and beta diversity of Yucatec, Kekchi and Mopan Maya domestic forest gardens in western and southern Belize. We examined 37,700 flowering plants in 30 Maya gardens, identifying 515 native species. These gardens are richer in species of flowering plants than the subtropical forests that surrounded them. Indeed, they may be the most species-rich domestic gardens on Earth. What do these statistics reveal about the carrying capacity of the Maya Forest before the "collapse"?

Campbell, Jennifer (University of Toronto)

[230] *Envisioning Space, Investigating Place: The use of Three Dimensional Modeling in Architectural Reconstructions*

As anthropological archaeologists we envision space so that we can investigate the cultural implications of place. This paper presents the use of three dimensional architectural models, created using Archicad, to reconstruct a Mughal Caravanserai from Peshawar, Pakistan. Models can illuminate changes to architecture over time and allow us to begin interpreting the cultural changes that are reflected in and by the alteration of space and the resultant formation of place. The primary field methods involved in data collection for this lab based modeling will be addressed, as well as, methods of spatial analysis and theoretical considerations that guide our interpretations.

[230] *First Organizer; [230] First Chair*

Campbell, John [59] see Miller, Mason D.

Campbell, Peter (CAIRN), J. Craig Williams (CAIRN) and Susan E. Jansen (CAIRN)

[62] *Possible Ritual Use of Canoes in Keener Cave, Wayne County, Missouri*

Keener Cave's subterranean lake has yielded several canoes since the early 20th century, having the highest concentration of any North American cave. The spatial patterning and number of canoes denotes long-term ritualistic use, as the lake's size and environment disqualify traditional canoe use. Several canoes show a previously undocumented construction method, suggesting specialization and a newly discovered tradition. The canoes' design and ritualistic use designates the site as highly significant. Recreational divers conducted previous research without documentation. The Cave Archaeology Investigation Research Network (CAIRN) performed a survey in the fall of 2009, recording artifacts in situ together with avocational divers.

Campbell, Roderick (Joukowsky Institute), Jing Yuan (Chinese Academy of Social Sciences, Institute of Archaeology), Yuling He (Chinese Academy of Social Sciences, Institute of Archaeology) and Zhipeng Li (Chinese Academy of Social Sciences, Institute of Archaeology)

[155] *Reconstructing Production: A Preliminary Investigation of a Late Shang Bone Workshop at Tiesanlu, Anyang*

In 2006 enormous quantities of bone artifact production debris were excavated along a 270x10 meter stretch of road reconstruction at Tiesanlu, Anyang. Its position in the Late Shang capital of Anyang, adjacent to the Miaopu bronze foundry and predominance of cattle bone raise interesting questions. The nature of the assemblage suggests some sort of relationship to the palace-temple area, yet the scale and nature of production suggests wider distribution. This preliminary study will focus on the wider significance of the site, the spatial and temporal distribution of production debris, and the reconstruction of some of the production sequences.

Campbell, Rose (The University of Montana)

[203] *Corset Stays and Tea Sets: The Archaeology of Women and Children in the American Mining West*

In decades of excavation in mining towns across the western United States, the families of the miners have remained largely ignored or undiscovered. This has led to a decidedly male bias in the archaeology of historical mining communities. Recent research at Coloma Ghost Town in western Montana has provided a unique opportunity to study women and children in mining communities. The

only known history of Coloma was written by a woman, and recent excavations have discovered a relative abundance of children's toys and women's apparel. The results of this on-going study could prove helpful to other archaeologists studying gender issues.

Campos Lara, Omar [254] see *Limón Boyce, Morrison*

Canaday, Tim [86] see *Swain, Todd*

Canaday, Timothy (Salmon-Challis National Forest), Mary Anne Davis (Idaho State Historic Preservation Office) and [43] *The Frank Church River of No Return Wilderness Programmatic Agreement: The Good, the Bad, and the Ugly*
The Frank Church River of No Return Wilderness is the largest contiguous wilderness in the lower 48 states encompassing over two million acres in central Idaho. The wilderness is managed by four National Forests (Bitterroot, Nez Perce, Payette and Salmon-Challis) and contains over 1,000 known archaeological sites. A Programmatic Agreement (PA) between the Idaho SHPO, the Advisory Council, and the four forests was signed in 2003. This aggressive eight year agreement was meant to provide a framework for reducing or eliminating documented adverse effects in the wilderness. This poster provides an overview of the PA and explores the accomplishments and setbacks encountered along the way.

Canaday, Timothy [43] *First Organizer*; **[43]** *First Chair*

Canarozzi, Nicole (University of Florida)
[250] *Evaluating the Eastern Oyster (Crassostrea virginica) as a Proxy for Season of Zooarchaeological Collection*
Determination of the season of collection of the eastern oyster in the southeastern US is complicated by the dynamic nature of the estuaries they inhabit. Environmental changes may cause unpredictable biological responses, including the deposition of multiple shell growth breaks. Currently, stable isotope geochemistry is the most effective method for determining seasonality of oysters in the southeast. However morphological indicators have not been consistently correlated with isotopic profiles. This research combines stable oxygen isotope geochemistry with visual analytical techniques that enhance growth structures to establish a simple, low cost method for determining season of capture of oysters in the southeast.

Cannon, Aubrey [29] see *Sonnenburg, Elizabeth P.*

Cannon, Kenneth (USU Archaeological Services), Carol Hearne (Challis Field Office, Bureau of Land Management), Molly Boeka Cannon (Department of Geography, University of Nebraska and Metcalf Archaeological Consultants), Oskar Burger (Stanford University) and William Eckerle (Western GeoArch Research)
[234] *Reinvestigations at the Challis Bison Kill Site, Custer County, Idaho*
In the early 1970s, B. Robert Butler of Idaho State University published a series of articles on bison in Idaho. A key site in these articles was the Challis Bison Kill which was reported as mid-nineteenth century in age and the further west jump site identified. Recent efforts supported by the BLM, the Earthwatch Institute, and the Idaho Heritage Trust have placed doubt on these original interpretations. We report on three years of field and laboratory analysis that focuses on new ages for the deposits and the environmental and social context of the site.

Cannon, Mike (SWCA Environmental Consultants), David Reinhart (SWCA Environmental Consultants), Deborah Jensen (SWCA Environmental Consultants), Heather Stettler (SWCA Environmental Consultants), and Sarah Creer (SWCA Environmental Consultants)
[24] *The Milford Wind Corridor Project: Adventures in Digital Data Recovery Reporting*
For the "new energy economy" Milford Wind Corridor project, SWCA is attempting to use "new digital media" to produce a data recovery

report and public interpretive material that are more user-friendly than the typical CRM document. Issues encountered in developing these materials range from agency acceptance, to selection of appropriate formats for different purposes, to management of a far more complex editorial and production process. Though there are added costs, the benefits of digital CRM reporting should include more appeal to the general public, greater research utility, and better dissemination of the results of technology-intensive analyses like visual impacts assessment.

Canuto, Marcello (MARI/Tulane University), Ellen E. Bell (CSU-Stanislaus) and Marcello A. Canuto (MARI/Tulane University)
[65] *From the Outside Looking In: Boundaries, Borders, and Administrative Strategies in the El Paraíso Valley, Western Honduras*
Recent research in southeast Mesoamerica highlights the inadequacy of models defining cultural borders as spatially fixed entities. Alternatively, we employ an interactionist approach to model integrative strategies in the western Honduras's El Paraíso Valley. During the Classic period (AD 250-900) there developed in this valley a complex web of interactions among El Paraíso residents, Maya elites at Copan, and non-Maya groups. Examining El Paraíso and El Cafetal as nodes of multiple interactive networks, we analyze how distinct groups and their leaders sought to structure and control these networks through distinct practices of materialization aimed at community, place-making, and political integration.

Canuto, Marcello [258] see *Bell, Ellen E.*; **[54]** see *Acuna, Mary Jane*

Cap, Bernadette (University of Wisconsin-Madison)
[54] *Marketplace identification among the Ancient Maya: A Case Study from the Classic Period site of Buenavista del Cayo, Belize*
Identifying the physical location of a marketplace in the archaeological record is difficult due to the removal of goods after their purchase and vendors carrying away their products and debris when the market closes. Therefore any attempt to identify a marketplace must establish rigorous, empirically testable correlates related to architecture and activities that take place in them. This paper presents such a suite of correlates and tests them against an assemblage from the Maya site of Buenavista del Cayo, Belize. Data from the site's East Plaza meet several criteria for the presence of a marketplace during the Classic period.

Capriata Estrada, Camila [138] see *Boswell, Alicia*

Capriles, José (Washington University), Christine Hastorf (University of California at Berkeley) and Melanie Miller (University of California at Berkeley)
[245] *Stable Isotope Analysis of Fish Remains from Lake Titicaca*
Research on past human diet in the southern Titicaca Basin has directed us to investigate the paleoecology of an important element in the diet, fish. By completing a range of molecular analyses on modern and archaeological fish specimens, we contribute to two related issues regarding the application of stable isotope analysis to archaeological fish remains. The first is the potential carbon and nitrogen isotopic values of prehistoric fish (and how these impact human diet), and the second is the lake-fish ecological relationship. From these data we improve our understanding of the place of fish in the diet of ancient people.
[222] *First Chair [222]* *Second Organizer*

Capriles, José [222] see *Bruno, Maria C.*

Carballo, David (University of Alabama) and Alejandra Gómez Cortés (Universidad de las Americas, Puebla)
[221] *Obsidian Symbolism in a Temple Offering from La Laguna, Tlaxcala*
Recent excavations on top of a temple structure at La Laguna, Tlaxcala, uncovered an offering containing 15 large obsidian bifaces, including knives and eccentrics, along with other imported and symbolically charged materials. The offering is currently without close

precedent for the Terminal Formative, the primary occupation phase of the temple. We comment on the dating of the offering and the technological attributes of the bifaces, and offer an interpretation of the symbolic significance of the complex by drawing on related deposits and iconography from prehispanic central Mexico.

[221] *Second Organizer* [221] *Second Chair*

Carbaugh, Aimee [214] *see* *Ambrose, Stanley H.*

Cardona, Augusto (Proyecto Arqueológico Misti) and Ran Boytner (Cotsen Institute of Archaeology, UCLA)

[188] *Beyond Moquegua: New Evidence of Wari and Tiwanaku Interaction in the Vitor Valley, Arequipa*

Recent excavations in Vitor reveal a complex interaction between Wari and Tiwanaku in the mid-valley site of Millo-2. Our survey and excavations indicate the presence of a large Wari site with residential, administrative and ceremonial areas. Within this site, both Wari and Tiwanaku ceramics have been uncovered in residential and public compounds. These data suggest that Wari and Tiwanaku traditions overlapped in the region of Arequipa, yet may be distinct from the patterns encountered in the adjacent region of Moquegua. We explore the economic, political and cultural dimensions of this dynamic relationship during the Middle Horizon in the South-Central Andes.

[188] *Second Organizer*

Cardona, Augusto [145] *see* *Williams, Patrick R.*

Carey, Heather [22] *see* *Wagner, Mark*

Carignano, Micaela (Washington University in St. Louis) and Lee Arco (Washington University in St. Louis)

[26] *Analysis of Fluvial Deposition during the Late Archaic Poverty Point / Early Woodland Transition at Jaketown*

The Jaketown site has a long history of human habitation, and cultural materials from Late Archaic through Mississippian Periods are present. Throughout the site, an intermediate deposit creates a clear stratigraphic discontinuity between the Late Archaic Poverty Point and Early Woodland cultural strata, which has led to debate concerning the chronologic and stratigraphic relationship between the two prehistoric occupations at the site. This poster presents stratigraphic, chronometric, and sedimentologic datasets that are used to evaluate the chronology of human habitation and to investigate the depositional/geomorphologic events during the Late Archaic / Early Woodland cultural transition at Jaketown.

Carlson, Eric (University of Montana)

[39] *Resource Intensification, Resource Depletion, and Emergent Inequality: An Assessment of Faunal Material spanning 900 yrs of occupation at the Bridge River Site*

An analysis of faunal material from housepit floors excavated at the Bridge River site reveals a process of resource intensification of anadromous salmon correlated with both the emergence and growth of the village through time. Faunal analysis also shows that secondarily-ranked food resources such as deer and other medium to large terrestrial mammals declined in abundance and taxonomic diversity. Element abundance shifts from equal representations of all parts to more selective (i.e. transportable) leg portions. These trends suggest over-exploitation of secondary food resources correlated with the emergence of socioeconomic inequality late in the history of the village.

[39] *see* *Smith, Lisa M.*; [185] *see* *Lash, Ryan P.*

Carlson-Drexler, Carl (Army Corps of Engineers, College of William & Mary), Carey Baxter (U.S. Army Corps of Engineers), and Michael Hargrave (U.S. Army Corps of Engineers)

[164] *Deploying Geophysics in Cultural Resources Management on United States Military Installations*

The U.S. Army Corps of Engineers' Construction Engineering Research Laboratory (CERL) in Champaign, Illinois, conducts geophysical investigations on numerous sites on military bases

around the United States every year. These studies are one of our contributions to managing cultural resources on the nation's military installations. Investigations of historic sites at Forts Riley and Leavenworth in Kansas, and Fort Lee in Virginia constitute a portion of our most recent research projects. This poster details the results of fieldwork at these sites and illustrates CERL's ongoing, active program of advanced geophysical research in archaeology.

Carnevale, Andrea [60] *see* *Birch, Jennifer*

Caromano, Caroline (Museu Nacional, UFRJ, Brasil), Leandro Matthews Cascon (Museu Nacional, Universidade Federal do Rio de Janeiro) and Rita Scheel-Ybert (National Museum, Federal University of Rio de Janeiro, Brasil)

[142] *Be they Big or Small: Integrating Botanical Macro and Microvestige Analyses in Central Amazon*

Innumerable questions in Amazonian archaeology place great emphasis on relationships between past human groups and the environment, traditionally using ethnographic analogies in order to infer these, due to preservation issues but also due to a lack of a systematic focus on the retrieval and analysis of botanical vestiges. A paleoethnobotanical approach through the combined use of anthracological analyses and starch grain and phytolith studies holds great potential by providing direct evidence on a great number of such relationships, and has been initiated in the Central Amazon Project. The present work intends on presenting some first results of this on-going study.

Carpenter, John (Instituto Nacional De Antropología E Historia) and Guadalupe Sanchez (Instituto Nacional de Antropología e Historia)

[199] *Interaction and Integration on the Aztatlán Frontier in Northern Sinaloa*

The Río Mocorito, located in north-central Sinaloa, is generally considered as the northern boundary of the Aztatlán tradition, as well as reflecting the northwestern limits of Mesoamerican culture (Tahue) identified by the 16th C. Spaniards. Here, we consider the evidence regarding Aztatlán interaction and integration within the adjacent region extending between the Río Mocorito and the Sonoran border; an area encompassing both the Huatabampo and Serrana (Rio Sonora) archaeological traditions. Evidence for interaction *vis-a-vis* exchange is ubiquitous. While socio-ideological integration may be reflected by both the diffusion of urn burials and the incorporation of Aztatlán materials as funerary offerings, there is, as yet, no evidence that any communities were politically integrated with their Aztatlán neighbors.

Carpenter, John [21] *see* *Sanchez Miranda, Guadalupe*

Carpenter, Tina (Northland Research, Inc.) and John Marshall (Northland Research, Inc.)

[33] *Shell and Earth Figures on the Northern Edge of the Sierra Pinacate*

Northland Research, Inc., conducted archaeological investigations at five sites along the U.S.-Mexico border on the Cabeza Prieta National Wildlife Refuge in southwestern Arizona. This paper discusses two data sets from the project—the shell assemblage and earth figures. The composition of the shell assemblage was unexpected as it was not dominated by *Glycymeris* shell as it is in surrounding areas. The documentation of one previously known intaglio, and the discovery of two additional earth figures, provides additional data for this particular landscape. The shell assemblage and the earth figures suggest that this landscape may have been used in unexpected ways.

Carpenter, Tina [100] *see* *Simon, Arleyn*

Carr, Christopher (Arizona State University) and Anna Novotny (Arizona State University)

[176] *Ritual Dramas in Ohio Hopewell Earthworks*

Survey and study of 89 photographs of skeletons, cremations, associated artifacts, and isolated artifact deposits in Ohio Hopewell

chapel houses indicate that these items were sometimes purposefully arranged into the forms of bird-human composites, birds, human faces, headdresses, and geometric cosmological themes. The arrangements suggest that Ohio Hopewell peoples performed ritual dramas, sometimes with many participants and interpretable in meaning, within their chapel houses. The method of anthropologie du terrain is used to distinguish between unintentional taphonomic processes and intentional arrangement of skeletal remains during these ceremonies. The findings have implications for the study of intercommunity alliance strategies and philosophical-religious concepts.

Carr, Dillon [224] *see Ellis, Christopher J.*

Carr, Kurt (The State Museum of Pennsylvania)

[90] *A Preliminary Analysis of Artifacts from the Shoop site (36Da20): Technological and Functional Implications*

For more than fifty years, research at the Shoop site in Pennsylvania has made significant contributions to Paleoindian studies. In 2008, a proposal was developed to nominate the site as a National Historic Landmark. Towards that goal the first controlled excavations and systematic mapping was conducted. Artifacts from the two major repositories were analyzed. The artifacts are characterized by a high ratio of tools to debitage, tool maintenance activities, scrapers, and a large number of projectile points. This presentation will summarize their morphological and technological characteristics, analyze their horizontal distribution and present the results of a pilot microwear analysis.

[90] *see Stewart, R Michael*

Carr, Philip (University of South Alabama) and Andrew Bradbury (Cultural Resource Analysts Inc.)

[236] *The Organization of Early Archaic Lithic Technology at the St. Albans Site*

Excavation of the St Albans site, West Virginia in the 1960s documented stratified cultural deposits to depths over 36 feet and a sequence of Early Archaic occupations. Despite the importance of St. Albans for our understanding of the Early Archaic, to date no in depth artifact analyses have been conducted. We present the results of a detailed technological analysis of a sample of lithic materials with a focus on raw material use, tool manufacture, and discard. Change in technological organization is inferred from early in the sequence to late. Simulation is used to better understand lithic material use through time.

[236] *First Chair*

Carrillo, Charles [193] *Discussant*

Carrillo, Richard

[193] *The Manufacture and Utilization of a Lithic and Bottle Glass Tool Technology by 19th Century Hispanic New Mexicans and their Colorado Descendants*

Lithic technology, as considered by most Americanist prehistorians, is associated with a technology that is unique to Native Americans. Chipped stone artifacts found on Spanish Colonial period and later sites have previously been attributed to mixing of prehistoric materials from underlying or nearby sites with the historic artifacts, or to historic Indian manufacture and use. A similar situation occurs in Colorado. Using archaeological and ethnohistorical data, the argument is made that the modified tools, both lithics and bottle glass, found on historic sites in the Purgatoire and Arkansas Valley region were manufactured by Hispanic New Mexicans and their Colorado descendants.

Carrion Santafé, Elena [58] *see Baena Preysler, Javier*

Carroll, Alex (Northern Michigan University)

[228] *Social Investment in Regions of Refuge: Survival Strategies among the Southern Paiute of Southern Nevada*

The Southern Paiutes of southern Nevada experienced progressive waves of encroachment by Spanish, Mexican, Mormon, and

American colonizers. In southern Nevada, close proximity to portions of the Paiute Trail, later renamed the Old Spanish Trail, put certain indigenous populations in the direct path of these colonizers and colonizing forces. This paper provides a preliminary analysis of social investment and knowledge transfer strategies about regions of refuges, the use of mountainous regions of refuge in the Mormon Mountains as one mechanism to evade slave raiding activities targeting children and women, and the archaeological imprint of regions of refuge among Southern Paiute communities.

Carroll, G. Denise [250] *see Reitz, Elizabeth J.*

Carter, Alison (University of Wisconsin-Madison)

[121] *LA-ICP-MS of Carnelian and Agate: Analysis of Geological Sources from Central, South, and Southeast Asia and Beads from Iron Age sites in Cambodia*

In Southeast Asia, agate beads are amongst the earliest indicators of contact with South Asia, however the exact provenience of the beads has never been determined. In order to explore this question a group of agate samples from geological sources in South and Southeast Asia were analyzed using LA-ICP-MS. This data was then compared with NAA results in order to ascertain if LA-ICP-MS is a valid method for differentiating the samples. Lastly, these results were compared with LA-ICP-MS data from Iron Age agate beads from Cambodia in order to determine if the beads were being made locally or imported.

Carter, Allyson [93] *Discussant*

Carter, Benjamin (Lehigh University)

[222] *Working the Data: Broad Scale Patterns Derived from 50,000 Data Points on Tiny Shell Beads from Ecuador*

Dr. David L. Browman always stressed the need to understand the data upon which interpretations are built. This is my attempt to demonstrate that I took his advice to heart. I collected nearly 50,000 data points on 7650 shell beads and 996 lithic microdrills from six Manteño (AD 800-1532) archaeological sites. From this database I have been able to demonstrate major technological changes associated with broad social and political changes in Andean South America, as well as site-specific interpretations, such as the caching of in-process shell beads at certain sites.

[67] *First Organizer*; [67] *First Chair*; [67] *see Martin, Alexander J.*

Carter, Tristan (McMaster University)

[175] *Sourcing Without the Social? Obsidian Characterisation in the Eastern Mediterranean 40 years On*

While obsidian sourcing is arguably the success story of archaeometry, social archaeology now often plays a secondary role to methodology and regional introspection. Such work fails to live up to Renfrew's original aims where sourcing was used to reconstruct socio-economic systems, contributing to archaeology's 'big questions' rather than focusing on obsidian per se. This paper details an attempt to use obsidian sourcing in the Eastern Mediterranean to map community interaction and ideational through a large-scale analytical program that involves a more holistic means of characterisation, integrating chemistry and a richer appreciation of the artefacts themselves (chaîne opératoire, visuals, haptics).

Casile, Claudette (Washington State University)

[97] *Statistical Perspectives on the Palynological Investigation of Marie Galante, FWI*

Previous palynological analysis of core VF08-1, collected on Marie Galante, determined the presence of economically important species and allowed for the establishment of three main events within the sedimentological profile. The results document changing environments along with pre-Columbian and colonial human activity. Statistical methods in spatial analysis provide a finer resolution of the palynological results, revealing hidden trends of environmental succession within the stratigraphic zones. When coupled with a series of radiocarbon dates, the statistical analysis corroborates and strengthens the palynological interpretations, and documents a human presence on this island during Archaic times.

Castaneda, Quetzil (OSEA)

[212] *Constructing the Past, Making History: Notes on the Lived Historical Value of Archaeology and the Significance of Autoethnographic Documentation of Archaeological Projects*

This paper discusses how archaeological research projects have an experiential meaning and historical value for the persons and communities involved in archaeology. In other words, archaeology "makes history" in the present in and through the relationships it creates with communities. Recognition of this fact creates the scientific imperative that archaeologists figure out ways to start conducting ongoing ethnographic documentation of the social contexts of their research projects. This paper presents concrete ways that archaeologists might actualize such autoethnography or "self"-ethnographic and historical documentation.

Castanzo, Ronald (University of Baltimore)

[156] *Pottery Production in Formative Period Valley of Puebla: Support for the Intermittent Crafting Model*

Several Formative Period pottery production facilities were excavated in 2007 near the town of San Felipe Tenextepec in the Valley of Puebla. Facility morphology and attributes of the ceramic assemblage suggest part-time household-level economic activity for the purposes of exchange. Since the local population was well below carrying capacity during this time, these households did not engage in the manufacturing and exchange of ceramics out of any need to augment their subsistence regime. For this reason, Hirth's intermittent crafting model of domestic craft production provides a strong explanatory framework within which to consider early local pottery making.

Castillo, Patricia (INAH)

[242] *The Symbolic Landscape in the Social Structure of Ancient Tajín, Veracruz*

En la distribución al interior de la zona monumental que corresponde a los espacios simbólicos, para su última época en el antiguo Tajín, se observan espacios conceptuales como los juegos de pelota en donde se marcan los rituales y la arquitectura monumental de la Gran Greca o Xicalcolihqui, que está construida y pensada para poder observarse desde lejos como una arquitectura que va a modificar el paisaje y se convierte en un gran símbolo que modifico el interior de la gran ciudad, estos elementos aparecen para los años de 1000 a 1200 con un agente que trasforma la ciudad y que tiene como nombre calendárico Trece Conejo.

Castillo-Butters, Luis (Pontificia Univ Católica del Peru)

[145] *The Wari, The Moche and the Cajamarca*

For a short period of time during the Middle Horizon, and exclusively in the Jequetepeque Valley, a large number of highland and coastal societies coincided leaving behind evidence of different kinds of interactions. While social exchanges and ritual practices seem to be a big part of these interactions, violence and coercion were most likely absent. The time period is critical, because it was during this period that the Moche collapsed, that the Transitional phenomenon took shape, and that the Lambayeque eventually took control. These interactions, and their physical manifestations left behind a trail of information that can illustrate the ways these societies interacted, and the measure by which these interactions conditioned their cultural evolutions.

[145] *First Chair* [145] *Second Organizer*

Castro Martínez, Pedro [143] *see Escoriza, Trinidad*

Catella, Luciana [138] *see Barrientos, Gustavo*

Catlin, Kathryn (University of Massachusetts Boston)

[246] *Getting to the Core of Skagafjordur*

After taking several thousand soil cores across Skagafjordur and noting the presence of tephra layers and the thickness of intervening soil (primarily aeolian sediment), we can begin to construct extensive erosion and deposition histories for individual farms. These sequences correlate with some of the relative measures of socio-economic status. In this paper we will discuss the implications of

observed sediment variations as both a cause and a consequence of the differences in wealth between neighboring Viking-age farmsteads.

Caulk, Grady (Corps of Engineers)

[236] *Archaic in South Florida*

As part of the Comprehensive Everglades Restoration Project (CERP) the Corps of Engineers and the South Florida Water Management District commissioned an update of the Archeological Context and a Cultural Resource Overview and Survey Strategy for the CERP area. Only four Early Archaic and 13 Middle Archaic sites were identified out of the 1,700 pre-Columbian sites recorded in the study area. This paper examines the survey strategies and site evaluation methods used to identify pre-ceramic Archaic sites in South Florida.

Cazares, Lucia (Zona Arqueologica de Monte Alban, INAH)

[103] *El Adoratorio Central de Monte Alban*

Ubicado en el lado oriente de la Plaza Principal, este foso llamado tambien cisterna, es una estructura muy singular explorada por Alfonso Caso en 1945, quien encontro una subestructura conectada con dos tuneles y el famoso pectoral de jade con representacion de murcielago como ofrenda de un entierro multiple. Además, en recientes estudios en la subestructura, localizamos dos ofrendas mas. Todo esto, y su ubicacion tan significativa, contigua al Observatorio Astronomico, al Edificio P y el Edificio H nos indica que esta edificación aun guarda muchos secretos, de los cuales propongo algunas hipotesis.

Cearley, Stacie (Bureau of Land Management)

[75] *Cleaning Out the Freezer: Faunal Analysis and Paleoecology of the Alpha Cave Cold Storage Site*

The bison bone recovered from Alpha Cave, located on the Craters of the Moon National Monument and Preserve, is currently being analyzed to identify the ratio of stable isotopes (18O and 13C). These efforts will provide a great deal of information regarding bison diets and regional paleoecology over the past 5000 years.

Cecil, Leslie (Stephen F. Austin State University), Linda Scott Cummings (Paleo Research Institute) and Melissa Logan (Paleo Research Institute)

[123] *Ancient Maya Food Processing as Evident Through Grater Bowls*

Recent studies of Maya vessel use and residues have concentrated on chocolate and atole residues from vases and pouring vessels that have hieroglyphic texts describing their use and contents. Other vessel forms, such as grater bowls, have received little attention as to their actual use by the Maya. Instead, ethnohistoric and ethnographic analogy of indigenous Mexican populations suggests that they were used to crush chilies. While the Maya may have used grater bowls to crush chilies, they may have been used to process other foods. This poster demonstrates that the Maya grater bowls were used to process animals and plants.

Cerezo-Roman, Jessica (University of Arizona)

[158] *Mortuary Practices and Personhood among the Hohokam of Southern Arizona*

Previous research on mortuary practices in the Southwest largely has focused on the identification of a single aspect of identity. This study employs an intersectional approach looking at the individual as a member of different social networks using the concept of personhood. I contrast the biological profile of individuals with posthumous treatment of the body at two Preclassic Hohokam sites in the Tucson Basin. Preliminary results suggest that social age and gender were emphasized by the mourners. In addition, I look at how transformations in practices and perceptions of the body and individual personhood were accomplished through mortuary rituals.

Cervantes, Gabriela (PUCP)

[226] *Reconstructing Complex Funerary Processes on Peruvian North Coast: A Middle Sicán Case Study*

Careful examination of a recently excavated, intact 1000 year-old

Middle Sicán elite tomb has allowed us to reconstruct much of the complex, funerary process. This study shows the careful planning of this tomb from the placement, construction, and decoration of the tomb to cautious placement and organization of diverse grave contents. The funerary process continued long after the primary interment with a sequence of natural and cultural events, including rains, ritualized burning of ground surfaces, and the placement of diverse offerings over centuries. Ritualized funerary process seems to have served as mechanisms of preserving memory of the deceased through materialization.

Chacaltana, Sofia (University of Illinois at Chicago)

[121] *Using LA-ICP-MS Method to Observe Imperial – Local Dynamics in the Upper Moquegua Valley during Inca Occupation*
During the Inca incorporation of the Moquegua Valley in southern Peru, the groups inhabiting this area went through an intense socioeconomic transformation that was reflected in the material culture of the region. I present preliminary analyses conducted at the Elemental Analysis Facility at the Chicago Field Museum to determine chemical readings from ceramic sherds collected from storehouses of an Inca waystation and an adjacent local community. This data shows that the empire was using foreign objects (vessels) in new socio-political contexts but continued utilizing local clay sources to manufacture vessels for their imperial activities.

Chada, Bill [72] see *Lincoln, Thomas R.*

Chadderdon, Thomas (The Louis Berger Group, Inc.)

[179] *A Long, Thin Line: Archaeological Survey Along 100 Miles of the Rockies Express Pipeline Project in Eastern Indiana*
The Louis Berger Group, Inc. conducted archaeological investigations for a 100-mile stretch of the Rockies Express Pipeline Project corridor from just southwest of Indianapolis east to the Ohio border. Five hundred eighty-three archaeological sites were identified during Phase I survey. Forty-three of those sites were subject to Phase II testing and nine sites were recommended eligible for listing in the National Register of Historic Places. Four of the eligible sites were avoided by construction design modifications and the five remaining sites were subject to Phase III data recovery excavations. This paper summarizes the results of Berger's archaeological investigations.

Chamberlin, Matthew (James Madison University) and Alison Rautman (Michigan State University)

[110] *Interpreting Burning in the Salinas Pueblo Province, A.D. 1275-1540*

Excavations at multiple villages in the Salinas Pueblo Province reveal divergent patterns of burning during the Pueblo IV period (A.D. 1275-1540). We draw on evidence of architectural history and structural damage, room, plaza, and midden depositional histories, and natural site formation processes from both early and later Pueblo IV villages to compare the occupational conditions, extent, and nature of these different contexts. We characterize variability in the causes and outcomes of both pre-occupational and post-occupational burning episodes during this period, which implicate conflict as well as accidental fires.

Chandler, Susan (Alpine Arch Consultants Inc) [130] *Discussant*

Chang, Claudia (Sweet Briar College)

[32] *Iron Age Demography and Socio-Political Interaction: Farmers, Foragers, and Pastoralists in the Semirech'ye Region of Southeastern Kazakhstan*

We will investigate the economic system used by the Iron Age Saka and Wusun confederacies occupying the northern edge of the Tian Shan Mountains. The survey data and excavation of three Iron Age sites suggest a multiple resource economic base that supported population increase from the 4th century BC to the 1st century AD on the Talgar alluvial fan. How did this local demographic expansion affect larger regional and even global interactions during this dynamic period of steppe development? Models from World-Systems Analysis and landscape archaeology will be tested using our archaeological

data on Iron Age economy.

[32] *Second Organizer*

Chang, Melanie [205] see *Nowell, April*

Chang, Vanessa

[98] *Identifying Elite Structures in the site of Panquilma*

Urban cities provide a wealth of information to the archaeological world. Surviving structures can illustrate social hierarchy. Through architecture, the site of Panquilma illustrates the existence of social stratification. Aerial photos depict the size and complexity of the site. Ground mapping techniques help to establish the variation of structures within. Comparisons amongst each household confirm the dialectics between the "common" and "elite". Common structures generally have: smaller rooms and closed-off quarters. Elite structures generally have: larger rooms, multiple plazas, middens and an open floor plan. Regional comparisons provide guidelines to the identification of Panquilma's elite structures.

Chao, Jiunn-Hsing [206] see *Chiu, Scarlett*

Chapin, Nicholas (ICF Jones & Stokes)

[118] *Late for the Revolution? Archaic Period Subsistence Changes in North-Central New Mexico*

A recent re-analysis of the original Oshara Tradition early archaic sites, from the Arroyo Cuervo region of New Mexico, appears to confirm the near absence of ground stone milling equipment in Archaic Period assemblages dating to before 5000 B.P. In contrast, archaic sites in the San Juan Basin of northwestern New Mexico show the increased use of milling equipment by soon after 8000 B.P. This paper examines the apparent differences in subsistence behavior during the early archaic between occupants of the Rio Puerco and Central Rio Grande Valleys, and those in areas located only a short distance to the west.

Charest, Andreas [211] see *Boatwright, Mark A.*

Charles, Douglas (Wesleyan University)

[173] *The Quick and the Dead: Archaeologists and Mortuary Sites of the CAA*

Burial mounds and cemeteries have been excavated in the lower Illinois River valley region since the mid-19th century. Over the last 50+ years, archaeologists associated with what is now the Center for American Archeology have conducted the excavations. Some of those archaeologists and some of those excavations have figured prominently in theoretical and methodological developments in mortuary archaeology within the discipline as a whole and in the interpretation of the Archaic, Woodland, and Mississippian cultures of the Eastern Woodlands. This paper will highlight the roles of these archaeologists and sites in recent archaeological practice.

Charles, Douglas K. [215] see *Rudolph, Katie Z.*

Charlton, Michael (University College London)

[256] *The Role of Skill in the Evolution of Ironmaking Technology: Examples from Iron Age and late Medieval northwest Wales*

The inference of skill-level from bloomery iron smelting artifacts, especially slag, requires the analysis of both yield efficiency and standardization. A comparison of iron smelting activities from Iron Age and late medieval bloomeries in northwest Wales shows that skillfulness is strongly associated with production intensity. While Iron Age smelting recipes gradually evolve to fit an optimal economic strategy, skillfulness amongst ironmasters does not improve. Late medieval recipes, however, rapidly evolve in concert with increasing control of furnace operating conditions. These results imply that ironmaking ability is developed through repeated performance and that skillfulness hitchhikes with adaptive iron production strategies.

Chase, Arlen (University of Central Florida) [159] *Discussant*

Chase, Zachary (The University of Chicago)

[18] *What is a Huaca? When is a Huaca?*

Material complexities of Andean numina defied Spanish colonial explanation, due to historically deep and persistent semiotic and ontological notions of the referential function of symbols and the ultimately incommensurable natures of the agentive and the material. Data from various highland areas show that understanding "huaca ontology" requires considering the diversity of entities deemed huacas and the temporal conditions of a huaca's being. Huacas were divine entities, intrinsically material, but unrestricted by or to any particular thing; partitive, but without sharp differentiation between signifier and signified. A brief conclusion suggests how this understanding of huacas may be useful in archaeological fieldwork.

Chastain, Matthew (Northwestern University), Alix Deymier (Northwestern University), David Dunand (Northwestern University) and James Brown (Northwestern University)

[140] *Materials Science Analysis of Copper Artifacts from Cahokia's Mound 34*

With the purpose of explaining the techniques used by Mississippian copper workers to reduce nuggets of native copper into thin sheets, copper artifacts deriving from the copper workshop site at Cahokia's Mound 34 were subjected to metallographic analysis. Replication experiments were then conducted to attempt to recreate features seen on the artifacts under controlled conditions. This research confirmed that sheets were thinned through cycles of hammering and annealing, identified a method used to cut the sheets into shape, explored several relevant aspects of copper's material behavior, and, more generally, demonstrated a procedure for using the methods of materials science to address archaeological questions.

Chatfield, Melissa (Stanford)[137] *Connecting Wari and Inca through Pottery Style and Technology*

The influence that the Wari Empire had on the later Inca Empire in terms of statecraft is a source of scholarly debate in the Cuzco region. The dataset presented here examines lineage iconography present on the tunics of ancestor figurines found at the Cuzco site of Pikillacta (Wari) and traces these design elements using pottery associated with ancestor worship during the Late Intermediate Period and Late Horizon at the multi-component site of Choquepunkio, also in the Cuzco Valley. Feasting vessel morphology/technology is compared for the Middle Horizon, Late Intermediate Period, and Late Horizon to demonstrate continuity of Wari practices into Inca times with technological innovation.

Chavez, Eden (CSULA) and Juan Landeros (California State University, Los Angeles)

[148] *Cave Utilization among Highland Zapotec of Oaxaca*

Recent ethnographic research documented Zapotec concepts of ritual and power related to the sacred landscape surrounding the pueblo of Lachirioag. The cosmic center is defined around a Pre-Columbian site believed to be the ancestral settlement of the modern town. Its central importance is validated by reference to elements of the primordial landscape such as mountains and lakes. Caves are constructed within the site as focuses of ritual activity used to access the supernatural power for the petitioning of aid, power, and material benefits.

Chavez, Eden [148] *see Landeros, Juan*Chávez Balderas, Ximena [64] *see López Luján, Leonardo*Chazan, Michael (University of Toronto) [126] *Discussant*; [230] *see Riddle, Andrew T.*Chen, Honghai [214] *see Dong, Yu*Chen, Pochan (National Taiwan University) [95] *Discussant*Chen, Quanjia [155] *see Jia, Peter Weiming*Chen, Stephanie [161] *see Blickstein, Joel IB*Chen, Xingcan [155] *see Liu, Li*Chen, Yi-lin [206] *see Chiu, Scarlett*

Chenoweth, Michael (University of Louisiana Monroe) and Diana Greenlee (Louisiana Department of Culture, Recreation and Tourism / ULM)

[160] *Aerial Photography and the Monumental Landscape at Poverty Point*

Archaeologists have used aerial photographs to understand the monumental landscape at Poverty Point for some 55 years. Early efforts focused on using aerial images to identify earthworks or segments of earthworks that were not clearly visible, due to their great size and topographic subtlety, on the ground. More recently, efforts have concentrated on documenting landscape modifications that resulted from 130 years of agricultural practices and on understanding alterations caused by ongoing natural geologic processes. The latter use is important as an aid in managing the archaeological resource. The temporal resolution of the aerial photographs ranges from 1934 to 2004.

Cheruvellil, Jubin (Michigan State University)[46] *Subsistence Decision-Making in Heterogenous Environments: Foraging Simulation in Saginaw Bay Watershed, MI*

Late Archaic, Early and Middle Woodland hunter-gatherers in Saginaw Basin of Michigan are observed to buffer against environmental variation by resource specialization, mobility and diet strategies. This research tests these past interpretations using a landscape based resource model. Forager behaviors are simulated using historical and idealized landscapes by an agent based approach with the aid of ArcGis and Agent Analyst tool kits. The resulting behavioral patterns are then compared against archaeological site and subsistence data. The statistical evaluation of simulations using archaeological data suggests niche based strategies that vary both spatially and temporally to cope with environmental variability.

Chesley, John T. [255] *see Fenn, Thomas*; [255] *see Thibodeau, Alyson M.*Chew, Sing (HSU/UFZ Helmholtz Centre for Env. Research) [32] *Discussant***Chiarulli, Beverly (Indiana University of Pennsylvania)**[42] *Geophysical Investigations during the Gila Archaeological Project*

During the past two years, one focus of the Gila Archaeological Project has been to investigate the use of geophysical instrumentation at both historic and pre-European sites. Instruments used in the investigations have included ground penetrating radar, magnetic susceptibility meters and the GSSI profiler. The use of these instruments has guided us in the location of test excavations and aided in our interpretation of landscape and cultural features. Students have benefited as well by gaining experience in the use and interpretation of these data. This poster summarizes our results.

[180] *Discussant*; [233] *First Organizer*

Chicoine, David (Louisiana State University) and Hugo Ikehara (University of Pittsburgh)

[138] *Formative Period Monumentalism and Visual Arts at Caylán, Coastal Ancash, Peru*

This poster exposes the preliminary results of the 2009 investigations at the monumental center of Caylán, Nepeña Valley, Peru. Initial efforts focused on the mapping and clearing of architectural structures and the excavation of test pits and limited areas. Preliminary mapping results suggest careful planning and a complex urban design, while excavation data point toward a main sequence of occupation during the first millennium BC. Here, we present and discuss Formative period patterns of architecture and visual arts, and propose a comparative analysis of sculpted friezes and other forms of monumental forms documented at Caylán.

Chicoine, David [114] *First Organizer*; [114] *see Mann, Rob*

Childress, Jane (Bureau of Land Management)

[223] *From Clovis to Clantons*

The San Pedro Riparian National Conservation Area (SPRNCA) contains some of the most important and historic properties in North America. Over 12,000 years of human life and culture is preserved, protected, and interpreted. These sites provide the raw materials for research and interpretation. Fostering public support for archaeology is effectively accomplished by providing the public with an experience of the benefits of study and preservation. Effective protection and interpretation of sites which range from Clovis culture to the Old West, accomplished through various partnerships, has enabled the agency to foster dynamic scientific research and public outreach programs.

Childs, S. Terry (Department of the Interior)

[76] *A Federal Perspective on Digital Curation: Issues and Solutions*

The Department of the Interior (DOI) owns almost 160 million museum items of which over 51 million are archeological objects and over 90 million are archives, including archeological associated records. How does DOI account for, document, and make public all these items? How does its collection cataloging system work; what are its benefits and deficiencies? Is the DOI developing standards of information recording that can benefit the wider archaeological and curatorial community? How is DOI handling the curation of its digital records, particularly those curated by non-federal repositories? These and other questions will be explored in this paper.

Chilton, Elizabeth (UMass Amherst) [60] *Discussant*; [161] *see Woods, Julie A.*; [174] *Discussant*

Chiou-Peng, TzeHuey (Univ. Illinois UC) [95] *Discussant*

Chiriboga, Carlos [54] *see Acuna, Mary Jane*

Chisholm, Linda (University of Minnesota-Twin Cities) and Loukas W. Barton (Katmai National Park, Department of the Interior)

[27] *Birds of a Feather, Butchered Together: Patterns of Avian Exploitation in Southwest Coastal Alaska*

This poster will compare avian skeletal data collected from three prehistoric coastal sites in Southwestern Alaska, specifically villages from Kukak and Amalik Bays, and Koniag-era Aniakchak Bay. Avian resources not only hold symbolic and ritual importance in prehistoric and contact contexts, but also reflect crucial subsistence strategies as well. The goal of this research is to determine whether butchery patterns and differential prey preferences exist, and whether such patterns demonstrate continuity between localities and through time.

Chiu, Scarlett (Academia Sinica, Taiwan), Christophe Sand (New Caledonia), Jiunn-Hsing Chao (Nuclear Science and Technology Development Center, National Tsing Hua University, Taiwan), William R. Dickinson (Department of Geosciences, University of Arizona, USA) and Yi-lin Chen (Research Center for Humanities and Social Sciences, Academia Sinica, Taiwan)

[206] *Characterizing Geochemical Compositions of New Caledonian Lapita Pottery via Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)*

The first available high-resolution elemental data on six New Caledonian Lapita pottery assemblages obtained via Inductively Coupled Plasma-Mass Spectrometry (ICP-MS) is presented in this paper. Pairing with petrographic analysis, the chemical compositions of these Lapita pottery assemblages indicate a strong correlation between specific geological zones and geochemical compositions of Lapita pottery within the islands of New Caledonia. This paper discusses not only the possible raw material procurement areas of each site studied, but also outlines a preliminary interpretation for the ceramic transfers occurred.

Chovanec, Zuzana (University At Albany)

[4] *An Experimental Approach to the Analysis of Opium Residues*
The increasing role of residue analysis in archaeological research has shifted the focus of taphonomic studies from sites to artifacts. Geological and chemical processes involved in the creation, preservation and degradation of residues in archaeological contexts are paramount and may be elucidated by experimental archaeological approaches. Such an approach is employed by researchers at the University at Albany in an effort to investigate the prehistoric use of psychoactive substances. Procedures and results are presented here regarding the controlled creation of various opium residues, their artificial aging in an attempt to simulate degradation, and their characterization by two analytical techniques.

Christensen, Kim (University of California Berkeley) [66]
Discussant

Christie, Jessica (East Carolina University)

[99] *Time and the Ancient Maya: Period Ending Ceremonies as Political Control Mechanisms*

The ancient Maya constructed time as a sophisticated political control device. This paper will explore how Period Ending ceremonies communicated to smaller or larger audiences through their spatial settings. Comparisons will be drawn between the Bak'tun ending 9.0.0.0.0. documented at Copan and in Jol'ja Cave and held in secluded spaces and the public architectural complexes of the Twin Pyramid groups at Tikal and some of its subordinates. The argument will be presented that Period Ending ceremonies not only validated the spiritual power of the ruler but further came to legitimize territorial claims of Late and Terminal Classic polities.

[99] *First Chair*

Church, Krista (University of Texas at Austin), Barbara Purdy (University of Florida) and Bruce MacFadden (Florida Museum of Natural History, Vertebrate Paleontology)

[26] *Contemporaneity of Human Remains and Extinct Late Pleistocene Fauna in Florida: A Rare Earth Element Analysis*

The contemporaneity of fossils from the Vero site (8IR9) in eastern Florida has been a subject of debate since the early 20th century, when human remains were recovered in stratigraphic association with extinct late Pleistocene fauna. There are few well-documented sites in the Americas where such sympatry occurs. In 1916, prominent anthropologists, such as Ales Hrdlicka, dismissed the human remains as younger, intrusive burials. However, the rare earth elements (REE) taken up during fossilization by the extinct fauna and the human remains at the Vero site are statistically indistinguishable, thus confirming the coexistence of humans and extinct fauna in Florida.

Church, Michael (HDR|e2M), James Gallison (HDR|e2M) and Michael Jennings (HDR|e2M)

[33] *Refining South Texas Prehistory—Excavation of 41SR392*

The prehistory of far southern Texas is not fully understood due to the small number of excavated sites, making the recent excavations at 41SR392 near Roma, Texas a critical addition to archaeological knowledge of the region. The project exposed stratified occupational horizons dating from the Early, Middle, and Late Archaic and Late Prehistoric periods. The site therefore offers a fine-grained record of changing subsistence patterns and technology, on the banks of the Lower Rio Grande River. We discuss the significance of the project's findings to broad issues in hunter-gatherer behavior.

Church, Minette

[193] *From Carreta to Railroad: Los Vecinos in Turn of the Twentieth Century southern Colorado*

The late nineteenth and turn of the twentieth centuries was a tumultuous time politically and economically in southern Colorado, yet these years have gotten little attention from archaeologists. In less than a generation, Spanish-speaking families living there found their civic identities externally redefined through successive sweeps of cartographers' pens, from Mexican to U.S. citizen, from New Mexican to Coloradan. Damacio and Loretta Lopez and their twelve children

were at the center of these transformative contexts, and through archaeological and unprecedented surviving personal documents we can look at the identities they and their vecinos, Anglo and Hispano, created together and apart.

Cinquino, Michael [22] *see Hayward, Michele H.*

Ciolek-Torrello, Richard [154] *see Van Galder, Sarah J.; [33]* *see Wegener, Robert M.*

Cisneros, Ashley [36] *see Holt, Julie Zimmermann*

Cisse, Mamadou (Rice University), Laure Dussubieux (Field Museum of Natural History), Marilee Woods (University of Witwatersrand) and Susan McIntosh (Rice University)

[121] *Early Glass Trade at Gao Saney (Mali): 700–1000 A.D.*

Excavations since 2000 at the 35-hectare mound of Gao Saney have revealed over six meters of deposits dating to A.D. 700–1000. The earliest deposits in two units contain numerous glass beads, many broken and remelted, in association with considerable amounts of ash and charcoal. LA-ICP-MS analysis of a sample of the beads by Dussubieux indicate that most of the beads were imported Middle Eastern soda glass made with plant ash. Compositional heterogeneity suggests that Gao Saney received glass from different sources, which is consistent with its interpretation as the historical market town of Sarneh, associated with capital of the great early Sudanic polity of Kawkaw.

Clark, Amy (University of Arizona)

[58] *Changes in site/land use between the Acheulo-Yabrudian and Middle Paleolithic at Tabun Cave, Israel*

When comparing artifact density to tool-to-flake ratio at the key site of Tabun Cave in Israel, there is a clear pattern break between the Acheulo-Yabrudian and Middle Paleolithic layers. Throughout the Middle Paleolithic layers these variables correlate negatively, following patterns found in other parts of Eurasia, but when contrasted with the Acheulo-Yabrudian there is an abrupt change, with no correlation evident. This change could reflect differing modes of site provisioning and organization of mobility, a hypothesis that appears to be supported through other lines of evidence from Tabun.

[58] *Second Chair* [58] *Second Organizer*

Clark, Andrew (SD State Historical Socie)

[220] *Landscapes of War: Topography and Conflict in the Middle Missouri*

Although recent scholarship has emphasized and refined the archaeological study warfare, one line of evidence has been under represented in the literature: the physical landscape. Through the use of geospatial techniques such as cluster, multi-dimensional visibility, and cost-surface analyses, archaeologists can infer aspects of war in multiple parts of society. By creating a historical Digital Elevation Model (DEM) of the pre-dam Missouri River and using archaeological data from the Middle Missouri subregion, I show a dynamic relationship between the uses of space and defensive tactics and diachronic changes in settlement choice.

[171] *First Organizer*, [171] *First Chair*

Clark, Bonnie (University of Denver)

[181] *Our Words Betray Us: Rethinking Archaeological Terminology through Collaboration*

Historical archaeologists often explicitly aim to include voices that were repressed during the historical context under study. However, good intentions can be undermined through the most basic of epistemological tools – terminology. The collaborators in the Amache project, the archaeology of a WWII era Japanese American internment camp, include individuals who once lived at the site. Former internees have a direct attachment to this past, one which throws a unique, but valuable light on the sometimes problematic nature of taken-for-granted archaeological terminology. The Amache case highlights how the words archaeologists use can reify the very divisions they are trying to bridge.

Clark, Dylan [103] *see Tuross, Noreen C.*

Clark, Jeffery (Center for Desert Archaeology) [100] *Discussant*

Clark, Jeffery [113] *see Mills, Barbara J.; [192]* *see Huntley, Deborah L.*

Clark, Jeffery J. [200] *see Trowbridge, Meaghan A.*

Clark, Joelle (Northern Arizona University) [209] *Discussant* [209] *Second Organizer* [209] *First Chair*

Clark, John (Brigham Young University) [221] *Discussant*

Clarke, Andrew (University of Otago, New Zealand) and Roger Green (University of New Zealand Auckland)

[68] *Polynesian Contacts: The Botanical Record*

A number of plant species, most famously the sweet potato and bottle gourd, have been involved in arguments about prehistoric contact between Polynesia and the New World. For the sweet potato, there is growing agreement that its prehistoric introduction into Polynesia was human-mediated, and instead the focus has moved to more specific questions around where on the South American coast Polynesians made contact, the number of contacts that were made, the number of sweet potato lineages that were introduced into Polynesia, and the subsequent dispersal patterns in Oceania. Teasing apart the contributions of prehistoric and historic introductions to modern Oceanic sweet potato diversity is also important. For the bottle gourd, fundamental questions still remain about the origin(s) of this species in Polynesia, with modern genetic work suggesting more complex dispersal patterns than previously thought.

Clarke, David (Delaware Department of Transportation) and Kevin Cunningham (Delaware Department of Transportation)

[180] *Public Outreach in CRM the Delaware Department of Transportation Model*

The Delaware Department of Transportation (DelDOT) Cultural Resources Program is continuing to uphold the spirit of section 106 compliance by adhering to guidance from the Federal Highway Administration and the Advisory Council. DelDOT feels it has an exemplarily model to incorporate public outreach and education in every CRM project. Moving into the 21st century we are way beyond brochures and striving towards a more inclusive and reflexive public oriented program. In concert with the tried and true outreach methods, we are using our website www.archaeology.deldot.gov as the flagship tool to promote and enhance our multi-dimensional cultural resources program.

Clauter, Jody (UW-Milwaukee)

[70] *Same Vessel, Different Mound: Ceramic Analysis from the Nitschke Mound Group (47DO27) and Nitschke Garden Beds (47DO518)*

The Nitschke Effigy Mound Group (47DO27) and Nitschke Garden Beds (47DO518) are Late Woodland (AD 400-1150) in eastern Wisconsin. Both were reported upon by W. C. McKern in 1927 and are part of Dodge County's Nitschke Mounds County Park. Ceramic analyses on rimsherds from the sites show that rimsherds from the same vessel were deposited within different mounds, and also indicate close similarities between rimsherds at the garden beds and mound group. Interpretations on the relationship between the habitation and mounds groups, on effigy mound building and site use, and on site formation at Nitschke mounds are presented.

Clay, Berle [251] *see Greenlee, Diana M.; [251]* *see Hargrave, Michael L.*

Clay, Rudolf (Cultural Resource Analysts, Inc.), Michael Hargrave (ERDC-CERL-IL) and Rinita Dalan (Minnesota State University Moorehead)

[251] *Geophysical Survey at Poverty Point: Raising Issues for Future*

Research

Geophysical survey at Poverty Point by the authors has identified a diverse set of geophysical features, some of them unexpected, and has stimulated the process of explaining them. As a group they complement the earthworks and emphasize that mound building, long felt to be the most significant activity at the site, was accompanied by off-mound activities with extensive construction. The realization that these exist, supplemented by excavations essential to understanding them, is expanding and changing our conception of terminal Archaic life.

Cleghorn, Naomi [234] *see Janzen, Anneke*

Cleland, Robin

[136] *Of Godly Deer and Hunters' Fear: The Fauna from La Quemada*
Initial faunal results are presented from La Quemada, a large ceremonial center in Zacatecas, Mexico. Although the size and monumentality of the site suggest an elite presence, rare trade goods are not concentrated in and near the monumental core suggesting that a social stratification approach to faunal analysis may not be the most productive. Instead, this project explores how, and if, ethnographic analogy drawing on current Huichol religious beliefs, animal-use, and bone-disposal practice can inform interpretation of the archaeological faunal assemblage. Particular attention is paid to how size-class and differential disposal affects the faunal record, as well as to taphonomy.

Clites, Elizabeth (Monticello), Brian McCray (Monticello) and Elizabeth Clites (Monticello)

[166] *Monticello Before the Mansion: A Comparative Study of Early Domestic and Industrial Structures on Mulberry Row*
Mulberry Row, an avenue of slave dwellings and workshops adjacent to Monticello Mansion, was a dynamic landscape within the core of Thomas Jefferson's plantation. To date, research has emphasized the structures recorded in a 1796 insurance plat, yet Mulberry Row existed in other forms prior to this time. Analysis of excavations of early enslaved African-American quarters, workshops, and the west kitchen yard provide insights into the earliest phase of Mulberry Row. This poster, using artifactual and contextual data digitized for our ongoing Mulberry Row Reassessment project, explores the early aspects of daily life among Jefferson's enslaved and free workers.

Clottes, Jean (ICOMOS) and Yanik Le Guillou (Ministry of Culture)

[104] *Fontanet: A Painted Cave in the Ariège-Pyrenees*
The Fontanet Cave (Ornolac-Ussat-les-Bains, Ariège, France) was discovered by spelunkers in February 1972. It has been perfectly preserved and its archaeological context is intact on the surface of the ground. In addition to a number of Magdalenian wall paintings and engravings and various engravings on the ground, human footprints and the hand prints of a child have been discovered, as well as the unique print of a shod foot. The preservation of the cave and the variety of Magdalenian traces and remains makes it an exceptional testimony of human actions underground at the end of the Pleistocene.

Coats, Jennifer (Cal State LA)

[148] *The Stone House in the Cave: Analysis of a Speleothem Structure in Actun Yaxteel Ahau*
Surface survey and inventory of the upper level of Actun Yaxteel Ahau conducted during the spring of 2009 documented a number of elaborate speleothem structures. To this point, the analysis of speleothems has tended to consider only portable fragments, while these structures appear to have functioned as ritual features. This analysis considers one example that strongly resembles a house structure. The author considers the function of Lot 11 within the Maya concept of Na and the importance of the idea to the ancient Maya of a cave within a cave.

Coats, Meredith (University of Cincinnati)

[112] *Architectural Development at a Classic Maya Secondary*

Center, Say Kah, Belize

Recent excavations at the Classic Maya secondary site Say Kah, located near the center La Milpa, focused on understanding the architectural development of the site and how the settlement related spatially and chronologically to nearby settlements. Architectural features including large benches and vaulted ceilings suggest a more complex group than hypothesized. Yet, in contrast to surrounding settlements, Group B of Say Kah appears to exhibit only a single phase of occupation. These discoveries allow for clearer understanding of Say Kah's place in a regional community of related sites and the development of settlement in the La Milpa region.

Cobean, Robert (INAH, MEXICO)

[221] *Symbolic Aspects of Epiclassic Obsidian Offerings in the Region of Tula, Hidalgo, Mexico*
During the Epiclassic (circa 600-900 A.D.) several transformations occurred in lithic industries of peoples in the region of Tula, Hidalgo. With the decline of the Teotihuacan state, the use of obsidian tools was largely replaced by the production of instruments from local materials such as rhyolite, chert, and basalt. A major Epiclassic use for obsidian objects was burial offerings. We propose explanations for changes in symbolic meanings of obsidian instruments in the Tula area.

[156] *Discussant*

Cochrane, Ethan (International Archaeological Research Inst. Inc.) and Alexander Morrison (University of Hawaii)

[206] *The Demise of Lapita: An Evaluation from Fiji*
The origin of Lapita ceramics the western Pacific has been the focus of much research, but little work has empirically examined Lapita's rapid disappearance in Remote Oceania. Most researchers suggest that interaction across the vast Lapita world fell rapidly and the ensuing isolation of communities and their adaptation to local environments caused the loss of Lapita. To assess the isolation-adaptation hypothesis for specific Lapita occupations, we should analyze fine-grained data on community interaction, local environmental and subsistence variation, and changes in ceramic use. New data from Tavua, Fiji, and other Lapita sites, are used to evaluate the isolation-adaptation hypothesis.

Cockburn, Denton [19] *see Kofti, Ziad*

Codding, Brian [118] *see Zeanah, David W.*

Coe, Michael (Yale University) [153] *Discussant*

Coffey, Grant (Crow Canyon Archaeological Center) and Devin A. White (ITT Visual Information Solutions)

[160] *The Goodman Point Cultural Landscape Analyzed through Remote Sensing*
The Goodman Point Unit of Hovenweep National Monument was the first archaeological area protected by the federal government when it was withdrawn from homesteading in 1889. This has resulted in remarkable preservation of an ancestral Pueblo community center that was intensively occupied between A.D. 1000 and 1300. Many parts of this archaeological landscape are visible, including ancient roads, footpaths, agricultural fields, and water control features. We explore the utility of quantitatively analyzing various types of satellite imagery and geospatial support data to locate these large-scale archaeological landscape components. The techniques used, and their ground-truthed accuracies, will be discussed.

Coffman, Sam (University of Alaska, Fairbanks) and Ben A. Potter (University of Alaska Fairbanks)

[27] *Early Holocene Archaeology at Teklanika West, Central Alaska*
We report recent research at Teklanika West, one of the original sites used to define the Denali Complex. Multiple components were confirmed at this site, dating throughout the Holocene. Lithic analyses indicate multiple site activities, which include primary reduction and weapon maintenance. Faunal analyses indicate a change in subsistence economies from the earliest to later components at the

site. These analyses have clarified many ambiguities of past research at the site.

**Cohen, Anna (University of Washington)
and Francois Dengah (University of Alabama)**

[135] *The Space of Social Differentiation: Intra-site Organization at Sacapu Angamucu, Michoacán, Mexico*

Recent fieldwork in the Lake Pátzcuaro Basin, Michoacán, Mexico, has revealed a dense Postclassic occupation (Sacapu Angamucu) with intact architecture yielding ancient spatial patterning. Here I examine the spatial distribution of structures documented during the 2009 field season. Utilizing cluster analysis of structure type and size, this research aims to identify social differences within the proto-Purépecha (Tarascan) Empire. In particular, the relationship between architecture and social stratification is considered.

Cohen, Claire [255] see *Van Buren, Mary*

Cohen, David (University of California-Berkeley)

[181] *Tsimologo ya Ntlha ("They are Still Old-Fashioned"): Pursuing Social Justice in Botswana*

Archaeological practice in Botswana and the way we have engaged with, 'identified', and bounded our subjects provides an example of epistemic and social injustice, and reveals the potential power of our output, positive and negative. In this paper, I argue how we should forgo neutrality to become more critically engaged and politically conscious in our writing of the past where it has the potential to make a positive impact in the present. Using my research in Botswana, I present the case for necessary engagement with the contemporary uses, misconceptions, and abuses of the past and the epistemic output of anthropology.

[181] *First Organizer*; [181] *First Chair*

Colaninno, Carol (University of Georgia)

[250] *Evidence for Year-Round Occupation at Late Archaic Shell Rings of the Georgia Coast: Data from Oxygen Isotopic Profiles and Seasonally Sensitive Vertebrate Fauna*

Determining site seasonality is of archaeological concern, particularly among coastal occupations. Seasonal occupation at five Late Archaic (4,200-3,100 B.P.) shell rings along the Georgia coast is examined using oxygen isotopic profiles from hardhead catfish (*Ariopsis felis*) and Atlantic croaker (*Micropogonias undulatus*) otoliths. Additionally, vertebrate remains are examined for seasonally sensitive taxa. These data indicate that at all five Late Archaic shell rings more than one season is represented and at several sites, all seasons are represented. This suggests that some portion of the population may have occupied the coast throughout the year during this period.

Cole, Clint (University of California at Davis)

[120] *Snake Valley Ceramics at the Fremont Frontier: A Regional Comparison Using Instrumental Neutron Activation Analysis*

Snake Valley Grayware ceramics are widespread throughout southwestern Utah as signifiers of Parowan Fremont (A.D. 900-1200) material culture. Sherds recovered from sites separated by wide distances show remarkable consistency in their manufacture, suggesting that many vessels were either produced from few geological sources or potters attempted to replicate a familiar paste with local materials. Variation in ceramic geochemistry is investigated by comparing results of Instrumental Neutron Activation Analysis on 103 geological specimens against 162 potsherds sampled from regional Fremont sites, including Baker Village (26WP63), Five Finger Ridge (42Sv1686), and Evans Mound/Paragonah (42IN40/43). Evidence for local pottery production versus external acquisition is discussed.

Cole, Sally J. [51] see *Hays-Gilpin, Kelley A.*

Coleman, Robin [145] see *Williams, Patrick R.*

Coles, Mellisa [185] see *Goodale, Nathan B.*

Collar, Anna (University of Liverpool)

[113] *Networks, Epigraphy and Religious Change in the Jewish Diaspora*

I here take a network approach to the epigraphic material for the Jewish Diaspora in the Roman Empire. Inscriptions on stone are ideal for tracing social, cultural or religious change as and where it happened, and analysing their distribution with techniques from network analysis makes it possible to discern patterns in the evidence that reveal processes of religious change over time and space. By looking again at the widely distributed epigraphy of the Jewish Diaspora I show that adoption of rabbinic reforms in the West was widespread, contra the viewpoint that the Western Diaspora was forgotten by the East.

Colledge, Susan [9] see *Moore, Andrew M T*

**Collins, Michael (Gault School of Archaeological Research)
and D. Clark Wernecke (Gault School of Archaeological Research)**

[38] *Texas Avocationalists--We Couldn't do it Without You!*

From its nascency the practice of archaeology in Texas has been one of cooperation between avocationalists and professionals. The Texas Archeological Society exemplifies this tradition by prescribing equal status to avocationalists and professionals in its governance. Avocationalists making substantive contributions to the study of the past in Texas are far too numerous to all be included in this poster, so the stories of a few are presented as representative examples.

Collins, Michael B. [210] see *Lohse, Jon C.*; [210] see *Hemmings, C. Andrew*

Coltman, Jeremy (California State University, Los Angeles)

[107] *Breath of the Mountain: Wind and Caves in Classic Maya Iconography and Architecture*

Recent ethnographic data indicate that modern Maya are very aware of air being sucked into and expelled from caves due to atmospheric pressure. This is perceived as the earth breathing and seen as proof that the earth is a living and sentient being. An examination of Classic Maya iconography documents a similar belief depicted in multiple media. The "breath of the mountain" is closely tied to the fundamentally important concept of life giving and life sustaining rain. Caves in ancient Maya thought were important as the nexus of wind, rain, and earth.

[107] see *Giron, Mario*

Coltrain, Joan [248] see *Janetski, Joel C.*; [27] see *Byers, David A.*

Colwell-Chanthaphonh, Chip (Denver Museum of Nature & Science) [159] *Discussant*

Comanche, Jordan [42] see *Richbow, Linsey J.*

Combier, Jean [58] see *Moncel, Marie-Hélène*

Comer, Douglas (Cultural Site Research and Management (CSRM)) and Glenn Markoe

[160] *Monumental Tether: The Nabataean Transition from Trade to Agriculture*

Profound cultural changes were occurring in the Arabian Desert at the dawn of the Common Era. Three centuries before, Alexander the Great found no houses, fields, temples, or anthropomorphic images there. Agriculture and permanent settlements were eschewed. Trade by camel caravan over trackless desert was the engine of wealth. In contrast, Petra by AD 100 was filled with temples, houses, theaters, a nymphaeum, a paradesos, and monumental tombs, all adorned with humans, animals, and the fruits of nature. Agricultural fields surrounded the city. We examine here the appearance of monumental structures and this transition from trade to agriculture.

Comer, Douglas [160] *First Organizer*; [160] *First Chair*; [160] see

Tilton, James C.; [160] see Blom, Ronald G.; [160] see Yatsko, Andrew

Compton, Anne (University of Michigan)

[182] *Insights on the West African Gold Trade: Ceramics from Bono Manso*

Little is known about the history and material culture of Bono Manso, the seat of the first centralized Akan state in the Brong-Ahafo region of modern-day Ghana. Documentary records suggest the site dates to approximately the 14th through early 18th centuries CE, but we lack a fine-grained chronology based on archaeological material. Using the ceramic assemblage first excavated by Emmanuel Effah-Gyamfi from 1973 to 1976, my research refines the existing ceramic typology and draws on ceramic analysis to offer new inferences on Akan trade relations and interaction with neighboring ethnic groups and political entities.

Compton-Gore, Katharine A. [122] see Kellner, Corina M.

Conard, Nicholas

[157] *From the Danube Corridor to Sex and Music in the Swabian Aurignacian*

Since 1996 the current team from the University of Tübingen has conducted a major body of fieldwork at sites in the Swabian Jura including: Hohle Fels, Geißenklösterle and Vogelherd. This research has produced important new data on the Aurignacian and has provided breakthroughs in the areas of cultural and chronostratigraphy, economic and technological systems, settlement dynamics, as well as on the origins of figurative art and music. This paper provides an overview of recent work on the Swabian Aurignacian and touches upon some of the highlights and open questions currently under study.

[157] *First Chair* [157] *Second Organizer*; [157] see Riehl, Simone; [157] see Bocherens, Hervé; [157] see Wehrberger, Kurt; [205] see Serangeli, Jordi

Concannon, Kieran [185] see Tynan, Collins P.

Concannon, Mary [38] see Crowley, Suanna Selby

Condie, Carol [3] *Discussant*

Condon, Peter (TRC Environmental), Javier Vasquez (TRC Environmental) and Luis Sierra (TRC Environmental)

[87] *Evaluating Formative Period Subsistence Economies in the Jornada Mogollon Region: Current Trends and Perspectives* Previous research by Hard (1986) suggested that the ratio between net-annual above ground productivity and the primary biomass of a biotic community acts as a predictor towards understanding the persistence of a hunter-gatherer subsistence strategy well into the late Formative period in the Jornada Mogollon region. Recent analyses into the subsistence economies of Mesilla and El Paso phase populations provide new insight into the exploitation of domesticated and nondomesticated resources as they relate to Hard's (1986) model. Using a comparative approach, data from 15 prehistoric sites in the Hueco Bolson, Hard's (1986) model is assessed and current interpretations highlighted.

Condori, Nilda [188] see Muñoz, Lizette A.

Conkey, Margaret (UC-Berkeley) [104] *Discussant*

Connaway, John [217] see Mehta, Jayur M.

Conner, Dr. Michael [150] see Erickson, Luke W.

Connolly, Brian [19] see DeFrank, Laura

Connolly, Cara (University of Nevada, Las Vegas) and Nathan Martinez

[190] *Fertility Groove Marks and Cupules in the American Southwest*

and Northern Chihuahua Desert

The groove and cupule rock art style is widely dispersed throughout the American Southwest and Northern Chihuahua desert. This rock art style is defined as boulder or rock slab covered with small rounded depressions (cupules), usually one or two inches in diameter and half-inch to an inch in depth, and/or linear grooves that are rarely more than a quarter-inch in depth. Archaeologists have speculated on the function of these groove marks, however, little research has focused on their purpose. This study will couple ethnographic and experimental data to test whether the groove and cupule style is associated with fertility rituals.

Connolly, Robert (University of Memphis)

[251] *Using the Material Record to Interpret the Poverty Point Site*

The Poverty Point site is featured in current discussions of a wide range of archaeological speculation on social, political, and economic organization. This paper uses data from surface collections and excavated cultural materials from the site to explore numerous aspects of the cultures fluorescence in the Southeast United States. Particular attention is paid to the provenience and context of the recovered cultural materials. The analysis provides insights for the noted discussions on the temporal development, functional use of space, and regional interconnectedness of the earthwork complex, along with its position in the site clusters of the Poverty Point culture.

Connor, Melissa (Nebraska Wesleyan Univ) [69] *Discussant*

Conolley, Ivor [201] see Galle, Jillian E.

Conrad, Lawrence (Ancient Society Books)

[83] *Introduction to the Orendorf Project*

Between 1971 and 1978 emergency salvage excavations were conducted in three sequentially occupied Middle Mississippian town sites on the Orendorf site in response to impending strip mining. With a grant from the NPS to WIU collections and records were organized and several aspects of the collections from Settlement C were examined. Currently we are finishing the faunal analysis from all of the excavations and examining flora and artifacts from Settlement D. Between 1986 and 1989 field school excavations were conducted in a large burial mound in response to ongoing vandalism. Bioanthropological analysis has been ongoing since 1996 and remains productive.

[83] *First Organizer*; [83] *First Chair*

Constan, Connie (University of New Mexico)

[152] *Pointed Bottom Pots and other Gallina Ceramic Quandaries*

This paper will focus on the pottery of the Gallina area of the American Southwest. Previous research on Gallina ceramics is limited and there is little consistency in typology. A synthesis of previous work and the different decorated and utility ware types will be presented. This will be facilitated through a comparison of frequencies from excavated assemblages, available whole vessel measurements, and current microscopic, mineralogical, and chemical investigations. In addition, the historic theories and recent ideas on the unusual pointed bottom pot form will be evaluated. Relationships between Gallina ceramics and types in adjoining culture areas also will be discussed.

Contreras, Daniel (Stanford University) and Kristin Nado (Arizona State University)

[175] *Interpreting Geochemically Characterized Obsidian from Chavín de Huántar, Peru*

The ceremonial center of Chavín de Huántar witnessed one of the early successful applications of archaeometry in the Andes, substantiating prior ideas about the site's integration in a broad regional network through the geochemical sourcing of obsidian. Our follow-up sourcing project moves beyond issues of long-distance trade to address the role of multiple social actors in prehistoric social organization. Embedding archaeometric data in economic and social theory and emphasizing the archaeological fundamentals of sampling and context, we critically reflect on the potentials and shortcomings of

obsidian geochemistry for elucidating aspects of flexibility and tension in multi-scalar sociopolitical dynamics.

Conway, Meagan (University of Massachusetts Boston)

[185] *Living on the Ridge: Understanding Streamstown Village, near Clifden, Co. Galway, Ireland*

This poster focuses on the vernacular architecture at Streamstown village, an 18th and 19th century ridge-top settlement, to understand shifting patterns of household and community spatial organization. In examining these remains and archival documentation, I trace the decrease in informal systems of community land use and building strategies, and the later emergence of a more formalized process of decision-making by both tenants and owners. The formalization was accompanied by the rapid depopulation of the upland hilly interior townland due to disease and immigration, followed by a shift to coastal areas and new road systems closer to the sea.

Conyers, Lawrence (University of Denver)

[85] *Ground-penetrating Radar Visualization Techniques for Anthropological Analysis*

Geophysical archaeologists have recently relied solely on amplitude slice-maps of GPR reflection data as a prime image from which to interpret information about buried archaeological sites. While this is a powerful tool, which can define buried features in three-dimensions, two-dimensional analysis of reflection profiles can often produce images that are much more informative. Examples are given from the American Southwest, Central America, Australia and Italy, which when combined with standard map-view images can tell much more about the human past and can be used to test ideas about human behavior in ways not possible using any other method.

[85] *Discussant*

Cook, Anita (Catholic University of America)

[18] *The Pageantry of Empire: Huari Shrines and Devotional Practices (AD 550-1000)*

In the Andes, every political act had ritual overtones. Huari sanctuaries present huaca-like qualities with later Inca ushnu complexes. I argue that the shape and size of Huari shrines are similar throughout the empire and as such represent the intersection between ritual and sovereignty. Portable objects and an iconography depicting the pageantry of empire provide a back drop to the activities identified in the archaeological remains of the shrines that include human and animal sacrifices combined with libations and burning events. Hence, regional Huari sanctuaries and their contents are metaphorically linked to the principal shrine and seat of power.

[18] *First Chair*

Cook, Della [30] *see Ausel, Erika*; **[239]** *see Kaestle, Frederika A.*

Coons, Barbara [62] *see Coons, Don*

Coons, Don (Hawaiian Speleological Survey) and Barbara Coons (Hawaiian Speleological Survey)

[62] *Archaeology in Hawaiian Caves*

The Hawaiian Island Chain is a series of mountains formed by actively growing volcanoes. Polynesian settlement on these islands was closely intertwined with geologic processes, and the settlers very quickly developed an understanding of and dependence upon the lava flows that make up the land forms. Exploring and utilizing the underground lava tubes was a natural extension of this newly adapted life style. Artifacts left behind by these earliest of colonizers are perfectly preserved today in an environment of constant temperature, constant humidity and absence of light. This valuable resource is little understood and only recently begun to be documented.

Cooper, D. Randall [172] *see DelCastello, Brian G.*

Cooper, H (Purdue University) and Nicholas Waber (University of Victoria)

[207] *Prehistoric Copper on the Northwest Coast*

Discussions of social complexity on the Northwest Coast have made reference to the use of copper as a prestige good, but little is currently known about the prehistoric use of copper from a regional perspective. This paper provides a preliminary regional overview of the archaeological occurrence of native copper in southeastern Alaska and British Columbia based on a review of published and unpublished data. Additionally, the social context of native copper metallurgy and its diffusion among hunter-gatherers will be briefly considered.

Cooper, Judith (SWCA), John Kennedy (SWCA Environmental Consultants) and Norma Crumbley (SWCA Environmental Consultants)

[228] *High Elevation Landscape Use in the Upper Green River Basin of Western Wyoming: Exploring Ecological and Cultural Mosaics*

As an archaeological landscape, the Wyoming Upper Green River Basin exhibits an intersection of varied topographic, ecological, and cultural zones. Despite intensive occupation of this high desert basin throughout much of prehistory, this area demonstrates strong influences from surrounding regions, like the Great Plains or Northern Colorado Plateau. To explore these influences, we focus on the archaeology of the Jonah Subregion of the Upper Green River Basin to evaluate long-term patterns in occupation, including temporal changes in raw material use and projectile point technologies. Using site distribution data, we attempt to link apparent population trends to climatic change over time.

Cooper, Leslie [201] *see Galle, Jillian E.*

Cooper, Randall (Cultural Resource Analysts), Brian G. DelCastello (Cultural Resource Analysts), Jennifer M. Haney (Cultural Resource Analysts) and Richard L. Herndon (Cultural Resource Analysts)

[172] *Synopsis of Woodland Occupations*

A total of 21 sites had Woodland components ranging in time from Early Woodland through the latter portion of the Late Woodland. Pottery, diagnostic hafted bifaces, and radiocarbon dates indicate Black Sand, Havana-Hopewell, Weaver, and South Branch groups occupied the area. Black Sand material was recovered from five sites, Havana-Hopewell from five sites, and Late Woodland from ten sites (South Branch and Weaver). Several sites had ephemeral Woodland deposits that could not be classified culturally or temporally. This paper provides an overview of these Woodland occupations, including several sites that are presently unique for this portion of Missouri.

Corbett, Debra [79] *see Funk, Caroline*

Corbett, Jack [103] *see Robles Garcia, Nelly M.*

Corbett, Ray (Santa Barbara Museum of Natural History)

[56] *Mortuary Practice on the Northern Channel Islands*

This paper examines and analyzes the nature of mortuary practice during the Early and Middle Period on California's northern Channel Islands. It compares the predominant mode of burial and mortuary treatment evidenced on each of the islands, Santa Cruz, Santa Rosa, and San Miguel, and contrasts these with patterns on the south central California mainland. Statistically significant differences are evident between the each of the islands and between the islands and the mainland.

Cordell, Ann (Florida Museum of Natural History) and Thomas Pluckhahn (University of South Florida)

[217] *Paste Characterization of Weeden Island Pottery from Kolomoki, Georgia*

Petrographic analysis of pottery from the Kolomoki site, Georgia is underway. Thin sections of 65 sherds were obtained representing several prestige and utilitarian Weeden Island pottery types, from midden and ceremonial contexts. Initial goals of the analysis are to characterize the range of variability in paste/resource groupings present in the Kolomoki assemblage. Ultimate goals of analysis are to

begin resolving patterns of manufacture and exchange of Weeden Island pottery through comparisons to thin sections of comparable types from the McKeithen site and other sites in north and northwest Florida.

[217] *First Chair*

Cordell, John [59] *see Doershuk, John F.*

Cordell, Linda (School for Advanced Research)

[51] *Inspiring Women in Archaeology*

In order to continue to advance our field, archaeology must pursue the innovative capacity of all its practitioners, women as well as men. There are significant barriers to continued advancement of women's careers in archaeology. Overcoming these barriers requires changing the rules, acknowledging women whose contributions have inspired the field, and inspiring women to inspire women and men.

[208] *Discussant* [14] *Discussant*

Cordero, Maria-Auxiliadora [68] *see Scaglione, Richard*

Cordova, Guillermo (arqueólogo)

[195] *Aproximaciones al Fenómeno Urbano de Tamtoc, SLP, México*

Por su importancia regional, la antigua ciudad de Tamtoc suele considerarse como la capital prehispánica de la región Huasteca. Su estudio significa la posibilidad de aproximarnos al fenómeno urbano ocurrido en épocas tempranas en México. En esta exposición presentaremos algunos aspectos arqueológicos que guían nuestra investigación que tiene como objeto aproximarnos al proceso histórico de una sociedad compleja caracterizada por una vida urbana. espacio material de la organización política: El templo y el palacio. Órganos rectores con capacidad para agregar densos de población organizados en unidades políticas para ser gobernados.

Cordova, Isabel (California State University Northridge)

[169] *La Blanca and Chalcatzingo: A Comparative Approach to Symbolism and Identification to the Ritual Use of Figurines.*

There have been many detailed analyses of anthropomorphic figurines from the Mesoamerican region, which have yielded various results. This analysis will explore the function and purpose of figurines recovered from two Formative Period Mesoamerican sites to broaden the perspectives under which they are studied and draw comparison across geographic space and time. Ritual usage seems to be a strong component of many of the pervading theories. In this paper, I propose an analysis of two different data sets, from La Blanca, Guatemala and Chalcatzingo, Mexico, which produced comparable figurines. Moreover, I will address theoretical orientations surrounding both sets of figurines.

Corella, Elijah (UM-St. Louis), Michael Ohnersorgen (UM-St. Louis) and Patti Wright (UM-St. Louis)

[162] *Undergraduate Archaeology at the University of Missouri-St. Louis*

In this poster, 2009 graduate Elijah Corella and University of Missouri-St. Louis faculty share their insights about the undergraduate program. Building on a well-rounded three-field foundation, students may emphasize any of the subfields through their choice of electives and the topic of the original research for their senior theses. Elijah Corella, completing a field school, a number of archaeology courses, and his senior thesis, *Microwear Studies: An Analysis of Flake Tools from Truman Road and A Critical Review of Current Methods*, is now employed by the Illinois Transportation Archaeological Research Program.

Corsci, Alexander [115] *see King, Adam*

Cortegoso, Valeria [123] *see Giesso, Martin*

Cortes Pérez, Enrique (INAH)

[57] *The Río Verde Grande Region and its Diagnostic Ceramics: First Approach to the Interaction Dynamics in Southeast Zacatecas during the Epiclassic Period*

The archaeological site at Buenavista is located in a semiarid environment of the Mesa Central province. The presence of ceramic types previously defined from other regions allowed us to interpret this ancient settlement as part of the cultural dynamics of northwestern Mesoamerica, principally during the Epiclassic period. In this context Buenavista's association to one of the principle affluent systems along the Río Grande de Santiago becomes significant. The Río Verde Grande, an ancient communication artery, that connects southeast Zacatecas, Aguascalientes, highlands of Jalisco and Atemajac valley, may have exchanged material objects and certainly with it, a series of ideological concepts.

Costello, Julia (Foothill Resources, Ltd.)

[56] *Mike Glassow in Context*

For over forty years Michael Glassow has had an enormous impact on California archaeology and the lives of countless students and colleagues. An accomplished academic and professional, he earned the deserved respect of students and peers. Additionally, Mike instilled in all of his students a sense of integrity and obligation to our profession, and stewardship to the resources we study. He expected us to serve in offices and on committees of state and national organizations, to participate in governmental programs, to act as advocates for our sites, and to publish our findings in accessible sources. He taught us to be generous and to volunteer.

[56] *First Chair* [56] [81] *First Chair*

Costin, Cathy (California State University)

[17] *Gendered Divisions of Labor in the Chimú and Inka Political Economies*

My research on textile manufacture on the North Coast of Peru suggests that the organization of cloth production within the political economy was transformed after the Chimú empire was conquered by the Inka empire. Here, I reflect on these changes in the context of gendered divisions of labor among the Chimú and the Inka, considering (1) historic developments in the organization of craft production on the North Coast; (2) the reorganization of production in other sectors of the North Coast economy after the Inka conquest; and (3) the ways in which North Coast structures and practices influenced the development of the Inka political economy.

[149] *Discussant*

Costion, Kirk [145] *see Williams, Patrick R.*

Coughlan, Michael (University of Georgia)

[184] *What the Trees Can Tell Us: An Archaeological Approach to Agro-pastoral Forest Modification in the French Western Pyrenees.*

Pastoralists in the French Western Pyrenees intentionally set landscape fires to create and maintain woodland pastures and to manage the type and quality of forage for their livestock. These landscape modifications likely represent ancient practices. Modified pastoral habitats grade along altitudinal vegetation zones from alpine meadows, to openings in closed-canopy subalpine forest, to semi-open woodland and "infield" pastures of the village. This research attempts a diachronic analysis of forest/pasture management regimes using the evidence presented by extant vegetation. This poster presents preliminary findings and an analysis of the feasibility of combining methods in paleoecology, ethnoarchaeology, and landscape ecology.

Covarrubias, Miguel [109] *see Hutson, Scott R.*

Cowan, Frank (Hartgen Archeological Associates, Inc.)

[176] *Tooling Up for Special Events at Special Places*

Hopewell artifact assemblages within Ohio Hopewell enclosures are dominated by small, fragile bladelets and, to a lesser degree, by highly stylized, thin bifaces and bifacial points, all often made of exotic raw materials. These are not tools designed for utilitarian purposes, and they appear to be ritual paraphernalia for use in ritual places. Specialized crafting areas for bladelet and very thin biface production are known adjacent to several Ohio Hopewell earthworks, but few workshops have been substantially investigated. Three

southwestern Ohio workshops provide a basis for evaluating the roles of bladelets within Ohio Hopewell earthworks.

Coward, Fiona (Royal Holloway University of London)

[113] *Grounding the Net: Networks, Environments and Material Culture in the Epipalaeolithic and early Neolithic of the Near East (~21-6,000 cal BP)*

The use of social network analysis (SNA) methodologies in archaeology has huge potential, but the 'networks' analyzed are derived from archaeological proxies for social relations and often highly abstracted from their real-world contexts. This paper will discuss the use of different proxies and levels of analysis in the analysis of the prehistoric social networks of the Epipalaeolithic and early Neolithic of the Near East (~21,000-6,000 cal BP). It will also consider how Geographical Information Systems and SNA might be used in tandem to investigate the relationship between social networks and the real-world physical environments in which they occur.

Cox, Matt (Illinois State University)

[125] *Living Beyond Their Means: An Archaeological Investigation of Consumption Patterns at the Janis-Ziegler Site (23SG272)*

Previous archaeological research at the Janis-Ziegler site in Ste. Genevieve, MO has suggested that the Ziegler family may have presented the public with a picture of wealth that they did not possess. In order to further investigate this notion the archaeological data from the 2006, 2007, and 2008 excavations was compared to four contemporaneous sites in Ste. Genevieve: the Delassus-Kern site, the Delassus de Luzieres-Hecker site, the Benjamin Shaw House, and the Felix Vallé State Historic Site. Additionally, historical records concerning the Ziegler family finances were examined to gain insight into the family's financial history and produced surprising results.

Cox, Richard [121] see *Dussubieux, Laure*

Crabtree, Pam (New York University)

[243] *The Role of Zooarchaeology in Modern Medieval Archaeology*

Modern medieval archaeology developed in Europe in the aftermath of World War II at a time when environmental data were playing an increasingly important role in archaeological research. Zooarchaeological techniques, many of which were initially pioneered to study animal domestication, have played a major role in the development of contemporary medieval archaeology. Using data from NW Europe, this presentation will examine the role that faunal analysis has played in the study of the transition from the Roman to the early medieval world and in the analysis of the rebirth of towns and trade in 7th-10th-century medieval northwest Europe.

[64] see *Campana, Douglas V.*

Crabtree, Stefani (Washington State University), Ben Ford (Washington State University) and Tim Kohler (Washington State University)

[19] *Modeling or Simulation? Assessing Settlement Patterns—Real and Modeled—in the VEP World*

Calculating spatial goodness-of-fit measures between VEP simulations and the archaeological record assesses the general fidelity of the simulation to the archaeological record, and aids in understanding sub-regional settlement differences and changes in settlement patterns over time. We explore various methods of assessing spatial goodness-of-fit using over 4,000 archaeological sites in the VEP study area, determining the most useful approaches for settlement distribution data. This yields suggestions for improving methods of assessing goodness-of-fit; insights into the modeling process; and, most importantly, expectations for how these societies actually worked.

Craig, Douglas (Northland Research) and Johna Hutira (Northland Research)

[86] *Applying Federal Damage Standards to Non-Federal Land: A Case Study from Southern Arizona*

A federal damage assessment was recently conducted on non-federal land in a highly publicized case in southern Arizona. Although the case was eventually settled out of court, a number of general issues were raised that bear careful consideration in the future. This paper presents some of the good points and the not-so-good points of the damage assessment efforts.

Craig, Douglas [33] see *Hopkins, Maren.*

Craig, Jessica (University of Kansas)

[112] *Changing Perceptions of the Built Landscape: Evidence for the Ritualization of Reused Structures and Monuments at the Ancient Maya Site of San Bartolo, Guatemala*

This work illustrates how the ancient Maya of San Bartolo constructed and reconstructed their cultural landscape over the course of the sites' decidedly turbulent occupational history. The varying ceremonial treatment of buildings and monuments across the site expresses the community's shifting notions about the past, the present, and the future. More specifically, the residents of San Bartolo utilized both veneration and termination rites as a means for rectifying these changing perspectives. Furthermore, paleoethnobotanical evidence from excavations across San Bartolo indicates that they employed a kind of "ritual tool kit" in the execution of otherwise distinct religious rites.

Crass, Barbara [27] see *Potter, Ben A.*

Crawford, Gary (University of Toronto) [151] *Discussant*

Creamer, Winifred (Northern Illinois University) [114] see *Haas, Jonathan*; [138] see *Rutherford, Allen*; [218] *First Organizer*; [218] *First Chair*

Creasman, Steven [150] see *Bradbury, Andrew*; [172] *First Organizer*; [172] *First Chair*

Creel, Darrell (University of Texas at Austin) and Roger Anyon (Pima County, Arizona)

[128] *Mimbres Kivas Great and Small: Ritual in Construction and Retirement*

More recent investigations of Mimbres kivas have revealed considerable regularity in construction and retirement. We explore the dedicatory deposits of kivas and their intentional retirement (possibly with termination deposits), usually by burning, followed by toppling the walls. The dedicatory objects are relatively consistent in Mimbres great kivas, especially during the Three Circle phase, AD 800-1000, with most objects such as shell bracelets and quartz crystals being broken prior to placement in floor, wall, or roof adobe. Termination deposits other than pottery vessels and objects left on floors are more difficult to identify but may include pottery vessels and dismembered dogs.

[128] *Second Chair [128] Second Organizer*

Creer, Sarah [24] see *Cannon, Mike*

Cressler, Alan [22] see *Sherwood, Sarah C.*; [62] see *Blankenship, Sarah A.*

Cresswell, Lisa (Bureau of Land Management)

[223] *Stone Boys and Scotsmen: Historical Land Use Practices on the Craters of the Moon National Monument and Preserve*

This paper presents the results of oral history investigations of land use practices associated with historic sheep herding activities on the Craters of the Moon National Monument and Reserve in southern Idaho. Interviews with key informants have generated a wealth of information on regional history involving individuals and families that made their living in the sheep business. These efforts have provided the BLM with a detailed account of significant localities within the steppe and lava flows included in the Preserve and how specific portions of the area were utilized over the past 130 years. The interviews also document the challenges associated with challenging

weather conditions and how land use within the region has evolved through the years. The results of this study stress the urgent need for additional interviews, before critical information is lost forever.

Crews, Christopher (Texas A&M University)

[161] *Obsidian Procurement in the Piedra Lumbre Valley: 130 Obsidian bifaces from GR-2*

GR-2, Ghost Ranch, New Mexico, has revealed at least 3 meters of deposition. 130 obsidian bifaces, including complete and fragmented points, have undergone X-Ray Fluorescence. The results show a reliance on Jemez and Polvadura sources throughout the occupation of the rockshelter. Outliers further our understanding of the mobility and trade practices of the inhabitants of the Piedra Lumbre Valley over the last 4000 years.

Crider, Andrea (Environment & Archaeology, LLC)

[55] *The Use of Residue Analysis in Determining Resource Procurement Strategies: A View from Appalachia*

Recent excavations at a mountaintop site (46Bo419) in Boone County, West Virginia revealed components dating from the Early Archaic to Late Woodland cultural periods. Various forms of pedoturbation, logging, and looting have disturbed stratigraphy across much of the site. Residue analysis performed on lithic tools, pottery sherds, and pitted stones provided key data concerning resource procurement at the site, including data that did not support commonly held theories of nut mast utilization in Appalachian upland settings. These results could have interesting implications to broader mobility and resource procurement patterns of the understudied interior uplands of southwest West Virginia.

Crider, Destiny (Arizona State University)

[161] *Pottery Paints and Technological Traditions: PIXE Characterization of Central Mexican Epiclassic and Early Postclassic Pottery*

Surface paints of red and cream painted Epiclassic (ca. A.D. 650-850) and Early Postclassic (ca. A.D. 850-1150) pottery from the Basin of Mexico are examined using particle-induced X-ray emission (PIXE), a non-destructive method of identifying chemical composition of archaeological materials. The samples are representative of diachronic and regional variants from Coyotlatelco, Mazapan/Tollan, and Early Postclassic Chalco-Cholula complexes. Chemical signatures are used to examine spatially and temporally discernable micro-variation among of paint and slip recipes among diagnostic pottery types. Spatial patterns in pigment recipes may reflect the degree of shared technological traditions evident across the region within each complex.

Crist, Walter (Arizona State University)

[183] *Beyond the Rules: An Archaeology of Board Games in the Eastern Mediterranean*

Despite being an artifact class that is quickly becoming ubiquitous at Bronze Age sites in the Eastern Mediterranean, game boards have received remarkably little treatment in the archaeological literature. This poster examines the spread of the Egyptian games senet and mehen, which spread throughout the Levant and Cyprus during the Early Bronze Age. Through comparison of the morphology and social contexts of these games in Egypt, Cyprus, and southern Canaan, conclusions can be made about the nature of interaction between the cultures. Game boards provide a unique avenue for studying trade relations, since they show the flow of ideas without an explicit commercial component.

Crompton, Amanda (Memorial University of Newfoundland)

[219] *The Finest Beach: The Changing Landscape at a French Fisheries Colony in Plaisance, Newfoundland, Canada (1662-1713)*

In 1662, a French colony was officially established in Plaisance, Newfoundland, Canada, to encourage and protect the vitality of France's overseas cod-fishing industry. The development of the French settlement at Plaisance will be reconstructed with archaeological and historical evidence. The colony was shaped both by its physical topography and by the competing demands of the

people who lived and worked there. Co-operation and conflict between Plaisance's permanent residents, seasonal fishing crews, military detachments, and administrative personnel shaped the colony's developmental trajectory. As a result, Plaisance was an atypical settlement that stands in marked contrast to other fishing settlements in Newfoundland.

Cross, Sarah [121] see *Vaughn, Kevin J.*

Crossland, Nicole (University of Montana)

[39] *The Evolution of Domestic Economies at the Bridge River site: A Lithic Perspective*

The rise of social inequality has been a topic of interest for Fraser Plateau archaeologists for some time and can also be demonstrated at the Bridge River site. The extensive dating at the Bridge River site enables researchers to examine the village intensively through several occupation periods. This research aims to understand the ways in which domestic economies have evolved in relation to the rise of social inequality. More specifically, the paper examines change in lithic tool production and use systems associated with domestic activity areas in large and small houses spanning the transition to inter-household ranking within the village.

Crothers, George M. [51] see *Wright, Patti J*

Crowley, Suanna Selby (Geoarch. Research Assoc./Mass. Archaeological Soc.), Curtiss Hoffman (Bridgewater State College/Massachusetts Archaeological Society), Eugene C. Winter, Jr. (Massachusetts Archaeological Society), Frederica Dimmick (NPS Cape Code National Seashore/Massachusetts Archaeological Society) and Mary Concannon (Massachusetts Archaeological Society)

[38] *A Community of Avocational and Professionals: Profiles in Outreach, Education, and Collaboration Among Archaeologists in Massachusetts*

Since 1939, the Massachusetts Archaeological Society has been a diligent advocate for Native American archaeological research in New England. Based at the Robbins Museum of Archaeology in Middleborough, MA, generations of Society members have organized and participated in research projects, family-friendly educational events, annual meetings, and published in traditional and digital formats. We are an active group of professionals, teachers, collectors, and enthusiasts who share common goals of education and preservation. This poster highlights accomplishments of our avocational and professional community, as well as partnerships with local Chapters, institutional grantors, Native tribal groups, and an expanding regional audience.

Crowley, Suanna Selby [252] see *Aiuvalasit, Michael J.*

Crown, Patricia (University of New Mexico)

[131] *Acquisition, Use and Discard of Red and Brown Wares at Pueblo Bonito, Chaco Canyon*

Red and brown wares represent only 5% of all ceramics from the Pueblo Bonito mounds, yet the specific types found indicate much about exchange relationships with groups in other parts of the Southwest. Examination of forms and use alteration of this assemblage indicates that these intrusive ceramics were valued and used for specific purposes. Comparisons are made of red and brown ware percentages relative to Pueblo Alto and Chacoan small sites.

[131] *First Chair*

Crumbly, Norma [228] see *Cooper, Judith R.*

Cruz Alvarado, Wilberth [5] see *Rosenswig, Robert M.*

Cruz Berrocal, Maria (University of California - Berkeley)

[143] *Some Comments on Spanish Feminism and Archaeology*

Some potential aspects for debate are: 1) the practical problems of using gendered languages, such as Spanish. A commitment to not using the masculine gender as the generic one has been particularly

important in Spanish archaeology, although there are some limitations; 2) while feminism and marxism in some American and Spanish archaeological traditions originally shared common elements -e.g. standpoint epistemology or focus on human labor as a fundamental in the understanding of society-, feminism has long had ambivalences about marxist views; 3) archaeology can make a particular contribution to the issue of object-subject distance. Is 'distance' a shortcoming?

[143] *First Organizer*, [143] *First Chair*

Cuartero Monteaugudo, Felipe [58] *see Baena Preysler, Javier*

Cuevas, Kimberly (Bureau of Land Management)

[223] *Piedras Blancas Light Station: Historic Property Restoration and Preservation*

Located on the coast of California, Piedras Blancas Light Station is one of only two such properties managed by the Bureau of Land Management in the nation. The light station became operational in 1875, and through the years experienced periods of construction, modification, and destruction. Today, the BLM has embarked on an ambitious restoration effort at PBL. Through consultation with the California Office of Historic Preservation, the BLM has resolved adverse effects to the historic and prehistoric sites on the property. This paper will demonstrate how restoration at PBL has embodied the conservation and preservation goals of the NLCS system.

Cui, Jianfeng [175] *see Hung, Ling-yu*

Cui, Yaping [214] *see Dong, Yu*

Cullen Cobb, Kim

[26] *Riveting Technology!*

This poster covers research and documentation of a group of Mississippian sheet copper ornaments from the collection of the Smithsonian Institution's National Museum of the American Indian. The application of rivets to finely crafted copper sheet ornaments is widespread during the Mississippian. The ornaments in this study are hammered into sheets and subsequently embellished with symbolic motifs. Rivets are used to join layers of copper during sheet production sequences or repair fractures or losses in the ornament. Careful examination of rivet application reveals fabrication sequences, starting with the original production of copper sheet, through extensive and ongoing repairs.

Culleton, Brendan (University of Oregon), Bruce Winterhalder (University of California, Davis), Cedric Puleston (University of California, Davis) and Douglas Kennett (University of Oregon)

[197] *The Ideal Free/Despotic Distributions, Social Network Theory and Intensification in the Ancient Maya Dual Economy*

The development of "dual economies", where intensive production serves goals of both domestic subsistence and surplus production for the prestige economy, is a significant but theoretically under-examined aspect of the emergence, integration and transformation of ancient Maya socioeconomic systems. We invoke the Ideal Free and Despotic Distribution models from Human Behavioral Ecology (HBE) and elements of Social Network Theory to examine the tempo and mode of Maya socioeconomic intensification. The theoretical aim is to outline a framework that maintains HBE's methodological individualism and ecological foundation while accounting for multiple currencies (e.g., calories, status, reproductive success) operating at diverse scales of socioeconomic organization (e.g., individual, household, polity, region).

Culleton, Brendan [250] *see Kennett, Douglas J.*

Culley, Elisabeth

[22] *Models of Pleistocene Image Production and Its Social Consequences: A Defense of Semiotics in Rock Art Research*
Archaeologists have long flirted with semiotics as a promising heuristic for interpreting prehistoric art and largely with disappointing results. Many semiotic tenets have proven theoretically unsound,

while others are difficult to operationalize in archaeological contexts. This paper returns to semiotics as a way of delineating the cognitive entailments of image-making practices and their social consequences and as a source of rigorous and testable hypotheses. Semiotic models for the initial emergence of non-utilitarian object production and use (artistic expression) and the cognitive relationships among these and other Pleistocene behaviors are presented. Broader applications of a semiotic research program are also discussed.

Culotta, Elizabeth (Science Magazine) [141] *Discussant*

Cummings, Linda Scott (PaleoResearch Institute, Inc.) and Chad Yost (PaleoResearch Institute)

[172] *Agriculture, Nuts, Wild Plants, and Fish: A Record of Subsistence along the Avenue of the Saints Corridor, NE Missouri*
Zea mays pollen, recovered from stratigraphic contexts, as well as organic residue matches with maize, beans, and squash point to agriculture practices by at least Woodland occupants of these sites. A glimpse at economic activity in one structure, represented by pollen analysis, indicates processing native resources such as nettle, marshelder, and basswood. Phytoliths recovered from stratigraphic samples hint at the availability of wild rice or a close relative. Organic residues examined from ceramics broaden our understanding of diet with evidence of meat, cultigens, and wild plants. Residue on a scraper, identified as fish scales, indicates scaling perch and suckers.

Cummings, Linda Scott [10] *Discussant* [10] *First Chair* [123] *see Cecil, Leslie G.*; [172] *see Varney, R. A.*; [4] *see Puseman, Kathryn*; [55] *see Logan, Melissa K.*; [87] *see Boggess, Douglas H M*

Cunningham, Kevin [180] *see Clarke, David S.*

Curet, L. Antonio (The Field Museum)

[116] *Archaeological Correlates in the Study of Social Stratification: The Cases of Central Place Theory and Ceremonial Centers*

Since early on American Archaeology has used a series of correlates to identify and understand social stratification in ancient societies. In this paper, I review two of these correlates: (1) centralized settlement patterns and the use of Central Place Theory and (2) the presence of ceremonial centers. The main argument of the paper is that these two correlates are being used very mechanically and without any discrimination to identify the presence of social stratification, even when other evidence against it exists. After discussing these correlates conceptually, I present ethnographic cases that contradict them. The paper ends with a case study from the Caribbean, the ceremonial center of Tibes.

Curewitz, Diane (Washington State Univ.) and R.G. Matson (University of British Columbia)

[84] *The 13th Century Depopulation of Cedar Mesa: The View from Ceramic Design*

Previous Cedar Mesa tree-ring dates and ceramic seriations did not explicate the relationship between terminal mesa-top and canyon occupations and the process of depopulation. Using seven design elements (including "rim ticks") developed by M. Hegmon to date assemblages from southwestern Colorado, these ambiguities are resolved; the mesa was essentially abandoned as a unit circa 1250, although Moon House appears to be a later exception. Simultaneous seriation of Central Mesa Verde and Cedar Mesa Pueblo III sites shows close parallels in timing of design element changes, although element abundances vary between the two areas.

Curran, Sabrina [205] *see Belmaker, Miriam*

Curta, Florin (University of Florida)

[243] *Ethnicity in Medieval Archaeology*

A resurgence of interest in ethnicity in medieval archaeology has recently re-opened the debate surrounding the ability of archaeologists to "get into the minds" of medieval people. The debate was ignited by the idea that archaeologists have no access to the

meaning of cultural traditions. The theoretical malaise at the root of this scepticism verging on nihilism shows that medieval archaeology still has to come to terms with such key concepts as symbols, style, and power. The paper offers a brief survey of the most recent developments in the field.

Curtis, Jason [153] *see Brenner, Mark*

Curtis, Jenneth (Parks Canada), Adrian Burke (Université de Montréal), Jamie Brake (Torngâsok Cultural Centre) and Pierre Desrosiers (Avataq Cultural Institute)
[147] *Documenting the Ramah Chert Quarries in Torngat Mountains National Park of Canada*

Ramah chert is a distinctive material for chipped stone technology that is well-known for its wide distribution across archaeological sites in eastern North America. Recent fieldwork is increasing our knowledge of several aspects of the quarry sites. This paper provides a review and update on the quarries as a contribution to the international inventory. We explore the geology of the chert outcrops and evidence of cultural activity. This information is further placed within the context of the period of use, products created, and geographical range over which they were distributed.

Cushman, David (SRI Foundation) [3] *First Chair* [3] *First Moderator*; [3] *first organizer*

Cuthrell, Rob (UC Berkeley)

[154] *Foodways, Practices, Colonial Experiences, and Elusive Identities: A Comparative Approach*

Many archaeologists have acknowledged the foodways/practice/identity nexus as an important space for political and social negotiation in colonial settings. However, because identities are multifaceted, multiscalar, and dynamic, exploring them using archaeological remains involves much uncertainty and ambivalence. This is particularly evident in colonial settings, where identities and identity-signaling practices were often central discursive problems. Using examples from colonial and post-colonial contexts from the east and west coasts of North America, this essay will explore how these issues affect archaeological interpretation.

Cutright, Robyn (Centre College)

[137] *Domestic Ritual in a Provincial Chimu Community, Jequetepeque Valley, Peru*

This poster explores small-scale domestic ritual in the LIP village of Pedregal, in the Jequetepeque Valley on the north coast of Peru. A wide range of rituals at multiple scales, from small offerings of burnt maize within houses to community-wide feasts, were integral to community life at Pedregal. The use of exotic materials in intimate household-based ritual acts drew Pedregal residents into contact with wider spheres of interaction, while feasting in the public sector of the site served to reinforce integrative community ties.

Cutright-Smith, Elisabeth (University of Arizona), Kacy Hollenback and Wendi Field Murray

[7] *Twenty Years Later: A Quantitative Assessment of NAGPRA's Impacts on American Archaeology*

The passage of NAGPRA in 1990 forever changed the discipline of archaeology. This legislation mandated repatriation of human remains and certain objects found on federal or tribal lands to culturally affiliated descendant communities, as well as those items in the possession of agencies and museums receiving federal funding. Yet twenty years later, we still do not have a clear picture of how this legislation has collectively changed the discipline in terms of method, theory, or practice. This paper seeks to understand the magnitude and direction of these changes through a quantitative content analysis of major anthropological and archaeological journals.

Cyphers, Ann (IIA-UNAM)

[156] *Subsistence Strategies at San Lorenzo*

Food production strategies in the lower Coatzacoalcos River drainage are risky due to unexpected fluctuations in environmental conditions.

In the early phases, the San Lorenzo Olmec diversified in a wide spectrum of resources in a mixed economy that incorporates fishing, hunting, and collecting with arboriculture and upland root crop cultivation. As subsistence demands increased through the Early Preclassic period, wetland resource withdrawal and production intensified, and maize agriculture in the wetlands became increasingly attractive despite its higher degree of risk from unpredictable flooding.

Cyr, Howard (The Department of Archaeology)

[111] *Geoarchaeological Research along the Oldman River, Southern Alberta*

Few early-middle Holocene age archaeological sites have been identified across the Northern Plains, leading archaeologists to speculate as to the effects postglacial environmental change had on the habitability of the area and on differential site preservation. Little is known about the development of Northern Plains river systems following the draining of the glacial lakes or about the impacts that river evolution may have had on both site selection by prehistoric groups and site preservation. This paper investigates the evolution of the Oldman River drainage in southern Alberta and addresses the possible impacts of alluvial activity on archaeological site preservation.

Czaplicki, Jon (Bureau of Reclamation)

[50] *The Fabulous '50s*

The 1950s is the decade that brought, among other things: the Korean War, polio vaccine, IKE for president, the original Disneyland, the Suez Canal crisis, the Barbie doll, the microchip, the death of the last Union and Confederate Civil War veterans, Sputnik, the space race, NASA, the US's Explorer satellite, rock 'n' roll, Elvis, the hula hoop, the 4 cent postage stamp [first penny increase in 26 years ('58)], the color TV ('53), B-52 bombers on full-time flying alert, and 509 TV stations by the end of decade. Well, what the heck was happening in archaeology?

[50] *First Chair* [141] *Second Organizer*

da Gloria, Pedro [47] *see Strauss, André*

Daehnke, Jon (Stanford University)

[225] *Places of Protocol: Lived Heritage, Memory and Materiality on the Columbia River*

There is increased demand by Indigenous populations for control of heritage, especially in accordance with their own practices and protocols. While non-indigenous views on heritage often remain attached to the primacy of archaeological objects, it is often these forms of intangible heritage – protocol and practice – that are most relevant to Indigenous communities. This paper explores the Chinook Nation's efforts at cultural reclamation, especially their emphasis on "lived heritage". This is demonstrated most clearly by the resurgence of canoe culture, the rebirth of communal longhouses, and most importantly the teaching of the protocols associated with being Chinook.

Daggett, Adrienne (Michigan State University)

[53] *The Chronology of Exchange: An Example from Early Iron Age Southern Africa*

Research on exchange between forager and agropastoralist communities in the southern African Iron Age focuses on how exchange affects social organization and subsistence for both communities. Spatial and cultural associations between forager and agropastoralist sites are well-documented, but sufficiently tight chronology to demonstrate temporal correlation is often missing. The material record represents relatively short-term events, from which long-term processes are extrapolated. The disparity between the activities represented and their interpretation makes addressing cultural and economic exchange problematic. This paper will consider chronology, inter-site correlation, and interpretation for a better understanding of the dynamics of interaction in Iron Age southern Africa.