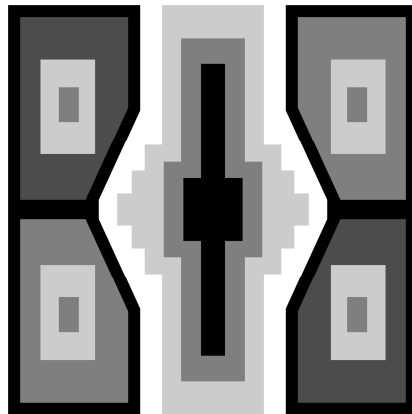


INSTITUTE
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~ *Abstracts* ~



55th
Annual Meeting

JANUARY 9–10, 2015
BERKELEY, CALIFORNIA

Friday, January 9th

CHRISTINE A. HASTORF, *University of California Berkeley*; MARIA BRUNO, *Dickinson College*; RUTH FONTENLA, *Universidad Mayor de San Andres*; GEOFFREY TAYLOR, *University of California, Berkeley*

The continuing debate of raised fields: a study at “Formative” Chiripa on the Taraco Peninsula, Bolivia

Several studies of raised fields in the Lake Titicaca Basin have debated the scale, date, produce and political authority of these intensive agricultural systems. In 2013 the Taraco Archaeological Project revisited the raised fields southeast of the Chiripa settlement and part of the larger sacred landscape of the site. While the site is known as an important Formative place, the absolute dates of the fields are later, suggesting that this part of the agricultural landscape was not only small-scale but post-Tiwanaku in age. On-going micromorphological studies will also shed light on what was produced in them.

SARA L. JUENGST, *University of North Carolina, Chapel Hill*

Long-distance travelers in the Titicaca basin during the Formative Period

The Formative Period (1500 BC-AD 200) in the Titicaca Basin of Peru and Bolivia was clearly a transformative time, shown by the domestication of plants and animals, creation of long-distance trade routes, and the emergence of a regional ritual tradition, Yaya-Mama. Less clear is these economic changes impacted the social relationships of lake basin residents. I tested burials from four temples on the Copacabana Peninsula for strontium isotopes in order to determine where people lived prior to death. I found four outlying individuals, indicating early long-distance movement around the Andes, perhaps connected to the emergence of the Yaya-Mama Religious Tradition.

ABIGAIL LEVINE, *Cotsen Institute of Archaeology, University of California, Los Angeles*

A new model for early complexity in the northern Lake Titicaca basin, Peru

Taraco was a major regional center in the northern Lake Titicaca Basin during the Formative Period (ca. 1300 BC-AD 400). Excavations in 2013 focused on Sector I, a sunken court site adjacent to the principal mound. Results suggest that the earliest public activities in the area centered around communal craft production—specifically intensive lithic production—which likely had a ritual or ceremonial character. These cooperative behaviors were ultimately formalized in the sunken court complex built during later phases. The results further indicate that the earliest use of ceramics in the Basin may be later in time than originally believed.

CHARLES R. ORTLOFF, *CFD Consultants International, Ltd. and University of Chicago*

The BCE 300–1100 CE Tiwanaku perimeter canal: its dual ceremonial and hydrological function

Acquisition of 1930's Tiwanaku aerial photographs reveals new details of surface canal systems intersecting the perimeter canal surrounding the city's ceremonial core. From aerial photographs, excavation data and GE imagery, knowledge of the entirety of Tiwanaku's water system now permits investigation of the hydrological function of the perimeter canal and its interconnected surface/subterranean canals. CFD calculations indicate the perimeter canal collected/draind rainy-season runoff, promoted rapid ground drying through aquifer seepage/drainage to the nearby Tiwanaku River and provided canal flushing-water to subterranean piping draining Putuni structures. Wet-season surface/aquifer drainage into/from the perimeter canal and dry-season spring fed canal and seepage flow into the canal stabilized the deep groundwater level providing foundation stability limiting structural settling/distortion of the Akapana and core structures. Beyond its ceremonial function, the perimeter canal was the hydrological linchpin regulating water supply/drainage to maintain Tiwanaku's hygienic, monument structural stability and interior-city agricultural areas.

NICOLE M. SLOVAK, *Santa Rosa Junior College*

Cranial modification and shifting identities at Ancón, Peru

Cranial modification, the practice of modifying the human skull during infancy to achieve a desired form, has a long and varied history in the Andes. This paper explores the absence and subsequent presence of cranial modification among a sample of Middle Horizon individuals from Ancón, Peru. The appearance of this form of bodily modification in the latter half of the Middle Horizon potentially suggests a renewed emphasis on coastal group identity and affiliation and a reestablishment of coastal connections between Ancón and its neighbors toward the end of the Middle Horizon.

LIZ GONZALES RUIZ, *Independent Scholar*

Nuevas propuestas sobre el uso de las cabezas humanas aisladas halladas en el sitio arqueológico de Cahuachi, Nasca-Perú

El objetivo de esta investigación fue ofrecer nuevos aportes sobre el uso de las llamadas “Cabezas Trofeo”, sustituyendo dicho término por el de “Cabezas Humanas Aisladas” (CHA). Usando evidencias arqueológicas contextualizadas, bioantropología e iconografía, así como fuentes etnohistóricas y etnográficas se ha intentado reconstruir la concepción de la muerte de la sociedad Nasca (época Temprana) que ocupó Cahuachi. La importancia del sacrificio humano para la regeneración cósmica (medio ambiente), la cacería humana y las batallas rituales como actos consensuados por los grupos intervalles de esta misma sociedad, la concentración masiva cíclica en los espacios públicos y la administración de la muerte como fuente de poder para legitimar el dominio político-religioso centralizados en Cahuachi.

PETER R. FUCHS, RENATE PATZSCHKE, *Institute of Prehistoric Archaeology, Free University of Berlin*; JESUS BRICENO, *Ministerio de Cultura, Trujillo*

From the Archaic to the Formative: monumental architectural tradition at Sechin Bajo, Casma, Peru

Recent investigation in Sechin Bajo resulted in the discovery of a building tradition of more than 2000 years, evidencing a sequence of four constructions, supported by more than 50 radiocarbon dates. The First Building, a simple platform that underwent several extensions and additions of several Circular Sunken Plazas was erected and used over more than 600 years during the Fourth Millennium B.C. and subsequently backfilled and built over by a Second Building, expressing a change in size, building techniques, function and use. The filling of an earlier construction represents a “Temple Entombment”, documented years ago at Kotosh and other sites in northern Peru. A Fourth Building, representing the most monumental construction of the sequence was erected on top of a Third Building in another process of “Temple Entombment” attended by extensive feasting. This last building demonstrates the most elaborated architecture and walls decorated with clay-reliefs exhibiting a complex iconography.

JEFFREY QUILTER, *Peabody Museum of Archaeology & Ethnology, Harvard University*

Chronology, climate, and culture change on the North Coast of Peru: A reevaluation

The collapse of the Moche state under environmental stress was a keystone for interpreting culture change in much of Peru for decades. Recently, however, the abandonment of the (Larco) relative dating system and other reevaluations has undermined the concept of a Moche state. This paper explores these issues and focuses on the third leg of the theoretical model – the evidence for climatic events and their timing and impact on societies on the North Coast as explored by The Peru Human Ecodynamics Project. As might be expected, the more we know, the more complicated our picture of the past becomes.

BRIAN R. BILLMAN, *MOCHE, Inc. and University of North Carolina-Chapel Hill*; JESÚS BRICEÑO ROSARIO, *ICPAC and El Ministerio de Cultura, Perú*; JULIO RUCABADO-YONG, *Pontificia Universidad Católica del Perú and MOCHE, Inc.*

New light on the Late Moche phase in the Moche Valley: results of recent excavations and settlement pattern analysis

Is the Late Moche phase a valid time period? Were the sites of Moche and Galindo contemporary throughout most of their occupation? What happened during the AD 800s and 900s on the north coast of Peru? We present a new look at this crucial period through the analysis of radiocarbon dates, Moche Valley settlement pattern data, and recent rural household excavations. Analysis of these new data indicates a dramatic shift in population to fortified settlements in the middle valley in the Late Moche phase after the abandonment of Huaca de la Luna. Recent revisionist reconstructions are not consistent with these new data.

GABRIEL RAMON, *Pontificia Universidad Católica del Peru and Leiden University*

Potters from the puna: reconsidering the evidence

The puna is the highest altitude zone regularly inhabited by humans in the Andes. Historically, puna people have been considered pastoralists. Given the mobile nature of the livelihood of many puna residents, they are rarely associated with pottery production. Therefore, within puna archaeology, the potential for pottery manufacture has been particularly neglected. However, a growing corpus of evidence is showing that ceramics have been produced at this high ecological level. This presentation reviews the archaeological and ethnographic evidence of potters from the puna, focusing on key cases to show that in the Andes pottery production at those high altitudes is not exceptional but one of the many subsistence strategies used by puna people.

Saturday, January 10th

ANN POLLARD ROWE, *George Washington University Museum and The Textile Museum, Washington, D.C.*

Defining the beginning of the Chancay textile style

Chancay-style textiles are more abundantly preserved than any other archaeological Peruvian textile style. Yet little documentary information is available on them and consequently their chronology has not been understood. Nevertheless, assembling associations from a variety of sources enables me to formulate for the first time a definition of what appears to be the earliest textile style that could be called Chancay, probably datable to Middle Horizon 3-4. The resulting style can be seen to be a forerunner of later more familiar Chancay textile styles.

GRACE KATTERMAN, *California Institute for Peruvian Studies (CIPS)*

Tunics, cloaks and loin cloths: male style and design at South Coastal Inca outposts

A study of repeated male garment types from several South Coastal sites with an Inca presence suggests a hierarchical arrangement among those who served the government at their provincial outposts.

ANN H. PETERS, *Consulting Scholar, University of Pennsylvania Museum of Anthropology and Archaeology*

Paracas Necropolis: “outsider” textiles

Reconstruction of Paracas Necropolis gravelot assemblages permits identification of garment types and image styles that recur in contemporary tombs. In each mortuary bundle one or two “home” styles dominate the textile assemblage, while a range of other “visitor” styles, more typical of other bundles, may be present. We have also identified “outsider” textiles, distinct in form, technique and style from the embroideries typical of Paracas Necropolis, which appear in small quantities among the larger bundles. What may these garment forms indicate about the social group(s) that carried out mortuary rites at the Necropolis of Wari Kayan and their evolving sociopolitical alliances?

DAWN LOHNAS, *Brooklyn Museum*; ELLEN HOWE, *Metropolitan Museum of Art*; JUDITH LEVINSON, *American Museum of Natural History*; ADRIANA RIZZO, FEDERICO CARÒ, *Metropolitan Museum of Art*

A technological study of post-fire painted Paracas ceramics

While Peruvian ceramic traditions have received much scholarly attention, technological aspects of Paracas pottery warrant further investigation. As part of a two-year study completed on collections at the American Museum of Natural History and the Metropolitan Museum of Art, conservators and conservation scientists conducted a material and technical analysis of the Paracas post-fire painted ceramics (ca. 800-100BCE). Using X-Ray Fluorescence Analysis, Polarized Light Microscopy, Raman and Fourier-Transform Infrared Spectroscopy, Scanning Electron Microscopy-Energy Dispersive X-Ray Spectroscopy and Pyrolysis-Gas Chromatography/Mass Spectrometry, important discoveries have been made about temporal and geographic changes and continuities in pigment and binder use and manufacture.

MARIUSZ ZIÓŁKOWSKI, *Centre for Precolumbian Studies, University of Warsaw*; JAROSLAW ARABAS, *Institute of Electronic Systems, Warsaw University of Technology*

From image to statistics: recent studies on “tocapus” signs

(Presented in English) Uno de los temas muy debatidos en los estudios andinos es el problema de la existencia (o ausencia) de un sistema gráfico, prehispánico, de transmisión de informaciones, o : de algún tipo de escritura, en el sentido amplio de este término. Desde 2006, se lleva al cabo un proyecto de estudios, basado en una documentación de ca. 500 queros. Los especialistas involucrados representan la lingüística, estadística, etnohistoria, historia del arte. El análisis estadístico de un grupo de ca. 1200 signos tocapu demostró el carácter premeditado y organizado de las “inscripciones”. En la ponencia se presentaran el resultado de similar análisis de asociación entre categorías de escenas y signos.

MARIO A. RAMOS VARGAS, *Proyecto Integral Huaycán de Cieneguilla, Proyecto Qhapaq Ñan – Sede Nacional, Ministerio de Cultura, Peru*

Hallazgo singular de un grupo de quipus Inca en Huaycán de Cieneguilla, Costa Central de Perú

El hallazgo de un grupo de quipus Inca en la Zona Arqueológica Huaycán de Cieneguilla de la Costa Central de Perú, recuperados de un contexto de tumba saqueada por el Proyecto Integral Huaycán de Cieneguilla, del Proyecto Qhapaq Ñan - Ministerio de Cultura, se torna muy singular y significativo, al haber estado contenidos en un paquete textil junto a otros materiales, entre ellos un cesto de costurero con todos sus implementos, evidencia que retoma la posibilidad de que los mismos especialistas en la lectura de los quipus también confeccionaban sus propios instrumentos de registro.

BILL SILLAR, *Institute of Archaeology, University College London*; MELISSA CHATFIELD, *Santa Barbara Trust for Historic Preservation*; ROB IXER, SARA LUNT, *Institute of Archaeology, University College London*; GORDON MCEWAN, *Wagner College*; DENNIS OGBURN, *University of North Carolina, Charlotte*

Becoming empire: social, economic and material changes at the start of Inka imperial expansion

This paper presents an analysis of changes in settlement organization, ceramics, stone-working and architecture before and after the Inka conquest of the region associated with the Pinagua ethnic group in the area around Lake Muina and Lucre. Through Petrography and X-ray Fluorescence we show how the materials, technical know-how and labour for some of the most iconic “Inka” pottery and stonework only became available after the Inka expanded into this region. Analysis of the origin and development of specific design elements, materials and technical skills shows how the production of hybrid objects combined Cuzco and Lucre regional elements. We argue that the experience of conquering the Lucre area influenced subsequent Inka imperial policy as similar methods of annexing conquered resources, extracting labour from subjugated ethnic groups and creating objects with hybrid local+Inka styles was to become a characteristic feature of the Inka Imperial economy of “supply on command”.

RODOLFO MONTEVERDE SOTIL, *Pontificia Universidad Católica del Perú*

Esculturas zoomorfas y ritualidad Inca en el Cuzco-Perú

Cuatro temporadas de campo en el Cuzco, de 2 semanas cada una, nos permitió registrar importante cultura material inca (1400-1532 dC.), como la existencia de esculturas zoomorfas (felinos, aves y serpientes) talladas en grandes rocas adosadas a estructuras arquitectónicas, que en conjunto son los componentes de las huacas (lugar sagrado) del sistema de Ceques que organizaba espacial y ceremonialmente la capital incaica. Esta evidencia arqueológica no ha sido analizada arqueológica ni etnohistóricamente por las investigaciones que nos precede.

VERÓNICA ISABEL WILLIAMS (IAS 2015 TRAVEL GRANTEE), *National Council of Scientific and Technological Research (CONICET) / University of Buenos Aires*

Social landscape during Inca dominion in Northwest Argentina

Among the ways that the Inca Empire adopted to rule its territory included actions into ideological, economic, and political sphere which explain in part the diversity and disparity that the state presence reached. Constructions like roads, tampus, pukaras, administrative centers, storage buildings, agricultural works, among others, were common in the entire annexed areas, but it is evident that its architecture, dimensions, monumentality and spatial density show contrasting regional differences. New evidence regarding Inca occupation in Northwest Argentina, especially in mid- central Calchaqui valley, shows different situations along the period of Inca conquest and domination itself. According to the evaluation of data from a couple of archaeological sites, all of them characterized by Inca features, varied chronologies, and archaeological contexts like burial sites, production or agricultural sites, administrative, and fortified sites are examples of the complex process of population assimilation in Northwest Argentina.

LARRY COBEN, *University of Pennsylvania*

Conquest, incorporation or...? The Inka, the Huarco and the Canete valley

The Cañete Archaeological Project (CAP) is investigating the Inca incorporation of the Cañete Valley. Our systematic survey and excavations suggest a complex interaction between the Inca and those who occupied the valley before them. We identified sites and features traditionally associated with the Inca, such as agricultural terraces, storage structures, and large rectangular plazas and rooms with niches in their walls, as well as two quipus. Other sites and features appear to have no Inca association, and others appear to have both Inca and non-Inca characteristics. In this paper, we discuss the imperial strategies of incorporation and local responses to them.

SATURDAY EVENING 8:15 (Open to the public)

HENRY TANTALEÁN, *Escuela Superior Politécnica del Litoral*; CHARLES STANISH, *Cotsen Institute of Archaeology, University of California, Los Angeles*

The ritual offerings in the sunken patio at Cerro del Gentil, Chincha

We present the materials found in ritual interments in a Paracas patio in at the site of Cerro del Gentil in Chincha from two seasons of work. This sunken patio was built in Late Paracas circa 400-200 BCE. There is evidence of repeated interments of materials, including pottery, gourds, textiles, mummy bundles, baskets, plants and animals. The patio was also covered with layers of mixed soil and plant materials, particularly maize. A late event, most likely the last, includes mummy bundles in classic Paracas tradition. We explore the possibility that the repeated reinterments and multiple uses at this patio were rituals surrounding the creation of a huaca by elites in the middle and lower valley in Chincha.

Posters

Posters will be on display throughout the conference in the Wurster foyer. Poster authors will be available between 1:00 pm and 1:45 pm daily.

HANS BARNARD, *Cotsen Institute of Archaeology, University of California, Los Angeles*; AUGUSTO CORDONA ROSAS, *Centro de Investigaciones Arqueológicas de Arequipa, Peru*; MARÍA CECILIA LOZADA, *University of Chicago*

Wari presence in the Vitor Valley (Arequipa, Peru)

During the Middle Horizon (around 600–1000 CE), the Vitor Valley, near Arequipa in southern Peru, was inhabited by a group identified as the Ramadas with its own distinctive material culture mostly known from funerary contexts. There are also clear indications for a Wari presence in the valley, mostly in architectural details, but also in the form of Wari pottery and local imitations thereof. We present the preliminary results of our research into this Wari presence in the Vitor Valley.

CHRISTIANE CLADOS, *Philipps University Marburg*

Beyond music: non-musical uses of music instruments in Paracas and Nasca iconography

The poster discusses some non-musical uses of the music instruments seen in representations of the ancient societies of Paracas and Nasca. This analysis focuses on representations on ceramics and textiles in which the protagonists are shown in different relationships to music instruments. Ceramics and textiles provide a detailed iconography that is occasionally confirmed by the archaeological evidence. This evidence allows to examine an extra-musical aspect of Paracas and Nasca music instruments, particularly as used as ritual paraphernalia, parts of dress, and sacrificial offerings.

JAMES DAVENPORT, *University of New Mexico*

Provisioning state-sponsored ceremonies in the provinces: neutron activation analysis of Inka and pre-Inka ceramics from the Temple of the Sun, Pachacamac

Inka presence at Pachacamac represents a high level of investment by the Inka in transforming the site to serve the imperial agenda, including the construction of the Temple of the Sun, where state-sponsored rituals and feasts were held. Differences in chemical composition, as determined by Instrumental Neutron Activation Analysis, provide evidence for the local reproduction of imperial style pottery. Additionally, compositional data provide evidence for the importation of serving vessels and aríbalos. Through importing imperial material culture, the Inka drew deliberate connections between the important ritual center of Pachacamac (and the rituals that took place there) and other imperial centers.

GIACOMO GAGGIO, PAUL S. GOLDSTEIN, *University of California, San Diego*

The role of plants in a Tiwanaku temple: results of a paleoethnobotanical analysis from Omo M10, Moquegua, Peru

Much is known nowadays about the role of plants in Tiwanaku households and political economy, yet, their function in ceremonial contexts is still unclear. Excavations of Tiwanaku sites in the hyper-arid environment of the Moquegua valley in southern Peru have resulted in the recovery of a wide array of ancient organic finds, including botanical remains. Omo M10 features the only Tiwanaku temple found outside the Altiplano. Based on the systematic collection, analysis and study of spatial distribution of the paleoethnobotanical samples collected from the temple's three excavated platforms we present an interpretation of the plants recovered in this ceremonial context.

AGNES AIKO HORIMOTO, GUILLERMO CAMPOS, WOON MAN TANG, ALEXEI VRANICH, *University of California, Los Angeles*

Reconstructing architecture through 3D printing

The Pumapunku at Tiwanaku, Bolivia, a temple complex considered the apogee of pre-Colombian architecture and construction. The shattered remains of an impressive andesite building set on huge stone slabs has been the subject of admiration since it was first described in 1539. Unfortunately, artist's reconstructions range from the uninformed to the bizarrely speculative. In this presentation, the fragmentary remains of the Pumapunku are modeled on CAD and printed in three dimensions a reduced scale to capitalize on archaeologist's training to think in three dimensions and refit broken objects. This method is applicable to any heavily damaged architectural setting. (This "poster" will consist of the pieces of architecture generated by the 3D printer.)

JASON KJOLSING, PAUL S. GOLDSTEIN, *University of California, San Diego*

Coastal resources at an inland temple: analysis of the marine assemblage of the Tiwanaku Omo Temple

Despite lying 90 km from the Pacific Ocean and an absence of Tiwanaku sites on the coast, numerous types of marine specimens have been recovered from the inland Tiwanaku communities of the Middle Moquegua Valley, Peru. Consumed as food, utilized as tools, worn as adornment, and offered as ritual objects, marine goods were dynamic resources for the Moquegua Tiwanaku. This poster presents recent analysis of the marine assemblage from the Omo temple (M10A) and examines how diasporas from the highland Tiwanaku state integrated coastal resources into their religious lives and political economy as they built communities in Moquegua, Peru.

KARL LA FAVRE, *University of California, Los Angeles*

A late prehispanic ceremonial-mortuary landscape in the eastern slopes near Lake Titicaca

During reconnaissance in 2012 in Carabaya, Perú, I identified a previously unknown Altiplano/Inca landscape with interconnected mortuary and corporate ritual areas. A particularly notable 2-km. stretch includes 3 chulpa clusters and a corporate ritual area with fine architecture and a dense Altiplano/Inca ceramic scatter. The corporate ritual architectural style is reminiscent of the earlier sunken courts of the Titicaca highlands, suggesting an additional earlier occupation and/or the greater longevity of this style in the forested slopes. The mortuary areas include familiar stone chulpas as well as a unique style of joined adobe compartments with impressed and painted geometric designs.

GUIDO LOMBARDI, ALCIDES RICARDO ALVAREZ VERA, TERESA HOGAN, MORGAN DREESBACH, JENNIE GREGORY, TYREL SORENSEN, JEREMIAH CAMP, *Metropolitan State University of Denver*

Evidence for undocumented cultural occupations in the Lurin-Rimac divide

In July 2014, MSU Denver field school participants joined Dr. Guido Lombardi and Dr. Alcides Alvarez in investigating undocumented archaeological sites within the Lurin and Rimac divide. The expedition observed structures, ceramics, petroglyphs, and geoglyphs of unknown cultural affiliation and use. Documentation of these sites is important for the preservation of Peru's cultural heritage as they are currently threatened by modern development that endangers further study of the area. This poster will present an overview of the sites, their environmental surroundings, their value to the Huaycán community, and their contribution to understanding inter-valley interactions between the Lurin and Rimac valleys.

GUIDO LOMBARDI, ALCIDES RICARDO ALVAREZ VERA, KATYA VALLADARES, AARON BURCH, HEATHER HILL, TYREL SORENSEN, TERESA HOGAN, MORGAN DREESBACH, JEREMIAH CAMP, LEAH SWETT, *Metropolitan State University of Denver*

Architecture in the CA8 complex of Huaycán de Pariachi: reflections of cultural interactions on the central coast

Initial work in Conjunto Arquitectónico 8 at the site of Huaycán de Pariachi by Metropolitan State University of Denver focused on establishing a typology of the architecture based on building materials and discernible chronology regarding occupational shifts and realigned territories between the Ychma, the Inca, and Incan allies. Utilizing topographic maps of the complex, this study interprets the observed architecture in the context of other known Ychma/Inca sites on the Central Coast. These comparisons yield valuable information regarding potential room functions, cultural affiliation, and contribute to current understandings of the diverse and possibly tumultuous culture history of Peru's Central Coast.

JULIA LONGO, *MOCHE, Inc.*; CYRUS BANIKAZEMI, *University of North Carolina, Greensboro*; BRIAN BILLMAN, *University of North Carolina, Chapel Hill*; PATRICK MULLINS, *University of Pittsburgh*

Modern settlement patterns and site preservation in the Middle Moche Valley

In the Moche Valley, Peru, the authors conducted a survey of sites within two proposed reserves. GPS data was collected for comparison with previously recorded site boundaries, offering insight into the threat of modern encroachment on sites. Using GIS and statistical analysis, the authors identified areas of site degradation, categorized each site in terms of endangerment, and determined patterns of encroachment. Furthermore, the authors assessed how modern settlement patterns compared to those of the pre-Columbian era. The insight gained through the authors' analysis shows potential for using such studies in effective prioritization of endangered areas in future site preservation efforts.

ERIK J. MARSH, *CONICET, Laboratorio de Paleo-Ecología Humana, Universidad Nacional de Cuyo, Mendoza, Argentina*

Accelerating history in the Lake Titicaca basin: the rapid emergence of agropastoralism and the state

During the 10,000-year human occupation of the Lake Titicaca Basin, two transitional periods were particularly poignant: the emergence of agropastoralism (~1590–1170 cal BC) and the Tiwanaku state (cal AD ~430–590). I suggest that history accelerated during these centuries, based on a series of Bayesian analyses of more than 250 radiocarbon dates, many produced through substantial efforts by researchers over the last decade. These two examples highlight past Titicaca inhabitants' capacity to actively generate rapid, profound regional changes, a view of the Andean *longue durée* that stands in contrast to evolutionary models' expectations for gradual developments.

LAURA G. MARSH, *Stanford University*

Examining variability and provenance through ceramic petrography at Chavín de Huántar

In order to better understand the variability and complexity of the site of Chavín de Huántar, in the Peruvian Andes, ceramic fragments from the site were sampled for paste analysis. Of the fragments analyzed macroscopically, 75 were chosen for thin sectioning and petrographic analysis, to confirm the results of the macroscopic analysis and to source the samples by comparison with geological samples from the area and petrographic analyses from previous studies and other sites. This research provided insights into the variability within Chavín and the site's relationship with contemporaneous sites.

SHAINA MOLANO, *University of California, Merced*; REBECCA BRIA, *Vanderbilt University*

Exploring variation in cranial modification at Hualcayán, Ancash highlands, Peru

Long-term excavations at Hualcayán in highland Ancash, Peru have produced a substantial number of modified crania dating to the Early Intermediate Period and Middle Horizon (1-1000 CE). Visual and metric analyses were employed to determine modification types, differences between the modified types, and classify crania of unknown shapes. Metric analysis also quantified the degree of deviation from normal skull shape. These deviations were significant, revealing intentional modification practices were used. Our analysis also reveals surprising diversity within three distinct modification types: annular, bilobate, and occipital flattening. The results are discussed in terms of local customs, group membership and social identity.

LUIS MURO, NICHOLAS BROWN, *Stanford University*

Community archaeology at San José de Moro, Peru

Recently, Peruvian archaeology has witnessed a growth in community-based projects representing a departure from a purely scientific archaeology towards one more engaged with people. This shift has allowed increased awareness of the discipline's role in socio-economic development of contemporary populations. This work aims to explore the complex dynamics between development–archaeology and community–patrimony. To this end, interviews were conducted by the San José de Moro Archaeological Program within the community surrounding the archaeological site of San José de Moro, Peru. This preliminary study revealed the plurality of perspectives existing about the place of archaeology in education, development, and conservation.

COLLEEN O'SHEA, *State University of New York, Buffalo*; JACOB BONGERS, *University of California, Los Angeles*; HENRY TANTALEÁN, *Escuela Superior Politécnica del Litoral*

Conserving and interpreting two bird pendants from the mid-Chincha Valley, Peru

This poster investigates the material composition and cultural significance of two bird pendants from the mid-Chincha Valley, Peru: one recovered from a platform mound dating to the Late Paracas Period (400–100 B.C.) and the other from a semi-subterranean, collective tomb, or chullpa, likely dating from the Late Intermediate Period (A.D. 1000–1476) to the Late Horizon (A.D. 1400–1532). These artifacts provide insight into local mortuary customs and practices. Here, we present a detailed look at the materials analysis of the bird pendants, discuss their conservation treatment, and offer preliminary interpretations of these artifacts in their respective cultural contexts.

EMILY A. SHARP, *Arizona State University*; REBECCA E. BRIA, *Vanderbilt University*

An analysis of trepanned crania in highland Ancash, Peru

Recent research in the Callejón de Huaylas, Peru, has recorded at least eight trepanned crania from the archaeological sites of Hualcayán and Aukispukio. The rates of trepanation and the types of this surgical procedure are not well-known in the north-central Andes. As such, this study provides much needed contextual information regarding the burial context and demographic profile (predominately adult males) of affected individuals. The observed samples likely date to the Early Intermediate Period and the Middle Horizon (AD 1–1000). Each case will be examined in light of trepanation technique, location on cranium, extent of healing, and associated trauma.

MATTHEW SITEK, PAUL S. GOLDSTEIN, *University of California, San Diego*

Preliminary research at the site of Cerro San Antonio in the middle Locumba Valley, Peru

The middle Locumba Valley on the far southern coast of Peru lies between two very different peripheral regions of the Tiwanaku state and may be a crucial case study for exploring the timing and direction of state expansion and collapse. Ethnohistoric sources suggest limited agrarian potential, yet the site of Cerro San Antonio shows evidence for over 150 hectares of occupation dating from the Archaic through Inca Periods. The site has never been subject to problem-oriented research and is endangered by looting. We discuss the extent of Middle Horizon occupation based on a preliminary reconnaissance and outline future research.

MACIEJ SOBCZYK, *Centre for Pre-Columbian Studies, University of Warsaw*

Maucallacta – an Inca ceremonial center in Cuntisuyu

The Maucallacta architectural complex, located in Arequipa Department in south-central Peru at 3700 m a.s.l., consists of over 250 stone buildings and tombs. The site was one of the most important settlements in Cuntisuyu, one of the four parts of the Inca Empire, and was also the main religious and administrative center related to the cult of the Coropuna volcano, a mountain described by many Spanish chroniclers in the 16th and 17th centuries as a deity and an oracle worshipped in pre-Columbian times. The main purpose of the archaeological project commenced in 2006, (As part of the operating since 1996, the Condesuyos Project) carried out by the Center for Pre-Columbian Studies of Warsaw University (Poland) and the Catholic University of Saint Mary in Arequipa (Peru), is to explore and restore the most important architectural structures documented in Maucallacta. As a result of that work, the intensive destruction of some important structures has been stopped, and some very interesting details of burial rites and the ways offerings were made to the sacred mountain have been discovered. As well as partially reconstructed ceremonial landscape of the region.

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Feeding the gods: microbotanical analysis at Chavín de Huántar

Chavín de Huántar is well known for its ritual significance in the Andean world, however the nature of daily subsistence and temple offerings remains unclear. Though previous research has been carried out on the Chavín de Huántar botanical assemblages, much remains obfuscated due to poor preservation of carbonized remains. In order to obtain a more complete understanding of Formative subsistence, residues extracted from potsherds within Chavín contexts were analyzed for starch and phytoliths. Analysis revealed previously unidentified food resources including *Maniot esculenta* and *Dioscorea sp.*, as well as *Zea mays* which is uncommon in the Chavín de Huántar macrobotanical record.