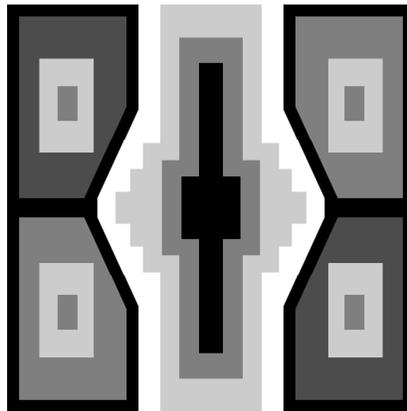


INSTITUTE
of
ANDEAN STUDIES

~ *Abstracts* ~



54th
Annual Meeting

JANUARY 10-11, 2014

BERKELEY, CALIFORNIA

Friday, January 10th

LARS FEHREN-SCHMITZ, *University of California, Santa Cruz*

A palaeogenetic investigation into the population history of Andean South America

Here, I present a study focusing on changes in the patterns of genetic diversity coincident with episodes of cultural and environmental change by analyzing DNA from human skeletal remains from several archaeological sites in the Central Andean area. The results verify that there are episodes in the Central Andean prehistory accompanied by population discontinuities. Moreover, we reveal that while populations from different geographic regions seem genetically distinct in the early periods, there is a process of homogenization in the Central Andes starting at least with the advent of the first Highland Empires in the Middle Horizon.

HENRY TANTALEAN, *Universidad Nacional San Marcos and Cotsen Institute*; CHARLES STANISH, *Cotsen Institute*; MICHIEL ZEGARRA, *Universidad Nacional San Marcos*; BEN NIGRA, *University of California, Los Angeles*; KELITA PEREZ, *Proyecto Arqueológico Chíncha*

Excavations in a Paracas monumental platform mound

We report on two seasons' excavations at the site of Cerro del Gentil, a Paracas mound in the upper Chíncha Valley. Cerro de Gentil was first reported by Wallace and investigated by Lumbreras and Canziani. We excavated one of three looted depressions on the mound. Our excavations reveal a series of sunken patios constructed of plastered and decorated walls. The patio was filled with stunning Paracas materials including textiles, pottery, gourds, cane objects, mummies, wooden and vegetal offerings. Along with survey data, this work better defines the Paracas occupation in the region and suggests that Chíncha was a regional political center in the later EH.

HENDRIK VAN GIJSEGHM, *Université de Montréal*; KEVIN J. VAUGHN, *Purdue University*

The uses and re-uses of Mina Primavera, Ingenio, Nasca: Place and diversity of meanings in political and ritual landscapes

We outline two millennia of changing uses of Mina Primavera, a human-made cavern that once was an important source of hematite for the people of the Nasca culture. Recent evidence has allowed documentation of ritual practices both in the context of mining and once the mine was no longer under exploitation, when it remained a place of symbolic significance in the landscape. We review this evidence in the context of Andean cosmology and ritual practice. Moreover we present evidence regarding the mine's more recent uses during the colonial period.

VERITY H. WHALEN, *Purdue University*; CORINA M. KELLNER, *Northern Arizona University*

New perspectives on regional cohesion in Late Nasca society

The end of the Early Intermediate Period (ca. AD 450-650) on the south coast of Peru marked a key historical moment of rapid social change, yet it remains poorly understood. In this paper, we evaluate the nature of regional cohesion in Late Nasca society based on recent research in the Nasca drainage and at the settlement of Cochuischo. Using data from architectural analysis, house excavations, and ceramic, lithic, mortuary, osteological, and isotopic analysis, we examine the traditional reconstruction of Late Nasca sociopolitical organization and identity, and reconsider some of the prior assumptions about Late Nasca society.

ANDRÉS LAGUENS, *Instituto de Antropología de Córdoba, Universidad Nacional de Córdoba, Argentina*

Llama and corn productive practices in the Ambato Valley, Southern Andes, Argentina

It is argued that around Xth century AD at the Ambato Valley, in the Southern Andes at Argentina, foodstuff productive practices included and articulated simultaneously corn cultivation and camelid breeding within one and the same space and infrastructure of corrals, terraces and water management devices, which were merged in a unique agro-pastoral practice of animal, vegetable, and fodder production. This contribution focuses on the analysis of their material evidence from different lines of inquiry with the aim of understanding the logic behind this economic practice as well as the underlying modes of relationships between human and llamas.

BENJAMIN VINING, *Wellesley College*; BILL SATURNO, *Boston University*

Multispectral satellite remote sensing of latent archaeological landscapes in the Chicama Valley, Peru

We describe anthrosols and archaeological features in the Chicama Valley, from the Moche – Chimu periods (ca. AD 300 – 1400) as evident in multispectral satellite remote sensing. Extensive sugarcane cultivation in Chicama affords the opportunity to analyze anthropogenic stress in vegetation landcover, at various life stages from emergence to senescence. Using extant archaeological survey data, we relate this to anthropogenic features, including prehispanic agricultural and settlement systems. Previously undocumented sites are also recorded. This approach helps identify latent archaeological features with low obtrusiveness in densely-vegetated agricultural areas, and complements conventional pedestrian survey approaches. In addition to obvious implications for archaeological analyses, we describe the legacy-effects of prehispanic land use on modern environmental systems.

LUCERO ARISTIZABAL, *Universidad de los Andes, Bogotá, Colombia*; MELANIE MILLER, *University of California, Berkeley*; SABRINA AGARWAL, *University of California, Berkeley*; CARL LANGEBAEK, *Universidad de los Andes, Bogotá, Colombia*

The Muisca of Colombia: Investigating social relationships through stable isotope studies

The Muisca culture of the Colombian Andes provides a unique opportunity to study complex interactions between social relationships and human diet during an important period of Colombian history. The excavation of the Muisca site of Tibanica, located in the Sabana de Bogotá, Colombia (1200 AD – 1550 AD), recovered over 500 human skeletal remains. We analyzed a sample of human skeletons (for bone collagen and apatite carbonate) for carbon, nitrogen, sulfur, and oxygen stable isotope data to investigate the potential roles that food may have played in the social relationships for the Muisca.

BRIAN BILLMAN, *MOCHE, Inc. and University of North Carolina-Chapel Hill*; DANA BARDOLPH, *University of California, Santa Barbara*; JEAN HUDSON, *University of Wisconsin-Milwaukee*; JESÚS BRICEÑO ROSARIO, *ICPAC and Ministerio de Cultura, Peru*

Chimu household economic and political strategies: A view from Cerro La Virgen, a rural community in the hinterland of Chan Chan

Situating the roles of hinterland communities is crucial to understanding the dynamic political and economic interactions of prehispanic complex societies. We report the excavation of household middens at Cerro La Virgen, a coastal settlement 6 km north of Chan Chan, the Chimu capital (AD 1000-1460). Through analysis of household economic activities including fishing, farming, and cotton cloth manufacture, we critically examine the role the community played in the provisioning of Chan Chan. Analysis of fish bone and shell also allowed us to associate specific strata with El Niño events, opening the possibility of examining household responses to those events.

ANDREW TURNER, *University of California, Riverside*

Ancestry and agricultural fertility in Moche Phase IV pottery

A series of poorly understood Moche Phase IV vessels portrays a deity referred to as “Wrinkle Face” engaged in sexual activity. Iconographic analysis of the vessels and comparison to funerary practices and the functions of huaca centers suggest that ancestor veneration was a probable basis of Moche religion, and Wrinkle Face was associated with regeneration and agricultural fertility. Huaca centers may have consolidated power among disparate lineage groups by asserting that Wrinkle Face was a progenitor of coastal peoples and by presenting a model for the workings of a vital cosmos in which human reproduction played a central role.

JANUSZ WOŁOSZYN, *Institute of Archaeology, Centre for Pre-Columbian Studies, University of Warsaw, Poland*

Same-sex relationships in Moche art – Sodomites, Siamese twins and scholars

Moche erotic vessels are often referred to in the literature on anthropology, gender studies and archeology of identity as being among the most important and reliable pieces of evidence of the presence of institutionalized same-sex sexual behavior in prehistoric societies. But are the references made to this example well-founded? The currently available material is exceptionally sparse; the majority of the “homosexual” sex pots have been eliminated from the world’s collections, and the hypotheses to date have mainly been based on far-fetched interpretations of the rare and highly controversial depictions and even modern forgeries. This paper describes the history of research into such representations, analyzes the shortcomings of the hypotheses contained in the literature, and finally presents examples that can actually be interpreted as images of same-sex relationships, which have intentionally or unintentionally been overlooked in research to date.

Saturday, January 11th

JOHN W. JANUSEK, *Vanderbilt University*; CHARLES R. ORTLOFF, *CFD Consultants International, Ltd.*

Water management at Tiwanaku: Revisiting the urban “moat” and its hydraulic features

Early research at the Middle Horizon site of Tiwanaku indicated that its core is at least partially surrounded by a circumferential hydraulic feature. Alan Kolata referred to this feature a ‘moat.’ Drawing on Posnansky, Kolata argues that it constituted a concentric boundary between sacred and secular areas of the city. We investigate the hydraulic purposes of the ‘moat,’ which we term Tiwanaku’s perimeter canal. We agree that the canal served to differentiate social and spatial segments of Tiwanaku, while arguing that it simultaneously served as the axial feature in an encompassing hydrological system that regulated rainy season flooding while enhancing dry season water input. It was also the axis of a hydraulic system that fed abundant intra-urban agropastoral systems, putting into critical relief traditional notions of prehistoric urbanism.

MAURICIO URIBE, *Universidad de Chile*; CAROLINA AGÜERO, *Instituto de Investigaciones Arqueológicas y Museo, Universidad Católica del Norte*

La cuestión Tiwanaku en San Pedro de Atacama (Norte de Chile): Nuevas impresiones a partir de estudios actuales de cerámica, textiles, y bioarqueología (436-990 d.C.)

En las últimas décadas los arqueólogos han tendido a examinar la problemática Tiwanaku principalmente en términos de acceso a recursos y/o complementariedad ecológica. Sin embargo, estas reconstrucciones adolecen de reduccionismo económico en perjuicio del entendimiento de las prácticas políticas e ideológicas que caracterizaron esta clase de fenómenos, preconcebidos como estados o imperios. Dentro de esta problemática, retomamos la supuesta relación entre Tiwanaku y San Pedro de Atacama, específicamente a través del caso de la emblemática cerámica negra pulida de los cementerios de Solcor 3 y Coyo Oriental, dos de los sitios que se consideran representativos del impacto altiplánico en la región. Este análisis en conjunto con los estudios textiles y la reciente data bioarqueológica, nos permiten cuestionar este vínculo y avanzar hacia la comprensión de una realidad social mucho más heterogénea y desigual. La cual, más que responder a una entidad política superior, se gestaría en una fuerte tensión entre los grupos dominantes y subordinados que habitaron los oasis del desierto de Atacama.

NICOLA SHARRATT, *American Museum of Natural History and the Bard Graduate Center*; MARK GOLITKO, *Field Museum of Natural History*; P. RYAN WILLIAMS, *Field Museum of Natural History*

Pottery production and ceramic circulation during the Middle Horizon: LA-ICP-MS analyses of Tiwanaku pottery from the Moquegua Valley, Perú

Production and circulation of goods were important to Tiwanaku state craft. However, studies of the movement of Tiwanaku vessels across the South Central Andes have largely relied on regional stylistic differences. In this paper, we compare compositional data derived from recent LA-ICP-MS analyses of Tiwanaku pottery from the Moquegua Valley with chemical data on locally available clays. Incorporating ceramics dating to the height of Tiwanaku authority and to the aftermath of state collapse (c.a. AD 1000), we examine the nature and extent of non-local pottery in the Moquegua province and the impact of collapse on long-distance exchange networks during the Middle Horizon.

GIANCARLO MARCONE, *Proyecto Qbapaq Ñan - Ministerio de Cultura, Peru*; KIRK E. COSTION, *Oglala Lakota College*; ULRIKE MATTHIES GREEN, *University of California, San Diego*

How did locals react to external political changes at the onset of the Middle Horizon? Investigating the interplay of feasting and ancestor veneration at Lote B, Lurín Valley, and among the Huaracane of the Middle Moquegua Valley

Indigenous elites employed numerous strategies in taking advantage of new political situations brought on by the expanding Middle Horizon states. In this paper we examine the interplay between commensal politics and mortuary practices wherein feasting increased when local elite priorities emphasized the enhancement of status. Similarly when local elites emphasized territorial claims in the face of colonial advancement, ancestor veneration intensified. Recent data from the Lurín and Moquegua valleys illustrate this pattern and point toward a favoring of public feasting accompanied by a decrease in the visibility of ancestor veneration by local populations at the onset of the Middle Horizon.

HEIDI KING, *The Metropolitan Museum of Art*

Corral Redondo: More evidence that the site was a huaca for the Wari and Inca

In the conclusion of my article *The Wari Feathered Panels from Corral Redondo, Churunga Valley: A re-examination of context* published in NP 2013:33 I suggested that the site may have been a huaca where the Wari and Inca performed rituals that may have included human sacrifice. A recent visit to the site, discussions with local people and archaeologists in Arequipa, and most importantly access to the roughly fifty Inca style objects—most of them miniatures—excavated at Corral Redondo by locals at the same time the Wari feather panels were unearthed, strengthen my argument.

DENNIS E. OGBURN, *University of North Carolina, Charlotte*

Labor tribute accounting encoded in a set of related khipu from Ica

Analysis of data records for three khipu from Ica reveals extraordinary mathematical and organizational connections between them, including exact addition of very large numbers between khipu and consistency of proportions and color coding across levels. These indicate an accounting hierarchy, which may be best explained as recording regional labor tribute assignments under broad categories, thus allowing us to read these khipu to a certain level. Additional evidence comes from the structures of the khipu, which can be shown to be consistent with Inca principles of hanan/urin division, decimal political organization, and fairness in division of labor assignments.

PETER FROST, *Independent scholar*; KEVIN FLOERKE, *Independent scholar*

Investigations of the Yanama River Valley: Contextualizing the Inca presence at Choquequirao

Choquequirao is a major palatial complex overlooking the Apurimac and Yanama Rivers in the Vilcabamba region of the Andes. Despite its status as a prominent Inca site, its context and place in a larger settlement pattern in the region are as yet poorly understood. Recent expeditions in the Yanama Valley to the north of Choquequirao have uncovered new and unexpected additions to the archaeological record in the area, and warrant further investigation and discussion in order to better understand this imperial site in the context of both local populations and the Vilcabamba as a whole.

SOFÍA CHACALTANA CORTEZ, *University of Illinois at Chicago, Pontificia Universidad Católica del Perú*; CLAUDIA NUÑEZ FLORES, *Pontificia Universidad Católica del Perú*

Para vivir, no hay que dejarlos morir: Tacahuay, an altiplanic enclave in coastal Colesuyo

In 2010, during excavations at the Late Intermediate Period/Late Horizon site of Tacahuay located in Coastal Colesuyo, members of Programa de Investigaciones Tacahuay found two chullpas, one disturbed, and one intact. The intact chullpa contained more than 20 individuals and a varied range of local, regional, and Inca style objects. When coupled with structures reminiscent of Inca spaces, the material culture found inside chullpas suggests that inhabitants of Tacahuay were embedded in complex local and regional interaction networks. Approaching the chullpas at Tacahuay as spaces of articulated interaction between the living and the dead allows us to examine collective memory and the role of material culture in this altiplanic enclave.

FERNANDO ASTETE VICTORIA, *Parque Arqueológico Nacional de Machu Picchu, Dirección Regional de Cultura, Cusco*; MARIUSZ ZIÓŁKOWSKI, *Centro de Estudios Precolombinos, Universidad de Varsovia, Polonia*; JACEK KOSCIUK, *Laboratory of 3D Scanning and Modelling, Institute of History of Architecture, Arts and Technology, Wrocław University of Technology*

El Mirador: New research at Machu Picchu

In a paper presented at the SEAC 2012 conference held at Ljubljana the authors have demonstrated that Intimachay in Machu Picchu, was an astronomical observatory far more complex and precise than it has been previously believed. It was most probably an “astronomical instrument”, intended for use by a narrow group of Inca priests-astronomers, mentioned in some sources. The present paper is dedicated to another, very interesting structure, called “El Mirador”, located on the slopes of Huayna Picchu. It was probably another “astronomical instrument”, for precise observations of a very narrow part of the Sky. A hypothesis concerning the practical function of this structure will be presented.

MATTHEW SAYRE, *University of South Dakota*

Domestic life and socioeconomic variability at Chavín

The monumental center at Chavín de Huántar has been the focus of much of the archaeological research conducted at the site. However, the La Banda domestic settlement area located across the Mosna River from the main temple complex is the subject of ongoing research and it provides the unique opportunity to analyze domestic life and socioeconomic differentiation. Here we find evidence of distinct architectural and ceramic use patterns. This evidence, combined with finds of a bone tool and marine shell production area, allow for initial insights into status difference amongst the Formative Period inhabitants of Chavín.

SATURDAY EVENING 8:15 (Open to the public)

JOHN W. RICK, *Stanford University*; ROSA M. RICK, *Stanford University*

Recent advances in the archaeology of the monumental center of Chavín de Huántar

The last two years of intensive fieldwork in the monumental center of Chavín de Huántar by an international and interdisciplinary team have clarified aspects of Chavín art, architecture, and chronology. In particular, the underground canals, previously thought to be primarily drains, have proven to also include water supply, and ritual function. We now know that the canal system was very extensive, with dense networks of canals underlying most recently explored areas of the site. The canals are proving to be exceptional contexts for the recovery of surprisingly dense pockets of very well-preserved associations of elaborate, sacrificed materials, including highly refined and decorated pottery assemblages. Similarly, the discovery of four new galleries within a relatively small area shows that these subterranean structures are found in a variety of contexts, and for the first time we have evidence of sequences of galleries in succeeding architectural layers.

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.

SARAH ABRAHAM, *Collasuyu Archaeological Research Institute*; CAMILA CAPRIATA, *Proyecto Qhapaq Ñan, Ministerio de Cultura, Peru*

Ground stone destruction and site abandonment at Pulapuco, Peru

Like most Late Horizon settlements in Peru, Pulapuco was abandoned when the Spanish arrived in the 16th century. Archaeological investigations at the site, located in southwestern Ayacucho, have yielded evidence of the purposeful destruction of material culture around the time of abandonment. In particular, analysis of ground stone revealed that many of these artifacts were intentionally destroyed just prior to abandonment. This poster will present data on the spatial distribution and breakage patterns of the intentionally broken ground stone and demonstrate how this often ignored artifact can shed light onto processes of site abandonment in the Andes.

CYRUS BANIKAZEMI, *University of North Carolina Greensboro*

Reconsidering residential activity using pXRF at Cerro Mejía, Moquegua, Peru

This study aims to analyze geochemical composition of archaeological floors, in order to detect activity areas in residential structures at the Wari-affiliated site of Cerro Mejía (600-1000 CE) in Moquegua, Peru. The use of portable X-Ray Fluorescence spectrometry (XRF) allows for the analysis of the elemental composition of soil samples. This data can then be used to compare chemical signatures to determine how the soil compositions correlate with predicted usage patterns of associated surfaces based on artifact distribution. This study examines a new line of evidence to enhance archaeological interpretations of activity areas and the use of space.

STEFANIE L. BAUTISTA, *Stanford University*; PATRICIA QUIÑONEZ CUSCANO, *Universidad Nacional Mayor de San Marcos*

Shell we eat? An analysis of the malacological remains from Uchuchuma, Aja Valley, Nasca – Peru

Recent excavations at Uchuchuma (200 B.C. - A.D. 1000), a prehispanic village located in the *chapiyunga* zone of the Aja Valley, Peru, have revealed evidence of malacological remains. Considering that Uchuchuma is quite a distance from the littoral zone (70km), the presence of these malacological remains suggests that the inhabitants of this village had, in some way, access to marine products. This poster synthesizes the analysis conducted on these remains in relation to their archaeological contexts. The results of this study contributes to the understanding of how marine resources were consumed and/or used in sites far away from the coast.

NICHOLE BETTENCOURT, RICHARD CONREY, WILLIAM NANAVATI, JOHN WOLF, MELISSA GOODMAN ELGAR, *Washington State University*

Fingerprinting Andean construction materials by X-ray fluorescence and laser diffraction

We present the results of experiments that tested the efficacy of X-ray Fluorescence (XRF) geochemistry and laser diffraction particle size analysis (PSA) protocols on archaeological sediments from the Taraco Archaeological Project, Titicaca Basin. We found that standard PSA protocols produced spurious particle size determinations on our soils, and present an alternative protocol here. We tested geochemical methods on Andean soils in quantitative experiments. Using Wavelength-Dispersive XRF experiments as baseline data, we calibrated a Bruker Tracer IV pXRF within acceptable uncertainty limits. We conclude that PSA and XRF fingerprinting can be successful for anthropogenic sediments in the Andes under experimentally determined conditions.

JEREMIAH CAMP, *Metropolitan State University of Denver*; CATHERINE GAITHER, *Metropolitan State University of Denver*; FERNANDO HERRERA, *Ministerio de Cultura, Peru*; EMILIE ARNDT, CHRISTIANE B. BAIGENT, JACK BISH, NICK REPKA, BRANDON THEIGE, LAUREN WALTHER, *Metropolitan State University of Denver Human Identification Laboratory*

Analysis of human remains from Tupac Amaru B: A working class perspective

Unlike the well-documented Inca culture, a great deal of research remains to be done on some of the lesser-known pre-Incan sites in Peru. In February 2013, salvage excavations at the site of Tupac Amaru B in Lima, Peru uncovered several human skeletal remains associated with the Yschma culture (ca. AD 1100-1400). Osteological analysis demonstrated evidence of biological stress, including vertebral anomalies, periostitis, anemia, and healed fractures. The nature and frequency of these lesions are consistent with a labor-intensive lifestyle. This poster will present the results of the analyses and discuss the biocultural significance within the framework of their archaeological context.

PATRICIA CHIRINOS OGATA, *University of California, Santa Barbara*; DANIEL D. SAUCEDO SEGAMI, *National Museum of Ethnology, Japan*; JOSÉ A. OCHATOMA CABRERA, *Pontificia Universidad Católica del Perú*

The Wari occupation of Cajamarca: Preliminary excavation results from the site of Yamobamba, Namora Valley, Peru

This poster summarizes the findings from the first season of research at Yamobamba, an extensive site in the Namora valley in Cajamarca. Preliminary excavations revealed a typical Wari formal layout, with square patios, peripheral galleries, and long narrow corridors. However, while the Wari secular elements are predominant at the site, small platform mounds and checkpoints suggest functional and cultural diversity. In addition, ceramic vessels found at Yamobamba correspond to local styles, while only limited numbers of non-local ceramics have been recovered. Together, the findings suggest a complex scenario of power relations between Wari and Cajamarca during the Middle Horizon.

CHRISTIANE CLADOS, *Institute of Andean Studies* (**Cancelled; not presented**)

From *Zackenstabdämon* to Wari Stinger Animal

Since Eduard Seler's article on Nasca iconography the term *Zackenstabdämon* refers to a mythical character that is among the best known of the Nazca pantheon. Especially the profile variety of the Jagged-Staff God shows a wide range of contexts that cannot be reduced to themes like (head-)hunting or warfare. In contrast to the frontal variety this specimen emerged much earlier than suggested, being already depicted in Necropolis tabbed borders of the final Early Intermediate Period 2. This essay will discuss its representation in context with Chicha consumption and battle scenes, as well as its role as a precursor of the Wari Stinger Animal.

JAMES M. CRANDALL, *University of Florida*

Spatial relationships between living and deceased communities of the Chachapoya

Within the Utcubamba Valley of northern Peru, ritual treatments of the dead were expressed through the construction of decorated sarcophagi or elaborate chullpas. The public display and representation of ancestors as reconstructed persons suggest that bodies maintained active relationships with communities of the living and were actively engaged as social agents. Chachapoya mortuary patterning indicates 1) The material reconstitution of Chachapoya mortuary bodies and spaces defined living communities' association to the ayllu, a practice that likely predates the Inka conquest 2) Viewshed analyses of these ancestral communities show that these spaces were segregated from the visual perception of living communities.

PABLO ANDRES DE LA VERA CRUZ CHÁVEZ, ANDREA LUCIA OCAMPO MACEDA, *Universidad Nacional de San Agustín de Arequipa, Peru* (**Cancelled; not presented**)

El maíz como vehículo de integración: Análisis desde el Valle del Chili al contexto regional

El maíz del valle del Chili, motivó la explotación de este ecosistema específico que favoreció la formación de diferentes maneras de relación entre los pueblos de la puna y los valles, muchas veces ajenos entre sí, para el beneficio económico mutuo en torno a este recurso.

En el valle del Chili la población local Churajón (S. XII – XV) admite la presencia e integración con sociedades altiplánicas como los Collas y las de los valles altos como Chuquibamba del valle del Colca, y otros pueblos; a lo largo de los periodos Medio, Tardío e inclusive el Colonial Temprano.

La administración Inca de esta región, estimuló este patrón previo, pero bajo un modelo centralizado y de dos maneras: uno, el control directo desde su capital Cuzco-Valle del Chili, encargando la producción a las poblaciones de Chuquibamba y Colca – Valle del Chili; y el segundo indirectamente a través de las poblaciones del Altiplano.

Existieron además de los mecanismos estatales incaicos, otras redes de obtención y producción del maíz, a través del desarrollo de nuevos vínculos y alianzas puna-valle. También resurgen formas de interacción ancestrales desde Tiwanaku, que coexisten con el modelo económico Inka de tributo, que estaba dirigido al consumo local.

Esta movilidad persistió en el periodo colonial temprano y la producción de maíz continúa fuertemente desarrollada.

La reevaluación de las evidencias y colecciones de excavaciones arqueológicas hechas en el valle del Chili desde los años 1960, sumadas a la búsqueda reciente de información documental en los archivos de Arequipa, nos permiten sostener el presente argumento.

MATTHEW J. EDWARDS, *HDR Environmental, Operations and Construction, Inc.*; PATRICIA QUIÑONEZ CUZCANO, *Proyecto de Caminos Antiguos en los Andes Centro-Sur*; WESTON MCCOOL, *University of California, Santa Barbara*

Wari and Inca roads of the Pampa Galeras: Results of the South Central Andes Ancient Roads Project

It has long been suspected that portions of the Inca road network were first built by the Wari (A.D. 650–1000). Fieldwork completed in the Leoncio Prado district of Lucanas in southern Ayacucho during the 2013 field season of the South Central Andes Ancient Roads Project yielded interesting new evidence that this was the case. The project resulted in the documentation of four interconnected road segments that connect the tributary valleys of the Nasca region with the high grasslands of the Pampa Galeras. This poster reports these findings and presents the evidence for a relative chronology of the identified routes.

KALENA GIESSLER, *University of Southern California*

Examining obsidian provenance and procurement: a pXRF analysis of obsidian artifacts found at Chavín de Huántar, Peru

The site of Chavín de Huántar contains many artifacts and materials, such as obsidian, that suggest that residents of Chavín engaged in long-distance trade relationships. After analyzing 616 obsidian artifacts found during the 2012 field season at Chavín using portable X-Ray fluorescence spectrometry (pXRF) as a sourcing technique, the obsidian artifacts appeared to include two distinct sources; 95.5% matched the Quispisisa source, while the remaining 4.5% matched the Alca source. Further analysis into the context, form, and identifying elements of the obsidian will allow for a more complex understanding of the use of this material at Chavín.

JASON KJOLSING, GIACOMO GAGGIO, ERIN RODRIGUEZ, PAUL S. GOLDSTEIN, *University of California, San Diego*

Color-coded pathways and restricted spaces: Analysis of the use of color and surface textures in the central altar complex at the Omo Tiwanaku temple (M10)

Excavations at the Tiwanaku ceremonial structure of Omo M10, in Moquegua, Peru uncovered a room complex housing a U-shaped altar that overlooked the temple's sunken court. Using photographs, soil and micromorphology analysis, and excavation data, this poster reconstructs the temple core's symbolic color-coded pathways. The complex's colorful red and green entryway suggests it was an extension of the similarly-painted sunken court. The inner U-shaped structure lacks this color scheme, instead surrounded by organic floor matting. If movement of temple pilgrims was demarcated by a painted pathway, temple-goers would have been denied approaching this inner structure and its protected floor.

LAURA MARSH, *Stanford University*

Sampling paste for thin section: The initial steps of petrographic research in archaeological ceramics at Chavín de Huántar

Thin-section analysis yields information about the manufacture and origin of archaeological ceramics, and careful selection of sherds plays a large role in determining the quality of the analysis. At the monumental center of Chavín de Huántar, Peru, choosing key contexts for macroscopic analysis, analyzing the sherds for form, decoration, and other basic attributes, and photographing and grouping pastes with a digital USB microscope, were the first steps of componential ceramic analysis that will be followed up with thin-section analysis of certain sherds, in order to learn more about the origins and connections of ceramic material at the site.

ANDREW RODDICK, *McMaster University*

“Somos olleros”: A preliminary study of a modern potting community in the Southern Lake Titicaca Basin

In 1987 Karen Mohr Chavez reported on a modern potting settlement between Lake Titicaca and Cuzco. Andeanists have since developed a rich scholarship on specialized potting villages, yet strangely they have neglected the Southern Lake Titicaca Basin. I report on recent work of the Proyecto Olleros Titicaca (POT) in Chijipata Alta. This community of specialized olleros, located between La Paz and Copacabana, produce standardized forms and exchange them throughout the altiplano. I discuss the material traces (in ceramics but also on the landscape) that are produced by potters’ choices, and highlight our current ethnographic, historic and archaeological avenues of research.

INGE R. SCHJELLERUP, *National Museum of Denmark*

Posic, a pre-Hispanic ritual centre, Huallaga, Peru, 500–1500 AD

A Danish-Peruvian archaeological expedition into the Ceja de Montaña in North-eastern Peru July 2013 has revealed unknown ruins at Mashuayacu river with monoliths and an extensive collection of twenty seven rocks with petroglyphs. Extensive building complexes with ritual installations and other structures from the Chachapoyas culture and subsequent from the Incas are situated on both sides of the river. The Inca site is situated near former procession ramps with traditional Inca architecture. Uniquely are preserved two Intihuatanas. Overall the site covers a comprehensive area of at least 300 x 1200 m in a dense rainforest used for centuries for religious and political assemblies. It is thus one mayor settlement in a hitherto largely unknown territory provisionally dated to the 6th - 16th century.

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

Taypi, Why the middle matters: Duality and mediating space in Tiwanaku monumental architecture

Taypi, the mediating space in which two complementary sides come together, has represented an integrative concept in Andean society. Through our re-interpretation of the uniquely well-preserved Tiwanaku monumental structure at Omo M10 we argue that action in the Tiwanaku ritual landscape, while reinforcing a dual model of ritual and society, also featured a central axis and mediating pathways and spaces. Focusing on the middle court portion of the structure, we will analyze access patterns, architectural features and artifactual evidence to illustrate how ritual movement in the middle court interwove a central and two lateral pathways through this mediating space.

SCOTT C. SMITH, *Franklin & Marshall College*

Tiwanaku political strategy in the Upper Desaguadero Valley, Bolivia

This poster synthesizes recent research in the Upper Desaguadero Valley of Bolivia to explore the timing, extent, and nature of Tiwanaku expansion into this region. Data from the Iruhito, Khonkho Wankane, and the recently surveyed site of Cerro Chijcha are presented. I suggest that incorporation of this region was selective and focused on establishing relationships with key sites along the river. Access to river may have been important as a route of movement and interaction between the Titicaca basin to the north and the central *Altiplano*.

MATTHEW C. VELASCO, *Vanderbilt University*; DAVID RODRÍGUEZ SOTOMAYOR, *Pontificia Universidad Católica del Perú*

Tombs of Yuraq Qaqa: Architecture and development of a Collagua cemetery in the Colca Valley, Peru

Studies of above-ground funerary structures (chullpas) in the Andes have predominantly focused on inter-regional and inter-site architectural variation as a proxy for ethnic and social divisions.

Complimenting these perspectives, we analyze the complex intra-site organization of chullpa architecture within a single cemetery in the central Colca valley. Composed of multiple horizontally and vertically agglutinated funerary chambers, Yuraq Qaqa is the result of several episodes of architectural expansion and landscape modification. By mapping architectural variables such as masonry style against a proposed construction sequence, we explore how the site transformed over the long-term and with the arrival of the Inkas.

KENNETH WRIGHT, RUTH WRIGHT, *Wright Paleohydrological Institute*; ARMINDA MARGUERITE GIBAJA OVIEDO, *Ministerio de Cultura, Peru*

Inkamisana cliff carvings

On the cliffs above the Ollantaytambo, Peru, water temple of Inkamisana, the Inka carved elaborate patterns. The carvings stretch over a cliff length of about 125 meters, running north to south, and have a direct relationship to the water temple. A poster will illustrate the various types of carvings and describe what we learned about them in our 2010-2012 research at Ollantaytambo. Special features include flat vertical areas that were gold plated, niches, nubs, channels and a paqchu (right). In 2012, we assigned two of our long-time local archaeologist colleagues with documentation of the cliff carvings. Ives Bejar Mendoza and Hugo Hanco Halire provided meticulous documentation of the carvings with detailed measurements and scaled sketches.