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Archaeology & Ethnohistory

October 20-21, 2018

BINGHAMTON
UNIVERSITY

HARPUR COLLEGE OF
ARTS AND SCIENCES

FRIDAY OCTOBER 19, 2018

Location: The Shop Restaurant - 219 Washington Street, Binghamton, NY

7:00-9:00 PM Welcome meet and greet (cash bar) in downtown Binghamton

SATURDAY OCTOBER 20, 2018

Location: Binghamton University - 4400 Vestal Parkway East, Science 1, Room 149

- 8:30-9:00 **Registration, coffee, and pastries**
Chair: HALONA YOUNG-WOLFE (Binghamton University)
- 9:00-9:20 **North Coast Political Organization from Village to Chimor**
PATRICIA NETHERLY (Vanderbilt University)
- 9:20-9:40 **Stable Isotope Analysis of Macrobotanical Remains from the Jequetepeque Valley: Evidence for Agricultural Intensification**
PAUL SZPAK (Trent University); KATHERINE CHIOU (University of Alabama)
- 9:40-10:00 **Living Without Plenty in Late Moche Times: "Low" Cuisine and Food Insecurity in the Hillside Settlement of Cerro Chepén, Jequetepeque Valley**
KATHERINE CHIOU (University of Alabama)
- 10:00-10:20 **A View from the Pampas: Re-evaluating Agricultural Strategies and Irrigation Water Management in Chan Chan's Hinterlands**
DANA BARDOLPH (Cornell University); BRIAN BILLMAN (University of North Carolina, Chapel Hill); JESÚS BRICEÑO ROSARIO (Ministerio de Cultura, Peru)
- 10:20-10:35 **Discussion**
- 10:35-10:45 **Coffee break**
Chair: MARIA FERNANDA BOZA CUADROS (Syracuse University)
- 10:45-11:05 **Collectivization at a Coastal Ayllu: New Excavations at the Late Middle Horizon Site of Tecapa**
STEPHEN BERQUIST (University of Toronto)
- 11:05-11:25 **The Petroglyphs of Catazho: Indigenous Identity, Cultural Heritage, and the Archaeology of Prehistoric Landscapes and Networks in the Ecuadorian Landscape**
BARRETT BRENTON (Binghamton University)
- 11:25-11:45 **Becoming Complex?: Understanding Contextual Developments of Monumentality in Late Period, Northern Ecuador**
ESTANISLAO PAZMINO (FLACSO University)

- 11:45-12:05 **Regional Survey and Ancient Disaster in the Río Grande in the Chone, North-Central Manabí, Ecuador**
COREY HERRMANN (Yale University)
- 12:05-12:20 **Discussion**
- 12:20-2:10 **Lunch and Poster Session**
Chair: BRITTANY FULLEN (Binghamton University)
- 2:10-2:30 **Comparing the Nasca Lines with North American Stone Features**
DAVID JOHNSON
- 2:30-2:50 **What's the Black on Your Pot? The Production of Cupisnique Rojo Grafitado Bottles**
ISABELLE DRUC (University of Wisconsin - Madison & The Field Museum); SILVANA BERTOLINO; KINYA INOKUCHI; FRANCISCO RUMICHE; JOHN FOURNELLE
- 2:50-3:10 **Clays of Time and Places: Instrumental Neutron Activation Analysis (INAA) of Huarpa and Wari Pottery from the Ayacucho Valley**
PATRICIA KNOBLOCH (Institute of Andean Studies); MICHAEL D. GLASCOCK; BRANDI LEE MACDONALD
- 3:10-3:25 **Discussion**
- 3:25-3:35 **Coffee Break**
Chair: BRIEANNA LANGLIE (Binghamton University)
- 3:35-3:55 **Those Allowed to Speak: Senses Among the Wari**
LOUISE DEGLIN (UCLA)
- 3:55-4:17 **Huari Urban Prehistory: 2017 & 2018 Excavations**
WILLIAM ISBELL (Binghamton University); ISMAEL PEREZ C. (Universidad Nacional de San Cristóbal de Huamanga);
BARBARA WOLFF (Montgomery College)
- 4:17-4:30 **Discussion**
- 4:30-4:35 **Business Meeting**
- 4:35-4:50 **Coffee Break**
- 4:50-6:00 **Keynote Presentation:**
An Interdisciplinary Archaeological Project on the Copacabana Peninsula
PROFESSOR SERGIO JORGE CHÁVEZ
(Central Michigan University)
- 6:00-7:00 **Posters Continued and Reception**
- 7:00- **Dinner at Drs. Bill Isbell and Judy Siggins' house, all are welcome**

SUNDAY OCTOBER 21, 2018

Location: Binghamton University 4400 Vestal Parkway East, Science 1, Room 149

- 8:30-9:00 **Coffee and pastries**

- Chair: MARIA SMITH (Syracuse University)
- 9:00-9:20 **Winds of Trade: Technological Modernity in Nineteenth-Century Arequipa's Maritime Landscapes (1821-1879)**
MARIA FERNANDA BOZA CUADROS (Syracuse University)
- 9:20-9:40 **Lithic Technology Across the Forager-Farmer Transition in the Altiplano of Peru**
NATHANIEL KITCHEL (Dartmouth College); RANDALL HAAS (University of California Davis); MARK ALDENDERFER (University of California Merced)
- 9:40-10:00 **Last Stop Before the Lowlands: Recent Archaeological Research in the Eastern Andes of Tarija, Bolivia**
JOSÉ CAPRILES (Pennsylvania State University); SERGIO CALLA MALDONADO; PATRICK DRUGGAN; SARA JUENGST; FREDDY PAREDES RIOS
- 10:00-10:15 **Discussion**
- 10:15-10:25 **Coffee Break**
Chair: LAUREN KOHUT (Bowdoin College)
- 10:25-11:45 **Pre-Hispanic Pet Parrots in Peru? Andean-Amazonian Faunal Exchange**
ZACHARY R.A. CRITCHLEY (Binghamton University)
- 10:45-11:05 **The Last Neolithic Revolution? The LIP Expansion into the Eastern Andean Slopes**
DARRYL WILKINSON (University of Cambridge)
- 11:05-11:25 **Alternative Concepts Behind the Term "Pukara"**
STANISLAVA CHAVEZ (Wayne State University)
- 11:25-11:45 **Burying the Dead at Ayawiri: Excavation and Analysis of Human Skeletal Remains from an Andean Hilltop Fort (Puno, Peru)**
MATTHEW VELASCO (Cornell University)
- 11:45-12:00 **Discussion**
- 12:00 PM **Lunch**

POSTERS

Intergroup Interaction in the Río Carabamba Valley, Peru
AMEDEO SGHINOLFI (Western University)

Investigating the Soil Temperature Properties of Terraced Landscapes in Chachapoyas, Peru
DANIEL PLEKHOV; PARKER VANVALKENBURGH (Brown University)

Lifestyles of the Rich and Religious: The Reification of Casta through Consumption at Cusco's Convento de Santa Catalina de Siena

MARIA SMITH (Syracuse University)

Santa Catalina de Salinas: Emergence and Continuity of a Salt Making Community in the Northern Ecuadorian Highlands

JORGE FLORES (Binghamton University)

Abstracts are listed in alphabetical order by the first author's last name. Please cross-reference the schedule for the time that each presentation will take place.

Dana Bardolph, Brian Billman

A View from the Pampas: Re-evaluating Agricultural Strategies and Irrigation Water Management in Chan Chan's Hinterland

This presentation explores agricultural strategies and the role of plant foodways in the social, political, and economic organization of Cerro la Virgen, a Chimú site (1000-1460 CE) in the hinterland of Chan Chan. Situated at the terminus of a vast complex of relic fields in the Moche Valley of north coastal of Peru, the site is located only six kilometers from Chan Chan, the capital of the Chimú empire and an urban center with a population of 20,000 to 50,000 people. One of the largest settlements in the Moche Valley and the only significant settlement on the three-pampa area (Pampas Esperanza, Milagro, and Huanchaco), Cerro La Virgen comprised a diverse community of craftspeople, farmers, and fisherfolk during the Late Intermediate Period (1000-1470 CE) and Late Horizon (1470-1532 CE). Previous scholars have characterized the site as a community whose primary purpose was the provisioning of the population of Chan Chan and the political economy of the Chimú empire, employing *parcialidad* (occupational specialization) or *mit'a* (corvée labor) ethnohistoric models. Recent paleoethnobotanical investigations of assemblages from different household contexts afford a closer look at the diverse economic strategies of the site's inhabitants, which we contextualize within broader histories of labor, exchange, and social interaction chronicled during the reign of the Chimú empire. We consider issues both methodological and theoretical, including (1) the extraordinary preservation of organic remains at the site, which allows us to evaluate the importance of tree fruits and other resources that do not often preserve in charred macrobotanical assemblages; (2) the role of plants within a broader subsistence economy that indicates wider relations of interregional interaction and exchange; and (3) a questioning of the assumption that the community of Cerro la Virgen functioned primarily as a state-controlled agricultural enterprise.

Stephen Berquist

Collectivization at a Coastal Ayllu: New Excavations at the Late Middle Horizon Site of Tecapa

Initial assessments of the coastal site of Tecapa suggested a Chimú-Inka administrative center, a hypothesis generated primarily by the strong resemblance of two compounds to the Inka *kancha*, the basic unit of Inka settlement planning. The standing architectural remains comprised what appeared to be niched and gabled gallery rooms arranged around a square patio. Four seasons of mapping and excavation have allowed me to confirm that these compounds conform to this architectural pattern, and to demonstrate that there are in fact four such compounds. However, excavations have also revealed that the site dates to the post-Moche Middle Horizon and was likely constructed in the early ninth century, contemporaneous with the final "Transicional" phases of the nearby Late Moche Huaca Colorada. Ceramic assemblages suggest an alliance between local communities and at least one group from the nearby Cajamarca highlands. Other architectural revelations include features that closely resemble *audiencias* and a possible *chullpa*.

Social relations are of course generated and negotiated in part through the production of space. I argue that the best explanation for the strong resemblance between Tecapa and the later Inka sites is that the architectonics of Tecapa anticipate the social organization that formed the backbone of Tawantinsuyu - the *ayllu*. Although truly designating Tecapa as an "ayllu" is a fraught proposition, the architecture is

strongly suggestive of the nested corporate groups that would later come to characterize this relational mode. Similar architecture is notable throughout the central and northern highlands, proliferating rapidly at the end of the Middle Horizon through the Late Intermediate Period, though few examples have been noted on the coast. Of course, this trend correlates spatially and temporally with the transition towards

open sepulchers noted by Isbell in 1997. This connection is borne out on the coast as well, by an apparent tower-tomb at Tecapa and by the open-sepulcher style tombs at Moro dating to this same period. Strikingly, the possible chullpa-style tomb is closely associated with the audiencia structures, as well as what appears to be a chicha-production facility. Many ceramics share key features with later Sican artifacts while at the same time maintaining distinct local forms. Tecapa thus sheds light on a number of important social developments that took shape in the Middle Horizon and after. At the same time, it presents a unique moment in the history of the North Coast of Peru that was later erased by Sican hegemony and Chimú conquest.

Maria Fernanda Boza Cuadros

Winds of Trade, Waves of Change: Technological Modernity in Nineteenth-Century Arequipa's Maritime Landscapes (1821-1879)

Following independence in 1821, the new Republic of Peru underwent a maritime turn in the orientation of its political economy. While regional economies remained organized around cities and small rural landholdings, the Pacific beaches and coves became more vibrant and more cosmopolitan. This was particularly true in Arequipa, where post-independence recovery was quicker than the rest of the country, and the city's economic elites turned their gaze to the coast early on. In order to make life and trade possible by the Pacific, it was necessary to provide the new ports with reliable supply avenues of potable water and food and to bridge the gaps between land and vessels at sea. Furthermore, as heirs to the inland-city settlement pattern of the Spanish colonial Andes, the city's traders also had to overcome the challenging sixty-mile journey to the sea. In this paper, I examine how nineteenth-century technologies associated with maritime-based trade shaped the coast of Arequipa between independence and the War of the Pacific, from steam navigation to railroads. As I demonstrate here, the adoption of new technologies did not preclude the abandonment of indigenous technologies and colonial-era networks even in the face of the century's foremost developments. Similarly, destitution and marginalization did not hinder capitalist advance on the coast. On the contrary, both created conditions that facilitated the action of capital on Arequipa's shores.

Barrett Brenton

The Petroglyphs of Catazho: Indigenous Identity, Cultural Heritage, and the Archaeology of Prehistoric Landscapes and Networks in the Ecuadorian Amazon

Located in southeastern Ecuador in the southern region of the province of Morano Santiago is an intense complex of over 120 boulders that contain nearly 900 petroglyphic images. They include a variety of anthropomorphic, zoomorphic and geometric designs. The boulders are scattered along a slope from Catazho Mountain along the Catazho River Basin down to the confluence with the Indanza River. Before the work of Delgado and colleagues in 2010, no systematic archaeological inventory of the petroglyphs had been done on this site (an area of ~7.5 km²). To date, there is still no archaeological fieldwork that has been completed in the region to establish either a chronology or a specific cultural affiliation with the petroglyphs. This paper will discuss investigations of this site since 2012 as part of an ethnographic and community development fieldwork course with indigenous Shuar communities in the region. Three

specific themes will be addressed: current and historic Shuar identity and mythology of Catazho, the petroglyphs, and related cultural landscapes, protection and interpretation of the site by a local community-based organization seeking to promote cultural heritage tourism, and an analysis of how the geographic positioning of Catazho and the petroglyphs would have linked the Pacific coast to the sierra and both upland and lowland Amazonia. This last association provides insights into the landscape archaeology of prehistoric networks tied to the Ecuadorian Amazon and interpretations of the diverse iconography of the petroglyphs. Finally, a call for additional research, action and cooperation is made in order to use micro remote sensing technology to further document potentially hundreds of additional petroglyphic images that are no longer visible on the boulders in ambient light, promote strategies for best

protecting this important National Heritage site from human-induced deterioration and vandalism, and establish the area as a World Heritage Site for future generations.

Jose Capriles, Sergio Calla Maldonado, Patrick Druggan, Sara Juengst, Freddy Paredes Rios

Last Stop before the Lowlands: Recent Archaeological Research in the Eastern Andes of Tarija, Bolivia

Located in southern Bolivia, the inter-Andean dry valleys of Tarija are located between the Altiplano highlands to the west and the Chaco lowlands to the east. While broadly recognized as one of the most important late Pleistocene megafaunal fossil localities in South America, unfortunately, Tarija has merited very limited systematic archaeological research. In this paper we present the results of recent survey, excavations, and analysis carried out in Tarija. The focus of our work was on identifying and dating the earliest human occupations in the region. As a result, we documented a wide range of sites situated in different ecosystems. While we documented a few suggestive megafauna fossil localities containing stone tools and several potentially very old rock art locations, our most significant findings correspond to Late Archaic Period open-air sites situated in Sama, an upland plateau. Well-preserved burials, trash pits, and other features in association with high-density dispersions of stone tools prompt for more research that explores the subsistence, mobility, and technological organization of post-Pleistocene inter-Andean foragers. Finally, AMS radiocarbon dates and artifact analyses allow discussing the long-term trajectory of human occupations in the Tarija basin and their relation to contemporary cultural developments in the Atacama Desert of northern Chile and highlands and yungas of northwestern Argentina.

Stanislava Chavez

Alternative concepts behind the term “pukara”

Today, the term “pukara” is understood in English as “fortress,” following the translation of this word in sixteenth and seventeenth centuries Quechua-Spanish dictionaries as “fortaleza.” Notwithstanding, I will argue in my presentation that, as a result of the clash of civilizations and worldviews in early Colonial time, alternative meanings of this term have been overlooked by non native Quechua speakers.

In order to uncover these hidden meanings, I will examine four lines of evidence. First, I will look at the archaeological aspects and geographic characteristics of places associated with the “pukara” toponymy. Second, I will examine the ethnohistoric evidence regarding contexts of the word “pukara.” Then, I will discuss the meanings of this term in modern Quechua language, based on my interviews of native Quechua speakers in and near Cuzco. Finally, I will present ethnographic evidence regarding usage of the term “pukara” in religious ceremonies of contemporary Quechua-speaking communities in Bolivia and southern Peru.

Katherine Chiou

Living without Plenty in Late Moche Times: “Low” Cuisine and Food Insecurity in the Hillside Settlement of Cerro Chépén, Jequetepeque Valley

“Low,” or everyday, cuisine—in other words, the foods tied to homestyle cooking—is part and parcel of people’s understandings of self and their place in the world. In the past, at home, by the hearth, meals were prepared and passed down from generation to generation, situating individuals in the world through memory, continuity, and tradition. Marginal, rural, daily, and common foodways are intimately connected to nostalgia and deep emotion in the popular imagination and act as inspiration and/or as a foil for the crafting of meaning in haute or “high” cuisine. Memories tied to sustenance and hardship can be particularly poignant, quietly shaping and modifying the food-related practices of cultures over the *longue durée*. The banality of the day-to-day culinary routine is thus a worthy topic of archaeological inquiry with the potential to unveil subtle details about past social relations and lived experiences.

In this paper, I discuss the daily lives and foodways of the residents of a commoner household (Household 1) located on the northern slope of Chepén Hill using GIS visualizations of botanical and faunal data. The site of Cerro Chepén is a fortified settlement located on top of a hill chain in the Jequetepeque Valley of Peru. Cerro Chepén was built and occupied briefly during the Late Moche period (ca. AD 600-800) as part of a larger, ephemeral settlement phenomenon characterized by the construction of walled-in hillside and hilltop settlements that prominently feature defensible works. This preoccupation with security is indicative of heightened political tensions and conflict that likely stemmed from two major episodes of prolonged drought (AD 570-620 and AD 650-730). In this desertic region of Peru, where political entities were built around systems of extensive irrigation networks, water was—and remains—life. Drought conditions, consequently, can be devastating, fostering social discord. By employing a microhistorical approach to past foodways, this research provides insight into the impacts of these disruptive factors on the everyday lives of the Moche lower classes in the latter part of the Moche sequence.

Zachary R.A. Critchley

Pre-Hispanic Pet Parrots in Peru? Andean-Amazonian Faunal Exchange

There is a long-documented tradition of exotic fauna showing up in areas of the Andes where they do not belong, from the caimans of Chavinoid art to mummified macaws at Pachacamac and Atahualpa's fabled menagerie. Why do these animals keep appearing hundreds of kilometers and more outside of their home ranges? This paper will examine the Andean desire for animals from the other side of the mountains and explore the significance that exotic fauna may have held in Andean art and tradition, and which ones served as symbols of power, hunting companions, or even beloved pets.

Louise Deglin

Those Allowed to Speak: Senses Among the Wari

Gary Urton's study of the body in Chavin art (1996) has provided the field of Andean studies with a new lens through which to perceive animal and human bodies in the pre-Inka period. In his article, Urton insists on locales of connection (e.g. joints) and interaction (e.g. orifices) that compose the bodies in Chavin art, such as articulations or canines. Those depictions, in his view, reflect the importance of the

relation of the body as the sum of different parts, perpetually interacting with its environment. In Quechua, eyes, ears and nose are considered to be t'uqu, "windows" of the body, whereas the mouth belongs to a different lexical category.

The ceramic material excavated at the Wari site of Conchopata by Dr. William H. Isbell and colleagues has yielded a large number of human faces, currently under study. Despite their wide array of styles, those portraits display consistent features: an insistence on the eyes, nose and ears, and a lack of emphasis on the mouth. While nostrils are carefully noted and sometimes even pierced, the mouth is barely sketched and sometimes not even depicted on the Wari human faces. Overall, it seems that the senses of the Wari people portrayed in the art were limited to those taking in information (sight, smell, hearing), whereas those implying an act of exchange with the environment, especially via the mouth (eating, speaking), were restricted to specific categories of beings.

Indeed, in contrast with the smile-less hieratic human faces, Wari supernatural beings display threatening fangs and skulls smile in a large grin. Surprisingly, two unordinary human faces with exaggerated features found in Conchopata also grimace. In a world where ancestors communicate with the livings and supernatural beings devour and protect them, speaking must have been perceived as the prerogative of a few. Humor, be it for ritual or leisure, might also have been the role of a few in Wari society."

Isabelle Druc, Silvana Bertolino, Kinya Inokuchi, Francisco Rumiche, John Fournelle

What's the black on your pot? The production of Cupisnique Rojo grafitado bottles

Cupisnique Rojo grafitado bottles appeared in small numbers in different sites of north-central Peru during the first millennium B.C. Stylistic studies by Burtenshaw-Zumstein (2014) showed they were formed differently than other Cupisnique bottles and presented a style by itself. Petrographic and portable digital microscopy of their pastes from samples from Kuntur Wasi in the Cajamarca highlands, Puemape on the north coast, and the Chicama Valley, and SEM-EDS analysis of the pigments of eight of these vessels, allow us to propose a production scheme that had not yet been highlighted for Formative Andean cultures based on compositional analysis. Mineral composition and granulometry point to a shared technology, using sources derived from granodioritic and dioritic outcrops in the northern coastal batholith. The potters probably worked independently, producing vessels for ceremonial and burial purposes. The hallmark of these vessels is the shiny black decorations over a highly polished red surface, but not all black is graphite. In the case of the Puemape bottle, the potter who produced this vessel used manganese. However, the closest manganese sources are in the highlands of Cajamarca. How can we explain this? Was this a lone production or a rogue producer?

Burtenshaw-Zumstein, J. 2014. Cupisnique, Tembladera, Chongoyape, Chavin? A Typology of Ceramic Styles from Formative Period Northern Peru 1800-200 BC. PhD Dissertation. University of East Anglia, UK.

Jorge Flores

POSTER: *Santa Catalina de Salinas: Emergence and Continuity of a Salt Making Community in the Northern Ecuadorian Highlands*

Salt has been considered an important material that is central to the social, political, economic, and biological aspects of human life. It has played a pivotal role throughout world history as an essential dietary supplement, as a commodity for specialized production and exchange, and as the economic foundation upon which some polities emerged throughout complex commercial enterprises during the

prehistoric and colonial times. In that regard, numerous researchers identify salt access as central to the development of complex societies. However, salt production during the Late pre-Hispanic period (A.D. 500-1534) in the northern Ecuadorian Andes has been archaeologically unexplored. Nevertheless, some ethnohistorical accounts states that salt constituted a fundamental pillar of the pre-Hispanic and colonial economic procurement in the Chota-Mira valley, and the emergence, growth, and continuity of the community of Santa Catalina de Salinas. This poster shows material evidences and general information of salt-making as an important economic activity of this community.

Corey Hermann

Regional Survey and Ancient Disaster in the Río Grande de Chone, North-Central Manabí, Ecuador

While Ecuadorian archaeology has begun to make great strides in understanding certain periods and cultures of its pre-Columbian past, others have remained stubbornly opaque. One such period, the Ecuadorian Late Formative (1300-300 BC), is characterized by the Chorrera culture, known by its stunning ceramic wares and figurative art recovered mostly from looted contexts. Unfortunately, archaeological fieldwork investigating Chorrera lifeways (and contextualizing its art) has been stymied in recent decades, leaving this millennium of Ecuadorian prehistory largely to diffusionist or processual interpretive frameworks of the mid-twentieth century. Basic culture-historical information such as the layout of Chorrera communities, activity areas, and homes remains almost entirely unknown.

Fieldwork conducted under the Proyecto Arqueológico-Paleoetnobotánico Río Jama (PAPRJ) by James Zeidler and Deborah Pearsall has provided a glimpse into Chorrera lifeways in northern Manabí, alongside its predecessors of Valdivia 8 and its descendants of the Jama-Coaque cultures (Zeidler and

Pearsall 1994). This investigation revealed that at three points in Jama's prehistory, volcanic eruptions from the Quito Basin blanketed the valley in many centimeters of tephra, causing ecological collapse and forcing Jama's residents to abandon their settlements (Zeidler and Isaacson 2003). The second of these tephras, an eruption from Pululahua dated to ~467 BC (Zeidler 2016), forced Chorrera people to abandon both valley-bottom irrigated and upland sites for several centuries. With an eye toward anthropological investigations discussing the construction of ancient and modern disasters, especially volcanic eruptions (Bawden and Reycraft 2000; Cooper and Sheets 2012; Hoffman and Oliver-Smith 2002), coastal Ecuadorian prehistory provides a robust case study for examining trajectories of social complexity which were both distinct from and linked with contemporary developments in the central Andes (Burger 2003, Mesía 2014), and which were unevenly punctuated by the experience of natural disaster (Zeidler 2016). In the summer of 2018, a pilot project was undertaken some forty kilometers away from the Jama valley, in the nearby drainage of the Río Grande de Chone. This pilot project undertook a brief regional survey of accessible portions of the drainage, within a roughly 350km² area and including the adjacent Tarugo and Canuto rivers. This pilot project's aims were twofold: the identification of suitably intact and accessible archaeological sites of Late Formative sites for excavation in future field seasons by the project; and the establishment of positive relationships with local stakeholders and landowners in the valley to develop the project under a framework of community archaeology.

The present paper elaborates some of the results of this pilot project, which identified nearly fifty archaeological sites with only a fraction of the valley intensively surveyed. In addition to numerous sites of Valdivia 8 (Piquigua), Chorrera (Tabuchila), Bahía, Jama-Coaque and Milagro-Quevedo cultures identified by surface ceramics and shovel testing, monumental landscape alterations and anthropogenic dark earths (Peterson et al. 2001, Arroyo-Kalin 2010) have been identified. Understanding the impact of Pululahua on the Chone region's prehistory, and comparing it to the Jama case, will be the focus of future dissertation research.

William Isbell, Ismael Perez C. and Barbara Wolff

Huari Urban Prehistory: 2017 & 2018 Excavations

As new discoveries of Wari-style artifacts take place across Peru it is increasingly important to understand the capital city and its people. The majority of former Huari research was concentrated on areas with monumental megalithic architecture, yielding primarily information about ceremony and elite ritual. Excavations in 2017 and 2018 by Binghamton University, Montgomery College, and the Universidad Nacional de Huamanga investigated a residential sector of the capital currently known as Patipampa. While this research is still in an early phase new and important understandings have been gained. This presentation acknowledges the work of numerous colleagues and students from several institutions, in order to describe city life in the new urban spaces created at Patipampa. Significantly, our excavations have not confirmed the high degree of activity specialization that some scholars affirm for Huari. Nor does oppression appear to have commonplace. Patipampa residents appear to have eaten well, consumed unassuming luxury goods, and participated in modest crafting activities while residing in large apartment houses whose residents were organized around ancestral tombs located within living spaces.

David Johnson

Comparing The Nasca Lines With North American Stone Features

In 1998 I presented my data on the correlation between the Nasca Lines and areas of higher permeability within the groundwater at the last Northeast Conference on Andean and Amazonian Archaeology and Ethnohistory at Binghamton. This was only two years after I made this correlation. During the next twelve years I extended the investigation along the Atacama Desert for 1,500 miles from northern Peru to south of Arica, Chile and from the coast to the Andes Mountains. As my colleagues and I disseminated our data, several researchers contacted me and said they may have similar features in North America. During the last six years I have examined stone features across North America which resemble the Nasca Lines /

coastal geoglyphs of Peru and Chile. Several Native North American First Nations refer to these features as their Ceremonial Stone Landscape. This presentation will discuss the similarities between the geoglyphs of Peru and Chile and North America. The data strongly suggests Native Americans have used similar stone features throughout these regions during different historical periods, different cultural phases and in diverse environmental regions. These data has been accepted into Smithsonian Institute's national archives.

Nathaniel Kitchel, Randall Haas, and Mark Aldenderfer

Lithic Technology Across the Forager-Farmer Transition in the Altiplano of Peru

Previous research proposes that the transition from mobile foraging to sedentary food producing economies corresponded to a transition from curated to expedient stone-tool technology. While this association is documented in many areas, the model has not been evaluated in the Andean Altiplano, an area well known for the independent emergence of food producing economies. Here we report an analysis of lithic assemblages from the Middle/Late Archaic Period site of Soro Mik'aya Patjxa and the Terminal Archaic/Formative Period site of Jiskairumoko, thus spanning the forager-farmer transition in this region. Although other lines of evidence reveal a clear decrease in mobility, we find that the importance of expedient tools remains constant across the economic transition. This finding is particularly surprising given other clear changes in the lithic economy including increasing emphasis on local raw materials and reduction in tool sizes. Our findings suggest that the transition to food production and concurrent reduction in mobility does not necessarily translate to an increasing reliance on informal tools; at least not to the extent that such change is detectable across the agricultural transition on the Altiplano. Our results therefore encourage caution when inferring mobility practices from stone tool technology in this region and beyond.

Patricia Knobloch, Michael D. Glascock, Brandi Lee MacDonald

Clays of Time and Places: Instrumental Neutron Activation Analysis (INAA) of Huarpa and Wari pottery from the Ayacucho Valley

The Middle Horizon (MH) (AD 700-1000) chronicles an exceptional political transformation when autonomous polities throughout the Andes were confronted with a unification process started by the Wari from the Ayacucho Valley. To unravel Wari's intrusive presence, investigators commonly assume that pottery displaying known Wari art and iconography was produced in Wari's heartland and capital, Huari. That assumption is tested using INAA, a compositional procedure to extract paste from pottery and determine the chemical signature of elements present in the clay. It does not analyze surface pigments. Results from 222 sherds suggested thirteen compositional groups or clay origins. The focus was narrow -

6 sites within an 8 km radius - yet broadly represents 6 centuries of occupation from the pre-MH Huarpa culture (AD 300-700) and MH Epochs 1 and 2 (AD 700-900). Because this study can combine paste identification with the locational and temporal designations of each sherd, it significantly establishes origins of Wari pottery styles, visualizes possible movement of people in the valley, and illuminates the cosmopolitan nature of the capital city.

Patricia Netherly

North Coast Political Organization from Village to Chimor

The political structure of human aggregations on the North Coast of Peru from Huaca Prieta to Gallinazo has resisted identification. Rightly or wrongly, archaeologists identify later cultures: Moche, Lambayeque (Sican) and Chimu societies as expansionist states. Nevertheless, their social and political structure and organization have also proven cryptic to ethnohistorical and archaeological interpretation. However, these societies were Andean and shared social and political structures with better-known highland societies for

which there is also a rich ethnological record. As several scholars have shown, for the highlands archaeological evidence for political and social duality is found in settlement patterns, architecture, and iconography.

Ethnographic studies, largely from the highlands, make clear these structures served important adaptive functions. For the coast, however, while dual political and social organization was undoubtedly present, the recognition of duality in formal political structures in the pre-European period by ethnohistorians and archaeologists has been difficult both because they are seldom mentioned by the Spanish and because of the capacity of these structures for aggregation and disaggregation.

Nevertheless, 16th century Spanish administrators and jurists were forced to acknowledge the presence of structures at different levels which they called *parcialidades* and which were equivalent to the highland *ayllu*. The word in either of the principal coastal languages is unknown. Like the term *ayllu*, the Spanish word, *parcialidad* was used for structures of different size at different levels of organization. Archaeological research has shown that such sociopolitical structures are both very ancient and pervasive. They proved to be a highly flexible and adaptive means of organizing human energy over a very long period of time. Consequently, we must acknowledge that the organization of societies on the North Coast in ranked, dually opposed moieties, based on groupings by kin or fictive kin, at three or four or more structural levels. These hierarchically related units provided the stable and effective organization of human effort necessary for the reduction of risk, political administration, agricultural expansion, the construction of large projects, such as irrigation networks, religious monuments, urban configurations and political expansion without the singular, powerful unitary rulers as postulated in Old World models of expansive state development.

Estanislao Pazmino

Becoming Complex?: Understanding Contextual Developments of Monumentality in Late Period, Northern Ecuador

Earthen mounds and pyramids, known as *tolas*, defined the northern Ecuadorian landscape of the Late Period's *Cara* ethnic group, from AD 800 until the Inka conquest. Approaches to regional cultural sequencing are entrenched in evolutionary assumptions that *tolas* represent an increase in complexity. While monumentality became more visible, the capacity of the elite to accumulate exotic resources and wealth was significantly reduced. With the introduction of *tolas* the late chiefly power was made effective

through strategies aimed at strengthening communal networks. Using evidence from various sites, including recent excavations at *Cochasquí*, I argue regional pathways of complexity are more nuanced.

Daniel Plekhov, Parker VanValkenburgh

POSTER: *Investigating the soil temperature properties of terraced landscapes in Chachapoyas, Peru*

This poster presents the preliminary results of a soil temperature study conducted during the summer of 2018, in Chachapoyas, Peru to investigate the heat retention and insolation properties of terraced hillslopes. Previous research on the agricultural benefits of terracing (Schjellerup 1985, Treacy 1989) has suggested that deeper soils and higher moisture retention can have favorable effects on soil temperature, particularly in proximity to terrace walls, with important implications for the productivity of crops and the elevations at which they can be planted. Being located between 3500-3600 masl, ancient farming on the terraces at the site of La Fila would have been at risk from frost and generally cold temperatures, and indeed the area is currently used exclusively for pasturage. Having buried twelve HOBO 8k data loggers along a 150-meter vertical transect that cut across a system of terraces at the site of La Fila, we collected nineteen days' worth of hourly temperature readings. These data loggers were buried at a depth of twenty centimeters and spaced out such that some were located immediately above or below stone-faced terrace risers, while others were located midway along the tread of the terrace. We hypothesized that soil temperatures would be lower at higher elevations and that there would be less variance in temperature

closer to terrace risers. We test these predictions here through quantitative and spatial analysis of the soil temperature data, which we complement with weather data derived from satellite remote sensing and hydrological and solar insolation modeling. We find that there is no discernible trend in temperature as it relates to elevation, while variance was actually lowest in the middle of the terrace tread. We present these findings and our initial interpretations of them, and outline avenues for future research.

Amedeo Sghinolfi

POSTER: Intergroup interaction in the Río Carabamba Valley, Peru

Archaeological research in the Andean region has usually focused on either the coast or the highlands, often neglecting intermediate areas. One such unexplored zone is the Río Carabamba Valley. This valley connects the coastal Virú Valley to the highlands, featuring the resource-rich chaupiyunga (500-2,000 m.a.s.l) - a moist ecological zone where maize, beans, ají, and coca were grown. The lower Virú Valley was the subject of the pioneering Virú Valley Project during the 1940s, and it was more recently the focus of archaeological investigations by Jean-François Millaire and graduate students from Western University. Likewise, over the past forty years, the nearby highlands have been thoroughly analyzed by John and Theresa Topic and graduate students from Trent University. Yet, very little work has been carried out along the Carabamba River. Connecting the littoral and the high Andes, the Carabamba Valley likely acted as a borderland, where members of sociopolitical organizations with different sets of beliefs, religion, and material culture were coming into contact through long-distance trade. Along this stretch of land, people, goods, and ideas moved between ecological niches, making it a possible locus of syncretizations and innovation. The Carabamba Valley therefore represents an ideal place for studying group interaction in the northern Andes. This project aims to identify and map the archaeological sites located in this borderland, reconstruct the settlement pattern through time, and document how human groups (coastal, highland and local) interacted in this environment. I will conduct a pedestrian survey of the valley, during which I will map sites using a drone and collect detailed information on architecture and surface ceramics. Spatial analyses will be conducted using ArcGIS. A pilot study was carried out in

August 2018, allowing me to visit the Carabamba Valley and assess the archaeological potential of the area.

Maria Smith

POSTER: *Lifestyles of the Rich and Religious: The Reification of Casta through Consumption at Cusco's*

Convento de Santa Catalina de Siena

Established in Cusco in 1601 by a group of Dominican nuns, the Convento de Santa Catalina de Siena housed women across Castas. While the Convento was a place of diversity, it was not a place of equality or inclusivity. Instead, the Convento was highly stratified by Casta. When women chose to join the Convento their families were expected to give a financial contribution, generally their dowry, to the convent. Women who donated large dowries received better accommodations and living opportunities than those from poorer families who could not contribute a significant dowry. In addition to the dowry, women were allowed to maintain all property acquired before their profession, including landholdings, enslaved laborers, and livestock. These women were often placed in higher positions within the convent because of their social and economic worth. Women of African or indigenous descent and those who could not contribute a dowry were not allowed to profess as nuns, but were able to become donadas, religious servants who undertook vows, and criadas, religious servants without vows. Furthermore, within these categories, one's Casta played an important role in placement within the strictly followed hierarchy of the Convento. This poster explores how nuns reified Casta and maintained inequalities within the walls of the Convento through the consumption of material goods, foodstuff, and space.

Paul Szpak, Katherine Chiou

Stable Isotope Analyses of Macrobotanical Remains from the Jequetepeque Valley: Evidence for Agricultural Intensification

This study presents the results of a pilot project examining the carbon and nitrogen isotopic compositions of plant remains from the Moche occupations at Cerro Chepén and San José de Moro in the Jequetepeque Valley. There were two primary objectives for this research, the first was to test the assumption that only charred botanical remains produce unaltered isotopic measurements and to assess whether or not crops were being fertilized with camelid dung or seabird guano. Christine History and Michael DeNiro conducted pioneering isotopic analyses of botanical remains from Peru in the 1980s and one of their key findings was that charred remains seemed to produce reliable isotopic measurements, while uncharred (desiccated) remains did not. This early research contrasted charred remains from the highlands with uncharred remains from the coast. In this study, we reexamined the notion of the reliability of desiccated remains by measuring the carbon and nitrogen isotope compositions of both charred and desiccated macrobotanical remains from two sites on the north coast of Peru. The results demonstrate no systematic differences in the isotopic compositions recorded in the charred and desiccated remains, calling into question the assumption that only charred remains will produce reliable isotopic measurements. The isotopic compositions of the plants themselves, charred or desiccated, are both consistent with the use of fertilizers (camelid dung, seabird guano, or both) at these sites. We discuss these results as well as future plans to expand this research, addressing the history of agricultural intensification in the broader region.

Matthew Velasco

Burying the Dead at Ayawiri: Excavation and Analysis of Human Skeletal Remains from an Andean Hilltop Fort (Puno, Peru)

This paper presents results from the excavation and analysis of 11 slab-cist tombs in and around the site of Ayawiri, one of the largest hilltop forts in the western Lake Titicaca Basin. Dating to the Late Intermediate Period (LIP, A.D. 1100-1450), these tombs typically contained variably articulated and commingled individuals, suggesting a complex burial practice that likely involved tomb reopening, successive burial, and the removal of select body parts. Demographic and mortuary profiles suggest that burial practices were decentralized and flexible, structured by shared attitudes toward “the dead” and the (partible) dead body, but also subject to the prerogatives and preferences of semi-autonomous corporate groups. Although limited by sample size and taphonomic degradation, bioarchaeological analysis of human skeletal remains did not find strong evidence of systemic stress or nutritional deprivation, at odds with models of resource scarcity during the LIP. However, cranial trauma demonstrates that the hostilities materialized in fortified landscapes could occasionally bring physical violence upon residents of Ayawiri. This study advances our understanding of a lesser-known mortuary tradition in the Lake Titicaca Basin—one long overshadowed by more prominent burial towers (chullpas)—and sheds new light on the complex interactions that took place between the living and the dead during the LIP.

Darryl Wilkinson

The Last Neolithic Revolution? The LIP Expansion into the Eastern Andean Slopes

It is often said that the forested slopes of the eastern Andes are virtually unknown in archaeological terms. That is true to an extent, but it is also worth noting that the montaña areas northwest of Cusco in the province of La Convención have seen a substantial increase in research projects over the past decade. It is becoming increasingly clear that this region was only permanently settled by agriculturalists during the Late Intermediate Period (LIP), and perhaps only in the final two centuries of the pre-colonial era, according to some recent C-14 dates. To what extent this was the case for the entire eastern Andes is unclear, but for some regions at least, it now seems that there was a substantial expansion of highland farmers into the eastern slopes just prior to the rise of the Inca State. The potential significance of this phenomenon should not be underestimated. It was, in effect, the last major Neolithic expansion to occur

in the Americas prior to European colonization. Indeed, it may have been the last Neolithic expansion to occur anywhere on the globe under "prehistoric" conditions. This paper will discuss some of the evidence for this phenomenon, and considers potential reasons why it might have occurred (including why it occurred when it did). Evidence will be presented from the author's recent excavations in the Amaybamba Valley, as well as a synthesis of survey data from a number of projects carried out in adjacent areas from the past 10 years.