



Department of Anthropology
MICHIGAN STATE UNIVERSITY

48th Annual Midwest Conference on Andean and Amazonian Archaeology and Ethnohistory

February 29-March 1, 2020
Room 115, MSU International Center

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Sponsored by the MSU Department of Anthropology and
Center for Latin American and Caribbean Studies



College of Social Science
MICHIGAN STATE UNIVERSITY



OUR SCIENCE **TRANSFORMS THE HUMAN EXPERIENCE**
AND INSPIRES LEADERS

48th Annual Midwest Conference on Andean and Amazonian Archaeology and Ethnohistory

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Michigan State University

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Saturday Feb 29 – 115 International Center

8:30 - 8:55 am Breakfast

8:55 - 9:00 Welcome remarks, Kurt Rademaker (Michigan State University)

Session 1

9:00 - 9:25 Late Preceramic Burials in the Copacabana Peninsula of Bolivia: Excavation, Analysis, and Native Community Involvement. Sergio J. Chávez (Central Michigan University)

9:25 - 9:50 Rethinking Gallinazo: Copper, Canals & Emojis. Kayeleigh Sharp (Southern Illinois University)

9:50 - 10:15 The Southern Moche's (AD 200 – 850) Integration of the Virú Fishing Village at Huanchaco, Peru. Richard Sutter (Purdue University - Fort Wayne), Gabriel Prieto (University of Florida), John Verano (Tulane University), Regulo Franco (Complejo Arqueológico El Brujo)

10:15 - 10:40 Q&A + Coffee Break

Session 2

10:40 - 11:05 Terminal Late Formative Aesthetics: Defining a Visual Economy in the Southern Lake Titicaca Basin. Andrew Roddick (McMaster University)

11:05 - 11:30 Fancy Imports and Local Knock-offs: Attribute Analysis of Tiahuanaco-style Pottery in Cundisa, Copacabana, Bolivia. Stanislava Chávez (Wayne State University)

11:30 - 11:55 Ancient DNA Preliminary Results from the Archaeological Site of Cundisa in Copacabana, Bolivia. Jennifer Kennedy (Central Michigan University), Stanislava Chávez (Wayne State University), Tanvi Honap (University of Oklahoma), Sergio Chávez (Central Michigan University)

11:55 - 12:05 Q&A

12:05 - 1:30 Lunch Break

Session 3

- 1:30 - 1:55 pm Assessing Paste Diversity in Imperial Inca Pottery from Ecuador using INAA. Tamara L. Bray (Wayne State University), Leah Minc (Oregon State University)
- 1:55 - 2:20 Roads, Waystations, and Caravans: Reconstructing Middle Horizon Exchange Systems through Geochemical Provenance and Network Analysis. David A. Reid (University of Illinois at Chicago)
- 2:20 - 2:45 Landscapes in Motion: Moving as Dwelling in the Andes since the 16th Century. Maria Smith (Syracuse University), Maria Fernanda Boza Cuadros (Centro Peruano de Arqueología Marítima y Subacuática)
- 2:45 - 3:10 Q&A + Coffee Break

Session 4

- 3:10 - 3:35 The Pyrocene in the Bolivian Amazon. John H. Walker (University of Central Florida)
- 3:35 - 4:00 Three Commensuration Problems in Andean Prehistory, and a Plea for Consilience. Bruce Mannheim (University of Michigan)
- 4:00 - 4:25 Preservation of Bundles of Big Dimensions from Peru. Selene Figueroa Cueva (Museo de Sitio Arturo Jiménez Borja-Puruchuco)
- 4:25 - 5:00 Michigan State University Repatriation of a (pre?) Inca Bolivian Mummy. William A. Lovis (Michigan State University)
- 5:00 Q&A + Business Meeting (open to all)
- Reception in Center for Latin American and Caribbean Studies, 3rd floor, International Center

Sunday March 1 – 115 International Center

9:00 - 9:30 am Breakfast

Session 5

9:30 - 9:55 Beyond Souvenirs: The Instagram Lives of Andean Tourist Textiles. Corey Bowen (University of Illinois at Chicago)

9:55 - 10:20 Using Rocks and Isotopes to Trace Human Movements during the Settlement of Southern Peru. Kurt Rademaker and Emily Milton (Michigan State University)

10:20 - 10:45 Q&A + Coffee Break

Session 6

10:45 - 11:10 Killing Man's Best friend: Canine Sacrifice at Jahuay, Quebrada de Topará. Jo Osborn (University of Michigan)

11:10 - 11:35 The Las Huacas Balanza Collection: Understanding the Use of Weights and Measurement in Prehistoric Perú. Jordan A. Dalton (University of Michigan)

11:35 Q&A + Closing remarks

We remember John Janusek – Andean archaeologist, professor, colleague, and friend



Associate Professor of Anthropology John W. Janusek researching Andean monoliths (courtesy of Andrew Roddick)

Presentations

Late Preceramic Burials in the Copacabana Peninsula of Bolivia: Excavation, Analysis, and Native Community Involvement

Paper dedicated to Dr. Jeffrey Parsons

Sergio J. Chávez (Central Michigan University)

This paper presents the ongoing research related to the previous excavations of Late Preceramic burials associated with projectile points of 5 millennia ago at the site of Muruqullu in the Bolivian portion of the Copacabana Peninsula. The site is situated at an altitude of 3950 m, and was originally identified by extensive surface surveys and excavations carried out during two field seasons of the Interdisciplinary Yaya-Mama Archaeological Project in the Titicaca Basin. Several Preceramic burials were excavated containing very tall and robust individuals. The burials were carved on bedrock, and represent the first instance of Preceramic burials underlying later occupations in the region. The human bones were studied and published with two physical anthropologists (Dale Hutchinson and Sara Juengst, University of N. Carolina at Chapel Hill and Charlotte), and since then we have been making additional observations of the partially preserved bone fragments, and also selecting samples for DNA analysis to be carried out by Jennifer Kennedy (molecular anthropologist at CMU). Lastly, I will show our involvement with the local native Aymara-speaking community by displaying the archaeological remains in their local museum as part of their ethnic identity as they plan to participate in and benefit from the industry of tourism.

Rethinking Gallinazo: Copper, Canals & Emojis

Kayeleigh Sharp (Southern Illinois University)

Investigations in the residential sector of the Songoy-Cojal site in the middle-Zaña Valley, Peru, effectively exposed long-standing misconceptions about the first millennium that are in need of correction. At Songoy-Cojal, artifacts of different aesthetic traditions (i.e., Gallinazo and Mochica [Moche], and to a lesser degree, Sicán), are juxtaposed by evidence of quotidian activities (multi-craft production and domestic residuals such as burnt food, fuel and tools), which paints a picture of a thriving, self-sufficient regional workforce that goes unrecognized in traditional funerary analysis. My research focuses on the daily lives of working-class groups like the Gallinazo – characterized by simply decorated pottery that bears emoji-like expressions – that are often overlooked in our attempts to expose the best and greatest in prehistory. I show that far from being a utilitarian substratum of other cultural traditions (i.e., the better known Mochica) or generic manifestation, as is conventionally argued, users and makers of Gallinazo objects in the Zaña Valley would have performed a vital economically complementary role during the latter half of the first millennium. In addition, I posit that the northern Gallinazo, and their ancestors from the Vicús region, were the likely innovators of various infrastructural and multi-crafting technologies as well.

The Southern Moche's (AD 200 – 850) Integration of the Virú Fishing Village at Huanchaco, Peru

Richard Sutter (Purdue University - Fort Wayne), Gabriel Prieto (University of Florida), John Verano (Tulane University), Regulo Franco (Complejo Arqueológico El Brujo)

The emergence of the southern Moche state within the Moche Valley is still a topic that is incompletely understood. On the coast, a Virú-affiliated fishing community persisted as the Pyramids at Moche polity consolidated its power and extended its irrigation network and cultivated lands within the valley. However, excavations reveal that sometime ~cal AD 550, the Moche abruptly appear at Huanchaco and disrupt the pre-existing Virú community by constructing domestic areas, a Moche IV cemetery, and a frieze decorated mound where ~50 - 60 executed adult males were interred. Our dentally derived biodistance results, presented here for the first time, suggest that the Moche conquest of Huanchaco was violent and that the sacrificial victims were closely related to the local Virú people of both Huanchaco and of the adjacent Cao Viejo population from the Chicama Valley to the north. The implications of our results are discussed.

Terminal Late Formative Aesthetics: Defining a Visual Economy in the Southern Lake Titicaca Basin

Andrew Roddick (McMaster University)

The "Terminal Late Formative" is a newly defined chronological phase in the southern Lake Titicaca Basin (Marsh et al. 2019). Our findings suggest that over 5-6 generations (AD 420-590), inhabitants in this region produced, circulated, and deposited "transitional" style ceramics. In this talk I explore the aesthetics of Qeya ceramics, the best known objects of this phase. I discuss the recent analysis of materials housed in institutions in Bolivia, the United States, and Europe, and consider the relationship of their aesthetics to related materials of earlier and later phases both in the southern basin and beyond. I end by considering this visual economy in regards to the development of the Tiwanaku "hospitality state" (Bandy 2013).

Fancy Imports and Local Knock-offs: Attribute Analysis of Tiahuanaco-style Pottery in Cundisa, Copacabana, Bolivia

Stanislava Chávez (Wayne State University)

Cundisa in Copacabana is a multi-component site spanning the last 2500 years. In this paper, I will concentrate on the Tiahuanaco cemetery component (AD. 500-1100), which includes ca. 100 burials excavated by the Interdisciplinary Yaya-Mama Project. I will focus on pottery vessels associated with these burials, analyzing their paste, temper, forms, and decoration. Based on preliminary results of my analysis, the majority of vessels, including some of the fancy Tiahuanaco-style ones, was made by local artisans using local clays and tempers. Moreover, some of the paste-temper recipes used to make these vessels originated centuries earlier, during the Yaya-Mama religious tradition (500 BC-AD 200). This study will help shed light on the ways Copacabana was integrated into the Tiahuanaco sphere of influence.

Ancient DNA Preliminary Results from the Archaeological Site of Cundisa in Copacabana, Bolivia

Jennifer Kennedy (Central Michigan University), Stanislava Chávez (Wayne State University), Tanvi Honap (University of Oklahoma), Sergio Chávez (Central Michigan University)

The archaeological site of Cundisa on the Copacabana Peninsula has a complex and continuous history of human occupation spanning over 2500 years. The site is in the modern town of Copacabana, Bolivia located on the shore of Lake Titicaca. Excavations by the International and Interdisciplinary Yaya-Mama Archaeological Project under the direction of Sergio and Stanislava Chávez, revealed Tiahuanaco burials that date from the Early Intermediate to the Middle Horizon Periods (50 BCE – 1000 CE). This makes it one of the largest cemeteries uncovered within the Tiahuanaco cultural sphere of influence and one of the first studied using ancient DNA methods. Eighteen individuals from Cundisa were selected for ancient DNA analysis from different time periods identified at the site. These samples were extracted, target-enriched for the complete mitochondrial genome, and sequenced on an Illumina MiSeq. Post enrichment ~3-79% of reads were mitochondrial with 12 of 15 samples having an average depth of coverage of >10X (min: 14X, max 100X). Of the eighteen individuals, eight were identified as haplotype B2 and the other four appear as A2. Using this information, we propose that there is evidence for genetic continuity reflecting the proposed cultural continuity as seen in the archaeological record by Chávez.

Assessing Paste Diversity in Imperial Inca Pottery from Ecuador using INAA

Tamara L. Bray (Wayne State University), Leah Minc (Oregon State University)

An enduring question in Inca archaeology concerns the issue of imperial pottery production. Inca ceramics, which are found across an enormous expanse of Andean South America, are known for their high degree of uniformity in vessel form, proportionality, and embellishment. How did the Inca manage the production of their signature style and achieve the level of standardization that they did? Early thinking assumed that imperial pottery was mass-produced in highly controlled workshops in the capital city of Cuzco and exported from there to points around the Empire. Subsequent studies at provincial Inca sites hinted that state pottery production and distribution was a more regionalized affair. Recent analyses of paste types and clay sources from various sectors now confirm that Inca pottery production was largely de-centralized and occurred at any number of locales throughout the Empire. The present study contributes to this picture by reporting on the compositional analysis of Inca ceramics from several key Late Horizon sites in Ecuador. Our findings indicate that imperial style wares in the northern Andes were manufactured locally in different regions. Further, within each region, these wares were produced in multiple paste recipes, implying a lack of centralized control of the manufacturing process.

Roads, Waystations, and Caravans: Reconstructing Middle Horizon Exchange Systems through Geochemical Provenance and Network Analysis

David A. Reid (University of Illinois at Chicago)

During the Middle Horizon (AD 600-1000), communities across Peru witnessed a period of intense interregional connectivity, in part, due to the expansion of the Wari empire. Here I present recent material analyses from three Middle Horizon sites (Pakaytambo, Santa Rosa II, and La Angostura) located along a major prehistoric road that traversed the coast-highland corridor of the Majes Valley in Arequipa, Peru. This road network would have facilitated the movement of people, communication, and material culture, such as the precious volcanic glass - obsidian. Geochemical provenance studies of obsidian artifacts have thus provided one medium to trace the expansion of Middle Horizon exchange networks. Using P-XRF and LA-ICP-MS, this study examines the procurement and exchange of obsidian (n=303) from both Wari state contexts and local road waystations that supported the movement of llama caravans across Arequipa's coastal valleys. Comparisons of obsidian source variability and frequency provide insights on Wari political-economic strategies that are distinguished from local bottom-up exchange networks. Using Social Network Analysis (SNA), I situate this data within broad-scale patterns of obsidian use in the Andes.

Landscapes in Motion: Moving as Dwelling in the Andes since the 16th Century

Maria Smith (Syracuse University), María Fernanda Boza Cuadros (Centro Peruano de Arqueología Marítima y Subacuática)

In recent decades, the archaeology of landscapes has grown considerably in terms of theories, definitions, perspectives and their application in case studies across the world. This scholarship has shown that many structuring elements of human existence are emplaced through action and discourse, thus articulating landscapes in distinct ways that transcend individual and institutional agencies. Through diverse perspectives, researchers have shown that these articulations occurred through distinct temporalities and forms of being. It is clear that studying landscapes is more than studying land, space, or settlement patterns and that the question of space is less about its physical dimensions and more so about its range of human action. Drawing on our work in Colonial and Republic sites across Peru, we explore how space and human action interweave the landscapes of these sites. Dwelling, movement, and ideological transformations unraveled in the Andes since the sixteenth century. These processes physically laid new spiritual claims, created new circuits of movement, and inscribed hills with notions of health and well-being. By focusing on moving and dwelling in the Andes since the Spanish invasion, we show that life at a site was anything but local and that quotidian action transcended the scale of place.

The Pyrocene in the Bolivian Amazon

John H. Walker (University of Central Florida)

Stephen Pyne's idea of the "Pyrocene" helps to talk about relationships between humans and fire, and how they have intensified with industrialization. All across the Americas, Pre-Columbian communities used fire in different ways for many purposes, but the most visible manifestation of a fire culture may be in the Bolivian Amazon. The Llanos de Mojos is a seasonally flooded tropical savanna that is fired regularly by ranchers living there today. Cowboys light fires to improve pasture for cattle, but fires can easily escape, as was illustrated during the most recent dry season in the Southwest Amazon, which drew international attention. Evidence for pre-Columbian fire as a landscape shaping tool must be interpreted carefully, within archaeological landscapes. Results from two swamp cores in West-Central Mojos are presented, showing complex and locally varying evidence for the use of fire over at least 3,500 years. Fire was used within a complex economic landscape in the past, and before it is used to interpret any modern fire culture, this long term history needs to be addressed.

Three Commensuration Problems in Andean Prehistory, and a Plea for Consilience

Bruce Mannheim (University of Michigan)

"Commensuration problems" are interpretative misfires in which phenomena observed within one conceptual framework are interpreted within another, fundamentally distorting the initial observation, resulting in misplaced analytic precision. I discuss three common (and very concrete) examples of commensuration problems in Andean prehistory: (1) wak'a, and notions of "the sacred"; (2) numbers and arithmetic; (3) social scale. In each case, researchers presuppose, and use as standards, frameworks that fundamentally distort the properties of the things they are analyzing. I propose a programmatic solution, consilience, recognizing methodological diversity across common objects of analysis. (And I guess that's why they call this an "abstract.")

Preservation of Bundles of Big Dimensions from Perú

Selene Figueroa Cueva (Museo de Sitio Arturo Jiménez Borja-Puruchuco)

The Andean cultural development that took place during prehispanic times has been one of the most successful of human history. A range of specialization levels were reached for different productive activities, among them, the preparation of mummy bundles. Bundling procedures were progressively developed and officialized within the Paracas, Wari and Inca. Precisely, during Inca times, in the Peruvian Central Coast, big mummy bundles were being produced, some of which even reached two meters high and 70 kilos, reflecting the high technological level reached by the Andean societies regarding their funerary activities. These characteristics difficult the preservation procedures developed by the archaeological museums in Peru, turning these bundle's conservation into a challenge. Considering this problem, a research was conducted on 20 Inca mummy bundles of big dimensions and weight from the Puruchuco Museum. The task was to know their structural features and body orientations, using CT scans as support. The research's objective was to design bundling systems that would allow to solve deformation problems caused by manipulation, transportation and storing which are frequent in this kind of bundles. The results were the formulation of two bundling systems that was funded by the U.S. Embassy in Perú: the bundling system 3A, which is focused on mummy bundles holding a horizontal position; and the bundling system 3B, for bundles in vertical position.

Michigan State University Repatriation of a (pre?) Inca Bolivian Mummy

William A. Lovis (Michigan State University)

In 1890 the U.S. Consul to Chile, Hon. William B. McCreery from Flint, Michigan, sent the gift of an exhibit to the nascent museum at Michigan Agricultural College – the mummified remains of a young girl reputed to be Inca, from a chullpa or stone tomb south of La Paz, Bolivia. She came with accoutrements including pouches with maize kernels, bean pods, and coca leaves, bundles of kapok fiber, a gourd, leather objects, a small ceramic jar, and other items. The young lady remained on display in various iterations of what would eventually become the MSU Museum at Michigan State University until early in the 1980s. She was removed from display as the ethics of human remains exhibition changed, and then placed into storage for almost 40 years. With no chance of exhibition, little interest in research (and in fact many questions about the spatial and temporal provenience and integrity of the entire assemblage), and only marginally adequate storage facilities for a mummy, the young girl and her trousseau were repatriated to the Plurinational State of Bolivia in January 2019. This is the story of her repatriation, and her documentation.

Beyond Souvenirs: The Instagram Lives of Andean Tourist Textiles

Corey Bowen (University of Illinois at Chicago)

Alpaca-wool sweaters and chullo hats have long been the definitive souvenir for visitors to Peru, Bolivia, and Ecuador. Scholarship on such textiles produced for tourists has highlighted how artisans negotiate the often conflicting demands of traveller expectations, economic needs, and Andean tradition. However, these approaches are rooted in 20th-century concepts of souvenirs and travel imagery. The rapid circulation of images on social media has altered the way tourists "gaze" and how they employ objects in constructing tourist narratives. Stories and photographs shared instantly to thousands of non-participant viewers challenge the usual trip-return divide; anthropologists must look for new ways to understand tourist encounters. In this paper, I use photographs from the image-sharing site Instagram to reassess the role souvenir textiles play in contemporary Andean tourism. Adapting Salazar's framework of "tourism imaginaries" to digital media, I explore how the use of textiles as photographic props produces and reproduces ideas of authentic tourist experiences, even as it appropriates Andean-ness in the service of personal identity formation.

Using Rocks and Isotopes to Trace Human Movements during the Settlement of Southern Peru

Kurt Rademaker and Emily Milton (Michigan State University)

What were the behavioral adaptations employed during the initial human colonization of the Americas? Our working group is studying the settlement of southern Peru by using rocks and isotopes as tracers for human movements. Provenance analyses of obsidian and other toolstones at the Quebrada Jaguay and Pampa Colorada coastal sites and high-altitude Cuncaicha rockshelter identify changes in local and regional trends of resource procurement between the Terminal Pleistocene and Early Holocene. Complementing this raw material dataset, we present a new stable oxygen isoscape for surface waters spanning the Pacific Coast to the high Andes to reassess the lifeways and migration routes of the Early Holocene humans buried at Cuncaicha. Ultimately, we aim to understand long-term processes of adaptation in extreme environments and the formation and maintenance of inter-zonal connections in the Andean world.

Killing Man's Best Friend: Canine Sacrifice at Jahuay, Quebrada de Topará

Jo Osborn (University of Michigan)

For thousands of years, ancient Peruvian dogs lived alongside humans, and played many roles within human societies. They were companions, sacrificial offerings, hunting and herding partners, and possibly a source of food. In spite of their long history within Peruvian communities, surprisingly little scholarly attention has been given to dogs in prehispanic times, allowing for the continuation of a number of misconceptions among Andean Archaeologists. This paper will review the roles of dogs in the prehispanic Central Andes, address some common misconceptions, and present new data on canine sacrifice at Jahuay, a Topará fishing community (300 BC – AD 0) near Chincha. At Jahuay, companion dogs were given as sacrifices following a flood, as the local community attempted to assert control over their environment in a moment of climatic crisis.

The Las Huacas Balanza Collection: Understanding the Use of Weights and Measurement in Prehistoric Perú

Jordan A. Dalton (University of Michigan)

The use of weights and measurement in prehistory remains a relative mystery. This is especially true for the Andes where records of prehistoric exchange and state administration are not as detailed as the Mediterranean and Near East. At the site of Las Huacas our excavations of a room within an elite administrative complex recovered a relatively large number of balanzas (balance beams). In this paper, I will discuss the Las Huacas balanza collection and compare them to those found at the Chincha capital of La Centinela. I combine the data from the La Centinela and Las Huacas collections to explore what the dimensions, decorations, and construction material of the balanzas might be able to tell us about the contexts they were used in and the types of goods that they weighed. I conclude the presentation by comparing balanzas to other Andean counting and record keeping tools, such as khipus and yupanas, and studies of weights and measurements from other regions.

Posters

Molecular Signatures of Plant Residues from Ceramics of Kala Uyuni Using Droplet Probe LC-MS

Joshua M. Henkin (Field Museum of Natural History), Kristóf B. Cank (University of North Carolina at Greensboro), Andrew Roddick (McMaster University), Nicholas H. Oberlies (University of North Carolina at Greensboro)

Thirty sherds excavated from three different Bolivian sites (Kumi Kipa, Kala Uyuni, and Sonaji; Taraco Peninsula, Lake Titicaca) were studied for their small molecule organic chemistry, thereby attempting a partial reconstruction of these ceramic vessels' life histories. Droplet probe liquid chromatography-mass spectrometry (LC-MS) was employed to accomplish the in situ, minimally invasive surface analysis for these sherds. The sampling interface exposes a droplet of solvent to a 2-3 mm diameter surface repeatedly, creating a microextraction characterized by an LC-MS instrument. This technique has been used to identify metabolites of known plants, fungi, and bacteria, and so the further goal of characterizing a priori unknown natural products from archaeological samples was pursued. Notably, two different sets of sherds from Kala Uyuni showed similar LC-MS and LC-MS-MS data to one another. 7727-p2 and 7665-p18 may share a Veratrum-type steroidal alkaloid (m/z 508.2902) akin to those produced by *Schoenocaulon officinale* (Melanthiaceae), a traditional insecticide plant known from southern Peru, and 5323-10 and 5323-11 probably both bear an alkylo-piperidine alkaloid (m/z 228.1950) like those reported in medicinal *Lobelia* spp. (Campanulaceae), with some exerting physiological and/or psychoactive effects. These results suggest promising lines of follow-up research while maintaining the intactness of these sherds for posterity.

Tracing Ancient Human Migration in the Peruvian Andes through Co-Evolutionary Insect Genetics

Kelsey Jorgensen (Wayne State University), Chuanzhu Fan (Wayne State University), Jesús Alcázar (Universidad Nacional Agraria La Molina), Norma Mujica Moron (Universidad Nacional Agraria La Molina), Clorinda Cobián (Universidad Nacional Agraria La Molina), Julie Lesnik (Wayne State University)

Multispecies anthropology lends fresh perspective to studies of ancient human migration where aDNA or archaeological evidence is sparse. In the Peruvian Andes, the spread of potato domestication led to the co-evolutionary development of its primary pest, the Andean Potato Weevil (APW). Unique geographic and biological constraints exist for the APW, suggesting that external facilitation would have been necessary for its present-day diversification. After humans began to domesticate the potato (*Solanum tuberosum*) about 8,000 to 10,000 years ago, ancient humans likely carried this tiny hitchhiker feeding in the potato to new locations. This research hypothesizes that APW speciation likely occurred with geographic isolation, so present-day APW ranges could be reflective of ancient human movements. To interpret the degree to which human movement contributed to APW speciation, analysis will combine the 1) evolutionary development of this insect proxy and 2) its present-day geographic distribution with spatial analysis of 3) radiocarbon dates of relevant Peruvian Andean archaeological sites. Candidate genes using all APW species (10) were sequenced to reconstruct a best-fit phylogenetic tree. Preliminary phylogeography results using this insect proxy are used to visualize potential directions of ancient human potato-grower population movement in the Peruvian Andes after potato domestication.

Ungará Mapping Project: A Preliminary Investigation into the Architectural and Spatial Configuration of a Late Intermediate Period Site in the Cañete Valley, Peru

Jennifer Larios (University of Michigan)

According to Spanish Colonial records, the archaeological site of Ungará (Cañete, Peru) played a key role in the defense and the irrigation economy of the Kingdom of Huarco (A.D. 1100-1470). This is evident in Ungará's location, as it is perfectly situated to overlook the eastern entrance to what was once the Kingdom of Huarco's territory. Moreover, Ungará oversees the take-off to the largest canal in the Cañete Valley, which much earlier political centers, like Cerro de Oro (A.D. 500-1000) would have depended on. Yet, no archaeological studies have been conducted at the site until now. This study combines aerial photography and high-accuracy GPS mapping in order to (1) begin to comprehend Ungará's occupational sequence and (2) to identify any spatial or architectural components that could reveal further insight into Ungará's economic and political role in the Kingdom of Huarco.

Restaurants and bars

On campus

MSU Dairy Store (ice cream)
474 S Shaw Ln, East Lansing, MI 48824

MSU Union
49 Abbot Rd, East Lansing, MI 48824

State Room, Kellogg Center
219 S Harrison Rd, East Lansing, MI 48824

Off campus (~15-20 min walk)

Black Cat Bistro
115 Albert St., East Lansing, MI 48823

Charlie Kang's
109 E Grand River Ave, East Lansing, MI 48823

Dublin Square
327 Abbot Rd., East Lansing, MI 48823

Grand Traverse Pie Company
1403 E Grand River Ave., East Lansing, MI 48823

HopCat
300 Grove St., East Lansing, MI 48823

Omi Sushi
210 M.A.C. Ave., East Lansing, MI 48823

The Peanut Barrel
521 E Grand River Ave., East Lansing, MI 48823

Off campus (~20-30 min walk)

Harrison Roadhouse
720 M-143, East Lansing, MI 48823

Punk Taco
1351 E Grand River Ave., East Lansing, MI 48823

Sansu Sushi
4750 Hagadorn Rd #100, East Lansing, MI 48823

Sindhu Indian Cuisine

4790 Hagadorn Rd #132, East Lansing, MI 48823

Sree Saffron

4750 Hagadorn Rd #6, East Lansing, MI 48823

Off campus, by car**Altu's Ethiopian Cuisine**

1312 Michigan Ave., East Lansing, MI 48823

The Avenue Café

*Try the ramen

2021 E Michigan Ave., Lansing, MI 48912

Capital City BBQ

*Try the pho

1026 W Saginaw St., Lansing, MI 48915

The Creole Burger Bar & Southern Kitchen

1218 Turner Rd., Lansing, MI 48906

Ellison Brewery & Spirits

4903 Dawn Ave, East Lansing, MI 48823

Eastside Fish Fry & Grill

*Recently featured by Guy Fieri on the Food Network

2417 E Kalamazoo St., Lansing, MI 48912

Green Dot Stables

*Try the truffle fries or make any slider vegetarian

410 S. Clippert St., Lansing, MI 48912

Meat BBQ

1224 Turner Rd., Lansing, MI 48906

El Oasis (taco truck)

2501 E Michigan Ave., Lansing, MI 48912

Taqueria El Chaparrito

401 E César E. Chávez Ave, Lansing, MI 48906

Zoobie's Old Town Tavern

*The best pizza around

1200 N Larch St., Lansing, MI 48906