



2019 Southern California Mesoamerica Network Conference

New Directions in Mesoamerican Research

Saturday, November 16, 2019
Michelson Hall MCB 101
University of Southern California
9am - 5pm

PROGRAM

Organized by Kirby Farah and the Society for Trojan Archaeologists

This event is sponsored by the USC Department of Anthropology, the USC Interdisciplinary Program for Archaeology, and the Society for California Archaeology.

SoCal MesoNet 2019 Program

9:00 AM **Opening Remarks**

- 9:30 AM Stephanie Lozano , UC Riverside
New Perspectives on the Teotihuacan Year Sign Found within the Maya Area
- 10:00 AM Kenneth Seligson, CSU Dominguez Hills
Recent LiDAR-based Reconnaissance in the Northern Maya Lowlands
- 10:30 AM Alyce de Carteret, Los Angeles County Museum of Art
Classic Maya "Codex-Style" Vessels: Re-evaluating an Art Community
- 11:00 AM Kenichiro Tsukamoto, UC Riverside
Visualization Techniques and Spatial Analyses of Archaeological Features on Airborne LiDAR Data at the Lowland Maya Site of El Palmar, Mexico
- 11:30 AM Eric Heller, University of Southern California
LMNVR 1.0: Digital Approaches to an Archaeology of Experience at La Milpa North, Belize

12:00 PM **Break for Lunch**

Lightning Round

- 1:30 PM Andres Berdeja, CSU San Marcos
The Significance of Jute in Maya Ritual Cave Settings in the Rio Frio Region, Cayo District Belize
- 1:40 PM Ariana Yanez, CSU San Marcos
The Relationship of Maize and Caves
- 1:50 PM Jessica Garcia, CSU San Marcos
Caves, Offerings, and Bones: A Preliminary Analysis of Ancient Maya Ritual Use of Rio Frio Cave A, Cayo District, Belize
- 2:00 PM Angelica Salcido, CSU Los Angeles
Ritual Objects: Aesthetic Appreciation
- 2:10 PM Jocelyn Acosta, CSU Los Angeles
Preserving Mesoamerican Research: Behind the Scenes of Cal State LA's Mesoamerica and Colonial Mexico Collection
- 2:20 PM Rachael Wedemeyer, UC Riverside
A Slanted Throne: Examining Banqueta Architecture and Iconography at El Palmar, Campeche, MX
- 2:30 PM Travis Stanton, UC Riverside
A Comparison of Area, Volume, and Density in Lidar Data from the Northern Maya Lowlands: The Case of the Coba/Yaxuna Causeway
- 3:00 PM Sarah Taylor, CSU Dominguez Hills
Abejas Mayas: Reintroducing a Lost Household Economic Strategy in Mesoamerica
- 3:30 PM Anabel Ford and Thomas Crimmel, UC Santa Barbara MesoAmerican Research Center
Above and Below the Canopy: Reliable Methods and Results from Lidar-Guided Survey at El Pilar
- 4:00 PM Omeatl Tonatiuh, Anahuac Cultural Center for Self Sustainability
Mesoamerican Foods and Agriculture
- 4:30 PM Andrew Kinkella, Moorpark College
Underwater Cenote Research at the Cara Blanca Pools, Belize: New Methods and Recent Discoveries

5:00 PM **Closing Remarks**

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Stephanie Lozano , UC Riverside

New Perspectives on the Teotihuacan Year Sign Found within the Maya Area

The year sign at Teotihuacan is worn by one of the most important and powerful deities of Teotihuacan, the Storm God, which has been generally understood as an early form of Tlaloc. This paper analyzes the iconography of ceramics with the Teotihuacan year sign from Tikal burials: burial 10 of Yax Nuun Ayiin and burial 116 of Jasaw Chan K'awiil. Presented in this paper are new insights of the year sign at Teotihuacan and within the Maya area. I demonstrate that the Teotihuacan year sign notes power and authority as it is connected to the Teotihuacan Storm God, cosmology and also can be traced back to Formative Olmec maize iconography. The Maize headband has also been found in other areas of Mesoamerica to note rulership, governess, and power. I also suggest that this maize headdress worn by the storm god was overlaid with mountain symbolism to note political authority and to reinvent it as true symbol of Teotihuacan during the Early Classic Period. During the Classic Period the relationship between the Maya and the Teotihuacanos was strong as Maya rulers would associated themselves with the Teotihuacan Storm God and year sign. The Teotihuacan year sign and Tlaloc not only appears in Maya iconography but was also equated to the Maya Ajaw glyphic title to emphasis its association with political authority as seen on Maya ceramics from prominent Tikal burials.

Kenneth Seligson, CSU Dominguez Hills

Recent LiDAR-based Reconnaissance in the Northern Maya Lowlands

The 2018-2019 LiDAR-based survey of the eastern Puuc Region of the Northern Maya Lowlands revealed Muluchtzekel to be one of the most prominent sites in the entire region. The pedestrian reconnaissance program covered a total of two square kilometers of the site center using LiDAR digital elevation models (DEMs) as references. The survey data allowed for the refining of LiDAR signatures of various classes of features as well as the quantitative assessment of feature identification confidence levels in areas yet to be ground-truthed. Test excavations demonstrated that the origins of the site can be traced back to the Middle Preclassic Period (ca. 800 BC) while final occupation levels date to the Terminal Classic Period (ca. AD 950). The site's location straddling the border between the Yaxhom Valley and the hilly Bolonchen District suggests that it grew to prominence as a strategic location for trade between the two sub-regions. This paper discusses the benefits and drawbacks (including ethical concerns) of applying LiDAR technology to archaeological survey in the Puuc Region through a focus on the growth of Muluchtzekel.

Alyce de Carteret, Los Angeles County Museum of Art

Classic Maya "Codex-Style" Vessels: Re-evaluating an Art Community

"Codex-style" vessels, produced in and around the Classic Maya city of Calakmul from approximately 650-800 CE, have long been admired for their sophisticated calligraphic style and the enigmatic nature of the supernatural scenes they depict. Foundational studies of these objects have likened them to codices or even a "book of the dead" that, if placed in the right order, might make legible an ancient story of creation. In the last few decades, advances in archaeological, art historical, epigraphic, and scientific research have deepened our understanding of these vessels. Yet, many questions remain about the community that produced them. A new collaborative project based at the Los Angeles County Museum of Art (LACMA) is investigating the 51 Classic Maya "codex-style" vessels in its Art of the Ancient Americas collection, the largest corpus of such vessels in any public institution. This presentation will synthesize recent scholarship and report on the ongoing work at LACMA.



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Kenichiro Tsukamoto, UC Riverside

Visualization Techniques and Spatial Analyses of Archaeological Features on Airborne LiDAR Data at the Lowland Maya Site of El Palmar, Mexico

The development of visualization techniques is critical for the identification of archaeological features on Lidar data. Commonly used visualization techniques in archaeological research include Skyview factor (SVFs), Slope, Hillshade PCA, and Red Relief Image Map (RRIM). I applied these to the identification of archaeological features on Airborne Lidar data that covered 94 km² at the Maya archaeological site of El Palmar, Campeche, Mexico. While some of these techniques such as SVFs and RRIM represented mound structures and topographical relief effectively, they obscured linearly characterized features such as causeways and raised fields. To solve this problem I used a simple visualization technique which was Single-band Pseudocolor overlaid Hillshade image available in QGIS. It enhances elevation differences occurred in cardinal directions by maintaining the north-south and east-west directions. I conclude that archaeological features are complex, and therefore different visualization techniques should be combined. This paper also presents the preliminary results of spatial analyses.

Eric Heller, University of Southern California

LMNVR 1.0: Digital Approaches to an Archaeology of Experience at La Milpa North, Belize

Emergent technologies, including photogrammetry, 3D modeling, and virtual reality visualization are transforming our ability to document and reproduce experiential aspects of archaeological sites and landscapes. These technologies overcome several objections to traditional phenomenological research by improving our ability to control variables, deliver reproducible sensory experiences, and provide innovative modalities for archaeologies of human experience. In this paper, 3D modeling and VR visualization is employed At La Milpa North, a Terminal Classic hinterland elite residential compound in northwestern Belize, to create digital representations of existent and reconstructed archaeological landscapes. Constructed from multiple data sources, including GIS data, photomodels of excavations, satellite imagery, and structural reconstructions, La Milpa North VR provides not only an engaging vehicle for data dissemination but also a valuable resource for phenomenological research.

Andres Berdeja, CSU San Marcos

The Significance of Jute in Maya Ritual Cave Settings in the Rio Frio Region, Cayo District Belize

Recent excavations conducted by the Rio Frio Regional Archaeological Project in Rio Frio Cave A in the Mountain Pine Ridge region in western Belize recovered several *Pachychilus* spp., or jute riverine snail shells some of which had been spire-loped. Although regularly reported as being found in vast quantities from excavations in a variety of contexts throughout the southern Maya Lowlands, little has been written about the use of these riverine snails among the Late Classic period Maya. Using a mix of archaeological data from other contexts and ethnographic observations of local food practices I made at the Another Beautiful Day in San Antonio Maya community celebration, I will attempt to determine how the jute from Rio Frio Cave A were used. Were they part of a ritual event, were they simply discarded in the cave, or were they evidence of a domestic meal held in the cave?

Ariana Yanez, CSU San Marcos

The Relationship of Maize and Caves Among The Late and Terminal Classic Period Maya of the Rio Frio Region

In the summer of 2019, the Rio Frio Regional Archaeological Project (RiFRAP) began archaeological excavations in Rio Frio Cave A. They revealed the cave was used at least during the latter half of the Late Classic through Terminal Classic periods (AD 700-900). Among the artifacts recovered were several young, charred corn cobs. In this presentation, I discuss the importance of maize to ancient and contemporary Maya peoples. Specifically, I focus on the symbolic importance of caves as the source of fertility and as homes of gods and other agriculturally-based supernatural beings. These data suggests that the maize we recovered during our excavations of Cave A may suggest a first fruit agricultural ceremony was performed there.

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Jessica Garcia, CSU San Marcos

Caves, Offerings, and Bones: A Preliminary Analysis of Ancient Maya Ritual Use of Rio Frio Cave A

Since the 1950's, archaeologists have been investigating ancient Maya settlements throughout central Belize to understand the lives and culture of people who once lived in them. Much of that attention has focused on the Belize Valley and Vaca Plateau, but few archaeologists have investigated the Mountain Pine Ridge (MPR) region. In 2018, Jon Spenard of California State University San Marcos initiated the, Rio Frio Archaeological Project (RiFRAP), with the intent of being the first ever long-term study of the greater MPR region. To date, the project has focused on two ritually used caves, Rio Frio Caves A and C, both of which are littered with ancient Maya artifacts. In this presentation, I will discuss the excavations we conducted in Alcove 3 of Rio Frio Cave A, which was used primarily during the Late-Terminal Classic periods (A.D. 700-900/1000). Comparing our data with those collected by other researchers from elsewhere in Belize, I propose the cave may have been used as a burial area for the local population, and that many more burials will be encountered as excavations in that cave continue. This presentation adds new data to the scant knowledge of rockshelter burials in the Maya area.

Angelica Salcido, CSU Los Angeles

Ritual Objects: Aesthetic Appreciation

The objects used for ritual purposes by the Aztecs will be examined in this project. I will explore and learn about these chosen objects through understanding their significance at the time of the Aztecs. By doing so I will introduce ritual aesthetics for viewers to immerse themselves into the aesthetic appreciation of artworks used in the context of rituals. The ritual aesthetics we will analyze through these objects are: understanding the ritual, historical context that led to the creation of this ritual, and an outcome for the ritual. Under these notions for understanding art under ritual aesthetics we can understand ritual objects from around the world. Ritual aesthetics forfeit prejudices and notions from our own personal understanding and opens up a clear vast area for understanding and appreciating these rituals.

Jocelyn Acosta, CSU Los Angeles

Preserving Mesoamerican Research: Behind the Scenes of Cal State LA's Mesoamerica and Colonial Mexico Collection

California State University, Los Angeles maintains one of the largest Mesoamerican research collections in the California State University (CSU) system. The Special Collections & Archives unit of the University Library houses a rich collection of Mesoamerican-related materials and has amassed over 7,000 books, three manuscript collections from; John B. Glass, Jean-Marie Lebon, and Wayne Ruwet, and recently the MAW collection of artifacts. The rare book collection has a great amount of books ranging from the 16th to 20th century of Mesoamerican research and history. One of its most notable collection is its pre-Columbian codices that includes the Borgia, Borbonicus, Boturini, Mendoza, Vindobonensis, Florentine Codex, and many more. These codices include interpretations and marginalia by distinguished scholars, ethnohistorians, and anthropologists of the 19th and 20th centuries. Resources such as these are vital to the Mesoamerican research community. Special collections and archives are a significant resource to the creation of original research and student engagement in the Mesoamerican field. This presentation will concentrate on the Mesoamerican collection at Cal State LA, but moreover how this collection is unique as it combines manuscripts, rare books, and artifacts that are all readily accessible in one place. The intent of this presentation is to show the significance of special collections and archival materials in Mesoamerican research and how as a student, I have used the collection to further my academic career and scholarship.

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Rachael Wedemeyer, UC Riverside

A Slanted Throne: Examining Banqueta Architecture and Iconography at El Palmar, Campeche, Mexico

El Palmar is a major Maya polity located in southeastern Campeche, Mexico where recent excavations have been concentrated in the Guzmán Group. The following paper focuses on the central room of Structure GZ7, most likely a residence of non-royal elite's leaders, known as lakamob (banner-bearers). Structure GZ7 is comprised of three rooms, each accompanied by an eastern and western gallery, and was occupied during the Late-Terminal Classic periods (AD 600-850). The western gallery of the central room holds a distinctive bench with a reclining backrest. Such benches are often depicted in courtly scenes of polychrome vessels but are rarely seen in physical architecture. Examinations of the masonry bench at Structure GZ7 provide deeper insights into the internal political organization of the El Palmar dynasty. A comparative study of this feature within the Petén and Rio Bec regions further refines our understanding of non-royal elites in Classic Maya society.

Travis Stanton, UC Riverside

A Comparison of Area, Volume, and Density in Lidar Data from the Northern Maya Lowlands: The Case of the Coba/Yaxuna Causeway

As lidar surveys continue to transform our understanding of Maya settlement, new methods are being employed to visualize data. Most projects have utilized some form of density calculation, begging the question of how we can standardize the definition of structures to make data sets comparable. In this paper, we use a method to calculate density that contemplates contiguous architectural features regardless of their shape or size. The shapefiles are then also used to calculate the area and volume of the features. By comparing the density of shapefiles to the area and volume calculations we can see different kinds of complementary patterns in lidar data. The data set we employ was gathered in 2014 and 2017 at the sites of Yaxuna and Coba, as well as a one kilometer wide transect along the 100 km causeway that connects them. This data set has significant implications for the consideration of roads in the formation of urban environments and how settlement density is impacted by distance from urban cores.

Sarah Taylor, CSU Dominguez Hills

Abejas Mayas: Reintroducing a Lost Household Economic Strategy in Mesoamerica

This research focuses on understanding the ways that reintroduced meliponiculture is influencing household economic strategies and biodiversity conservation outcomes in two locations in Mesoamerica. The first is a community-based conservation project in the small village of Ek'Balam, Yucatan, and the second is a local business in San Juan La Laguna, Guatemala. After preliminary research, I found three important themes. First, knowledge of beekeeping is being maintained and passed on even in the absence of bees. Second, scientific studies of honey from stingless bees (*Melipona beecheii*) and European bees (*Apis mellifera*) indicate that the traditional ecological knowledge about uses for honey is supported by laboratory-based findings. Finally, even though beekeeping was an important household practice from ancient Maya times through the middle of the 20th century, there is a dearth of ethnographic literature on the topic. This multi-sites research provides an opportunity to build on cross subfield data (from archaeology, ethno history, and biological anthropology) to understand the important relationship between humans and this semi-domesticated non-human actor throughout Mesoamerica.



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Anabel Ford and Thomas Crimmel, UC Santa Barbara MesoAmerican Research Center

Above and Below the Canopy: Reliable Methods and Results from Lidar-Guided Survey at El Pilar

The recent acquisition of large-scale Lidar survey data has revitalized interest regional settlement studies in the Maya Lowlands. Archaeologists agree that Lidar data must be verified on the ground before accepting interpretations of remotely identified features, with results used to construct reliable, comparative databases to advance ancient Maya land-use and settlement studies. The El Pilar Project integrates survey results – comprising field maps created with GPS and traditional reconnaissance methods – with Lidar imagery in a Geographic Information System database to construct more complete pictures of settlement distribution, landscape modification, and human-environment interactions. We describe the results of Lidar-guided survey at El Pilar along with the protocol our project developed to systematize data collection and increase the efficiency of survey. The methods we describe have proven effective for investigating Maya settlement patterns at the site scale and locating features difficult to discern in Lidar imagery.

Omeatl Tonatiuh, Anahuac Cultural Center for Self Sustainability

Mesoamerican Foods and Agriculture

Zapotecopec is an indigenous based Agricultural school and Research center located in East Los Angeles that strives to rejuvenate the Mesoamerican roots, history, and identity of their members through a self sufficient model of autonomy and self determination. This talk addresses the significance of Mesoamerican foods and agricultural practices as they relate to the preservation of culture and identity. It highlights the fact that Mesoamerican cultures live on, and are visible through the foods and everyday practices of descendant communities living in East LA. The Anahuac Cultural Center for Self Sustainability owns a plot of land where they have built all means to sustain themselves and sustain the practices and traditions of their Mesoamerican ancestors.

Andrew Kinkella, Moorpark College

Underwater Cenote Research at the Cara Blanca Pools, Belize: New Methods and Recent Discoveries

This research focuses on ancient Maya settlement at the Cara Blanca Pools, a string of 25 freshwater cenotes and lakes located in west-central Belize. Pool 1 has been the most extensively explored, with a depth of 235 ft and a geological makeup where the pool extends deep underneath the surrounding cliffs, becoming an underwater cave. The underwater cave component is named "Actun Ek Nen," which translates to "Black Mirror Cave" in the Mayan language. Underwater exploration, methodology, and archaeological finds will be discussed, including Maya ceramic sherds and the remains of a giant sloth. Maya settlement immediately surrounding the pool will also be discussed, as these structures indicate the pool was used as a pilgrimage center and sacred location for water ritual during the Late and Terminal Classic Period of ancient Maya society (AD 600-925). The presentation will end with a discussion on artifact assemblages and related structures that ritualized cenotes have in common.

