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Abstracts

(in alphabetical order by author)

Christopher Carr, Nicholas Dunning, and Thomas Ruhl

University of Cincinnati

**Title**: Using lidar and other remote sensing to study ancient Maya wetland management

**Abstract**

The ancient Maya thrived for several thousand years, building great cities, independently inventing writing, and making great art. They succeeded despite a very challenging water regime- five months of the year with excess rainfall, five months with almost no rainfall. And this in a karst landscape with very little surface water. In upland swampy areas (known as polje or bajo) they collected water for the dry season in constructed reservoirs (aguadas). In lowland swampy areas they drained water to open agricultural lands. In both cases, the modern difficulty of access to the swampy areas limits on-the-ground survey, especially on the landscape level. The proliferation of remote sensing tools, especially airborne lidar, has revolutionized the study of wetlands in tropical areas. This paper will present our preliminary study of wetland fields in the perennial wetlands around Laguna de Terminos, and in the seasonal wetlands of Yaxnohcah, both in southern Campeche, Mexico. The lidar data allows us to model water flow on a landscape level giving us hints of the ancient Maya engineering strategies. The lidar data allows us to plan on-the-ground reconnaissance survey and excavation, and to efficiently navigate to those places through the swampy areas.

Iyaxel Ixkan Cojti Ren

Vanderbilt University

**Title:** The Saqarik (Dawn) and Foundation Rituals Among the Ancient K’iche’an peoples

**Abstract**

It is proposed that the saqarik or the dawn episode, described in ethnohistoric documents from Guatemala, is a metaphor that represented a transition in sociopolitical development to legitimate newly-established political order. The metaphor of the dawn was a widespread tradition in Mesoamerica that was closely linked to foundation rituals. Foundation rituals are ceremonial activities carried out to establish new polities or dynastic rules at a specific place. Among K’iche’an groups (K’iche’, Kaqchikel, Rab’inaleb’ and Tz’utujil), foundation rituals relating to the sunrise are performed on altars oriented toward the four cardinal points. These altars are usually built around new settlements and are used for fire ceremonies or incense burning to receive the dawn. Altars of this type are dedicated to protector deities and are generally called saqarib’al or dawning place in K’iche’, although they sometimes have individual names. In this presentation it is explored the worldview of the “dawn” tradition in the highlands of Guatemala, as well as the political implications of its practice and reproduction. I will also address how the concept of saqarik is understood among K’iche’ people today.

Nicholas Dunning, Thomas Ruhl, and Chris Carr

Dept. of Geography & GIS, University of Cincinnati

**Title**: The Ancient Maya Wetland Fields of Acalan

**Abstract:** An extensive array of wetland fields is clearly visible on satellite imagery of the Laguna de Terminos area in southwestern Campeche, Mexico. The fields occur largely within a specific topographic range. Several different morphometric field forms are evident, ranging from larger, more amorphous examples, to smaller, densely packed rectangulate types. We review here available data on the environmental context of these fields. No excavation data is currently available to aid in dating the fields. We examine available data on ancient, Contact period, and historic settlement in the Laguna de Terminos region and hypothesize that the field system may well have developed over multiple cultural-historical periods. We also compare the Laguna de Terminos fields to those already known to occur along the middle reaches of the Rio Candelaria, many near the large archaeological site of El Tigre, the probable location of Itzamkanac, the capital of the Late Postclassic polity of Acalan.

Marlon V. Escamilla

Vanderbilt University

**Title:** Nahua-Pipil migration and symbolic landscape in Balsam Coast, El Salvador

**Abstract**

The Early Postclassic period migrations of Nahua speaking groups from Mexico to Central America, is known as one of the best examples of large-scale population movements in New World culture history. Historical, linguistic, and archaeological evidence indicate that the early Nahua-Pipil migrations to Central America consisted of a complex series of population movements that occurred from about AD 800 until perhaps AD 1350. At the time of the Conquest (1524), the Nahua-Pipil had established themselves in the southeast Pacific coast and southeast highlands of Guatemala, and in western and central El Salvador (Fowler 1989). The reasons why Nahua-Pipil groups migrated into this particular landscape in El Salvador and the sociopolitical situation that emerged from this population movement are still unclear. This study will analyze the earliest Nahua-Pipil settlements established in the Balsam Coast of the western part of El Salvador during the Early Postclassic (AD 800-1200) period. Specifically, I discuss the possible reasons why the Nahua-Pipil decided to build their settlements in the Balsam Coast and to what extent the locations of these archaeological sites represents a cultural process of symbolic appropriation of the landscape as a reflection of emulation associated with a diasporic migration phenomenon.

Tomas Gallareta Cervera, Anna Novotny, Brett A Houk

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**Title:** Place Making and the development of a non-paramount Royal Court at the site of Chan Chich, Belize

**Abstract**: Research on ancient Maya cities is generally focused on large paramount sites that had written records of the rulers’ activities. However, these large cities are the exception, rather than the norm, since the majority of the urban sites consist of smaller settlements. Research at the archaeological site of Chan Chich recovered evidence of the development of a non-paramount ancient city. Excavations at the Upper Plaza, the site's main royal precinct, suggest large construction projects, during the Late Preclassic and Early Classic periods. In addition to the expansion of monumental construction, the Upper Plaza was a focus of mortuary ritual for the Chan Chich elite during this time. Excavations in 1997 recovered a Terminal Preclassic royal tomb in the center of the plaza and our 2016-2018 excavations uncovered six interments containing eight individuals intrusive into Late Preclassic architecture, including another possible royal internment. In this paper, we discuss the excavation data of this non-paramount city, specifically, the construction of monumental architecture, its mortuary record and its relation to local traditions of urbanization.

Byron Hamann

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OSU

**Title**: Madrid 1528: Cortés, Weiditz, Tianquiztlatoatzin, and Others

**Abstract**: In the spring of 1528, Hernán Cortés returned to Spain for the first time since the fall of Tenochtitlán. Traveling with him were several dozen Native Americans, some of them noble ambassadors and others enslaved entertainers. On arrival in Madrid, the group was seen by Christoph Weiditz, an artist from Augsburg. The encounter resulted in a famous series of watercolors by Weiditz, showing Cortés and a number of the Native Americans. The paintings of two ballplayers, and of a log juggler, are perhaps the most famous. This talk, on themes of censorship and slavery, presents new research based on a study of the original paintings as well as a recently discovered letter written from Madrid.

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Vanderbilt University

**Title**: Boom and Bust of Ritual Cycles: The Chiapas ‘Cargo Bubble,’ 1940-1970

**Abstract**

The paper advances the idea that sudden increases in credit and liquidity cause ritual spending to go up among Mesoamerican indigenous groups, strengthening traditional institutions and ethnic identity. Specifically, I discuss the effect of government credit programs on the cost of civil-religious offices (‘cargos’) among Tzotzil and Tzeltal-Maya groups of Chiapas (Mexico). In the decades following the Mexican revolution, the government began to offer low interest loans and buy corn at fixed prices from indigenous farmers in order to minimize risk and seasonal price fluctuations. Analyzing the historical costs of over 700 cargos in Chiapas, I show that government credit caused ritual spending to increase exponentially between 1940 and 1970. After the Ejidal Bank began to issue credit to smallholders, cargo expenditures increased, on average, by 7% annually (compound growth). As liquidity and credit increased in Maya communities, farmers began to reinvest cash surpluses into prestige by volunteering to sponsor expensive patron-saint fiestas and rituals. I frame such phenomenon as a ‘cargo bubble,’ given its similarities to contemporary financial bubbles. Because cargos were scarce, Maya farmers had to compete to serve, which led the cost of fiestas to soar over time. In the 1970s, the cargo bubble bust. Ritual spending fell rapidly, only to recover – in part – in the aftermath of the Zapatista rebellion. I argue the bust of the bubble was caused by unsustainable levels of indebtedness. Oral histories from Chenalhó (where I worked) and historical data from other towns show that as the cost of mandatory cargos increased, Maya people began to rely on informal credit networks, often taking high interest loans from relatives and neighbors to cover cargo debts. In the 1960s, cargoholders began to default on their debts, triggering a wave of intra-community conflicts, religious conversion, and expulsions whose consequences are still unfolding today.

Zachary Hruby

Northern Kentucky University

**Title**: Blades of the Night Sun: An Iconographic Analysis of Copan Stela F, Its Altar, and the Stromsvik Macroblade Cache

**Abstract**: A massive obsidian macroblade cache excavated at Copan by Gustav Stromsvik in 1935 was analyzed for the first time since its discovery. The cache not only contained unworked macroblades, but also some chipped into sacrificial daggers and eccentrics. Given these new discoveries, this talk describes the iconography of nearby Stela F and its altar in relation to the largest obsidian cache so far discovered in the Maya world. An argument is made that the monuments, their caches, and the obsidian deposit placed in front of them were all related to one another as a single ceremonial and artistic program. Iconographic results suggest that the 10-year period ending recorded on the stela was celebrated through Ruler 13’s impersonation of the Nighttime Sun God, which subsequently recreated a mythological sequence of underworld sacrifice.

Phyllis S. Johnson and Markus Eberl

Vanderbilt University

**Title:** Sourcing Obsidian Blades from a Potential Lithic Workshop at the Late Classic Maya Capital of Tamarindito

**Abstract**: In 2012, the Tamarindito Archaeological Project uncovered a cache of 224 obsidian prismatic blades and 18 polyhedral cores, along with obsidian debitage in an annexed room of structure 5PS-d at the Late Classic Maya capital of Tamarindito. This cache is the largest density of obsidian recovered from any context at Tamarindito, suggesting that it may have functioned as a lithic workshop. In the present study, 35 percent (n=81) of the obsidian blades recovered were analyzed using portable x-ray fluorescence (pXRF) in order to identify the source of obsidian used to manufacture these implements. These results were compared to the chemical composition of raw obsidian samples from three primary sources (El Chayal, Ixtepeque, and San Martin Jilotepeque) in Guatemala. The results of this preliminary study demonstrate that the overwhelming majority of these artifacts were manufactured from El Chayal, which scholars have suggested was a very common but tightly controlled resource during the Late Classic period. 5PS-d is a non-elite structure located 1100 meters from the plaza, however, which leads to several questions: How did non-elites acquire such a large amount of this rare resource? Were specialists manufacturing blades for the elite? For direct distribution to other households? By examining the obsidian artifacts recovered from this workshop, we offer novel insights into the control, production, and distribution of obsidian during the Late Classic period at Tamarindito.

Rosemary Lieske

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Vanderbilt University

**Title**: GIS-based Spatial Analysis: Modeling Movement and Exchange Routes in Postclassic and Conquest Era El Salvador

**Abstract**: The use of GIS-based modeling approaches, such as least cost path and circuit analysis, provide us with a greater understanding of how ancient people moved and interacted in the landscape and illuminate possible networks of exchange. In this study, I use least cost path and circuit analysis to reconstruct the network of trade and communication routes in the Cuscatlán region of western El Salvador from AD 1500-1548. Using tributary data derived from the Relacion Marroquin (AD 1532), I investigate the ways in which Postclassic trade and tribute relations were reconfigured due to Spanish settlement and the imposition of the encomienda system. Circuit analysis and other GIS-based techniques help to identify possible trade and exchange routes of staple goods and tribute among local settlements. Such analysis highlights the interconnectivity among indigenous sites and illustrates ways in which secondary and tertiary centers of exchange were affected by Spanish administrative policy.

Matthew Meyer

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Murray State University, Department of Earth and Environmental Sciences

**Title:** Reassessing Postclassic Settlement Data from the Cerro el Vigia Hinterland of Tres Zapotes, Veracruz

**Abstract:** In 2001, a survey of the southwest slopes of the extinct Cerro El Vigia volcano was undertaken. A primary goal of the study was to describe the relationship between Tres Zapotes, an Olmec, Epi-Olmec, and Classic period center, and this adjacent region, especially as it concerned basalt exploitation for monumental sculpture and utilitarian artifacts. The survey area of approximately 24 square kilometers yielded a number of ceramics, obsidian, groundstone, and other household and ceremonial items, all of which were analyzed and extensively recorded. That study concluded that the area in question was abandoned following the Classic period. Since then, new evidence from stratigraphic excavations at Totogal, a Late Postclassic center which shares its western boundary with the earlier survey, was obtained. These new data permit the reassessment of the adjacent survey region and can better inform the Postclassic settlement pattern. In this presentation, I make a first pass at reassessing the published data from survey, focusing specifically on the Late Postclassic period, examining descriptions of diagnostic ceramics and obsidian tools. This will not only fill a temporal void in the southern Gulf lowlands Postclassic archaeological dataset, but it will also facilitate more comprehensive examinations of area demography.

Miller Wolf, Katherine A.

Indiana University East

**Title:** Bioarchaeological Evidence of Inequality in Mesoamerica from Prehistoric to Colonial Periods

**Abstract:** The manifestation of inequality is marked on human skeletal remains. This presentation will discuss three such cases from the Classic through Historical periods in Mesoamerica. As is well known, the Spanish were wildly successful in the efforts to eradicate native populations throughout the New World, except for one indigenous Maya group, the Itzá that successfully resisted Spanish colonial control until the end of the 17th century. When the Maya site of Tayasal fell to the Spanish, the Sab Bernabé Mission was constructed on top of the sacred buildings. The bioarchaeological evidence paints a bleak picture of life under Spanish colonial control and the Maya that elected to convert did so too late - those interred within the cemetery died before middle-age and suffered from ill-health. An example of the effects of British colonialism from the 18th-19th centuries was recently recovered in Belize City. A Jesuit priest collected the remains of 75+ individuals in an attic at St. John’s College. Recent research determined the approximate dates of the crania and partial post-cranial remains recovered from the attic and had once been buried on an island given the presence of mollusks growing on the bones. Historical documents note that when epidemics affected the population in the city that the wealthy British colonists would seek medical treatment but their slaves and servants would be sent to islands to die. The dates, overall skeletal robusticity, and paleodemographic profile provide powerful evidence that these are the remains of individuals quarantined to islands who did not survive their affliction. The final example comes from the Classic period site of Copan (AD 600-812) where inequality manifested in the remains of those from different social statues within the ancient urban city.

Gabriela Montero

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University of Kentucky

**Title**: Use of land and social change in the sixteenth century Eastern Lower Papaloapan Basin, Mexico

**Abstract**: During the Aztec period, populations in the Eastern Lower Papaloapan Basin in the southern Mexican Gulf Coast region produced several crops provisioning the empire, such as cotton and cacao. Maize was likely produced for local subsistence. From archival and archaeological research, we know that there was a change towards sugar cane production and cattle raising when the Spaniards settled in the region. New cattle estancias and a sugar mill reconfigured the prehispanic communities in terms of preexistent economic structures of trade and labor. This necessarily impacted how everyday life was experienced by both Indigenous populations and Spaniard migrants, later also including African groups that arrived in Veracruz as part of the slave trade. This paper focuses on historic documents and preliminary archaeological evidence to assess how the change in land use affected the local natural landscapes and economies, influencing the new communities that were in process of formation.

Alanna Radlo-Dzur

Ohio State University

**Title:** Reevaluating scent and sound in the Borgia group

**Abstract**

Central Mexican painting traditions utilize a complex system of symbolic conventions to represent invisible emanations such as scent, breath, and sound. This study establishes a systematic analysis of how these concepts are represented in the Borgia group manuscripts. Scrolls, volutes, wands, and tethers are deployed with a range of iconography to signal invisible emanations. Sorting these into groupings based on their component parts shows how they describe categories of perception that are quite different than the Western model of the five senses. These distinctly Mesoamerican categories of sensorial perception are reinforced by a series of Nahuatl terms. Many are rooted in relationship to ihiyotl, meaning breath and wind, but also signifying aliveness, or evidence of life, as well as skill. Connecting visual systems of representation to categories of perception present in language demonstrates the value of an interdisciplinary approach to open new avenues for understanding Mesoamerican philosophy.

Pedro Guillermo Ramón Celis

Indiana University Bloomington

**Title:** Archaeology of indigenous colonialism; Guiengola, a Zapotec fortress in the Isthmus of Tehuantepec, Oaxaca, Mexico

**Abstract**: Colonialism is a concept used frequently to describe the political and economic expansion of European influence across the globe. This work will look at other examples of this social phenomenon that occurred in different social and cultural contexts, in this case, the archaeological city of Guiengola, located in the Isthmus of Tehuantepec. According to ethnohistorical records, Guiengola was built by the Zapotec kingdom of Zaachila in the 15th century as part of a series of fortress distributed between the Central Valleys of Oaxaca, and the Pacific Coast. The purpose of the fortresses was to secure a safe route for commerce and the movement of people between the two regions and to protect the growing population of Tehuantepec, a new Zapotec capital in the region. This growth of Zapotec influence in the Postclassic is framed within the Mexica’s own expansion to Soconusco and Guatemala. This paper is going to present data and analysis from the field se ason of summer 2018, carried out by the author at the site in order to understand the urban development of Guiengola, as well as gather the archaeological evidence to argue for the existence of a Zapotec colonial project in the Postclassic.

Kevin Wann

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Murray State University

**Title**: An examination of Middle Formative through Early Classic ceramic attributes from stratified contexts at Matacanela, Veracruz

**Abstract**: This study compares Middle Formative through Early Classic period ceramic attributes, including temper characteristics, vessel shape, and surface modifications, from stratified deposits at Matacanela Site in Veracruz, Mexico to other contemporaneous sites located in the Tuxtla Mountains and riverine bottomlands in the southern Gulf Lowlands. Specifically, the study compares data from excavated deposits in the Tepango Valley Archaological Survey and the Eastern Papaloapan Basin, and San Lorenzo and La Venta east of the Tuxtla Mountains. On the basis of obsidian source distributions, it has been hypothesized that Matacanela was located along a boundary between these two geographically different areas. This paper attempts to discern if Matacanela’s location along a geographical boundary is reflected also in the technological choices that potters were making—whether geographical and other exchange networks were also reflected in ceramics. Lastly, we consider other potential sources of divergence between sites.

Marc Wolf

Indiana University East/City University of New York)

**Title**: Bringing Mesoamerica Home

**Abstract**: Maya archaeology—Mesoamerican archaeology—as the names imply, is a discipline that is predominantly fixed within the geography of Latin America. Evidence behind the sciences from ethnobiology to settlement pattern analysis to bioarchaeological studies is recovered from remaining cultural material that was created and left behind by the ancient peoples of the modern countries of Mexico, Guatemala, Belize, Honduras, and points farther south. Naturally many studies and research is conducted farther abroad—in the US or Europe for example—in specialized laboratories and with equipment not necessarily available in an artifact’s land of origin, however primary context lies within the tropics of Central America. Construction of a mock archaeological site—complete with a multi-tiered Maya structure—will bring the experience of scientific analysis of parts of the Maya world to the US Midwest. The campus of Indiana University East hosts the Archaeological Research Center (the ARC)—a recreation of several ancient structures and activity areas constructed for the sole purpose of excavation by students seeking archaeological field-school experience. Of the many opportunities that the center affords, planning, layout, materials election, and the physical building of the platforms and structures are particularly noteworthy. After many years of surveying and computer settlement pattern analysis, one of the perspectives that a researcher can overlook is that of the building itself—the labor, time, and expenditures necessary for construction contextualized by ancient technology. My participation in the IUE ARC has helped to overcome this deficit and has generated interesting metrics in logged hours, volume, and other human resources.