

DUMBARTON OAKS  
PRE-COLUMBIAN STUDIES



SYMPOSIUM

WAVES OF INFLUENCE: REVISITING COASTAL CONNECTIONS BETWEEN  
PRE-COLUMBIAN NORTHWEST SOUTH AMERICA AND MESOAMERICA

DUMBARTON OAKS, WASHINGTON, D.C.

October 11-12, 2019

WAVES OF INFLUENCE: REVISITING COASTAL CONNECTIONS BETWEEN  
PRE-COLUMBIAN NORTHWEST SOUTH AMERICA AND MESOAMERICA

A Symposium at Dumbarton Oaks, Washington, D.C.

October 11-12, 2019

**Friday, October 11, 2019**

8:45 a.m. Coffee

9:15 a.m. Welcome and Introduction  
Frauke Sachse, Dumbarton Oaks  
Christopher Beekman and Colin McEwan, Symposiarchs

**Session I: *Deep Time and Broad Brush***

**Moderator: Frauke Sachse, Dumbarton Oaks**

9:45 a.m. Christopher Beekman, University of Colorado Denver  
Colin McEwan, Independent Scholar  
*Waves of Influence: Revisiting Maritime Contacts along the Pacific Coast*

10:30 a.m. Sonia Zarrillo, Cotsen Institute of Archaeology  
Michael Blake, University of British Columbia  
*Tracing the Movement of Ancient Cacao (*Theobroma cacao* L.) in the Americas:  
New Approaches*

11:15 a.m. Coffee

11:45 a.m. Richard Callaghan, University of Calgary  
Alvaro Montenegro, The Ohio State University  
Scott Fitzpatrick, University of Oregon  
*The Effects of ENSO on Travel along the Pacific Coast of the Americas*

12:30 p.m. Lunch/Speakers' Photograph

**Session II. *Early vs. Late Networks along Two Key Coastlines***

**Moderator: Patricia McAnany, University of North Carolina at Chapel Hill**

2:00 p.m. Guy Hepp, California State University, San Bernardino  
*Landfalls, Sunbursts, and the Capacha Problem: A Case for Pacific Coastal  
Interaction in Early Formative Period Mesoamerica*

2:45 p.m. John Pohl, Cal State LA/UCLA  
Michael Mathiowetz, Independent Scholar  
*Our Mother the Sea: Rituals, Feasts, Marriages, and Pacific Coastal Exchange in  
Postclassic Mexico*

3:30 p.m. Coffee

4:00 p.m. Rebecca Mendelsohn, Metropolitan Museum of Art  
*Globalization and Political Authority on the Central American Coast, 300 BC–  
AD 300*

4:45 p.m. Eugenia Ibarra Rojas, Universidad de Costa Rica  
*Trading in the Sixteenth Century: Chibchan "Rich Men" and Mesoamericans in  
Southern Central America*

5:30 p.m. Reception

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**Saturday, October 12, 2019**

9:00 a.m. Coffee

**Session III. *Changing Networks out of Ecuador***

**Moderator: John Verano, Tulane University**

- 9:30 a.m. James Zeidler, Colorado State University  
José Beltrán Medina, Instituto Nacional de Antropología e Historia  
*Archaeological Evidence for Long-Distance Maritime Contacts between the Tesoro/Comala/Armería Phases, West Mexico, and the Jama-Coaque Tradition, Coastal Ecuador*
- 10:15 a.m. Maria Masucci, Drew University  
John Hoopes, University of Kansas  
*Evaluating Pre-Columbian Contact between Ecuador and Costa Rica: A Ceramic Approach*
- 11:00 a.m. Coffee
- 11:30 a.m. Kim Cullen Cobb, Smithsonian Museum Conservation Institute  
Christopher Beekman, University of Colorado Denver  
Emily Kaplan, Smithsonian National Museum of the American Indian  
Thomas Lam, Smithsonian Museum Conservation Institute  
*Cached or Carried? The Craft and Use of Axe-Monies in Mesoamerica*
- 12:15 p.m. Lunch

**Session IV. *The Long Reach of Spondylus***

**Moderator: Kenneth Hirth, Penn State University**

- 1:30 p.m. Benjamin Carter, Muhlenberg College  
*Spondylus as a Driver of Interregional Exchange: Mapping Recent Ecological Research on Spondylus to Inform the Hypothesis*
- 2:15 p.m. Christopher Beekman, University of Colorado Denver  
*Spondylus and Its Counterparts in Mesoamerica: Affinities and Oppositions*
- 3:00 p.m. Coffee
- 3:30 p.m. Richard Lunniss, Universidad Técnica de Manabí, Portoviejo, Ecuador  
*The Origins of Trade and the Use of Sailing Craft on the Coast of Ecuador: The View from Salango*
- 4:15 p.m. Colin McEwan, Independent Scholar  
Richard Lunniss, Universidad Técnica de Manabí, Portoviejo, Ecuador  
*La Plata Island, Ecuador: An Oceanic Sanctuary from 2000 BCE to 1531 CE*

# WAVES OF INFLUENCE: REVISITING COASTAL CONNECTIONS BETWEEN PRE-COLUMBIAN NORTHWEST SOUTH AMERICA AND MESOAMERICA

A Pre-Columbian Studies Symposium, organized by Christopher Beekman (University of Colorado Denver) and Colin McEwan (Independent Scholar)

## ABSTRACTS

**Christopher Beekman**, University of Colorado Denver  
**Colin McEwan**, Independent Scholar

### *Waves of Influence: Revisiting Maritime Contacts along the Pacific Coast*

In this paper, we reassess the factors shaping Pre-Columbian maritime contacts between western Mexico and the Pacific coast of northwest South America. Interest in the topic has ebbed and flowed like the tide, but returns each time because it grants us a glimpse of a greater Pre-Columbian world that transcends the discrete culture areas bequeathed to us from the 1940s. The traditional culture areas of Mesoamerica and the Andes hamper research as they omit precisely those areas that most directly challenge the central assumptions of isolated centers of cultural development.

We first present a condensed history of research into the topic, followed by Conquest and Colonial era accounts that identify modes of coastal interaction at that time. After a consideration of *longue durée* geographic factors, we discuss the historically recorded forms of watercraft and the evidence for their time-depth. We draw particular attention to linguistic and biological evidence that, combined with the ethnohistoric accounts, suggests that coastal populations were actively engaged in both local and long-distance movement of plants, animals, goods, and knowledge. This in turn lays the groundwork for the symposium presenters to address their respective areas in detail.

We offer several working hypotheses to frame the individual contributions. With four millennia of activity along 4000 km of coastline, the region never formed a single network. Actors were unaware of the full extent of interaction, which changed configuration many times over the prehistoric period. We suggest that the coast might usefully be conceptualized as an evolving network built up from layers of close interaction, with various nodes emerging and disappearing over time. We have also encouraged participants to set aside the often disconnected evidence cited in the past and focus on their individual case studies.

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**Christopher Beekman** received his PhD from Vanderbilt University and is an associate professor of Anthropology at the University of Colorado Denver. His research focuses on sociopolitical organization in ancient western Mexico, and that region's interaction with its neighbors. He has participated in archaeological fieldwork in Ecuador, Egypt, El Salvador, Guatemala, and the United States. He has directed excavation projects at Llano Grande and Navajas, and surveys in the La Primavera region and in the Magdalena Valley (with Verence Heredia Espinoza), all in Jalisco, Mexico. He is currently working with Verence Heredia Espinoza on the unpublished collections from Los Guachimontones. He has held fellowships at Dumbarton Oaks Research Library and the Sainsbury Research Unit, and has been an invited professor at Université Paris I - Panthéon-Sorbonne. He has authored or edited several books including *Shaft Tombs and Figures in West Mexican Society* (with Robert Pickering) (2015). His edited volume *Migrations in Late Mesoamerica* and co-edited volume *Anthropomorphic Representations in Highland Mesoamerica: Gods, Ancestors, and Human Beings* (with Brigitte Faugère) are forthcoming in 2019. Two additional co-edited volumes in preparation address mobility and migration in Mesoamerica (with M. Charlotte Arnauld and Grégory Pereira), and the diversity of western Mexican cultures (with Joshua Englehardt and Verence Heredia Espinoza).

**Colin McEwan** holds a PhD in Anthropology from the University of Illinois at Urbana-Champaign and from 2012-2019 was Director of Pre-Columbian Studies at Dumbarton Oaks Research Library and Collection, Washington, D.C. He has carried out fieldwork in diverse settings including the Andean Highlands of Peru, Colombian Amazonas, coastal Ecuador, and Patagonia. From 1979-1991 he directed the Agua Blanca Archaeological Project focused on the principal town of the Manteño Señorío of Salangome in the Machalilla National Park, coastal Ecuador. He was formerly head of the Americas Section at the British Museum, London where he curated exhibitions and authored or co-edited publications including *Ancient Mexico in the British Museum* (1994); *Patagonia: Natural History, Prehistory and Ethnography at the Uttermost End of the Earth* (1997); *Pre-Columbian Gold: Technology, Style and Iconography* (2000); *Unknown Amazon: Culture in Nature in Ancient Brazil* (2001); *Turquoise Mosaics from Mexico* (2006); *El Caribe Pre-Colombino* (2008); *Ancient American Art in Detail* (2009); *Moctezuma: Aztec Ruler* (2009); *Turquoise in Mexico and North America* (2012); and *Inca Sacred Space: Landscape, Site and Symbol in the Andes* (2014). He is currently finalizing a co-edited catalogue of the Bliss Collection of Pre-Columbian Art from Central America and Colombia together with an accompanying scholarly volume (forthcoming 2020). He is particularly interested in exploring alternate ontologies and in reconstructing and interpreting the roles that objects play in prehistoric cultural landscapes.

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**Sonia Zarrillo**, Cotsen Institute of Archaeology

**Michael Blake**, University of British Columbia

*Tracing the Movement of Ancient Cacao (*Theobroma cacao* L.) in the Americas: New Approaches*

We present preliminary results of a pilot project to test well-documented archaeological collections for three lines of evidence (absorbed theobromine residues, starch grains, and ancient DNA) to show that the origins of Mesoamerican cacao (*Theobroma cacao* L.) use and domestication can be traced to the Upper Amazon regions of northern South America as early as 5300 years ago. We explore the implications of these recent findings for our new research on archaeological collections of artifacts from Ecuador, Colombia, Central America, and Mexico aimed at helping us better understand the timing, distribution, and range of uses for cacao as the plant was moved northwards out of its South American homeland. Was the tree domesticated more than once at different times in different places? Was it dispersed by land, by sea, or by both routes, and when? Finally, we discuss our pilot project to look for a fourth line of evidence using paleo-proteomics—a technique with the potential to help identify a range of other ingredients that may have been used, along with cacao, to make ceremonial beverages.

**Sonia Zarrillo** is a Postdoctoral Fellow at the Cotsen Institute of Archaeology at UCLA and a Research Associate in the Department of Anthropology at the University of British Columbia. She received her PhD from the University of Calgary (2012). As an archaeologist and paleoethnobotanist, her research focuses primarily on the interaction between people and plants in the past and how these data inform us on the origin and dispersal of domesticated plants and the transition to agriculture, human adaptation to ecological regions and the development of agricultural systems, and cultural evolution and interaction. Her main regions of study are the Central and Northern Andes, including the adjacent lowland tropical forest and arid coastal zones. Her most recent research engaged an interdisciplinary team to establish the earliest evidence to date for *Theobroma cacao* in the Americas (~5300 BP) from SE Ecuador and confirmed the Upper Amazon as the origin of domesticated cacao.

**Michael Blake** received his PhD from the University of Michigan in 1985 and joined the Department of Anthropology at the University of British Columbia the following year. Blake's work has focused on the organization and structure of pre-State and early State societies, examining the ways in which social, political, and economic organization changes through time. For the past two decades, he has been studying the role of agriculture and food production—in particular, the history of corn's domestication and spread through the ancient New World. Recent work has focused on the nature and timing of plant domestication. He has had the privilege of working with a large team of experts in paleo-ethnobotany who are at the forefront in developing methods for identifying ancient DNA, biochemical markers, and both macro- and micro-remains of plants that have long been of great economic, social, and ritual importance to indigenous peoples of the Americas.

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**Richard Callaghan**, University of Calgary

**Alvaro Montenegro**, The Ohio State University

**Scott Fitzpatrick**, University of Oregon

*The Effects of ENSO on Travel along the Pacific Coast of the Americas*

For decades, contacts have been suggested between Ecuador and western Mexico, occurring from 400 BC to the sixteenth century, if not earlier. The frequency of these patterns or the degree to which they were sustained is currently unknown. Evidence that compares features such as shaft tombs and mortuary offerings, metallurgy, ceramic technology and style, design motifs, language, ethnographic sources, and costume, indicates that contact was probably occurring sporadically, at least from 400 BC to 400 AD, and then in the following periods: 800 AD, 1200 AD, 1300 AD, and 1600 AD, but the evidence does not appear continuous. In recent years, many of these lines of evidence have been expanded upon.

Computerized simulation programs have been used in a number of different regions to investigate archaeological and historical problems, such as exploration strategies, population dispersals, maritime trade and interaction, population origins, and more recently, the effects of El Niño Southern Oscillation (ENSO) on population dispersal in the Pacific. In an earlier study, a computer simulation was designed to evaluate both historic and prehistoric voyaging problems to examine the difficulty of maintaining sustained contact between western Mexico and Ecuador and enhance understanding of the level of navigational skill necessary to make such trips.

This study incorporated the performance characteristics of sailing rafts with statistical average wind and current data. The results showed that the voyages from West Mexico to Ecuador required extended periods without visibility of land. Newly available high-resolution climatic and oceanographic datasets have emerged and are used to revisit this issue, taking into consideration ENSO events. This analysis provides a more robust framework in which distributions of cultural traits, genes, and languages can be compared, allowing for a better understanding of patterns and mechanisms of contact.

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**Richard Callaghan** is a Professor in the Department of Anthropology and Archaeology at the University of Calgary, Canada. He has conducted archaeological and ethnological research in Western Canada, Central America, South America, and the Caribbean. His primary research includes computer modeling of historical and archaeological problems dealing with migrations, maritime cultural contacts and interaction spheres, and voyages of discovery. His research has focused on the colonization of Palau, Madagascar, the Caribbean Islands, the Marianas Islands, Magellan's crossing of the Pacific, the avenues for the prehistoric introduction of *Gallus gallus* to Chile from Polynesia, Edo period wrecks on the Northwest Coast of North America, and Neolithic voyaging around the British Isles. Recently he has published on the effects of the El Niño Southern Oscillation cycle (ENSO) on the Polynesian expansion across the Pacific with Alvaro Montenegro and Scott M. Fitzpatrick. Other ongoing research with Montenegro, Fitzpatrick, and others is on the pathways of human colonization through Wallacea.

**Alvaro Montenegro** is an associate professor at The Ohio State University's Geography Department. He left his native Brazil in 1999 to seek a PhD in Physical Oceanography at Florida State University, working on dynamics of deep currents off the Brazilian shelf. The shift to his current interests in global climate dynamics and past human-environment interactions took place as he was exposed to numerical models during a postdoc at the University of British Columbia.

**Scott Fitzpatrick** is a Professor in the Department of Anthropology and Associate Director of the Museum of Natural and Cultural History at the University of Oregon. He is an archaeologist who specializes in the prehistory and historical ecology of island and coastal regions, particularly the Pacific and Caribbean. Much of his research has focused on prehistoric colonization events, seafaring strategies, adaptations to smaller islands, exchange systems, and human impacts on ancient environments. Dr. Fitzpatrick is the founding co-Editor of the *Journal of Island and Coastal Archaeology*, and has published several books and over 100 journal articles and book chapters.



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**Guy Hepp**, California State University, San Bernardino

*Landfalls, Sunbursts, and the Capacha Problem: A Case for Pacific Coastal Interaction in Early Formative Period Mesoamerica*

In the 1960s, Ford argued that the first Pacific coastal Mexican pottery should more closely resemble that of northern South America than the early highland Mexican wares of the Tehuacán tradition. In the 1970s and 1980s, Kelly argued that Colima's Capacha assemblage represented one of several "landfalls" of technological and stylistic influence emanating from its southern front among Valdivian, Machalillan, or Puerto Hormiga potters. Revisiting Ford's arguments in the 1990s suggested independent developments in various places and determined that interregional similarities are too scant (and radiocarbon dates too geographically disordered) to indicate diffusion from South America. Barra and Locona pottery from the Soconusco, markedly dissimilar from South American wares in their heavy emphasis on tecomates, further muddied the waters by suggesting Central American influences. The rise and fall of interest in long-distance interaction between Mesoamerica and regions to the south has partly followed the abandonment of diffusionism in Anglophone archaeology. Interest in interaction is now reemerging, albeit with new theoretical influences and considerations of style, the complicated material records produced by itinerant craftspeople, and boundary politics. Recently, archaeologists applying Appadurai's concept of "disjuncture" have argued for interaction models emphasizing both similarity and difference among supposed contact partners to better reflect complex interactions. In this paper, I consider early Pacific coastal pottery, especially from West Mexico, Oaxaca, and Ecuador. I focus on the "sunburst" iconography traditionally associated with the Capacha phase but also found in other early Pacific coastal ceramic traditions. I also consider aspects of vessel form that complicate models of simple diffusion from a single source. I conclude that indicators of interaction between distant areas of the Pacific Coast do exist and that these are consistent with at least two major external sources of ceramic influence in Early Formative period Mesoamerica. Understanding local rearticulations of these influences, and thus the actual advent of pottery in several regions, will require more evidence.

**Guy Hepp** is an Assistant Professor of Anthropology at California State University, San Bernardino. He holds a B.A. and a PhD from the University of Colorado at Boulder and an M.A. from Florida State University. His research is focused on early complex societies of Mesoamerica and his recent studies have considered the archaeology of La Consentida, an Early Formative period (2000–1000 cal BC) village in Oaxaca, Mexico. This project, funded by the National Science Foundation and the Fulbright Program, was awarded the Society for American Archaeology's 2016 Dissertation Award. Hepp recently published a book based on his dissertation research with the University Press of Colorado. He has also published several papers regarding mortuary archaeology and the iconography, depositional contexts, technological characteristics, and cosmological implications of ancient ceramic figurines and musical instruments.

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**John Pohl**, Cal State LA/UCLA

**Michael Mathiowetz**, Independent Scholar

*Our Mother the Sea: Rituals, Feasts, Marriages, and Pacific Coastal Exchange in Postclassic Mexico*

The pioneering fieldwork of Seler, Lumholtz, Saville, Sauer, Vaillant, and Ekholm led the Sociedad Mexicana de Antropología to officially recognize "Mixteca-Puebla" as the fourth and last major cultural horizon of the ancient Mexican world in 1945. By 1960, this cultural horizon had been reduced to an Aztec provincial phenomenon. Attractive as this proposal has been to "big" society theorists in Mesoamerica, it has always created more problems than it solved by grossly simplifying the critical role played by the peoples of the Pacific Coast in building the transregional economy on which the Aztec empire was eventually predicated. We will focus on a number of significant organizational characteristics including decentralized political systems, the introduction of a new wealth finance economy, and religious ritualism shared between the Eastern Nahua, Mixtec, Zapotec, Aztatlan, and the Casas Grandes traditions.

**John Pohl** is Adjunct Professor in Art History at UCLA and Lecturer in Anthropology at California State University Los Angeles. He has received numerous fellowships and grants for his research on the Nahua, Mixtec, and Zapotec civilizations of southern Mexico and is now investigating the roles they played in a Pacific coastal exchange system that linked Oaxaca directly with West Mexico. In addition to his academic pursuits, Dr. Pohl has had a prolific career as a writer, designer and curator for major museums and exhibitions around the country including "Sorcerers of the Fifth Heaven: Art and Ritual in Ancient Southern Mexico" for Princeton University, "The Aztec Pantheon and the Art of Empire" for the Getty Villa Museum, and "The Children of Plumed Serpent, the Legacy of Quetzalcoatl in Ancient Mexico" for the Los Angeles County Museum of Art and the Dallas Museum of Art.

**Michael Mathiowetz**, PhD, is an archaeologist specializing in the prehistory and history of indigenous people spanning the U.S. Southwest, northern Mexico, and west Mexico. Over the past two decades, he has participated in archaeological fieldwork both in the United States and in Mexico, including California, Arizona, Baja California, Sonora, Chihuahua, Nayarit, and Jalisco. His expertise includes a focus on the Aztatlán and Casas Grandes cultures and their relation to Pueblo III to IV social dynamics in the Southwest. His ongoing research integrates the archaeology, ethnohistory, and ethnology of multiple geographical regions, and examines long-distance interaction between ancient Mesoamerican and Puebloan societies and the present-day continuities. Recent field experience includes a 2014–2015 postdoctoral research fellowship at Centro INAH-Nayarit that included leading excavations at a prehispanic Aztatlán elite residence near Ixtlán del Río, Nayarit.

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**Rebecca Mendelsohn**, Metropolitan Museum of Art

*Globalization and Political Authority on the Central American Coast, 300 BC–AD 300*

The inclusion of northwestern Costa Rica as the southern periphery of Mesoamerica has often been suggested based on the recovery of Mesoamerican-style objects from this zone. Jade objects, in particular, are frequently linked to Olmec and Maya art styles. Yet several scholars have pointed out that many of these objects share styles and depositional contexts dating to an era between the fall of the Olmec capital of La Venta and the rise of the Classic-period Maya. This paper explores evidence for interaction among Late-Terminal Formative peoples spanning the Pacific coast from southern Chiapas to the Nicoya peninsula. I argue that a globalization event occurred between 300 BC and AD 300, in which local peoples adopted elements of a “global culture” into local traditions. One example is the widespread adoption of a style of resist-decorated pottery known as Usulután. Though Usulután ceramics are often associated with El Salvador, where they are recovered in large numbers, ceramics of this style are recovered throughout the study zone. Provenance studies have revealed that Usulután-style pottery was frequently produced locally.

The era between 300 BC and AD 300 is also associated with notable changes in burial patterns and in increase in status-affirming objects in both southern Mesoamerica and northwestern Costa Rica. A suite of personal instruments of power, including jade pendants, zoomorphic scepters, and stone seats, represent shared notions of authority along the Pacific coast during this era. This paper addresses some of the common motifs associated with these status-affirming objects, while also addressing the regional diversity in the application of these themes. The procurement of status-affirming objects and participation in a network of elites are explored as possible motivations for the timing and geographic limits of this globalization event. I conclude that in addition to identifying moments of heightened interregional interaction, archaeologists should apply agency approaches to deduce the underlying motivation for the adoption of elements of “global culture.”

**Rebecca Mendelsohn** is a Sylvan C. Coleman and Pam Coleman Fellow with the Metropolitan Museum of Art. She received her PhD in anthropology from the University at Albany, SUNY in 2017 and has held pre- and post-doctoral fellowships with the National Science Foundation, Fulbright, Dumbarton Oaks, and the Smithsonian Tropical Research Institute. Mendelsohn’s research focuses on the long-term resilience of coastal lowland societies through the investigation of local environmental adaptations, sociopolitical strategies, and shifting patterns of interregional interaction. Her primary fieldwork takes place at the Pacific coastal capital of Izapa, Chiapas, Mexico, where she has directed the Izapa Household Archaeology Project since 2014. Additional fieldwork experiences in Costa Rica, Panama, Belize, Greece, and Cyprus also inform her work.

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**Eugenia Ibarra Rojas**, Universidad de Costa Rica

*Trading in the Sixteenth Century: Chibchan “Rich Men” and Mesoamericans in Southern Central America*

Ethnohistoric studies demonstrate that Chibchan trade in southern Central America was affected by the presence of Mesoamerican and southern traders and products, especially in the final period before Spanish arrival (800-1600 A.D.). There is evidence that such trade occurred, although how, where, and when is not always clear. It is evident however, that Chibchan “rich men”, powerful chiefs, competed for valuable foreign goods to enhance their power and prestige. Late period Mesoamerican migrations, especially into Nicaragua and Costa Rica, created pluricultural spaces where resources and products were significant to different groups for different reasons. This paper will focus on the natural resources of the area, especially those on the Pacific Coast. It will describe their exploitation, their elaboration, and their circulation, considering their mobilization among and between members of the different cultures present in this part of the isthmus. Ethnohistoric information on cotton, gourds, cacao, tobacco, and salt, as well as their transformation into products like cloth or mantas will be discussed. The aforementioned products were of interest to every ethnic group present, thus trade and exchange frequently placed them in negotiating roles. The analysis of their activities demonstrates the use of determined equivalencies, using cotton cloth or mantas, white or red *chaquira*, and native animals as a means of exchange that continued into very early colonial times. The objects specified were incorporated first into important local trade networks built upon Chibchan caciques’ hierarchical kinship ties, and the changing political and social relations with Mesoamerican merchants and peoples.

**Eugenia Ibarra Rojas** graduated from the Universidad de Costa Rica as an anthropologist and an historian. Her development as an ethnohistorian has evolved within an interdisciplinary context alongside Archaeology, History, Linguistics, and Social Anthropology. The practice of Ethnohistory in Southern Central America requires input from multiple fields, and she has been fortunate to have shared research with the leading experts in the region. Her research agenda has centered on the ethnohistory of indigenous peoples of Nicaragua, Costa Rica, and Panama. Sociopolitical organization, subsistence practices, settlement patterns, routes, trade and exchange activities, warfare, and religious ideas have been the main topics of interest. Sociocultural change in pluri-ethnic settings during contact period has been particularly central, as can be seen in *Fronteras Étnicas en la Conquista de Nicaragua y Nicoya. Entre la Solidaridad y el Conflicto* (2001), and *Pueblos que Capturan. Esclavitud Indígena al Sur de América Central del Siglo XVI al XIX* (2012). Her accomplishments have opened doors to a deeper understanding of the history of indigenous Central America, mainly through publications and conferences, but also by disseminating research results through the formal education programs of Costa Rica and Nicaragua.

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**James Zeidler**, Colorado State University

**José Beltrán Medina**, Instituto Nacional de Antropología e Historia

*Archaeological Evidence for Long-Distance Maritime Contacts between the Tesoro/Comala/Armería Phases, West Mexico, and the Jama-Coaque Tradition, Coastal Ecuador*

In spite of a long tradition of scholarship dedicated to the theme of prehispanic maritime contacts between the Pacific coastal areas of Ecuador and Mesoamerica, most arguments for these contacts have been based on a wide variety of trait comparisons between ill-defined cultural sequences in the respective contact zones, often spanning multiple centuries. In this paper, we examine specific archaeological evidence suggesting direct maritime contacts between coastal Colima cultures (Tesoro, Comala, and Armería Phases) of West Mexico and the Jama-Coaque cultural tradition (Muchique Phase 2) of northern Manabí, coastal Ecuador. First, we show when and how some specific ceramic traits appear in coeval archaeological contexts (ca. 450-650 CE) at two archaeological sites in coastal Colima State, west Mexico. Three vessel forms in particular are examined: (a) shallow pedestal bowls (*compoteras* or *cajetes con base pedestal*); (b) heavy ceramic seats or platters (*asientos-platón*) having either polypod supports or thick annular bases; and (c) miniaturized olla forms (*lliptapurus* or *coqueros*) for storing powdered calcium carbonate (*llipta*) from ground seashells employed in the consumption of coca (*Erythroxylum* spp.). All three vessel forms fall outside the canons of coastal Colima ceramic traditions and have been identified as intrusive from the south, while the coca plant itself is native to South America. Likewise, a decorative feature indicative of high status on Comala phase ceramic figurines is also intrusive in Jama-Coaque figural sculpture and similarities in bioarchaeological evidence found in human crania from the two areas suggest that West Mexican dental modification patterns may provide another provocative link between these two contact zones. Finally, comparisons of the archaeology and inferred social complexity of the two contact areas are discussed and a model of emissary trading and ritual commensality is invoked to explain this specific example of maritime contact.

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**James Zeidler** is an Emeritus Research Scientist at Colorado State University and maintains academic affiliations as visiting professor with the Archaeology Program of Ecuador's Escuela Superior Politécnica del Litoral and as Reader at the Dumbarton Oaks Research Library and Collection. He is a Registered Professional Archaeologist (RPA) with over 45 years of experience. He received his Ph.D. in Anthropology from the University of Illinois at Urbana-Champaign with concentration in South American prehistory. He has taught archaeology and heritage resource management at the university level in Ecuador and in the United States and has conducted archaeological field research in Ecuador from 1974 to the present. He has published extensively on his Ecuadorian field research, with special areas of focus on the Valdivia, Chorrera, and Jama-Coaque cultures of coastal Ecuador. He is currently engaged in on-going archaeological and ethnohistorical research on the prehistory and colonial history of northern Manabí Province.

**José Beltrán Medina** studied architecture at the Universidad Nacional Autónoma de México, archaeology at the Escuela Nacional de Antropología e Historia, and received his master's and doctoral degrees at the Universidad de Baja California. He currently serves as professor of scientific research at the Instituto Nacional de Antropología e Historia in Nayarit State, west Mexico. He has participated in 32 archaeological projects, serving as project director for 26 of these. He specializes in the western Mesoamerican region with field experience in Nayarit, Colima, Michoacán, Guerrero, Baja California, and the Maya area. His topical specialty is in archaeomalacology and the role of marine and estuarine faunal exploitation in the development of coastal Mesoamerican societies. He has written extensively on long-distance exchange relationships at the local and regional level with the Mesoamerican plateau as well as other regions of the Americas, such as coastal Central America and the northern Andean area.

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**Maria Masucci**, Drew University

**John Hoopes**, University of Kansas

*Evaluating Pre-Columbian Contact between Ecuador and Costa Rica: A Ceramic Approach*

Archaeologists have long noted similarities in ceramic technologies and traditions between Costa Rica and Ecuador. These are relevant for models of culture change, whether the result of direct interactions or parallel cultural processes in the emergence of social complexity. We test the alternatives of direct, long-distance contact along the Pacific coast or traditions that are parallel but independent. To date, assertions of relationships have been based upon inductive observations of similar ceramic traits such as polychrome fine-paste wares. However, the possibility that these were the result of direct, long-distance contact has yet to be tested through a systematic evaluation of specific hypotheses based upon contextualized evidence. In this paper, we focus upon archaeological data from the Pacific coasts of Costa Rica and Ecuador during the period of ca. 800 – 1200 CE as a means for testing whether, when, and how ceramic styles and technology of southern Greater Nicoya were either directly or indirectly related to those of the ceramic phases of coastal Ecuador. Our analysis draws upon style, design, and iconographic data.

**Maria Masucci** received her doctorate from Southern Methodist University, specializing in New World Archaeology followed by post-doctoral training in the application of Geological and Materials Science techniques to the study of ancient ceramics at the Center for Materials Research in Archaeology and Ethnology at MIT. Her research focus is on ancient land use and subsistence adaptations in the coastal lowlands of Ecuador, which encompasses her current work on ancient ceramic technology, craft production, and the interplay of culture, technology and socio-political complexity. She also participates in research on the first ceramics of the Early Neolithic of Portugal. She is a Professor of Anthropology at Drew University.

**John Hoopes** received his PhD in anthropology from Harvard University and is a specialist in the archaeology of the Isthmo-Colombian Area. His interests include the origins of ceramic technology and the emergence of social complexity as well as lapidary arts, metallurgy, practices identified as shamanism, and popular interpretations of the ancient past. He has been undertaking research on the archaeology of Costa Rica since 1978 and has participated in archaeological fieldwork in coastal Ecuador. He was co-editor (with Jeffrey Quilter) of *Gold and Power in Ancient Costa Rica, Panama, and Colombia* (Dumbarton Oaks, 2003) and is currently co-editing a catalogue of objects from Costa Rica, Panama, and Colombia in the Bliss Collection, as well as another volume on Isthmo-Colombian archaeology to be published by Dumbarton Oaks in 2020. He is a Professor in the Department of Anthropology at the University of Kansas.

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**Kim Cullen Cobb**, Smithsonian Museum Conservation Institute

**Christopher Beekman**, University of Colorado Denver

**Emily Kaplan**, Smithsonian National Museum of the American Indian

**Thomas Lam**, Smithsonian Museum Conservation Institute

*Cached or Carried? The Craft and Use of Axe-Monies in Mesoamerica*

Dorothy Hosler's metallurgical research remains the best-known and best-supported analysis of long-distance relationships between Pre-Columbian western Mexico and Ecuador. Copper axe-money in particular is one of the most cited pieces of evidence for commercial contact between these regions. Few have been excavated, but early reports indicated that the axes were found both in burials or cached in jars within buildings, occurring as single examples or up to several hundred in number. Early Spanish accounts confirm their use as a medium of exchange, one of several in Mesoamerica at the time of the Conquest. Materials analysis and data synthesis by Hosler and colleagues later established most of what we know about the axe-money as a physical object.

Many questions remain. In this paper, we seek to pinpoint where axe-monies were used and how their different forms related to techniques of crafting and to political territories. Axe-monies were often found in caches, and we consider whether these were stashed wealth, ritual offerings, or some other form of collecting behavior. We address these questions through two lines of analysis. First, we map the distribution of axe-monies in Mesoamerica to assess their distribution by form. Second, we present the results of analyses of crafting and composition of axe-monies that were found together in the same caches. We draw upon axe-monies from the Smithsonian collections from the National Museum of the American Indian and the National Museum of Natural History.

**Kim Cullen Cobb** is research associate at the Smithsonian Museum Conservation Institute, an art conservator in private practice in the Metro DC area, and a professional goldsmith. She received her Master's in Art Conservation from Queen's University, Kingston, Ontario, Canada in 2005. Kim has a longstanding professional record of exhibition and research related conservation work across the Smithsonian with a special focus on archaeological and ethnographic collections.

**Emily Kaplan** has been an objects conservator on staff at the Smithsonian National Museum of the American Indian since 1996. She focuses on care and study of the Latin American and archaeological collections, scientific analysis of collections, and preventive conservation. She is currently co-editing a volume on Inka and Colonial drinking vessels known as *qeros* with contributions from multiple disciplines. Emily received a Master's in Art Conservation from Queen's University, Kingston, Ontario, Canada in 1993.

**Thomas Lam** has a PhD in Ceramics from Alfred University. After his PhD, Thomas completed a postdoc at the National Institute of Standards and Technology (NIST). Thomas is a Physical Scientist at the Smithsonian Museum Conservation Institute (MCI), where he applies his knowledge of material science and characterization skills of scanning electron microscopy electron dispersive spectroscopy (SEM-EDS), cathodoluminescence (CL), X-ray fluorescence (XRF), or microfade testing (MFT) to contribute to the MCI technical studies team.



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**Benjamin Carter**, Muhlenberg College

*Spondylus as a Driver of Interregional Exchange: Mapping Recent Ecological Research on Spondylus to Inform the Hypothesis*

Since the 1970s the marine bivalve, *Spondylus*, has been seen as a driver for Pre-Columbian long-distance exchange between Ecuador and western Mexico. Large quantities of this red, orange, and/or purple shellfish were harvested in Ecuador to send as raw material or as worked objects to societies to the south and east where the shellfish was unavailable. The demand exceeded the supply in Ecuador, driving harvesters farther and farther north in search of the shell - potentially to distant western Mexico. Yet, the overharvesting hypothesis is difficult to assess archaeologically. This paper presents an updated account of recent *Spondylus* ecology and distribution yielding three main lessons to be carefully applied to the archaeological record. First, mapping recent occurrences of *Spondylus* demonstrates that *Spondylus princeps* is more limited in its spatial distribution and in lower densities at those locations compared to *Spondylus calcifer*. Second, neither species was likely a 'driver' of interregional exchange to the north. Indeed, we should consider both Spondylids less as drivers, and more as two important components in a complex and dynamic set of exchange goods that promoted regional and interregional exchange. Lastly, this research suggests that the accurate identification of archaeological Spondylids is central to understanding pre-Columbian *Spondylus* harvesting, exchange and use, and its impact on long distance interaction.

**Benjamin Carter** is currently Associate Professor of Anthropology and Chair of the Sociology and Anthropology Department at Muhlenberg College. His archaeological research in South America focuses upon the production of shell beads and their role in the production and negotiation of identity by producers, traders, and consumers. In particular, his work considers the role of production among the Manteño (c. 800 A.D. - 1532 A.D.) of southwestern Ecuador. Similarly, his research considers the role of a specific bivalve known as *Spondylus* and the ways in which this shellfish was understood and deployed through time and space and across social groups. He also studies changes in the landscape wrought by the industrial production of charcoal in nineteenth century Pennsylvania and how that landscape has now been subsumed into the "wilderness" of State Game Lands and the buffer zone around the Appalachian Trail.

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**Christopher Beekman**, University of Colorado Denver

*Spondylus and Its Counterparts in Mesoamerica: Affinities and Oppositions*

Much research on the links between Mesoamerica and northwestern South America has focused on the evidence for the exploitation or trade of shell, particularly the mollusk *Spondylus* spp. Its shell was harvested in both regions to produce decoration, as a material symbol, and as a component in ritual offerings. Jorge Marcos proposed that the widespread depiction and use of *Spondylus* derived from contact with Ecuadorean traders, who traveled ever northwards in the search for new sources of the shell to meet increasing demand in Peru. But did *Spondylus* possess the same meanings in Mesoamerica that it did in the Andes? How similar were the ritual practices that incorporated it? And did *Spondylus* hold special relationships with other shells as it did in the Andes?

This paper first addresses the symbolism of *Spondylus* and other related shells (*Strombus* sp., *Conus* sp., *Pinctada* sp.) in the Andes, followed by a more detailed look at Mesoamerica. I take a structural approach to the shells' iconographic representations at Teotihuacan and in the Maya lowlands, and find them to have associations with gender and gendered activities similar to those in northwestern South America. I then look at specific ritual practices, such as the common pairing of the shell with other materials and its use in offerings related to cosmology and landscape. *Spondylus* was used in both areas as an offering for rain, and in offerings that placed *Spondylus* in relation to other elements of the cosmos. These practices are first documented for Mesoamerica in the Middle Formative Isthmus of Tehuantepec, a likely zone of contact with South American traders. If beliefs and associations of *Spondylus* were indeed shared at this time, it corresponds to the increasingly conceptual interest in this shell during the Andean Early Horizon, rather than the dramatic increase in consumption during the Middle Horizon and Late Intermediate Period. Contact between these regions and the transfer of ideas about *Spondylus* must have been initiated for reasons other than meeting economic demands. The quest for religious knowledge is proposed as an alternate motivation for contact and sharing of information.

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**Richard Lunniss**, Universidad Técnica de Manabí, Portoviejo, Ecuador

*The Origins of Trade and the Use of Sailing Craft on the Coast of Ecuador: The View from Salango*

Salango, on the central coast of Ecuador, has a deep sequence of Pre-Columbian occupation that presents contextualized evidence for the history of use of *Spondylus* and other sacred shells, for the history of exchange of sacred items in general, and, in particular, for the invention of large sailing balsa rafts. During the Formative Period (3500-100 BCE), long distance exchange involved the circulation of relatively small quantities of items, which were themselves small or very small in size and weight. Equally if not more important was the circulation of the sacred knowledge required by the local shamans or shaman equivalents who managed the spiritual affairs of the communities at that time. With the Early Regional Development (100 BCE - 300CE), there were various broad ranging changes in technology, ideology, and cosmology that had very significant impact on the nature and scale of exchange. Not least was the invention of large balsa rafts, as evidenced by large stone anchors, which made possible the transport by sea of bulk quantities of goods. This invention took place in the context of the emergence of a ruling class of aristocrats who abrogated to themselves as an aspect of their political power the spiritual authority formerly possessed by the shamans. The power of these aristocrats was especially evinced by ornaments of gold and *Spondylus*, including necklaces of tiny *Spondylus* beads. It was precisely at this time that the Moche lords of north coastal Peru, in particular, began to demand ever-increasing quantities of *Spondylus* both for the ritual use of entire shells and for the manufacture of their own tiny beads. We can conclude that it was in Bahía II aristocratic enterprise that we find the origins of Manteño *Spondylus* trade by balsa raft.

**Richard Lunniss** moved in 1982 to Salango after four seasons with the Cusichaca Project, near Cuzco, on the coast of Ecuador. Salango has been the chief focus of his work since then, with main field sessions from 1982 to 1987 and from 2014 to 2016. His publications on Salango have dealt mostly with the ceremonial structures and associated features and artefacts of the Late Formative and Regional Development Periods, but also include treatment of the Late Archaic and Middle Formative fishing settlements. Other publications have been concerned with the ritual landscape of coastal Ecuador, and with Manteño sites such as Cerro Jaboncillo, where he worked in 2010 and 2011. He obtained his PhD in Archaeology at the Institute of Archaeology, University College London, in 2001, after which he moved permanently to Ecuador with his family. He has been a professor of the Universidad Técnica de Manabí, Portoviejo, since 2015.

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**Colin McEwan**, Independent Scholar

**Richard Lunniss**, Universidad Técnica de Manabí, Portoviejo, Ecuador

*La Plata Island, Ecuador: An Oceanic Sanctuary from 2000 BCE to 1531 CE*

Sacred islands are scattered widely along Pacific coastal Mesoamerica, Central America, and South America. La Plata Island, 23 km off the central coast of Ecuador, was an oceanic sanctuary for over 3,500 years prior to the Spanish invasion. Since George Dorsey's excavations in 1892, successive episodes of fieldwork have documented island-wide distribution of artifacts and four principal places of interest to those who visited in the ancient past. We present a *longue durée* account of island history in three stages. First, for the Early - Middle Formative occupations (2000 - 900 BCE) we focus on a small Valdivia shelter of possible shamanic function set on a bluff overlooking Punta Escalera, the southwest corner of the island. Second, the Late Formative (600-100 BCE) and Early Regional Development (100 BCE - 300 CE) periods show emphasis on diverse formal rituals that involved both the rear beach of the main landing site at Drake's Bay and Pampa de los Pitos, the plateau overlooking Drake's Bay. Pampa de los Pitos was in the first place the setting for repeated Bahía musical rites involving ceramic whistling figurines. Repeated complex offerings of different types were made at both sites. At Drake's Bay, massive Engoroy and Bahía II offerings were separated by a layer of volcanic ash matched by an identical layer at Salango, thus allowing correlation with the mainland sequence of that site. The third stage sees qualitative change in the types of offering at Drake's Bay relating to Manteño occupation of the Integration period (750-1531 CE), and more importantly the appropriation of the island by the Inca state through the placing of Capac Hucha burials at a *tinku* location 50 m up the valley that debouches at Drake's Bay.