

Virginia Ochoa-Winemiller, Ph.D.

Current Research (2024-2025)

Digital Imaging and Geospatial Analysis of Eastern Honduras Ancient Iconography. Project Director. New Jersey City University.

This study aims to collect and examine iconographic motifs from pottery and ceramic artifacts recovered from archaeological research in eastern Honduras. The project plans to test the function of pottery and ceramic artifacts as material mnemonics where iconographic motifs function both as decoration and texts, that is, as graphic and symbolic scripts of social memory. If successful, data will reveal prevalent iconographic patterns, their chronology, and context of use. Data will allow us to better understand the transmission and reproduction of cultural ideals, the extent of ethnic or regional identities, and finally to confirm the role of these artifacts and designs as mnemonic devices, that is, holders of social memory among the ancient people of eastern Honduras. In addition, mapping the geographic distribution of iconographic motifs, their typology, and styles will illustrate their distribution and reveal ancient exchange routes. Cross-cultural comparison and geospatial analysis of the spatial distribution of these traits will be used to determine the flow of exchange as well as to assess their role on local identity and influence from Mesoamerica and the Isthmo-Colombian-Chibchan area. As part of the outcomes outlined, this project aims to create a digital catalogue of pottery, ceramic artifacts, and their iconographic designs accessible to scholars, students, and the public. This virtual catalogue will include links to relevant publications and artifact collections housed at museums and other institutions in the United States and Honduras. The purpose is to facilitate access to the data collected, encourage further research focusing on the archaeology of eastern Honduras, and as a virtual teaching laboratory for undergraduate students where they will learn and experience the research methods used by archeologists in the study of material culture and behaviors of ancient societies.

Since 2012

Application of laser 3D technology in the study of ceramic figurines, stamps and whistles production in Honduras, Mexico, and Belize. Project Director. New Jersey City University.

Using a laser multi-line scanner and software developed to quantify Hausdorff distances between vertices in 3D surfaces, this project analyzed sample collections of figurines and molds from Belize, Mexico and Honduras. The results indicated that this procedure was a more precise indicator of common source and standardization in molded clay artefacts. This method provided data relevant to assessing the scope of ancient trade networks and the nature of social and economic relationships that existed among the ancient inhabitants of Mesoamerica.

Related Publications and Presentations:

(2024) Artisan communities, regional interaction, and identity in Eastern Honduras. Paper presented at the symposium Centralizing Central America: New Evidence, Fresh Perspectives, and Working on New Paradigms. SAA 89th Annual Meeting of the Society for American Archaeology, New Orleans, LA; April 17-21, 2024.

(2021) Crafting and trading along the banks of the Telica: Artisan communities and regional interaction in Eastern Honduras and beyond. Paper presented at the SAA 86th Annual Meeting, San Francisco CA. April 14-18, 2021

(2019b) "Assessing Surface Correspondence of Maya Figurines and Molds Using Multi-line Laser Technology and Metrology." Paper presented at the South-Central Conference on Mesoamerica (SCCM), Louisiana State University. Baton Rouge, LA. Co-presenter Terance L. Winemiller.

(2019a) "Crafting, sharing, and representing: The molds and figurines of Calakmul, Mexico." Paper presented at the 84th Society for American Archaeology Annual Meeting, Albuquerque, NM. Co-presenters Terance L. Winemiller, William Folan, and Lynda Florey Folan (April 2019).

(2018) "Assessing surface correspondence and trade of Maya figurines and molds using multistripe laser technology and metrology." *Archaeometry* 60 (5): 1002-1017. Article co-authored with Terance L. Winemiller and Jennifer Ludwig.

(2017) "Molding culture patterns: Standardization and trade of Maya figurines and molds." Paper presented at the 8th Annual South-Central Conference on Mesoamerica, Tulane University, New Orleans. Co-presenter Terance L. Winemiller.

(2015) "La producción de figurillas, sellos y silbatos: El uso de tecnología láser 3D para evaluar estandarización en artefactos cerámicos." *Memorias del XXVIII Simposio de Investigaciones Arqueológicas* en Guatemala. Asociación Tikal, Guatemala. Co-author Terance L. Winemiller.

(2013) "Evaluando estandarización: El uso de la tecnología láser 3D en el estudio de figurillas, sellos y silbatos de Calakmul, Campeche, México." *Memorias del XXII Encuentro de Cultura Maya*. Universidad Autónoma de Campeche. Campeche. Co-authors Terance L. Winemiller and Rosemary Joyce.