

# 42<sup>nd</sup> Annual NCAAAE

## Full Program

### Saturday Morning

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8:00	Coffee and Registration
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9:00	Conference welcome
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<b>Session 1: Water</b>	
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9:00	Calibrating Isotopic Analysis of Mollusk Shell Material as a Proxy for ENSO Behavior in North Coastal Peru
	Kate Johnson (University of Maine)
	Daniel Sandweiss (University of Maine)
	Kirk Maasch (University of Maine)
	Alan Wanamaker (Iowa State University)

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9:20	Past and Present Hydrosocial Territories of the Tiwanaku Valley
	Corey Bowen (University of Illinois Chicago)

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9:35	Tracing Ancient Waters: Preliminary Findings on Pre-Hispanic Hydraulics in Cusco's Amaru Markawasi Drainage
	Abimael Choqqe Torres (Universidad Nacional de San Antonio Abad, Cusco)
	Stephen Berquist (University of Warsaw)
	Maya McQueeney (University of Pennsylvania)
	Alexei Vranich (University of Warsaw)

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9:50	Discussion
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10:10	Coffee Break & Poster Sessions
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## Session 2: Animals

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10:30      Occupation Sequence and Use of the Letrankaka Rock Shelter (LK-1),  
Sajama, Bolivia

Mirtha Gomez-Saavedra (Penn State)

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10:45      Salinar (400–150/100 BCE) Camelid Uses in the Huanchaco Bay Area,  
Moche Valley, North Coast of Peru: Zooarchaeological Evidence from  
Pampa La Cruz (PLC) and José Olaya (JO-IG)

Ruoyu Zhu (University of Florida)

Gabriel Prieto (University of Florida)

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11:00      Exotic to Whom? Reassessing “Exotic Species” in Andean Archaeology

Weronika Tomczyk (Dartmouth College)

Emanuela Rudnicka (University of Warsaw)

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11:15      Discussion

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## Session 3: Power

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11:35      Afro-descendant salt producers in northern Ecuador: Another example of  
the informal economy among Afro-Andean communities.

Jorge Flores (Instituto Francés de Estudios Andinos)

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11:50      The Archaeology of Gamonalismo and Postcolonial Contradictions in the  
Southern Peruvian Andes

Alexander Menaker (UT Austin)

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12:05      Negotiated Authority: Inca Governance and Palace Institution at the  
Huacones-Vilcahuasi site in the Lower Cañete Valley.

Rodrigo Areche Espinola (University of Pittsburgh)

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12:20      Discussion

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Please join us for a catered lunch in Anthropology Room 345, 12:45–1:45pm

## Saturday Afternoon

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### Session 4: Material Culture

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2:00      Identifying Headgear on Painted Figures from Cajamarca Cursive Style Ceramics

Jeanette Nicewinter (Northern Virginia Community College)

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2:15      Assessing the Production of Middle Horizon "Pachacamac" Style Pottery from Pachacamac, Peru: A Multi-Method Approach

James Davenport (University of Missouri)

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2:30      Beyond Decipherment: An Archaeology of Inka Khipus

Mackinley FitzPatrick (Harvard University)

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2:45      The Inka and Zeacentrism: Complicating Categories, Taxonomies, and Scientism in Archaeology's Methodological Habitus

Jordi A. Rivera Prince (Brown University)

Di Hu (James Madison University)

Kylie E. Quave (George Washington University)

Katherine Chiou (University of Alabama)

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3:00      Discussion

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3:20      Afternoon Snacks & Poster Sessions

Object Session: Andean Slings with Kyle Marini

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### Session 5: Landscape

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3:50      Presenting Yuraq Qaqa: A megalithic Map of an Ancient Andean Landscape in the Colca Valley, Peru

BrieAnna S. Langlie (Binghamton University)

Lauren E. Kohut (Winthrop University)

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4:05      Detailed Results from Yuraq Qaqa: A megalithic Map of an Ancient Andean Landscape in the Colca Valley, Peru

Lauren E. Kohut (Winthrop University)  
BrieAnna S. Langlie (Binghamton University)

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4:20      The PIA Cavillaca: Preliminary results of the first field season in the Lurín Valley

Céline Erauw (Vanderbilt University)  
Carmela Alarcón Ledesma (Independent Archaeologist)  
Maria Laura Zamora Melo (Universidad de Buenos Aires)  
Peter Eeckhout (Université libre de Bruxelles)

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4:35      Visualizing Sacsayhuamán: A 3D Virtual Reconstruction Process

Kevin Eslinger (Independent Artist)  
Stephen Berquist (University of Warsaw)  
Alexei Vranich (University of Warsaw)  
Julia Pięłowska (University of Warsaw)  
Jeremi Kozakiewicz (University of Warsaw)

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4:50      Discussion

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5:10      Business Meeting & Founder's Award

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5:30      Keynote: Kukuli Velarde

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## Sunday Morning

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8:30 Coffee & Registration

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9:25 Welcome Back

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### Session 6: Death

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9:30 Placement, Processing, and Identity: Exploring Variation in Mortuary Practices at Kuelap, Chachapoyas, Peru

J. Marla Toyne (University of Central Florida)

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9:45 Chronology and Continuity in Domestic and Mortuary Spaces in the Qaracha Basin, 850–1300 cal. CE

Anna Fancher Whittemore (Cornell University)

Lorena Liz Rolando Espinoza (Universidad Nacional Mayor de San Marcos)

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10:00 For the Love They Bear Them: Clandestine Burial and Caring for the Dead in Colonial Peru

Jo Osborn (Texas A&M University)

Emily Milton (Smithsonian Institution)

Jacob Bongers (University of Sydney)

Richard Espino Huaman (Independent Researcher)

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10:15 Discussion

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10:35 Coffee Break

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### Session 7: Neighbors

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10:55 Becoming Paracas: Coalescence on the Prehispanic Peruvian South Coast and Highlands during the Late Formative Period

Stefanie L. Bautista (University of Rochester)

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11:10 Maritime Landscapes and Imperial Reach: Inka Strategies in Coastal Arequipa

Rosa Maria Varillas (University of Illinois Chicago /Field Museum of Natural History)

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11:25	Not Ruins but Relatives: Toward an Indigenous Archaeology of the Pueblo Pasto
	Juan Camilo Argoti Gómez (Brown University)
	Angela María Lucero Bernal (Resguardo Indígena de Ipiales, Nariño)

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11:40	Discussion
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12:00	Farewell until next year!
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## Posters for the 42<sup>nd</sup> Annual NCAAAE

Posters can be viewed at any time during the meeting. Authors will be stationed next to their posters during Saturday coffee breaks.

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### Deep Pasts at the Edge of Empires: Recent Survey and Excavations by the PAGuaL Team at Cerro Sulcha in the Carabamba Highlands

Patrick Mullins (Washington College)

Amedeo Sghinolfi (Western University)

Dana Bardolph (Northern Illinois University)

Elvis Monzon (Universidad Nacional de Trujillo)

Derek Sarier (Washington College)

Amy Cannon (Washington College)

Macallan Sansbury (Washington College)

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### Crías Para Los Dioses: Chimú Sacrificial Camelids from the North Coast of Perú

Evan Pineda (University of Florida)

Gabriel Prieto (University of Florida)

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### Cusco in Time: Absolute dating and the transformation of the Inca capital

Dominika Sieczkowska-Jacyna (University of Warsaw)

Sabino Quispez (Independent Researcher)

Alexei Vranich (University of Warsaw)

Andrzej Rakowski (Silesian University of Technology)

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## Emblematic and material color across the Paracas-Nasca transition: Dichotomies and significance

Ann Peters (Penn Museum)

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## How did the ancient inhabitants of Saipuru, Bolivia organize lithic production over their landscape?

Katherine Goldfaden (James Madison University)

Di Hu (James Madison University)

Sonia Alconini (University of Virginia)

Juan Carlos Chavez Quispe (University of California, Riverside)

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## Human Occupations on the Hyper-arid Coast of the Atacama Desert: New Data from Punta Lobos (Tarapacá, Chile)

Andrea Gonzalez (Universidad Austral de Chile/Brown University)

Arturo Saez (Universidad Austral de Chile)

Robert Carracedo (Universitat Autònoma de Barcelona)

Carola Flores (Universidad Adolfo Ibáñez)

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## Not All That Shines Green is Jade: Time Series Clusters and Network Analysis to Explore Spectra of Ecuadorian Greenstone Beads

Darby Ko (Drew University)

Andie Park (Drew University)

Maria Masucci (Drew University)

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## The Ancient Quimbalete and Mercury Efficiency in Present-Day Small-Scale Gold Processing, Perú

William E. Brooks (Independent Geologist)

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## Unveiling Ecuador's Metallurgical Landscape: Preliminary Results from a pXRF Study of Prehispanic Copper

Maria Isabel Guevara-Duque (University of Illinois Chicago/Field Museum)

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## Conference Abstracts

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Areche Espinola

### **Negotiated Authority: Inca Governance and Palace Institution at the Huacones-Vilcahuasi site in the Lower Cañete Valley.**

When the Incas arrived on the Peruvian coast around the 15th century, they incorporated several hierarchical societies with specialized economies and institutions into the empire. Among the most notable coastal institutions was the palace, a building that embodied the power and authority of coastal lords. These palaces emerged during the Late Intermediate Period, experiencing the Inca imperial system in diverse ways. This presentation examines the spatial organization and chronology of the North Complex, a large elite residence situated at the Huacones-Vilcahuasi site in the lower Cañete Valley. Through inter-site and inter-valley comparisons, including Inca palaces, the results indicate the introduction of a new palace model under Inca governance in the Cañete Valley. This raises potential scenarios of interaction between the local groups and the imperial administration in this coastal region.

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Argoti Gómez, Lucero Bernal

### **Not Ruins but Relatives: Toward an Indigenous Archaeology of the Pueblo Pasto**

How do we think about the past, especially when direct descendants continue to feel and think with their Territory? This project, based in the Pasto (500 BC - AD 2025) community of Chapal (Funes, Nariño, Colombia), addresses that question through recognizing and horizontally collaborating with non-Western ontologies, understood not as different visions of the world, but rather as different coexisting worlds. The Pasto landscape remains vibrantly alive in the memory and practice of our people, who refer to "the Ancestors" not through distant ethnonyms, but the relationality of los de antes & los de adelante. Building on Indigenous archaeologies and landscape theory, this research understands Territory as an active participant in history, as beings with whom communities negotiate belonging, survival, and transformation.

Traditional models tend to reduce land use to transactional logics. However, the continuous and fluid Territorial occupation of Chapal, Funes (2000 - 3200 masl) invites a reframing. Here, microverticality is not only economic but relational and cosmopolitical. The verticality of the Pasto people does not index zones of acquisition but weaves together memory, kinship, and ritual itineraries. Thus, in Chapal, movement emerges as an ontological scaffold, a landscape of belonging and resistance, where circulation sustains not just bodies, but relationships across

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human and non-human domains. Through the integration of remote sensing technologies, collaborative mapping, and characterization of geomodified and spiritual spaces, we argue that archaeological sites should not be reduced to silent ruins of the past, but rather be embraced as living archives of political identity and ecological memory.

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Bautista

### **Becoming Paracas: Coalescence on the Prehispanic Peruvian South Coast and Highlands during the Late Formative Period**

In the last twenty years, there has been a large increase of research focused on Paracas. We now know, for example, that Paracas peoples lived in various valleys throughout the Ica and Rio Grande de Nazca Regions but also had settlements in the highlands of Ayacucho. Further archaeological research has also demonstrated that Paracas architecture looks different in every valley. While some Paracas pottery styles look the same, there is also a clear change in style over time, which also seems valley dependent. Finally, the timing of Paracas colonization in these valleys also varies. This evidence seems to suggest that Paracas was a less cohesive society than archaeologists originally imagined. So then, what was Paracas? And what was the thread that bound these various groups together? I suggest that Paracas was a coalition of various independent inter-valley clans whose settlement pattern was influenced by their environment but who also constructed and reproduced a cosmology that was held together by kinship and ritual to ensure survival. This talk, therefore, will focus on how Paracas peoples, who were facing an ever-expanding social world and fluctuating environment, coalesced to form a social order that defined personhood, doings (sensu Fowles 2018), and material culture.

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Bowen

### **Past and Present Hydrosocial Territories of the Tiwanaku Valley**

Archaeologists have frequently investigated the role of water management in the development of the Tiwanaku state (500-1000 AD) in western Bolivia. In recent years, this interest has shifted from agriculture and irrigation to the integration of water in ritual contexts. The significance of water is perhaps most obvious in the dramatic architecture built to direct it through the temples and canals of the Tiwanaku capital; the source of this water, however, remains uncertain. This paper presents results from preliminary surveys and community engagement conducted during the 2025 field season which evaluated the extent of human modification of spring sites throughout the Tiwanaku valley. It considers the parallel stories of a past and present water management through the lens of hydrosocial territories:

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the spatial manifestation of particular cultural, political, and material relationships between societies, water, and landscapes.

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Brooks

### **The Ancient Quimbalete and Mercury Efficiency in Present-Day Small-Scale Gold Processing, Perú**

The quimbalete, or Inka mill, was used in pre-contact Perú and is still used today to process gold in Perú. It is a 1-2 ton, manually operated, artisanal stone crushing device used to release the mm-sized gold from the ore as it is rocked back and forth on a water-lubricated, stone base to which mercury is added. The weight and the back-and-forth rocking motion forces the gold grains and mercury together to form an amalgam that is recovered from the muddy slurry; the amalgam is then squeezed in cloth to release excess mercury; and then it is burned to produce an anthropogenic gold nugget. Spot geochemical sampling of: 1) the Au ore, 2) post-amalgamation mud, and 3) dried post-cyanide (NaCN) mud indicate that the ages-old mercury amalgamation process captures ~20% of the gold from the crushed ore and sodium cyanide is the final step to capture the remaining gold. Therefore, since mercury is used with quimbaletes to amalgamate gold at small-scale gold processing sites today in Perú, then, the documented use of quimbaletes in pre-contact Perú is consistent with pre-contact use of mercury for gold amalgamation.

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Choque Torres, Berquist, McQueeney, Vranich

### **Tracing Ancient Waters: Preliminary Findings on Pre-Hispanic Hydraulics in Cusco's Amaru Markawasi Drainage**

In this paper we present the results of our preliminary study of pre-Hispanic hydraulics in the watershed above the Amaru Markawasi archaeological site in Cusco, Peru, extending upwards to Chispiyuq and outwards along the Ukuku drainage. Extensive archaeological and historical work has focused on Inka canals in this area; however, few projects have sought to excavate these features or define how they functioned as a system. In our preliminary study, we identify a series of possible dams, reservoirs, amunas (technologies for replenishing aquifers), and aqueducts. More importantly, we note instances of superimposed canals, most likely indicating modifications to the system over time.

Our non-invasive preliminary work has involved GRP survey and prospection with UAV's carrying LiDAR, multispectral cameras, thermal cameras, and cameras functioning in the visual spectrum. We have mapped the canals, drawn intact sections, measured widths, and have sought interpolate buried or destroyed segments. We have also conducted ecological survey, in the understanding that the Inka and other Andean peoples tactically utilized forest cover to manage water

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resources. As we expand the study, we will link the organization of water management into the Inca chronological sequence to understand how principles of management shifted over time.

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Davenport

### **Assessing the Production of Middle Horizon "Pachacamac" Style Pottery from Pachacamac, Peru: A Multi-Method Approach**

The "Pachacamac" style has been identified on the central and north coasts of Peru during the Middle Horizon. It is characterized by thin-walled and high-fired ceramics, restricted to serving vessel forms, and decorated with polychrome motifs that share iconography with both other contemporaneous Middle Horizon styles and with contemporary Lima and Nieveria ceramics from the central coast. On the central coast, it is found infrequently and is generally restricted to elite contexts, raising questions about its local production in that region. Production of "Pachacamac" style ceramics at a different Wari location outside the central coast would support a connection between local elites and a broader Wari network. Alternatively, local production may indicate an independent adoption of Wari iconography and ideology. This study examines the production of "Pachacamac" style pottery from Max Uhle's excavations at the site of Pachacamac in the Lurín valley of Peru's central coast using a multi-method approach. Data from thin section petrography and from neutron activation analysis are analyzed. The data are compared with those from other styles of pottery from Pachacamac as well as pottery from other Wari centers.

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Erauw, Alarcón Ledesma, Zamora Melo, Eeckhout

### **The PIA Cavillaca: Preliminary results of the first field season in the Lurín Valley**

The Lurín Valley is one of the most densely occupied valleys in Peru from an archaeological point of view: over 350 sites have been recorded from all periods, from the Archaic Period to the 16th century CE. Notably, the valley includes four distinct ecosystems, making it a reservoir of many wild species and plants. Yet with a few exceptions, comprehensive studies on the Lurín Valley environment are scarce. The PIA Cavillaca research objective is to identify the natural resources used by the valley's inhabitants and highlight changes and/or continuities in resource use following the Inca conquest (LH), offering a new perspective on its impact in the Lurín valley beyond previous approaches like architecture and ethnohistory, and contributing to discussions on how imperial control shifts and reshapes human-environment relationships.

This paper will present the preliminary findings from the first survey campaign of the Cavillaca Project, conducted during June and July 2025. The survey employed a multi-method approach, integrating pedestrian field surveys, aerial drone, and

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digital data collection using the QField application. The presentation will discuss the methodological framework, the challenges encountered, and the adaptive strategies employed in response. The recorded data encompassed a range of variables, including surface materials, architectural features, natural elements, evidence of anthropogenic and natural impacts. These data will be compared with previous studies to assess changes over time. A focused case study of the Pampa de Flores site will be used to illustrate the survey approach and preliminary interpretations.

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Eslinger, Vranich, Pięłowska, Kozakiewicz

### **Visualizing Sacsayhuamán: A 3D Virtual Reconstruction Process**

This presentation details an ongoing project to digitally reconstruct the Inca fortress of Sacsayhuamán using high-resolution 3D modeling grounded in archaeological data, historical accounts, and architectural analysis. Working in collaboration with archaeologist Dr. Alexei Vranich, I combine site plans, GPS-based topography, drone imagery, and LiDAR scans. We created LiDAR scans on site as part of an archaeological dig with the Polycam app to capture precise geometries.

A central interpretive approach draws on the observation that foundation width offers important clues to the original height of walls. Footings are rarely over-engineered beyond the load they must bear. At Sacsayhuamán, variations in footing dimensions suggest differing wall heights, offering a basis for reconstructing the fortress's three towers, including Muyucmarca, in ways that challenge common enclosed, inward-tapering depictions. Wider outer foundations, for example, may indicate taller exterior walls stepping down toward a more open central space.

Using various 3D modeling programs, we built multiple hypotheses stone-by-stone, matching Inca masonry styles and testing configurations for structural plausibility, sightlines, and functional logic.

The resulting virtual environment serves as both a research laboratory and an educational tool, enabling archaeologists, historians, and the public to explore the scale, layout, and potential uses of Sacsayhuamán in immersive detail. By integrating precise digital capture with evidence-based interpretation, this project seeks not to create a single "final" vision of the site, but a flexible, evolving model that fosters collaborative exploration and deeper understanding of one of the Inca Empire's most iconic architectural achievements.

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FitzPatrick

### **Beyond Decipherment: An Archaeology of Inka Khipus**

Khipus—Andean knotted-cord records—have long been studied through the lens of decipherment, with scholars seeking to extract their encoded content. This approach has produced important advances, especially in understanding the numerical knotting system of many Inka-style khipus, but it has also narrowed the field's focus. Too often, khipus are treated as static texts awaiting decoding.

This talk takes a different approach, positioning khipus as material, archaeological, and cultural technologies—objects embedded in specific contexts, shaped by dynamic use, and functioning in ways irreducible to script-based models. This talk has two aims: first, to survey what scholarship has established about Inka-style khipus across multiple scales of analysis—the cord, the khipu, the archive, and the corpus. This overview highlights both what we can reliably “read” from Inka-style khipus and the limits of the decipherment model.

Second, I argue for a shift in emphasis, from solely decipherment toward materiality and practice. Drawing from my research on the khipus from Laguna de los Cóndores, I demonstrate the value of a materially grounded perspective. Through the lens of chaîne opératoire, “slow looking,” and embodied practice, I show how structural variation in fiber, twist, color, and attachment reveals processes of production, scales of labor, and the negotiation of meaning.

Ultimately, I argue for an archaeology of khipus rather than a mere decoding of knots. Importantly, this materially centered framework helps situate khipus within the broader material record of imperial expansion, offering a deeper understanding of how knowledge, memory, and power were organized in the Inka world.

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Flores

### **Afro-descendant salt producers in northern Ecuador: Another example of the informal economy among Afro-Andean communities.**

The Afro-descendant groups in the Chota-Mira Valley, Ecuador, have often been associated with labor on plantations and haciendas within the Andean context. However, salt production played a significant role in the history, economic autonomy, social organization, and resistance of Afro-descendants in response to prolonged segregation and discrimination.

During pre-Columbian times, salt production was an important economic activity among Indigenous Ecuadorians in the Chota-Mira Valley. In contrast to the primary commodities supported by the Jesuit hacienda—such as sugar cane, textiles, and livestock—there is little clear understanding of how salt production

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influenced the lives of enslaved individuals during the Jesuit control of the valley (circa 1670-1767 A.D.).

Historical documentation indicates that salt was essential to the lives of enslaved people, integrating them into the social and economic dynamics of the Andean hacienda. This included the various uses of salt in hacienda tasks. The lack of access to this vital mineral prompted a social reaction that ultimately drove Afro-descendant groups to seek economic autonomy in this parish. Ethnographic data reveal that salt-making has been a crucial part of the social memory and identity of Santa Catalina de Salinas, particularly in relation to the domestic economy and various everyday strategies employed to improve their material and social conditions. Archaeological remains illustrate the physical layout and social organization of salt production, considering both Afro-descendant groups and adopting a diachronic perspective that will benefit future studies of the relationship between this economic activity and the early and late inhabitants of the Chota-Mira Valley

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Goldfaden, Hu, Alconini, Chavez Quispe

### **How did the ancient inhabitants of Saipuru, Bolivia organize lithic production over their landscape?**

Situated in the Bolivian Chaco, Saipurú and its environs have been at the ecological and cultural crossroads for millennia. Traditionally seen as a "frontier" between the "civilized" highlands and the "uncivilized" Amazon, the lifeways of the local inhabitants have been deemphasized in highland and state-centric historical narratives. In this poster, we aim to understand some of the long-term patterns of lithic tool use and production over the landscape. Doing so would help us understand how the local peoples organized their activities over the landscape, revealing the deeply historical habitational and local mobility patterns that would frustrate state consolidation of power, as the inhabitants of Saipuru are famous in the historical documents for successfully resisting and rebelling against the Inka and then the Spanish. We combine lithic analysis of stone artifacts recovered from a 2013 survey and GIS-based analyses to understand spatial relationships of lithic use and production. We ask the following questions: Which sites/areas were more lithic production area-oriented versus lithic use-oriented? What is the relationship between evidence of lithic production, elevation, and distance to local raw material sources? What patterns of sedentism and mobility can we uncover from comparing lithic debitage to ceramic densities over the landscape?

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Gomez-Saavedra

### **Occupation Sequence and Use of the Letrankaka Rock Shelter (LK-1), Sajama, Bolivia**

High-altitude environments in the central Bolivian Altiplano present unique challenges for human societies. Pastoral socio-ecological systems – in which human communities rely primarily on herding and ecological practices – represent a key strategy of adaptation. The archaeological site of Letrankaka (LK-1), a rock shelter located east of Mount Sajama in the central Bolivian Altiplano, preserves an exceptional archaeological record and occupation sequence that allows us to trace more than five millennia of subsistence strategies, including pastoralism, hunting, and ritual activities. Radiocarbon dating and analyses of lithics, ceramics, bones, and rock art reveal recurrent but discontinuous occupations extending into colonial times. The earliest levels (5470-5217 BCE) are characterized mainly by hunting activities associated with projectile points and wild fauna. After a gap in occupation, later phases (802-547 BCE) show societies bearing ceramic technology and likely practicing camelid herding occupied the site and used it largely for temporary shelter and occasional ritual activities. The significant presence of obsidian (21%) from distant sources indicates participation in wide-ranging mobility and exchange networks across the central Altiplano. Pigments collected throughout the occupational sequence are particularly concentrated in context dates between 258-419 CE and 546-640 CE, possibly associated with rock art production. Outside the shelter, pigments are associated with dates between 764 and 418 BCE. These findings suggest that LK-1 functioned as a strategic space within a dynamic pastoral landscape, whose occupation was shaped by discontinuity, ritual resignifications, and social transformations. The site provides new perspectives on the adaptation and resilience of high Andean societies, offering insights into the sustainability of socio-ecological systems in high-altitude environments.

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Gonzalez, Saez, Carracedo, Flores

### **Human Occupations on the Hyperarid Coast of the Atacama Desert: New Data from Punta Lobos (Tarapacá, Chile)**

On the hyperarid coast of the Atacama Desert, the site of Punta Lobos (Tarapacá, Chile) offers new insights into human settlement in extreme environments along the South Andean coast. Excavations in 2023 on a rocky promontory revealed stratified deposits containing combustion features, lithic tools, marine fauna, plant fibers, cordage, and ornaments. This variety suggests a repeated and multifunctional use of the space, including processing, consumption, toolmaking, and overnight stays.

A key aspect is the identification of well-defined habitation floors, made of ash, burned material, algae, and shells, comparable to "sealed floors" in other northern Chilean coastal sites. These indicate occupations that were longer and more

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domestic in character, exceeding ephemeral or purely logistical use, and likely linked to recurrent, planned settlement.

Radiocarbon dates obtained in 2025 show that Punta Lobos was occupied throughout the Holocene, including very early phases that extend the known chronological horizon for the Tarapacá coast. This prompts a reevaluation of the idea that earlier occupations were systematically lost to marine transgressions.

The site is connected to other early coastal contexts—Quebrada Los Burros, Quebrada Las Conchas, and Quebrada Maní— form a wider archaeological landscape of littoral and inland sites, as well as early use of fog oases. Punta Lobos' setting supports its interpretation as a strategic location for seasonal or logistical settlement.

Ongoing geoarchaeological and taphonomic studies will refine knowledge of its formation and spatial organization, confirming Punta Lobos as a key locus for understanding social, technological, and territorial dynamics on the Atacama Desert coast since the early Holocene.

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Guevara-Duque

### **Unveiling Ecuador's Metallurgical Landscape: Preliminary Results from a pXRF Study of Prehispanic Copper**

Despite its abundance of mineral resources and long-standing metalworking traditions, Ecuador has been largely overlooked in narratives of Andean metallurgy, which have focused disproportionately on northern Peru and the Central Andes. This paper presents preliminary findings from a large-scale pXRF analysis of over 1,600 copper artifacts dating from 500 to 1400 CE, collected from 15 cultural groups across Ecuador. The study reveals a striking diversity of copper alloys—including pure copper, Cu-As, Cu-Ag, Cu-Au, Cu-Sn, and Cu-Pb—and highlights distinct regional, temporal, and cultural patterns in their production and use. Results suggest that Ecuadorian metallurgists developed localized technologies tailored to symbolic, functional, and aesthetic purposes, with particular emphasis on ornamental objects and ceremonial display. Regional variation in alloy composition reflects both differential access to ore sources and divergent cultural preferences. The Integration Period (700–1450 CE) emerges as a peak era of metallurgical complexity, marked by intensified alloy experimentation and widespread copper consumption. These findings challenge longstanding diffusionist models and instead position Ecuador as an independent and innovative center of metallurgical production. By foregrounding Ecuador's contributions, this study reframes the northern Andes as an active participant in shaping broader Andean technological and cultural landscapes.

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Johnson, Sandweiss, Maasch, Wanamaker

### **Calibrating Isotopic Analysis of Mollusk Shell Material as a Proxy for ENSO Behavior in North Coastal Peru**

In coastal Peru, variability in the El Niño Southern Oscillation (ENSO) primarily manifests as changes in sea surface temperature (SST) and upwelling. Existing literature investigates how mollusk species in north coastal Peru can be a source of proxy data for ENSO SST and upwelling changes. While most mollusk species die off during ENSO events due to unfavorable environmental conditions, some less sensitive species, such as *Trachycardium procerum*, exhibit resilience to El Niño and continue to deposit calcium carbonate shell material once or twice daily over their one to three-year lifespan. Isotopes and trace elements taken up during shell growth are proxies for upwelling and SST anomalies and indicate changes in ENSO behavior. This project analyzes carbon and nitrogen isotopes from *T. procerum* samples live-collected in Peru to calibrate the correlation between isotopic values and environmental conditions associated with recent ENSO events. Calibration will involve identifying isotopic trends and patterns within shell records that correlate with specific ENSO variations (flavors). Once calibrated, *T. procerum* isotope records can be used in future projects to identify and categorize past ENSO events from archaeological shell material.

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Ko, Park, Masucci,

### **Not All That Shines Green is Jade: Time Series Clusters and Network Analysis to Explore Spectra of Ecuadorian Greenstone Beads**

In the ancient Andean region, greenstone beads discovered are commonly attributed as jade originating from the Guangala and Manteño cultures of Ecuador, despite a dearth of jade's compositional constituents present in the region. In the current study, we examine the composition of Ecuadorian artifacts through novel approaches with spectral data analysis that define peaks and employ machine learning network clusters of waves.

Our dataset includes nine artifacts (six greenstone beads, two pendants, one axe) and seven local rocks from coastal Ecuador analyzed on its wave spectra along with reference spectra drawn from a publicly available data source. For spectral pattern recognition and comparison, we introduce a kernel-smoothed zero-derivative peak definition, time-series and density-dependent algorithms, and cosine-similarity network analysis.

The findings demonstrate similarities in the compositions of local Ecuadorian rock and greenstone artifacts, reaffirming the Guangala and Manteño people's role in Andean greenstone bead production and clarifying common generalizations of

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green artifacts as jade. In fact, muscovite is clustered nearby artifacts and local rocks from the same archaeological site and further from Jade and other minerals. Despite decades of archaeometric progress, material identification in archaeology remains constant and rarely cross-validated. The evaluated Ecuadorian greenstone beads are not composed of Jade based on their wave patterns. Materials with more complex structures and accessible to the region, such as Muscovite, constitute those greenstone beads. Network analysis combining clusters demonstrates consistency with traditional visual inspection, expediting the manual process, further applicable to archaeological fields.

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Langlie, Kohut

### **Yuraq Qaqa: A megalithic Map of an Ancient Andean Landscape in the Colca Valley, Peru**

Carved boulders and outcrops depicting agricultural terraces, irrigation channels, and reservoirs—referred to as *maquetas*—have been found in multiple highland regions in the Andes, especially the Colca Valley. In 2024, our team found a *maqueta*, known locally as Yuraq Qaqa (white rock in Quechua), a massive 7,000 m<sup>3</sup> carved outcrop of rhyolitic tuff making it the largest documented *maqueta* to date in the Andes. Yuraq Qaqa attests to centuries of agricultural experimentation, innovation, and knowledge production prior to Spanish colonization of the Colca Valley. To date we have carried out archaeological survey around Yuraq Qaqa, photogrammetry, and LiDAR documentation of the site, as well as a conservation assessment. While other known *maquetas* depict relatively circumscribed terrace and irrigation systems, Yuraq Qaqa serves as a regional map of mountains, glaciers, springs, and agricultural systems that encompass not just the valley, but much of the region of Arequipa. Yuraq Qaqa is also unique in its incorporation of abstract artistic elements, including circles, spirals, and rectilinear petroglyphs, which challenge western forms of cartographic knowledge. Taken together, Yuraq Qaqa suggests communities in the Colca Valley engaged in regional-scale environmental engineering and coordination between communities.

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Menaker

### **The Archaeology of Gamonalismo and Postcolonial Contradictions in the Southern Peruvian Andes**

In the 19th–20th centuries, following Peruvian independence, the postcolonial nation-state saw the formation of the *gamonal*, a local landlord who exploited indigenous people to perpetuate a servile labor force and appropriate land. While the community of Andagua in the Southern Peruvian Andes was subject to Spanish colonial state violence, residents identify their greatest forms of subjugation as occurring under the Peruvian nation-state. Drawing from ethnographic,

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archaeological, and historical evidence, this paper bridges historical archaeology and archaeologies of the contemporary to write inclusive histories that incorporate residents' perspectives to frame past experiences. Beyond the history of the gamonal, this paper discusses how families organized to rehabilitate pre-Contact agricultural infrastructure from the 1960s to the present. Some people subject to the harsh hand of the gamonal have reclaimed their lands, while for others there is a lingering sense that justice will never be served.

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Mullins, Sghinolfi, Bardolph, Monzon

### **Deep Pasts at the Edge of Empires: Recent Survey and Excavations by the PAGuaL Team at Cerro Sulcha in the Carabamba Highlands**

Located at the highland edge of coastal polities like the Moche, Virú, and Chimor, the Carabamba Highlands have deep pasts of highland-coastal interaction and geopolitics, agropastoral practices and resilience, and waves of highland colonization and migration into lower chaupiyunga zones. This paper presents a preliminary synthesis of novel survey and excavation data collected in the Carabamba Highlands and at the archaeological site of Cerro Sulcha during the 2024 and 2025 field seasons by the PAGuaL team (Proyecto Arqueológico sobre la Historia y Prehistoria de los Guacaponchos y Llampas). Our 2024 drone and pedestrian survey of the Carabamba Highlands revealed an ancient landscape with a long past of communities, fortifications, roads, and reservoir water management systems that stretched from the Late Horizon (LH, 1450s – 1500s CE) all the way back to the Initial Period (IP, 1800 – 900 BCE). Our most recent 2025 excavations at the fortified hilltop settlement of Cerro Sulcha expanded upon these findings, exposing a deep and likely continuous agropastoral domestic occupation that stretched at least from the LH through the Early Intermediate Period (EIP, 200 BCE – 600 CE) with a possible founding during the IP. Here we explore our findings at Cerro Sulcha and situate them with our previous work at contemporary LIP and EIP highland colonies in the Moche and Virú Valley chaupiyungas.

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Nicewinter

### **Identifying Headgear on Painted Figures from Cajamarca Cursive Style Ceramics**

Figurative imagery is frequently painted on Cajamarca Cursive style ceramics from the north highlands of present-day Peru. These figures are painted on the interior of fineware bowls, plates, and even small-scale spoons. They appear in a variety of guises and possibly represent various states of being from lively men in tunics to ancestral bundles. One intriguing aspect of these figures is the headgear worn by certain individuals depicted on Cajamarca Cursive style ceramics. Representations

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of headdresses, and possibly even hats, are identifiable within the corpus of Cajamarca painted ceramics. An interpretation of these images as individuals wearing specific types of headgear is possible through comparison with physical and represented examples of ceremonial regalia from neighboring cultures, such as the Moche of the north coast and the Recuay of the north-central highlands. There was intensive trade and interaction between the Cajamarca of the north highlands and these neighboring cultures, as evinced through the recovery of Cajamarca ceramics from both areas. Meanwhile, foreign ceramics and other foreign material culture are scarce in the north highlands. An investigation into the painted representations of headgear, and their relationship to specific ceremonial regalia from other cultures, elucidates the way Cajamarca artists were incorporating foreign motifs and images into their artworks.

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Osborn, Milton, Bongers, Espino Huaman

### **For the Love They Bear Them: Clandestine Burial and Caring for the Dead in Colonial Peru**

Following the Spanish invasion and the collapse and overthrow of the Inca Empire, millions of Indigenous Andean people died due to disease, famine, and violence. Simultaneously, the twinned forces of Spanish evangelization and treasure hunting caused widespread destruction to Andean cemeteries and legally prohibited traditional Indigenous mortuary practices. Such prohibitions severed the mutual relationships of care and nurturing (uyway) between the living and the dead that underpinned social order and continuity within Andean communities. In response, some Indigenous people began to clandestinely inter their dead outside of sanctioned cemeteries. This behavior, however, is currently underrecognized in the Andean archaeological record. New archaeological data from the site of Jahuary on the Peruvian south coast, paired with new consideration of previously excavated burials from nearby sites, suggests clandestine burials were a widespread mortuary practice in colonial Chinchay. We propose that this practice is best understood not as a form of resistance nor a rejection of Christian evangelization, but rather a form of community care to aid the continued survival of both the living and the dead.

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Peters

### **Emblematic and material color across the Paracas-Nasca transition: Dichotomies and significance**

The human eye perceives color through contrast. Warp-patterned weaving of the Andes organizes spatial and iconic messaging through color relationships, including a dichotomous contrast essential to the complementary warp patterning practiced in contemporary communities of the southern Central Andes.

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Archaeologically documented examples of dichotomous color contrasts abound in the southern Central Andes starting in the late Middle Horizon, c. 1000 BP, worked in warp patterning, weft patterning and double-cloth. They co-occur in textile assemblages with polychrome imagery worked in other techniques, and may reference fundamental principles of Andean thought and social organization. Here I explore antecedents in late Paracas and early Nasca, in the greater Ica region c. 2300 – 1800 BP, a place and time associated with strong polychrome imaging traditions and color patterning previously discussed by Carrión (1931) and Paul (1986, 1998). I will demonstrate dichotomous color organization in both late Paracas and early Nasca textile design across a wide range of production techniques. The specific colors paired provide evidence for principles of color theory. Their associations with particular materials, forms, practices and iconography suggest other realms of significance.

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Pineda, Prieto

### **Crías Para Los Dioses: Chimú Sacrificial Camelids from the North Coast of Perú**

In the last ten years, the archaeological evidence of the importance of camelids in the Andes has been increasingly discovered, discussed, and understood. Camelids in this region not only provide food and wool, they are often involved in religious rituals, including sacrifices. For the Chimú culture, camelids represent one of the two major victims of their ~500 year sacrificial practices in the North Coast of Perú, whose grounds are located a few kilometers North of Chan Chan. This sacrificial site of Pampa La Cruz contains the mortuary profile of hundreds of sacrificed children and young camelids. As of now, most of the focus and archaeological work has been centered on the remains of the children, and not on the camelids. This paper examines the body positions and burial treatment of the sacrificial camelids, exploring how they reflect longstanding Andean concepts of dualism, elemental origins, and the intertwined nature of human-animal relations in both social and religious landscapes. By centering this study on the camelids, this work highlights their equal and active role in Chimú ritual sacrifice, offering new insights into Chimú cosmology, worldviews and sacrificial mortuary practices.

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Rivera Prince, Hu, Quave, Chiou

### **The Inka and Zeacentrism: Complicating Categories, Taxonomies, and Scientism in Archaeology's Methodological Habitus**

Archaeological methods are partly shaped by logics of hierarchy, rigid taxonomies, and single-axis distinctions. Such practices and protocols are insufficiently critiqued and questioned, resulting not only in important issues with equifinality but also with erasure and ignorance of non-dominant narratives in the archaeological record. Much of archaeology is characterized by a "methodological

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habitus" that works to unintentionally and uncritically standardize and bias interpretations and is bounded by an adherence to scientism. We challenge the assumption that hypothesis- and data-driven archaeological inquiry is ontologically incompatible with intersectional ambiguity and complexity.

To illustrate the interpretive constraints this habitus can produce, we turn primarily to the domain of food and foodways and demonstrate how intersectional and critical feminist science can offer pathways for resisting deterministic taxonomies and overly confident reconstructions. Drawing on the case of zeacentrism in Andean archaeology, we explore how even quantitative and "objectively" categorical archaeological analyses can flatten past social experience. We illustrate our argument with a discussion of zeacentrism in archaeological research related to Inka imperialism.

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Sieczkowska-Jacyna, Quispe, Vranich, Rakowski

### **Cusco in Time: Absolute dating and the transformation of the Inca capital**

The origins of Inca Cusco are deeply rooted in myth and legend, narratives that reflect historical memories while primarily serving to legitimize the expansion of the Inca state. Although scholars have established a relative chronology of Cusco's foundation and growth by integrating these accounts with archaeological and historical records, defining absolute dates for key transformations remains a major challenge in Andean studies.

Recent excavations at the monumental complex of Sacsayhuaman provide critical new evidence to address this issue. A stratified series of radiocarbon samples, spanning pre-Inca occupations through the colonial period, has been systematically recovered from secure archaeological contexts. This dataset allows the application of Bayesian modeling, in combination with stratigraphic and architectural analyses, to refine the chronology of the site's construction phases.

The results establish a highly accurate sequence of events, clarifying the timing of major building programs and situating the foundation of Sacsayhuaman within broader processes of imperial expansion. In particular, this study highlights the role of Inca Pachacuti Yupanqui, under whose reign Cusco was transformed into the capital of an empire. Framing these findings within the dynamics of the Inca conquest of the Cordillera Vilcabamba, the research provides a more nuanced understanding of the relationship between monumental construction and state formation.

Beyond advancing debates on Cusco's origins, this work demonstrates the methodological value of Bayesian modeling for dating extensive archaeological features in complex stratigraphic settings. The approach offers a replicable

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framework for refining absolute chronologies at other Andean centers, contributing both to regional archaeology and to comparative discussions of urban development in early states.

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Tomczyk, Rudnicka

### **Exotic to Whom? Reassessing "Exotic Species" in Andean Archaeology**

The concept of exotic species is a difficult-to-define cluster concept. In biology and environmental sciences, it generally refers to species that are not endemic to the regions where they live, often equated with invasive species. The social sciences, however, focus more on the cultural and historical framings that explain why species occur outside their natural range. Anthropological archaeology, including research in the Andes, also carries its own preconceptions when determining which species should be considered exotic. Our review of Andean (zoo)archaeological case studies shows that most authors apply the term in two overlapping ways: either to describe a foreign animal or to denote a rare and unusual one. To avoid conflating rare animals with rare zooarchaeological finds, we introduce the concept of the Archaeological Exotic Species. We then apply this concept to our studies of faunal remains and animal byproducts (such as feathered textiles and containers with leather trim) from the Castillo de Huarmey site — a Wari funerary and administrative center on the north coast of Peru. This case study demonstrates that many seemingly rare animals were unfamiliar to researchers but not to the Wari-era inhabitants of the site. At the same time, some apparently endemic species are conspicuously absent. We conclude by emphasizing the need for more precise definitions of how archaeologists categorize animals as exotic, as this is crucial for producing stronger archaeological knowledge.

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Toyne

### **Placement, Processing, and Identity: Exploring Variation in Mortuary Practices at Kuelap, Chachapoyas, Peru**

There is great variation in mortuary practices across the Chachapoyas region, including individualized sarcophagi and residential floor pit burials; collective chamber tombs, mausoleums, and caves; as well as secondary burials in walls and architecture. We find naturally preserved mummified individuals as well as ossuaries. While there are expectations that mortuary practices reflect shared ritualized beliefs in life and the afterlife, this range in body placement and treatment would seem to suggest diversity in beliefs. Alternatively, the variation could reflect complexities of individual social identities of the deceased and/or relationships with the living. Mortuary theories abound, but the model of Poetics (Whitehead 2004; Osterholtz 2020) provides a valuable window to explore this dynamic of not only the final resting place but also the process and processing of

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the bodies. This paper explores the mortuary variation within the monumental complex of Kuelap where long term excavations have elucidated this variation with a burial sample of over 700 individuals from 228 mortuary contexts, including isolated crania, individual complete/mostly complete burials, multiple secondary burials ranging from 2 to 70 individuals, as well as an ossuary representing the commingled remains of 179 individuals. Singular identities are represented but also secondary relocation to collective spaces involves processing and transposition of individuality. With new excavations at other sites, we are also identifying similar within site variation. The lack of uniformity in mortuary practices could indicate chronological aspects, social identities, as well as secondary funerary rituals connected to the "socially constructive cultural performance" of community building (Whitehead 2004:60).

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Varillas

### **Maritime Landscapes and Imperial Reach: Inka Strategies in Coastal Arequipa**

This study examines the integration of coastal Chala, Arequipa (1470–1532 CE), into the Inka imperial network, highlighting the interplay between state strategies and local resilience. Long considered marginal to the highland heartland, the Arequipa coast emerges through recent research as a dynamic landscape of agricultural production, craft specialization, and maritime resource exploitation. Fieldwork at Puerto Inka and surrounding quebradas and lomas combines excavation, survey, and drone-based mapping with LA-ICP-MS ceramic compositional analysis, radiocarbon dating, and zooarchaeological and botanical studies. Results reveal a sophisticated system of highland-coastal exchange, including the presence of non-local crops likely associated with imperial *corvée* labor, alongside enduring local practices in fishing, horticulture, and herding. Evidence of state-administered storage and distribution networks demonstrates coordinated labor and resource management that linked coastal communities directly to Cuzco. By situating Puerto Inka within broader provincial and interregional networks, this research challenges assumptions of coastal marginality and emphasizes the strategic importance of maritime landscapes in Inka political economy. These findings contribute to a more nuanced understanding of imperial reach, showing how the Inka negotiated environmental diversity, integrated peripheral zones, and fostered complex interactions between local communities and the state.

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Whittemore, Rolando Espinoza

### **Chronology and Continuity in Domestic and Mortuary Spaces in the Qaracha Basin, 850–1300 cal. CE**

Despite its importance in the pre-Hispanic period as the home of the Quispisisa obsidian source, the present-day Province of Huanca Sancos in Ayacucho, Peru

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has been the subject of relatively little archaeological research. Fortunately, recent and developing studies are beginning to shed light on the region's unique history and role in larger regional patterns and dynamics. This paper presents the findings from the 2023 season of Proyecto de Investigación Bio-Arqueológico de Sancos, which investigated the mortuary site of Silvanayocc and the domestic/mortuary site of Sayllamoqo in the Qaracha Basin of Huanca Sancos. Silvanayocc is a hillside complex of large, modified limestone caves, which housed mummy bundles. It is situated within the line of sight of Sayllamoqo, a village dominated by circular houses and double-coursed walls, interspersed with rectangular structures and small burial caves. Based on 19 radiocarbon dates, the sites were used contemporaneously, between about 850–1300 cal. CE, with the most intense period of mortuary use between 950–1100 cal. CE. These dates and similar, Wari-influenced and local artifacts styles found across contexts suggest cultural continuity during and after the decline of Wari influence in the region. Additionally, two burial caves at Silvanayocc contained domestic occupations dating to the Early Intermediate Period (ca. 50 cal. BCE–200 cal. CE), suggesting that machay burial traditions may, at least in some cases, represent a return to ancestral dwelling places. Together, these findings suggest strong local continuities and traditions through periods of drastic political and cultural change in the south-central Andes.

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Zhu, Prieto

### **Salinar (400–150/100 BCE) Camelid Uses in the Huanchaco Bay Area, Moche Valley, North Coast of Peru: Zooarchaeological Evidence from Pampa La Cruz (PLC) and José Olaya (JO-IG)**

The sites of Pampa La Cruz (PLC) and José Olaya – Iglesia Colonial (JO-IG) in the Huanchaco Bay area were important Salinar settlements during the late Early Horizon (400–150/100 BCE). Located less than 500 meters apart, PLC and JO-IG represent contemporaneous Salinar occupations where local communities engaged in both quotidian and ritual activities. While PLC is characterized by modest residential compounds and open plazas, JO-IG is associated with cemeteries and ceremonial U-shaped structures.

Previous studies have shown that late Early Horizon residents of PLC and JO-IG had access to various local and exotic goods and subsisted on agricultural products, maritime resources, and domestic animals. South American Camelids first appear in the lower Moche Valley during the Early Horizon and became more extensively exploited in the subsequent Virú and Moche periods.

In this paper, I present a zooarchaeological analysis of camelid remains from the Salinar context of PLC and JO-IG. Using skeletal part representation, age distribution, human and non-human modifications, and other zooarchaeological

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indicators, I examine the provenance and both dietary and non-dietary uses of camelids in the late Early Horizon Huanchaco Bay area. Comparison between the camelid assemblages from PLC and JO-IG further highlights spatial variation in camelid exploitation and the role of camelids in shaping intra-communal relationships and Salinar identities. This study provides critical insights into early experimental herding and the uses of camelids among coastal fishing communities on the north coast of Peru.

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