

Panelists: *Kim McMurray*, The Indivisible Guide, *Alexandra Klein*, National Humanities Alliance, *Lindsay Theo*, American Federation of Teachers, *Kiran Mansukhani*, The Graduate Center, CUNY, *Wynter Pohlenz Telles Douglas*, Bryn Mawr College, *Olga Faccani*, University of California, Santa Barbara, *Emily Allen-Hornblower*, Rutgers University, *Kristina Chew*, Rutgers University, *Arti Mehta*, Howard University, *Dan-el Padilla Peralta*, Princeton University, and *Jerise Fogel*, Montclair State University

Session 4A: Open Session Consumption and Exposure in the Roman World

Taste and Technique: Reconstructing Food Preparation Strategies through Use-Alteration Analysis of First-Century C.E. Cookware Assemblages from Pompeii

Aaron Brown, University of California, Berkeley

This paper considers how the inhabitants of first-century C.E. Pompeii prepared their daily meals and what factors influenced their choice of cooking techniques. Through an examination of the frequencies of particular types of vessels (bronze and ceramic) and utensils used for food and drink preparation recovered from a series of previously excavated properties in and around Pompeii, I reassess what constituted the standard *batterie de cuisine* within the Pompeian kitchen and how this could be modified according to the needs and preferences of the one stocking the shelves. I further offer a reconstruction of the various cooking methods employed and preferences exhibited by those who used these cookwares through an analysis of use alterations displayed by the objects. This involves the systematic examination and documentation of intentional and unintentional modifications—including sooting, scratching, denting, etc.—visible on the surface of each object. The properties selected for this study represent a range of property types, including modest and grand houses, commercial food establishments, and suburban villas, allowing us to discern how food preparation strategies differed between households, as well as residential and commercial properties. I interpret these differences as indicators of the socioeconomic priorities and individual tastes of those who prepared the meals within these different contexts.

This study, based on fieldwork carried out in August and September of 2019 in the storerooms at Pompeii, sheds light on an often overlooked aspect of Roman daily life through the examination of an historically neglected class of artifacts. It also provides a corrective to traditional typological artifact studies which privilege morphology over functional considerations. By focusing on the dynamics of object-user interaction and how vessels and utensils were actually manipulated within Roman kitchens, as evinced through use alterations, we can better appreciate not only the methods, but also in part the motives of the cooks who used such objects.

A mari ad mensam: An Investigation of Social Status Through Fishing and Fish Consumption in the Roman Mediterranean

Catherine E. Gould, University of Southampton

Fish sauces, such as garum, have been explored in numerous studies of Roman marine exploitation, yet the sociocultural implications of fish consumption and status in the Roman world have been, for the most part, overlooked. This is not to say that no scholar has examined the sociocultural significance of ancient fishing practices; in the past two decades, there have been several significant investigations into the specifics of the Roman fishing and aquaculture industries. However, the argument that fish is an indicator of status in the ancient Roman diet is less developed than the conclusions drawn about fish and fishing within the Roman economy and technological contexts.

In this paper, I aim to fill the gaps in previous academic analyses of Roman marine resource exploitation by examining the social status inherent within several connected elements of the Roman fishing industry. The guiding research questions are as follows: To what extent was the presence of saltwater fish in Roman diets a status indicator? Can evidence from Roman iconography, literature, and archaeology be used to create a definitive status hierarchy of consumable fish in the Roman world? What were the social status implications in the Roman fishing industry from sea to table? To answer these questions, this paper combines primary source material with modern scholarly interpretations to form an original contribution to the archaeological studies of the Roman world.

The conclusions I make are as follows: The Romans of the Imperial period valued saltwater fish over freshwater fish; these same Romans preferred fresh fish over preserved fish. The fish which came from a private fishpond was an indicator of higher status than the purchase of fish at a market or a meal of fish from a tavern, and the environment from which fish were caught designated their value and popularity within Roman dietary culture.

Skeletons from Oplontis Reveal Dietary Differences in the Bay of Naples (79 C.E.)

Kristina Killgrove, University of North Carolina at Chapel Hill, *Andrea N. Acosta*, University of South Carolina, and *Robert H. Tykot*, University of South Florida

Measurement of the stable isotopes of carbon and nitrogen from human bone collagen is common practice in bioarchaeological projects interested in palaeodiet. Although a number of studies have employed this technique on cemetery populations from the Imperial Roman world, just two previous studies have highlighted the diet of people killed by the eruption of Mt. Vesuvius in 79 C.E. Here we present the results of a new palaeodietary analysis of twenty-four people from the site of Oplontis (Torre Annunziata, Italy).

The human skeletons were discovered between 1984–1991 in Room 10 of Oplontis B, and full analysis of the remains began in 2017. Our isotope analysis of the rib collagen shows a $\delta^{13}\text{C}$ average of -19.3‰ , suggesting a diet primarily composed of wheat and barley, and a $\delta^{15}\text{N}$ average of 10.8‰ , suggesting a diet of terrestrial meat such as pork. However, the average nitrogen value at Oplontis is significantly higher than that at Herculaneum and Pompeii, suggesting that

people from Oplontis may have also been eating higher trophic level food, such as marine mollusks or sardines.

Within the population, we also identified changes in diet during several individuals' life courses by comparing the isotope values in their tooth collagen versus bone collagen. For example, one older man ate a diet in the last five years of his life that was significantly lower in nitrogen than was his adolescent diet. Given his antemortem tooth loss, his different diet over time is likely a result of masticatory problems.

This palaeodietary study of the people found at Oplontis represents the first biochemical analysis of this population. Further work on their DNA to determine biological relationships and disease status is ongoing.

The People of Oplontis B: An Osteological Study of Age, Sex, and Familial Relationships

Andrea Acosta, University of South Carolina, *Kristina Killgrove*, University of North Carolina, Chapel Hill, and *Shyiesha Carson*, University of West Florida

Vesuvius erupted in 79 C.E., leaving entire towns and their populations buried for centuries. One such place was Oplontis B, assumed to have been a wine and oil emporium or distribution center in the Campania region. Skeletons were discovered between 1984–1991 only in Room 10 of the complex.

Our 2017–2018 excavation and osteological analysis was the first full accounting of the human skeletons and casts from Oplontis and revealed a minimum number of 64, higher than previously assumed. People of all ages are represented in this cross-section of the living population, composed of 28 non-adults and 33 adults; the sex ratio was evenly distributed with 17 females and 18 males. This demography differs from cemetery populations, wherein females are usually underrepresented and there is high infant mortality. Notably, two full-term fetuses were found in or near two adult females. The presence of nonmetric cranial and dental traits in this population, such as persistence of the metopic suture and shovel-shaped incisors, also suggests biological relationships among individuals.

Both the archaeological evidence from Oplontis B and the osteological discoveries suggest that this multiuse complex was a form of a residential business that may have been family owned and operated. Ongoing DNA analyses will allow us to further investigate the demography of this population, including our biological relationship hypothesis, and isotope analysis may reveal whether any of the people who died at Oplontis were immigrants.

An Interdisciplinary Study of Lead Use and Lead Exposure on an Imperial Roman Estate (First–Fourth Century C.E.) in Southern Italy

Tracy Prowse, McMaster University, *Maureen Carroll*, University of Sheffield, *Mike Inskip*, McMaster University, and *Jane Evans*, British Geological Survey

Excavations at the site of Vagnari in southern Italy have uncovered a vicus and necropolis (second–fourth centuries C.E.) associated with a large Imperial estate. Vagnari is the largest Roman period site in the region and was likely situated near

the via Appia, an important trade route linking Rome to the southeast coast of Italy. Evidence of metal working, lead scrap, and lead objects from the vicus at Vagnari suggest that lead was a ubiquitous resource on this Imperial estate. This raises questions about where this lead came from and the possible health consequences of its widespread use on the people working and living at Vagnari, particularly for children who are at greater risk for negative health consequences associated with exposure to lead. We have the unique opportunity at Vagnari of knowing where the people lived and worked with this toxic material, and we have their physical remains in the necropolis to investigate lead levels in their teeth.

Isotope analysis of the lead manufacturing debris and artifacts recovered in the vicus indicate that the ores were extracted from mines in Sardinia and/or western Italy. Preliminary analysis of the source of lead in the Vagnari teeth indicates similar geographic origins. Laser ablation analysis on 20 deciduous and permanent molars from the Vagnari skeletal sample is progress. Preliminary results from the first 9 teeth of this sample reveal that approximately 20% had highly elevated lead levels (up to 37.7 ppm), including both women and children, while the remaining individuals had lead levels within acceptable ranges. This paper discusses the relationship between lead production, lead exposure, and the health consequences for members of this rural Roman community.

A Spatial Epidemiological Model of Malaria Transmission Risk in Roman Italy

David Pickel, Stanford University

Given our ever-growing knowledge of malaria's prevalence in ancient Italy, archaeologists and ancient historians increasingly are taking the disease into consideration when studying the demography and economy of Rome, and understandably so. Wherever prevalent, the disease has costs, the gravest being significant increases in mortality and morbidity rates, especially among children. Malaria also depresses economic growth. Moreover, these costs can engender and reinforce sociopolitical struggles and inequalities.

Yet this recent work lacks specificity, in particular with regard to the spatial and temporal boundaries that humans and the environment impose upon the disease. Much scholarship presents oversimplified descriptions of malaria's ancient prevalence, often describing the disease as if it were at all times everywhere. On the contrary, it is more likely that the disease was highly circumscribed, thus impacting regions and populations differently much in the same way it does today. Given the evidence currently available, how can we improve our understanding of this differential impact and the ways in which Romans lived with the disease?

In this paper, I offer a new way to specify malaria's likely prevalence in the past. Drawing from epidemiology and disease ecology, I use spatial analysis to model ancient malaria transmission risk in Roman Italy based on essential ecological criteria: temperature and hydrology. I then juxtapose this model with the archaeological and textual data, which provide evidence for Roman approaches to water management and daily life within potentially at-risk areas. Through this juxtaposition, it becomes clear that the Romans, although unaware of malaria's specific etiology, were likely able to incidentally reduce the risk of the disease's transmission. It also suggests that malaria's eventual entrenchment within the

peninsula, lasting until its elimination in the mid-twentieth century, may have been a consequence of those very same Roman practices which for a time curtailed its transmission.

Session 4B: Colloquium

Material Approaches to Ptolemaic Imperialism

Organizers: *Thomas Landvatter*, Reed College, *Jennifer Gates-Foster*, University of North Carolina at Chapel Hill, and *Melanie Godsey*, University of North Carolina at Chapel Hill

Colloquium Overview Statement

In the third century B.C.E., the Ptolemaic dynasty presided over the largest expanse of Egyptian power since the New Kingdom, eventually including significant parts of Nubia, coastal North Africa, the Aegean, Crete, Cyprus, and the Levant. The discontinuous nature of the Ptolemaic territories has resulted in regional case studies that are typically hyper-local in their focus and rarely compare across the eclectic span of Ptolemaic economic and political influence. This fragmented narrative—characterized by Ptolemaic episodes and interventions—is often also presented without material contours. In this session, we ask what an archaeology of Ptolemaic imperialism might look like and how objects and assemblages studied in context can offer insight into changing material patterns stimulated by new economic, religious and civic practices that developed in spheres impacted by Ptolemaic rule from the third to first centuries B.C.E. More broadly, we aim to situate studies of the Ptolemaic empire in an archaeology of Hellenistic imperialism and ancient imperialism more broadly.

The six papers in this panel consider material perspectives on Ptolemaic imperialism from different contexts across the Eastern Mediterranean. The first, “Ptolemaic Imperialism and Material Culture,” frames the conversation, providing an overview of Ptolemaic imperialism and a framework for incorporating material evidence in its study. The second paper, “Ptolemaic Pots? Contextualizing Assemblages in the Ptolemaic East,” examines the Ptolemaic presence in the Levant through an analysis of ceramic assemblages. The following paper, “Mortuary Practice and Social Change on Ptolemaic Cyprus,” considers the social effects of Ptolemaic rule on Cyprus through the lens of burial practice. From Cyprus the focus of the panel moves westward, with “Ptolemaic Imperialism in Southern Greece” considering whether Ptolemaic rule in Greece produced archaeologically perceivable effects on social practice and economic choice. The fifth paper, “Hellenistic Crete and Material Evidence for Ptolemaic Influence and Imperialism,” critically analyzes the development of Crete during the Hellenistic period in relation to Ptolemaic hegemony in the region. In the last paper, “Ptolemaic Borderlands: The Red Sea and Nubian Frontiers in Archaeological Perspective,” the panel’s focus returns to Egypt itself, considering Ptolemaic imperialism along the eastern and southern borders of Egypt through an analysis of fortifications and settlements. These papers, with their wide geographic focus and diversity of material

approaches, provide a holistic view of Ptolemaic imperialism and define a way forward for the material study of the Ptolemaic empire.

Ptolemaic Imperialism and Material Culture

Christelle Fischer-Bovet, University of Southern California

The last two decades saw a renewed interest in the study of empires among ancient historians (e.g., Bang and Scheidel), partly influenced by comparative approaches to premodern and modern empires. At the same time, historians of Hellenistic Egypt (e.g., Hauben and Meeus) have challenged the old idea that the first Ptolemy was not attempting to build a vast empire. They have emphasized the imperial character of the Ptolemaic royal ideology and more broadly what may be called a Ptolemaic culture. Only a holistic approach to the sources may allow us to assess how Ptolemaic imperialism was shaping the interaction between imperial elites and lower rank officials/soldiers on the one hand and local communities on the other hand and how it has affected their cultural, social, economic and political environment throughout the empire.

The aims of the paper are twofold: first, to give a brief overview of Ptolemaic imperialism with a particular attention to change over time; second, to sketch a framework that integrates more thoroughly material evidence, including coinage, into the study of Ptolemaic imperialism. Material evidence has the advantage to be more evenly preserved throughout the empire than papyri. The latter give a unique glimpse into Egypt but tend to make it appear more exceptional than any other region. Material evidence also enable us to read against the grain some of our literary sources, that focus on the decline of Ptolemaic power. Instead, “decrease” and “increase” can be qualified in terms of the development of (sometimes new) settlements, dissemination of a particular visual culture, economic production or circulation of goods. As a case study, Ptolemaic settlement patterns in Southern Anatolia and in the Red Sea are compared to show differences but also the mark of a Ptolemaic culture in the making.

Mortuary Practice and Social Change on Ptolemaic Cyprus

Thomas Landvatter, Reed College

Aside from a ten-year interval from 305 to 295 B.C.E. when it was controlled by the Antigonids, Cyprus was under near-continuous Ptolemaic control from 312 to 58 B.C.E. In contrast to other areas under Ptolemaic rule, Cyprus underwent a radical political transformation in the third century B.C.E. Cyprus was culturally and ethnically diverse, with significant Greek, Phoenician, and so-called “Eteo-Cypriot” populations, and while the island was nominally under Persian control during the fourth century B.C.E., Cyprus in practice had been ruled for several centuries by a varying number of independent city-kingdoms. With the final establishment of Ptolemaic control on the island in 295, the city-kingdoms were abolished and the Ptolemies ruled the island directly. Given the scale of the political transformation on the island, Cyprus provides an interesting test case to examine the social and material effects of the Ptolemaic imperial project.

This paper examines the effects of Ptolemaic rule on Cypriot society through the lens of burial practice. While mortuary practices have the tendency to be conservative, the purposeful and structured nature of human burial means that shifts in mortuary patterns can shed light on wider social transformations. Communities on Cyprus had long-standing traditions of burial practice that were distinct from surrounding regions, including the widespread use of inhumation in rock-cut communal burial chambers. During the Ptolemaic period, there were significant shifts in mortuary behavior linked with broader trends in areas under Ptolemaic control, in particular the political center of Alexandria. This includes the use of cremation and more monumental, architecturally elaborate rock-cut communal tombs (i.e., the so-called “Tombs of the Kings”). However, while linked to burial practice elsewhere, these innovations on Cyprus have particularly Cypriot connotations and were adapted to preexisting Cypriot norms. Mortuary practice, among elites at least, was Ptolemaic in style but fundamentally Cypriot in structure.

Ptolemaic Pots? Contextualizing Assemblages in the Ptolemaic East

Peter Stone, Virginia Commonwealth University

Of the Ptolemaic territories outside of Egypt, Coele-Syria and Palestine were the most fiercely contested in the Hellenistic Period. Claimed by Seleucus I but in fact held by Ptolemy I, it would be the scene of five Syrian Wars fought between their successors from 274 to 197 B.C.E. Despite a wealth of excavation in this region, monuments and inscriptions that might elucidate the workings of imperial power are rare in the span it was held by the Ptolemies, leaving us only more humble remains as possible archaeological testaments to their rule. To see if such remains can speak to imperial realities I will present an overview of ceramic assemblages from the Nile Delta, the Levant, and eastern Cilicia in the third and early second centuries B.C.E., allowing for comparisons between sites located in Ptolemaic Egypt, their contested Levantine territory, and into areas squarely held by the Seleucids. This overview will demonstrate similarities in the typical range of table and cooking vessels made and used in the delta of Egypt and the southern Levant. We will consider whether these similarities can be attributed to Ptolemaic imperialism or other social and economic factors.

Ptolemaic Imperialism in Southern Greece

Melanie Godsey, University of North Carolina at Chapel Hill

The Greek mainland remained an important cultural center and battleground for the successors of Alexander the Great. The Ptolemies established garrisons, founded new settlements, relied on port cities to maintain their thalassocracy, and received offerings in return for their benefactions in early Hellenistic Greece. Recent studies have explored how inscriptions, portraiture, and royal cult monuments display a centralized presence of Ptolemaic power in Greece into the mid-second century B.C.E. Although long-term Ptolemaic occupation is recorded in certain parts of Greece, such as Methana, the overwhelming historical evidence for isolated, short-term settlements to meet certain political or military goals deters

interest in studying the integration of Ptolemaic settlements into regional social and economic landscapes. Material consequences of Ptolemaic imperialism in the region, therefore, remain underexplored. I discuss changes in land use, agricultural production, and ceramic assemblages to contextualize the material culture of southern Greece in the discussion of administrative and institutional facets of Ptolemaic imperialism. Are there perceivable effects on social practice and economic choice in Greece? Through a contextual study of the dialogue between human, landscape, and material actors in the imperial project, the approach gears the analysis toward recent studies of ancient imperialisms in order to challenge how the Ptolemaic iteration of empire fits into discussions of Hellenistic material culture.

Hellenistic Crete and Material Evidence for Ptolemaic Influence and Imperialism

Scott Gallimore, Wilfrid Laurier University

The island of Crete is a difficult location to characterize during the Hellenistic period. Home to a Ptolemaic garrison at Itanos in the northeastern corner of the island, Crete remains isolated from many of the broader discussions of the eastern Mediterranean despite its position as a central node between Asia Minor, the Aegean, and North Africa. Discussions of the relationship between Hellenistic Crete and Egypt tend to emphasize two points: (1) that Crete was a source of mercenary soldiers; (2) and that the island served as an intermediary for economic and intercultural exchange networks between Egypt and regions like the Peloponnese and southwestern Asia Minor. Focus on the extent to which Crete was active in the development of these networks and how this is reflected in material assemblages is lacking. In fact, by the second century B.C.E., most overviews of Crete focus more on the island's growing contact with Rome and the transformations that may have stimulated. With ever-increasing publication of data sets from excavation and survey, there is potential to reevaluate the development of economic, religious, and civic institutions on Hellenistic Crete within the context of eastern spheres of influence and to assess the island's contributions to those developments locally and internationally. Thus, this paper aims to engage in critical analysis of the traditional perspectives of Hellenistic Crete within the context of Ptolemaic hegemony by addressing the central concern of the colloquium: what an archaeology of Ptolemaic imperialism might look like. Developing that picture for the island will enable novel interpretations of Crete during the Hellenistic period and better situate the island within the numerous spheres influenced by the Ptolemaic dynasty.

Ptolemaic Borderlands: The Red Sea and Nubian Frontiers in Archaeological Perspective

Jennifer Gates-Foster, University of North Carolina at Chapel Hill

Over the last twenty years, archaeological survey and excavation have given rise to a new understanding of Ptolemaic imperialism along the eastern and southern frontiers of the Egyptian state. In these border zones, fortifications, mining settlements, and coastal communities were established in the Eastern Desert and Red Sea regions alongside a dynamic program of temple patronage and community

development in Syene and the Dodekaschoinos. These locations were nodes of contact with nomadic populations, especially the Blemmyes of the Eastern Desert and Nubia, as well as the 'Arabs of the Desert' now known from the *ostraka* recovered at Bir Samut. These communities also functioned as zones of identity construction where cultic performance mediated the relationship between local power brokers, officials from Alexandria and polities in distant Meroe. In each case, Ptolemaic power and the practices of living at the margins of the Ptolemaic enterprise were materially expressed and dynamically intertwined with much older cultic and economic patterns visible in the landscape.

In this paper, I consider the nature of Ptolemaic imperialism as expressed through the new settlements and fortifications constructed in the third century B.C.E. along the Red Sea coast and in the Eastern Desert beyond the borders of Egypt. Mapped onto a much older landscape of Nubian trade and entanglement, the Ptolemaic imprint on these regions reveals a strain of awareness of older nodes of exploitation and settlement, just as the temples constructed in the Dodekaschoinos engage with cultic topography derived from New Kingdom and Late Period precedents. The broader picture that emerges is of a Ptolemaic formulation of imperialism centered on spaces—temples and fortifications, in this instance—that mediated the borderland encounters of the third century B.C.E.

Session 4C: Poster Colloquium

The Gabii Project Excavations: 2009–2019

Organizer: *Andrew C. Johnston*, Yale University

Colloquium Overview Statement

This poster session highlights various facets of current research from the ongoing work of the Gabii Project, which since 2009 has been investigating the Latin city of Gabii, 20 km east of Rome. After a decade of excavation, a critical mass of data has now been gathered to begin to answer important questions about the whole urban trajectory, from the pre-urban phases through late antiquity, which have relevance for the study of Roman urbanism more broadly. In particular, this session aims to embrace a wide range of different methodological approaches to the long history of Gabii, which reflect the Project's excavation and recording practices as well as the significant potential not only of the site, but also of the modern "big dig."

The Bronze Age at Gabii is obscure compared to other periods, but recent ceramic finds allow for new observations about the earliest occupation of the site ("New evidence from the Bronze Age"). Funerary practices and textile production can reveal the important role played by women and children in communicating group boundaries and facilitating social cohesion in the emergent urban spaces of central Italy like Gabii ("Burials and Bobbins"). The faunal remains from the Early Iron Age through Archaic periods reflect changes in economy and meat consumption that correspond to the changing social structure at Gabii ("Zooarchaeological Research at Gabii").

An extraordinary archaeobotanical sample affords a rare glimpse into the uncultivated pastureland of Republican Gabii, providing new insight on Roman foddering practices (“Fodder for Thought”). An analysis of a collated data set for fine wares at Gabii and the (g)local trade networks that they reflect contributes to a critical reinterpretation of the urban trajectory of the city after the late Republican period (“Fine Ware Consumption Trends”). Complementarily, the large collection of brick stamps excavated at Gabii allow for the reconstruction of the city’s shared trade network with Rome (“Building an Empire”). A newly uncovered imperial building—a remarkable elite *domus* of the third century C.E., which was later converted into a productive facility—helps to fill in a major gap in our knowledge of the later occupation of the city (“Life at Gabii”). An ongoing reexamination of the famous Gabine sculptures discovered by Hamilton in the eighteenth century enables a more accurate reconstruction of their ancient appearance, and a more complete understanding of these artifacts whose lack of secure context has resulted in their neglect by archaeologists (“Restoring the Restored”).

New Evidence from the Bronze Age at Gabii

Mattia D’Acri, University of Missouri

The Bronze Age at the site of Gabii is obscure compared to the other periods. There is much archaeological evidence from the Iron Age to the Roman period that allows for a relatively comprehensive reconstruction of the site, but the situation for the earliest phases is completely different. So far, for the Bronze Age, only one site is known, related to a small village on a terrace overlooking Lake Castiglione, dated back to the Middle Bronze Age (fourteenth century B.C.E.). There have been sporadic pottery sherds recovered around the Lake of Castiglione area, and one sherd from the area inside the perimeter of the Archaic town, all dating to the Recent and Final Bronze Age (thirteenth–eleventh centuries B.C.E.). The latter area is where the Gabii Project has been operating since 2007. In the new excavations, some important evidence dated back to the Bronze Age has been recovered, in particular from the Areas C and D, although it unfortunately was found in secondary deposition. In fact, secure stratigraphic contexts dated to this period are still unknown. The goals of the poster are to present the new Bronze Age sherds that have been uncovered from the Gabii Project excavations, and, in light of this new evidence, to offer some new observations on the Bronze Age occupation of the site that would later develop into the city of Gabii.

Burials and Bobbins: Integrating Textiles and Tombs into the Rhythms of Early Life at Gabii

J. Troy Samuels, Indiana University, Bloomington, *Sheira R. Cohen*, University of Michigan, and *Sabina A. Ion*, Gabii Project

While the urban development of Rome has been extensively studied from a historical and topographical perspective, the difficulties of urban excavation have limited our ability to understand the intricacies of social organization in the pre-urban settlement. Recent excavation at the Latin city of Gabii, an early neighbor

and rival to Rome, has helped fill this gap and provides a unique opportunity to study individual elite groups as they navigate the emerging urban environment and begin to forge new urban communities. Individual agency plays a large role in these negotiations and therefore requires a careful analysis of the material traces of individuals and individual activities.

Our excavations at Gabii provide a glimpse of some of these formative practices and reveal new evidence for the important role played by women and children in communicating group boundaries and facilitating social cohesion in the emergent urban spaces of central Italy. In this poster, we look at two activities that are not often linked, yet are particularly visible at Gabii, funerary practices and textile production. As a mechanism for communal expression and status display, funerary behavior has received considerable attention by archaeologists across the globe. In particular, archaeologists have focused on the potential correspondence between the structure of the living and mortuary populations and the distortion and manipulation of that structure through funerary practices. By contrast, discussion of production techniques and organization has largely focused on the economic implications without integrating these behaviors into our considerations of identity formation and identity display. Textile production, as with all collaborative activities, requires and generates communal bonds that, through time, craft dynamic human networks within and between groups. This poster will explore the different rhythms of community building that we see when we examine the material traces of different groups in the archaeological record.

Zooarchaeological Research at Gabii: Results from the Early Iron Age through Archaic Periods

Victoria C. Moses, University of Arizona

Because the Gabii Project has studied large excavation areas in a systematic way, the early occupation levels of Gabii provide a rare opportunity to understand the urban development of an important Latial center. The faunal remains from the Early Iron Age through Archaic periods reflect changes in economy and meat consumption that correspond to the changing social structure. The zooarchaeological evidence at Gabii includes larger fragments of bone collected from full soil sieving of early deposits and microfauna remains from soil sample flotation. These provide rich data for understanding both how ancient Gabines purposefully harnessed animal resources but also how animals reflect the natural and built environment.

Sheep and goat were the most common animals across these periods. However, the way that sheep and goat were used changed over time and differed between areas of the site. Based on the age of the animals, the inhabitants of Area C raised animals for meat consumption while Area D raised animals for other products, as well as for meat. By the Archaic period, there was an increase in cattle consumption in Area D that suggests the emergence of meat production sites outside the habitation area. Sheep, goat, and pig continued as the most abundant animals. In the earliest levels, there was a significant number of equids, both horse and donkey, that would have played an important economic role as beasts of burden. The preliminary results from microfaunal analysis show the presence of wild animals, including rodents, birds, fish, and lizards. Rodents in particular can be used as a

proxy for urbanization, since they are attracted to waste from an increase in human activities. Zooarchaeological analysis at Gabii shows how human and animal interaction during these periods reflect economy, meat consumption, social structure, and the environment.

Fodder for Thought: Botanical Remains from Republican Gabii

Laura Motta, University of Michigan, and *Katherine Beydler*, University of Michigan

This poster will present the preliminary results of the analysis of archaeobotanical material from an early Republican complex excavated in Area C. In particular, it will focus on a single sample with an atypical taxonomic composition. The plant remains come from a fifth-century B.C.E. road preparation layer that primarily consisted of burnt material. This sample preserved a remarkable amount of seeds that are not usually considered fit for human consumption and which often grow in arable fields, including small members of the bean family (*Fabaceae*) and a variety of wild grasses. It also contained high numbers of edible grains, both wheat and barley, showing an excellent level of preservation. As a whole, the sample represents an interesting and unique glimpse into plants that are usually understudied and underrepresented in archaeological contexts, informing us on the uncultivated landscape and pastureland of Republican Gabii and providing new insight on Roman foddering practices.

Fine Ware Consumption Trends at Republican and Imperial Gabii

Matthew C. Harder, University of Missouri

This poster presents some preliminary analysis on the consumption of fine wares at the Latin site of Gabii during the Republican and Imperial periods. The city of Gabii was located on the Via Praenestina roughly halfway between Rome and Praeneste. Literary accounts typically describe Gabii as relatively destitute and in decline by the Late Republican period. In order to better qualify such historical information, it is necessary to broadly survey the archaeological evidence before and after the supposed Sabine decline. This project presents, for the first time, the collated ceramic data (Black gloss ware, terra sigillata, ARS, etc.) from all of the published sources and projects conducted at Gabii. By sketching what vessels Sabines acquired and the associated use context, we can more accurately talk about the social and cultural realities of the site during these periods. Thus, integral components to this poster are diachronic distribution maps that show where, when, and what type of ceramics were being used across the site. In sum, the poster contributes to the ongoing research questions such as what (g)local trade networks the Sabines tapped into during these periods, and what these materials can inform us about the life history of Gabii.

Building an Empire: The Roman Brick Industry at Gabii

Christina Cha, Florida State University

Recent excavations of the Gabii Project have uncovered a large quantity of ceramic building material, of which a sizable portion features stamps. Roman brick stamps can be helpful in identifying the sources of the bricks used for urban building programs. The collection of brick stamps from Gabii shows that numerous brickyards were involved in supplying the construction material for the site. Yet the ancient purpose of brick stamps remains uncertain, whether they were used to take stock of inventory, or to guarantee the quality of the end product, or possibly for both aforementioned reasons. Nevertheless, the information provided by brick stamps can be used to better discern the industry's organization, production practices, and patterns of distribution.

Many different stamp types have been found at Gabii, and several of these have comparable examples from Rome and other peripheral locations, revealing significant trade connections. Gabii's proximity to Rome seems to have allowed the two cities to participate in a shared network of trade. At present, there is minimal evidence for a local production of bricks at Gabii, and based on the preliminary results of this study, the Gabines appear to have imported most of their ceramic building material from external sources. By analyzing the evidence of brick stamps from Gabii and then comparing the data with that of other sites in its periphery, this study aims to contribute to a clearer understanding of how ceramic building material was both created and distributed across a regional trade network.

Life at Gabii during the Middle and Late Imperial Periods

Arianna Zapelloni Pavia, University of Michigan, *Amelia Eichengreen*, University of Michigan, and *Darcy Tuttle*, University of California, Berkeley

In contrast to our increasingly clear understanding of Gabii during the Archaic and Republican periods, little is known about the urban trajectory of the site during the middle and late Imperial phases. In the past three years, the Gabii Project has begun investigating the later phases of its occupation and abandonment. Here we present preliminary results concerning these little-known periods based on new archaeological findings, which better inform our understanding of the site as a whole: we focus on the excavation of an imperial *domus*, which has yielded new and more detailed information about the economic and social vitality of Gabii during the middle Imperial period.

During the 2016–2019 field seasons, the Gabii Project uncovered a large building constructed in *opus vittatum*, dating to the second to third centuries C.E. After the beginning of the fourth century C.E., the building was modified for production. The most prominent features of the original phase of this building include a large central room, perhaps an atrium or peristyle, paved with mosaic floors with black and white geometric decorations, as well as an apsidal room, which likely functioned as a *tablinum* or reception hall based on its layout and position. Structures with similar plans in North Africa and Spain demonstrate that this large Gabine *domus* was modeled on a type of elite domestic architecture that was widespread during the second to fourth centuries C.E. However, in the fourth century C.E., the

splendor of the building comes to an end. In line with contemporaneous trends for such buildings, its elaborate spaces fell out of use, and parts of the structure were repurposed for production activity, while others were robbed out.

Hamilton and the Remaking of the Gabii Sculptures

Zoe Ortiz, University of Michigan

At the end of the eighteenth century, art dealer and antiquarian Gavin Hamilton discovered one of the largest caches of sculpture ever found in Italy outside of Rome. Excavating at Gabii, Hamilton uncovered a puzzling array of artifacts, including full-scale mythological sculptures, miniature table sculptures, monolithic inscriptions, and imperial portraits spanning three centuries. In addition, Hamilton claims to have discovered a large public space at Gabii, which is now known as "Hamilton's forum." At the end of this excavation, Hamilton remitted the majority of his finds to the Borghese estate, where the sculptor Vincenzo Pacetti set out to "prepare" the sculptures for their very own museum. Unfortunately for the Borghese family, they were compelled to sell this collection to Napoleon, who transported the collection to the Musée du Louvre, the sculptures' current home. Recently, a new collaborative analysis with the Louvre has been undertaken. Through this work, along with the fresh reexaminations of the *Giornale* of Pacetti, the illustrations of Visconti (the curator of the new museum), and the various letters of their associates, we have been able to discern the various modifications to the sculptures undertaken in the 18th century. In doing so, we have created a more accurate picture of these sculptures and how they would have been seen in ancient times.

This poster presents the discoveries of Hamilton, the modifications made by Pacetti, and the curation of E.Q. Visconti in order to begin the process of recreating their ancient environment within Imperial Gabii. By doing so, it demonstrates the benefits of an interdisciplinary approach (i.e., archaeology, art history, and antiquarian studies) in understanding sculptures and artifacts that were discovered without a thoroughly recorded archaeological context, a class of objects that are often disregarded by modern archaeologists.

Session 4D: Open Session Regions, Households, and Objects: New Research in Southeastern European Prehistory

More Similar Than Different: Reassessing Settlement Patterns and the Implications for Late Neolithic Archaeological Cultural Units on the Great Hungarian Plain

Danielle Riebe, University of Illinois at Chicago

Since the 1920s, the prehistoric chronology and archaeological cultures in Hungary have been fairly well defined. The incorporation of radiocarbon analysis has helped archaeologists to refine chronological sequences and systematic surface

surveys in the country between the 1960s and the 1990s has resulted in valuable datasets for studying regional scale settlement patterns. However, even with these changes, to a great extent much of the archaeological information has derived from small scale excavations at a few selected sites. This is particularly true for research on the Late Neolithic (5000–4500 B.C.E.) in Eastern Hungary.

During the Late Neolithic, the Great Hungarian Plain was inhabited by multiple archaeological units: the Csószhalom, Tisza, and Herpály. Extensive archaeological research has been conducted at Tisza sites, but far less attention has been given to Csószhalom and Herpály sites resulting in a skewed interpretation of socio-cultural developments during the Late Neolithic. The Prehistoric Interactions on the Plain Project (PIPP) has set out to better contextualize the dynamic processes that resulted in cultural variation by modeling multi-scalar interactions between Herpály and Tisza sites. As part of an NSF funded project, in the summer of 2019 PIPP began intensive investigations at the Herpály site, Csökmő-Káposztás-domb. Previously it was assumed that Herpály sites consisted of small tells located on oxbows, with an external flat settlement located nearby. However, very little research has actually been conducted to support this conclusion. Large-scale magnetic prospection carried out at Csökmő-Káposztás-domb suggest that tell-centered Herpály settlement complexes are much larger and more multicomponent than previously suspected. In fact, Csökmő-Káposztás-domb appears strikingly similar in layout to Tisza settlements located nearby. This paper presents the results of PIPP's 2019 field season and compares the magnetometric results with other Herpály and Tisza sites nearby to draw new conclusions about settlement patterns, regional interactions, and sociocultural variability during the Late Neolithic.

New Archaeological Project in Southern Albania: Upper Kurvelesh (dist. Tepelenë)

Vera Klontza-Jaklova, Masaryk University, *Tom Pavloň*, Archaeological Institute of Czech Academy of Science, *Michal Hlavica*, Masaryk University, *Iveta Navrátilová*, Masaryk University, *Adam Geisler*, Masaryk University, *Tomáš Krofta*, Archaeological Institute of Czech Academy of Science, and *Manolis Klontzas*, Masaryk University and Archaia Brno

In our paper, we present results of the first season survey in the region of the Upper Kurvelesh, which has many special features. These include not only its topography and the absence of systematic archaeological research but also the lack of intensive agriculture, particularly plowing, which would have provided the primary archaeological information about human activities in the past. It means that we can neither easily find fragments of archaeological artifacts and ecofacts on the surface, nor can we observe the abnormalities in cultural vegetation. Therefore, we must mobilize other methods (topography, geology, hypothetical land use, water regime, roads, and their residues, architecture, anomalies in vegetation, historical memory, and others).

Our first goal, set after evaluation of 2018 preliminary survey season results, was to define the habitation area and its chronology in Gusmar. In the 2018 season pottery fragments and flint tools, revealed by erosion, were found on the SW slope. During the season 2019, the hill and the area around it were divided into topographical units (sectors A1 – A3, B1 – 24, C1 – 6) and each was systematically

surveyed. A few hundred ceramic sherds, dozens of flint tools or their fragments, fragments of metal artifacts and other materials were found. They confirm habitation during the Upper Paleolithic and Neolithic, Archaic, Classical, Hellenistic, Roman, and Early Byzantine periods. Abundant activities of WWII and the subsequent socialist period were also evident. The habitation area, north of the hilltop was much larger than initially supposed. On the hill itself, residues of architectural units (buildings S0001 – S0009, roads, terraces, etc.) were found.

One of our central aims for 2019 was to visit the so-called Ali Pasha Aquaduct in Bënçë and test if it was possibly Roman in origin. At least three rebuilding phases were recognized. The earliest part of the structure (eastern part) corresponds to Roman custom. The plasters used in each building/rebuilding phase are different; a number of Roman pipe fragments were found alongside the structure; the topography of the structure crossing the valley is typical for Roman syphons. Although a Roman origin is highly plausible, it must be still proved by detailed research.

We also realized ethnoarchaeological research, centered on so-called shepherds' shrines. A few interviews with the local inhabitants were conducted, and a few potential sites visited. The shrine in Stogu was measured and documented. We continued to look for other residues of habitation and land use around Nivica village. As far we are convinced that the Kurvelesh region was operating as a crossroad between two main roads following the Vjosa river and the coastal connection. It was also a source of the raw materials, water, food supplies, and provided a refuge in times of unrest.

Tear it Down, There's Got to be a Better Way: Changes in House Construction during the Copper Age

William P. Ridge, University of Illinois at Chicago

The Copper Age (4500–2800 B.C.E.) in eastern Europe is a period in which multiple social, demographic, and technological changes took place. Many of the long-lived tells and large regional centers inhabited throughout the Neolithic were abandoned; metallurgy and the movement of metal prestige goods transformed how social status was achieved and displayed; and the movement of groups from outside the region imported novel material culture and practices. A notable change also occurred to the construction of houses and other domestic structures. For many regions, the Neolithic is characterized by the construction of long-houses, some, dozens of meters in length. By the Copper Age, long-houses became less common place and settlements were populated with more modest-sized dwellings. For the period of approximately 4000 to 3500 B.C.E., there is little available data on domestic structures. This is due in part to limited research on settlements, but also may be due to another shift in construction practices, namely from above-ground to subterranean structures.

In this paper, I examine the long-term trajectory of house construction practices in the Great Hungarian Plain and surrounding regions. The goal is to determine when construction practices changed and to understand the possible social or environmental reasons behinds these changes. I draw comparisons with construction practices from other regions (e.g., Early Neolithic Greece) and later time periods (e.g., Early Iron Age; Medieval), as well as incorporate my own settlement research

on Middle Copper Age Hungary. Based on these various lines of data, it appears that the construction of pit-houses become more common around 4000 B.C.E., which may be related to both region-wide environmental and demographic shifts. This may also help explain the dearth of excavated domestic contexts from this period.

Facing Innovations: The Role of First Copper Objects in the Social Transformations in the Fifth Millennium B.C.E. in Southeast Europe

Marina Milić, University College Dublin, *Vera Bogosavljević-Petrović*, National Museum Belgrade, and *Robert Sands*, University College Dublin

This paper explores the role of the earliest copper tools in the transformation of social practices at the heart of stone-using Neolithic communities in the Balkan Peninsula in the fifth millennium B.C.E. This was a turning point for societies in southeastern Europe when a major technological innovation came to influence everyday practices, economies, value systems and social hierarchies. While the adoption of metallurgy has been widely explored, the consumption and craft practices of first copper object has rarely been evaluated. Our study focuses on copper axes, the earliest metal objects that were produced following the initial invention of metallurgy. The objects come from the modern-day states of Serbia, Romania, and Bulgaria, the birthplace of European metallurgy. Traditionally, axes have been at the heart of archaeological discipline, forming the basis for chronological and culture group determinations.

Using recent developments in 3D digital modeling and geometric morphometric analyses, this paper provides a new digital and statistical approach to the study of typological and technological characteristics of axes. The basis of our study is a comparative digital analysis of copper and stone axes found within four Vinča culture hoards from the site of Pločnik in southern Serbia (fifth millennium B.C.E.). We also include contemporary assemblages from neighboring regions. The axes are examined using 2D and 3D (point cloud) geometric-morphometric analyses allowing comparative and objective typological analyses.

The examination of material, shape, and functionality of axes helps us better understand morphological and functional relationships between the earliest copper axes their stone counterparts (skeuomorphism). The results shed new light on the impact and pace of adoption of this technological innovation, and how its dissemination and consumption relate to complex economic and symbolic transformations of the transitional later Neolithic / Chalcolithic period.

Never Let Go: Repaired Ceramic Vessels from the Neolithic Balkans

Gazmend Elezi, Cotsen Institute of Archaeology, UCLA

Repairing ceramic vessels is a common practice in the Neolithic Balkans and the Aegean that goes back to the Early Neolithic Period. At least two techniques were used to reassemble the broken vessels, piercing holes for lashing joining sherds across the break with leather or other natural fibers in combination with adhesive material such as plant based tar or natural bitumen and layers of clay.

Although repair-holes in potsherds are present in almost every single Neolithic excavation where pottery is present, scholars working in the region have not paid much attention to such a phenomenon. No systematic record of potsherds with repairing traces has been published so far. As a result, issues related to motivation, technology, or selectivity of the repairing practices are barely addressed. In this paper, I try to build on these issues by focusing mainly on three prehistoric sites in southeastern Albania. Although it is very difficult to trace the true reasons behind the act of mending, this study shows that neither the function nor the category or type of the vessels by itself could have motivated Neolithic users to repair them. The systematic record of the material from Kallamas, a Neolithic settlement on the shore of the Grate Prespa Lake, shows that vessels of different shape, dimension, color, or function preserve traces of repair. The economic aspects alone, on the other hand, cannot explain the geographical and diachronic extension of the phenomenon in the region. The lack of an aesthetic, typological, functional, or economic pattern may suggest that other reasons seem to have encouraged the repairing practices. I argue that aspects of the relationships between owners and their ceramic vessels, shaped through different social activities in which they were engaged, should be seriously taken into consideration to approach such a practice from a behavioral viewpoint.

Session 4E: Open Session Graves, Cemeteries, and Skeletons

Projecting the Dead: A Study of Media Use at the Cerveteri Necropolis and Other Mediated Etrurian Sites and Exhibits

Meryl Shriver-Rice, University of Miami, Abess Center for Ecosystem Science and Policy, and *Hunter Vaughan*, University of Colorado, Boulder

Media use in archaeological sites and museums has grown ever more complicated with the advent of digital technology, as emergent media—on-site 3D multi-projector installations, interactive multimedia components, augmented reality and virtual reality—are increasingly integrated into museums and archaeological sites. Such media integration needs to be critically examined through media studies, both from a social use of technology lens and philosophically through ethics and phenomenology, as sites from Stonehenge to the Roman Forum are increasingly mediated. In this paper we examine the on-site media projections in the tombs at the Banditaccia Necropolis in Cerveteri, Italy. By using the research methods of participant observation and sensory analysis of museum tours at Cerveteri, as well as comparative studies of other site-specific media use in Etruscan museum exhibits and ancient Etrurian sites, we will address issues related to: mediating spaces of the dead; materiality and the use of media installations in lieu of actual objects; and the use of mediated storytelling as a form of science communication. Comparative media assessed will include the wide-angle lens video installation at the Tomb of Hunting and Fishing at the Necropolis of Tarquinia; the 3D hologram of the Chimera statue at the Museo Archeologico in Arrezzo; the Museo Archeologico Nazionale di Firenze's looping video installation of the well excavations at

Chianti; and the rotating hologram of the Stele di Vicchio at the Museo di Arte Sacra Beato Angelico. Our findings suggest that, despite challenges to technological maintenance and execution, new diverse forms of multimedia communication and entertainment education surpass the limitations of traditionally written language and act as a strong means of sharing new information and experiential processes of archaeological practice at museum and archaeological sites in ancient Etruria.

The 2019 Season at the Necropoli del Vallone di San Lorenzo, Montecchio (TR), Italy

Sarah M. Harvey, Kent State University, *Gian Luca Grassigli*, Università degli Studi di Perugia, *Stefano Spiganti*, Independent Researcher, and *Francesco Pacelli*, Independent Researcher

During four weeks in July 2019 at the Etruscan period necropolis located at the località Raiano in the Vallone di San Lorenzo, part of the municipality of Montecchio in the province of Terni, Italy, a tomb was discovered and excavated. Although damaged by water and modern agricultural activity, it was buried under a deep layer of soil and clay and thus not disturbed by modern clandestine excavations, as was often the case with other tombs at the site. This tomb is of particular significance, having been built from blocks of travertine and having an entirely different style of tomb architecture than the rock cut tombs featured elsewhere at the site. The tomb might represent a unique example of an “aedicular” style tomb in this region; another possibility is that it is of the “dado” type.

Although culturally the necropolis is located in a region identified as Umbrian, it is not far from the left bank of the Tiber River at the boundary of the Etruscan territory, and by the sixth century B.C.E. may have been under the control of the Etruscans. As such, the unusual architecture of this tomb may be the product of external influences; furthermore, as it was larger than other tombs in the necropolis, it may have commemorated an important family, perhaps a family that had recently moved to the region.

The tomb is rich in artifacts from the Archaic and Classical period, including pottery, worked bone, metal, and glass paste objects; human bones were also found. The tomb was plundered in ancient times, but the artifacts discovered during excavation date to between the sixth and the fifth century B.C.E. Photogrammetry was used to record the progress of excavation, and the three dimensional images will be shown during the presentation.

The Roman Cemetery at Tel Dor in Context

Alexandra Ratzlaff, Brandeis University, and *Dor Golan*, Israel Antiquities Authority

Excavations conducted from 2017–2019 in the area immediately north of the coastal city of Tel Dor, under the auspices of the Israel Antiquities Authority, yielded a newly discovered Roman cemetery dating to the first/second century C.E. The cemetery included a large stone mausoleum, with fragments of a sarcophagus, and at least eight rock-cut cist tombs. While the majority of the tombs were

robbed, those that were not looted present an interesting array of grave goods that reflect a range in social stature among the cemetery's occupants. The presence of the large stone mausoleum in and of itself suggests an investment of personal wealth, while several of the undisturbed cist tombs contained a variety of items from luxury goods to common daily objects. Overall, the excavation of this cemetery contributes a new dimension to our understanding of the population at Tel Dor during the early Roman period, for while monumental structures have been excavated on the tel, relatively little is known about the actual Roman population living there. This paper will include discussions of the tombs and mausoleum, associated pottery, and other grave goods, as well as addressing the mixed nature of the various burial types, with the aim of contributing new information to our knowledge of aspects of the cultural identity of the early Roman population at Tel Dor and to give the cemetery both a regional and provincial context by comparanda. Analysis of this site also helps to further understand the extent of Dor's physical city limits during the Roman Imperial period.

It's a Hard-Knock Life: Childhood on Chryssi Island, Greece

Susan Kirkpatrick Smith, Kennesaw State University, *Melissa Eaby*, Institute for the Study of Aegean Prehistory, Study Center for East Crete, and *Chryssa Sofianou*, Ephorate of Antiquities of Lasithi

Very little is known of the life of Byzantine children, and even less of Byzantine children as told through their physical remains. The 2016 excavation of a cist grave on Chryssi Island, off the southeast coast of Crete, under the direction of Chryssa Sofianou for the Lasithi Ephorate of the Greek Ministry of Culture, will help rectify this lack of information. The grave was built into the collapsed remains of a Late Minoan building. There were no grave goods present, however, there were several iron nails present that were contemporary with the burials. The grave, which likely dates to the sixth to seventh century C.E., contained the remains of a minimum of twenty individuals. Other than one adult male, all other remains were highly comingled. The remains of one prenatal individual was found in several layers of the grave and could be reassembled based on size. The rest of the skeletal remains were considered by skeletal element only.

Of the twenty individuals, at least eight were children, ranging in age from prenatal to early- to mid-teens. The children's remains are significant for their high frequency of pathological conditions, traumatic injuries, and enthesopathies (evidence of overuse of muscles caused by repetitive activity) usually seen only in adults. These skeletal pathologies indicate that children living on Chryssi Island in the Byzantine period endured great hardship, pain, and likely abuse in their short lives.

The Himera Dwarf: Bioarcheological and Genetic Analyses of an Ancient Adult Greek Skeleton with Achondroplasia

Robert J. Desnick, Icahn School of Medicine at Mount Sinai, *Stephen Clayton*, Max Planck Institute for the Science of Human History, Jena, Germany, *Pier Francesco Fabbri*, Università del Salento, Lecce, Italy, *Stefano Vassallo*, Soprintendenza Beni

Culturali, Regione Siciliana, Palermo, Italy, *Norma Lonoce*, Università del Salento, Lecce, Italy, *Julie Herzig-Desnick*, The Institute of Fine Arts, New York University, *Alissa Mittnik*, Harvard Medical School, and *Johannes Krause*, Max Planck Institute for the Science of Human History, Jena, Germany

Among the more than one-hundred human skeletal dysplasias, Achondroplasia is a form of short-limbed dwarfism compatible with adult life. It is the most common skeletal dysplasia and occurs in about one in 15,000–25,000 births. Although the short-limb phenotype was described in ancient literature and iconography, the radiologic and clinical features of Achondroplastic dwarfs were only definitively characterized in 1967, and the molecular genetic defect was identified in 1994. Over 95% of unrelated Achondroplastic dwarfs have a common mutation in the FGFR3 gene, c.1138G>A (p.G380R). In 2009, a partial dwarf skeleton, datable according to archaeological evidence between 525 and 409 B.C.E., was discovered in the western necropolis of Himera, a Greek colony in Sicily, established in 648 B.C.E. and destroyed in 409 B.C.E. by the Carthaginian army under Hannibal Mago. We characterized its skeletal phenotype and molecular genotype using anthropologic, phenotypic, and genome DNA sequencing analyses to determine the type of skeletal dysplasia, its sex, approximate age, and specific dwarf-causing genetic mutation. Paleopathological analysis suggested that the most probable diagnosis was Achondroplasia. X-rays of the skeleton were independently reviewed by two skeletal dysplasia experts, Drs. Ralph Lachman (Stanford University) and Jurgen Spranger (U. Mainz), who independently confirmed that the most likely diagnosis was Achondroplasia. Radiological pulp tooth ratio studies indicated the dwarf was 30 to 35 years old. C14 dating studies of petrous bone indicated that the dwarf was about 2,650 years old (Cal2-sigma B.C.E. 809-596), with the caveat of the Hallstatt plateau. Genomic DNA was extracted from petrous bone and then sequenced, which identified Y-chromosomal genes and multiple sequencing reads of the common Achondroplasia mutation, c.1138G>A, confirming the anthropologic assessment. Further deeper sequencing and population genetic analysis to assess the dwarf's ancestry are underway. To our knowledge, this is the first ancient inherited birth defect in which the specific causative gene mutation has been identified.

A Late Roman and Early Medieval Cemetery at the Roman Villa of Vacone

Devin L. Ward, University of Toronto, *Dylan Bloy*, University of Tennessee, *Gary Farney*, Rutgers University Newark, *Tyler Franconi*, Joukowsky Institute for Archaeology and the Ancient World, Brown University, and *Candace Rice*, Joukowsky Institute for Archaeology and the Ancient World, Brown University

Human remains interred in the ruins of Roman villas illuminate the complex transitional period at the end of the Roman era. This paper explores the late-antique and early-medieval burials from the Roman villa of Vacone to elucidate the life of the villa site after its abandonment and destruction. Our excavations have identified burials of five adults, five sub-adults, four neonates as well as numerous fragments of human remains probably associated with disturbed burials, all falling within two stages of use.

The first stage is represented by four sub-adult burials cut into the villa collapse above an *opus spicatum* floor surface in the northeastern corner of the site. One was buried in a third-century African amphora, two were buried along a wall bounded by upright stone and tiles, and the last was buried in the middle of the floor. One of the individuals buried along the wall was interred with the remains of a bird by the skull (calAD 76-212). These remains were buried very shortly after the collapse of the villa, and indicate a rapid change in the perceived function of this previously elite site.

The second stage is represented by at least five adult male individuals and one sub-adult, all dated to the seventh century C.E. One was interred with a bronze ring (calAD 658-769) close to the earlier sub-adults. The others were interred in the southwestern corner of the villa. This early-medieval period of activity gives insight into rural life during the era of Lombard rule in central Italy, and provides perspectives on the lived experience of the post-Roman countryside.

The burials at Vacone demonstrates that Roman monuments remained important markers of the early medieval landscape of central Italy, the purposes of which continued to be negotiated and reimagined in a changing society.

Session 4F: Workshop Behind the Scenes: Choice, Pigment, and Materiality in the Ancient World

Sponsored by the Ancient Painting Studies Interest Group

Moderators: *Marie N. Pareja*, University of Pennsylvania, and *Hilary Becker*, Binghamton University

Workshop Overview Statement

Advancements in scientific cultural heritage allow us to see more about the material choices behind the technology and artistry of ancient objects and the pigments used to decorate them. Artists and craftspeople make decisions based on multiple factors when painting (or dyeing) an object: pigment availability and quality, technical knowledge, economic aspects, and its possible inherent symbolism. This workshop addresses issues of choice and materiality when planning and executing projects involving color. Although aspects of painting, plastering, and dyeing technologies are considered relatively standard, deviations from the expected norms and the resulting implications for both the visual and value-related effects are explored. Presentations cover a wide chronological range but repeatedly return to issues fundamental to pigment choice, a pigment's properties, and the perceived meaning(s) of a particular color. The artists' extensive knowledge of pigments and their properties is clear—deviations from the typical uses of pigments can reflect an even more nuanced understanding and perception of color. Three papers highlight these aspects in particular: the examination of blue and green pigments from Neolithic Çatalhöyük, an analysis of the pre-Flavian wall paintings from Nijmegen, as well as the considerations of Roman artists (e.g., chemical incompatibilities, fraud, and quality) when shopping for pigments.

This workshop also integrates discussions of three synthetic pigments created by distinct cultures: Egyptian blue, Chinese blue, and Cobalt blue. A discussion of the chemistry and production of these three blues together makes it possible to explore the technology of these man-made pigments and their properties. This exploration is continued with a paper highlighting the recent study of a late-Hellenistic to Roman pigment production center at Kos, which featured evidence for the production of Egyptian blue, among other things. The examination of blue extends to textiles as well, and the problematic nature of the use of this color in the Bronze Age Aegean—as both paint and dye—is explored. The high value of blue does not necessarily detract from the use of other pigments, as suggested in the final session presentation, which examines the techniques and perceived values unique to green in Roman art.

The perspectives of art historians, archaeologists, and conservation scientists coalesce in a workshop that encourages spirited discussion amongst panelists and audience members. These conversations will help to build a deeper understanding of the varied and nuanced realm of pigments, materiality, technology, and choice in the prehistoric and ancient world.

Panelists: *Duygu Çamurcuoğlu*, British Museum, *Ruth Siddall*, University College London, *Marie Nicole Pareja*, University of Pennsylvania, *Luc Megens*, Cultural Heritage Agency of the Netherlands, *Lara Laken*, University of Nijmegen, *Yuan Lin*, *Krystal Cunningham*, *Federico Carò*, *Ioanna Kakoulli*, and *Ariadni Kostomitsopoulou Marketou*, University of Oslo, *Elizabeth Molacek*, University of Texas, Dallas, *Hilary Becker*, Binghamton University, *Emily Egan*, University of Maryland, and *Shana O'Connell*, Howard University

Session 4G: Open Session

Fieldwork from the Prehistoric Mainland

Gourimadi Archaeological Project: Preliminary Results of the Second Excavation Season

Zarko Tankosic, Norwegian Institute at Athens/Indiana University, *Fanis Mavridis*, Greek Ministry of Culture and Sports, Ephorate of Palaeoanthropology-Speleology, and *Paschalis Zafeiriadis*, University of Cincinnati

The second season of the Gourimadi Archaeological Project (GAP), an excavation project in southern Euboea, Greece, under the aegis of the Norwegian Institute at Athens, was completed in the summer of 2019. The site of Gourimadi occupies the summit and slopes of a prominent hill on the southern edge of the Katsarionio plain, approximately 5 km northwest from Karystos. The excavation continued in the two trenches first opened in 2018. The trenches produced a wealth of archaeological material, consisting of pottery, lithics (mainly obsidian), and architectural remains comprising of both straight and curved walls. The quantity and quality of architectural remains, most of which are concentrated in trench 1, is particularly intriguing. At the end of the 2019 season, we have isolated

at least eight architectural features and at least three construction phases in an area of 28 m². In addition, we discovered remains of a clay-built domed hearth and a roughly circular stone-built structure, which could have supported a large post. The evidence indicates the existence of massive multiple structures at the summit of the Gourimadi hill, at least one of which was apsidal. More than 130 obsidian projectile points, as well as the associated debitage and other tools suggest that the site was an important lithics production and consumption center. The ceramics dates Gourimadi chiefly in the early to middle part of the fourth millennium B.C.E. (Final Neolithic), with evidence of earlier (Late Neolithic) and later (Early Bronze I) phases scarce, but present. A human skull placed on its base was also found in what we originally thought of a refuse area in trench 1. In this paper, we present the evidence collected in 2019 and place it in its regional context. We also offer initial interpretations on the nature of Gourimadi and its position in the Neolithic and Early Bronze Age Aegean world.

Prehistoric Thorikos (Greece, Attica): Preliminary Results from the Settlement

Sylviane Déderix, Université catholique de Louvain, *Nikolaos Papadimitriou*, Universität Heidelberg, *Anthi Balitsari*, Université catholique de Louvain, *Gianluca Cantoro*, GeoSatReSeArch, IMS-FORTH, *Aspasia Efstathiou*, Agora Excavations, ASCSA, *Margarita Nazou*, National Hellenic Research Foundation, and *Robert Laffineur*, Université de Liège

The site of Thorikos occupies the slopes of the Velatouri hill, along the south-east coast of Attica. Thorikos is the most important Bronze Age site known in the Lavrion, a region of strategic importance due to its metal resources. The discovery of Final Neolithic pottery outside Mine 3 suggests that the ore that was readily available as surface outcrops was exploited as early as the late-fourth millennium B.C.E. The Early Bronze Age is insufficiently known. Considerable amounts of pottery have been found in Mine 3, suggesting more systematic exploitation of argenteriferous ores, but habitation remains are elusive. Thorikos was involved in regional networks of exchange during the Middle Bronze Age, and monumental tombs were constructed on the acropolis of the Velatouri during the early Mycenaean period, demonstrating that Thorikos had become a major center ruled by an elite by the beginning of the Late Helladic period. However, the economic, social, and political changes that took place at the site between the Late Neolithic and the Late Bronze Age are poorly understood, notably due to the scarcity of settlement data. In 2018 the Belgian School at Athens started a new five-year project (dir. Prof. R. Docter) at Thorikos, one of the main aims of which is to study, publish, and contextualize excavated prehistoric buildings on the Velatouri. This presentation reports on the results of the 2018 and 2019 campaigns. The settlement remains excavated by Stais (1890s) on the Great Velatouri were cleaned, recorded in 3D and studied, and the findings from the small trenches excavated by Servais (1960s) in the surroundings were examined. In parallel, the acropolis and the east and north slopes of the hill were surveyed, leading to the identification of potentially prehistoric buildings and providing new information on the extent of the prehistoric settlement of Thorikos.

The Kotroni Archaeological Survey Project (KASP) at Ancient Aphidna in Northern Attica: Results of the First Season (2019)

Eleni Andrikou, Ephorate of Antiquities of East Attica, *Anastasia Dakouri-Hild*, University of Virginia, *Steve Davis*, University College Dublin, *Athos Agapiou*, Cyprus University of Technology, *Philip Bes*, Independent Scholar, *Tim Kinnaird*, St. Andrews University, *Will Rourk*, University of Virginia, *Kalliopi Sarri*, University of Copenhagen, and *Anastasia Yangaki*, National Hellenic Research Foundation

The contemporary site of Kotroni is located about 30 km north of Athens, near the modern town of Kapandriti. Situated in the northern part of Diacria, the site lies to the north of the river Marathon which feeds the Marathon reservoir today. In the early-nineteenth century, G. Finlay described an isolated hill rising “to the height of several hundred feet. On its summit there are remains of an ancient fortress, and traces of habitation on its sides [...] the hill is beautifully situated overlooking the fine undulated and well-wooded country through which the river of Marathon flows.” The citadel has been identified as the center of the ancient, constitutional demos of Aphidna, and alleged to have been one of the original twelve districts which the legendary King Cecrops II brought together initially to create the *polis* of Athens, with the process of synoecism completed by the founder hero of the city, Theseus. KASP explores this significant diachronic archaeological landscape within its environmental, geographical, and cultural landscape utilizing a combination of historical research, digital applications, and conventional field techniques, such as survey. The project systematizes piecemeal information about this landscape known to scholarship since the nineteenth century and substantially and non-destructively augments the record by means of systematic collection of surface artifacts, remote sensing, geophysics, geological, and geomorphological analysis. The current paper presents the results of the first season (2019), including the outcomes of remote sensing analysis, airborne LIDAR and aerial image modeling, geoarchaeology and intensive survey. In particular, we confirm the location of the Middle Bronze Age tumulus, hitherto lost to scholarship; produce evidence for habitation and metallurgical and ceramic production in the vicinity of the citadel; and identify several new sites dating from the Classical to the Late Roman eras around the citadel.

The Natural and Cultural Environment of Southern Phokis: The Plain of Desfina

Andrew Koh, Massachusetts Institute of Technology, *Ioannis Liritzis*, University of the Aegean, and *Ian Roy*, Brandeis University

This investigation of the natural and cultural environment of the Desfina Plain in Southern Phokis of Central Greece was inspired by an ongoing study of mainland interconnections with East Crete and the Levant during the Late Bronze-Iron transition by Koh in conjunction with a lifelong perspective of the region by Liritzis. This present investigation builds on J. McInerney’s foundational studies of the topography and history of Phokis (1999, 2011) and draws on a transdisciplinary blend of traditional, digital, and archaeometric techniques to undertake

a comprehensive ecological, environmental, ethnohistorical, and topographical study of Southern Phokis.

Sandwiched between Achaea and Boeotia, long-recognized centers of past human activity, the Desfina Peninsula has been characterized as a relatively nondescript pastoral landscape throughout history as far back as the Bronze Age. Yet initial ceramic studies suggest a more networked reality, a landscape that drew inspiration from adjacent regions through contacts, but produced fine pottery of its own accord with local resources. This self-sufficiency was perhaps even necessary due to prominent geographic features (e.g., Corinthian Gulf, Peleistos River Valley) that naturally demarcate mountainous Southern Phokis from its better-known neighbors, which encouraged maritime connections for trade and exploration early on as evidenced by the nearby Mycenaean coastal acropolis at Steno.

Our preliminary study of the Desfina environment, buttressed by targeted excavations at the fortified Late Helladic III site at Kastrouli (ca. 1200 B.C.E.), indicates that the peninsula was more than a simple pastoral outpost supplying surrounding regions with livestock. Evidence for ambitious hydrological and transportation works projects dispersed throughout intra-plain settlement pattern units that were likely coordinated (e.g., lake drain, Cyclopean road terraces) along with abundant remains of an ancient marine diet up in the plain attest to a level of complexity and interconnectivity previously overlooked. In the shadows of Mount Parnassos, yet its own entity as a high-altitude plain shielded by the local promontory of Mount Kirfis, the rich natural and cultural environment of the Desfina “*mesokampos*” makes the best case yet to be not only the home of the classical *polis* of Echedameia, destroyed by Philipp during the Sacred War, but also Anemoreia (*Iliad* 2.521) with its closely associated plain (Lycophon, *Alexandra* 1073).

Excavation and Survey at the Sanctuary of Zeus at Mt. Lykaion, Summer 2019

Mary E. Voyatzis, University of Arizona, David Gilman Romano, University of Arizona, and Anna Karapanagiotou, Director of Arcadian Ephorate of Antiquities

During the summer of 2019, excavation and survey continued at the Sanctuary of Zeus at Mt. Lykaion. The project is under the direction of the Arcadian Ephorate of Antiquities, Tripolis, together with the University of Arizona, and under the auspices of the American School of Classical Studies at Athens. Excavation resumed at the ash altar of Zeus on the southern peak of the mountain at 1,382 m and in the lower mountain meadow at 1,182 m. The most notable discovery from the altar was the huge volume of EH and MH coarse ware from a previously unexcavated area to the east of the stone platform. Additional ceramic evidence consists of LH drinking vessels, animal figurines from the Mycenaean shrine, and further evidence for continued activity into the Early Iron Age. From later periods are bronze miniature tripods, coins and later ceramics. In the lower sanctuary, the administrative building revealed several floor layers, and a bronze hand of Pan holding a syrinx. The stone corridor that served as a processional way from the heart of the sanctuary to the stadium and hippodrome yielded a line of blocks, leading towards the stone arch from the north. In the Classical stoa, more of the Byzantine phase of occupation was uncovered at the west end, and part of the rear retaining wall of the stoa was exposed. Nearby, where we are searching

for the Sanctuary of Pan, several walls and water basins were discovered, plus sherds from a red figure vessel. A prostyle Ionic building, originally excavated by Kourouniotis and recently rediscovered, was completely cleared this summer. Pedestrian survey continued in the village of Ano Karyes and immediately surrounding the Sanctuary of Zeus. The Greek Archaeological Service worked at the altar, at the Agno Fountain, and in the Bath facility.

The 2019 Bays of East Attica Regional Survey (BEARS) Project: New Evidence for the Archaeology of the Bay of Porto Raphti

Sarah C. Murray, University of Toronto, *Catherine Pratt*, University of Western Ontario, *Robert P. Stephan*, University of Arizona, *Maeve C. McHugh*, University of Birmingham, *Grace K. Erny*, Stanford University, *Katerina Psoma*, University of Illinois at Chicago, *Bartek Lis*, British School at Athens, *Melanie Godsey*, University of North Carolina-Chapel Hill, *Margarita Nazou*, National Hellenic Research Foundation, *Dimitri Nakassis*, University of Colorado-Boulder, and *Philip Sapirstein*, University of Toronto

This paper presents the findings of the inaugural season of the Bays of East Attica Regional Survey project (BEARS). Operating in Greece under the auspices of the Canadian Institute in Greece and with the oversight of the East Attica Ephorate of Archaeology, the project aims to clarify the history of human activity around the bay of Porto Raphti in eastern Attica. In June 2019, BEARS conducted the first of three planned seasons of intensive and extensive surface survey. The work especially concentrated on developing a clearer understanding of the chronology and nature of finds in three areas around the bay with known surface assemblages: the Pounta peninsula, Raphtis island, and the valley and acropolis of the Koroni peninsula. Surface finds from the Raphtis island demonstrate that this was the location of a major Late Helladic IIIC settlement probably linked to the cemetery at Perati, as well as limited Late Roman (sixth–seventh century C.E.) occupation. The Pounta peninsula yielded an extraordinary quantity of obsidian lithics, indicating significant activity during the Final Neolithic/Early Bronze Age, with lesser quantities of material dated to the Late Helladic IIIC and Roman/Byzantine periods. At Koroni, surface finds of Late Helladic IIIC and Archaic/Classical date indicate that activity on the site predates the third-century Ptolemaic military camp excavated by American archaeologists in the 1960s. For the Hellenistic period, a high quantity of imported amphoras and fine wares constitutes robust evidence that the population of the area was integrated into the southern Aegean economy. Overall, these survey data provide a remarkable range of new evidence and insight into the history of the Porto Raphti area and its connections to other regions of the Aegean. Methodologically, the project's work also demonstrates the value of conducting extensive and intensive survey even in areas with extensive modern development.

Session 4H: Workshop Antiquities, Illicit Trafficking, and Public Advocacy: The Future of the 1970 UNESCO Convention

Sponsored by the Cultural Heritage Committee

Moderator: *Elizabeth S. Greene*, Brock University

Workshop Overview Statement

The year 2020 marks the fiftieth anniversary of the 1970 UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property. This international treaty was enacted to help curb unauthorized exploitation of archaeological sites around the world. Following fifty years of implementation, what has changed about museum acquisitions policies, legal and illicit trade in antiquities, and the protection of archaeological sites? Where has this international law succeeded and how effective are the implementation processes of different States? What additional efforts are needed for future heritage protection? What issues remain to be addressed as archaeologists continue to report discoveries of newly looted sites? Conflict-related looting has proliferated in Syria, Iraq, Afghanistan, and elsewhere; illicit trade in antiquities now draws new actors, including terrorist networks. The museum community also faces new questions about cultural objects taken under colonialist systems, where the non-retroactive nature of the Convention offers little guidance on claims of restitution.

In light of these and other current issues, this workshop brings together scholars of the 1970 UNESCO Convention and its impact on archaeological research and illicit trafficking, experts in the international art and antiquities trade, and policymakers who address legal implementation. Workshop participants will offer brief reflections on the 1970 Convention's impact on their own areas of expertise in order to promote conversation about what constructive role the AIA, museums, and policymakers might play in the future. The goal is to consider priorities for the preservation and ethical treatment of cultural property moving forward. This workshop also recognizes the contributions of Patty Gerstenblith, recipient of the AIA's 2020 Outstanding Public Service Award. By discussing the future of the 1970 UNESCO Convention—and the AIA's role in public advocacy—we honor her longstanding efforts to protect archaeological heritage across the globe

Panelists: *Patty Gerstenblith*, Center for Art, Museum & Cultural Heritage Law, DePaul University, *Neil Brodie*, University of Oxford, *Christina Luke*, Koç University, *Morag Kersel*, DePaul University, *Brian I. Daniels*, Penn Cultural Heritage Center, University of Pennsylvania, *Laetitia LaFollette*, University of Massachusetts, and *Richard M. Leventhal*, Penn Cultural Heritage Center, University of Pennsylvania

Session 4I: Colloquium Surveying the Punic World

Organizer: *Peter van Dommelen*, Brown University

Colloquium Overview Statement

Phoenician and Punic archaeology has always been a field both literally and figuratively on the margins of the Classical world, as the rise to power and expansion of Carthage have invariably received most attention in Classical scholarship, no doubt because of the impact that the city and its overseas regions had on Rome at a crucial stage of the development and expansion of the Roman Republic. Carthage was however so much more than just Rome's nemesis or antithesis. In antiquity, the city was not only widely known for its maritime and commercial achievements, but it was also highly renowned for its agricultural production that stood out for its quality and quantities—it is no coincidence that Varro brought a fig from Carthage to the Senate in support of his famous indictment of Carthaginian wealth and power. How well regarded the Punic agronomic skills were, is best demonstrated by the order of the Roman Senate in 146 B.C.E. to translate all twenty-eight volumes of agricultural expertise that Mago the Agronomist had compiled sometime in the fourth century B.C.E.

It is against this background that since the early 1990s a number of intensive and systematic archaeological surveys have been undertaken across the various regions of the Punic world, from southern Tunisia and Malta to Sardinia and from southeastern Spain and Ibiza to Atlantic Morocco: by 2008, seventeen such projects were on record that constituted the database for discussing the Rural Landscapes of the Punic World (van Dommelen and Gómez Bellard 2008). The result was a new awareness of the rural dimensions of Carthaginian domination and exploitation of the overseas Punic districts that included both abundant new settlement evidence and fresh insights into Punic agricultural practices.

The last few years have seen a renewed interest in and, especially, a remarkable increase of new activities in this field, that may likely be defined as a 'new wave' of surveys across the Punic regions. These new projects can not only draw on a much-improved knowledge base of Punic pottery, including coarse wares, that greatly facilitates dating and interpretation of surface finds, but they also avail themselves of the huge technological advances that have transformed modern archaeological surveys elsewhere in the Mediterranean.

The aim of this session is in the first place to take stock of the new fieldwork that is being undertaken in North Africa, Sicily, Sardinia, and Spain, and to compare and contrast initial new results. In the second place, this session is also organized in order to take a fresh look at the Punic countryside and its colonial connections in the light of the new survey data and other recent excavation evidence, and to compare these to recent work on Roman Republican colonization that is similarly transforming our understanding of developments on the Italian mainland during the later centuries of the first millennium B.C.E.

Sinis Archaeological Project: Results from the 2018 and 2019 Seasons of Landscape Survey in West-Central Sardinia

Linda Gosner, University of Michigan, *Alexander Smith*, The College at Brockport – SUNY, and *Jessica Nowlin*, University of Texas at San Antonio

The Sinis Archaeological Project (SAP) is a new regional survey in west-central Sardinia that explores the landscapes of the Sinis Peninsula and adjacent territories from multi-scalar, diachronic perspectives. The survey region encompasses agricultural plains, coastal areas with marshes and lagoons, mountains, and rolling hills. In antiquity, these landscapes provided local inhabitants and foreign colonizers and traders with an array of natural resources such as agricultural products, metals, salt, and other marine resources. While many Mediterranean surveys—and those focused on the Punic world in particular—have traditionally focused on agricultural landscapes, SAP is designed to provide a broader picture of rural settlement and resource exploitation in these diverse ecological landscapes of the Sardinian countryside in the past.

While the wider project takes a diachronic perspective from antiquity through the present day, this paper focuses on our evidence for the Punic and early Roman periods. We provide an overview of our project methodology, which incorporates traditional Mediterranean-style pedestrian survey alongside remote sensing techniques, including multispectral satellite and drone reconnaissance and recording. We take an explicitly multi-scalar approach, integrating intensive site-based survey and targeted excavation at the smallest scale, with pedestrian survey at the intermediate scale, and regional reconnaissance at the largest scale. We present the results of this methodology in action through a discussion of our first two seasons of fieldwork (2018–2019) in two of our four survey zones. The first, Zone A, consists of agricultural plains centered on the large indigenous settlement of S'Urachi; our work there contextualizes the current excavations at the site in their wider landscape and builds upon our site-based survey of S'Urachi completed in 2017. Our second zone, Zone B, is located in the coastal territory immediately to the west, which contains seasonal lagoons and salt flats. Comparing these two distinct regions provides a nuanced picture of the varied strategies of Punic colonization, settlement, and exploitation of rural landscapes. Ultimately, our project provides a new perspective on the Punic landscapes of west-central Sardinia as well as a model for survey of varied ecological landscapes of the in the wider Mediterranean.

Punic Settlement in the Interior of Sulcis: New Data from the Landscape Archaeology of Southwest Sardinia Project

Thomas P. Leppard, Florida State University, *Andrea Roppa*, Università degli Studi di Padova, and *Elizabeth A. Murphy*, Florida State University

Interest in Punic settlement has been perennial in Sardinian archaeology. This is especially the case in the southwest of the island, where major Punic coastal sites—including Nora, Bithia, Karaly, and Sulky—cluster. As a result, the general patterns of littoral settlement are fairly well understood: initial development at these large coastal sites, linking the island to wider transmaritime networks,

followed by later expansion of farmstead settlement into the wider landscape from the fourth century B.C.E. (Barreca's "capillary" phenomenon). However, the Punic settlement of the interior of Sulcis is not well understood (complicated by apparent cessation of nascent urbanizing processes at the major site of Pani Loriga), and neither is the larger political and economic process that capillary landscape in-fill-ing represents. Here we report new data germane to these problems, data derived from the Landscape Archaeology of Southwest Sardinia (LASS) Project. Over three seasons LASS has conducted intensive pedestrian survey in the interior of Sulcis, clarifying hitherto poorly understood rural settlement. We discuss evidence for expanding Punic settlement in the aftermath of the end of activity at Pani Loriga, and contextualize this within wider Sardinian and western Mediterranean trends.

Questioning Colonization: Lixus and Economic Development in the Oued Loukkos, Morocco

Stephen A. Collins-Elliott, University of Tennessee, Knoxville

The identity of the city of Lixus (near Larache, Morocco) as a Phoenician colonial settlement is well known, and has its roots in classical textual sources. Yet, the need to take an integrated view to the urban development of Lixus in the context of its hinterland is apparent. Furthermore, recent interrogation of the categorical boundaries of Phoenician and Punic identity shows the importance of clearly articulating the cultural and political dimensions of those labels with respect to both sociohistorical phenomena and the material record. This is especially the case when examining the rural economy of the valley of the Oued Loukkos which comprises Lixus's hinterland, currently the focus of the ongoing Moroccan-American archaeological project Gardens of the Hesperides: The Rural Archaeology of the Loukkos Valley. While the site of Lixus shows evidence of Early Iron Age occupation, and while Archaic Phoenician red slip ware had previously been located at sites up river, detecting instances of what might be called colonial interactions in the mid-to-late first millennium B.C.E. remain elusive for the countryside around Lixus. Increased investment in rural infrastructure appears largely to have taken place in the last few centuries B.C.E., a trend not owed to any colonial or overseas causes. Particularizing other aspects of Lixus's political economy also shows the degree to which Lixus can be viewed on its own regional terms: coinage, likely issued from the second century B.C.E. onward, have been shown to have had a shared metrology with Gadir across the Strait of Gibraltar, but with a highly local iconography. The epigraphic record, though rare at Lixus, attest to not just the use of Phoenician/Punic, but Libyan as well. Taking a broad view of Lixus within the regional ambit of the Oued Loukkos, this paper argues that to a significant degree regional economic development should be taken as owed to local, endogenous factors, rather than the product of colonial interactions from abroad.

A Landscape Full of Resources: Rural Exploitation of Qart Hadasht's Hinterland during the Late Third Century B.C.E.

Victor Martínez Hahn Müller, University of Gent, Belgium, *Roald F. Doctor*, University of Gent, Belgium, *José Miguel Noguera*, University of Murcia, Spain, *Carmen Ana Pardo Barrionuevo*, University of Almería, Spain, and *Elle Liagre*, University of Gent, Belgium

After Hamilcar Barca arrived on the Iberian Peninsula in 237 B.C.E., the Carthaginians founded several cities, all of which unfortunately remain unknown, with the one exception of Qart Hadasht, which the Romans would later call “Cartago Nova.” Even if Carthaginian rule in Iberia lasted only for a couple of decades, the foundation of these major settlements may be associated with their systematic exploitation of natural resources on the Iberian Peninsula.

In order to explore and assess the intensity of Carthaginian exploitation of territorial resources in Iberia and to define Carthaginian modes of exploitation on the Peninsula, we have begun to investigate through archaeological surveys the hinterland of the Barcid colony of Qart Hadasht (Cartagena, Murcia, Spain). Our study area between Trujillo and the Ramblas of Carrasquilla (Campo de Cartagena) was not only rich in metals, especially silver and lead, but may also have offered other resources in abundance. Our main hypothesis is that the Carthaginians, unlike the Romans after them, took advantage of these, and developed small sites to function as salt-mines, farms, fishing centers, and stone quarries.

The preliminary results that we will present show the connections of mining with other economic activities in especially the Carthaginian period. We will also look into methodological difficulties that are specific to mining landscapes because of the constant presence of metal slag on archaeological sites. We will finally present our results of a volume study of the large slag heaps created by Carthaginian exploitation in order to assess the productivity of these mining operations.

Punic Southwest Sicily: Whose Hinterland?

Victoria Moses, University of Arizona, *Emma Blake*, University of Arizona, *Robert Schon*, University of Arizona, *Rossella Giglio*, Soprintendenze Archeologica, Trapani, Italy, and *Alena Wigodner*, University of Arizona

The Arizona Sicily Project (2018–ongoing) is an intensive pedestrian survey of the coastal zone between the Sicilian cities of Marsala and Mazara del Vallo. While this diachronic project seeks to chart the ties between North Africa and western Sicily in all periods, this paper focuses on the evidence dating to the Punic and early Roman periods, when the zone was under Carthaginian control and immediately after. This survey is the first to document systematically the Punic period in this countryside, and thus contributes to prior work at Motya and Marsala (Lilybaeum) in the Punic period. We present our methodology, data, and preliminary analysis of Punic materials and sites found in the survey zone. Drawing on this new data and the results of an earlier survey north of Marsala, this paper considers the local impact of Carthage, given its proximity across the Sicilian Channel. We interrogate the degree to which Carthage itself was transformative to rural residents in our zone, compared to its colonies on the Sicilian coast. In other words,

beyond a general identification of this as a “Punic” countryside, did Carthaginian influence significantly affect settlement in the territory, to a greater extent than the influence of the Punic cities present on Sicily itself?

Discussant: *Elizabeth Fentress*, University College London

Session 4J: Joint AIA/SCS Workshop Humanities Publishing in Transition

Sponsored by the Forum for Classics, Libraries, and Scholarly Communications

Moderator: *Deborah E. B. Stewart*, University of Pennsylvania

Workshop Overview Statement

As the ecosystem for scholarly communications evolves, students and scholars in Classics, history, and archaeology must remain informed about current issues and emerging trends in disseminating and curating scholarship through print and digital publications, open repositories, archives, and libraries. Forming a discussion panel for this workshop are two faculty members who have embraced online media for scholarly communications and edit open-access publications in our disciplines, two editors from established university presses that produce digital editions on various platforms, and two subject librarians who provide author advisory services, manage collections budgets, and select materials in Classics and archaeology.

After introducing themselves and their experiences with scholarly communications, the panelists will engage in a moderated discussion about what authors—whether already published or aspiring to publish—should understand about academic publishing and media in the twenty-first century. In addition to any significant, recent newsworthy items about scholarly publishing, topics for discussion will include:

- What publishing venues should an early-career author prioritize? What resources are available to authors seeking to understand their rights and contracts with publishers?
- How can scholars share their data, methods, analysis, and/or manuscripts openly and responsibly? If deposited openly, how can they make their work more discoverable?
- How can scholars use online media to build a profile, receive feedback on works-in-progress, and share their scholarly work with a wide network?
- How do hiring, promotion, tenure, and reappointment committees evaluate scholarly communications outside of traditional journal and monograph publishing? How can scholars participating in online scholarly communications leverage their work with potential employers or publishers?
- What viable business models for open-access publications and/or innovative digital publications are publishers and associations exploring?

- How are libraries adapting budgets, services, and collections in response to the needs of faculty, staff, and students for discovering, accessing, evaluating, producing, disseminating, and preserving born-digital scholarly content?
- How can scholars work with publishers, libraries, and other entities in order to develop their aspirations for open and/or multimodal scholarship?

The second half of the workshop is reserved for open, collegial dialogue between the panel and the audience on topics or questions related to publishing, data sharing, and scholarly communications.

Panelists: *Rebecca Stuhr*, University of Pennsylvania, *Sebastian Heath*, Institute for the Study of the Ancient World, NYU, *William Caraher*, University of North Dakota, *Bethany Wasik*, Cornell University Press, and *Catherine Goldstead*, Johns Hopkins University Press

Session 4K: Colloquium

Burial Spaces of the Roman East: an Interdisciplinary Colloquium

Organizers: *Nicola Barham*, University of Michigan, and *Sarah Madole Lewis*, CUNY

Colloquium Overview Statement

In recent years, the study of mortuary landscapes in the Roman Provinces has embraced a range of new methodologies, with the eastern Mediterranean operating as a particular area of interest. Our proposed session gathers specialists from Europe and North America for a series of papers showcasing their most recent work. The aim is to set the burial spaces of Asia, Judea-Palestina, and Syria into productive dialogue. We approach key sites with a network of archaeological, anthropological, and art historical methodologies to interrogate the social and physical constructions of burial spaces from individual sarcophagus groups to entire *necropoleis*.

The first paper, "Shaping the Mortuary Landscape: The Archaeology of Death in Roman Ephesos," engages our theme at the macro-level, drawing on a diverse range of the most current methodologies to map social attitudes towards death and funerary practice, and the influence of the market economy on burial landscapes. The second paper, "The Death of a Foreigner: Burial Customs and Migration in Roman Lebanon," considers vexed issues of foreign identity in burials of the region. Drawing upon a digital database newly developed to facilitate cross-investigation of epigraphic, iconographic, spatial, and material evidence, the paper interrogates existing evidence in light of results from new isotope analyses on human remains from Berytus.

The next papers shift the focus to the use of sarcophagi. The first of these, "Strigillated Sarcophagi in their Eastern Mediterranean Contexts," takes Huskinson's recent monograph on sarcophagi from the Roman West as its point of departure. It explores how strigillated sarcophagi interacted within the local economies and

funerary landscapes at Ephesos, Tyre, and Caesarea Maritima. Next, "The 'Unfinished Garland': an Underexplored Motif" traces the use of tombs with these semi-worked forms in Asia and on the Lebanese coast. Situating this corpus of sarcophagi within the wider third-century aesthetic of formal abstraction, the paper explores the visual purposes that these communities may have perceived such "unfinished" forms as fully realizing.

The final paper, "Stamping the Body: The Power of Repeated Motifs on the Lead Coffins of Roman Lebanon," considers the understudied, rich corpus of late antique lead sarcophagi likely produced in and around Tyre and Sidon. The role of iconographic replication in enhancing the potency of figural motifs is considered, as is the possibility that the same workshops produced sarcophagi for polytheist, Christian, and Jewish patrons. Our respondent provides connective tissue and discusses the broader implications of the session for mortuary studies.

Discussant: *Joseph Rife*, Vanderbilt University

Shaping the Mortuary Landscape: The Archaeology of Death in Roman Ephesos

Martin Steskal, Austrian Archaeological Institute, Austrian Academy of Sciences

Since 2008, I have been engaged in intense field-archaeological research in the *necropoleis* of Ephesos. This research has included a combination of methods, such as survey, excavation, architectural study, geophysics, geoarchaeology and biological anthropology. In terms of Ephesos, we can consider our research approach to be holistic meaning that it covers a wide chronological, topographical, and contextual spectrum. Around 90 hectares of concentrated burial areas have been identified to date around the city limits of Ephesos. Within these burial areas, more than 1,200 burial places (tombs or freestanding sarcophagi) were mapped and classified. Most of them date to the Roman Imperial and Late Antique period.

This paper addresses several aspects of our interdisciplinary research and focuses on the Roman period. It discusses topics such as the organization of the mortuary landscape, the transformation of areas into architectural landscapes of the dead, burial sites in their intra- and extra-urban contexts, means of self-expression, general tendencies in the social attitudes towards death and funeral practices, as well as visual memorialization of status: outward-oriented representation versus a more pensive, family-focused memorial. This paper will also take a closer look at the economic aspects of death in Roman times independent of issues like religion or piety. It will become clear that death and burial obeyed the laws of the market: burial places were bought and sold like real estate. This paper discusses how these businesses were designed and who the people involved were. It also takes a look at the material remains that allow us to identify economic activities within the *necropoleis*.

The Death of a Foreigner: Burial Customs and Migration in Roman Lebanon

Vana Kalenderian, University of Groningen, and *Lidewijde de Jong*, University of Groningen

This paper discusses the vexed issues of foreign identity and burial customs in Roman Lebanon. Historical records attest relatively large numbers of migrants in the region in the first and second century C.E. People moved to Berytus, a rare Roman colony in the Levant, and to various satellite establishments in the Beqa' Valley. Army veterans and sometimes soldiers on active duty appear in the inscriptions of the region. Yet whether these migrant communities maintained the ritual customs of their homeland when burying and commemorating the deceased or, instead, adopted local customs or developed new burial practices, is a question rarely asked. Heavy fragmentation of the material record pertaining to funerary practices of colonists, soldiers, and veteran families complicates this investigation, as does the inherent difficulty of connecting graves to foreign identities.

This paper takes a fresh look at this issue by combining existing data with the results from new isotope analyses on human remains from graves in Berytus. We employ a newly developed digital database that allows for the cross-investigation of various categories of evidence: epigraphic, iconographic, spatial, and material. We aim to demonstrate that particular ritual practices concerning treatment of the body and use of containers are likely non-local. Yet, such occurrences remained exceptional and overall the graves contain few markers indicating foreign occupants. This contrasts with the commemorative customs, in text and image, where non-local identities are often explicitly mentioned.

Strigillated Sarcophagi in their Eastern Mediterranean Contexts

Sarah Madole Lewis, Borough of Manhattan Community College, City University of New York

This paper addresses the production, patronage, and local contexts of sarcophagi with strigil patterns from the Eastern Mediterranean in light of Huskinson's recent monograph on strigillated sarcophagi, which focused exclusively on examples from the Roman West. Notable case studies from Ephesos, Tyre, and Caesarea Maritima reflect the presence of this type in three bustling maritime trade centers with an international population. Drawing on comparisons with strigillated sarcophagi from Roman Greece and other related types found in Asia Minor, Syria, and Palaestina, these sarcophagi are considered within their own funerary landscape. Local preferences for garland sarcophagi both finished and unfinished, plain imported chests, and costly ostentatious Attic imports, along with local innovations, dominate the Ephesian and Tyrian landscape, with a slightly different situation at Caesarea Maritima. How strigillated sarcophagi interacted within the local sarcophagus economies and the implications of patronage are considered, along with potential references to Rome.

The 'Unfinished Garland': An Underexplored Motif

Nicola Barham, University of Michigan

This paper traces the use of sarcophagi bearing the semi-worked form of the unfinished garland motif on the Lebanese coast. While these sarcophagi have (on the one hand, quite correctly) been historically identified as “roughed out” in the quarry for later finishing, scholars have failed to deeply engage the question of why so many of these sarcophagi were ultimately used for burials in this “unfinished” state. Accounts to date have been inclined to frame such uses as an idiosyncrasy of economy or incompetence—as some kind of aesthetic mistake.

The very extensive display of this “unfinished” sarcophagus type among the tombs of the necropolis of Tyre challenges such conclusions. Early twentieth-century accounts of scholars such as Etienne Michon and John Ward-Perkins, established the notion that the use of such “unfinished” tombs was exceptional; but they were not aware of the visual effect of the juxtaposition of so many of these sarcophagi at Tyre, where the necropolis had not yet been excavated. “Unfinished” garland sarcophagi constitute over an eighth of the sarcophagi found at Tyre; of those sarcophagi that display any sculptural features, at least five-eighths are of this type. The form was exceedingly popular.

This paper highlights not only the type’s widespread use, but furthermore the intentional replication of the disks and lunate bands of these imported sarcophagi in regionally carved tombs made of local stone. Drawing on the crescent forms that had long been popular in the region as formal comparanda, the paper further situates this corpus of tombs within the wider third-century move towards abstraction in the visual arts, met from the sculptural reliefs of the temple complex at Baalbek to the domestic wall paintings on Rome’s Clivo dei Scauro. The paper thereby explores the multi-directional aesthetic purposes that communities may have perceived these “unfinished” forms as realizing.

Stamping the Body: The Power of Repeated Motifs on the Lead Coffins of Roman Lebanon

Sean Leatherbury, Bowling Green State University

Hundreds of lead coffins survive from the Roman world. This number pales in comparison to the many thousands of extant stone sarcophagi, but in certain regions, the lead examples represent an important, and understudied, group. This paper considers the rich corpus of lead coffins likely produced in the second through fourth centuries in and around the cities of Tyre and Sidon in modern-day Lebanon, which were exported to a range of sites in the eastern Mediterranean. Focusing on their decoration, the paper examines the role of iconographic replication in enhancing the potency of the figural motifs, and explores the possibility that the same workshops produced sarcophagi for polytheist, Christian, and Jewish patrons. The distinctive manner in which the coffins were produced, with smaller stone or wood matrices that could be used over and over again, created zones in which artists allowed some of the more common “decorative” images of Roman art to multiply, vastly enhancing the potency of motifs that proclaimed religious affiliations (images of deities, crosses, menorahs), that served to protect

the deceased (phallic imagery, heads of Medusa, sphinxes, pelta shields), and expressed hopes for a good afterlife (rope motifs, images of Psyche, peacocks and *kantharoi*). These zones were organized in such a way that they played a range of visual games meant to boost the coffins' powers: for example, the architectural frameworks—colonnades, building facades—that often organize the figures are related to similar micro-architectural formats present on stone sarcophagi, but also to the architecture of the tombs in which they were buried. Through an analysis of the modular nature of their decorative programs, this paper argues that the coffins serve as a unique testament to Roman ideas about the reduplication and aggregation of symbolic motifs, which were adapted by artists for the deceased of various faiths.

Session 5A: Open Session

Ruler Cult and Portraiture in the Hellenistic and Roman Worlds

Mapping Early Hellenistic Ruler Cult

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In the late fourth century B.C.E., a new phenomenon emerged in the religious practice of the Greek world: ruler cult. Although mortals in the Greek world had been worshipped as heroes and gods before the Hellenistic period, cults of Greek rulers that developed during and after the campaigns of Alexander of Macedon are considered distinct from both divine kingship and hero cult for mortals. Previous scholarship has claimed that this form of ruler cult evolved from Greek hero cult, but in contrast to hero cult, there is a striking lack of evidence for ruler cult on the Greek mainland. Instead, virtually all major cults for Alexander and his Successors appear first in western Anatolia or just off its coast. Epigraphic evidence in six Ionian cities attests to cults of Alexander that likely began during his lifetime and continued as late as the third century C.E. The first major cults for the Successors were also located in or off the coast of Anatolia. An inscription at Skepsis dating to 311 B.C.E. (OGIS 6, 20-3) attests to the founding of a *temenos*, altar, statue, festival, and sacrifices for Antigonos I (Demetrios I alongside). Over thirty years later, an inscription in Ilion (OGIS 212) records Seleukos I, after a long career in Mesopotamia, receiving similar honors. Ptolemy I also appears to have received his first individual cults at Miletos, ca. 314–288 B.C.E. (Milet I 3 139C) and Rhodes, 304 B.C.E. (Diod. Sic. 20.100.3–4). Similar types of evidence indicate that Lysimachos, Philetairos I, Ptolemy II, Antiochos I, and queens Apama I, Arsinoe II, and Stratonike of Syria all received their first major cults in Anatolia. The initial concentration and longevity of Hellenistic ruler cults in Anatolia suggest that this was a regional phenomenon, one rooted in a local tradition of acknowledging political power through cult practice.