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116TH ANNUAL MEETING ABSTRACTS



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SESSION 1A: Colloquium

Current Projects in Central Italy: New Work by the American Academy in Rome and the Deutsches Archäologisches Institut

ORGANIZERS: *Kimberly Bowes*, American Academy in Rome, *Ortwin Dally*, Deutsches Archäologisches Institut, Rome, and *Philipp von Rummel*, Deutsches Archäologisches Institut, Berlin

Colloquium Overview Statement

This session presents new archaeological work carried out by the affiliated projects of Deutsches Archäologisches Institut (DAI) and the American Academy in Rome (AAR). The DAI and AAR carried out major early foreign projects in Italy, the DAI beginning in 1867–1869 with excavations at the Sanctuary of Dea Dia and the AAR in 1948 with the excavations at Cosa. Their histories thus represent in microcosm the foreign archaeological experience in Italy as well as the research priorities and predominant narratives of the German and American archaeological traditions, respectively. Their combined experience is no less representative today, although major factors have changed. Rather than being exclusively foreign outposts, the combined projects of the DAI and AAR represent new and diverse modes of collaboration with various Italian colleagues. From the days of national “specialization” in architecture and urbanism on the part of the Americans, and sculpture and architecture on the part of the Germans, the current projects of the schools represent most of the major research fields within Roman archaeology, from landscape archaeology to environmental data.

The purpose of the session is thus threefold: to represent through three papers from each school the particular research trajectories and strategies of American and German archaeological projects, to identify points of shared interests, and to identify any new or continued differences in methodology, analysis, or research goals. Thus, while the six projects presented represent a wide range of archaeologies and Roman chronologies—from landscape archaeology to legacy data projects covering the Archaic to Late Antique periods—the common thread uniting the presentations is an emphasis on methodology. Thus, each paper focuses particularly on the methodological and theoretical approaches used in each project, as well as their opportunities and challenges. A continued emphasis on the great tradition of *Bauforschung*—buildings archaeology—is apparent in the German projects, as is a new emphasis on landscape archaeology, while the American projects represent the increasing interest in environmental archaeology and artifacts analysis, as well as a return to older legacy projects.

This colloquium will begin with a brief overview of the historiographies of the two schools’ archaeological traditions. It will then be organized by region. First, two papers representing two different approaches to Pompeii will be presented, one emphasizing mural stratigraphy (DAI), the second the potential of artifact data (AAR) for narrating urban histories. Four papers on Rome will follow, documenting both continuities of traditional strengths in architecture with a paper on the Basilica Aemilia (DAI), and two legacy projects on the Palatine and Regia, re-

spectively (AAR). Finally, work on Lazio will be discussed with a paper on field survey (DAI).

DISCUSSANT: *C. Brian Rose*, University of Pennsylvania

The Fortification Walls of Pompeii: New Results of an Architectural Research Project

Christiane Brasse, Brandenburg University of Technology Cottbus–Senftenberg

The city walls of Pompeii with their outstanding state of preservation are among the most important sites for research on ancient fortifications in Italy. Still, apart from a variety of specialists' studies (particularly those by Maiuri) focused on certain spots, the circuit walls have never been studied in the whole from an architectural point of view; therefore, their importance for the development of the urban organism is less well known. Also missing is a comparative study, which would enable us to embed the different building periods within the existence and chronology of other fortifications in Campania. To find answers to these questions, an architectural research project was carried out between 2011 and 2014 by members of the Institute for the History of Architecture at Brandenburg University of Technology in Cottbus–Senftenberg; it forms part of the larger Pompeii project entitled *Le Mura Urbiche di Pompei*. During four seasons, all visible remains of the city walls, including ditches, ramparts, curtains, towers, and gates, were mapped comprehensively within their topographical situation, using a highly effective combination of different measuring and documentation methods. Apart from the overall plan, detailed scaled-up drawings and photogrammetric recordings of all relevant elements have been created; it is now possible to set up a three-dimensional digital mockup of the whole structure. After the analysis of the collected data, highly interesting observations have been made concerning construction details, building techniques, manufacturing processes, and, last but not least, the indisputable course of the walls. The evaluation of all information allows new conclusions on the chronology and appearance of the visible remains of the city walls from the beginning in the sixth century B.C.E. to the end in 79 C.E. But new aspects concerning the urban development of Pompeii also have to be considered, as the setting and orientation of the sophisticated layout of the city gates would have changed over time. The paper gives a short overview of the fieldwork carried out and presents the results concerning the fortification system, its building phases, and its impact on the urban development of the city.

Artifact Assemblages, Their Contexts, and Their Place in the Matrix of a Roman City

Steven J.R. Ellis, University of Cincinnati

The University of Cincinnati's excavations of a large Pompeian neighborhood—covering 10 separate properties across two town blocks—have amassed an abundance of data on the episodic developments of the city over several centuries, many of which demonstrate the response of Pompeii's subelite to city-, regional-,

and Mediterranean-wide currents in the socioeconomy. Fundamental necessities for urban themes of this scale are big and carefully organized data sets, which themselves demand, but can also provide, a foundational understanding of how a city is made. Even so, the contextual information for the types of deposits that make up the volumetric matrix of stratified, multiphased urban sites—why they are there and why they contain the types (and statistical patterns) of artifacts they do—is losing currency to spatial analyses that plot findspots across rooms and properties and neighborhoods; since at least the 1980s, but especially with the recent technical advances in three-dimensional visualization, the locus of an artifact's find-spot now seemingly trumps its context. The central aim of this paper is thus to go beyond—or perhaps come back a step or two from—spatial studies on the use of urban space to instead deal more directly with the (perhaps more) critical issues of how the deposits and their assemblages came to be there in the first place. The reality is that most information available to us from stratified urban excavations comes from the construction and creation of buildings rather than the actual use of their spaces. This paper focuses on some striking patterns in the recovery of certain assemblages and their contexts at Pompeii—from building materials to organic remains to coins—to ultimately demonstrate the extent to which the infrastructure for urban waste management was organized and how that material was selectively recycled and reused in the construction of buildings and cities.

The Basilica Aemilia Project

Klaus Stefan Freyberger, Deutsches Archäologisches Institut, Rome

The Basilica Aemilia is one of the prominent buildings on the Forum Romanum. It was built by M. Fulvius Nobilior in 179 B.C.E. and restored by L. Aemilius Paulus in 55 B.C.E. In 22 C.E., M. Aemilius Lepidus asked the senate for permission “ut basilicam Pauli firmaret ornaretque” (Tac., *Ann.* 3.72), which was largely an Augustan new construction of the building. A large fire caused severe damage to the basilica during the reign of Emperor Carinus in 283 C.E. During the capture of Rome by Alaric in 410 C.E., the building seems to have been completely destroyed, even if its ruins were still in use in later periods.

The remaining parts of the Basilica Aemilia have never been completely documented and published. This project continues the work of the late Heinrich Bauer and aims to document, interpret, and publish the entire structure. The project closes an important gap in the architectural history of Rome and addresses the following points: (1) graphical reconstruction of the building; (2) chronology and construction phases; and (3) function and building history.

Palatine East Pottery Project: Approaches to the Dissemination of Results

J. Theodore Peña, University of California, Berkeley, and Victor M. Martínez, Monmouth College

The Palatine East Pottery Project (PEPP) is a long-term research initiative concerned with the study and publication of the Roman-period pottery assemblage recovered in the course of the American Academy in Rome/Soprintendenza Ar-

cheologica di Roma excavations carried out on the northeast slope of the Palatine Hill in Rome. PEPP is now far along with its work, and this presentation accordingly focuses on the methods that will be employed for the dissemination of the project's results, highlighting several innovative approaches that will be used. The publication plan calls for a two-pronged approach, with the presentation of the basic data in the form of a monograph (the fourth in the Palatine East excavations final reports series) and the dissemination of a much more extensive array of data and images via the web. For the first of these, we plan to submit the monograph manuscript to a specific peer-reviewed, open-source, online, long-form publication series with print-on-demand capability that was recently established with a view to developing economical approaches to the publication of data-rich research projects in all areas of classical studies. For the second, we plan to present data and images of various kinds less suitable for inclusion in a monograph on a rolling basis through *Res Romanae*, the website of the University of California Roman Material Culture Research Laboratory. Features of the monograph will include a materials-driven approach to the definition of pottery classes; the presentation of complete quantitative data (including sherd count, weight, estimated vessels represented, estimated vessel equivalents); the presentation of information regarding form manufacturing sequence, form weight, and, for the various amphora classes, form capacity; and the presentation of catalogue entries that indicate evidence for vessel-manufacturing technique and use alteration. The program of web publication includes the use of Harris Matrices as an interactive user interface that will allow searches of the quantitative data by stratigraphic context, pottery class, or functional group; the presentation of flow diagrams documenting the manufacturing sequence for each form; the presentation of catalogue descriptions linked to profile drawings, photographs illustrating details of manufacturing technique and documenting evidence for use alteration, and photomicrographs of both thin sections and thick sections; and the presentation of a video tutorial explaining how to use the AutoCAD routine that the project is employing to calculate vessel volume and capacity.

The Regia Revisited: Toward the Critical Digital Edition of Old Excavations

Paolo Brocato, Università della Calabria, *Nicola Terrenato*, University of Michigan, and *Marcello Mogetta*, University of Michigan

The Regia in Rome is representative of a typical problem in classical archaeology: the major site, excavated many times over many decades by different scholars, but without a comprehensive, integrated publication. Occupying a crucial spot at the foot of the Palatine toward the valley where the Forum is located, the Regia was intimately connected with the emergence of public spaces in early Rome. A recent project launched by the American Academy in Rome, the Università della Calabria, and the University of Michigan aims at reconsidering all the available archival and artifactual evidence in view of preparing the final publication of the site.

The outcome of the project will be a peer-reviewed, stable online publication based on a single-context, analytic, relational, and spatially referenced database. This will be a version of the database used for the research and analysis and will be

edited according to the parameters defined by the Gabii Goes Digital initiative. A phase-by-phase analysis of the contexts will also be included, with interpretations and reconstructions. A paper volume summarizing the main results of the work would complement the online edition.

Landscape Archaeological Approaches to Southern Coastal Latium in the Roman Republican and Imperial Eras

Michael Teichmann, Deutsches Archäologisches Institut, Rome

Southern coastal Latium was part of the immediate hinterland of the metropolis of Rome. Therefore, it was of particular importance for the capital in terms of economy and demography and as social and religious space. The investigated area is limited by the Tiber and Rome, the Alban Hills, the Lepini Mountains, the Ausoni Mountains, and the Tyrrhenian Sea. It reaches from the immediate suburban area to more marginal, rural zones covering a variety of differentiated microenvironments, such as the coastline, coastal plain, volcanic hills, and limestone mountains.

This project aims at improving our understanding of the interaction of Romans and their surrounding landscape between the Middle Republican and Imperial eras. As parts of the area were intensively studied at least from the 19th century onward, a wealth of archaeological legacy data exists. This archived and published data has been centralized in a geographic information system (GIS). Some methodological issues that arise from work with legacy data are considered, as the data are heterogeneous and biased in several ways.

Descriptive site location analysis is conducted for several microenvironments, different time slices and various site types. The role of environmental and cultural variables, which could have been of importance for the choice of settlement sites, as well as the question of whether changes in preferential factors occur over time, are assessed by using an inductive, quantitative, geostatistical approach. The results should be considered in context with the regional history and written sources on Roman rural life. Geoarchaeological evidence is considered as a complementary source on the sustainability and impact of Roman agriculture for some sites in the investigated area.

SESSION 1B: Colloquium

Understanding Societal Change at Mitrou Through Practice Theory

ORGANIZER: *Aleydis Van de Moortel, University of Tennessee*

Colloquium Overview Statement

Societal change has been an important focus of research on the Bronze Age Aegean since Renfrew's *Emergence of Civilization* (London 1972). Processualist theorists seeing change as driven by societal systems have been followed by post-processual approaches emphasizing the role of individual agency. An attractive alternative is practice theory, a mode of thinking that considers human agency and societal structures as inextricably connected, thus acknowledging the importance

of both in effecting societal change. A key concept in practice theory is *habitus*, defined by Bourdieu as internalized social structures and norms guiding human thought and practice. Whereas Bourdieu attributes a dominant role to *habitus* in social reproduction, including the production of power, we follow Giddens, who accords greater importance to individual agency.

Some studies have employed practice theory to investigate specific aspects of Bronze Age Aegean society, but we propose for the first time to use this approach for studying societal change at a single site—Mitrou, in central Greece. Recent excavations at Mitrou exposed deeply stratified sequences of habitation levels ranging from Early Helladic (EH) IIB to the late Protogeometric phase (ca. 2400–900 B.C.E.), with evidence for all major societal changes that occurred in this period: the flourishing and demise of corridor houses; the reversion to simpler societies in EH III to the Middle Helladic period; the rise of visible political elites in the early Late Helladic (LH) period and of Mycenaean palatial societies in LH IIIA2–LH IIIB; the demise of these palaces at the transition to LH IIIC; and the reversion to simpler societies in late LH IIIC and the Early Iron Age. By tracing simultaneous developments in social practices related to various aspects of architecture, stone imports, pottery consumption, and subsistence, we want to explore in a more holistic fashion changes in *habitus* at Mitrou as well as the role played by individuals or groups in manipulating social, economic, or symbolic resources in their quest for power.

Our discussant is Mesoamerican archaeologist William Fowler, who has successfully applied practice theory to the study of Ciudad Vieja, a multicultural early Spanish contact site in El Salvador. Doing so enabled him to locate different cultural groups within the settlement and analyze how interactions with the Spanish affected social practices among native population groups. Correspondences with textual evidence lent greater credence to his interpretations. Because of the many parallels between his work and ours, Fowler will be able to give us valuable feedback.

DISCUSSANT: *William Fowler*, Vanderbilt University

Rubble Architecture and Flooring Practices: Evidence for Social Practice and Societal Change at Mitrou

Aleydis Van de Moortel, University of Tennessee

This paper presents diachronic developments and synchronic variations in rubble architecture and flooring practices at Mitrou from the Middle Helladic through late Protogeometric periods. The focus is on the construction of rubble walls, entrances, and floors and the arrangement of space in the various buildings excavated at the site. Throughout this overview, references are made to the next paper in this colloquium, which discusses the clay and timber superstructures of those same buildings.

Adopting Bourdieu's insight that social practices are reflections of a group's *habitus*, or internalized social norms and structures, I first define the tradition of architectural practices and analyze the organization of the built environment

at Mitrou in the early Middle Helladic period. Then I trace their development throughout periods of major societal change seen at the site. In particular, I investigate the effects on architectural practice of Mitrou's rise as a port of call in the trade network of Kolonna and Ayia Irini early in the Middle Helladic II phase, as discussed in another paper in this colloquium; the monumentalization of architecture and the built landscape by Mitrou's emerging elite early in the Late Helladic period and the effects of its increasing Mycenaeanization, as discussed by another paper in this colloquium; the rebuilding of the settlement in the early Postpalatial period; and the site's development into a rural hamlet at the transition from the Bronze Age to the Early Iron Age. Following Giddens' dictum that history is made by knowledgeable individuals and not by structures, I examine how social groups may have manipulated knowledge of building practices acquired through trade networks to project their status.

Rubble-wall construction has seldom been the object of in-depth study in Bronze Age Aegean archaeology. With few exceptions, publications merely provide the size of walls, a superficial description of the arrangement of stones, and a brief characterization of the sizes and shapes of stones. This paper presents a detailed technical analysis of rubble-wall construction at Mitrou and proposes a new typology that helps clarify developments at the site.

A Diachronic Perspective of Architectural Fragments from Mitrou as Evidence of Construction Traditions and Social Practice

Kyle Jazwa, Florida State University

Traditionally, the stone foundations of prehistoric buildings have served as archaeologists' primary source of information on architectural plan, design, and construction. These foundations, however, are but a single component of the architectural whole. At many sites in mainland Greece, most of the superstructure consisted of highly perishable mudbricks or other forms of clay walls and timber frames. Because of the perishability of these materials, comprehensive studies devoted to the physical remnants of such superstructures are lacking at prehistoric sites in the Aegean. Careful excavation and collection of more than 3,000 such architectural fragments at Mitrou, East Lokris, offer the opportunity for a detailed study at a single site with a long sequence of habitation, providing us with a greater understanding of construction choices in the course of the Bronze Age and Early Iron Age. This paper offers a diachronic perspective on the construction of building superstructures at Mitrou and complements a similar paper in this colloquium devoted to the very stone foundations, floors, and architectural spaces to which these fragments of superstructures belonged. Engaging in such a multidimensional approach offers a more holistic understanding of social practices and societal change.

Recovered whole and beam-impressed mudbricks, wattle-impressed daub, and roofing fragments from Mitrou hint at a dynamic landscape of building traditions throughout the site's history. Macroscopic analysis of the mudbricks reveals distinct changes in tempering choices that correspond to major societal shifts at the site. Throughout these major changes in mudbrick composition, the endurance of tempering techniques suggests distinct learning traditions. In this paper, I offer

a synthetic account of the architectural fragments situated in the context of their societal phases and building types. This diachronic perspective allows individual construction techniques to be tied to broader trends and social practices evident in other categories of the material record at Mitrou. My work presents for the first time a fully stratified sequence of architectural fragments in the prehistoric Aegean, which may serve as a reference collection for similar studies at other sites.

Geological Study of Building Materials and Groundstone Tools at Mitrou, East Lokris

Lee B. Anderson, University of Tennessee

An important question for the study of practice in Bronze Age and Early Iron Age Aegean society pertains to the acquisition of stone materials (raw or processed) used for buildings and groundstone tools. In 2013 and 2014, I conducted a comprehensive geological study of groundstone tools, building stones, and non-plastic inclusions in architectural fragments from Mitrou to test the hypothesis that access to external rock sources can be linked to elites and to periods of greater societal complexity at Mitrou. The site of Mitrou offers excellent opportunities for such study, as it has a long, well-defined stratigraphic sequence ranging from the Early Helladic (EH) IIB phase to the late Protogeometric phase, and it has produced evidence for elite presence in EH IIB, the Prepalatial period, and perhaps also during the Palatial period in the early Late Helladic period, and perhaps also during the Palatial period, when Mitrou may have been taken over by an outside palatial power.

My study of groundstone tools found that a significant portion had been imported, some from sites along the Euboean Gulf and some from as far away as Aegina. Likewise, imported stone was used for the construction of Prepalatial elite Tomb 73. Raw materials for mudbricks, roof tiles, and other clayey architectural elements must have been gathered in close proximity to the site, but even so I examine whether there were shifts in the location of the sources. My research aims to illustrate how rock choice relates to the changing social dynamics of the site during times of increasing complexity.

Ceramic Evidence for Societal Changes at Mitrou in the Middle Helladic and Late Helladic I Phases and the Impact of Interregional Interactions

Christopher Hale, University of Melbourne

Recent quantitative and stylistic analysis of the Middle Helladic (MH) and Late Helladic (LH) I ceramic assemblages from the site of Mitrou in East Lokris has revealed the first detailed ceramic sequence for the region consisting of seven Middle Helladic subphases spanning the entirety of the period and four distinct LH I subphases. Such a refined relative chronological foundation and the excellent stratigraphic preservation at the site allow for detailed diachronic investigations into changing social practice in relation to major societal changes at Mitrou during the formative centuries prior to the Mycenaean period.

Through an analysis of changes within the ceramic assemblage coupled with an investigation into the impact of interregional interactions and influence, it is argued that the long-established Middle Helladic social norms and practices emphasizing egalitarianism began to be challenged by MH II (early). The establishment of a regular network of exchange with Kea and Aegina in particular led to the transfer of ideas concerning status and power along with increased opportunities for wealth generation. New, more materially identifiable means of displaying status catalyzed a process that would eventually result in the appearance and acceptance of wealthy and powerful elites during LH I. These elites were keen to emphasize their elevated status through material culture.

This analysis will largely agree with recent work by Maran that emphasizes the importance of Kolonna on Aegina as a socioeconomic and political center during the latter Middle Helladic period. Specific individual members of society in central Greece strove to establish a symbolic connection with Kolonna to compete for local status and juxtapose themselves against an established local *habitus*. This eventuated in a process of “glocalization,” where outside material and immaterial traits were reinterpreted and merged with local ones, resulting in the gradual “reorientation” of central Greek customs and norms toward those of Aegina and southern Greece while still maintaining distinctive local features. These processes established both a precedent and a mechanism for the sudden and complete Mycenaeanization of the ceramic assemblage by LH IIB.

Wining and Dining at Mitrou, East Lokris: Ceramic Consumption and Political Context from the Early Prepalatial to the Final Palatial Period

Salvatore Vitale, University of Pisa

Mitrou is a coastal site in the region of East Lokris with evidence for occupation from the Early Helladic IIB to the late Protogeometric phase. Its favorable geographical location—on the sea route along the North Euboean Gulf, with easy access to the Kephissos Plain and, hence, Phocis and Boeotia—enabled Mitrou’s inhabitants to participate in exchange networks of objects and ideas. The intensity and scope of exchange and interaction, however, were far from stable throughout the long history of the site.

This paper discusses changes in pottery consumption and dietary practices at Mitrou during the Late Bronze Age, investigating the mechanisms responsible for the acceptance or rejection of influences from other regions, particularly Boeotia, Aegina, and the Argolid. Deposits from three significant horizons are analyzed, dating to Late Helladic (LH) IIA2 (early Prepalatial period), LH IIIA2 (early) (final Prepalatial period, marking the last phase of Mitrou’s independence), and LH IIIB2 (late) (final Palatial period, when the site was probably under domination of a nearby palatial center).

The analysis of the evidence reveals that changes in ceramic consumption patterns and dietary choices were determined by precise sociopolitical strategies. The adoption of northeast Peloponnese drinking shapes was strongly promoted by the beginning of LH IIA, when Mycenaean and Aeginetan pottery replaced the indigenous ceramic assemblage, which was previously dominated by Mainland Polychrome Matte-Painted and Gray Minyan Wares. During LH IIIA2 (early), rep-

representing the peak in Mitrou's wealth, the process of Mycenaeanization of the site was completed. However, local elites in some ways held on to their own identity through the use of specific central Greek drinking shapes, such as the kantharos, and the almost complete simultaneous rejection of canonical stemmed bowls, carinated kylikes, and Aeginetan serving and cooking vessels. A different situation is seen in the LH IIIB2 (late) phase. It appears that at that time, Mitrou's elite inhabitants fully accepted fashions and consumption habits developed elsewhere. This fact is demonstrated by two phenomena: (1) the wide range of pottery imports from various regions, including Phocis, Boeotia, the Argolid, and again Aegina; and (2) the occurrence of specific palatial types of pottery such as Rosette deep bowls and ceramic griddles. These features suggest that during LH IIIB2 (late), as a consequence of the domination by a nearby ruling center, Mitrou's elite had adopted the same social practices as elites elsewhere in the Mycenaean world.

Exploring Societal Changes at Bronze Age and Early Iron Age Mitrou Through Social and Economic Practices: What the Macrobotanical Evidence Can Tell

Angeliki Karathanou, Aristotelian University of Thessaloniki

Mainland Greece witnessed major sociopolitical and economic changes in the course of the Bronze Age and Early Iron Age. The political economies of Early Helladic (EH) complex societies experienced transformation processes leading eventually to the emergence of social inequalities and the formation of ruling elites toward the end of the Middle Helladic period and the beginning of the Late Helladic (LH) period. Those inequalities resulted in LH IIIA in the formation of hierarchical societies organized around centralized palatial complexes in central and southern Greece. Several generations later, at the end of LH IIIB, the sudden collapse of the palace-centered systems forced the societies into long-term social, political, and economic rearrangements, resulting gradually in the self-contained poleis of the Geometric era. With the aim of understanding these changes, current archaeological research is putting more and more emphasis on the investigation of social and economic practices.

This paper seeks to define such practices using contextualized analysis of macrobotanical remains from Mitrou, a settlement in central Greece with an uninterrupted sequence of occupational strata spanning the EH IIB to the late Protogeometric phases. I explore aspects of human activity in relation to plants, including diet, agricultural practices, storage, and disposal strategies as well as ordinary and ceremonial food consumption in an effort to shed more light on the societal changes attested at Mitrou.

Starches and Grains: Reconstructing Subsistence Within a Changing Bronze Age Sociopolitical System at Mitrou, East Lokris

Calla McNamee, The Malcolm H. Wiener Laboratory for Archaeological Sciences, The American School of Classical Studies at Athens

The link between prehistoric subsistence practices and sociopolitical organization is a primary focus of archaeological research. In the Aegean, the intensifica-

tion and diversification of subsistence, from the grain-based production of wheat and barley in the Late Neolithic to a diversified economy incorporating olives, grapes, and legumes in the Bronze Age, have been considered fundamental contributors to the increasing complexity in the region and the eventual rise of Mycenaean society. Using an analysis of starch grains and phytoliths extracted from groundstone artifacts, this study investigates the relationship between changing subsistence practices and sociopolitical organization at the Bronze Age and Early Iron Age site of Mitrou, East Lokris. The uninterrupted archaeological sequence at Mitrou, spanning from the Early Helladic IIB to the late Protogeometric phase, encompasses the acme and decline of the corridor house civilization and the rise and demise of Mycenaean palatial society. Concomitant changes in the character of Mitrou's settlement occupation have already been observed in Mitrou publications and by other papers in this colloquium.

This well-defined cultural chronology provides an ideal context to investigate variation and diversification through time in the use of staple resources as well as the control and distribution of staple resources by the settlement's elite. The phytolith and starch grain evidence extracted from groundstone artifacts documents the primary staple resources processed at the site and variation in their prevalence through time. The changes in subsistence patterns identified at Mitrou are discussed with respect to sociopolitical transitions at the site level, and they are framed within the broader context of Mycenaean societal developments.

SESSION 1C: Colloquium

"Pacem appellat": Policy, Propaganda, and Peace in Rome's Empire

ORGANIZER: *Michael J. Taylor*, University of California, Berkeley

Colloquium Overview Statement

The Roman empire was established through violence. At the conclusion of military operations, the creation of a working peace involved two basic sets of actions: the articulation of an ideology that defined and celebrated the new order, and the nuts-and-bolts work of enacting effective policies to ensure long-term influence and control. Because of disciplinary boundaries and intradisciplinary schisms, the former often is studied by art historians or cultural historians, while the latter falls to political historians and often those who specialize in epigraphy. The goal is to combine for the audience the two aspects of peacemaking through a set of case studies, ranging from the Middle Republic to the Early Empire, alternating presentations on policies and pragmatics with papers on representation and ideology. The panelists will bring to bear a wide range of evidence, including literary texts, visual media, survey archaeology, and the epigraphic record.

Souza offers a new perspective on the Roman settlement of Italy during the first major stage of Roman imperial expansion in the fourth and third centuries B.C.E. The Roman organization of Italy is generally seen as creating a successful foundation for conquest beyond the peninsula. The presenter argues that rather than being forward looking, the Roman settlement of Italy sought to prevent con-

quered populations from infiltrating the Roman populace as slaves and freedmen, and thus the Romans maintained conquered populations separately as *socii* rather than engaging in forced incorporation through the mass enslavement of defeated Italian peoples.

Taylor deals with the propaganda related to Rome's victorious interventions in the East, focusing on how Greek allies were treated in two battle scenes. The first, a bronze plaque from Pergamon, depicts the Battle of Magnesia (190 B.C.E.) from the point of view of Rome's Attalid allies and stresses the contribution of Eumenes II and his cavalry to the battle. Moving on to the reliefs on Aemilius Paullus' Pydna monument at Delphi (168 B.C.E.), the panelist argues that two of Rome's Greek allies appear on the panel but notes that they were visually sidelined, with the hard work of killing Macedonians left to the Roman figures alone. The Pydna monument thus acknowledges yet denigrates the contribution of Greek allies to the overall Roman success. Both scenes make visual arguments directly related to the dynamics of the postwar settlement.

Pfuntner provides a regional case study of communities affected by civil war and the successive attempts of warlords to establish a working peace. Exploring the epigraphic record as well as settlement patterns, the paper discusses the brief rule of Sextus Pompey during wartime conditions and the changes caused by the ultimate triumph of Octavian. The paper concludes that Sextus Pompey's rule was less disastrous than the sensationalist (and biased) literary sources suggest and notes the dramatic impact that the settlement of Octavian had on the urban landscape of the island with the imposition of a new hierarchy of *coloniae* and *municipia*.

Roncaglia discusses a symbol of imperial peace and power, Claudius' Po River houseboat, which drew on Hellenistic precedents of magnificent royal ships (Aemilius Paullus had sailed up the Tiber in triumph on the royal barge he captured from Perseus). The boat and its position in northern Italy at once harkened to Claudius' transmarine military action in Britain and called attention to domestic achievements, such as his road-building program over the Alps. Sailing down the Po at ease, Claudius celebrated the long arc of Roman imperial expansion, given that the Po had once been the contested frontier of Italy. The paper therefore deals with how an emperor celebrated victory and peace through complex and carefully reasoned symbols even as the age of conquest was increasingly a thing of the past.

DISCUSSANT: *Lisa Eberle*, University of Oxford

The Mobility of Potential Citizens: New Perspectives on the Roman Settlement of Italy

Randall Souza, Duquesne University

The success of Roman foreign policy that effectively exploited the military manpower of conquered Italian populations has long been understood as a major factor in the growth of Roman control over the peninsula beginning in the fifth century B.C.E. The nature of that control is understood to be primarily military, as the city of Rome led a growing agglomeration of allies that would be fruitless to oppose, and indeed those allies were a crucial part of the story of Rome's

military achievements. The political and social side of Roman peace treaties was thus a means to turn erstwhile enemies into future allies as quickly as possible: defeated soldiers would be paraded and/or sold as captives, but defeated populations could join the winning side by agreeing to provide resources with which the next war would be fought. That dynamic is also at play in myths of Early Roman inclusiveness, as in Romulus' declaration of asylum (Livy 1.8.4–7) or the eventual Roman reconciliation and unification with the Sabines (Livy 1.13.4–8).

The extension of variable citizenship rights on a case-by-case basis likewise undermined the potential growth of alternative and competing hegemonic organizations. Beginning in the fourth century, colonies of full Roman citizens further complicated the patchwork of statuses. While this patchwork has conventionally been understood as a teleological continuum, Mouritsen has made a compelling case that there is little evidence for central or sustained planning in the relationships forged by the Romans during the Early and Middle Republic. In fact, the Romans can be seen formulating a piecemeal provincial administration in Sicily in the third century as well. In Italy, too, it is likely that a complex variety of arrangements were made with conquered populations, which only later were distilled into terms such as *civitas sine suffragio*.

In this paper, I argue that the Roman treatment of conquered Italian populations was not designed to integrate them into a growing Roman state, as Sherwin-White would have it, but instead had the effect of segregating them from one another and from the Romans themselves. There is no reason a priori to think that the Romans were eventually planning to bring these conquered cities into a territorial state or that rights of commercium and connubium were intended to bring Latin and Campanian populations to Rome. Rather, they served to allow Romans to plug themselves into elite Italian social and economic networks while keeping most Italians at arm's length. Mouritsen points to the extremely unlikely scenario of an Oscan-speaking Capuan moving to Rome after 338 to stand for office when not all Roman citizens could do so.

In particular, the decision to forgo the mass enslavement of hostile populations can be seen as a measure to avoid introducing Italian servile populations into Roman society and thereby generating traffic between Rome and its allied regions. By regulating interaction through the differential granting of citizenship, the Romans stymied natural regional communications that might otherwise have led to the development of effective opposition. With the major exception of allied troops, who were necessary for ongoing Roman military success, Roman policy in the Early and Middle Republic, such as it was, generally discouraged mobility that could be dangerous to existing social structures. Indeed, even in the army allies were kept separated from Romans. The Romans in general did not want the populations they conquered to develop ties with one another, nor did they want to be changed themselves by those they conquered.

I do not conclude that a concerted effort or a well-defined policy was at work but rather that the Romans' ad hoc diplomacy was an expression of general conservatism. Despite those foundational assimilation myths, and in tension with the Roman aptitude for appropriating successful ideas from others, there was a basic xenophobia inflamed not least by conquered peoples. *Graecia capta ferum victorem cepit*—this result is exactly what the Romans had been trying to avoid.

Contested Victories: Roman Battle and Hellenistic Art

Michael J. Taylor, University of California, Berkeley

Two visual representations survive celebrating decisive Roman victories in the Hellenistic East. A bronze plate from Pergamon almost certainly depicts the Battle of Magnesia (190 B.C.E.), while the reliefs on Aemilius Paullus' Pydna monument at Delphi portray the Battle of Pydna (168 B.C.E.). It is telling that both surviving depictions of these battles were designed for Hellenic audiences. A synoptic exploration of these two pieces provides insight into the representation of Roman military power in the eastern Mediterranean. The Pergamon bronze, produced in an Attalid courtly context, narrates the Battle of Magnesia from the point of view of Rome's allies, while the Aemilius Paullus monument imposes the vision of the triumphator himself, although one moderated through the efforts of Greek artists and craftsmen. This paper is therefore primarily interested in the appearance of Greek allied soldiers in scenes that depict battles traditionally viewed as Roman victories. After all, Greek allies were important supplements to Roman field armies, including the forces that triumphed at both Magnesia and Pydna.

The Pergamon bronze, which likely replicates a larger painting of the battle, gives the pride of place to Hellenic-style cavalry, which ride over both a nude Gallic cavalryman and the tightly packed ranks of the Seleucid phalanx. While Roman infantrymen appear in the scene, they appear discomfited (one has even been killed), in stark contrast to the focused charge of the Attalid horsemen.

The paper argues that two Greek allies, an infantryman and an archer, do appear on Paullus' Pydna monument, although they are often mistakenly identified as serving on the Macedonian side. Nonetheless, a careful examination of the figures suggests that the archer has put an arrow through a Macedonian cavalryman, firmly establishing him (and the Hellenic infantryman above him) as fighting on the Roman side. The inclusion of allies on a Roman monument is not necessarily due to any policy of inclusion. It is notable that in the composition of figures, the allies make a very limited contribution to the fight. They sit in the corner of a panel, wallflowers, while the hard work of killing Macedonians is reserved for figures that can be readily identified as Romans. Even the Macedonian cavalryman wounded by the archer receives his death blow from a prominently placed Roman infantryman. The paper argues that the monument therefore represents a snub of Greek allies, who comprised more than 20% of Paullus' field army. Their presence is proof of their obedience to Rome, but their marginal status and lack of impact on the battle suggests that the victory is anything but a mutual accomplishment.

Thus, each scene makes a divergent claim about the contribution to the victory, with immediate relevance to the shape of the postwar settlement. The Pergamon bronze was no doubt part of a discourse justifying the dramatic expansion of Attalid power in Asia Minor, which could be linked to Eumenes' critical contribution to the decisive battle. Meanwhile, the Pydna monument was constructed at a time when Rome imposed harsh treatment on many of its Greek allies, something easier to justify if those allies made little direct contribution to victory.

The paper closes by briefly commenting on an additional shared feature of both representations: the appearance of nude Gauls, which are sometimes misidentified on the Pydna monument as "heroic nudes." While this was technically historically accurate, given that Gauls fought in small numbers in the armies of both

Antiochus III and Perseus, both pieces grossly exaggerate the Gallic presence at the battle. The scenes therefore transform both Magnesia and Pydna into “Gallic victories,” tapping an old Hellenistic political trope resonant with claims of hegemony and rulership. The visual boasts in each piece were therefore inextricably linked to broader geopolitical assertions in the new international system created by Roman intervention.

Resettling Sicily: Octavian, Agrippa, and the Aftermath of Sextus Pompey’s Imperium

Laura Pfuntner, University of California, Davis

This paper analyzes the Roman civil war and its aftermath in Sicily based on archaeological and epigraphic evidence that has emerged in the past three decades. Sicily served as Sextus Pompey’s base in his war with the Second Triumvirate (42–36 B.C.E.). As such, the island and its waters were the site of military actions that brought to a close the first phase of the civil war, in which the triumvirs defeated the remnants of the senatorial opposition to Julius Caesar across the Mediterranean.

However, we have very little information about the administration of Sicily in this period from contemporary historical sources—and none of the later accounts (namely, those of Appian and Cassius Dio) gives us Sextus’ perspective; instead, they seek to portray his imperium as illegitimate and destructive. As a result, analysis of Sextus’ tenure of Sicily has been mired in largely irresolvable debates—for example, regarding the juridical status of Sicilian civitates in the years between the assassination of Julius Caesar and Augustus’ final “settlement” of the island in 21 B.C.E. In addition, based on these one-sided ancient accounts and on Strabo’s description of Early Imperial Sicily and archaeological evidence from sites such as Morgantina, the civil war and its immediate aftermath are usually interpreted as a period of crisis and destruction that did lasting damage to the Sicilian economy.

In this paper, I reconsider Sextus’ time in Sicily in its broader political and economic context and in light of recent archaeological and epigraphic evidence from Sicily. After a brief overview of how Sicily and its communities became significant actors in Roman power politics in the decades leading up to the civil war, I discuss Sextus’ tenure of the island between 42 and 36 B.C.E., including his administration of grain production and distribution—though because of the scarcity of sources, this discussion must be largely hypothetical. I then examine Octavian’s actions on the island after the conclusion of the war and consider his motivations: To what extent did Octavian seek to “punish” the cities of Sicily that had sided with Sextus? And what impact (if any) did the events of this early stage of the civil war have on Octavian’s “settlement” of the Roman empire as a whole in the years after Actium?

To answer these questions, I analyze the means by which Sextus was able to maintain control of the island for so long and the nature of his relationships with Sicilian communities. And so the paper addresses the broader question of how a constituent part of Rome’s imperial core—in this case, its oldest overseas province—could function in times of military upheaval: in particular, how did the political, economic, and social obligations and opportunities for communities (and the various groups within them) change? I focus on the economic, social, and

political relationships fostered between Romans and Sicilians during, and in the decades following, Sextus' tenure of Sicily, for which there is significant numismatic, epigraphic, and archaeological evidence from sites such as Lipari, Segesta, Halaesa, Centuripae, and Lilybaeum to supplement the accounts of Appian, Dio, and Strabo.

I argue that while Sextus' presence on the island created challenges for Sicilian communities (e.g., in the production and distribution of grain), it was less disruptive, and the damage caused by the war itself was less dramatic, than the literary sources suggest. Nonetheless, the economic, political, and social innovations that followed the civil war—especially the introduction of Roman colonists to several urban communities and the redistribution of land—had a significant long-term impact on Sicily, establishing a new urban hierarchy centered on cities with colonial or municipal status that supplanted the network of largely autonomous poleis that had previously supported Roman administration of the island.

Claudius' Houseboat and the Symbolism of Imperial Peace

Carolynn Roncaglia, Santa Clara University

On his leisurely return from Britain to Rome to hold his triumph, the emperor Claudius entered the Adriatic from the Po Delta on a vessel that, according to Pliny the Elder, more resembled a domus than a ship. This paper examines the political and cultural symbolism of that ship as a victory monument.

There has been renewed interest in the ideologically complex building programs of rulers in the early Roman empire, particularly regarding Augustus and Herod the Great, and this interest has been concurrent with research into Roman adaptations of the imagery and behavior of earlier Hellenistic rulers, such as Van Overmeire's examination of Nero's use of Hellenistic royal structures and behaviors. Claudius' Po houseboat offers a chance to examine a temporary Julio-Claudian monument as a case study for how Roman emperors adapted a symbolically rich Hellenistic tradition.

Claudius' ship domus was part of a tradition of ship palaces begun by Hellenistic dynasts. Ptolemy IV Philopator had his magnificent *thalamegos*, a floating Macedonian palace complete with its own temple to Aphrodite, while Archimedes himself was said to have helped design the Syracusan king Hieron II's ship palace. North of the Dead Sea at Iraq al Emir, Hyrcanus the Tobiad created an elaborate palace that appeared to float on a pool of water, while Cleopatra VII employed similarly fantastic barges. These ships and palaces highlighted the wealth of their builders and more significantly their ability to pacify the natural instability of the waters. This tradition of extravagant royal boats gave Romans—such as Claudius' predecessor Gaius, who had constructed floating palaces on Lake Nemi—the opportunity to construct their own symbols of prosperity and pacification. This was, however, an exclusively royal tradition, and the use of too many royal signifiers, as Gaius' assassination shows, could be dangerous for a Roman princeps.

This paper shows how Claudius' ship domus navigated those perils by acting as part of a larger triumphal and imperial program of showcasing conquered waterways and crossed borders. For extending Roman power into Britain, Claudius received a naval crown on his house as a symbol, according to Suetonius, of a

traversed and dominated ocean, and the imagery of tamed waters would be continued throughout his reign in public-works projects focused on harbor building, lake draining, and aqueduct construction, all of which extended the glory of his one triumph and only major military expedition. Similarly, Claudius' road building over the Alps not only honored his father's accomplishments but also symbolized the bridging of otherwise formidable obstacles. Claudius' speech to the senate, preserved in the work of Tacitus and the Lyons inscription, explicitly glorifies the expansion of citizenship and the senate as boundary crossing.

Claudius' houseboat drew on an earlier tradition to highlight his ability to bring peace and prosperity; he tempered the potentially problematic aspects of this convention by making his floating domus part of a cohesive imperial image, one that constantly referred back to his British triumph and that justified otherwise ambitious actions as part of a natural and just expansion of Roman imperium. For the antiquarian emperor, the choice of the Po Delta was particularly significant. The river was, as his speech to the senate noted, the earlier boundary of Italy, and by sailing down it as if it were the Nile, he made it no longer a frontier. Moreover, by sailing down a particular canal of the Po made by Augustus and entering the Adriatic near Ravenna, he paid respect to the nearby naval base and highlighted his connection to the Divus Augustus. Rather than a decadent oddity, Claudius' floating domus was a carefully planned part of a symbolically unified rule.

SESSION 1D: Colloquium

Beyond the Borderlands: Identity Formation in Peripheral Contexts

ORGANIZERS: *Susannah Fishman*, University of Pennsylvania, and *Steve Renette*, University of Pennsylvania

Colloquium Overview Statement

Persia, Greece, Rome, and Assyria—these are the giants of ancient civilization that dominate scholarly research and the popular imagination. More recently, scholars have examined how local practices and interregional exchanges constitute these larger entities and provide a more empirical window into the dynamics of ancient identity formation. In this colloquium, presenters will share new research that will enable us to explore how local identities engage, absorb, select, and resist ideas and practices from their broader political context in ways that often transcend political boundaries. From quotidian cooking practices to changing monumental architecture, these communities found means of enacting local identities that were effective on local and supraregional scales.

This discussion will include case studies from fifth-century B.C.E. Greece to the third-millennium B.C.E. Near East. The range of this research will allow us to employ a cross-cultural comparative perspective to deepen our understanding of how local processes of identity formation relate to the larger political structures that are more commonly studied. The relationship between domestic practices, urban space, and political formation will be discussed in the context of early urbanization in the Bronze Age Levant, as well as the Assyrian conquest of urbanized

polities in Anatolia. New research demonstrates that in Bronze Age Oman local dynamics of identity formation were far more heterogeneous than Mesopotamian-centric scholarship indicates. Analysis of Attic pottery in the Achaemenid Levant shows that these initially foreign goods became incorporated into local constellations of meaning. A *longue durée* analysis of the Mani Peninsula, Greece, explores how this geographically remote area maintained a local identity over thousands of years of political domination. Finally, the modern political considerations that support the Greek/non-Greek binary will be explored, as archaeological evidence from the Granicus Valley in Anatolia demonstrates that these categories cannot account for the local practices found in this area. By focusing on areas commonly viewed as peripheral, these papers will highlight the multiscalar, heterogeneous, and ultimately local processes of identity formation.

Commonalities and discontinuities from these projects will give us the theoretical scope to tackle issues of local identity formation in future research. The data from these presentations are drawn from ongoing, site-specific research, creating the opportunity to incorporate innovative perspectives that will benefit all those who attend this colloquium. This research will allow us to move beyond reified concepts of ancient borders and to develop an empirical understanding of the practices that enabled identity formation across peripheral boundaries.

Living on the Edge: The Archaeology of Early Urban Encounters in Northern Coastal Lebanon

Alison Damick, Columbia University

The growth and nucleation of sites in the northern Levant in the third millennium B.C.E. has often been cast as “secondary” urbanization, a result of contact with contemporary incipient states in Mesopotamia and Egypt. The societies of Early Bronze Age (ca. 3200–2000 B.C.E.) Lebanon are therefore produced in scholarly analysis as peripheral in a number of ways: geographically, they occupy the liminal zones between land and sea to the west and mountain and desert to the east, but they also occupy a conceptually and structurally peripheral position in the history of early urbanism. The opportunity afforded by their location to facilitate trade and communication between other societies has played a large part in conceptualizing the identity of “commercial” northern Levantine societies. For a long time, this was partly due to the inaccessibility of many sites within Lebanon as a result of modern conflict. However, in the past decade and a half, new projects have allowed archaeologists to start investigating the precise local history of settlement transformations and the range of behaviors of the people living during them, with the aim of understanding how identities were expressed within and between local societies rather than relative to neighboring ones.

To this end, this paper discusses some of the daily processing activities at Tell Fadous-Kfarabida in northern coastal Lebanon, as reconstructed through a preliminary analysis of the Early Bronze Age groundstone assemblage. Groundstone tools were used and reused to process and modify a variety of materials in the daily lives of Early Bronze Age communities, including food materials and spices, animal hides and bones, ceramics and plasters, and other stones; in this sense, groundstone tools were always themselves at the edge of people’s daily lives, ren-

dering possible their various modes of expression and encounter. In this paper, I explore the ways in which “mundane” groundstone tools can be studied to understand the encounters that structured people’s lives on a daily, local level at Tell Fadous-Kfarabida, and how that might inform archaeological understanding of settlement change and identity formation in Early Bronze Age northern Lebanon.

They Paved Paradise and Put Up Assyrian Architecture: Remaking a Syro-Hittite City into an Assyrian Center

Kathryn R. Morgan, University of Pennsylvania, and *Virginia R. Herrmann*, University of Tübingen

This paper explores the changing character of urbanism over the course of the imperial encounter in the Syro-Hittite city of Sam’al, modern Zincirli Höyük, in southeastern Turkey. Sam’al, an independent Syro-Hittite kingdom, was progressively integrated into the Assyrian empire, first as a vassal state and then as a directly administered province of Assyria, before its ultimate abandonment in the seventh century B.C.E. While its situation was far from unique among the Syro-Hittite states, the University of Chicago’s Neubauer Expedition to Zincirli is the first project to excavate a Syro-Hittite lower town and thereby to explore the effects of the process of imperial integration not only on a citadel center but also on the lives of its more humble inhabitants.

Geophysical prospection and initial excavations in Sam’al’s lower town from 2008 to 2010 revealed two large complexes, one of more domestic character, one a monumental structure with close architectural parallels to administrative buildings in the Assyrian heartland. Both date to the eighth to seventh centuries B.C.E. In the summers of 2012 and 2013, excavators removed a cobble pavement from the expansive courtyard of the monumental building to reveal agglutinated domestic structures of a much more modest scale. Still, these dated probably not more than a century earlier than the overlying administrative complex, indicating a rapid change in the use of (limited) urban space in the lower town. This paper presents the changes in practice that accompanied the change in urban function, and places them within the wider political landscape of southeastern Anatolia in the eighth and seventh centuries B.C.E.—an area precariously situated at the fringes of empires. It further considers the extent to which current archaeological methodologies, including the integration of remote sensing and excavated data and the use of digital recording and reconstruction techniques, contribute to a more detailed, streamlined, or accurate understanding of ancient built environments.

Neighborhood and Identity in the Land of Makkan: The View from Bat, Oman

Jennifer Swerida, Johns Hopkins University

The “Land of Makkan,” textually attested in Mesopotamia and geographically situated on the Oman Peninsula of southeastern Arabia, is generally understood as a tribal society existing on the periphery of the Bronze Age Gulf trade route. Internally, Makkan’s socioeconomic roots are traced to the so-called Umm an-Nar period (ca. 2500–2000 B.C.E.)—the earliest archaeologically recognizable phase of

sedentization, agricultural cultivation, and copper exploitation. As the knowledge base concerning the Umm an-Nar expands, what once appeared to be a unified material culture horizon closely tied to trade with Mesopotamia and the Indus is now seen to incorporate a variety of independent regional material traditions and economies spread across the Arabian Peninsula.

Such is the perspective from the UNESCO World Heritage Site of Bat, Oman, where recent and ongoing excavations are further clarifying the emerging Early Bronze Age regional and neighborhood socioeconomic identity. This paper discusses the development of Umm an-Nar neighborhood socioeconomic identities at Bat, drawing on results from the 2014 excavation season, in contrast to the Mesopotamian-centric perspective derived from textual accounts mentioning the Land of Makkan.

Social and Economical Transformations of the Levantine Coast Societies During the Persian Period Through the Adoption of Greek Pottery in Ceremonial and Domestic Cookery

May Haider, Sapienza Università di Roma

During the Persian Period (ca. 539–332 B.C.E.), Attic pottery was being exported throughout the Levantine coast in great quantities from the late fifth century until the middle fourth century B.C.E. At this time, the Levant lay between the politically powerful and ethno-culturally diverse Achaemenid empire and the huge cultural influence of Greece. The Levant was fixed on the periphery of a region known as the Trans-Euphrates, an area subordinated to Babylon and governed from Damascus. Although importation of foreign pottery is attested in earlier periods, nonlocal pottery was never as prevalent in proceeding periods as the mass presence of Attic wares in Persian-period contexts. In the past, this phenomenon was often interpreted as pre-Hellenistic cultural exportation or even evidence of Greek colonies. Yet not a single site excavated in Phoenicia has yielded any architectural record or inscriptions that indicate any kind of Greek cult. Rather, the evidence indicates that economic, commercial, and political prosperity on the Levantine coast led to the incorporation of initially foreign materials into local customs.

Attic pottery is mostly found in domestic contexts alongside local pottery, where the imported material was integrated into domestic and cultic habits with local vessels. In some cases, Attic vessels were found in contexts with a ritual aspect probably related to cultic feasting and mourning rituals. These materials were adopted to serve the local cult through their physical inclusion in ceremonies and through the symbolic reinterpretation of the decoration on the vessels used in these ceremonies. This selective incorporation requires us to question why only a few themes from the vast repertoire of Attic iconographic images were imported to the Levant. The study of the mass importation and various uses of Attic pots can help us shed new light on the social and economic transformations of the Levantine coast societies during the Persian period.

Maintaining Distinction: Local Identity in the Remote Mani Peninsula, Greece, in the Classical, Byzantine, and Ottoman Periods

Rebecca M. Seifried, University of Illinois at Chicago, and *Chelsea A.M. Gardner*, University of British Columbia

This paper reviews textual and archaeological evidence of the sociopolitical identity forged in the Mani Peninsula, using the Classical, Byzantine, and Ottoman periods as case studies. As early as the Archaic period, Mani has been claimed by a series of succeeding political powers, but it has always existed on the periphery of their political and geographical reach. While often sheltered from events occurring throughout the territory of these various powers, their effects occasionally extended across the mountains into Mani, reverberating throughout the fabric of Maniate life.

In the Classical period, the settlements in Mani consisted of Spartan *perioikic poleis*, which were located firmly within the territory of classical Lakonike. However, the distribution of identified classical settlements in the Mani—and their material culture—suggests that the *perioikoi* were never ruled by the central Spartan power. Later, the Byzantine period saw a surge in the construction of monasteries and churches, which frequently incorporated fragments of classical constructions. This indicates a primarily religious alignment with the empire and a simultaneous connection with the past landscape. Ottoman-period architectural evidence of fortresses and *kalderimia* (cobble roads) gives insight into the limited extent of Ottoman influence in the region, and new research on bureaucratic tax registers provides additional information about the status and religion of the local residents. Together with historical accounts, these sources demonstrate that Maniates actively resisted assimilating elements of Turkish culture.

The goal of this paper is to clarify the relationship between Mani's political and geographical remoteness and the identities that were forged and maintained within its borders. Through this diachronic perspective, we elucidate the features that are consistent within Maniate identity from the Classical to Ottoman periods, and we conclude that the area is characterized by a purposeful differentiation. From within, distinct identities were enforced through active resistance and the use of different stylistic elements in material culture. From without, their portrayal in travelers' descriptions and bureaucratic records hardened the social boundaries that separated the region from the mainland. Mani's status as a remote territory affected the region in different ways at different times, but it also enabled residents to maintain a distinct identity, regardless of the larger processes taking place outside its borders.

Identifying Academic Borderlands in Ancient Anatolia

Emily S. Wilson, The University of Chicago

The historical perception of Turkey as a bridge spanning the cultures of the Near East and the Aegean has necessarily informed historical approaches to the archaeology of western Anatolia. This area is considered both a borderland and a frontier zone where disparate people from a number of ethnic backgrounds interacted. Traditional approaches to this "liminal territory" are ideologically charged, largely

concerned with identifying a Greek presence by typifying and separating out what is “Greek” from the “eastern” presence, whether native Anatolian or Near Eastern. This paper charts how this problematic approach arose from a historically strained relationship between Greece and Turkey, formalized in the Greek-Turkish War and the Exchange of Populations in the early 1920s. This divide has also been encouraged by 19th- and 20th-century western European thought, which prized and elevated the classical Greek culture over other cultures native to the eastern Mediterranean basin, and sharpened in current fractures within the categorization of academic departments in today’s universities. The assumption that the “Greekness” of an object, architectural remain, or literary fragment can be tracked, typified, and quantified should be laid aside. Rather, this monolithic Hellenic index that modern scholarship tends to identify is a complex and dynamic entity in the shifting landscape of ancient western Anatolia.

This paper then uses the Granicus River Valley Survey as a test case. This survey of the settlements and burial practices in Aeolis, a notional “Greek” area of western Anatolia, shows a complex and varied pattern of material culture. A reexamination of this area’s tumuli, sarcophagi, and pottery suggests that the classification of material as “Greek” or “non-Greek” may not be a particularly useful or helpful means of categorization.

SESSION 1E: WORKSHOP

Joint NEAIG/ASOR Session: Politics and Archaeology in the Middle East. New Paradigms of Cooperation

MODERATORS: *Andrea U. De Giorgi*, Florida State University, and *Elif Denel*, ARIT

Workshop Overview Statement

Volatility has recently grown to define not only political realities in the Middle East but also changing attitudes toward cultural heritage. In such countries as Syria, Egypt, Afghanistan, and Libya, overwhelming levels of instability have already resulted in alarming levels of damage and destruction. Political dynamics in all countries of the Middle East greatly affect attitudes toward cultural heritage, as the ways in which remains of ancient cultures are viewed play an integral role in notions of national identity. Legal frameworks aim at maintaining permanent bearings on the protection and the management of cultural heritage. As such, attitudes toward cultural heritage stand out as essential to political strategies in defining and redefining identity. In such politically dynamic environments, both foreign and local archaeologists strive to align their research perspectives with the recurrently redefined procedures and the expectations of governments, in addition to responding to local cultural and social dynamics of the regions in which they carry out fieldwork. These efforts are made manifest in archaeological fieldwork, including surveys and excavations, as well as in conservation and restoration projects and museum studies. This session aims at generating informative discourse among specialists and researchers working in different countries. It further aspires to create a constructive platform for effectively responding to nation-

specific needs and requirements within an internationally suitable framework in the ever-changing political environments of distinct nations.

PANELISTS: *Stephen Batiuk*, University of Toronto, *Scott Branting*, University of Chicago, *Michael Danti*, Boston University, *Susan Kane*, Oberlin College, *Andrew Vaughn*, ASOR, and *Djalaliddin Mirzaev*, Termez Archaeological Museum

SESSION 1F: Colloquium

BLAH! How To Do and Not Do Archaeological Science: A Colloquium in Honor of T. Douglas Price

ORGANIZERS: *Michael L. Galaty*, Mississippi State University, and *Jonathan A. Haws*, University of Louisville

Colloquium Overview Statement

This colloquium is offered in honor of T. Douglas Price, winner of the 2015 Pomerance Award for Scientific Contributions to Archaeology. During a career spanning almost four decades, Price has had an enormous influence on the field of archaeological science, including a strong and lasting impact on several important theoretical debates. He pioneered several methods necessary to the study and chemical characterization of archaeological bone, isotopic analysis in particular. His research has revolutionized our understanding of the European Mesolithic, the transition to agriculture, and human migration throughout the world.

In a series of papers based on regional surveys and excavations, Price demonstrated that the northern European Mesolithic was not a “dark” transitional age but rather was characterized by technological sophistication and revolutionary social behaviors. Mesolithic hunter-collectors actively resisted, sometimes violently, the first farmers in northern Europe, who appeared to have migrated into the region. To test this hypothesis, Price developed new isotopic methods for tracking human movement through bone chemistry. Since then, and in a series of landmark papers, he and his colleagues and students have applied these methods, with greater and greater precision, to questions of migration and diffusion throughout the world: in Europe, the Balkans, Iceland, Mexico, the Andes, the American Southwest, and, most recently, China.

Price’s influence in archaeology looms large and is felt on a global scale, through his own work and that of those he taught and mentored. As Weinstein Professor of European Archaeology and director of the Laboratory for Archaeological Chemistry at the University of Wisconsin–Madison, he instructed thousands of undergraduate and graduate students. Before retiring in 2009, he advised no fewer than 21 Ph.D. dissertations, which spanned the globe, many of them in archaeological science. In this way he has had a secondary impact on the practice of science in archaeology by training a whole generation of archaeological scientists.

The participants in this session and the organizers are all former students of Price who have found permanent jobs in academia conducting archaeological-scientific research. We will address a range of archaeological-scientific topics, pre-

senting case studies from throughout the world, employing results from remote sensing, regional survey, and the isotopic analysis of bone. In doing so, we hope to paint a broad portrait of archaeological science in the United States today and to honor our friend and mentor, T. Douglas Price.

DISCUSSANT: *T. Douglas Price*, University of Wisconsin–Madison

Applications in Landscape Analysis and Cultural Resource Management for Hyperspectral Satellite Imagery

William D. Middleton, Rochester Institute of Technology

Hyperspectral satellite imagery (HSI) from the Hyperion Imaging Spectrometer aboard the Earth Observing-1 Satellite provides abundant spectral reflectance data over large areas. These data lend themselves to a wide variety of applications in the study of contemporary landscapes, ranging from the analysis of landscape diversity, the classification of reflectance spectra into archaeologically and biologically meaningful taxa, and the extraction of abundance spectra for the identification of specific materials to the calculation of spectral indices for the measurement of material properties. Over the past several years, we have been using HSI as part of an interdisciplinary project that also includes geoarchaeology, paleobotany, isotope geochemistry, ecology, and archaeology in the study of the ecology of complex societies in prehispanic Oaxaca, Mexico. Throughout the prehispanic past, human behavior has both shaped and been shaped by the local environment. We present here two of the applications of HSI that we have developed as part of this project: the measurement of the potential agricultural productivity of the prehispanic landscape and the assessment of the impact of urban sprawl on cultural resources.

The Central Valleys of Oaxaca have a pronounced wet-season/dry-season cycle in which most of the annual rainfall of 700 mm falls between May and September. As a result, most of the arable land away from the river floodplains can be cultivated only during the wet season. Using the normalized difference water index (NDWI), which measures water in plant tissue, we can compare the dry season, during which there is sufficient water to support agriculture only along the river floodplains, and the wet season, when large areas of piedmont can support agriculture. The NDWI allows us to calculate the actual area over which agriculture can be supported throughout the year and from that estimate past potential agricultural productivity.

A full-coverage regional survey identified more than 3,000 prehispanic archaeological sites in the Central Valleys of Oaxaca. In the three decades since the survey, the population of the Central Valleys and the city of Oaxaca in particular has skyrocketed, and urban and industrial sprawl has affected many archaeological sites. Using an ACE target detection algorithm, we are able to identify and measure areas of human habitation and construction in the contemporary landscape. We can then compare these images to digitized versions of the original survey air photographs, identify sites that have been affected by urban sprawl, and calculate the extent of the damage to cultural resources.

Finding Invisible People: Last Ditch Strategies for Hidden Landscapes

T.L. Thurston, University at Buffalo, State University of New York

The “archaeological survey” has been an established institution for more than a century, at first consisting of the mapping of “known” archaeological sites on a regional map, sometimes combined with walking roadside transects in search of surface materials. In the middle of the 20th century, the systematic pedestrian surface survey was instituted, which consisted of choosing survey blocks through a random sample or selecting a random sampling pattern over a region, then field-walking and collecting in a methodical manner.

In the late 20th century, with the advent of theoretical perspectives dealing with landscape, taskscape, and sensory notions such as viewscape and soundscape, many archaeologists adopted the suggestion that “full-coverage” survey of non-random areas was preferable, if at all possible to achieve. Today, many options also exist for nonintrusive and remote sensing in archaeological prospection. The evolution of the archaeological survey has thus been both theoretical and methodological.

Taking its title from a recent study bemoaning the nearly complete invisibility of a subject population, this paper describes a suite of chemical and geophysical methods used on difficult landscapes that form the primary focus of the author’s research. These include geochemical prospection, airborne hyperspectral imaging analysis, interferometric synthetic aperture radiometry (IFSAR), LIDAR, and GIS-based integration of georeferenced historic maps with the results of scientific methods.

The layering of traditional and newer methods yields results not necessarily achievable through any single technique and substantially aids in site prospection and landscape interpretation in contexts where little or none of the visibility needed for traditional survey is found. The theoretical approaches and research questions that form the basis of the projects themselves are also addressed. “Difficult” landscape contexts—barren or marginal uplands or wooded scrub grasslands—are explicitly studied to clarify sequences of encapsulation, surveillance, resistance, and violent local-central conflicts within state societies. Such topics directly dictate a detailed understanding of the concealed landscape, its hidden inhabitants, and the livelihood affordances from which their cultural repertoire is chosen.

Is the Grass Greener? Evaluating Shifting Herding Strategies and Land use at Neolithic-Chalcolithic Köşk Höyük (Central Turkey) Using $^{87}\text{Sr}/^{86}\text{Sr}$

David C. Meiggs, Rochester Institute of Technology

Measurement of strontium isotope ratios ($^{87}\text{Sr}/^{86}\text{Sr}$) in skeletal remains revolutionized archaeology by offering an empirical proxy to address questions of geographic origins in the past. T. Douglas Price was a pioneer applying this technique, yet his legacy may be felt more from his persistent efforts to ground such analytical methods in a framework capable of addressing archaeological questions with cogent and meaningful interpretations. Through his research, stewardship, and enthusiastic promotion of archaeological chemistry, he significantly contributed to

creating a new, vital, and dynamic branch of archaeological inquiry. This paper is humbly offered in honor of his contributions to the field and in gratitude for his mentorship.

The application of regional “isoscares” derived from modern samples to evaluate archaeological data is of increasing interest. Here, we use an “isoscape” with isotopic data from archaeological fauna to reconstruct prehistoric land-use patterns. The Late Neolithic to Chalcolithic site of Köşk Höyük (6200–4900 cal B.C.E.) in central Anatolia attests to significant changes, the organization of domestic space and localization of material culture. The organic development of buildings during its early occupation contrasts with the planned layout and standardized interiors later. These changes are accompanied by significant shifts in other arenas, including sheep/goat culling practices and the exploitation of wild fauna. Several lines of evidence suggest domestic groups became increasingly autonomous throughout the Anatolian Neolithic. The resulting increases in social differentiation are anticipated to change how access to grazing areas was regulated. To investigate this hypothesis, we aimed to identify specific grazing areas used by inhabitants at Köşk and how these changed through time. We collected a web of geographically spaced samples to evaluate bioavailable strontium reflecting regional geological and edaphic characteristics. Then we produced an $^{87}\text{Sr}/^{86}\text{Sr}$ “isoscape” around the site using GIS software. $^{87}\text{Sr}/^{86}\text{Sr}$ in sequential samples of tooth enamel from domestic ovicaprines and wild equids at Köşk shows low individual variability, suggesting limited seasonal mobility in either group. By mapping the enamel values onto our “isoscape,” we evaluate the seasonal geographic distribution of grazing areas for domestic livestock as well as the location of exploited wild equid herd communities. Patterns in these results will be used to weigh models of shifting social relations at Köşk Höyük that regulated labor scheduling and rights of access to grazing areas. Finally, we consider the methodological opportunities and limitations of using “isoscares” as referents for bioavailable strontium in archaeology.

Lapa do Picareiro: A 50,000-Year Record of Human Occupation and Environmental Change in Central Portugal

Jonathan A. Haws, University of Louisville

Macroscale records from deep-sea and ice cores provide fine-grained evidence for paleoclimatic and paleoenvironmental change during the Late Pleistocene of western Iberia but only coarse-scale spatial evidence for reconstructing local and regional paleoenvironments in which prehistoric humans lived. In central Portugal, terrestrial records for this period are restricted to a few localities, primarily caves, because of intense landscape modification by humans since the introduction of agriculture. As sediment traps, limestone caves may provide valuable sources of information about human ecodynamics and paleoenvironments over long timescales. However, discontinuous sedimentation and bioturbation has limited the diachronic quality of cave records in Portugal. One cave, Lapa do Picareiro, has yielded a continuous, stratified sedimentary sequence with faunal remains that allows for MIS 3 and MIS 2 environmental reconstruction and a context for human occupation. We present data from ungulate, rabbit, micromammal, bird, and amphibian remains to understand the taphonomic formation of the assemblages from

Picareiro. We then link the archaeofaunal data sets with macroscale paleoclimatic and paleoenvironmental records to understand human responses to long-term environmental change in central Portugal.

The spatial distribution of lithic and bone artifacts suggests sporadic, short-term visits to the cave during most of the Early Magdalenian, Solutrean, Gravettian, and Middle Paleolithic. The ungulate, rabbit, micromammal, bird, and amphibian remains are used here to understand the taphonomic formation of the assemblages from Picareiro. Results suggest inputs by Neanderthals and anatomically modern humans, the Iberian lynx, and raptorial and scavenging birds. Humans and lynx were likely responsible for most of the large mammals and rabbits as well as some birds. Raptorial birds likely preyed on the rodents, especially voles, amphibians, and small birds. Vultures and carrion crows are present and also likely contributed many mammal remains. The fauna therefore derive from multiple sources and provide a balanced paleoenvironmental record.

Mapping Maya Migration Networks During the Classic Period

Carolyn Freiwald, University of Mississippi

The Maya traveled and traded widely, as shown by the foreign styles, symbols, and goods that archaeologists find at nearly every site during the Classic period (250–900 C.E.). The presence of foreign goods, however, is not the same as the presence of foreign people and leaves questions about population movement unanswered. T. Douglas Price and other scholars have successfully used biogeochemistry to identify migration in Mesoamerica at sites extending from the Valley of Mexico to the southeastern extent of the Maya world at Copán. This presentation summarizes what we know about Maya population movement during the Classic period. An individual's bones and teeth keep a record of diet, health, and even where he or she was born, and researchers can "read" this life history by measuring the isotope ratios of strontium, oxygen, carbon, and other elements. There are now hundreds of published strontium and oxygen isotope values, and individuals with foreign origins have been identified at nearly every Maya center studied, including Tikal, Copán, and Caracol. In fact, more than 25% of the burial population at many sites had a nonlocal origin, including men, women, and children, both nobility and commoners, in rural and urban centers. Maya migration networks were strongest at the regional level, despite the presence of ceramics and obsidian from hundreds of miles away, and most population movement occurred over short distances, even at great cities such as Tikal. Maya social structure clearly accommodated population movement, but burial patterns suggest that some individuals retained a foreign identity throughout their lives. I explore some of the broader implications of migration patterns to better understand what it meant to be a migrant 1,300 years ago and why people may have moved.

Stable Strontium Isotope Analysis in Archaeology: New Developments in Paleodiet and Paleomobility

Kelly J. Knudson, Arizona State University

For decades, archaeologists have used a number of biogeochemical methods, such as carbon and nitrogen isotope analysis, to investigate paleodiet. More recently, T. Douglas Price has been instrumental in developing the use of isotopic indicators of paleomobility, including radiogenic strontium isotopes ($^{87}\text{Sr}/^{86}\text{Sr}$). However, archaeologists now have a way to generate paleodietary and paleomobility data in the same enamel or bone sample using different isotopes of strontium. More specifically, the fractionation of stable isotopes of strontium has been used to examine paleodiet through identifying the trophic level of the strontium sources in the diet. Stable strontium isotope compositions (reported as $\delta^{88}/^{86}\text{Sr}$) vary in a mass-dependent manner; advances in instrumentation now enable the measurement of these data. Importantly, this technique now allows archaeologists to generate paleodietary ($\delta^{88}/^{86}\text{Sr}$) and paleomobility ($^{87}\text{Sr}/^{86}\text{Sr}$) data from the same sample, which minimizes destructive analyses and allows archaeologists to directly examine the strontium sources in the diet, which is important for paleomobility studies that rely on radiogenic strontium isotope analysis.

Mass-dependent strontium isotope data from tooth enamel and bone from individuals buried during the Late Intermediate Period (ca. 1000–1300 C.E.) in the large cemeteries of Chiribaya Alta, Chiribaya Baja, San Gerónimo, and El Yaral in the Ilo and Moquegua Valleys of southern Peru demonstrate the utility of measurements of strontium isotope fractionation as a new tool for archaeological investigation of paleodiet. When only adult bone is analyzed, eliminating the possibility that breast milk consumed before or during the weaning process contributed to low stable strontium values, archaeological human bone stable strontium isotope values are quite variable. For example, the lowest mean values are present at Chiribaya Alta (Chiribaya Alta mean bone $\delta^{88}/^{86}\text{Sr} = -0.35 \pm 0.20\%$ [$n=12, 1\sigma$]), which implies that many individuals buried there consumed strontium from higher trophic levels compared with individuals from Chiribaya Baja, San Gerónimo, and El Yaral. Higher mean values are present at San Gerónimo and El Yaral (San Gerónimo mean bone $\delta^{88}/^{86}\text{Sr} = -0.10 \pm 0.19\%$ [$n=3, 1\sigma$] and El Yaral mean bone $\delta^{88}/^{86}\text{Sr} = -0.05 \pm 0.11\%$ [$n=4, 1\sigma$]). Since high marine trophic levels exhibit higher stable strontium isotope values than high terrestrial trophic levels, the high stable strontium isotope values at San Gerónimo and El Yaral may indicate the consumption of strontium from marine resources.

SESSION 1G: Colloquium
Moving People, Moving Goods, Moving Ahead: Reconsidering Factors Affecting Sociocultural Developments from the Mesolithic Through the Iron Age in Eastern Europe

ORGANIZERS: *Danielle J. Riebe*, University of Illinois at Chicago, and *Sylvia Deskaj*, Michigan State University

Colloquium Overview Statement

Even today, 58 years after his death, V. Gordon Childe is often cited when it comes to discussions of sociocultural evolution in prehistoric Europe. His works of synthesis are still influential, in particular in their discussions of eastern Europe. Childe significantly advanced the field of archaeology by challenging established concepts of culture and chronology and by pushing for a broad, regional scale of research. While his early work focused on identifying external sources of culture change, specifically as a result of diffusion or migration, Childe's later interests in economic factors have influenced the ways in which subsequent archaeologists have approached anthropological discussions regarding sociocultural stasis and change. However, since Childe's time, the number of excavations and regional surveys in eastern Europe has increased exponentially, allowing his theories and interpretations to be refined. Much of this new work has generated results that oppose the traditional cultural-historical frameworks for prehistoric eastern Europe, which date back to the time of Childe. Static, one-dimensional explanations for sociocultural change, such as those based on migration or environmental change alone, along with unidirectional notions of evolution and diffusion, have been replaced with more dynamic, multilayered interpretations that take into account multiple trajectories of change. Nevertheless, despite the wealth of new data, archaeologists working in eastern Europe have continued the tradition of using culture types as their unit of measurement, along with broad-brushed interpretations of the prehistoric record, to explain various sociocultural developments within the larger region. Papers in this session, including "First Farmers in the Eastern Adriatic: Villages, Landscapes, and the Transition to Agriculture in Central Dalmatia," "Intersettlement Interaction and Cultural Change in Early Neolithic Communities in Albania," "Defining Boundaries, Explaining Change: Social Developments from the Late Neolithic to the Early Copper Age on the Great Hungarian Plain," and "Biological Anthropology, Nationalism, and Archaeological Interpretation in Albania: The Search for an Illyrian Past," reexamine various potential causes for sociocultural changes throughout prehistoric eastern Europe and operate at multiple levels of analysis to offer a more nuanced interpretation of cultural developments in the region.

DISCUSSANTS: *Barbara Voytek*, University of California, Berkeley, and *Lorenc Bejko*, University of Tirana

Intersettlement Interaction and Cultural Change in Early Neolithic Communities in Albania

Eugen Ruzi, University at Buffalo, the State University of New York

The spread of agricultural communities in southeast Europe occurred by the migration of farming groups coming from Anatolia. Based on pottery decoration and the presence/absence of cultural traits, this migration has been divided into two different routes—a coastal “Impressed Pottery Complex” and an inland “Painted Ware Complex.” The former is associated with maritime colonization (south Anatolia, Crete, Adriatic) and the latter with settlements in river valleys (central Anatolia, Thessaly, Morava and Danube Valleys). Early Neolithic sites from Albania display a mixture of cultural traits from both complexes, as exemplified especially by the presence of impressed pottery in all “painted ware” assemblages. The goal of this paper is to clarify the extent and character of social interaction among the farming communities in Albania during the Early Neolithic (ca. 6500–5800 cal B.C.E.). The processes of intersettlement interaction were evaluated through the identification of the distribution and evolutionary rates of Early Neolithic ceramic characteristics. The research focuses on the cultural transmission of decorative and technological attributes of impressed pottery. Frequency and occurrence series of pottery decoration were used to construct a chronological framework, which allowed for a diachronic study of cultural and technological change. The data sets were generated through the classification of impressed pottery decoration types and other ceramic attributes, which involved the visual inspection of Early Neolithic pottery assemblages hosted in the National Archaeological Museum in Tirana. From these assemblages, a sample was selected for compositional analyses to examine how pottery technology changed through space and time. The data set collected through visual and archaeometric means was analyzed together with the chronological framework to detect spatio-temporal trends and innovation rates.

First Farmers in the Eastern Adriatic: Villages, Landscapes, and the Transition to Agriculture in Central Dalmatia

Sarah McClure, The Pennsylvania State University, *Emil Podrug*, Šibenik City Museum, and *Ana Solter*, Archaeological Museum Zagreb

The archaeological record of the eastern Adriatic is significant for understanding the spread of food production into Europe and characterizing the timing, tempo, and nature of its underlying processes. Current research on the Neolithic in central Dalmatia is addressing questions of the environmental and social effects of early farming societies, the underlying mechanisms of regionalization in the Middle Neolithic, and the ecological impacts of farming strategies. In this paper, we present new evidence from recent excavations at the Neolithic villages of Rašinovac (Impresso) and Krivače (Danilo) in central Dalmatia and compare them with other Neolithic sites in the region. Our work illustrates the complexities of land use, village interaction, and the ecological impacts of these early farming populations and highlights their significance for understanding the mechanisms of the spread of farming in Europe.

Defining Boundaries, Explaining Change: Social Developments from the Late Neolithic to the Early Copper Age on the Great Hungarian Plain

Danielle J. Riebe, University of Illinois at Chicago

Dramatic cultural developments occurred from the Late Neolithic to the Early Copper Age on the Great Hungarian Plain. Whereas multiple archaeologically defined groups with distinct cultural characteristics inhabited the plain during the Late Neolithic, by the Early Copper Age widespread cultural homogeneity defined the region. This change has been described as the result of a shift in various socioeconomic practices that affected social boundaries, in which boundaries went from strictly enforced to more permeable. However, investigations into social boundaries in the Neolithic have largely relied on the descriptive stylistic analysis of ceramics recovered predominantly from tell excavations. Specifically, evidence for distinct Late Neolithic groups is supported in part by the different ceramic decorations, including painted and incised wares. However, by defining boundaries based on the distribution of stylistic materials, concepts of trade, interaction, diffusion, and exchange are dismissed. Through the use of laser ablation-inductively coupled plasma-mass spectrometry (LA-ICP-MS), this paper explores both the compositional and stylistic evidence for trade and exchange on the plain during the Late Neolithic in an attempt to assess the degree to which social boundaries were actively maintained in the Late Neolithic and the extent to which these boundaries changed during the Early Copper Age.

Biological Anthropology, Nationalism, and Archaeological Interpretation in Albania: The Search for an Illyrian Past

Sylvia Deskaj, Michigan State University

Culture history has had a profound impact on regional archaeology in the Balkans, particularly in Albania, where, historically, efforts have been made to force biological and cultural similarity while ignoring difference. The homogenization of the archaeological record in Albania can be traced through three historical trends: (1) the practice of a racialized biological anthropology; (2) an overreliance on tumulus excavation; and (3) a lack of modern, comprehensive mortuary analysis. Victorian travelers and scientists thought Albania was inhabited by modern-day savages, tribal throwbacks to the prehistoric age. Consequently, in the early 20th century many foreign physical anthropologists, including Carleton Coon, went to Albania to measure the heads of living people, employing the racialized biological-anthropological frameworks common at that time. They sought to demonstrate that Albanians were descended from prehistoric Illyrians and constituted a distinct race. Slightly later, foreign and Albanian archaeologists turned to the country's many mound (tumulus) burials for further evidence of an identifiable "Illyrian" ethnos. A discussion of the methods whereby Albanian tumuli were excavated and dated sheds light on the various conclusions and archaeological interpretations drawn from the results by foreign and Albanian archaeologists, which fed into various nationalistic mythologies. Lastly, while the culture-historical approach has favored the excavation of skeletons and grave goods, very little attention has been given to the social processes and overall cultural contexts

that produced tumulus burial throughout Albania and by extension the rest of the Balkans. The homogenization of biology, mortuary culture, and social processes generated by culture-historical approaches in Albania have been woven into a ongoing desire to link contemporary Albanians to their Iron Age counterparts, the Illyrians, making it difficult or impossible to compare Albanian archaeology with that of the rest of Europe.

SESSION 1H: WORKSHOP

Emergency Measures for Archaeological Sites and Museum Collections in Times of Crisis

MODERATORS: *Laetitia La Follette*, University of Massachusetts Amherst, and *Kenneth Lapatin*, Museums and Exhibitions Committee

Workshop Overview Statement

The devastation wreaked on New Orleans by Hurricane Katrina a decade ago had a profound effect on the city's museum collections and historic sites, but other disasters before and since, both natural and man-made, have damaged and will continue to threaten cultural heritage around the world. This workshop, cosponsored by two AIA committees with related interests, seeks to examine past practices and explore potential future responses to such extreme (but not necessarily unpredictable) events as hurricanes, tornadoes, floods, fires, and earthquakes, not to mention acts of war and terror. What steps can museum and other professionals take to safeguard collections and sites in advance of such incidents, and how might we best respond in their aftermath? What resources for assistance, both public and private, are available to us before, during, and after such crises? What lessons, positive as well as negative, have we learned from recent events, and what recommendations might be made for better responses in the future?

This topic of this workshop was first proposed at the 2014 AIA workshop on the Second Protocol of the Hague Convention. AIA members in the audience expressed an interest in more information on national resources and protocols for emergency evacuation and treatment of museum collections and archaeological sites in the United States, as opposed to those for international ones called for under the Second Protocol and such organizations as the International Committee of the Blue Shield.

PANELISTS: *Susan Taylor*, New Orleans Museum of Art, *Jerry Podany*, The J. Paul Getty Museum, *Rachel Watson*, Louisiana Division of Archaeology, *Michael (Sonny) Trimble*, U.S. Army Corps of Engineers' Center of Expertise for Curation and Management of Archaeological Collections, *Dawn Deano Hammatt*, Louisiana State Museum, and *Corine Wegener*, Smithsonian Institution

SESSION 11**Reports from The Field: Greece**

CHAIR: *Thomas F. Tartaron*, University of Pennsylvania

The Western Argolid Regional Project: Results of the 2014 Season

Dimitri Nakassis, University of Toronto, *Sarah James*, University of Colorado Boulder, *Scott Gallimore*, Wilfrid Laurier University, and *William Caraher*, University of North Dakota

The summer of 2014 was the first of three planned field seasons for the Western Argolid Regional Project. This interdisciplinary project, carried out under the auspices of the Canadian Institute in Greece, is centered on an intensive diachronic archaeological survey of the upper valleys of the Inachos River to the north and west of Argos. Our survey seeks to investigate the nature of the relationships between the communities in and around the western Argolid. This is a significant issue, since although Argos was a major center in virtually all periods of Greek history, its regional context and its connection to other cities in southern Greece is poorly understood, in part because of the paucity of research in the western Argolid, especially in comparison with the eastern half of the prefecture.

In 2014, the survey worked in the region of ancient Orneai (modern Lyrkeia), an independent polis destroyed in the late fifth century B.C.E. by Argos (Thuc. 6.7.2; Diod. Sic. 12.81.4–5), through which the Klimax, a major road connecting Argos and Mantinea, passed (Paus. 2.25.4–6, 8.6.4). The region thus lay at the edge of Argive influence and at the intersections of several overland corridors and roads that connected the communities of southern Greece.

In the course of a six-week field season, the project surveyed an area of 5.5 km² and investigated seven major sites in addition to numerous minor scatters, all ranging in date from the Early Bronze Age to the Ottoman and Venetian periods. The survey was highly intensive in its spatial control and in its collection strategy: individual survey units, defined primarily by modern agricultural fields, were very small (on average, 0.21 ha), and field walkers, spaced at 10 m intervals, collected all artifacts other than tile, which was sampled.

Our preliminary analysis of the 2014 season suggests that there were two major shifts in the settlement history of the valley. First, there was a massive increase in activity during the Classical and Hellenistic periods, with settlement focused on low, defensible hills. These low limestone outcrops also seem to have been favored loci for preclassical activity. This pattern shifted dramatically in the Roman period: Roman and post-Roman settlement is characterized by nucleated habitation on the lower slopes on the north side of the valley, less than half a kilometer from the Inachos River.

The Urban Plan of Mantinea in the Peloponnese: An Integrated Geophysical and Satellite Remote Sensing Fieldwork Campaign

Jamieson C. Donati, Apostolos Sarris, Carmen Cuenca-García, Tuna Kalaycı, Nikos Papadopoulos, and François-Xavier Simon, Institute for Mediterranean Studies (FORTH)

This paper presents the results from the first campaign of remote-sensing fieldwork at Mantinea in the Peloponnese. Geophysical prospection, using new generations of multicomponent equipment, has been used in tandem with satellite-image processing to reveal an extensive network of buried orthogonal streets, sections of city blocks, and residential and public buildings. This new and valuable information reveals much about the wider urban dynamics of Mantinea and shows that the city was a planned settlement. Rather than conform to a strict Hippodamian system, Mantinea appears to have experienced different phases of city planning, possibly as a reaction to sociopolitical upheavals during the fourth and third centuries B.C.E., when the city was twice destroyed and rebuilt. The discovery of city blocks of different dimensions and irregularities in the positioning of roads are indicative of a multilayered urban environment. On a broader scale, the new city plan of Mantinea has important implications for the history of Greek town planning in the Peloponnese during the second half of the first millennium B.C.E. While the rational organization of cities is a defining feature of Greek urban culture, especially in colonial foundations, few examples are known from the Peloponnese. Mantinea illustrates that the organization of space and conceptual approaches in cohabitation are characteristics of Greek urban culture in the Peloponnese as much as they are elsewhere in the ancient Mediterranean.

The Mazi Archaeological Project: Regional Survey on the Borders of Attica

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The Mazi Archaeological Project (MAP)—a collaboration between the Third Ephorate of Prehistoric and Classical Antiquities and the Swiss School of Archaeology in Greece—undertook its initial season of fieldwork in 2014 as a multidisciplinary regional archaeological survey of the Mazi Plain in northwest Attica, Greece. This fertile and well-watered valley is bounded by the Kithairon and Pateras mountain ranges and historically has been part of the borderlands between Attica and Boeotia. Situated on the main route between Eleusis and Thebes, the valley also occupies a critical crossroads on regional and interregional land routes. From the Classical period onward, the valley was occupied by two important settlements: to the east, the Attic deme of Oinoe; to the west, Eleutherai. Beyond these well-known landmarks, however, little work has been done in tracing the diachronic history of the landscape. The Mazi Archaeological Project therefore aims to address long-term questions of human occupation, human-environmental interaction, territoriality, regionality, and movement in periods ranging from prehistory to the present.

Our initial season of archaeological fieldwork (the primary focus of this paper) followed a detailed geomorphological study, the results of which provide crucial

context for our study of the landscape. The archaeological survey combined extensive exploration and intensive field walking methods with a variety of digital initiatives in data recording, generation, and analysis. With a relatively small team (10–12 people) and a short field season (four weeks), the side-by-side survey covered some 2 km² of territory in 370 survey units, with finds ranging in date from the Neolithic to the present; extensive survey teams documented more than 100 archaeological features with equally wide date ranges. We also began a program of multispectral satellite imagery (WorldView-2) analysis and ground truthing—used specifically in concert with the extensive survey—along with a variety of GIS-based studies. Finally, we conducted a program of aerial photogrammetry, total-station survey, and stone-by-stone drawing to produce the first detailed plan of ancient Oinoe. Field recording was streamlined through the use of mobile systems to create a robust and flexible database, which provided both challenges and (more importantly) new avenues in data collection and management for such multidisciplinary fieldwork. In this paper, we provide a summary of the background, methods, and initial results of the MAP.

Molyvoti, Thrace, Archaeological Project, 2014

Nathan T. Arrington, Princeton University, and *Thomas F. Tartaron*, University of Pennsylvania

The Molyvoti, Thrace, Archaeological Project (MTAP) investigates the identity, chronology, form, and function of the site on the north Aegean coast inconclusively designated ancient Stryme. In 2014, excavation in 20 5 x 5 m squares expanded the areas investigated in 2013, and an intensive surface survey of the city and its immediate hinterland began. The project's second season provided new information on the scale, chronology, and changing function of the site in its regional context, offering unique opportunities for comparing and contrasting excavation and survey data.

Excavation fully uncovered a classical crossroad. Digging below the road surfaces provided good evidence for the date of the foundation of the Hippodamean grid plan and also revealed a substantial earlier structure. Continued excavation of a sizeable (18.5 x 18.5 m) classical house uncovered several more rooms with abandonment debris, and digging below the floor in one room provided ceramic evidence for the preclassical phase of the site. In 2013, we discovered that the house was reused in the Late Roman era, and work in 2014 revealed more architectural evidence for this period. It is now clear that there was a fourth- to early fifth-century C.E. phase and a later fifth- to first half of sixth-century C.E. phase. The second phase is associated with the large circular feature first revealed in 2013 and completely excavated in 2014, whose function remains enigmatic.

The surface survey investigated 1,040 20 x 20 m squares in "urban survey" mode. The Classical to Late Classical period was overwhelmingly represented, and the preponderance of amphoras, particularly of north Aegean type, was striking. This material evidence supports the view that the city played an important role in a regional trading network and contrasts with the low number of domestic finds, such as loomweights. The precise economic activity of the settlement remains an

object of investigation; the many hopper mills found during survey suggest that grain production may have been intense.

Survey demonstrated that the Late Roman activity detected in excavation was geographically limited. However, it added a third Late Roman phase to the history of the settlement, identifying a mid sixth- to early seventh-century C.E. site situated on a sheltered, lagoonal harbor, possibly a prosperous agricultural estate. Significant quantities of imported material suggest that the inhabitants participated in maritime networks positioned on a northern Aegean route between the great centers of Constantinople and Thessaloniki.

The Olynthos Project: A Report on the Fieldwork of 2014

Lisa Nevett, University of Michigan, *Zosia Archibald*, University of Liverpool, *Bettina Tsingarida*, 16th Ephoreia of Prehistoric and Classical Antiquities, *David Stone*, University of Michigan, and *Tim Horsley*, Northern Illinois University

This paper presents preliminary results from the first year of a new, five-year project at Olynthos, undertaken as a *synergasia* between the 16th Ephorate of Prehistoric and Classical Antiquities and the British School at Athens, in collaboration with the universities of Liverpool and Michigan and with the permission of the Greek Ministry of Culture. The project builds on previous studies of households at Olynthos and in other parts of the ancient Greek world. Our aim is to create a uniquely detailed picture of classical households as social and economic units by looking at the range of activities present within individual houses and at the organization of those activities through space and time. Households are also contextualized socially and economically within a new plan of the entire city. The research design involves excavation of two complete houses, one on each of the city's two hills, together with magnetic, resistance, and field survey of the whole urban area (some 50 ha). Geophysical survey is both an aid for selecting areas for excavation and an independent method for investigating the layout of the city as a whole and its extent on the eastern side of the North Hill, where legacy data show that settlement existed but do not reveal its full extent. Surface survey enables exploration of the chronological and functional differences across the city as a whole.

In 2014, 15 30 m squares in the northeastern sector were surveyed with both magnetic and resistance techniques. These data show clear anomalies suggestive of a continuation of the street grid over most of this area, although a more dispersed and irregular layout appears toward the northern end of the North Hill. Six test trenches were excavated in different sectors of the surveyed grid to investigate the relationship between the geophysical data and the archaeological remains while at the same time locating a well-preserved and deeply stratified house for further, in-depth investigation. These trenches revealed the foundations for a mudbrick fortification wall together with evidence for domestic occupation that occurred at different depths below topsoil in different trenches and in some places included at least two distinct architectural phases. Field survey to the east of the city revealed dense activity at higher elevations contemporary with the occupation of the city, along with scattered evidence for the use of these areas during other periods.

SESSION 1J: Colloquium**The Preservation of Organic Remains in the Aegean, Presented by the Malcolm H. Wiener Laboratory for Archaeological Science of the American School of Classical Studies at Athens**

ORGANIZERS: *W. Flint Dibble*, University of Cincinnati, *Daniel J. Fallu*, Boston University, and *Olivia A. Jones*, University of Groningen

Colloquium Overview Statement

Understanding the differential preservation of archaeological materials is an essential prerequisite to identifying cultural patterns within archaeological assemblages. The Mediterranean climate of the Aegean allows for the preservation of only specific types of organic remains (e.g., bone rather than uncharred botanical remains) or specific formation processes (e.g., depositional environment). As a comparative study of archaeological assemblages through space or time, the study of archaeology necessitates an understanding of biases in the archaeological record due to differential preservation. This colloquium presents Aegean case studies in which the preservation of organic remains—either beneficial or detrimental—is linked to their archaeological contexts to provide significant methodological or cultural conclusions.

The Aegean-based case studies in this colloquium include a wide variety of human, animal, and plant remains. The differences in composition and robusticity of plant and osteological materials can cause vastly different preservation profiles. Furthermore, the intentional burial of human remains vs. the haphazard discard of most plant and animal remains can create vastly different preservation profiles in the same locality. Since preservation is constrained by contextually specific depositional environments, geoarchaeology is an important tool for understanding and explaining the postdepositional processes that lead to differential preservation. The interdisciplinary nature of this colloquium aims to demonstrate that nuanced studies of differential preservation yield significant methodological and contextual results.

The papers within this colloquium answer five key questions: (1) How can a specialist identify differential preservation and, more importantly, use these results to better understand cultural activity? (2) What methods can be used to determine how basic archaeological quantifications are biased by preservation? (3) How can a researcher, whether a specialist or a scholar using published results, determine when it is fair to compare one assemblage to another? (4) Are there taphonomically significant relationships between the preservation of different types of organic and inorganic materials? and (5) How can geoarchaeology provide a greater understanding of organic and inorganic preservation?

Within archaeological science of the Aegean, there is a need for discussing and bringing to the foreground intrinsic issues of the preservation of organic remains. A more detailed understanding of differential organic preservation will lead to more appropriate comparative studies of assemblages and, more importantly, to-

ward greater insights into both natural and cultural formation processes within specific excavated contexts.

DISCUSSANTS: *Sherry C. Fox*, American School of Classical Studies at Athens, and *Panagiotis Karkanas*, American School of Classical Studies at Athens

So Many Samples, So Few Seeds: The Search for Plant Remains at Bronze Age Iklaina

Susan E. Allen, University of Cincinnati, and *China Shelton*, Framingham State University

Since 2008, we have been investigating botanical evidence for subsistence practices, economic organization, and environmental change at the Bronze Age site of Iklaina in the southwest Peloponnese. Archaeobotanical remains from Iklaina have been recovered with the use of a spatially intensive sampling strategy, the first of its kind to be applied to a Mycenaean administrative center. Iklaina is a noteworthy case study because of its monumental architecture, figural frescoes, and the presence of Linear B, which together indicate that Early Mycenaean Iklaina was a powerful center that only later came under the control of the Pylos palace administration. The systematic and intensive sampling and recovery strategies employed at Iklaina promote a high degree of spatial resolution. This allows the macrobotanical assemblage to provide insight not only into changes in subsistence and land use during the Mycenaean period but also into issues of taphonomy, preservation, and contextual integrity. While initial testing of soil samples at Iklaina revealed few remains, we demonstrate that intensive sampling can still produce significant results.

We have collected and processed 910 samples of up to approximately 40 liters. Of these, 711 have produced carbonized ancient plant materials that include crop and weed seeds, the remains of fruits and nuts, and wood charcoal. Recovered taxa include *Triticum monococcum*, *T. dicoccum*, *T. cf. aestivum*, *Hordeum vulgare*, *Lens culinaris*, *Vicia ervilia*, *Pisum sativum*, *Vitis vinifera*, *Olea europaea*, *Ficus carica*, *Quercus*, and *Linum usitatissimum*. However, despite high values for taxon ubiquity and diversity, the number of carbonized plant remains per liter of soil (density) is unexpectedly low, and it is only through the intensity of our sampling program that taphonomic processes affecting patterns of preservation are emerging.

In addition to generally poor preservation of ancient carbonized plant remains, our samples also include modern carbonized materials from the on-site burning of olive trimmings and adjacent surface vegetation. Careful documentation of the relative abundance and species of modern seed rain within our samples reveals a correlation between sample depth and level of disturbance. Analysis of the co-occurrence of different taxa in carbonized and uncarbonized forms enables us not only to differentiate between modern contaminants and ancient remains but also to track the likelihood of preservation integrity in various contexts. The broad correlation of a gradual decrease of contamination with increased depth indicates that excavation strategies that focus on horizontal exposure should, at minimum, combine this approach with deep soundings.

Dust to Dust and What Is Left? The Impact of Partial Preservation in the Calculation of the Number of Individuals from Commingled Assemblages

Efthymia Nikita, American School of Classical Studies at Athens

Many skeletal assemblages excavated in Aegean prehistoric contexts represent secondary and multiple burials with an extreme degree of fragmentation, commingling, and loss of specific or random elements. The standard practice during the osteological analysis of such material is to calculate the minimum number of individuals per assemblage. However, such an approach merely offers a baseline on which to compare the frequencies of extant elements and results in an underestimation of the actual number of individuals present in each context. For this reason, more modern methods focus on the calculation of the most likely number of individuals and the original number of individuals. Such methods take into consideration both the elements of each side of the body as well as the number of pairs that can be identified between bilateral elements. In addition, they can employ a single element—the most prevalent bone—or multiple elements simultaneously. They can also account for missing elements and produce more accurate estimates. However, even these methods are largely affected by the degree of preservation of the material and the extent to which pairs between elements can be accurately identified.

The current paper evaluates the performance of different estimators for the number of individuals in commingled assemblages under different preservation scenarios. For this purpose, artificial data sets of varying sample size (10 N 200) were created. In some of these data sets, all skeletal elements were assumed to exhibit homogenous preservation, while in others each element was given a different preservation coefficient so that more robust elements were better represented in the sample. In each sample, 0% to 90% of the values were classified as “missing.” Subsequently, estimators of the minimum, most likely, and original number of individuals were calculated for each data set. The performance of each type of estimator in respect to the original data sets of known sample size is discussed along with the impact of sample size, differential preservation of each element type, and missing values. This study has important implications for the understanding of the role of postdepositional processes in estimated paleodemographic parameters and demonstrates the significant impact that preservation biases may have on an osteological assemblage.

Fish Tails . . . and Their Heads? Differential Preservation vs. Preparation Methods of Fish at Aegean Prehistoric Sites

Tatiana Theodoropoulou, American School of Classical Studies at Athens

The consumption of marine resources is a key question to modern research dealing with subsistence strategies among Neolithic and Bronze Age communities in the prehistoric Aegean. The importance of these animals within these cultures has been assessed through various research tools, including zooarchaeology, organic residues and chemical analysis, human osteology, and iconography. Among these disciplines, zooarchaeological analysis offers a valuable record, essential not only to piecing together what sorts of marine foodstuffs were consumed but also

to understanding how these resources were processed and managed. The specific research design and detailed sampling protocol introduced in modern archaeological research in Greece has led to the recovery of an increasing number of extant marine remains, predominantly shells but also fish bones.

Despite a significantly larger “marine” data set available for the prehistoric Aegean, fish-bone assemblages from Aegean prehistoric sites still remain modest compared with shell or other animal remains. This can only somewhat be explained by partial sampling or size. It is true that fish bones are frequently too small to be recovered without the assistance of water sieving and are considered smaller and more fragile than other animal remains. However, the problem of underrepresented fish remains is also observed at sites where thorough flotation has been employed and other “fragile” remains, such as seeds, have been preserved. In other cases, extant fish remains are often biased toward postcranial anatomical elements—that is, fish vertebrae. These biases greatly restrict our ability to identify the presence and modalities of fish exploitation in prehistoric sites, including specific fish species, management of catches, and culinary choices.

This paper discusses problems in the preservation of fish remains and focuses on differential representation of cranial and postcranial fish elements from different sites. The issue of differential preservation is calibrated vs. the presence/absence of different fish body parts due to landings of catches, off-site/on-site management, possible preparation methods involving the removal of specific parts, or trade. This paper sets a number of parameters that may help us distinguish taphonomic agents vs. specific human actions that have led to the differential recovery of fish remains. It is only through such a comprehensive analysis that the available fish record can be rightly evaluated and the importance of fish among subsistence resources in Aegean prehistory set on a new basis.

Between a Rock and a Hard Place: Preservation Issues of Human Remains in a Mycenaean Tholos

Olivia A. Jones, University of Groningen, and *Daniel J. Fallu*, Boston University

The preservation patterns of human remains have often been a side note of bioarchaeological studies in Aegean mortuary research; however, assessment of the preservation can aid in the understanding of the original deposition and later taphonomic processes. The interpretation of the tomb as a whole is vital to understanding all processes in order to reconstruct anthropogenic vs. natural actions. The Mycenaean tholos tomb of Petroto in Achaea was used successively beginning in the Mycenaean period. This tholos-tomb skeletal assemblage is characterized by highly fragmented and poorly preserved human remains in every level except the top and final level. In this final level, a primary single burial with no grave goods was placed. The corbeled stone-built construction of the tomb paired with a stone-lined cist and covered with a large stone cover slab created an enclosed environment. The human remains were not covered with soil but left in the open, stone-lined void of the cist. The remains are not as highly fragmented as those in lower levels; however, they exhibit alternative preservation challenges due to the poor surface preservation and subsequent mineral deposits. This preservation of

the human remains is shown to be the result of the stone void of the cist, which created a cave-like environment.

This paper provides a case study of a unique burial environment in which mineralogical surface analysis reconstructs the processes that led to the leaching of, and subsequent mineral encrustation on, the human remains. A change in the hydrologic environment, likely due to the partial collapse of the tholos roof—resulted in the percolation of carbonate-rich water and the formation of a speleothem-like mineral coating on some skeletal elements. In addition to providing key information concerning the postdepositional tomb environment, the spatial patterning of mineral formations and zones of differing preservation may allow for the repositioning of the skeleton into its original position in order to answer questions concerning the state of articulation and mortuary treatment not addressed during excavation.

The Petroto tomb provides a unique case study of a tholos tomb in which the burial environment of the cist mocks a natural cave environment, thereby giving mineralogical evidence for reconstructing the original burial deposit. Exploring the postdepositional processes of the burial has resulted in a more holistic understanding of the state of the remains and has provided vital information for understanding the deposition and later processes of the primary cist burial from the Petroto tholos.

The Good, the Bad, and the Ugly at the Dark Age Ranch: Taphonomic Reinterpretations of Pastoralism at Nichoria, Messenia

W. Flint Dibble, University of Cincinnati, and *Daniel J. Fallu*, Boston University

The published increase of cattle in Dark Age Nichoria has been a key piece of evidence for scholarly models of a Greek Dark Age pastoral economy. A reanalysis of the entire Nichoria Late Bronze Age and Dark Age zooarchaeological assemblage confirms the proportional increase in cattle osteological fragments in the Dark Age. However, formation processes have caused differential preservation profiles within the assemblages. Unlike the Bronze Age assemblage, the Dark Age assemblage has experienced severe attrition: surficial erosion, pitting, cracking, and extreme fragmentation. The presence of decalcified bone fragments suggests a loss of archaeologically significant material. Therefore, the bias introduced by poor preservation necessitates a reconsideration of earlier conclusions of Dark Age cattle ranching at Nichoria and a consideration of what the poor preservation signifies.

Natural postdepositional processes likely explain the poor preservation of the Dark Age assemblage. While the boiling of bones for grease and marrow might explain this pattern, both marrow-rich and marrow-poor anatomical elements are affected. Instead, it seems likely that the poor preservation was caused by the Dark Age depositional matrix. The few pH and organic carbon tests from Dark Age deposits confirm them to be more acidic and devoid of organic carbon. Current micromorphology of intact soil aggregates has revealed significant differences between Late Helladic and Dark Age burial matrices. Unlike the Bronze Age and Byzantine sediments, Dark Age sediments contain few visible calcite formations indicative of poor in situ preservation. Furthermore, a significant increase in the

sand content of the Dark Age sediments suggests a change in the depositional environment contemporary with the poorly preserved zooarchaeological material.

The poor preservation of the Dark Age assemblage has greatly affected most variables used to assess animal husbandry patterns: species proportions, anatomical element distributions, and mortality profiles. Denser anatomical elements from adult animals have survived in far greater frequency than less dense anatomical elements from subadults. As expected in contexts subjected to preservational attrition, the robust remains of cattle were more present in the Dark Age period than the smaller remains from sheep, goat, and pig. These conclusions suggest that the increase in cattle remains is due to differential preservation, and it is untenable to maintain the proposed hypothesis of Dark Age cattle ranching at Nichoria. Instead, the observed changes in deposition and/or soil formation, the cause of poor preservation, appear to be specific to the Dark Age and may be the result of climatic or anthropogenic perturbations.

Preservation Patterns of Human Remains and Their Role in Reconstructing Aegean Mortuary Practices: Some Methodological Concerns

Ioanna Moutafi, University of Sheffield

The study of preservation patterns has long been an important methodological tool for zooarchaeologists in the taphonomic analysis of skeletal assemblages. Bone frequencies, fragmentation levels, and surface alterations are used to distinguish between intrinsic and extrinsic factors influencing skeletal preservation, allowing reconstruction of the original sample and the formation process of the recovered one. Recently, the study of human remains has begun to adopt these methods, especially for the analysis of commingled skeletal assemblages, and these aspects are being increasingly explored in Aegean bioarchaeology. Despite significant progress, however, several limitations are still evident: the methodological approach is often poorly justified; data are recorded and analyzed without precise description, resulting in a noncomparable outcome; the analysis of skeletal preservation is rarely planned prior to the excavation, resulting in information loss at the time of recovery; and a multidisciplinary taphonomic study of the entire archaeological context is usually lacking.

This paper argues that the analysis of preservation patterns of human remains should be fundamental in Aegean mortuary studies because of their potential for the reconstruction of mortuary practices. The variety of funerary customs during the Aegean Bronze Age, which often include multiple activities in different locations, is responsible for a diverse set of skeletal assemblages. It is not always straightforward to identify the character of these assemblages or details of the actions producing them. The thorough application of an explicit methodology can, however, offer a great deal of information on specific mortuary practices, even on the basis of incomplete or “poorly preserved” assemblages. A successful approach to Aegean commingled funerary remains requires the use of (1) unambiguous terminology that will permit the precise description of all aspects of preservation (quantity, representation, fragmentation, surface condition); (2) explicit rules for recording and quantification; (3) other relevant methodologies for commingling analysis (e.g., sorting, segregation, individuation); (4) differential estimations of

minimum number of individuals (e.g., MNI, MLNI) and their comparison; and (5) comparison of the observed bone frequencies against intrinsic preservation patterns in controlled samples.

The discussion is based on the author's study of various types of commingled burial assemblages from several Aegean places and times. Preservation patterns enabled the identification of a Cycladic custom of temporary body deposition in rock shelters and subsequent removal (Early Cycladic Keros), as well as a rich variety of secondary funerary choices in Mycenaean cemeteries (Late Helladic [LH] I-II Kirrha, Phokis and Ayios Vasilios, Laconia; LH III Voudeni, Achaea).

SESSION 2A

Urbanism and Civic Display in the Roman Provinces

CHAIR: To be announced

Theatricality and Spectacle of Roman Water Display

Dylan Rogers, University of Virginia

Previous scholarship on water display during the High Roman empire has focused on typologies, along with the political and social concerns of water display. I attempt to understand better the Romans' use of water by applying current landscape theories to water display. Spencer, in *Roman Landscape: Culture and Identity* (Cambridge 2010), suggests that in defining a space as a landscape, in this case the area surrounding a water display, it is "visually distinctive and interesting, that it attracts the eye, and engages the senses and faculties" (16). In this vein, then, it is appropriate to connect water displays to theatricality and spectacle within the Roman world. After briefly defining the terms "theatricality" and "spectacle," I illustrate the theatricality of water displays through the examples of the Nymphaeum of Herodes Atticus at Olympia, the Hadrianic/Antonine North Nymphaeum and its accompanying water channel at Perge (Turkey), and the House of the Fountains at Conímbriga (Portugal). Each of these three examples provides water displays in different contexts (e.g., religious, public, private), by different patrons (e.g., local elite, the emperor, and a private individual), for different reasons (e.g., religious devotion, self-advertisement, pleasure). These water displays, along with others in the High Roman empire, distort reality, especially creating the artificial (i.e., theatricality). Water displays are provided by a patron and are naturally tied to place, which can create memories for the patrons of the spectacle of water. Agency is then associated with water displays, as a patron must sponsor a project, in addition to an audience enjoying the fountain. Theatricality and spectacle offer an exciting avenue of inquiry into the nature and meaning of water display, which is seen empire wide, pushing these structures past either simple utilitarian fountains or simple pieces of political propaganda.

A New Examination of the Arch of Marcus Aurelius and Lucius Verus at Oea

Rachel Meyers, Iowa State University

The tetrapylon arch of Marcus Aurelius and Lucius Verus at Oea (Tripoli), made of gleaming white marble, features niches for statues and *imagines clipeatae* on two sides, reliefs of Apollo and Minerva on the other two sides, captured barbarians with trophies, and ornate vegetal motifs on all piers. The arch was first examined by Italian archaeologists in the early 20th century after Italy seized Libya, but most of the work at that time involved isolating the ancient monument from the extensive medieval and modern structures that surrounded and enveloped it. A thorough analysis of the arch is lacking.

The purpose of this paper is to analyze the arch of Marcus Aurelius and Lucius Verus at Oea within its North African context and in comparison with other honorary arches. While it appears, upon initial glance, very similar to other Roman arches of the same time period in format and sculptural decoration, closer examination reveals several incongruities. On most arches, the dedicatory inscription is featured prominently on the attic, but on the arch at Oea, the text was inscribed on the frieze and architrave. Furthermore, it is clear that the acanthus scrolls that had already been carved onto the architrave were subsequently chiseled away to make room for the text. This is highly unusual in Roman historical relief. Then, also, the circumstances of the dedication provoke questions, since the text states that the *curator muneris publici munerarius* paid for the construction of the arch (IRT 232). Paying for such a large and lavish civic structure falls outside the usual duties of a *munerarius*: sponsoring gladiatorial shows. Finally, I point out the distinct manifestations of Romanization in this town in Tripolitania. The use of marble from Greece and sculptors most likely from Asia Minor was, in fact, a hallmark of such sculpture produced for display in Rome during the second century. With this new investigation of the arch at Oea, I show how the decoration of the arch and the nature of its dedication set it apart from other honorary arches of similar time and place.

Constructing Urban Longevity: The Chronological Implications of Civic Monuments in Northern Anatolia

Erin Pitt, University of California, Berkeley

By the end of the first century B.C.E., the Roman provinces of Pontus-Bithynia and Paphlagonia were highly diverse and sparsely urbanized, with the exception of a few coastal centers along the southern Black Sea. The unification of these geographical areas under the empire of Mithridates VI and annexation by Rome provided the impetus and resources that were critical for urban development. The construction of civic monuments constituted only one aspect of this development; yet it is one important avenue through which the proliferation, intensification, and success of the Roman urban model can be investigated.

This paper examines the ideological and chronological framework surrounding the construction, repair, and renovation of three categories of civic monuments in the provinces of Pontus-Bithynia and Paphlagonia: (1) imperial cult buildings, (2) theaters and theater-related structures, and (3) bath-gymnasia complexes. The

construction of each type of monument established a foundational framework for fledgling urban communities concerning the necessary elements of a Roman city as well the civic ideology that was required for successful urban life in both new and preexisting cities. This study, moreover, illustrates important local and regional preferences for the types and uses of particular urban monuments, a critical element for understanding an area of such unique history and cultural diversity. Finally, it begins to explain why the urban centers of this area of north-central Anatolia witnessed a period of stability and growth from the late second century C.E. onward, when more densely populated and urbanized provinces within the empire experienced contraction and decline.

Two patterns with chronological implications emerge. The continued use, repair, and adaptation of these categories of monuments demonstrated a sustained commitment to the urban paradigm, thus contributing to the unique urban stability of this region during the turbulent third century C.E. Second, the infusion of imperial patronage and the importance of the region in the third century C.E. were critical. While urban contraction and disconnection to the imperial center occurred elsewhere in the empire, north-central Anatolia became the setting for these same stimuli, specifically the benefits of the imperial purse and a renewed interest the urban environment.

***Tegulae Mammatae* in the Roman Baths at Isthmia**

Jon M. Frey, Michigan State University, and *Timothy E. Gregory*, Ohio State University

The development of specific terracotta materials for use in hypocaust systems is widely held to mark a critical moment in the evolution of the large-scale public bathing facilities that were an essential part of life in ancient Rome. Of these, *tegulae mammatae*, so-named because of the presence of breast-like protrusions on one side of a flat tile, are a particularly important yet understudied feature. Discussions of these peculiar artifacts in ancient and modern sources are both brief and often contradictory. For example, even though they are most commonly found in the walls of heated rooms in baths, where they provided a space for the flow of exhaust gases from the furnace, Vitruvius mentions *mammata* tiles only as a precaution against dampness. Moreover, while it is commonly agreed that these tiles were eventually replaced by tubuli or "box flue tiles" some time in the first century C.E., the reason for this change is not discussed in detail.

The discovery in recent years of two different types of *tegulae mammatae* at the Ohio State University Excavations at Isthmia has provided an opportunity to engage in a closer examination of these unique artifacts. Thus, in this presentation, we begin with an assessment of the published evidence regarding the use and eventual replacement of "breast" tiles in hypocaust systems throughout the Roman empire. Next, we present the results of our detailed study into the construction of the *tegulae mammatae* uncovered at Isthmia. In light of this information, we evaluate the different possible explanations for the growing preference for tubuli in later hypocaust systems and conclude that this change in building materials should be attributed more to the greater ease of installation than to factors of construction or thermal heating properties. Most significantly, though, this presenta-

tion demonstrates that additional study of the locations where *mammata* tiles have been found at Isthmia holds great potential to help us understand the essential stages in the transition from Greek to Roman bathing practices in antiquity.

Roman Carthage: Its Sea Armature and Urban Design

Thomas J. Morton, Swarthmore College

While the UNESCO campaigns of the 1970s and 1980s as well as the subsequent clarifying excavations in the 1990s and 2000s added greatly to our understanding of the phasing of Carthage in antiquity, many aspects of the urban design strategies that were used during the long history of the Roman city have not been examined properly. This paper moves beyond the important studies of urban planning and evaluates smaller but profound urban design gestures that occurred from the beginning of Roman empire through the late second century in this critically important North African city. Integrating the pioneering work of Gros, Rakob, and Hurst at Carthage, this study assesses the placement of select monumental structures located throughout this extensive city. Of particular importance for this study is the role of the sea in the city's second-century urban designs—particularly for the Antonine Baths and the forum structures on the Byrsa Hill.

Building on MacDonald's notion of urban armature for Roman cities, it has recently been proposed that some Roman cities in North Africa employed a sea armature—that is, buildings were designed such that they were to be initially experienced from the sea. In addition, a sea armature suggests a visual/spatial linkage of discrete parts of the city—a linkage that is visible only from the sea. This idea of a sea armature is explored in detail for the Roman city of Carthage. Using three-dimensional visualizations of the Roman coast of Carthage as well as a recent photographic documentation of the modern coast, this study not only demonstrates the critical role of the coast for the massive rebuilding of the city that occurred after the second-century C.E. fire but it highlights a shift in the design thinking of the city. Whereas the planners of the Augustan phase of Carthage were certainly affected by the sea (and the coastal grid from the earlier Punic city), the change in the city's coastline as well as the devastating second-century fire provided an opportunity to put forward new urban design strategies in Carthage. The designers of such impressive buildings as the Antonine Baths realized this and changed the face of the city—especially when viewing it from the sea.

SESSION 2B**Bronze Age Greek Pottery Studies**

CHAIR: To be announced

Consuming Style: Decoration and Consumption in Late Neolithic Northern Greece

Teresa Silva, Demokritus University of Thrace, *Dushka Urem-Kotsou*, Demokritus University of Thrace, *Kostas Kotsakis*, Aristotle University of Thessaloniki, and *Areti Chondrogianni-Metoki*, 30th Ephorate of Prehistoric and Classical Antiquities

The Late Neolithic (ca. 5300–4500 B.C.E.) in northern Greece was a period of increased settlement density necessitating complex networks of interaction on both the material and the ideological level. The latter has been related to the increasing independence of the household as a basic social unit and the negotiations required to mediate between household and community. Consumption practices must have played a role within this social discourse, and ceramic vessels provide a way to use material culture to approach these ideologically driven ties.

Traditionally, the use, and thus the role, of ceramics is categorized into large storage, coarse cooking, and fine table wares. The macroscale picture of the Late Neolithic Northern Greece ceramic assemblage appears to conform to these definitions and seems to indicate an overall idea of the utility of ceramics to the inhabitants' everyday lives. However, on the microscale of the individual settlements, one consistently finds vessels that subvert these traditional definitions. Recent large-scale research projects have yielded detailed data that allow for the combination of stylistic analysis with that of traditional use categorization and provide case studies that can be connected throughout the region. Through detailed analysis of tablewares, which are often highly decorated, we may begin to connect consumption practices to the continual changes being enacted within the communities as households negotiate the demands of the overall society.

"Recovering" Anatolian Drinking Sets from the Middle Minoan Ceramic Assemblages of Knossos and Phaistos on Crete

Tanya McCullough, AIA Member at Large

Metals, especially gold and silver vessels, are notoriously underrepresented in excavated assemblages. These precious objects are often curated, melted down, or lost altogether to postdepositional processes. The lack of metal vessels is especially acute in Middle Minoan assemblages on Crete, where only a handful of metal vessels dating to this period have been uncovered. Considering the vital role of metals to the ancient economy, the dearth of metal objects in the archaeological record presents a critical gap in our understanding of Minoan society during this period. Concentrating on the ceramic assemblages from the palatial sites of Knossos and Phaistos, in this paper I discuss the feasibility of using metallic-looking ceramic skeuomorphs (imitations of objects in another medium) in "recovering" metal vessels from the archaeological record.

A large percentage of the new shapes that appear in the Middle Minoan period at Knossos and Phaistos appear to have a metallic origin. These shapes—representing drinking sets—have strong correlations with many of the metal vessels found in Anatolia, at sites along the northern Levantine coast, specifically Byblos, and at El-Tôd, in Egypt. The metal vessels from El-Tôd are also thought to have originated in Anatolia as well. The imported silver vessels were likely used as luxurious drinking sets by the sociopolitical elite, engendering, in turn, the emulation of ceramic copies to be used by the “subelite” as substitutes in competitive feasting ceremonies. As the earliest Middle Minoan ceramic shapes with “metallic” features seem to have been introduced to Crete sometime during the Middle Minoan (MM) IB–MM IIA, I suggest the Minoans may have been stocking their newly built palaces with foreign luxury goods.

Fine Ware Pottery as an Indicator of Social Stratification in the Mirabello Area During Middle Minoan II

Georgios Doudalis, University of Heidelberg

This paper explores how Protopalatial fine ware pottery can be used to understand the relationships between different social structures in the area of the Gulf of Mirabello in East Crete during the Middle Minoan (MM) II period (ca. 1800–1650 B.C.E.). Previous studies discussed the interconnections between the sites in terms of the financial, cultural, and social dominance of “palaces” over peripheral settlements. In contrast, Schoep has introduced the notion of competing social groups as evidenced within the architecture of various Protopalatial buildings at Malia. Haggis, in his study of the MM IB (ca. 1900–1800 B.C.E.) Lakkos deposit at Petras Siteia, discusses different fine ware decorative styles and distinguishes different social classes within the same settlement.

The main argument I present in this paper is that fine ware pottery can act as an indicator of social ranking during the MM II period in the Mirabello region as well. To understand the political and cultural behavior of the occupants of that area, one must examine conspicuous consumption of intraregional pottery assemblages. According to Soles, during the MM II period hierarchical social structures existed mainly in the area of Gournia. Also, Haggis examined centralized production in the area of Gournia and Istron, which controlled the distribution and redistribution of transport coarse ware vessels.

To understand the sociopolitical situation in the Mirabello area, this paper takes as evidence the distribution of fine ware pottery within the region. By analyzing the types and decoration of pouring vessels discovered in an unpublished Mochlos house assemblage and three briefly published deposits by Soles and Brogan in comparison with the types studied in the surveys of Gournia by Watrous, in Vrokastro by Hayden, and in Kavousi by Haggis, I identify the way that “elites” established their position on a political and cultural scale.

In conclusion, the “elites” in the Mirabello Gulf during MM II interrelated on a regional level, sharing common ideological and cultural characteristics. They distinguished themselves from the other occupants through the possession, distribution, and conspicuous consumption of fine ware pottery. Thus, they succeeded in creating regional social stratification even without the presence of a “palatial”

center. This relationship between “elite” and other social structures established local authorities who controlled aspects of daily life and declared that authority via the consumption of particular pottery styles and typologies.

Stylistic Regions and Cultural Regions? Contextualizing Neopalatial Myrtos-Pyrgos Within the Southeast of Crete

Emilia Oddo, University of Cincinnati

Archaeologists often identify discrete cultural regions on the basis of ceramic styles and debate the significance of these regions as a means to reconstruct political geography and historical developments through time. Ceramic regionalism has often been discussed in the archaeology of Bronze Age Crete, and specific macro-regions have been identified in the central and eastern part of the island. Although it has been demonstrated that palatial centers are not always the direct producers of ceramics, it is maintained that they cover an important role as consumers and that, as such, they influence production. From pots to culture, it is often assumed that the diffusion of ceramic styles represents the diffusion of palatial influence, especially—though not necessarily exclusively—over the elites of smaller centers. In turn, they are then considered to be under the ideological, cultural, or even political control of the palaces. In this paper, I revisit this approach and the identification of stylistic regions in Neopalatial Crete by exploring the meaning of ceramic style in terms of possible cultural influence. As a case study, I examine the LM I pottery assemblage from Myrtos-Pyrgos’ Cistern 2, placing it within the ceramic tradition of southeast Crete. I propose a more fine-grained regional distinction, identifying micro- and macrostylistic regions, and evaluate the role of ceramic style as a barometer of cultural affiliation.

The Banquet and the Feast: Social Complexity and Ceramic Elaboration in Second-Millennium Egypt and Minoan Crete

Anna Panagiotou, University College London

It is an established observation in the archaeology of the eastern Mediterranean that parts of the basin, such as Egypt, are extremely poor in decorated pottery, while others, such as the Aegean, develop striking visual traditions in the same medium. In Egypt, this characteristic of the material culture has been contrasted with the aesthetic elaboration of elite culture, leading to the development by researchers such as Wengrow (*World Arch* 33[2] [2001] 168–188) and Baines (*CAJ* 4[1] [1994] 67–94) of a model associating the simplification of the lives of the majority, expressed in the aesthetic impoverishment of widely available materials such as pottery, with the establishment and justification of a hierarchical social structure. This model raises questions that are directly relevant to central concerns of archaeology and related disciplines, especially the anthropology of aesthetics. The insights on decoration in the work of Gell (*Art and Agency: An Anthropological Theory* [Oxford 1998]) help us move beyond the idea of a pure aesthetic to the social mobilization of the decorated object and offer a toolkit of ideas that is well suited to exploring the place and value of decorated pottery and its involvement

in social negotiations, particularly in times of change and reconstruction of social structures.

In order to examine the implications of the proposed model associating increasing social complexity with the standardization of the most widely used aspects of material culture, I am studying instances that can be visualized as peaks in decorative complexity. By examining extraordinary circumstances, it becomes easier to follow the implications of the model and test its validity, and the second millennium in the eastern Mediterranean offers two such instances. The first is Minoan Crete, an ideal illustration of the exceptional and enduring Aegean practice of elaborately decorating pottery. Both the contextual and the diachronic aspects of this practice are studied through the analysis of pottery deposits stored at the Knossos Stratigraphic Museum. At the other extreme of the spectrum of decoration lies pharaonic Egypt, infamous for its unadorned pottery, a product of standardized manufacture. In the New Kingdom, however, blue-painted pottery appears, which stands out both in the unusualness of the practice and in the use of a color almost never encountered in pottery decoration. These two case studies are suited to a comparative approach, both offering complex palatial societies structured along very different lines, illuminating the diverse ways in which decorated material culture interacts with social complexity.

SESSION 2C

Epigraphy

CHAIR: To be announced

Forma litterarum vetustissima est: A Reappraisal of Inscriptiones Graecae in Bulgaria repertae (Sofia 1956–1966) 3(1) 1294–95

Denver Graninger, University of California, Riverside

While the number of Greek inscriptions from pre-Hellenistic inland Thrace has increased since Mihailov completed his monumental corpus, *Inscriptiones Graecae in Bulgaria repertae* (Sofia 1956–1966), they are still few in number and basic in character: graffiti and simple epitaphs predominate, as do silver vessels marked with elite Thracian names. Much scholarship uses the early presence of Greek at these inland sites as an index of the penetration of Greeks into the region or, conversely, of the progressive Hellenization of Thracian elites.

This paper expands both the corpus of early Greek inscriptions from inland Thrace and traditional frames of their interpretation by examining the two texts published by Mihailov as *IGBulg* 3(1) 1294–95 within the framework of an emerging Greek “epigraphic habit” in the region. First edited by Skordelis in 1861 and subsequently by Mihailov in 1961, *IGBulg* 3(1) 1294–95 have scarcely been discussed since. Unable to locate the monuments, Mihailov was forced to rely on Skordelis’ difficult majuscule transcription, which offered fragmentary, uncertain Greek. The letterforms, however, are clear and include an inverted lambda, a “tailed” mu, and a forward-tilting epsilon; described as *vetustissima* by Mihailov, they are precocious for the region and point to an Early Classical or even Archaic date.

IGBulg 3(1) 1294 is metrical and may have been a funerary or, more likely (“agal[ma],” or the like, is possible in line 2), dedicatory epigram. *IGBulg* 3(1) 1295 includes a possible personal name, Kleandr(os), and a probable divine name in the dative case, Dionuso; a votive context is again appropriate, and “Dionysus” is well-attested in the Thracian interior (e.g., Hdt. 7.111). Equally suggestive of cult is their findspot near Batkun in the northern Rhodope Mountains, home to a famous sanctuary of Asclepius under the Roman empire. Other divinities were worshiped in the area at earlier periods (e.g., *IGBulg* 3(1) 1114, dated ca. fourth century, which mentions a sanctuary of Apollo).

By considering these monuments within the framework of a nascent Greek epigraphic habit in inland Thrace, this paper shifts focus away from the putative ethnic/cultural identity of the authors of these monuments and onto their audience, while raising the possibility that a cult place in the northern Rhodope Mountains could serve as a venue for the type of elite, and presumably competitive, display known from contemporary sanctuaries in the Aegean Greek world.

No Sex or Beans, but Beef’s Okay (for a Price): A *lex sacra* from Rhodes Reexamined

Isabelle Pafford, San Francisco State University

A well-known *lex sacra* from Rhodes (*LSS* 108) requires worshipers to refrain from sex, beans, and heart but allows them to sacrifice animals, including roosters. In addition to requiring ritual purity, the regulation demanded that monetary payments for sacrifice (cult fees) must be placed in a *thesauros*. A drachma was required for sacrificing cattle, but four-footed animals apparently were charged at a lesser rate, while the rooster would have been comparatively expensive at five *chalkoi*. Despite the text’s great religious, philosophical, and economic interest, the only published photograph of the stone is indistinct. For this reason, arguments about date based on letterforms have been less than conclusive, and suggestions about the nature of the sanctuary where the stone may have been set up have unavoidably been based on the wording of the published text alone. Autopsy and photographs taken of the stone in June 2014 have yielded excellent results. Distinctive cuttings at the base of the stone show that this object is in fact a fragment of the top block of a stone *thesauros*, consonant in size and typology with several specimens of the bottom blocks of such devices, which have been found throughout the island. Following breakage, the stone was turned and reused as a stele for the inscription, arguably as part of a reorganization and renewal of cult practices within the sanctuary. This paper presents the results of autopsy and explores options for redating the inscription and associating it with known sanctuaries in the city of Rhodes, such as the recently located Asklepieion.

Epigraphic Evidence for Sacred Textiles: A Comparison of Inscriptions from Miletos and Andania

Jennifer C. Swalec, Brown University

In 1912, excavations undertaken at Miletos revealed an intriguing fragment of an inscribed temple inventory dating to the Late Hellenistic period. This inven-

tory features primarily a rich account of various sacred textiles that were being held in the possession of a Milesian sanctuary ca. 100 B.C.E. This sanctuary's precise identity remains unknown because of breaks in the inscribed stone at both its top and bottom edges. Despite the importance of the sacred inventory's contents for the histories of ancient clothing and sacred textile dedications, the inscription remained unpublished until Günther's editio princeps of 1988. This publication emphasizes the physical conditions of the inventory's recorded textiles, particularly in light of similar conditions recorded for textiles at Athens and Delos, and suggests Artemis as the most likely recipient of the Milesian textiles.

To integrate more fully the Milesian inventory's textiles into ongoing discussions of the ritual and dedicatory religious practices reflected by textile-rich inventories from the fourth century B.C.E. (for Artemis Brauronia at Athens, as well as for Hera and Hermes on Samos) and the third century B.C.E. (for Demeter and Kore at Tanagra), new commentary is needed. Inspired by the methods employed in Cleland's analysis of the Athenian clothing catalogues for Artemis Brauronia, I present an analysis of the descriptive strategies that are integral to the Milesian inventory. From this analysis I supplement earlier interpretations of the inventory's significance.

I conclude by comparing the religious practices suggested by the Milesian inventory's contents with those reflected by a set of sacred regulations for the Andanian Mysteries in Messenia. These regulations include restrictions on clothing and date to approximately the same time as the Milesian inventory (92 B.C.E.) or within the following century. The religious activities of Miletos and Andania both involve garments of Egyptian, or at least eastern, origin: the *kalasiris* and the *sindonites*. The Milesian and Andanian documents differ, however, in their emphases on color, decoration, fabric, and range of textile types. Consideration of sacred textile regulations from elsewhere in Greece elucidates the contrast between various qualities of sacred textiles that are present at Miletos and restricted at Andania. Through comparison with the approximately contemporary Andanian clothing restrictions, religious practices at Miletos emerge in sharper relief, contributing to a broader project of identifying and interpreting what renders a textile worthy of sacred possession.

The Seven-Day Week in the Roman Empire

Ilaria Bultrighini, University College London

Although the practice of dividing the days of the year into cycles of seven days and naming each of these days is generally considered a universal habit that reaches far back into antiquity, before the early Roman Imperial period neither Greeks nor Romans nor, as it seems, any other ancient civilization measured time in this way. The seven-day week made its first appearance in the first century B.C.E. and became increasingly widespread throughout the Roman world in the course of the first centuries of our era, being widely shared by different religious and ethnic groups within the vast territory embraced by the Roman empire. Regardless of the variety of calendars that they may have been using, Christians, Jews, and pagans all shared the week as a means of measurement and organization of time during late antiquity. Earlier research into the origins of the seven-day week and the pro-

cess of its diffusion and standardization in the Roman empire and the Near East has been sporadic and unsystematic. As a result, the subject is still controversial and very poorly understood. Using artifactual, epigraphic, and literary evidence, this paper sheds new light on the theme by presenting the preliminary results of an ongoing study of the origin, history, and development of the seven-day week in the Roman world. I discuss the earliest evidence related to the use of the seven-day cycle, which goes back to the first century B.C.E. to first century C.E. and consists of a few allusions to the planetary week in literary sources, Pompeian graffiti, and fragmentary *fasti* from different towns in Latium. I then address the process of diffusion and standardization of the seven-day cycle, in both its planetary and numerical forms, which started from around the second century C.E., culminated with the conversion of the empire to Christianity, and is especially attested by Christian epitaphs. I conclude by pointing out how by the fourth century C.E., although we are lacking any official recognition of the employ of the week as a means of measurement and organization of time, the habit of measuring time in cycles of seven days, each of them either numbered or dedicated to one of the seven planets, became universal or at least general all across the Roman empire.

Calos Graffiti and Cultural Appropriation at Pompeii

Sarah Levin-Richardson, University of Washington

Roman culture is known for adapting phenomena from other cultures to suit its specific societal needs. In this paper, I examine how Pompeian graffiti that hail an individual as *calos*, “beautiful,” transform the practice of *kalos* acclamation from Greece to meet the needs of Roman citizens of the Early Empire.

Pompeii contains 20 examples of *calos* graffiti, ranging from the Porta Marina’s *calos Victor ubique*, “beautiful Victor everywhere” (*CIL* 4 652), to *calos Castrensis* at the end of a long poem that seems to advertise a bar (*CIL* 4 1679, add. 210, 463, 704 [atrium of VII.2.45]). While Franklin, Jr. (*AJP* 108 [1987] 95–107), includes some of these graffiti in his investigation of pantomimists at Pompeii, and Woekner (“Women’s Graffiti from Pompeii,” in *Women Writing Latin from Roman Antiquity to Early Modern Europe* [New York 2002] 67–84) argues the abovementioned *calos Castrensis* graffito was female-authored, no study has yet explored *calos* graffiti as a phenomenon with its own topography, functions, and relationship to Greek culture.

I begin by examining the text of each *calos* graffito, the type of space it was written in, and how it relates to other texts or images in that space. I find that many of the *calos* graffiti have associations with sex for sale; for example, three (*CIL* 4 2179, 2180, 2301) were written in Pompeii’s purpose-built brothel (VII.12.18–20), and three more (*CIL* 4 5136, 5138, 5148) come from outside an establishment (IX.5.19) taken by some as a brothel because of large numbers of graffiti mentioning sexual acts and prices. Another six were written in close proximity to sexually obscene graffiti (*CIL* 4 1256, 1283, 1285, 2150, add. 215, 4567, 9146h). I then assess where individuals named as *calos* appear in other Pompeian graffiti, noting that several individuals had widespread epigraphic popularity (e.g., Victor is mentioned more than 15 times), and seven *calos* graffiti concern presumed actors.

Finally, I address the relationship of *calos* graffiti to Greek *kalos* acclamations. I argue that while both were used to praise certain popular males as desirable, at

Pompeii this desirability was associated with problematic categories of individuals, such as prostitutes and actors (both legally classified as *infames*) rather than aristocratic youth. This, in turn, may have reinforced the expectation that freeborn citizen males only be desiring subjects rather than desirable objects.

The Rhetoric of Acculturation: Bilingualism in the Honorific Epigrams of Sicilian Municipia

Christopher Jelen, University of Oregon

After Rome's incorporation of Sicily as its first province and throughout the Early Empire, Latin dominated the discourse of administrative epigraphy on the island. The predominance of Latin in such epigrams obscures the precise nature of the Romanization process that the existing Greek systems underwent. Evidence of the Greek reception of Roman administrative structure and the Roman treatment of the existing Greek structures is relatively scarce within the rhetoric of Sicilian epigraphy. However, a small number of administrative inscriptions, all of which show some degree of Greek-Latin bilingualism, demonstrate this very process of acculturation. All these Early Imperial inscriptions are found in Roman municipia, an ideal area for an examination of the Roman acculturation of existing Greek systems. The degree of Roman involvement in their administrative structures was high but not so high that the presence of Greek administrative positions, as well as administrative rhetoric in the Greek language, are completely absent, as is largely the case in Sicilian *coloniae*.

By examining the presence of loan words, calques, orthographic errors, and code switching as well as considering the inscriptions' material, quality, and public presentation, I explore the nature of these inscriptions' awareness of a double audience, an audience that was at one time both Greek and Roman. Through an examination of this double audience and in particular the evidence of bilingualism in administrative terminology, I argue that the process of Romanization that the Sicilian municipia underwent was one of mutual accommodation or at least that it was presented as such within the rhetoric of administrative epigraphy. Within these inscriptions, the Greeks incorporate the Roman administrators, as well as the administrative positions themselves, into the existing social and political structure, and the Romans in turn adapt, and possibly exploit, the existing Greek governmental terms and positions to serve the needs of the new administrative system.

SESSION 2D

Anatolia

CHAIR: To be announced

Tortoise-Shell Lyres from Gordion: Polyphony in Context

Samuel Holzman, University of Pennsylvania

Greek and Latin authors write of Phrygia, the central Anatolian kingdom that flourished in the Early Iron Age, as a vibrant and inspiring musical landscape. Its

mythic musicians, Olympos, Marsyas, and Hyagnis, supposedly introduced the aulos, the associated Phrygian mode, and popular pipe tunes to Greece. Greek auletes exploited this association by performing under Phrygian-sounding stage names, such as Midas of Akragas, who swept the Pythian and Panathenaic competitions in the early fifth century. The tympanum, cymbals, and syrinx played for the goddess Cybele join the aulos in the raucous ensemble perceived as Phrygian musical culture, with no room left for stringed instruments. When images of stringed instruments were first excavated in Phrygia, they were understandably interpreted as the work of immigrant Greek craftsmen. Excavations at the site of Gordion, the capital of Iron Age Phrygia, have uncovered fragments of five extensively modified tortoise shells, which were used as the sound boxes of lyres. Close analysis of the tool marks and pattern of alteration reveals much about their construction, sound, and zoomorphic aesthetic. Two of the shell sound boxes can be dated stratigraphically to the beginning of the seventh century, around the end of the reign of the historical King Midas. Deposited in the cellar of an extramural house together with a pile of loomweights, the instruments provide a glimpse of the context of musical performance. A small stone idol of Cybele and fine ware drinking vessels found nearby suggest that stringed instruments were played in conjunction with household worship and dining, quite different in tone from the stereotyped vision of the goddess' wild rites. Although in myth Phrygia hosted the great showdown between Marsyas and Apollo, these archaeological discoveries paired with known iconography indicate that the aulos and the lyre coexisted harmoniously. This new balanced vision of Phrygian polyphony sets the backdrop for comprehending the poetic license with which the metageography of ancient instruments was crafted. In other words, the material culture of Gordion helps separate the ethnographic from the mythopoetic strands of ancient music historiography.

Agricultural Adaptation During Imperial Expansion: Climate Adaptation in Iron Age Highland Central Anatolia

John M. Marston, Boston University

In the ancient Near East, locally produced agricultural surpluses were necessary to support the growth of state-level societies. The territorial expansion of such polities often involved the foundation of new settlements, where resettled populations confronted sometimes vastly different climatic conditions and were forced to adapt to new and unfamiliar landscapes. The success or failure of agriculture in recently incorporated areas may have fueled or limited the growth of states, providing one mechanism to understand the limits on territorial expansion in the past. In this paper, I present new archaeobotanical data from the Iron Age highland central Anatolian city of Kerkenes Dağ, founded by the Phrygian kingdom in the seventh century B.C.E., and consider agricultural adaptation to new environments and its role in the expansion of the Phrygian state.

Previous studies at two lowland central Anatolian sites have illuminated the agricultural strategies employed by Phrygian farmers and herders. Rich data from Gordion, the Phrygian capital, and preliminary results from Kaman-Kalehöyük indicate that farmers attempted to maximize crop yields while also reducing the

chance of agricultural failure due to drought. Results from highland Kerkenes Dağ, however, indicate a dramatic change in agricultural strategies, with a focus on the production of free-threshing wheat. Do these agricultural practices indicate a successful adaptation to the climate of highland central Anatolia, where rainfall is high but the growing season is short? I identify challenges in this agricultural adaptation that give new insights into the forces behind the expansion and ultimate limits of the Phrygian state.

The Space Between: Waters, Pilgrims, and Limits in Ancient Labraunda

Christina DiFabio, University of Michigan, and *Andrew Waters*, AIA Member at Large

Labraunda was among the most important sanctuaries in ancient Anatolia. In the Hellenistic period, local potentates—including the famous Mausolus and his family—sponsored massive architectural projects that monumentalized this rural sanctuary, which remained a site for local pilgrimage through the Christian period. Since 1948, the site’s impressive buildings (including its temple, gates, and dining halls) have been meticulously studied, primarily by Swedish archaeologists. However, little attention has been paid to the empty spaces between those monuments—the terraces, courtyards, and walkways where most activities presumably took place. How did pilgrims enter and exit the sanctuary? How did they get from one terrace to another? Who among them was allowed to access the colossal dining hall that partially eclipses the temple? How did the experience change over time? This paper addresses these questions and presents findings from two years of excavation at a previously unstudied late fourth-century B.C.E. monumental fountain just outside the sanctuary gates. We offer a diachronic multiscalar analysis to study the fountain: first as a pilgrimage landmark signaling the transition between the countryside and the abode of Zeus Labraundos; second as a conspicuous—even extravagant—example of water display within the greater sanctuary water network; and third as a node in a complex system of monuments that made Labraunda a magnet for pilgrims from the Bronze Age through the Byzantine period.

Spoilation of Tombs and Changing Funerary Culture in Late Antique Aphrodisias

Esen Oğus, Texas Tech University

Reuse of spoliated material in Late Antique building projects is a widely attested practice around the Roman empire. Even though the reused material often derived from funerary monuments, the secondary life of such material has been little studied. However, close scrutiny of spoliation and reuse of tombs sheds light on the transformation of Roman funerary culture in late antiquity and whether this transformation is related to the dissemination of Christianity.

To serve this end, this paper focuses on the chronology, scope, and nature of reusing tombs and sarcophagi at Aphrodisias. The city has a well-preserved record of funerary inscriptions and sarcophagi, most of which date to the second and third centuries C.E., and were discovered in secondary contexts. There are two

major phases of spoliating the tombs in Late Antique Aphrodisias. The first phase is the construction of the city walls around the mid fourth century, a major project that harvested blocks from the superstructure of the tombs but left the sarcophagi and the burial places (*loculi*) inside the tombs untouched and available for subsequent burials. The second major phase of spoliation is during the renovation of the church some time between its conversion from a temple in 500 C.E. and its abandonment in the 12th century. At that time, the sarcophagus chests were treated like construction material; they were cut off in pieces and were reused as paving slabs. Other sarcophagus pieces were used as covers of graves located around the church.

The gradual abandonment of Roman tombs followed by their relocation around the churches is a shared aspect of Late Antique funerary culture in Asia Minor. Therefore, the paper compares the pattern of tomb reuse at Aphrodisias with other neighboring sites such as Hierapolis and Laodikeia, where many Roman tombs continued to be used well into the Byzantine period. The results of this comparison show that the initial dismantling of the tombs at Aphrodisias for the city wall project was independent of Christianity and was due to an urgent necessity such as an external threat. The later attempts of spoliation, such as cutting sarcophagi into panels and moving the graves closer to the city center, are consequences of the changing mindset introduced by Christianity. In conclusion, while similar changes in ancient funerary culture took place in Asia Minor, not all of these are precipitated by religion, but some were a response to peculiar local circumstances.

SESSION 2E: Colloquium

Algorithmic and Digital Technologies in Understanding Archaeological Environment

ORGANIZER: *Myrsini Mamoli*, Louisiana State University

Colloquium Overview Statement

Reconstruction of objects from archaeological fragments is often done with a high degree of uncertainty. Typically this task is taken up by archaeologists, who interpret available data and propose the initial state of an artifact based on its type, structure, technologies, materials, ornaments, and scale in comparison with similar objects. Three-dimensional scanning technologies have to a large extent solved the problem of accurate data acquisition and reproduction of fragile artifacts. Still, experts often disagree about the interpretation of available evidence and the resulting proposals for an artifact's original state. Therefore, a substantial gap remains between the representation of the existing, fragmentary object obtained through fieldwork and the representation of a proposed initial state. The problem becomes larger when experts try to understand the successive phases in the history of one artifact, building, or urban environment and then simulate the experiential changes in each phase.

Archaeologists and art historians increasingly rely on algorithmic and digital technologies to describe and reconstruct physical archaeological remains and the ways they were experienced in the past. This colloquium presents different

approaches that use algorithmic and digital models to study, explain, and form questions about the original state and evolution of archaeological artifacts. The first paper presents the use of three-dimensional scanning technologies for the digital fabrication of replicas of fragile and sensitive Mayan artifacts to facilitate their study and exhibition. The second paper presents a grammar of ancient Greek and Roman libraries that helps us compute possible variable reconstructions of any given building's remains. The third paper presents a procedural model of Augustan Rome that runs different experiments on the evolution of the city to test Augustus' claim that he found Rome of sun-dried brick, and left it of marble. Finally, the fourth paper presents a digital model of a Byzantine church in Istanbul, now known as the Hırami Ahmet Paşa Mescidi, that simulates the natural lighting conditions and the historical alteration of lighting effects, thus providing evidence for the liturgy and functionality of the building over the course of the Byzantine and Ottoman periods.

Grammatical Computations of Ancient Libraries

Myrsini Mamoli, Louisiana State University

The library was one of the most important institutions in the Hellenistic and Roman city, as evidenced in the writings of ancient authors and the building remains of libraries found throughout the Graeco-Roman world, from Asia Minor to France and from Africa to northern Greece. Yet the library remains one of the least easily identifiable building forms and one of the most difficult to reconstruct, because unlike architectural types such as the temple, stoa, or theater, the library exhibits significant variety in design, scale, and monumentality and the use of different component elements.

In reconstructing libraries, scholars often rely on a prescribed set of assumptions about components and their arrangement that limit our ability to identify libraries and understand their diversity of arrangement. The work presents a comprehensive documentation of known and identified libraries, reviews the design principles of the architectural form of ancient libraries, and on the basis of this historical analysis proposes a shape grammar that helps us identify, understand, and reconstruct ancient libraries of diverse and variant scale, design, and monumentality.

The library grammar encodes the design principles of ancient libraries in 91 rules that are grouped in two major parts: the first generates the main hall of the library and its interior design, and the second generates the complete layout of the library including additional porticoes, peristyles, exedras, gardens, and propylon. The application of the rules generates libraries of diverse scales and monumentality: libraries known in the corpus as well as hypothetical libraries.

The work presents grammatical derivations for the 17 known and identified libraries. These derivations, depending on the degree of preservation of the building remains of libraries, function as an evaluative tool for the validity of the grammar or for the reconstructions proposed by traditional research. In many cases, they point to different possibilities in the identification of the building remains related to libraries among remains of different phases or remains belonging to

neighboring buildings, and they suggest variant scenarios of reconstruction that might not stand out using traditional techniques of reconstruction.

A frequency analysis of the metadata of the rules in the grammar and the derivations provides a probabilistic model as an effective and systematic guide in identifying, evaluating, and predicting the architectural form of libraries. Based on this frequency analysis, the work evaluates the derivations of possible libraries and concludes whether these buildings are libraries, nonlibraries, or exceptional libraries.

Bricks Into Marble: Reverse Engineering Augustan Rome

Diane Favro, University of California, Los Angeles

Augustus boasted he found Rome of sun-dried brick and left it of marble (Suet., *Aug.* 28). Scholars have variously interpreted this transformation as a metaphor for cultural sophistication, a tangible symbol of peace and prosperity, and an architectural reflection of the capital's status. The first emperor had the wealth, power, and time to undertake significant alterations to Rome, yet even a *divus filius* could not rebuild every structure in the densely populated megalopolis. To date, the truth of his transformative claim has been only loosely evaluated, primarily using two-dimensional mapping. Static cartographic representations are helpful but incomplete. Most include major structures plotted in generalized topographies, with scant reference to in-fill structures. Generally, they represent all Augustan projects simultaneously rather than the deployment of buildings over time.

Recent archaeological discoveries, new technologies, and experimental methodologies promote multidimensional, polymodal urban analyses. Geotemporal tools allow scholars to interrogate architectural interventions in space and time; procedural modeling lets us rapidly generate and regenerate hypothetical cityscapes based on diverse formal rules; building information modeling (BIM) provides a data structure for process analysis. Exploiting GIS and three-dimensional modeling software, researchers at the University of California, Los Angeles Experiential Technologies Center (ETC) are reverse-engineering Augustan Rome, creating a dynamic geotemporal topographic urban projection with massing models of buildings coded by construction dates, surface materials, orientation, and other factors. The resulting environmental simulations operate as laboratories for testing various hypotheses regarding the ancient capital.

To evaluate the alleged marble transformation of Rome, the ETC team is conducting diverse, ongoing experiments. By mapping events affecting patronage and labor across the three-dimensional urban simulation, we affirmed the theorization of Augustan interventions as largely reactive and opportunistic. Analyses of diurnal and annual lighting effects on marble structures in the digital model had negative results, calling into question literary and artistic references to a cityscape of sparkling ashlar. Multiple projective tests of hypothetical urban in-fill structures validated interpretations of restrictive viewing of marble buildings within the cityscape, shifting the emphasis to curated, internalized enclosures defined by porticoes. Temporal analyses of massing models color-coded by material and building period revealed the importance of "constructionscape" (areas occupied

by materials and equipment), revealing how the working of marble in popular urban locations filled the eyes of residents in Augustan Rome with marble dust.

Modeling Natural Light, History, and Liturgy in a Byzantine to Ottoman Building

Matthew Savage, Louisiana State University

Traditional studies of historical buildings often direct attention to only one moment in a building's history: the moment its construction is considered by the researcher to have been complete. This moment is what is usually represented in conventional architectural renderings, such as plans, elevations, sections. But a building never exists for one moment in time: it is constantly subjected to the processes of change through use and the element of time. The problem is compounded when functions of buildings change, such as when churches are converted into mosques, a procedure that was common in Istanbul and elsewhere. For such major and abrupt changes in function, it might be possible to identify accompanying alterations, and architectural renderings might even indicate them as such. But little consideration, if any, is usually given to the kinds of more subtle, gradual alterations a building undergoes during the natural course of its life and use in any given functional phase. Yet such alterations can nevertheless profoundly affect its appearance and spatial environment, and thus also its interpretation and reception over time.

This paper discusses the identifiable alterations made over the course of approximately 1,200 years to one building in Istanbul, the Hırami Ahmet Pa a Mescidi, a small Byzantine church that was later converted into a mosque. While almost nothing is known of the monument from source documents, an analysis of the physical structure reveals a wealth of information about its history, including alterations made to the building during the period it functioned as a church and later as a mosque. Changes to the structure not only affected its physical appearance in both the Byzantine and Ottoman periods but also altered the building's spatial environment, particularly in terms of the orchestration of natural light within the building. The paper presents a model for representing these conditions and discusses the historical implications that result from the ability to document and reconstruct them.

SESSION 2F

The East in Late Antiquity

CHAIR: *Nicholas Rauh, Purdue University*

Two Late Roman Wells in the Athenian Agora

Johanna Hobradschk, University of Missouri, Columbia

Two recently excavated commercial wells at the east end of the Painted Stoa in the Athenian Agora have yielded new evidence for the fate of this building in late antiquity. The pottery sheds new light on how the Painted Stoa was used in

the Late Roman period, and its quantity over time challenges previously held assumptions about destruction and decline in the area of the classical agora during the fourth and fifth centuries C.E.

Unlike in many other excavated Late Roman wells in the agora, all the ceramic material was kept from these deposits, allowing for a more nuanced analysis of the pottery. This paper presents a quantified study of the pottery from the two wells and suggests a chronological adjustment for pottery of the late fourth and early fifth centuries C.E. in Athens, particularly for Attic gouged jugs and for two-handled versions of Late Roman Amphora 3. When this adjustment is made, many deposits that were previously dated to the end of the fourth century can no longer be associated with a destruction of Athens at the hands of Alaric. While there may be some evidence for barbarian invasions in Athens, life did not stop for very long, if at all; therefore, other possible explanations for the archaeological remains from this time period in the agora must be considered, such as the construction of the so-called Palace of the Giants. These two Late Roman wells and many others like them are a better indication of continuous prosperity in Athens through the fourth and fifth centuries, and we should not allow a paradigm of decline and fall to drive our interpretation of the archaeological record.

A Sixth-Century Church in Corinth

Paul D. Scotton, California State University, Long Beach

Although published in 1960, the Southeast Building in Corinth has remained problematic as regards both form and function. Much of the difficulty has arisen from the confusing architectural record. Nearly all the remains are of spolia, and therefore the hazard of conflating different phases is high. Recent investigations have recognized three distinct structures of three different periods. The two earlier phases and structures, an *ergasterion* of the Archaic period and an Augustan-period *tabularium*, or records hall, have been presented previously. This paper presents the third and final structure, a sixth-century church.

In the second half of the fourth century C.E., a major earthquake struck Corinth, leveling the Julian Basilica and the Southeast Building, among other structures. The Julian Basilica was not rebuilt. The Southeast Building was, however, but in the form of a small-scale basilica. This rebuilding included extending the building to the east and north, increasing the thickness of the outer east and west walls, and moving the primary entrance from the north to the south. The widened interior was converted from the Augustan configuration of four rooms with an east–west running corridor to a large, main room with 10 piers in two rows of five, creating a nave with two aisles. On the south was a formal entrance with a small room on either side. To the north was the hieron.

Within the area of the hieron had been an exedra of the Julian Basilica in which was a tribunal. Although of differing orientations, the basilica and the Southeast Building met at this point with a doorway on either side of the tribunal. The extension of the sixth-century church incorporated this area, and because of the difference in orientation, projected at an angle into the area of the south aisle of the Julian Basilica. In the sixth century, this may have been the result of a simple desire to build a bigger building, but an inscription found nearby suggests that this was

not just an Early Christian basilica but one with a particular association. Kent 728 refers to the church of Ayios Pavlos. If this reference is to a specific structure, this sixth-century church was likely the one, built to include the site of the tribunal that had been the seat of the imperial court of law for the province of Achaia.

Symbolism and Meaning Among a New Corpus of Late Roman Octagonal Intaglios

Andrew L. Goldman, Gonzaga University

Among the broad array of oddly shaped (noncurvilinear) gemstones produced during the Roman Imperial period, the octagonal intaglio is indisputably one of the more curious, arresting, and frequently encountered types. Popular to a limited degree between the second and fourth centuries, these eight-sided gemstones have gained little scholarly attention in terms of their production, dissemination, and potential symbolism. This condition is owed largely to their relative rarity but also to a continuing perception among glyptologists that their variation in form should be read merely as an expression of changing popular tastes among Late Roman patrons. Many were cut in the shape of tall, truncated pyramids, with twinkling, eye-catching facets that lend credence to this attractively simple interpretation.

Over the past decade, however, an increasing number of these gemstones—many from secure archaeological contexts—have appeared in publication, the rising incidence of which has greatly facilitated a more thorough study of this specialized gemstone type. As a result, it has now been possible to compile a substantial and detailed corpus of 185 specimens, more than half of which possess a verifiable provenance for either their region of origin or specific find site. This unique assemblage has provided a first opportunity to examine in greater detail a range of standard characteristics (e.g., gemstone type, size, iconographic motifs, date, point of origin) among a sizeable body of octagonals. Among other discoveries, the new data has helped refine the chronological span of octagonal production and, with a considerable percentage surfacing in Turkey, to suggest possible workshop candidates in the Roman East, at sites such as Sardis and possibly Ancyra and Caesarea.

The corpus has also revealed that a substantial proportion of the carved motifs display symbolism with evident connections either to the military (e.g., eagles, Mars, *dextrarum iunctio*) or to early Christians (e.g., Chi Rho, the Good Shepherd). In consequence, it is argued that eight-sided intaglios were purchased not merely to reflect popular tastes; rather, more deliberate motives for ownership can be discerned here. The eight-sided aspect of the stones reflects deep symbolic meanings relating to fellowship and doctrine held among members of the Late Roman military and Early Christian communities.

The 2013–2014 Seasons of Excavations at Huqoq in Israel's Galilee

Jodi Magness, University of North Carolina at Chapel Hill, *Shua Kisilevitz*, Israel Antiquities Authority, *Matthew Grey*, Brigham Young University, *Benjamin Gordon*, Duke University, *Chad Spigel*, Trinity University, and *Karen Britt*, University of Louisville

Since 2011, excavations at Huqoq in Israel's Galilee have brought to light remains of a Late Roman to Byzantine (fifth to sixth century) village and monumental synagogue building. In this paper, we present an overview of the discoveries of the 2013–2014 seasons, focusing especially on the synagogue building, which is decorated with unique figured mosaics. These include scenes showing the exploits of the biblical hero Samson and a panel that may depict the legendary meeting between Alexander the Great and the Jewish high priest, a story preserved in the writings of Flavius Josephus and in rabbinic literature. This mosaic panel is the first example of a nonbiblical story ever discovered decorating an ancient synagogue.

Ceramic Evidence from Caesarea's South Bay in the Late Roman and Byzantine Periods

Alexandra Ratzlaff, University of Haifa, *Ehud Galili*, Israel Antiquities Authority, and *Assaf Yasur-Landau*, University of Haifa

The South Bay of Caesarea is located south of three well-investigated and published areas of maritime activity. These are the Herodian harbor, the South Harbor, and on the coast opposite it, the Roman warehouses (*horrea*). Extensive underwater surveys in this bay have yielded a large corpus of new material indicating that this area, too, was a center for thriving maritime activity. At the core of this new corpus of material is an assemblage of Late Roman and Byzantine transport amphoras, the theme of the present research. Their underwater distribution patterns indicate that most were found together in small clusters of similar amphora types. Furthermore, as most of the vessels are relatively unworn by the sea and are represented by their entire upper third, it is very possible that their findspots represent their initial place of deposition in separate cargoes each originating from a unique merchant ship.

Typologically, more than half of the assemblage originated in Palestine, mostly as variations of Gaza jars. The remaining vessels come from sites in Egypt, North Africa, and the Aegean Islands. Many of the same types of vessels, from this maritime context in the South Bay, have also been recovered in terrestrial excavations in the city and were dated to late antiquity.

This collection composition provides additional evidence for Caesarea's prosperous maritime activities during the Late Roman and Byzantine periods. The pronounced presence of local amphoras may indicate that the South Bay was the locus of coastal trade (cabotage) or that it was the exit point of exported goods. Other finds in the same bay, such as a jetty, as well as cargoes of metals and marble, testify that during the Late Roman and Byzantine periods the South Bay functioned as a secondary anchorage, supporting the provincial capital's commercial endeavors.

SESSION 2G: WORKSHOP**Hellenistic Pottery Beyond the Euphrates: Regional Connections and Local Traditions from Northern Mesopotamia to the Caucasus, from Iran to Central Asia**

MODERATORS: *Hilary Gopnik*, Emory University, and *Rocco Palermo*, Università di Napoli Federico II

Workshop Overview Statement

The Hellenistic pottery assemblages of the Levantine coast, western greater Syria, and western Turkey have been intensively studied and are now relatively well understood and widely published. The eastern reaches of the region (northeastern Syria, Iraq, southern Anatolia, the Caucasus, and Iran), however, still lack synthetic treatments and extensive publication. This workshop elucidates the complex assemblages that archaeologists have uncovered in survey and excavation east of the Euphrates, outlining the interregional networks and local traditions in this large but poorly understood area.

The main aim of the workshop is to exchange information about pottery assemblages in this broad geographic context. Our chronological range is from the late fourth century B.C.E. to the first century B.C.E., but we also incorporate material on either end of that period that ties assemblages into the Achaemenid and Roman/Parthian periods. The participants have been chosen to cover the entire geographic range: from Mesopotamia to central Asia and from the Caucasus to southern Iran. Because the aim of the workshop is to engender critical discussions of this material, the presentations will be circulated in advance with only five-minute summaries presented at the workshop. The remaining time will be spent asking questions, raising issues, and exchanging ideas and approaches to this material.

Presentations include theoretical approaches that offer models for networks of pottery exchange and local production, including identifying the cultural and fabrication sources of certain widespread forms, tracking local continuities with earlier material, and distinguishing functional variations within and between assemblages. Analytical approaches include stylistic, chemical, and petrographic analysis. Since these assemblages can be formally similar but with very different finishes or wares, emphasis will be on illustration, and participants are encouraged to provide multiple forms of illustration including plates, photographs, reconstructions, and ware samples if possible. Although the focus is on ceramics, fruitful discussions about broader issues—including the nature of Hellenism, hybridity, fluid cultural borders, and exchange and production systems that potentially transcend political borders—will arise out of presentations in the workshop.

PANELISTS: *Rocco Palermo*, Università di Napoli Federico II, *Lidewijde de Jong*, University of Groningen, *Bertille Lyonnet*, EPHE, Paris, *Giulio Maresca*, Università di Napoli L'Orientale, *Lara Fabian*, University of Pennsylvania, *Susannah Fishman*, University of Pennsylvania, *Charlotte Maxwell Jones*, University of Michigan, *Gabriele Puschingg*, University College London, *Fabiana Raiano*, University of Naples "L'Orientale", *Iona Kat McRae*, The University of Sydney, and *Hilary Gopnik*, Emory University

SESSION 2H**Archaeological Sites in Jeopardy: Problems and Prospects**

CHAIR: *Sarah Parcak*, University of Alabama at Birmingham

Pompeii Sustainable Preservation Project: The First Campaign at the Nocera Gate Necropolis

Albrecht Matthaei, Fraunhofer Institute for Building Physics, *Anna Anguissola*, Ludwig-Maximilians-Universität München, *Ralf Kilian*, Fraunhofer Institute for Building Physics, and *Daniele Malfitana*, Istituto per i Beni Archaeologici e Monumentali del CNR

At the 2014 AIA Meeting in Chicago, we had the chance to present the Pompeii Sustainable Preservation Project (PSPP), its aims, and its methods. The PSPP has now started, and we would like to report on its progress and first results. With a start-up grant from Germany's Fraunhofer-Gesellschaft and Italy's consiglio nazionale delle ricerche, our team of conservators and archaeologists has begun its research. Restoration and documentation work started in a preliminary campaign in the fall of 2014 at the necropolis of Porta Nocera. With its 60 grave monuments, this necropolis, which was excavated in the early 1950s, together with the grave monuments from the so-called Fondo Pacifico (unearthed in 1983), is the biggest tomb precinct of Pompeii and allows us to study and preserve ancient plaster, mortar, building structures, statues, small findings, and wall paintings. This is of course the perfect place for our project, which employs an interdisciplinary approach by combining work in archaeology, restoration, and the development of new materials for sustainable conservation while at the same time taking into account the history of the architecture.

In this paper, we present the results of this first campaign: after an overview on the condition of the tomb monuments and a rescue plan formulated on the basis of the actual damage, we move to the question of the restoration history of Pompeii's necropoleis with particular attention to the different models of roof shelters that were constructed over the monuments. A central theme pertains to aesthetics of the roofs that, apart from rescuing the monument over which they stand, also help shape the space of the modern museum-necropolis area. Important aspects are also the costs, the material, and the sustainability of the different shelter solutions so far used in Pompeii. A final section of the paper is devoted to the new concepts, solutions, and methods the PSPP applies to the actual fieldwork. Since the project and the ongoing work is still in its first phase we will start with only reversible interventions—like removable shelters—and aim to open a discussion on these topics, hoping for critical input for the next campaigns.

Archaeological Excavation at the Sites of Mese Aynak, Afghanistan

Abdul Wasey Ferozi, Archaeology Institute of Academy of Sciences

In this paper, I give a brief overview on archaeological sites of Mese Aynak, Afghanistan. The Mese Aynak archaeological site, located in Logar province, 35

km southeast of Kabul, in addition to having a distinguished archaeological value, contains the second-largest copper mine in the world. The natural and cultural resources of this area have been appreciated by its inhabitants since old times.

A preliminary survey of the Mese Aynak site was carried out in 1963, when the Soviet Union technician team started a survey for copper. They also came to know about the value of the ancient historical site, and throughout the years after, archaeologists and researchers have visited the site from time to time.

This site has been significantly looted during the years of war and conflict. After receiving a report in 2004 of illegal excavation and looting, an archaeological mission from the Afghan Institute of Archaeology visited the area for the first time in 2005, carrying out a preliminary survey of the site.

Later, when the government of the Islamic Republic of Afghanistan and the Chinese company MCC signed a contract for copper mining, extensive archaeological excavations started on the site, according to the international standard.

Eventually, in 2009 the official excavation of the area started by the Institute of Archaeology of the Ministry of Information and Culture, with the cooperation of scientific members of the Archaeology Center of the Academy of Sciences, with the technical support of international archaeologists, particularly the French archaeological mission in Afghanistan (DAFA), and with the financial support of the World Bank.

The constructions and artifacts that have been excavated so far belong to a historical timeline extending from the Kushan to the Islamic period. Valuable artifacts, such as coins, pots, wall paintings, and clay and stone statutes that have been discovered on the site, are comparable to those of the Hada, Bamyán, and Tape Maranjan Kabul archaeological sites.

Initial excavation led by the Afghan Institute of Archaeology and DAFA at Mese Aynak began in 2009 at the monastic site of Qala-e-Gul Hamid. In 2010, the second monastic site was excavated at Kaferia Tapa.

Archaeological excavation increased in scale and intensity in 2011, when teams from the Institute of Archaeology of the Ministry of Information and Culture and the Archaeology Center of the Academy of Sciences were joined by a team of international archaeologists.

Vandalism and Destruction of Rock Art Sites in Tadrart Acacus (Southwest Libya)

Ahmed Alsherif, Sebha University

This research focuses on approaches to vandalism and destruction of rock art and Tefinagh inscription sites in Tadrart Acacus. Tadrart Acacus has thousands of cave paintings in very different styles dating from 12,000 B.C.E. to 100 C.E. Numerous rock art sites in Tadrart Acacus include hundreds of engravings and thousands of paintings. The massif measures roughly 150 km long x 50 km wide. The massif of Tadrart Acacus hosts one of the richest concentrations of Sahara rock art. It was included in 1985 on the UNESCO list of World Heritage Sites. There are, however, hundreds of Tefinagh inscriptions that have been discovered in Tadrart Acacus.

Approximately 10 sites were damaged on April 6–7, 2009, in two different areas of Tadrart Acacus, the Awiss and Senaddar areas. Moreover, black and sil-

ver spray-paint was used to destroy these rock art sites. In May 2014, rock art in Tadrart Acacus was vandalized by spray-painted graffiti and carved initials at an accelerated rate, since the country's civil war had begun in February 2011.

Deep Roots: Building a Future from Fragments of the Past

Helena Pinto Lima, Museu Paraense Emílio Goeldi, and *Anna Browne Ribeiro*, Museu Paraense Emílio Goeldi

Once a thriving metropolis in the Brazilian Amazon, today the city of Carrazedo lies buried beneath forest soil and vegetation. This important site, which boasts historic and pre-Columbian remains, struggles against total destruction, facing threats not only from natural forces but also from the inexorable forces of development. The situation at Carrazedo exemplifies the preservation limbo that characterizes the precarity of Amazonia's archaeological record.

This paper reports on an ongoing interdisciplinary project sited in the lower Amazon that seeks, in parallel with academic research efforts, to create a collaborative heritage preservation project in Gurupá, the district that encompasses Carrazedo and other similar sites. Known in colonial-historical times as an important military and commercial center, Gurupá also presents evidence of significant pre-Columbian trade and habitation. The remains of these occupations, be they historic forts or deeply stratified archaeological sites, continue to contend with a variety of threats.

With this in mind, archaeologists from the Museu Paraense Emílio Goeldi in the Amazon developed OCA (Origens, Cultura e Ambiente), a framework for a coupled education and research project. Carrazedo was selected as OCA's first proving ground because of its academic and historic significance, as well as community interest in heritage management.

In Amazonia, populations tend to settle where others have been. This appears to have been as true in the pre-Columbian period as in historic and modern times, and in Gurupá, this means communities actively inhabit archaeological sites. This mirroring reflects, and also follows, the millennial ecological legacies of previous inhabitants. However, pre-Columbian settlements are often substantially larger than contemporary towns, which is also the case throughout Gurupá. This suggests that past environmental management systems permitted larger populations to thrive in these places, today considered inimical to intensive human use. In this sense, these sites are more than a forgotten history; they hold the key to technologies for a sustainable future.

Contemporary populations in Gurupá come into daily contact with archaeological remains, which subjects this heritage to potential jeopardy at every encounter. This contact has recently intensified due to the Brazilian government's implementation of major infrastructural construction projects. In areas previously unsupported, this vital governmental intervention pits health against cultural heritage, presenting archaeologists with a serious dilemma.

Given local interest in protecting this heritage, we consider how collaborative interventions can balance the immediate benefits of development and the long-term advantages of participatory heritage management in Gurupá.

SESSION 2I**Domestic Contexts in Campania**

CHAIR: *John Clarke*, The University of Texas at Austin

Votive Evidence and Ritual Behavior in Pompeian Domestic Space

Kevin Dicus, Case Western Reserve University

The Pompeii Archaeological Research Project: Porta Stabia recovered approximately 130 votive objects (miniature vessels, figurines, anatomical terracottas) during its eight seasons excavating the domestic properties at I.1.1–9 and VIII.7.1–15 in Pompeii. The distribution of the objects is relatively even: usually no more than five votives, and in some cases no votives, were recovered from a single trench. Three anomalies occur in the northern and central properties of VIII.7.1–15 and the southern property of I.1.1–9, where the numbers notably increase (20, 21, and 30 votives, respectively).

This paper analyzes how this distribution might (not) speak to ritual performance in Roman households. The distribution might suggest observable ritual performance patterns: regular small-scale dedications may have occurred throughout the houses, while some especially sacred areas hosted more intensive ritual activity. Through a careful examination of how the votives arrived at their findspots, however, the paper proposes a different scenario. It demonstrates that about 70% of the votives were recovered from patently secondary contexts. The votives were constituent parts of large assemblages that were brought into the space as construction fill and, consequently, are not markers of domestic ritual activity. The statistic also applies to the anomalous areas. Nearly all the votives from the two large deposits in VIII.7.1–15 are shown to be in secondary contexts as well, deposited through processes other than ritual activity.

The final section of the paper focuses on the assemblage from the southern property of I.1.1–9. It is remarkable not only because it contains the largest number of votives (N=30) but also because the votives appear in their primary context, deposited at the place of use. This relationship between object and space, however, does not necessarily indicate that the space was especially sacred: only nine votives are linked to ritual deposition. The remaining votives were part of the accumulated waste products from a neighboring kiln workshop and therefore represent an economic aspect of ritual rather than a sacred one.

This paper demonstrates the ambiguity inherent in seemingly straightforward assemblages. The distribution of votives throughout numerous households ostensibly points to consistent ritual activity, but a close analysis of the formation processes reveals that the distribution is misleading. It is crucial to understand how assemblages were deposited before they are used to interpret the activities of a site.

Marble in Elite Domestic Décor: The Decorative Lithic Programs of the Villa Arianna and Villa San Marco (Ancient Stabiae)

Simon J. Barker, Independent Researcher, and *J. Clayton Fant*, University of Akron

Campanian houses are justly famous for their decorative wall paintings; however, the equally exceptional stone décor has not received due attention. The Marmo al Mare Project presents preliminary results in its ongoing campaign to make the first comprehensive study of the lithic decoration for the most prominent elite houses within the Vesuvian area (work on Villa A at Oplontis was presented at the Annual Meeting in Seattle in 2013).

This paper presents the initial results of two seasons of survey work at the Villa Arianna and Villa San Marco at Ancient Stabiae (modern Castellammare di Stabia). The paper discusses several results of this project: first, a survey of the overall marble use at the Villa Arianna (and the so-called Secondo Complesso) and the Villa San Marco, including but not limited to marble thresholds, pavements, and wall revetment. Our study of San Marco confirms that the marble pavement in Room 10 employed rare Egyptian granites, including Granito della Colonna (Wadi Umm Shegilat) and Sedia di San Lorenzo (Wadi Semna), and that Room 16 had the largest marble floor of any residence in the Vesuvian area with a wall-to-wall *opus sectile* pavement of more than 200 m². Secondly, this paper discusses the level of marble décor at both villas, the range of stones represented at each site, their qualities and quantities, and how the villas compare with other houses within the wider Vesuvian area in the use of marble in domestic décor. Finally, our approach to the quantification of marble varieties and prestige levels is discussed, including new methods of recording and analyzing mosaic pavements with marble inserts. In total, three such pavements are known at the Villa Arianna in Rooms 3, 31-35-41, and M (no such pavements are attested at San Marco). The pavements in Rooms 3 and M were examined in detail as a test case for our methodology, and its scope for examining similar pavements at Pompeii and Herculaneum is also discussed.

***Pinguntur enim portus*: The Spatio-Temporal Context of Harbor Landscapes in Roman Wall Painting**

Gregory S. Tucker, University of Michigan, and *Matthew Naglak*, University of Michigan

Harbors and ports are prominent in descriptions of Roman wall painting both by Vitruvius, in *De Architectura*, and by Pliny, in *Naturalis Historia*. They are described as common in corridors and in open terraces, but there is little information provided in either text as to their spatial surroundings or the social significance of this imagery. Much like the well-studied subject of maritime villas, harbors in Roman wall painting depict the interaction of constructed, organized space and wild, untamed nature. Vitruvius specifically lists “harbors” first when describing the many subjects found in landscape painting from the mid to late first century B.C.E., indicating the conceptual overlap between natural and anthropogenic space. The focus of the texts and the surviving evidence both indicate that these images were commonly found in domestic spaces; however, we wish to further evaluate the significance of where these images can be found within these spaces.

Considering how and where the Romans positioned these images and whether there are changes to these patterns over time gives us insight with which to draw better conclusions as to how people thought about the places they inhabited, how they perceived their world.

In this paper, we examine harbor imagery from Roman-era domestic space around the Bay of Naples—a wide range of images from the villas at Oplontis and Stabiae and the houses of Pompeii and Herculaneum provide a contextual framework with which we can begin to derive patterns in the style of depiction and location of harbor scenes. We analyze changes in the space and place of these images over the traditional four periods of Pompeian wall painting while at the same time applying the methods of space syntax and visibility analysis to better understand how these images were presented, viewed, and experienced in combination with the rest of the domestic interiors. Placing these images back on the walls and into the spaces where they were experienced, as well as within the dynamic economic and political context of the Roman empire at the time, allows us to explore changing perceptions of the functional space of harbors and domestic decoration using an integrated approach.

“Si sono scoperte sette buone pitture”: Linking Bourbon Excavations to New Finds at Villa Arianna, Stabiae. A Study of the Wall Painting Decoration of Cubiculum 89

Aurora Raimondi Cominesi, Restoring Ancient Stabiae Foundation, and *Paolo Gardelli*, Restoring Ancient Stabiae Foundation

Between 2010 and 2013, the State Hermitage Museum of Saint Petersburg—in collaboration with the Restoring Ancient Stabiae Foundation and under the direction of the Soprintendenza Speciale per i Beni Archeologici di Napoli e Pompei—has conducted two archaeological and conservation campaigns at the site of Villa Arianna, in ancient Stabiae. The campaign has led to the rediscovery of a *cubiculum amphitalamos* (89) already investigated by Bourbon excavators in 1759, when “seven pictures in good state”—now on display at the Museo Archeologico Nazionale di Napoli (inv. nos. MANN 9289, 8840, 9332, 9169, 9664)—were found and detached.

Starting by putting these fragments back in their original architectural context, we present a study of the fresco decoration of the room, including some interesting new discoveries. The room consists of a *procoeton* decorated on a red background onto which two alcoves open: with a white background, the northwest one (2.50 x 1.60 m); with a yellow background, the northeast one (2.50 x 2.0 m). The excavations of 1759 concerned the entirety of the northwest alcove, the north and part of the south wall of the northeast alcove, and the *procoeton* but left untouched the entirety of the east and part of south wall of the northeast alcove. Here, an interesting *quadretto* emerged, standing alone at the center of the medium zone of the east wall, which presents many a point of comparison with the renowned fresco of the Cupid Seller (inv. no. MANN 9180) supposedly discovered only a few meters away from Cubiculum 89. At the same time, another floating figure, seen from the back, resembles closely the execution of the Flora (inv. no. MANN 8834), equally

discovered in a room adjacent to Cubiculum 89. Other figures seem to be adding an “Egyptianizing/Isiac” motif to the room.

This paper studies the late Third Style decoration of the room in the context of past discoveries, shedding new light on the use and dating of the sector of Villa Arianna where the *cubiculum* 89 is located, and especially on the transition from late Third to early Fourth Style, both at Villa Arianna and—more generally—at the Vesuvian sites.

SESSION 2J

Poster Session

A LIDAR Application at the House of Kadmos in Thebes, Greece

Anastasia Dakouri-Hild, University of Virginia, *J. Mason*, RWTH Aachen University, *S. Schneiderwind*, RWTH Aachen University, *Y. Fappas*, Archaeological Museum of Thebes, and *Will Rourke*, University of Virginia

Between 1906 and 1929, a massive Late Bronze Age building was excavated on the citadel of Thebes, Greece. The architecture, featuring ashlar masonry, pictorial life-sized frescoes, and an impressive (if partially preserved) footprint, stands out even today at the center of the citadel. Despite the House of Kadmos’ significance, the archaeological assemblage remained largely unpublished and until recently the architecture was not recorded in detail. In 1997–1998, the latter was recorded and studied comprehensively by the main author, and a monograph is in preparation to publish the site in its entirety. As part of this publication program, the building was scanned in early 2014 using stationary LIDAR. In this poster, we present preliminary results of this operation, entertaining the value of LIDAR scanning in heritage management, public dissemination of archaeological information, and primary research.

Not the Short End of the Stick: Dwarfism in Classical Greek Sicily

Carrie L. Sulosky Weaver, University of Pittsburgh

Well-attested in the writings of ancient authors Herodotus, Thucydides, and Diodorus Siculus, the Greek city of Kamarina was founded on the coast of south-eastern Sicily ca. 598 B.C.E. and occupied until the middle of the first century C.E. The city’s classical necropolis, which archaeologists call Passo Marinaro, was established southeast of Kamarina and was in use from the fifth through third centuries B.C.E. During the osteological analysis of a skeletal assemblage (N=272) from Passo Marinaro in 2011, an abnormally proportioned human skeleton was discovered. Although the cranium of the individual is the expected size for an adult, the shafts of the long bones are unusually short. These, as well as other unique skeletal features, suggest that the individual’s condition was caused by pituitary dwarfism, which is the result of a dysfunctional pituitary gland. This paper presents the archaeological evidence surrounding the dwarf skeleton and the cultural implications of its inclusion within a Sicilian Greek necropolis. After a brief

description of Kamarina and its cemetery, details of the skeleton's anatomical abnormalities and burial context are given; parallel case studies of ancient dwarfism are discussed; and perceptions of dwarfs in Greek art and literature are explored, ultimately placing this individual within the wider framework of Greek mortuary and cultural practices. The study concludes that this individual is the only known dwarf, pituitary or otherwise, from a classical Greek context. Since this individual was buried in the same manner as other members of the community, the burial context suggests that the dwarf was not marginalized as "other" but rather fully integrated into Kamarinean society.

XRF Analysis on Early Bronze Age Metal Items from Kalinkaya-Toptastepe

Evren Y. Genis, Middle East Technical University

Kalinkaya-Toptastepe, an Early Bronze Age site in central Anatolia dated to the late fourth and the third millennium B.C.E., yielded a large number of metal objects from the Early Bronze Age necropolis of the southern slope of Toptastepe, offering an ideal closed assemblage to reveal the metalworking technologies of an early small rural community of central Anatolia. The first archaeometrical analysis applied on these objects several years ago, however, revealed unexpectedly high amounts of zinc, which turned out to be not an intentional alloy but modern contamination due to the electrochemical cleaning carried out in the 1970s. The author carried out a second analysis after cleaning the metal objects using a microsandblasting technique to remove the artificial zinc contamination. The accumulated data provided important insights into the metal alloying traditions of a late Early Bronze Age village community in central Anatolia, showing that the earliest conscious alloys were being applied in small hamlets of the Early Bronze Age as well. It is apparent that these pre-Iron Age metal objects, revealing zinc in their chemical composition, cannot be considered early brass but rather are a result of a modern, ill-advised cleaning application.

Roman Marble Use in Central Adriatic Italy

Devi Taelman, Ghent University

The use of marble and stone in ever-increasing quantities was emblematic of Roman architecture and culture. While Roman buildings have often been studied for their architectural and art historical value, their potential to inform us about the use and trade of building material and its role in the Roman economy is often overlooked. Roman architecture was frequently embellished with high-quality marble, often imported over long distances from across the Mediterranean. The study of marble use and trade therefore offers important information on ancient commercial relationships, trade patterns, and supply routes. While some general questions about the trade of marble have been examined, very few studies have dealt with this historical phenomenon from a quantitative and regional perspective.

The paper presents the first results of a rigorous study of marble use in the Roman towns of central Adriatic Italy. The overall goal of the project is to gain new insights into the mode of distribution and the social-economic mechanisms

that were involved in the large-scale import and export of marbles in the Roman period. For this, the results from central Adriatic Italy are integrated into the wider historical and archaeological record. This paper focuses on the results of the identification and provenance of the various stone materials used for embellishing the archaeological sites of Potentia, Helvia Ricina, and Trea. By approaching the use and provenance of marble decoration from a quantitative perspective, differences in supply patterns between sites can be identified.

Draft Map of Hispania During the Second Century C.E.

Richard J.A. Talbert, University of North Carolina, Chapel Hill, and *Ryan M. Horne*, University of North Carolina, Chapel Hill

The Ancient World Mapping Center at University of North Carolina, Chapel Hill (awmc.unc.edu) presents for inspection and comment a large draft map of Hispania (the Iberian Peninsula) during the second century C.E. This is the center's second such map: the first, of Asia Minor in the same period, is now finished and in production. Despite the recent improvement of map resources for the study of classical antiquity, it remains a challenge for scholars who study very extensive regions to gain a cartographic conspectus of them at a serviceable scale. The Iberian Peninsula is a prime example. Even in the *Barrington Atlas*, where double-spread maps can extend to 62 cm wide, it is split among four maps at 1:1,000,000 with an additional inset to accommodate the Balearic Islands. Coverage by the *Tabula Imperii Romani* (five sheets also at 1:1,000,000) suffers equally. The latter's original intention to issue a comprehensive map encompassing all its sheets once they were completed (in 2001) has not been fulfilled. Moreover, its oversight of northern Portugal on K-29 Porto/Conimbriga (1991) has never been redressed.

Digital technology and the center's expertise now permit coverage of the Iberian Peninsula and Balearic Islands in a single map at 1:750,000. This larger scale corresponds to the Asia Minor map as well as to the presentation of Greece and Italy in the center's *Wall Maps for the Ancient World* (Routledge 2011). While the series was designed for classroom use, the Iberian Peninsula map expects a mature engagement and purposely confines its focus to one century. For the base, the center modifies OpenStreetMap and Shuttle Radar Topography Mission data to re-create (so far as possible) the physical landscape of the Roman period. Use of these open-source resources makes it possible to present the complexities of coast- and river-line work in notably accurate detail. Elevation is distinguished by eight tints. Naming of both landscape and cultural features matches the *Barrington Atlas*; coordinates are derived from Pleiades project data wherever available. All settlements marked in the *Barrington Atlas*' three larger lettering sizes are shown, together with significant further sites and new discoveries determined with expert help. Observers' reactions to the draft on display are eagerly invited. In addition to the planned publication of the map in print, an electronic version is under consideration: it would use the center's new map tiles and À-la-Carte framework to provide an interactive, customizable application that contributes to the Pleiades and Pelagios linked data community.

(Re)Constructing Antiquity: Three-Dimensional Modeling and Cypriot Votive Sculpture from Athienou-Malloura, Cyprus

Erin Walcek Averett, Creighton University, *Derek B. Counts*, University of Wisconsin–Milwaukee, *Kevin Garstki*, University of Wisconsin–Milwaukee, *Michael K. Toumazou*, Davidson College, *Adam Whidden*, University of Kentucky, *Qing Zhang*, University of Kentucky, *Bo Fu*, University of Kentucky, *Brent Seales*, University of Kentucky, *Ruigang Yang*, University of Kentucky, and *Caitlyn Ewers*, Creighton University

In the summer of 2014, the Athienou Archaeological Project (Davidson College), in collaboration with the University of Kentucky's Center for Visualization and Virtual Environments, Creighton University, and the University of Wisconsin–Milwaukee, initiated a pilot research project that used structured light scanning to produce three-dimensional models of archaic-Roman votive offerings dedicated in the rural sanctuary at Athienou-Malloura. Visual documentation is at the core of archaeological practice, and imaging has played a critical role in archiving and interpreting material culture. Although archaeologists have embraced technology for this purpose since the discipline's inception, recently there has been a proliferation in cost-effective digital imaging technologies and the use of computerized applications. The use of imaging technologies presents many practical advantages, from research analysis to virtual presentation, in an international field that rarely permits archaeological finds and objects to be removed from their country of origin.

This poster presents the results of our pilot season implementing an accurate but cost-effective process to create high-resolution three-dimensional data sets. A close-range projection structured light scanning system with customized hardware and software packages was developed for our project by the Center for Visualization. The equipment includes a Flea3 8.8 MP Color camera, a BenQ 1080p projector to illuminate each object with a known pattern, and purpose-built software to scan, reconstruct, mesh, texture map, and visualize objects. The objects scanned include a range of scales and materials: terracotta figurines, limestone statues, bone, glass, and ceramic vessels. In addition to developing protocols and a set of best practices for the scanning process, we were able to generate an accurate and sample corpus of three-dimensional models. The metadata (which records the geometry and shape of the object, as well as its appearance) has already proven to be a powerful tool; for example, final models can be measured with a digital ruler to 0.5 mm accuracy across any part (or the whole) of the object. Likewise, a printed prototype from a limestone head reveals an amazing degree of accuracy with respect to surface detail and form. Subsequent phases of this project will experiment with developing a predictive data-processing algorithm that will use geometric dimensions, surface texture, and break patterns to propose potential joins among our thousands of terracotta and limestone fragments and use the three-dimensional models to ask further research questions regarding manufacture techniques and surface treatments.

Copper-Alloy Vessels Reported Through the Portable Antiquities Scheme: A Perspective on Rural Identity in Roman Britain

Jason Lundock, The Appleton Museum of Art

This poster reviews copper-alloy vessels of Roman date reported through the Portable Antiquities Scheme (PAS) and uses this data as a means for discussing the formation and display of identity within the British countryside during the Roman period. Examination of regional variations in vessel forms, types, and decoration reveals geographic trends that relate to the specific practices of consumption and display employed by localized populations. By analyzing other objects of Roman date discovered near the findspots of copper-alloy vessels, it is possible to create site profiles and relate these objects to their wider context and use. In doing so, it is apparent that the rural landscape of Britain was complex and that copper-alloy vessels were used and adapted by diverse groups of peoples inhabiting the island during this time. This poster not only demonstrates the great utility of the PAS in studying rural life and identity in Roman Britain but also shows the value of artifact studies in the examination of identity and ancient material culture.

All the Colors of White: Seeking Colors on the Niobids Group at the Uffizi Gallery in Florence, Italy

Cristiana Zaccagnino, Queen's University, Fabrizio Paolucci, Uffizi Gallery, Pietro Baraldi, University of Modena and Reggio Emilia, and Andrea Rossi, Independent Researcher

The uncovering at the same time of 13 marble statues representing the myth of the Niobids and the group of two wrestlers in Vigna Tommasini in Rome in 1583 has been considered one of the most extraordinary discoveries of the 16th century. The myth of the Niobids was extremely popular during the first two centuries of the Imperial period. The Niobids, Roman copies of the late second century C.E. after a Greek Late Hellenistic original, once decorated the Horti Lamiani and Maiani and were probably located in a nymphaeum, as in Hadrian's Villa at Tivoli and in the recently discovered villa of Marcus Valerius Messalla Corvinus at Ciampino near Rome. The group was purchased (along with the two wrestlers) by Ferdinando de' Medici soon after its discovery and was located in Villa Medici until it was brought to Florence in 1770, where since 1779 it has been on exhibit in the room expressly created for it at the Uffizi Gallery.

The recent restoration of the statues has given the opportunity to look for evidence of polychromy on their surfaces. The goals of the research project were to find the decorative aspect of the statues and to acquire information about the characteristics of the pigments used. Two different methods were used: (1) the visual, involving macroscopy, technical photography (ultraviolet fluorescence, infrared reflectography and visible-induced luminescence) and microscopy, and (2) the analytic, involving removal of pigment samples on which were carried out analyses through instrumental and analytical technologies (infrared and Raman microscopy).

Traces of white lead as well as cinnabar for the skin and red (iron oxides and hydroxides, and madder lake) for hair, dresses, and rocks have been identified with certainty. The outline of the eyes of one Niobid was defined with pigments. No Egyptian blue has been identified. Traces of blue have been identified as phthalocyanine, a modern compound used in dyeing.

The preliminary results clearly confirm the use of painting on the Niobids, despite the numerous restorations after the discovery. Currently, our knowledge about polychromy of Roman copies of Greek originals is quite scarce, but certainly color was an important element as appreciated as the qualities of the sculpture itself. The comparison of these data with evidence of pigments on other copies of the Niobids may be used to verify whether replicas were not only carved but also painted according to a prescribed scheme.

Introducing the Manar al-Athar Open-Access Photo Archive

Elizabeth Macaulay-Lewis, Graduate Center, City University of New York, and
Judith McKenzie, University of Oxford

The free Manar al-Athar online Photo Archive (www.manar-al-athar.ox.ac.uk) now has more than 12,000 high-resolution images for teaching, research, and publication of art and architecture of the areas of the former Roman empire that later came under Islamic rule, such as Syro-Palestine/the Levant, Egypt, and North Africa (ca. 300 B.C.E. to the present). "Manar al-Athar" is Arabic for "Guide to Archaeology," and material is labeled in both English and Arabic, facilitating its use in the lands in which the sites are located. Based at the University of Oxford, it is an example of the online presentation of research results, making data immediately available to other scholars for their own research while also providing teaching material.

Users can sort and search images, and the information about each image is stored and downloaded with it. The site was developed from the ArchDAMS image management system at the Institute of Archaeology, University of Oxford. Users can download images at high resolution for academic publications (free of charge, without form filling, not watermarked) or at low resolution for teaching.

Pilot development of this website is part of a project at the University of Oxford (funded by the Leverhulme Trust), Late Antique Egypt and the Holy Land: Archaeology, History and Religious Change. Thus, the initial focus and strength is on Late Antique buildings or sites that have undergone conversion from paganism to Christianity, and sometimes, in turn, to Islam. This includes material of interest to those studying iconoclasm and pilgrimage. With the support of other sponsors, new images are being uploaded regularly, and coverage is being widened to Roman architecture and pagan, Christian, Jewish, and Umayyad art. The photographs of each monument, taken by the team, are presented in a visual sequence to convey the contexts of details.

This wide coverage also makes the Manar al-Athar Photo Archive suited for teaching at the secondary, undergraduate, and graduate levels. With images demonstrating the common classical heritage in Hellenistic and Roman architecture and floor mosaics from Tripoli to Damascus, the Photo Archive is a useful resource for those teaching classical civilization courses, as well those on the Graeco-Roman

Near East. Examples are presented of its use to create nontraditional assignments, such as websites on specific sites and buildings made by students at the Graduate Center at the City University of New York, to demonstrate the Photo Archive's usability in teaching contexts.

Excavation of Sector S: A New Late Antique Fortified Site at Pessinus

Paolo Maranzana, University of Michigan, and *Simon Young*, Melbourne University

The archaeological explorations at Pessinus, located in central Anatolia, have been carried out in the past five years (2009–2013) under the aegis of the University of Melbourne and funded mainly by the Australian Research Council. The project is directed by Gocha Tsetskhladze (University of Melbourne). The excavation of sector S (2011–2013) aims to improve our understanding of the edges of the Late Roman and Early Byzantine city. The site of Pessinus bears no traces of fortifications, although archaeological and geophysical studies have highlighted the presence of several watchtowers. Furthermore, a Byzantine fortress was excavated by a team from Ghent University between 1987 and 1991. These structures most likely composed an alternative defensive system.

During the 2010 season, geophysical prospection has shown the presence of another fortified site on a plateau located to the east of the city. This site is designated sector S, and it was targeted by two seasons of archaeological excavations in 2011 and 2013. The results show the presence of a fortified area that developed over time. We were able to reconstruct some of the fortress' architectural features. The walls were reinforced by buttresses placed at regular intervals (5 m apart), while the structure was made out of layers of roughly cut stone fixed with mortar. Further analysis of the structures excavated have highlighted some interesting features: first, the fortress was built in at least two phases, as the round tower found on the north side was probably added later. Second, the fortress was most likely constructed on top of a Late Hellenistic necropolis—a grave of this period was uncovered about 2 m below the modern surface in one of the trial trenches in 2013. This new discovery confirms the hypothesis of an expansion of the city during the Late Antique/Early Byzantine period, as already observed on other sites located in the periphery of Pessinus. For example, a church was discovered by geophysical study during the 2013 season. This structure, probably Early Byzantine, was also built on top of a hill located on the west fringes of Pessinus. The urban development of Pessinus provides key information on the transformations of central Anatolia in the Late Antique/Early Byzantine period. Sites such as Amorium and Germia have pointed to the expansion of settlements during this period in the area, and the results from the 2011–2013 seasons at Pessinus conform with this observation, and provide additional insights into the process.

Post-Neolithic Obsidian Consumption and Early Metallurgy in the Western Mediterranean

Kyle P. Freund, McMaster University, Robert H. Tykot, University of South Florida, and Andrea Vianello, Oxford University

While there is a large body of literature on prehistoric obsidian use in the western Mediterranean, little of this work is focused on post-Neolithic assemblages. This presentation aims in part to redress this research bias through a discussion of Chalcolithic and Bronze Age obsidian consumption in the region, with a focus on the role that early metallurgy played in the collapse and reconfiguration of exchange networks beginning in the latter half of the fourth millennium B.C.E. This study was achieved by combining obsidian-sourcing data obtained through portable X-ray fluorescence (pXRF) spectrometry with the techno-typological characterization of 840 obsidian artifacts from 21 sites in Sicily, Calabria, and Sardinia.

In Sicily and Calabria, there is a long tradition of pressure-flaked blade production of Lipari and Pantelleria obsidians beginning in the Early Neolithic (ca. sixth millennium B.C.E.) and continuing through the Early to Middle Bronze Age (ca. mid second millennium B.C.E.). However, there were changes in the techniques used to work these raw materials at the same time that communities at the tail end of long-distance exchange networks no longer exploited obsidian and metal technology began to proliferate.

On Sardinia, similar changes in obsidian production also occurred at the transition between the Neolithic and Chalcolithic. While metals do not replace obsidian in any functional sense, their introduction in the form of copper axes, weapons, and jewelry can be seen to represent a cognitive and symbolic shift in the relative importance of obsidian in the minds of the people who used it. In this context, there is an abandonment of specialized Neolithic obsidian workshops near the source areas and a move toward the production of expedient flake tools.

Through an analysis of 840 artifacts from 21 sites, this paper represents one of the first detailed studies of post-Neolithic obsidian consumption in the western Mediterranean. When considered within the larger framework of western Mediterranean prehistory, this research makes an important contribution to our understanding of long-term cultural processes and the effects that early metallurgy had on the sustainability of prior social structures and economic traditions.

ASOR's Syrian Heritage Initiative: Planning for Safeguarding Heritage Sites in Syria

Kyra Kaercher, American Schools of Oriental Research, LeeAnn Gordon, American Schools of Oriental Research, and Kurt Prescott, American Schools of Oriental Research

The Syrian Heritage Initiative: Planning for Safeguarding Heritage Sites in Syria (SHI) is headed by The American Schools of Oriental Research (ASOR) and is funded by a cooperative agreement with the U.S. Department of State, Bureau of Near Eastern Affairs. Active conflict in Syria is contributing to the damage and destruction of cultural heritage. This research project aims to (1) raise awareness in Syria and among the international community about current threats to Syria's

cultural heritage through ongoing monitoring and evaluation; (2) assist in mitigating adverse impacts; and (3) identify and plan cultural heritage preservation projects and assistance that can be carried out in Syria now or postconflict. The project will develop comprehensive documentation for the current condition and future preservation needs of cultural heritage in Syria and will generate practices that are relevant for conflict zones in neighboring regions. This poster presents the objectives of this project and the progress made to date on accomplishing these objectives. The objectives include assessing the impact of the conflict in Syria on cultural heritage, working with Syrians to monitor and mitigate threats to sites, assembling literature about Syrian heritage sites, developing a digital geospatial inventory of heritage resources, and developing proposals for future preservation projects.

The Kaplan Excavations Publication Initiative, 2014

Jacob C. Damm, University of California, Los Angeles, *Andrew J. Danielson*, University of California, Los Angeles, *Amy B. Karoll*, University of California, Los Angeles, *Martina Haase*, Johannes Gutenberg-Universität Mainz, *Ann-Kathrin Jeske*, Johannes Gutenberg-Universität Mainz, *Krister Kowalski*, Johannes Gutenberg-Universität Mainz, *Nadia Ben-Marzouk*, University of California, Los Angeles, *Aaron A. Burke*, University of California, Los Angeles, and *Martin Peilstöcker*, Johannes Gutenberg-Universität Mainz

Since 2007, the Jaffa Cultural Heritage Project (JCHP) has revisited Kaplan's excavations (1955–1974) at the site of Tel Yafo. This effort has focused predominately on his work as it pertains to contexts dating from the Late Bronze Age through the Persian/Hellenistic periods. The JCHP mandate also has included targeted excavations in the areas of the New Kingdom Egyptian gateway and the Late Bronze Age Lion Temple complex, which, when combined with the study of Kaplan's original notes, have served to clarify and expand on previously raised questions of stratigraphy and chronology. This has shed further light on the nature of Egypto-Canaanite contact during the period of Egyptian control in the region, the study of which has widespread ramifications for the broader chronological scheme of the eastern Mediterranean and, more generally, the archaeological study of cultural contact. As such, the Kaplan Excavations Publication Initiative serves to make significant contributions to the understandings of this phase in ancient Near Eastern history.

Unearthing the Next Generation: An Examination of Secondary Students in an Archaeological Field School

Andrew Carroll, Regis Jesuit High School

Field programs not only train students in field excavation methods and theoretical theorems but also expose students to the unique situation of a working in the field. However, these programs are often limited to college students. Because of time and money constraints, few students find the opportunity during a college career to work on one of these programs unless they are already specializing

in archaeology. Archaeology and classical programs should instead be looking to share these types of experiences with a broader, younger audience who are still in the midst of finding their own paths through life. Offering high school students a curriculum in which they can attend an archaeological field program gives them a chance to grow and experience a field of study often not available to them. Field schools give high school students the chance to learn more about the blending of science and humanities through archaeology. This is important because the options most often provided by high school guidance counselors steer students away from a liberal arts education, a trend that is having detrimental ramifications on the field as a whole. To accomplish this, however, the format in which students participate in a field school will have to be altered to accommodate the unique challenges of traveling and working with young students. From my own experience as both a high school teacher and a field archaeologist at Poggio Civitate, I have designed and implemented a pilot program in which high school students can be exposed to the theoretical and practical aspects of field archaeology. This paper looks at the benefits and challenges involved in adding a high school curriculum to a preexisting college program and the possibility of the growth for these types of programs in the field of classical archaeology.

The Minoan Dye Industry on Crete: Organic Residue Analysis of Pottery from the Workshop at Alatsomouri-Pefka

Alison M. Crandall, Brandeis University, *Andrew J. Koh*, Brandeis University, *Philip P. Betancourt*, Temple University, Tyler School of Art, *Marie Nicole Pareja*, Temple University, Tyler School of Art, *Thomas M. Brogan*, INSTAP Study Center for East Crete, and *Vili Apostolakou*, 24th Ephorate of Classical and Prehistorical Archaeology in Greece

Alatsomouri-Pefka, a dye workshop in northeastern Crete consisting primarily of carved bedrock basins, serves as a clear example of the Middle Minoan (MM) II textile industry (ca. 1700 B.C.E.). Samples obtained from a selection of pottery on-site using the Archaeochemistry Research in the Eastern Mediterranean (ARCHEM) project's organic residue analysis procedure show that work at the installation used a range of dyes including red madder, yellow from weld, and purple from murex. Obtained from *Hexaplex trunculus*, a medium-sized species of sea snail, murex was renowned throughout antiquity, and its use was chronicled by many ancient writers including Aristotle and Pliny the Elder. Madder and weld, from *Rubia tinctorum* and *Reseda luteola*, respectively, are plant dyes with more permanent colorfast properties. The gas chromatography and mass spectrometry data also provide evidence for lanolin (a wax found in sheep's wool) and urine. Mixing urine with murex could set the dye and also change its hue, a practice supported by the design of the site's triple vessel, which combined mixtures of murex and urine into its third compartment. Of the 21 objects in the study, 15 produced chromatograms with combinations of these colors and materials. Further analysis is required of a larger sample size, but it is likely that other dyes were made by the Minoans at Alatsomouri-Pefka as well.

Applications of Reflectance Transformation Imaging for the Documentation and Study of Etruscan Material Culture at Poggio Colla

Allison Lewis, Oakland Museum of California, and *Heather White*, University of California, Los Angeles/Getty Conservation Program

In 2014, conservators at the Mugello Valley Archaeological Project piloted a reflectance transformation imaging (RTI) program to assess the applicability of this technique for the documentation of objects excavated at the Etruscan site of Poggio Colla. RTI is a computational photographic method that creates high-resolution interactive files through which a user can examine artifact surfaces with a variety of rendering modes that simulate raking light from any direction. Many of the diagnostic features on the surfaces of artifacts excavated at Poggio Colla, including burnished, stamped, and incised bucchero ceramic vessels and inscribed stone and ceramic objects, have been at least partially obscured by deterioration and alteration of surface topography. RTI can enhance subtle details of surface topography that are nearly invisible with traditional examination and photographic documentation methods, making it a useful tool for interpreting and recording weathered surfaces. In this poster, we detail the simple and inexpensive RTI process implemented in the field at Poggio Colla and present examples of how the technique has been used to create research tools for the study of decorated bucchero ceramics and epigraphic material from the site.

The Database of Obsidian Sourcing Studies (DObsiSS): Using Git for Collaborative Management of Archaeological Data

Zack Batist, McMaster University

The Database of Obsidian Sourcing Studies (DObsiSS) is an integrated listing of chemically characterized archaeological obsidian compiled from published journal articles, excavation reports, conference papers, and other scholarly records. Obsidian is a volcanic glass that was used throughout prehistory to produce razor-sharp cutting tools, and it has chemical properties that enable archaeologists to identify the source from which the raw material derives. This information is used to determine whether the inhabitants of a site participated in large-scale exchange networks, as well as the capacity of their involvement. Although a large amount of data has been generated over the years, obsidian-sourcing studies tend to be done independently, with results published in journals aimed toward specialized researchers, detailed in regional-journal field reports, or kept as supplementary material in databases held by archaeometric laboratories. Aside from the issue of data accessibility, the redundancy of published results and a lack of standardization among laboratories complicate efforts to compare and analyze all this information. The database presented here is the result of an effort to make this immense wealth of data more useful for archaeologists or for academics in other disciplines.

DObsiSS is an open access online resource that is continuously updated to include newly published data. The database operates using Git—a collaborative data-sharing protocol that allows anyone to commit proposals for modification, submit new content to be added, and track any changes in a transparent manner. It is also a great platform for discussion, where anyone may inquire about particular

proposed modifications or make suggestions for larger improvements. This effort to compile all obsidian-sourcing data into a central repository is a great use case for archaeological applications of Git, which was designed so that content may be easily expanded. It also encourages greater collaboration among researchers and enables fact checking and error reporting from knowledgeable members of the community. This poster outlines the implementation of Git as it pertains to DObsiSS and highlights the potential benefits of its wider adoption by archaeologists.

Shipwreck Surveys of Shqiperi

Lee Pape, RPM Nautical Foundation, and *Mateusz Polakowski*, East Carolina University

The Albanian Coastal Survey is an ongoing project exploring and identifying submerged cultural resources along the Ionian and Adriatic coast. This project is a partnership between RPM Nautical Foundation and the Albanian Ministries of Culture and Defense. This partnership provides a unique opportunity for students and researchers to collaborate on projects in previously understudied areas. The 2014 season presented students with the opportunity to conduct surveys on wreck sites along the coast. This poster presents the surveys conducted during the 2014 field season by students of the scientific dive team. Working with the local fishermen and divers, the team was able to identify a potential tile wreck off the coast of Porto Palermo: the Qeparo wreck. A concentration of tiles and other ceramics were located in an area of approximately 300 m² at a depth of 6–24 m. Following field operations, the students had the responsibility of processing and compiling data and submitting a field report on this site, providing the basis of this poster. Documentation of the site included photography and three-dimensional imaging, sketches and photomosaics of the site, measurements of select artifacts, and detailed photographs of numerous ceramics. Both the tiles and pottery indicate a Corinthian cargo, one that has a preliminary date of the fourth to third centuries B.C.E. The Qeparo wreck is one of many wreck sites with Corinthian cargoes moving north along the eastern Adriatic route and speaks to the heavy overseas trade Corinth maintained with populations along this coast during the Classical to Hellenistic eras.

Getting Our Daily Bread in Pompeii: A Geographic Information System Network Analysis of an Ancient Production and Distribution Process

C. Diane McLaughlin, Pompeii Food and Drink Project

Geographic information system (GIS) software is a powerful tool for both illustrating and analyzing existing data from archeological sites. Because the archaeological site of Pompeii contains a remarkably complete record of a small Roman city preserved as it existed in 79 C.E., it provides us with data that can be used to examine the everyday workings of an ancient Roman urban environment. Data on bakeries was chosen as an example of how a GIS-referenced database can be used to develop a more precise understanding of the forces that affected the location and distribution of bread production at that time. Bakery locations are digitized,

and important characteristics (such as the presence of mills) are appended in electronically accessible spreadsheets, along with spatial and other characteristics of the surrounding neighborhood and roads. The modes of transportation analyzed are cart travel for delivery of grain and foot travel for distribution of the product to the consumer. Assuming a distribution method of walking or pushcart, individual bakery service areas are defined and color tagged to visualize product distribution. Using GIS software and the associated descriptive database, rapid multiple analyses visually demonstrate patterns of location and distribution in map form. This provides insight into a critical element of the workings of the city and enhances the picture of how these shops were used and the decisions that were made in locating them. For example, bakeries with mills are most often located on streets that are either large enough for two-way cart traffic or on one-way roads that have cart ruts indicating they were heavily used major routes traveling west across the northern part of the city. In addition, bread-distribution areas largely overlap. This suggests that bakeries with the means for milling grain are located not for the best competitive distribution of product but where the means of accessing raw materials (grain) for bread production may have been easier. Statistical assumptions and related analysis accompanies colored maps to illustrate the entire analytical process. GIS software helps analyze archaeological sites, serving both as a descriptive tool to illustrate locations and known relationships and as an analytical tool to develop greater understanding or new ideas about ancient lifestyles.

What to Do with Teggiano: Displaying Roman Antiquities Beyond the Museum

Alison Rittershaus, University of Michigan

This project discusses the development of a self-guided walking tour of Roman antiquities in the small hilltop city of Teggiano, Italy. Located on the edge of the Cilento National Park and perched above the Vallo di Diano, Teggiano in antiquity occupied a geographic area influenced by many cultures: archaeological evidence pertaining to Villanovan, Greek, Samnite, and Lucanian cultures has been discovered in addition to that of Roman influence from the Republican era onward. The city is home to a variety of Roman material spanning a great chronological range and reflecting the city's continuous habitation, including possible "cyclopean" walls, republican funerary reliefs, a head belonging to a statue of Antoninus Pius, a statue base dedicated to Severus II, and a set of Late Antique or Early Medieval reliefs depicting agricultural activity. However, the majority of this material has been built into the exterior walls of later and privately owned buildings and as a result has suffered from poor preservation and lack of archaeological context, rendering traditional museological display impossible. Using the Museo Diocesano di Teggiano—home to selected examples of both Roman and medieval material—as a starting point, the tour is designed to take advantage of the peculiar status of this material and its diffusion across the urban landscape to draw connections between the city's many layers of history. Drawing on previous studies of the area, the itinerary teases out themes of chronological longevity, personal display in a multicultural environment, ideas surrounding funerary rites, and the historical role of the Vallo di Diano while facilitating exploration of the city in its current state. These develop organically over the course of

the walk, which is guided by a pamphlet detailing the itinerary superimposed on a map of the city streets and paired with photographs and brief textual explanations. The pamphlet is designed to be useful even to those unable to visit the sites in person, and it will be available in the museum for free. It is hoped that this project may provide a template for bringing attention to ancient material in similar communities, providing opportunities for locals and visitors alike to engage with material cultural heritage in new ways.

2014 Fieldwork in the Harbors of Burgaz, Turkey

Elizabeth S. Greene, Brock University, *Justin Leidwanger*, Stanford University, *Lana Radloff*, University at Buffalo, State University of New York, and *Numan Tuna*, Middle East Technical University

Archaeological investigations at the Archaic through Late Roman harbors associated with Burgaz (“Old Knidos”) on Turkey’s Datça Peninsula have been conducted since 2011, with the aim of exploring the long-term development of the ports and their integration within the urban settlement as well as a broader maritime cultural and economic landscape. As a collaboration between Brock University, Stanford University, and Middle East Technical University (METU), the Burgaz Harbors Project focuses on the changing maritime landscape of the site, before and after the expansion of New Knidos at the tip of the peninsula in the Late Classical period; around this time, activity at Burgaz shifted toward large-scale industry, which is evident in the city center and surrounding environs. In 2014, fieldwork and analysis focused on several lines of research related to the earliest use of the harbors and the repurposing of infrastructure from the Hellenistic period onward.

Ongoing survey and excavation in and around Harbor 1 (L1) is providing evidence for the earliest development of Burgaz’s maritime facility, including an enclosed but now largely silted basin adjacent to the city center currently under investigation by METU archaeologists. Continuing work in Harbor 2 (L2)—a part of the local heritage most immediately threatened by tourism development—is revealing evidence for the construction and use of another port where moles and towers built probably during the Late Classical period may have served a defensive purpose. Recent exploration has begun to focus on what is likely the latest maritime facility in the area of Burgaz: Harbor 4 (L4), a large port with simple but massive rubble breakwaters apparently intended to accommodate the loading and export of agricultural produce. Adjacent coastal areas, now partially submerged or eroding into the shallows, show evidence for Hellenistic, Roman, and Late Roman activity. Of key interest are extensive production workshops and wine-storage facilities that underscore ongoing industrial activity even after the development of a major commercial harbor at New Knidos. Developed in tandem with these studies is a new program of compositional analysis of ceramics from the harbor investigations in light of the many production centers previously documented by METU research across the peninsula. Through this program, we aim to shed light on the finer contours of local and regional maritime exchange across the Datça Peninsula.

Bronze Age Terracotta Statues of Ayia Irini, Kea: An Experimental Reconstruction and Technical Examination

Rachel DeLozier, University of Arizona, and *Eleni Hasaki*, University of Arizona

This project focuses on the large-scale terracotta statues from the temple of Ayia Irini on the Aegean island of Kea (Late Minoan IB/Late Cycladic II or 1500–1425 B.C.E.), examining the material and physical challenges involved in their manufacture. Our investigation consisted of two major efforts: a preliminary experiment in the United States in which we re-created the most complete of the statues (inv. no. K3.611; ht. 0.986 m), followed by a close examination of select pieces from the original Bronze Age group of more than 50 statues kept in the Archaeological Museum of Kea.

By completing the reconstruction project first, our intention was to gain a deeper understanding of terracotta as a medium and, more specifically, a more comprehensive knowledge of the clay techniques involved. For this portion of the project, we worked over a period of five months, typically sculpting in 3–4 hour sessions that were held 1–2 times per week. We began with a basic understanding of the techniques of the statues based on Caskey's 1986 publication and relied on this knowledge to help us adapt such techniques as constructing the skirt in the coil method, building the upper body with the support of an internal wooden armature, and other structural considerations.

With the knowledge of terracotta gained from our reconstruction, we were thus better prepared to examine and understand the originals from the artisan's perspective. Because of our familiarity with the challenges of terracotta, we could identify and interpret such clues as breakage points, finger marks, clay join sites, and other aspects of the fragments that give complex information on the processes involved. We also had a better appreciation for the time and labor commitments required to build statues of such a size, as well as the difficulty of maintaining stability while transporting the statues.

It must be emphasized that our reconstruction is by no means intended as an exact replica of the original Bronze Age statues but is, instead, a preliminary investigation of the material issues encountered in the production of large-scale terracotta sculpture. Importantly, the reconstruction gave us a more subtle insight into many of the creative processes involved for the Bronze Age terracotta sculptor. Our final examination of the original Bronze Age fragments, then, was enriched by this technical foundation of knowledge, and we were ultimately better able to contextualize the terracotta sculptures within Bronze Age Kea craft production as a whole.

The Neanderthal Cognition: Chert Procurement in Southwest Iberia Using Particle-Induced X-Ray Emission Analysis

Telmo Pereira, University of Algarve, *Claudia Manso*, Museu Municipal de Bombarral, *Eduardo Alves*, Universidade de Lisboa, *Jonathan A. Haws*, University of Louisville, *Luis Alves*, Universidade de Lisboa, and *Michael Benedetti*, University of North Carolina, Wilmington

For decades, Modern human behavior was related to the emergence of *Homo sapiens sapiens*. Such behavior was defined by the presence of adornments, bone tools, art, lithic heat treatment, pigment use, burials, marine-resource exploitation, and long-distance acquisition of raw materials. Recent data from Africa and Europe seem to indicate that some of these features may have appeared prior to the emergence of modern humans.

This project aimed to approach one of those features: the management of raw materials. We focused on the chert artifacts from Columbeira Cave, Praia do Rei Cortiço, and Mira Nascente. All these sites are presently under investigation, are well-preserved, have been widely published, and represent key sites for the understanding of Neanderthal ecology, behavior, and economy in this territory. Chert artifacts were analyzed with a nondestructive, high-resolution chemical analysis (particle-induced X-ray emission) and compared with geological samples taken from primary outcrops. In this territory, such raw material can be tracked with high accuracy because its outcrops are well delimited in the landscape, presenting specific elements that allow individualization. The application of GIS to this information allowed us to measure with accuracy the physical distance between outcrops and the sites.

Archaeology and Conservation: Erasing the Line in the Dirt

Elizabeth Frost, University of Evansville, and *Margaret Ramos Bellini*, Durham University

This paper focuses on the disconnect between the fields of archaeology and conservation. The two have traditionally held separate roles in the academic world, though they are quite related. The field of archaeology has changed over the decades to support new theories and advancing technology; the next evolution that needs to occur is the integration of field professional conservation. Conservation is a highly specialized, multifaceted field focusing on the stabilization and preservation of artifacts, in situ and excavated. By integrating the methodologies and techniques of skilled conservation professionals into archaeological field practices, more artifacts and their contexts can be preserved and in turn used for further research. Moreover, this paper intends to inform the reader of the importance of conservation beyond simple cleaning techniques, an aspect of archaeology traditionally not taught in tandem with archaeological methodologies and practice, and to expound on the reasons why conservation is an integral part of the archaeological process. These aspects are illustrated through examples of the fields successfully working together at the Poggio Civitate Archaeological Project and the Prince of Wales Heritage Centre. Further examples from the authors' own experiences at Poggio Civitate are illustrated; both authors have worked in the field

and are now long-term members of the conservation team. Using the precedent set by Poggio Civitate Archaeological Project, this paper creates a template that can be used by other excavations to gainfully incorporate conservation into their field.

Perpetual Lament: Anthropomorphic Mycenaean Figures in Funerary Contexts

Darby Vickers, University of California, Irvine

Type A and B anthropomorphic Mycenaean statues are traditionally interpreted as cult objects—often representations of divinities—since they are primarily found in sacred contexts. A depiction of a female carrying a small female figure, possibly one of these larger anthropomorphic terracotta figurines, appears in the South House from the cult center at Mycenae. This provides the tenuous assignment of these larger anthropomorphic figurines as representations that focus cult practice. However, a large anthropomorphic figurine also appears in Tomb 40 at Mycenae, which signifies the connection of these figures to the dead. Another potential procession scene in which a larger female figure carries a smaller monochrome female figure appears on a larnax from the cemetery at Tanagra.

The figure in Tomb 40 at Mycenae and the depiction on the larnax destabilize the connection between the larger anthropomorphic figures and images of deities. I argue from the funerary context of the figure found in the tomb and the depiction of the larnax from the cemetery that these figures are substitute mourners who would remain in the tomb to continue lamenting the dead.

The conception of the large anthropomorphic figures as substitute mourners draws evidence from a wide variety of sources. The idea that Mycenaean anthropomorphic figures served as substitutes for people in the tombs has been around since 1925, when Nilsson argued that the figurines (of the smaller types) that were found in graves had a similar function to the *Ushebti* of contemporary Egypt. Gallou, in her 2002 dissertation, argued that the enthroned anthropomorphic figurines found in Mycenaean tombs served as substitutes for chthonic deities, which, she argued, would remain in the tomb to receive rites from the continuing community.

The argument can also be made from analogy to figurines from the Archaic period buried in the graves as well as Hellenistic grave monuments, which represented the continued lamentation for the dead by statues. Hoffman, in her 2002 article, made a similar claim by analogy with Cycladic figurines found in graves from the Early Bronze Age.

This interpretation of the figures as substitute mourners is still consistent with the cult context of the figures in sanctuaries. A list of various cult practices in PY Fr 1222 includes the “raising of ritual lament,” which may have been either part of the mourning for a deceased god or simply a ritual practice for chthonic deities.

Pre- and Protohistoric Pottery Production and Exchange in the Central Mediterranean: The Use of Nondestructive Portable X-Ray Fluorescence

Robert H. Tykot, University of South Florida, *Craig Alexander*, Cambridge University, *Keri Brown*, University of Manchester, *Kyle P. Freund*, McMaster University, *Sarah McClure*, Pennsylvania State University, *Erin Mckendry*, University of South Florida, *Andrew M.T. Moore*, Rochester Institute of Technology, *Frederick Pirone*, University of South Florida, *Emil Podrug*, Šibenik City Museum, *Davide Tanasi*, Arcadia University, *Melissa Teoh*, University of Oregon, *Martijn van Leusen*, University of Groningen, *Andrea Vianello*, University of Oxford, and *Patrick Woodruff*, University of South Florida

Results presented here from the nondestructive portable X-ray fluorescence (pXRF) analysis of ceramic artifacts in Italy, Malta, and Croatia, dating to the Neolithic, Chalcolithic, Bronze, and Iron Ages, focus on the advantages and limitations of this method of analysis in identifying local vs. nonlocal pottery and the “history” of these artifacts’ mobility and socioeconomic significance. While pXRF provides opportunities for conducting analytical research in museums and other places where borrowing or sampling the artifacts is not permitted, its users must be aware of its limitations, including detection limits, which elements are measured, potential heterogeneity of the material tested, and comparison with analytical data from other studies. Unlike with obsidian, for which all Mediterranean sources can be distinguished, there are limitations in the use of pXRF on ceramics when compared with regular XRF, instrumental neutron activation analysis, and laser ablation inductively coupled plasma mass spectrometry. Much are the detection limits of pXRF; trace elements in very low ppm or in ppb are not measurable, and thus the data are limited to fewer elements for statistical analysis. On the positive side, the spot size analyzed by pXRF is substantial, and multiple spots may be tested quickly for any heterogeneity.

Elemental analysis was conducted on 2,500 ceramic artifacts from more than 25 archaeological sites using a Bruker III-SD, with settings of 120 seconds for each spot tested, and using a filter that provides quantitative data for trace elements thorium, rubidium, strontium, yttrium, zirconium, and niobium, along with major elements calcium, titanium, manganese, and iron. Analyses were done on both inside and outside surfaces and on broken edges to address any issues of heterogeneity. Quantitative values in ppm were produced using widely shared calibration software for these elements, and principal components analysis of the data was used to identify production groups and nonlocal items. While these analytical results are combined with ceramic type, decoration, and context for making interpretations, petrographic thin-section analysis was not allowed because of its destructive nature, an increasingly common situation in many countries. In some cases, raw clay samples were also analyzed.

Examples to be presented on the success—and challenges—of pXRF on ceramics include separating Neolithic pottery from different parts of Croatia and the Tavoliere; distinguishing multiple production groups in the Siracusa region of southeast Sicily and confirming Late Bronze Age Aegean imports; identifying multiple ceramic groups within Malta and exports to Sicily; and distinguishing differences between local and city-center production at Etruscan sites for coarse and fine wares.

Breaking Ground: Foundation Feasts in the Minoan Palace at Gournia, Crete

R. Angus K. Smith, Brock University, and Ana M. Wagner, University of North Carolina at Chapel Hill

During the summer of 2011, the Gournia Excavation Project unearthed two remarkable deposits in the southwestern corner of the palace at Gournia. In Boyd-Hawes' Room 13, excavation proceeded below the level at which Boyd-Hawes' excavations had ceased. Almost immediately, a large deposit of intact conical cups, other serving vessels, ash, pumice, and animal bone was unearthed. Below this deposit, a second deposit was discovered associated with walls beneath the level of the later Late Minoan (LM) IB palace walls. This second deposit also contained a large number, and much greater variety, of intact serving vessels. The later deposit dates to an early phase of LM IB, and the earlier deposit can be dated to Middle Minoan IIIA. These deposits can be categorized as foundation deposits, since they were purposefully buried directly beneath floors and coincided with two major building phases of the palace. Both are evidence for ritual activity in the southwestern area of the palace—the area where the well-known baetyl and a kernos are located—at the beginning of the life of the palace and in the period directly following the Theran eruption.

This poster illustrates these deposits and contends that they are foundation deposits that provide evidence for drinking and feasting rituals involving many participants, that these rituals occurred at crucial times of transition for the palace, and that the differing nature of the two deposits is a reflection of both changing ritual practice and social structure in Neopalatial Crete.

Three-Dimensional Modeling of Stone Anchors In Situ: Rapid Documentation for Analysis

Carrie Fulton, Cornell University, and Andrew Viduka, AIA Member at Large

Stone anchors constitute a significant portion of observable underwater cultural heritage in the Mediterranean and provide evidence for maritime practices and trade networks as early as the Bronze Age. Through the analysis of these anchors, scholars have worked to create chronological and geographical typologies, noting the importance of size, weight, and shape as well as the number and placement of holes in the stone. Full documentation of these anchors, however, often requires removal from their underwater environment, especially to acquire mass. To improve the quality of data collected for better comparative analyses, we use two different software programs for photogrammetric analysis, PhotoModeler Scanner (Eos Systems, Inc.) and PhotoScan Pro (Agisoft), to assess their suitability for underwater survey activities, their value in deriving more accurate documentation, and their potential for further analysis of typological characterization for archaeological and cultural-resource management. This methodology is developed using anchors previously surveyed off of Maroni-Tsaroukkas, Cyprus, and implemented on anchors as part of a recent survey off of Maroni-Yialos, Cyprus. Not only does this procedure generate detailed surface information in minimal time underwater, it also preserves data for future analysis without necessitating the removal of the anchor from its underwater environment. Through creating three-dimensional

digital models, this noninvasive approach thus permits a more thorough investigation of anchor typologies and chronologies, as researchers are able to compare mass and other measurements in a virtual database of anchors. Because of these outputs, this methodology can help provide a more complete view of early maritime activities across the Mediterranean.

Cycladic “Frying Pans” Reexamined: An Experimental Approach

David Pickel, University of Arizona, and *Eleni Hasaki*, University of Arizona

Cycladic “frying pans” remain one of the most enigmatic and exhibited artifacts of the Aegean Bronze Age, and while many theories have been suggested regarding their possible function(s) and the symbolism of their decorative features, little attention has been paid to their manufacture, even in the key publications of Coleman (1985) and Rambach (2000). A close analysis of their *chaîne opératoire* and morphological characteristics (e.g., weight, measurements, syntax of decoration, and rendering of idiosyncratic motifs) can reveal aspects of manufacture and artist’s intent and may also invite reconsideration of some proposed functions.

Therefore, to gain a better understanding of the Cycladic frying pans, we have chosen to re-create one, specifically inventory number NAM 4974 (Tomb 174, Chalandriani, Syros), its with forked handle, central ship motif, and network pattern of spirals. Our final replica has taken into consideration the scholarship concerning Bronze Age ceramic technology, first-hand observations of select Cycladic frying pans at the National Archaeological Museum of Athens, including inventory number NAM 4974 itself, microimaging, and three-dimensional laser scanning.

In the course of examining multiple frying pans, precise weights, never before considered, and measurements were recorded, and careful attention was paid to their morphological and decorative characteristics, their fabric, and the white-paste filling of their impressed designs. With these observations, we were able to better inform the production of our 1:1 scale replica, which in turn has revealed new thoughts concerning the time and tool kit required by Early Bronze Age Cycladic potters. Furthermore, with our finished replica we were also able to perform complementary experimentation, putting to the test popular theories regarding Cycladic frying pan function.

This study brings new attention to one of the most iconic artifact types of the Aegean Bronze Age. Our poster provides the results of our experimental study, including not only the methodology and procedure of our reproduction but also our observations on manufacture, design, and possible function(s). Alongside the poster is our scale reproduction of inventory number NAM 4974 and the tools used in its manufacture.

Where Is Ecbatana as Capital of the Medes?

Mohammad Rahim Sarraf, Tehran University, and *Maral Sarraf*, Tehran University

The name of Ecbatana has been mentioned as the capital of the Medes Dynasty (550–750 B.C.E.) since the Middle Assyria governance and writings of Herodotus, a Greek historian, but the major problem is that of where in western region of

Iran this city was really located. Historians, archeologists, and linguists have mentioned different models, but this problem remains ambiguous.

From 1982 to 2000, an Iranian archeological expedition started excavation for discovery of the old city in Ecbatana Hill in the modern Hamadan city in western Iran. Excavation started with the establishment of 10 × 10 m grid-system networks going downward to reach to the virgin soils. Afterward, the discovered artifacts were studied and evaluated.

The reason for excavation was that based on the historical narrations, the capital of the Medes is located inside this hill. The Medes' dynasty ruled over western Iran for about 200 years and caused the collapse of the Neo-Assyrian government.

During 12 seasons of exploration, the Iranian archaeological expedition concluded that the ancient city consisted of parallel passageways and houses of 17.5 × 17.5 m inside the hill. By studying their maps, it was specified that these houses have been turned 180° east–west and north–south. This urban development system, which has been constructed in passageways with a width of 35 m and in two rows with adobe and bricks, is repeated geometrically. To the best of our knowledge, this system has not been found anywhere in the ancient cities. Unfortunately, the expedition could not specify the actual age of the ancient city because of the limitations of excavation and the small number of artifacts discovered. For this reason, there is a need for the continuation of excavations and discovery of the artifacts. But the discovery of two column bases inscribed in ancient Persian cuneiform relating to Ardeshir proved the presence of Achaemenians in this place.

To specify the situation of the ancient city discovered in the eastern region of Ecbatana Hill, considering the dispersed architectural monuments that have been discovered in this city, an architectural plan was completed with AutoCAD software, and then three-dimensional modeling (perspective) was prepared with 3ds Max, V-Ray, and Photoshop to show the situation in the different parts of this ancient city at the time of construction.

A Case for Counterinsurgent Tactics in Roman Dacia: Aerial Drone Survey and Geospatial Modeling in Eastern Transylvania

Alvaro Ibarra, College of Charleston, and *Jeremy C. Miller*, College of Charleston

This poster presents the latest findings of the Braşov Archaeological Project (BAP), an ongoing study of Rome's martial and cultural impact in the embattled region of Dacia (present-day Transylvania). The most recent findings support the employment of a grand military strategy during the Roman occupation of Dacia (106–271 C.E.). These tactics were not static; rather, they changed as the nature of the conflict shifted from set-piece battles and sieges to guerrilla warfare.

BAP is employing a suite of techniques to collect and interpret survey data, ranging from traditional reconnaissance to aerial drone surveys and geospatial modeling. This summer, BAP continued to implement geospatial and GPS/GIS techniques and viewshed analysis, supplemented with aerial drone surveys of 15 Roman and Dacian sites throughout eastern Dacia. We have focused on locations associated with the ancient Olt River network of communication and trade. A total of nearly 30 archaeological locales are currently under scrutiny.

Aerial imagery clearly shows deviations from the traditional Polybian marching camp, and their placement in the landscape often defies the recommendations of Vegetius. Moreover, drone photographs reveal deviant castrum interior plans as well as heretofore-unknown annex structures. Such deviations serve as evidence of a changing and possibly evolving defense network.

BAP is now in the process of producing a multivariate GIS that assesses each castrum individually and posits its role within the regional field of operations. The preliminary data imply shifting strategies that correspond to geographic and tactical factors over time. Quite simply, the longer the Romans spent in Dacia, the more limited resources they had to dedicate to the hotly contested and arduous terrain of eastern Transylvania. An active and ongoing insurgency forced the Romans to adjust their martial philosophy to one that had to contend with larger conflicts elsewhere. As part of a grand imperial strategy, local commanders adjusted regional tactics accordingly and even adapted typical Roman protocol.

The poster displays the latest GIS and aerial data and the current interpretative model. The model assesses the size of each fort, relative capacity, defense capabilities, strike range, range of patrol, and reconnaissance along with the fort's ability to maintain operations based on their proximity to natural resources and/or supply lines. The later, smaller castra located near mountainous choke points suggest a long struggle akin to current tactical configurations in Afghanistan.

Depictions of Tomb Monuments on White-Ground Lekythoi and Their Relationship to Physical Monuments During the Period of the Post-*Aliquanto* Sumptuary Law

Emma Buckingham, University of North Carolina at Chapel Hill

White-ground lekythoi were among the most pervasive and popular Athenian grave goods during the fifth century B.C.E. An especially prevalent decorative motif, particularly after the first quarter of the fifth century, was the depiction of mourners at the tomb. However, scholars have often noted that paradoxically funerary white-ground lekythoi were produced mainly during the period of the post-*aliquanto* sumptuary law, a decree recorded by Cicero providing that tomb construction could not involve more than three days' work for 10 men and that sculpted monuments could not act as tomb markers. Accepting Cicero's statement, scholars have proposed several theories concerning the monuments depicted on vases: they are imaginative pastiches of monuments or representations of wishful thinking; or they do depict actual tomb monuments, albeit from an earlier period, from a nonprivate or non-Attic context, or are made from materials that do not survive in the archaeological record.

Analyzing the corpus of the 555 known examples of white-ground lekythoi depicting grave stelae included in the Beazley Archive and *Corpus vasorum antiquorum*, and classifying them by date, stele type, and subtype (using Nakayama's classification) and relevant secondary features, I present tables and graphs displaying changes in the frequency of types and subtypes of stelae, as well as associations of depictions of warriors or arms with the various subtypes.

Some interesting patterns emerge as the popularity of white-ground representations increases. Within each type, there is a tendency to grow more ornate over

time, thus anticipating the development of physical tombs and the reemergence of sculpted funerary types in the last quarter of the fifth century B.C.E.; just as tombs on lekythoi grow more elaborate, so do the real tombs, although they lag behind by several decades. These data suggest that before sumptuary law, physical tombs may have inspired the first representations of lekythoi, which then developed on their own (perhaps looking to non-Athenian models as inspiration). When physical tombs returned, they started simpler and then eventually became more elaborate in the fourth century B.C.E., perhaps even taking inspiration from the lekythoi.

Scholars have also suggested that some lekythoi may have depicted public tombs for fallen warriors, especially lekythoi also showing warriors or armor. I present an analysis showing that only about 7–8% of the lekythoi have such figures, which are more frequently associated with the more elaborate subtypes of monuments.

For the Birds: An Environmental Archaeological Analysis of Byzantine Pigeon Towers in the Negev, Israel

Jennifer Ramsay, College at Brockport, State University of New York, *Guy Bar-Oz*, Zinman Institute of Archaeology, University of Haifa, and *Yotam Tepper*, Israeli Antiquities Authority

Pigeon rearing was an integral part of the mixed husbandry agricultural regime that dominated the Negev region from at least the Hellenistic through the Byzantine periods. Hundreds of structures have been documented that relate to the raising of pigeons, and the importance of pigeon dung as a fertilizer is attested in the literary evidence of authors such as Pliny (*HN* 17.6), Varro (*Rust.* 1.38), and Columella (*Rust.* 2.14) who were writing in the Roman period. Excavation of destruction levels of a dovecote near the site of Shivta, Israel, produced large quantities of pigeon dung for analysis. A preliminary study of the archaeobotanical material determined the significance of pigeon dung for providing direct evidence of pigeon diet and local environmental conditions during the Byzantine period. In this study, 25 plant taxa were identified, most of which were weed and wild species commonly found in cultivated fields, as well as barley, olive, fig, and grape. This not only provides evidence of food types consumed by the pigeons but also data on the flora of the Negev Desert during the Byzantine period, which was much greener and more agricultural at that time than it is today.

First Recorded Case of Mycenaean Head Shaping from Central Greece

Kaitlyn Stiles, University of Tennessee

Head shaping is a little-understood phenomenon in ancient Greek culture. The intentional or unintentional modification of the cranium is a unique method for expressing cultural identity, status, gender, and age, among other things, that has been well recorded in other parts of the world. This poster presents the first recorded case of Mycenaean head shaping and assesses the possibilities for its presence in Mycenaean culture. The only evidence for prehistoric Greek cranial

modification has been illustrated by Lorentz, who reported intentional head shaping in crania from a Neolithic cave cemetery in Tharrounia, Euboa, Greece. Evidence for head shaping on mainland Greece and in other time periods has yet to be addressed. In a preliminary analysis of the human skeletal remains from the Mycenaean (Late Helladic IIB–IIIB) chamber tomb cemetery at Golemi Ayios Georgios, East Lokris, Greece, the cranium from one female shows indications of head shaping. Using knowledge of cranial growth and development and the archaeological context of Mycenaean Greece, I examine the biological, aesthetic, and potential cultural consequences of head shaping for this individual. Based on the specific shape of the modification, I compare the cranium to previous examples found in Greece, the Mediterranean, and the world. A continued increase in bioarchaeological studies of Mycenaean skeletal remains will likely provide a clearer picture of head shaping in Mycenaean contexts. However, as this is a sample size of one, I make no broad claims of head shaping practice in Mycenaean Greece but suggest the possible implications for this particular individual given her existence in this part of the Mycenaean world.

Frontiers of Food: Identity and Food Preparation in Roman Britain

Sarah Taylor, University of Western Ontario

Food preparation and consumption are culturally specific practices; evidence from both the ancient and modern world show that these practices are highly visible and differ in many ways. My research on this subject uses evidence from the military fort at Vindolanda on Hadrian's Wall as a case study for understanding the cultural identities of diverse communities on the frontier of Roman Britain. Vindolanda provides a unique opportunity to learn from food-preparation implements about the cultural, ethnic, and group identities of the inhabitants of Roman forts and their extramural settlements in northern England. The similarities and differences of the dietary identities of various social groups on a Roman frontier within a broader investigation of the maintenance of cultural identity by conquered peoples are particularly illuminating. The distinctive preservation of archaeological materials at Vindolanda provides the opportunity to include implements not usually preserved, including wooden objects (e.g., spoons, bowls) as well as a very rich environmental record that complements our understanding of food preparation. In addition, the Vindolanda writing tablets are able to contextualize the artifact assemblages. The tablets found within the early forts (ca. 85–120 C.E.) consist of correspondences and inventory lists, some of which catalogue the food that is actually within the fort storehouses. Since food preparation and consumption is so culturally driven, the deposition patterns of different types of artifacts between different areas of the site, and even the comparison between neighboring households, may be used as cultural signifiers about those that lived in these spaces. Furthermore, this project provides a pathway to applying models of anthropological food theory to archaeological evidence and to studying ancient foodways. In this poster, I provide a brief introduction to the site of Vindolanda and the specific contexts used in this research, followed by the highlights of the cooking-implement assemblages found therein. The poster also includes a discus-

sion of the spatial relationships that illustrate the varied identities of the people living at Vindolanda.

Accessible Archaeology: New Approaches at Cosa in 2014

Allison Smith, Florida State University, *Matthew Brennan*, Indiana University, *Sophie Crawford-Brown*, University of Pennsylvania, and *Ann Glennie*, Florida State University

Excavations at Cosa, Italy, resumed in the summer of 2013 under the auspices of Florida State University, Bryn Mawr College, and the University of Tübingen. They investigated the structure and chronology of Cosa's bath complex, which, though noted by Brown in the seminal *Cosa I*, previously remained unexcavated. The first season focused on four primary locations within the bath block and revealed impressive interior and exterior architectural remains and artifacts, including brickstamps and inscriptions, datable to the Hadrianic period and later. The 2014 excavations further targeted these areas, as well as the large reservoir south of the baths and the hydraulic rooms in their southwestern sector.

In conjunction with traditional excavation, an aerial survey of the entire site of Cosa was undertaken. This investigation was carried out by means of a Quadcopter unmanned aerial vehicle with a three-dimensional stabilized gimbal supporting a digital camera. Through the implementation of aerial photography, cloud-based and workstation-based photogrammetry, and digital modeling, the Cosa Excavations project replicates the trenches excavated during the season, as well as the visible remains of the site as a whole—the city walls, the arx, and the forum. With the information gathered in 2014, we are able to manipulate and visualize data remotely, even after excavations have concluded. Such digital replication of archaeological remains, which supplements excavation, is a crucial tool for modern data collection, information sharing, and site preservation.

Beyond their archaeological and academic merits, such techniques offer a valuable opportunity for improved community outreach. Using digital media, Cosa Excavations launched its first archaeology blog in the 2014 season, allowing interested nonspecialists the opportunity to remotely follow the course of the dig season. Time-lapse videos of excavation were also recorded and made available to the public, providing a free and visually striking sequence of "archaeology in action." Such initiatives have the potential to dramatically improve outreach and accessibility, two increasingly pressing concerns for archaeologists.

Future goals of the project include a compilation of digital reconstructions into a publicly accessible website to foster outside research on the ancient city of Cosa. As a complement to the city models, a digital catalogue of all materials in the Cosa Museum storerooms will aid in both preserving information and stimulating wider scholarly analyses of data that have been accumulated over the past 70 years.

Methone: An Intensive Archaeological Surface Survey of a City and Landscape

C. Myles Chykerda, University of California, Los Angeles, and *MaryAnn Kontonicolos*, University of California, Los Angeles

The 2014 Ancient Methone Archaeological Project (a collaboration of the American School of Classical Studies at Athens and the 27th Ephorate of Prehistoric and Classical Antiquities) aims to enrich the understanding of ancient Methone and situate the north Aegean city within the wider Mediterranean world. The intensive surface survey component in particular investigates the natural and cultural landscapes surrounding both the ancient (Final Neolithic through 354 B.C.E.) and Hellenistic settlements of ancient Methone. The intensive survey project aims to ascertain critical information concerning the spatial distribution of archaeological materials of all periods, as well as to determine the overall extent of both the prehistoric and historic settlements, a plausible location of the ancient harbor, and any archaeological features in the area that have remained undocumented.

The initial phase of the project is envisioned as a one-season intensive survey with the goal of covering the entire target area. Over the course of six weeks in the summer of 2014, a total of 80 ha was surveyed via intensive pedestrian survey. Survey methodologies that have become standard in Mediterranean archaeology were employed. Typical survey units, following natural delineations such as field boundaries where possible, were 50 x 100 m and were walked over by a team of five people with 10 m spacing. All material was counted, while only diagnostic pieces were collected, and an assortment of environmental and morphological features was recorded for each unit on paper forms that were digitized at the end of each work day. All geographically linked data (such as survey unit boundaries, material densities, and periods represented per tract) are digitized and visually presented in ESRI's ArcMap 10.2.

This poster presents the initial findings. General trends show a rich material assemblage representing habitation of the southeast sector of the survey area from the Early Bronze to Classical periods, as well as several medieval ceramics. We anticipate that the northwest sector of the survey area, the location of the later Hellenistic settlement, will be equally illuminating regarding overall boundaries of habitation in this period and general land-use patterns.

In addition to density patterns, a number of individual finds attest the industrial manufacturing that took place at this center, particularly in the Early Iron Age and the Archaic and Classical periods. These materials include pottery wasters, numerous dispersed pieces of iron slag, and a figurine mold. Other materials represent military, cultural, and economic spheres of Methone throughout its primary period of occupation.

Experimental Archaeology with the Kylix: Drinking and Playing *Kottabos*

Heather F. Sharpe, West Chester University, and *Andrew Snyder*, West Chester University

Scholarship on Greek symposium vessels is extensive, not least of which is on the drinking cup called the kylix. From studying scenes painted on Greek vases, we are well aware of its function as a symposium vessel, and decades of research

on its form and painted decoration have provided a chronological framework and an understanding of local and regional trends as well as the painting styles of individual artists. Further information may be gained specifically on the functionality of the kylix through experimental archaeology. For this project, the two investigators seek to understand such practicalities as the most suitable kylix size for drinking and to investigate the mechanics of playing the drinking game *kottabos*. Using modern copies, we demonstrate how functional kylikes of varying sizes were and specifically address whether larger kylikes were too large to be truly used as drinking vessels or whether they were intended primarily to be display pieces. Secondly, taking into consideration the many representations of symposiasts engaged in playing *kottabos*, attempts are made to understand the skills necessary to play *kottabos* using a modern kylix produced with a 3D printer (and therefore not prone to breakage). While kylikes have been traditionally viewed by many scholars primarily as works of art and while concerted attention has been directed toward analyzing their decoration, it is worthwhile to consider the kylix's utilitarian function. Our study analyzes the kylix in light of its original symposium context in an effort to elucidate its principal role as a drinking vessel.

New Light on an Old Building: Three-Dimensional Modeling and Architectural Analysis at Pseira

Miriam G. Clinton, University of Pennsylvania

Block AF at Pseira (Buildings AF South and AF North, published in 2009) is one of the most important groups of buildings from Pseira for two reasons. First, it preserves the longest stratigraphic sequence from the site (from Middle Minoan II to Late Minoan (LM) IIIA), and second, the LM I building, the House of the Rhyta (AF North), was a major cult building. As reconstructed more than 20 years ago, however, the LM I building in Block AF has some architectural problems. It has two different terrace levels used at the same time, with no suggested access between them. Both terraces consisted of ground-floor rooms with exterior access points and lay below upper stories, but no staircases were identified. Today, much more is known about Minoan architecture, thanks to the proliferation of recent excavations, such as those at Mochlos, Gournia, Choiromandres, and many other sites, and especially from Palyvou's detailed study of the Akrotiri architecture. This poster presents the results of an intensive architectural reexamination of Block AF, including measurement, drawing, and photography. It offers a reinterpretation of the existing remains using both traditional and digital methodologies. The new study, based on DGPS measurement, GIS analysis, and photogrammetric modeling, enabled a complete reanalysis of the architecture. A detailed three-dimensional model of the existing remains is used in combination with architectural observation to provide an understanding of the access between the rooms. Most important, a new location for the essential staircase to reach the cult areas in the upper story is suggested. These new results provide crucial information to enable a fuller understanding of the Minoan use of the building as both a domestic and a cult structure. In addition, the body of documentation generated, including a complete three-dimensional model of the extant remains, allows for additional intensive work in the future, including a full three-dimensional reconstruction of the House of the Rhyta.

Girls or Boys on the Column of Trajan? Depictions of Female Participation in Military Religion

Elizabeth M. Greene, University of Western Ontario

On the Column of Trajan in Rome, six scenes depict the emperor sacrificing at an altar. These scenes are set in various geographical locations, from peaceful provincial towns to the depths of war-torn Dacia. All six scenes include a participant that has been identified historically as a boy, an attendant called a *camillus*, holding the ceremonial implements shown in many images of religious sacrifice from antiquity. Based on their dress and appearance, as well as comparanda from other depictions of religious sacrifice, these figures on the Column of Trajan should be reidentified as girls and women.

This poster argues for a reassessment of these figures and presents evidence from other first- and second-century monuments for their gender reassignment. Rather than a generic model of "female figure," there is a well-defined difference between the individuals on the Column of Trajan. Some are clearly younger girls, while others are adult females, indicating that they have a purpose and perhaps an identity of significance. This research considers the implications of the depiction of women and children traveling with the Roman army. It considers their role within the Roman military world in light of recent archaeological finds, predominantly in the western empire, and further reconsiders the social role of women and families living with the Roman army. This work concludes that these women may have been the wives or daughters of high-ranking officers, with whom we are familiar from other archaeological and historical contexts. Scholars must find a place for such women in our account of military life, even in times and places ravaged by conquest and death.

From Stone to Screen: Putting the Squeeze on Digital Epigraphy

Chelsea A.M. Gardner, University of British Columbia, Kaitlyn Solberg, University of British Columbia, Lisa Tweten, University of British Columbia, Haley Bertram, University of British Columbia, Emma Hilliard, University of British Columbia, and Maude Côté-Landry, University of British Columbia

This poster presents *From Stone to Screen*, a multidisciplinary, collaborative, open-access digitization project launched in 2012 by the graduate students of the department of Classical, Near Eastern and Religious Studies at the University of British Columbia (UBC). This initiative is completely student-run and focuses on the digitization of the departmental epigraphic squeezes, which feature McGregor's Athenian Tribute List collection. While similar digitization projects have been undertaken by other institutions, *From Stone to Screen* is unique in its accessibility objectives, its student-only administration and governance, and the scanning techniques and subsequent quality of the scanned images.

From Stone to Screen is partnered with the UBC library's Digital Initiatives (DI) team to create high-resolution photographs using their Tarsia Technical Industries (TTI) Repro-Graphic 40x60 Copy System and CaptureShop software to set the image parameters. The TTI workstation uses a Sinar 86H camera back and digital CMV lenses to take a series of four images, moving in an X pattern, shifting by

1 pixel for each frame; the four images are then assembled into one. Our tests have shown that merging three of these composite images with different exposure values in Photoshop CS6 creates the sharpest possible distinction between shadow and light on the squeezes. This poster presents these images, as well as the challenges faced through our efforts to capture three-dimensional text through photography.

Owing to generous funding by UBC's Teaching and Learning Enhancement Fund, the collection was recently completely digitized: the scanning of our full collection, approximately 1,000 squeezes, was completed in the fall of 2014, and is live on the Digital Initiatives website (<http://digitize.library.ubc.ca/>). This poster showcases select individual scanned photograph entries from the website, complete with metadata, transliterations, and transcriptions—information that we aim to provide for each squeeze. The images are all available for download, in a variety of file sizes, to anyone wishing to access them; we are committed to offering the entire collection as a freely accessible resource, making the squeezes and their associated data available to epigraphists, scholars, and the public worldwide. This poster presents a successful, viable, and tested project that reveals the increasing potential of open-source digital tools for scholars and students with small teams and variable budgets. It ultimately encourages the digitization of other collections following our methods.

Our initial test collection can be accessed at: <http://digitalcollections.library.ubc.ca/cdm/landingpage/collection/squeezes>. Our progress can be tracked at <http://fromstonetoscreen.com/>

Forgotten Terracottas: Freestanding Spouted Funnels from Poggio Civitate (Murlo)

Fredrik G. Tobin, Uppsala University

The site of Poggio Civitate (Murlo), just outside Siena, has produced a wealth of Etruscan terracotta objects, including a group of terracotta “funnels.” These unusual objects have puzzled scholars since their recovery in the early 1970s and have remained essentially unpublished. This poster presents a completely new reconstruction and interpretation of the “funnels,” marking the first time they have ever been presented to an audience outside Italy.

The “funnels” were freestanding objects slightly less than 1 m in height. They consisted of a conical base, a tube in the middle, and a spouted funnel at the top. In shape they have a lot in common with other stands from the Orientalizing and Archaic periods, but with the very unusual addition of a spout. From the preserved fragments it has been calculated that there was a minimum of 16 of them. Most of the fragments were found in a small area directly north of the large archaic building on the site. They were found mixed in with debris from the destruction of the building (usually dated to ca. 530 B.C.E.), which places the production of the spouted funnels to somewhere in the middle of the sixth century B.C.E.

There exist no published direct parallels, archaeological or iconographic, to the freestanding spouted funnels from Poggio Civitate. However, they can be seen as part of a well-documented tradition of metal and terracotta stands in ancient central Italy. These stands were usually made to hold metal or ceramic vessels. The

funnels preserve very rich decorations in white-on-red, which suggest these were objects produced for a prestigious and highly visible environment. This poster suggests that this means we need to consider the possibility that the funnels were produced to function within the context of large-scale banquets at Poggio Civitate, either as holders for wine skins or as filtering devices. Feasting was an important activity for establishing and maintaining aristocratic power in early Etruria, and these tantalizing objects could give us new insight into how this was done at a site like Poggio Civitate.

Foundation Myths in Southern Roman Palestine

Robyn Le Blanc, University of North Carolina, Greensboro

The importance of foundation myths to the civic identity of cities and peoples in the Roman East has been widely studied and discussed in the past three decades. Studies by Rogers (*The Sacred Identity of Ephesos: Foundation Myths of a Roman City*, [London 1991]), Jones (*Kinship Diplomacy in the Ancient World*, [Cambridge 1999]), Price ("Local Mythologies in the Greek East," in *Coinage and Identity in the Roman Provinces*, [Cambridge 2005]), and Linant de Bellefonds ("Pictorial Foundation Myths in Roman Asia Minor," in *Cultural Identity in the Ancient Mediterranean*, [Los Angeles 2011]) have described the ways in which Greek heroes and mythological figures were adopted as founders of cities and settlements in the Roman East and how these figures were promoted through material culture in these cities. Foundation myths rooted in Greek mythological and historical traditions served to create cultural, ethnic, and historical links between the cities and peoples in the east with the larger Graeco-Roman world.

Most of the work on the foundation myths of the Roman East has focused especially on the rich literary and material evidence of Asia Minor, with Phoenicia, Arabia, and the southern Levant receiving less attention. Belayche's ("Foundation Myths in Roman Palestine: Traditions and Reworkings," in *Ethnic Constructs in Antiquity: The Role of Power and Tradition* [Amsterdam 2009]) study on the foundation myths of Palestine as displayed on Roman coins remains the best and most comprehensive work on the subject. I build on Belayche's careful work by using the cities of the Hellenized southern Levantine coastal plain as case studies for the variety of foundation myths that were attached to cities in the region and how these different myths were used in building civic identity. Rather than study only the most popular foundation myth, I consider all the traditions associated with Ascalon and Gaza. These two cities had rich foundation legends, cosmopolitan populations, and a desire to set themselves apart from their Jewish neighbors. Looking at numismatic and textual evidence, I argue that the foundation myths of these two cities reflect a desire to build a multiethnic and multicultural civic identity and history that integrated not just Greek traditions and figures but figures from the Near East as well. These findings emphasize the need to consider the impact of Near Eastern myth and figures in the creation of civic identity and cultural heritage in Roman Palestine.

Field School and Fieldwork, from EDM to LIDAR: Digital Recording of Architecture at the Villas of Ancient Stabiae

Thomas N. Howe, University of Maryland, School of Architecture, Preservation and Planning, *Robert Lindley Vann*, University of Maryland, School of Architecture, Preservation and Planning, and *Luke Petrocelli*, University of Maryland, School of Architecture, Preservation and Planning

The Restoring Ancient Stabiae Foundation will soon have behind it almost 15 years of innovative coordination and sustainable management of several teams working on the Stabiae archaeological site. Since 2007, it has been active, with its partner the superintendency of Pompei, Ercolano and Stabia, in large-scale field archaeology (excavation and conservation).

Key to the scientific coordination of the many teams is the development of one team to do all the surveying and architectural recording. This is done mainly through the field team from the University of Maryland School of Architecture, Preservation and Planning with methods developed since 2011.

This poster session presents the work-flow sequence, equipment, technical protocols, and final results to date in hard copy two-dimensional and digital three-dimensional form. The methods used involve high-precision large-area georeferenced triangulation survey control; rapid drawing of upstanding architecture, including complex fresco patterns, with a reflectorless EDM total station theodolite; photo-stitching photographs to the three-dimensional wireframe model; producing corrected photo-stitched plans and elevations; digital hand drawing with standard conventions from the photo-stitched elevations; field checking and meshing to the three-dimensional master composite wireframe; and the final generation of conventional archaeological plans, sections, and elevations from this master composite. To date, approximately half of the Villa Arianna has been recorded, and in 2014 all of Villa San Marco was experimentally scanned with LIDAR. The presentation critically evaluates the different opportunities and limitations of LIDAR vs. EDM "drawing." It also evaluates the necessary skill levels and training of an effective staff and presents a training program that can make relatively inexperienced students productive staff members in a short time.

The presentation includes, in addition to the poster, three-dimensional graphics on a laptop, and a live demonstration of the LIDAR equipment recording and modeling the presentation space of the conference.

The presentation also includes an outline of a planned field school and field season at the Stabiae site in June 2015. The RAS Foundation hopes that this will be a regular activity of the foundation and its Maryland partner in the future and that the foundation may, as part of its long-term mission toward sustainable archaeology, be able to provide digital three-dimensional architectural recording services to other archaeological projects in the Vesuvian area.

Combatting Cultural Racketeering: The Battle Against the Looting Pandemic. Prescribing Research, Policy, and a Dose of Cross-Disciplinary Cooperation

Katie A. Paul, Antiquities Coalition, and Deborah M. Lehr, Antiquities Coalition

The Arab Spring of 2011—the catalyst for social movements that redefined the modern world—also served as the accelerant of a much more sinister sociopolitical issue: cultural racketeering—the systematic theft of art and antiquities by organized crime syndicates. Looting has been a problem as old as the sites affected, but the phenomenon of cultural racketeering suggests a crisis much broader and more methodical than has been seen in the past. A review of the current literature indicates that these methodical and systematic practices point to evidence of not only organized criminal involvement but also mafia and terrorist involvement. Additionally, the highly globalized black-market networks these criminal elements operate lend to a wide range of security issues in multiple sectors, creating obstacles in scale but opportunities in enforcement.

Our research and work under the Antiquities Coalition has provided valuable insight into how archaeologists can explore practical solutions to help protect sites in times of crisis. Coordinating with the efforts of organizations outside of the realms of archaeology and academia and understanding the tools and benefits different policy and economic arenas can offer create immense opportunity for archaeologists to undertake solutions to combatting cultural racketeering that are not only practical but flexible for any given community.

By researching beyond the scope of the archaeological material affected and reaching across a variety of disciplines while coordinating and cooperating with experts in economics, policy, security, politics, and criminology, we have been able to glean credible information pointing to overall trends in the antiquities market. Yet the most important outcomes of these cross-disciplinary studies were the development of targeted strategies to combat the rapidly rising issue of cultural racketeering and the circulation of illicit antiquities in the market. Using a cross-disciplinary approach, the Antiquities Coalition was able to develop and sign a Memorandum of Understanding (MoU) that created a public-private partnership between the Egyptian Ministry of Antiquities and the International Coalition to Protect Egyptian Antiquities (ICPEA). This agreement has allowed the ICPEA and government of Egypt to work together to formulate innovative approaches to combatting all facets of cultural racketeering on the ground.

The Development of a Legacy GIS for the Contextualization of the Linear B Deposits from the Palace of Nestor at Pylos

Zak Bartholomew, College of Charleston, James Newhard, College of Charleston, Norman S. Levine, College of Charleston, Kevin Pluta, University of Texas at Austin, and Dimitri Nakassis, University of Toronto

The Palace of Nestor has been an important site for scholars since it was first excavated. One of the noteworthy classes of artifacts is the administrative evidence in the form of Linear B tablets and sealings. Currently, efforts are under way to bring this assemblage to full publication by employing traditional and innovative visualization and imaging techniques.

Concurrent with the formal, traditional publication of this assemblage is the development of a visual and spatial informatics system. One of the subtasks includes the creation of a GIS to spatially locate the fragments within the palace. While the location of the objects has been emphasized in previous studies, geospatial applications have advanced such that the location of the tablets can be linked to other information and presented in a format that facilitates querying and exploration by the user.

Using extant published studies and excavation notebooks, the findspots of each fragment are being georeferenced. This is accomplished not without complications. The artifacts were recovered at a time when location was closely linked to nearby referents, and differing systems of notation were allowed and evolved over time. For example, the system commonly used in Rooms 7 and 8 employs a modified township-section organizational logic. In other sections of the palace, a location was determined by triangulating from reference points that have since disappeared. In other cases, fragments were noted as simply coming from a particular room or room section. Building a unified system that accommodates the fuzzy nature of the data is therefore of prime consideration.

The poster presents the current solution for this issue, which allows for querying by tablet and series data. Results are displayed within a site map that shows the location of each queried fragment. Future developments will allow for the display of additional information (e.g., imagery, transcriptions) and greater robustness for querying by word or word fragment.

Site Formation Processes on the SEUS Continental Shelf (Georgia Bight) with Application to the Identification of Prehistoric Submerged Cultural Resources

M. Scott Harris, College of Charleston

Renewed interest in the exploitation of marine resources (fisheries, sands, renewable energy, fossil fuels) from the continental shelves of the eastern United States (SEUS) requires substantial cultural resource searches. While site-specific investigations are required during the initial phases of resource exploitation, estimation of potential human-habitation sites provides important information due to the difficult nature of identification of these sites. That artifacts are limited does not mean they should be ignored but rather that more effort should be put forward for identification of these critical early Paleoamerican sites.

This paper presents a sea-level based model for critical areas of human habitation on the shelf. Extending from the last interglacial highstand near modern coasts approximately 80,000 years ago, an estimated sea level curve is presented with a working framework of shoreline positions since that time. Based on paleo-landscape reconstructions identified from multibeam bathymetry, sidescan sonar, subbottom profiler, and remotely operated vehicle observations, approximate shoreline and fluvial system positions are presented. Within the context of these sea-level positions, landscape indicators critical for understanding human habitation patterns in this region are also identified based on current terrestrial models.

Within the SEUS, the Georgia Bight shelf is a landscape palimpsest, with ancient coastal, mainland, and fluvial systems changing form and preservation potential throughout a varying climate and overtopped by sea-level rise. Critical areas in-

clude primary (rock outcrops) and secondary (placer deposits) lithic sources for tool manufacture adjacent to water and food sources—critical elements associated with existing terrestrial sites. Although the SEUS contains a complex mosaic of many varied depositional systems and landforms, several distinct features have been identified at different depths in the bight. At 80 ka BP (Marine Isotope Stage [MIS] 5a), the shoreline mimicked the modern coast. Dropping to approximately –115 m below relative sea level (RSL) (acknowledging glacial fore bulge and tectonic patterns regionally) in MIS 4 approximately 65 ka BP and rising to nearly –45 mRSL approximately 55 ka BP until dropping to –125 mRSL at the last glacial maximum, the shelf was exposed to its edge almost 100 km east of the modern coast for almost 50,000 years. Here, several large promontories (Bulls Scarp, Winyah Scarp) looked north and south at the edge of the weakened Gulf Stream and intensified cold coastal current. These promontories remained exposed until about 11,000 to 12,000 years ago, when rapidly rising sea levels raced across the gentle slope of the shelf, staggering their landward retreat during slow-rising periods, forming estuaries and areas ripe for habitation.

A Chemical Investigation of Cedar Oil in the Hellenistic Levant

Elizabeth Mauer, Boston University

In this poster I examine the ancient practice of using cedar oil to protect papyrus from destructive insects using chemical, textual, and archaeological analyses. My starting point is organic residue analysis of clay amphoriskoi from the large Hellenistic-era administrative compound at Tel Kedesh, Israel. In one room, excavators found about 30 intact amphoriskoi and about 1,800 small clay sealings, indicating the presence of an archive. Preliminary testing of several of the amphoriskoi via gas chromatography-mass spectrometry (GC-MS) indicates that they held cedar oil. I compare these ancient residues with modern samples taken from different types of cedar trees using several different methods of production. My research sheds light on two issues: the type of tree used and the method used to produce the oil. In 1931, Lucas examined the use of cedar oil for mummification and argued that the oil used actually came from juniper trees. My data should help resolve this issue.

Many ancient authors mention cedar oil. Herodotus and Pliny the Elder cite its use in mummification, while Ovid, Ausonius, Persius, and Vitruvius Pollo mention its use to preserve papyrus. Pliny provides an explanation of how cedar oil was made. These authors use different words for cedar, and it is unclear if these relate to different sources and/or uses. I reanalyze these citations in light of my analytical results.

The amphoriskoi from Tel Kedesh are all made of a ceramic ware known as Phoenician semi-fine, which petrographic analysis has shown comes from the area of Tyre. I trace the distribution of semi-fine amphoriskoi in the eastern Mediterranean in order to assess whether all such vessels may be postulated to have carried cedar oil or if the pattern instead suggests that they were used for various liquid commodities.

Cedar wood is well known as a valuable commodity throughout the Mediterranean. By focusing on cedar oil, I shed light on its specific use and highlight its status as a primary product in its own right.

SESSION 3A: Colloquium

Palmyrene Funerary Portraiture and the Construction of Identities

ORGANIZERS: *Rubina Raja*, Aarhus University, and *Andreas Kropp*, Nottingham University

Colloquium Overview Statement

This session brings together presentations that address issues surrounding the funerary portraiture from Palmyra in Roman Syria. The papers present new approaches that promise rich rewards.

In sheer numbers, Palmyrene portraits constitute the largest corpus of portraits in the Roman world outside Rome. Some 2,000 specimens are known today. The large majority come in the form of relief busts on slabs used to cover the openings of individual loculi that were arranged like shelves by the dozens or hundreds inside tower tombs or hypogea. The bulk dates to the first three centuries C.E. The portraiture of Palmyra offers an exceptionally large and articulated repertoire of facial types, hairstyles, poses, gestures, costumes, attributes, and insignia.

Until now there existed no comprehensive corpus of Palmyrene portraits and, as a consequence, there are hardly any synthetic studies, especially in the English-speaking world. This lack is starting to be addressed by the members of this panel who are engaged in the Palmyra Portrait Project (PPP), a research project that is currently creating a comprehensive corpus of Palmyrene portraits to serve as a basis for further research.

This colloquium brings together specialists from different backgrounds who have been publishing their research on Palmyrene portraiture with a variety of methodological approaches. The purpose of the colloquium is first to outline the methods, challenges, and opportunities in studying this vast and varied body of material, and second to explore the significance of Palmyrene portraits as a social and cultural phenomenon. Two aspects merit particular attention and will be addressed across the papers of this colloquium:

- **Portrait styles:** Palmyrene portraiture stands out for its own distinct, deindividualized style from both imperial and Roman provincial portraiture. There are very few of the “Zeitgesichter” that are so common in other Roman provinces. Rather than rendering exact facial features, Palmyrene artists used stylized, generic, and stereotypical visual formulas to produce conventional types. Do the portraits reveal a different approach to the purpose and function of portraiture? Did Palmyrenes put less value on “individualism” and instead promote conformity? Do the portraits articulate a different “Selbstverständnis” as citizens?

- **Costumes:** Men’s costumes range from richly embroidered “Persian” garments to the Greek chiton and himation. Women mostly retained more “oriental” fashions consisting of embroidered tunic, cloak, headband (“diadem”), turban, and veil. Can we discern “dress codes” in how costumes are combined and the

contexts in which they are deployed? Do these costume choices constitute statements about cultural allegiances to the clan, the polis, and/or the Roman empire?

The portraits of Palmyra are carefully constructed self-images. They were employed by the citizens not merely as a means of self-expression and statements of personal and collective values but also as tools for the construction of public and private personas. For our understanding of a culture and society uniquely placed between Rome and Parthia, the portraiture of Palmyra is a rich source that is still waiting to be tapped.

Palmyrene Portraits: Evidence, Methods, and Questions

Rubina Raja, Aarhus University, and Andreas Kropp, Nottingham University

This joint paper sets out the evidence, methods, and questions that are addressed within the Palmyra Portrait Project (PPP). In sheer numbers, Palmyrene portraits constitute the largest corpus of portraits in the Roman world outside Rome. Some 2,000 specimens are known today. The large majority come in the form of relief busts on slabs used to cover the openings of individual loculi that were arranged like shelves by the dozens or hundreds inside tower tombs or hypogea. The bulk dates to the first three centuries C.E. The portraiture of Palmyra offers an exceptionally large and articulated repertoire of facial types, hairstyles, poses, gestures, costumes, attributes, and insignia. Until now there existed no comprehensive corpus of Palmyrene portraits and, as a consequence, there are hardly any synthetic studies, especially in the English-speaking world. This lack is starting to be addressed by the PPP, a research project that is currently creating a comprehensive corpus of Palmyrene portraits to serve as a basis for further research. This paper introduces the corpus, which currently holds more than 1,000 pieces, and sets out the research agenda of the project.

Male Faces in Palmyrene Funerary Portraits: Influences, Meaning, and Problems of Interpretation

Tracey Long, Aarhus University

How did men of Palmyra view themselves in the world? Palmyrene funerary culture included placing plaques with portrait reliefs of the deceased on graves that lined the walls of tomb structures. The database compiled by the Palmyra Portrait Project provides access to the largest-ever virtual collection of these unique pieces, allowing the iconography to be studied in great depth.

The portraits have been regarded as “provincial,” implying inferiority to centers of power such as Rome, or dismissed as not portraits, in which case their cultural relevance is overlooked. By concentrating on one particular group of portraits, we can inquire as to their true significance: not as objects of aesthetic worth but as mirrors of contemporary culture and of how self-identity was negotiated in this Near Eastern city.

Heads and faces of male funerary portraits have never been the subject of separate study despite displaying a plethora of portrait styles not seen elsewhere. They are packed with meaning, every feature a conscious addition through which

to communicate meanings, allegiances, and values regarded as important in the “private” funerary context, values different to those of females. This paper demonstrates how male identity was constructed through choices of hairstyle, facial hair, face types, indicators of age, and even the direction of the head in this vibrant mercantile city situated between the opposing powers of Rome and Parthia and the wider world.

Who Was I? Palmyrene Funerary Portraits Individualized Through Attributes

Annette Højen Sørensen, Aarhus University

The Palmyrene funerary portraits display a variety of attributes, but within the scholarly literature, the deceased are usually identified as individuals through their inscriptions, which most often declare the family lineage of the portrayed. These inscriptions were usually written in the local Palmyrene Aramaic dialect, but on rare occasions a Greek inscription may have accompanied the indigenous language. Many portraits are furthermore shown with attributes such as writing equipment, priestly attire, horses, camels and book scrolls. and thus seem to add to the individual expression of the portrait.

This paper explores the choice of attributes, particularly on the male portraits, to seek out the commissioner’s choice of attributes in relation to the status, skills, trade, etc., of the portrayed individual. The importance of pictorial representations cannot be underestimated. To illiterates visitors to the tomb, inscriptions would have been of little importance, and the attributes may then have added specific qualities to the portrait that captured the personality and identity of the portrayed citizen; in contrast, the literate and modern scholar tend to focus on the inscription as the identifying factor of the Palmyrene portraits.

The Funerary Portraits of the Family of Wahbâ

Fred Albertson, Memphis University

This paper examines four Palmyrene loculus plaques, three currently in the Metropolitan Museum of Art in New York (acc. nos. 98.19.2, 98.19.3, 98.19.4) and the fourth, a double bust, housed in the Musée d’Archéologie Biblique des Pères Blancs à Sainte-Anne, Jerusalem (inv. no. PS 2670). The reliefs represent, in total, four brothers and their father, a fact confirmed by the accompanying Aramaic inscriptions. What also links these reliefs is an addition to the standard genealogy found on each inscription, which notes that the plaque was made by Wahbâ, their brother, or, in the case of the father’s image, by Wahbâ, his son. An analysis of the chronology of the portraits demonstrates that the brothers’ funerary images all predate the one belonging to their father. This suggests that based on Wahbâ’s participation in the commissioning of these reliefs, presumably as head of the family, the carving of the father’s image postdates his death by perhaps 30 years and probably is the product of a reburial. The phrase “which PN made for him” is rather rare on loculus plaques and stelae at Palmyra, and an analysis of its use may suggest that it is specifically employed to denote unusual circumstances surrounding the carving, whether it be the date or the patron. A final analysis of the

group provides insight into the selection of the workshop, presumably by a family member after the deceased's death.

Dress Code Violations: Palmyra and the Tradition of Roman Provincial Portraiture

Maura Heyn, University of North Carolina at Greensboro

This paper situates Palmyrene portraiture in the tradition of the funerary art of the Roman provinces, particularly Roman Egypt and Pannonia, with the purpose of highlighting that which is unique to Palmyra. The portraiture from Palmyra, Pannonia, and Egypt is roughly contemporaneous, produced in the first several centuries C.E., and the artists from these provincial regions seem to be working from the same general model: the funerary portraiture produced in Rome in the first century B.C.E. The deceased from all three regions are depicted in a frontal, bust-length portrait and are often wearing the western-style tunic and cloak. There are, however, interesting particularities of dress and attribute in Palmyra: some of the deceased wear local dress and display attributes that have no parallels in the capital city. This paper analyzes the reasons behind the choice to deviate from the Roman paradigm and the ramifications for such differences when considering the meaning of provincial art.

The Use of the Embroidered Tunic in Female Funerary Portraiture from Palmyra

Signe Krag, Aarhus University

Less frequently, the embroidered tunic can be observed in Palmyrene female portraiture. It is executed following different variations and using different media, in connection with different aspects of identity. Already in the earliest stelae from the first century C.E. the tunic can be worn by females, and during the second century C.E. it is more frequently seen in loculi reliefs in which the appearance of the tunic changes. This paper explores how the embroidered tunic was used in female portraiture in relation to different aspects of identity and why some females were chosen to be portrayed wearing this type of tunic.

SESSION 3B

Responses to Death (Neolithic to Bronze Age)

CHAIR: *Joanne Murphy, University of North Carolina, Greensboro*

Responses to Death at Franchthi Cave

Tracey Cullen, American School of Classical Studies at Athens

Small mortuary assemblages are typical of the Greek Neolithic, particularly the early and middle phases. In this respect, Franchthi Cave is no exception: even allowing for sporadic occupation of the cave and the associated open site, Paralia, the number of excavated burials and scattered human bones is very small. The size

of the sample is in part a function of excavation strategy—deep vertical trenches were favored in the cave over wide horizontal exposure—yet the rarity of human remains is striking. Is it possible, as Perlès has suggested for Early Neolithic northern Greece, that the formal burials at Franchthi represent a small minority of the population, whose treatment is not typical of the ways in which the communities using the site attended their dead? In that case, one might surmise that only some individuals were chosen for intramural burial, while most of the population was buried or exposed outside the living area.

Following this reasoning, the small sample size becomes the starting point for an interesting problem: who are the few individuals who warrant intramural burial, and how were they laid to rest? Among the formal burials, neonates, infants, and children outnumber adults, and among those adults, women outnumber men. The two most richly furnished burials at Franchthi date to the Middle Neolithic and are those of a neonate and a middle-aged woman. Might the intramural burial of these individuals be symbolically related to the deliberate placement of the dead below house foundations in the Balkans and Near East? It has been suggested that such burials—often neonates—served an apotropaic function for the community or that the inclusion of child burials within the living space offered protection to the dead. Reconsideration of the juvenile burials at Franchthi can benefit from a look at Neolithic ritual practice elsewhere in the Mediterranean. For example, are child burials in Greece more frequent in cave contexts than in open-air sites, as seems to be the case in Neolithic Italy, and if so, why?

Infants and children have sometimes been overlooked in the study of Neolithic mortuary ritual, the assumption being that they have not achieved enough status or “personhood” to warrant special funerary treatment. This paper is intended to contribute to the growing awareness of Aegean archaeologists of the need to write gender and childhood into our narratives of the past, while also acknowledging the substantial difficulties in doing so.

Old and New Discoveries in Prepalatial Mochlos

Jeffrey S. Soles, University of North Carolina at Greensboro, *Costis Davaras*, University of Athens, and *Thomas M. Brogan*, INSTAP Study Center for East Crete

This paper reaffirms the Early Minoan (EM) date of the Prepalatial settlement and cemetery at Mochlos and refutes the recent attempt to redate it, particularly its cemetery, to the Middle Minoan (MM) I period.

It reviews the evidence for Prepalatial Mochlos uncovered in the current Greek-American excavations on the site. The project has uncovered the EM houses of the people who were buried in the adjacent cemetery. They are widely scattered beneath the Neopalatial town so that it is possible to estimate the size of EM IIB Mochlos at 6,000 m², about four times that of the contemporary village at Myrtos (Fournou Korifi). In addition to house remains, the project has uncovered evidence for various manufacturing activities, including bronzeworking, gold-jewelry making, and stone-vase making.

The paper also examines a building complex located in a ravine along the eastern edge of the Prepalatial cemetery that was used during the EM I, EM IIA, and EM IIB periods, which makes it one of the oldest building ever uncovered at Mo-

chlos. During this time, it underwent dramatic changes in design and function. Initially it was occupied as a dwelling and used as an obsidian workshop. At a later point most of the building was buried; small irregular rooms were erected above it; and terrace walls were erected in the ravine behind. At least two burials were made in the new rooms, but the earlier southeast room of the original building was redesigned for offerings, while the terrace walls were designed to accommodate cooking and feasting areas.

To Build a Cave: Accounting for Projecting Slabs on Later Prepalatial Tholoi

Emily Miller Bonney, California State University Fullerton

A puzzling feature of many of the Cretan tholoi built at the beginning of Early Minoan (EM) II or later is the presence of projecting slabs. The frequently triangular projections vary in size and degree of finish and usually are positioned no more than 1 m above ground. Scholars have suggested they served to support a covering mound of earth or scaffolding used in the construction of the tombs, but none of these explanations is very convincing. Part of the difficulty in providing a satisfactory account is the inconsistency in number and orientation on the exterior of the tomb—some slabs point east, other point southwest, and there is no clear pattern. This paper argues that we can best understand the slabs by looking at the earlier EM I tholoi. Some have suggested the first tholoi were built to look like caves, but an examination of the earliest examples at Ayia Kyriaki, Kaloi Limenes, Trypiti, Stou Skaniari to Lakko, and Lebena Yerokambos indicates that they were intended to be actual caves. Constructed of large blocks and even boulders, the tombs have extremely irregular exterior surfaces. They blend into the landscape and can be difficult to identify because of their resemblance to the hillside caves and rock outcropping. Constructed as caves, these early tholoi possessed the same liminality as an actual cave. This paper contends that the addition of annexes to many tombs at the beginning of EM II and the inclusion of anterooms in most of the later tholoi mark a reconceptualization of the tomb as a building rather than a cave, an ontological shift. That people reenvisioned the tomb as a clearly man-made structure is apparent as well in the use of more regular and frequently lightly finished blocks in the later tombs. But the builders and users were aware of the earlier tombs, and I contend that the projecting slabs were intended to recall the rugged exterior of the EM I tholoi. The irregularity the slabs introduced into the tomb's exterior allowed it to be linked to the earlier tradition, while the annexes clearly signaled a new order of tomb building.

Personal Adornment and Group Identity in the Archanes-Phourni Cemetery: A Quantitative Approach

Sarah Linn, University of Pennsylvania

The term “kinship” is often used to characterize the relationships of groups of individuals interred within different tombs in the same cemetery in the Aegean. The assumption is that people buried in close chronological and geographical proximity may be related by blood, marriage, or other social bonds. While it may

be difficult or impossible to demonstrate kinship, and the term should be used carefully, it seems likely that some association existed, whether biological or voluntary. Material vestiges of these group affiliations may survive in the grave goods and building structures themselves. The objects these groups chose to deposit with their dead are meaningful and perhaps indicative of the identities and associations among the group interred and in contrast to others.

I explore group identity as expressed through the burial offerings, especially personal adornment, within the tombs of the Archanes-Phourni cemetery located in north-central Crete. I use a quantitative approach. To constrain the chronological span of this long-lived cemetery, I limit the analysis to the Early Minoan III to Middle Minoan II periods. This cemetery contains both tholoi and house tombs typical of the Mesara and east Crete, respectively, and considers multiple burial methods, including surface, larnax, and pithos burials. Lack of a clear regional approach to burial and deathways makes Archanes-Phourni an interesting case for an archaeological study of group identity.

Multivariate analyses offer a systematic and unbiased approach to the study of burial practice and deposition of objects that cannot be achieved with simple comparisons of numbers of objects and wealth among tombs. Polychoric and tetrachoric correlations, as well as correspondence and cluster analyses, are applied to examine relationships among variables and identify patterns that may be difficult or impossible to recognize otherwise. These variables include burial building, burial method, age, sex, and objects interred, such as ceramics, weapons, depilators, and jewelry. Objects are now seen as having an active role in the formation and maintenance of identity; as personal ornaments were directly associated with the body, methods of dress make an especially productive study. Adornment types and materials are emphasized as a possible lens through which group identity can be studied within a mortuary context. Through these multivariate analyses, I hope to better understand the relationships among the groups interred within the Minoan cemetery of Archanes-Phourni and to refine a methodology for comprehending group identity within funerary contexts on a larger scale.

Contextualizing the Late Minoan Tombs of the Western Siteia Mountains

Andrew J. Koh, Brandeis University, and *Miriam G. Clinton*, University of Pennsylvania

Ever since Seager excavated the chamber tomb cemetery at Plakalona in 1900, archaeologists working in the western Siteia Mountains on Crete have been aware of both chamber and tholos tombs in these northern foothills dating to the Late Minoan (LM) III period and the Early Iron Age. Today these tombs stretch between the modern villages of Chamezi (Kimouriotos), Mesa Mouliana (Sellades), Myrsini (Aspropilia), Tourloti (Plakalona), and Lastros (Langades), which were together known as Metochia in the 1834 Egyptian census. Many of these tombs were looted prior to formal excavation, but they have nonetheless yielded an array of rich finds, including bronze and iron swords and richly decorated pottery. While detailed analysis of the finds has proven invaluable, the settlements to which the LM III tombs were tied have often proven elusive. Scholars such as Rutter have explicitly pointed out the lack of intensive research into the historical background of

both the tombs and the landscape in which they are embedded. Using topographic and GIS studies to build predictive models, this paper moves to address the gap in scholarly research. We analyze the broader archaeology of the western Siteia Mountains to link these rich tombs to their regional context and compare material from the tombs with known domestic, industrial, and administrative sites from the Late Bronze Age and Early Iron Age, offering new possible locations for the Postpalatial settlements connected to burials at Sellades, Aspropilia, and Plakalona. These studies suggest that the tombs were one part of a bustling landscape at the end of the Bronze Age, one that continued and adapted the Late Bronze Age settlement hierarchy of the region. They show that in the western Siteia Mountains of Crete, at least, the 12th millennium B.C.E. brought both continuity and change. This conclusion has important implications for current narratives of collapse in the Aegean world and shows that Minoan life, though undoubtedly altered, did not end abruptly with the end of the Bronze Age.

Fluctuations in the Power of the Dead at Pylos

Joanne Murphy, University of North Carolina, Greensboro

This paper reexamines the recent archaeological hypothesis that ancient societies commonly believed the ancestors played significant roles in their supernatural orders. This scholarship suggests that communities claimed that their ancestors, through their connection to the divine or supernatural, wielded a constant and unchanging power. This power could transform society and grant exclusive rights over limited resources to those who could claim a special relationship to the ancestors, either through a familial connection or through enhanced access to the dead.

In this paper, based on a detailed examination of the dates of the use of the tombs at Pylos, the wealth of the artifacts in them, and their locations, I argue that the metaphysical components and significance of the mortuary arena and ancestors at Pylos were not constant but fluctuated over time, and that the emphasis cycled between the ancestors and recently deceased and their funerals. This cycle between ancestors and the recently deceased was directly related to the changing political economy at the palace.

I illustrate that ritual at the tombs, as a repeated pattern of activity/practice, was predominantly limited to the placement of repeated groups of objects with the dead with only minimal ritual activity in the dromoi; the one exception is late in the history of Pylos and confirms the renewed importance of ancestors during that period. At the time of a new funeral, if necessary the older skeletal remains were moved to the side to make room for the new burial. These depositional patterns highlighted the funeral and indicate that the dead were at their most socially significant at the time of burial.

The varied lengths of time during which individual tombs were in use, the different locations of the tombs at different periods in relation to the palace, the changing quantities and values of the objects deposited in the tombs, and the chronologically limited evidence for any nonfunerary rituals at the tombs all indicate diachronic changes in the importance of ancestors and that of the newly dead among the elite groups at Pylos.

SESSION 3C

Urban Life and Infrastructure

CHAIR: To be announced

City Walls, Polychrome Masonry, and the Civic Image of Samnite Pompeii

Ivo van der Graaff, Center for Advanced Study in the Visual Arts, National Gallery of Art

For many cities of the ancient Mediterranean, fortifications represent one of the principal communal investments in urban infrastructure. Not only did walls define the defensive perimeter of a settlement and its hinterland, but their imposing mass and masonry added an unmistakable monumental component to the cities they once enclosed. As a result, many scholars both ancient and modern agree that fortifications formed an integral part of the image and definition of an ideal city. Nevertheless, there are no studies that assess the visual relationship between a single set of defenses and their associated urban matrix. This paper tackles that issue.

Built and upgraded several times between the late fourth century B.C.E. and the establishment of the Roman colony, the Samnite fortifications of Pompeii are arguably the best-preserved defenses surviving since antiquity. Traditionally, Pompeianists such as Mau and Maiuri have identified three main construction phases to the defenses, each marked by the application of distinct construction materials, including limestone, tuff, and concrete. These phases were pivotal events that accompanied Pompeii's urban expansion in the Samnite period, when its citizens erected the monuments—temples, theaters, and sumptuous private houses—that defined their city. Through the use of common local construction materials, such as brown tuff and yellow limestone, Pompeii acquired a distinct image that Pompeians actively developed throughout the city. Nowhere is this more evident than in the fortifications where engineers deliberately juxtaposed tuff, limestone, and subsequently concrete to reference the broader visual aesthetic of Samnite Pompeii. In this manner, the fortifications were in dialogue with the buildings of the city, including temples and the facades of elite houses, ultimately defining a unified civic image that encompassed its social plurality.

Using masonry analysis and the latest archaeological evidence, this paper examines the systemic aesthetic considerations that engineers employed in the construction of the defenses of Samnite Pompeii. These were not subtle adornments but massive statements of power reflecting both Pompeii's status as a city and its citizens' ambitions. Viewed in this way, the fortification circuit reveals itself as a building initiative that, like many other public monuments, was the object of political patronage, elite manipulation, religious associations, and appropriation.

The Iron Streets of Pompeii

Eric Poehler, University of Massachusetts Amherst, *Juliana van Roggen*, University of Massachusetts Amherst, and *Benjamin Crowther*, University of Texas at Austin

The construction of Roman roads and streets is a subject well understood both from literature and from archaeological investigation. Ancient authors, such as Statius (*Silv.* 4.3) offer a glimpse of an imperial road being built—if enmeshed within a panegyric—while stratigraphic excavations of major Roman viae, rural tracks, and urban streets have confirmed a general picture of Roman practice. Recent research at Pompeii by the authors, however, has revealed a heretofore unrecognized method of construction or repair. From an intensive campaign of documentation on more than 70% of the paved surface of Pompeian streets (most of the rest being closed for safety concerns), 440 locations of iron and iron slag have been found, particularly between the junctions of paving stones. Oxidized to a bright orange color but still sufficiently solid to show its metallic nature, these iron deposits are generally small, most less than a few centimeters in diameter. More important than their size, however, is the identification of iron staining on multiple paving stones surrounding the iron fragment, which demonstrates that this iron or iron slag was not pounded but rather was poured into place. Moreover, our survey has identified locations where this molten material was splattered across stones and ruts, where it was used to fill exceptionally deep ruts, and where it was poured into the spaces between paving stones to fill up large voids below them. Excavation by the Superintendency of Pompeii across a 2 m stretch of Via Stabiana at its intersection with Via del Menandro, still awaiting final publication, has revealed the character of this molten material and hints at the prodigious quantities that appear to have been used.

Our paper therefore examines the survey research in detail and begins to tackle several obvious yet important questions: (1) Where did this material come from? (2) When did this campaign of iron use occur? (3) How was the process of melting, transporting, and pouring this iron material performed? (4) Why did the Pompeians employ what appears to be such a difficult and costly technique compared with repaving in stone (silex)?

The Local Dynamics of Pompeian Urban Development

Michael A. Anderson, San Francisco State University

The urban fabric of ancient Pompeii presents a complicated palimpsest of construction, amalgamation, fission, renovation, and destruction, each a reflection of the current social, economic, and political realities of city life at the moment the work was accomplished. However, while collectively the city's layout and composition reflect changing societal trends and priorities, it was the actions and decisions of individuals that actually transformed these ideals into physical reality. Though rarely observable in the archaeological record, it was these distinct decisions, and their localized motivations, that piece by piece combined to form the complex tapestry of the city's urban environment, the primary locus of urban transformation in the Roman world.

Archaeological investigations undertaken by the Via Consolare Project, with the permission of the Ministero per i Beni e le Attività Culturali e del Turismo and the Soprintendenza Speciale per i Beni archeologici di Pompei Ercolano e Stabia, have uncovered and documented the history of the urban development of Insula VII.6 since 2006. By means of geophysical examination, topographical survey, architectural analysis, and targeted excavation, while making extensive use of innovative computer technologies to capture all data highly accurately in three dimensions, this work has produced a wealth of unusually detailed evidence that provides a window onto the local-scale dynamics of urban change within the block. These not only reveal the impetus behind urban transformation but also permit the reconstruction of the particular decisions reached by individuals and sometimes the exploration of the actual consequences of those decisions.

This paper details the precise urban history of Insula VII.6, revealing also how small-scale and localized decisions combined to have lasting effects on the composition of the block from the second century B.C.E. until the early first century C.E. In particular, it highlights the significant and recurring role of nearby municipal construction as a motivating force for change in the private sphere, presenting both opportunities and challenges to local property owners. In turn, this observation drives further conclusions about the scope of civil authorities' powers of expropriation and emphasizes the role of euergetism as a significant force of urban growth in the Roman world. In the end, it is possible to investigate how the particular households of Insula VII.6 may have responded to these motivations and ultimately how profitable or disastrous their decisions turned out to be.

Managing Pedestrian Movement in Pompeii

Massimo Betello, State University of New York at Buffalo

The questions of whether and how Pompeians managed pedestrian traffic remain quite unexplored. People movement should no longer be studied as an intuitive phenomenon but rather as a system whose complexity resulted from the interaction of public and private interests: archaeological evidence allows us to consider Pompeii a "built environment" where the "natural flow" was artificially channeled and controlled by civic authorities.

This paper, a close study of Pompeian sidewalks and their relationships with fountains and city gates, illustrates how opposing sidewalks on the same road carried two kinds of ambulatory traffic—"movement-to" and "movement-through." I distinguish these two types of movement using fountains as proxy evidence for pedestrian "movement-to" and the city gates for "movement-through."

Careful survey of the city reveals that those fountains located near city gates (e.g., Porta Vesuvio, Porta di Nola, Porta del Sarno, and Porta di Stabia) were built on the opposite side of the sidewalk than that which passes through the gates themselves. I argue that these fountains were positioned on those sidewalks where an increase of "movement-to," caused by people gathering to collect water and socialize, would have hindered the "movement-through" of those entering and exiting the city, who were likely walking on the sidewalk passing through the gate. At Porta Ercolano, Porta di Nocera, and Porta Marina, there is also evidence of specialized guidance and exploitation of passersby. Structures such as benches, *scholae*

tombs, pedestrian crossings, and covered walkways are positioned to take advantage of the different natures of these two sorts of ambulatory traffic, showing how both the public and private constituents attempted to manage and exploit them.

Given that the construction of fountains certainly followed authorization by civic officials, this study also suggests the existence of a civic policy regarding the management of pedestrian traffic. Indeed, features such as the fountain of Vicolo della Regina, where an iron railing allows the collection of water around the spigot and from the street side only, provide additional evidence that city officials were concerned with the well-being and smooth movement of pedestrians. I argue that this railing was a safety feature that would prevent a pedestrian walking on the sidewalk from falling over the fountain's low (ca. 30 cm) sides. Evidence such as this regarding civic concern for pedestrian movement, when viewed along with the evidence for control of wheeled traffic, describes a civic authority concerned with the full spectrum of mobility in the city.

Evidence for the Production and Repair of Dolia at Regio I, Insula 22 (Pompeii)

Caroline Cheung, University of California, Berkeley

Dolia were important massive ceramic storage vessels in the ancient world and have been found at many Roman sites. Despite their ubiquity, however, no systematic study regarding their production or repair has been conducted. This paper presents the preliminary results of the first season of a dolium research project in connection with the Pompeii Artifact Life History Project (PALHIP), a long-term research project that aims to elucidate the life history of portable material culture at the Roman city of Pompeii. The dolium research project was conducted in June and July 2014, the third season of PALHIP, and studied in a noninvasive manner the *in situ* dolia of Regio I, Insula 22 in Pompeii, a property that was excavated in various stages between the 1950s and 1980s.

The most recent excavation explored the northern sector of the site and resulted in a discovery of several large, nearly intact dolia. Although none of the dolia has been entirely excavated and most are still embedded in lapilli, their placement and position allowed detailed autopsy and measurement of dimensions that are otherwise difficult or impossible to note, such as wall thickness and base diameter. Overall, these dolia provided an opportunity to study evidence of manufacture, use alteration, damage, and modifications, such as repairs, of an understudied component of portable Roman material culture.

This paper presents evidence suggesting that some dolia were coil built on a slow-turning wheel and that their rims were constructed in at least two steps. In addition, the paper presents evidence for use alteration and calculations of several dolia's capacities. Furthermore, the repairs found on several dolia also differed, suggesting that there were different techniques and materials used in repairing dolia. This may have corresponded with the stage during which the dolium was repaired (pre- or post-*cocturum*), the type of damage people attempted to rectify, and/or the skill and expertise of the person(s) executing the repair. Observations made by the naked eye and images captured by a digital microscope also indicate that the dolia of I.22 differed in terms of shape, fabric, and capacity, unlike examples from Ostia. The paper concludes with goals for further work during

future seasons, which would include using a handheld XRF to study the elemental composition of the various repairs.

Ubi prandeam? Status, Food, and Eating Out in Ancient Rome

Christy Schirmer, San Francisco State University

The subject of Rome's lower classes has gained popularity in recent years, although two generalizations about their eating habits persist: first, that Roman nonelites were predominantly vegetarians, and second, that food shops such as *cauponae* and *popinae* were primarily used by non-elites while elite Romans dined at home. In this paper, I argue that this standard narrative of Roman diets reinforces an oversimplification of social strata and ignores realities of daily life in the ancient city.

With a brief overview of relevant literature (e.g., Hor., Juv., Mart., Plaut., Plin.), I challenge the notion that most of the Roman population was largely vegetarian and only minimally supplemented bread, oil, and wine with other ingredients. I argue that status manifested itself in the way food was procured, prepared, and presented, not in raw ingredients or even ingredient categories. I present a group of foods for which there is compelling literary evidence of non-elite consumption, including a wide variety of fruits and vegetables, fish, meat, and seasonings.

To examine the issue of food-shop use by nonelites, I present a case study of shops identified with food service in Regio VII.6 in Pompeii. I offer a model based on spatial analysis of likely storage areas, inventory volume, and concomitant caloric output of the shops in that insula. The results indicate that the clientele of these shops were probably not the lower-class residents of the surrounding neighborhood to the exclusion of elite members of society. I argue that upper and lower classes alike used the shops, and their function was probably multipurpose (i.e., grocery and snack bar) for residents and visitors to the city.

Both the literature review and analysis of the material record support a view that the classes in the Late Republic and Early Imperial period were more integrated than scholarship has traditionally suggested. They also illustrate the need for further investigation of elite and nonelite interaction in terms of food culture and other matters of daily life.

A Refusal to Hyperspecialize: The Case of the Roman Miller-Baker

Jared T. Benton, Old Dominion University

In antiquity, unlike in the Middle Ages, milling and baking belonged to the same craft; Roman bakeries contained both millstones and ovens. By the eighth century C.E., milling and baking had become separate professions in their own right. But the chronology of the split and the reasons for it remain unexamined. The specialization of the miller and the baker into two professions is most commonly explained through technological determinism, originally proposed by Boudewijn Sirks: the invention of the watermill pushed milling out of the cities and into rural areas with running water, while baking remained an urban phenomenon for reasons of clientele and distribution.

The problem with this hypothesis is that the watermill was invented as early as the first century B.C.E. and was increasingly implemented in the centuries that followed. The question of why specialization occurred at the end of antiquity is perhaps less interesting than why it did not occur earlier. Specialization confers certain economic benefits in productivity and labor, and the ancients were not ignorant of such advantages. Plato saw specialization as the origin of the ancient state, and Xenophon observed that one who focuses on a single task will do it best.

Here, archaeological remains possibly provide an explanation not offered in the textual evidence. Milling is almost always the most visible process in Roman bakeries, located in rooms along busy streets. Indeed, the millstone—probably as a consequence of its high visibility—became a symbol of the craft. The image of the millstone was used on shop signs but also on funerary monuments and signet rings. The visibility of the millstones in bakeries and the use of millstone iconography suggests that Roman miller-bakers may have been resistant to giving up milling as part of their repertoire for ideological reasons, despite practical incentives to do so.

It is worth returning to the question of why the specialization of the miller and the baker occurred at the end of antiquity. The practical reasons of technology and productivity were always there, but the specialization of the miller and the baker could not have occurred until the ideological bonds were broken and the notion of what comprised a bakery—and the craft in general—changed altogether. The specialization of the miller and the baker fit into socioeconomic and cultural changes that occurred during the sixth and seventh centuries C.E. and the heralding of a new age.

SESSION 3D: Colloquium

Burial and Commemoration in the Roman Provinces

Sponsored by the Roman Provincial Archaeology Interest Group

ORGANIZERS: *Lidewijde de Jong*, University of Groningen, and *Tamara M. Dijkstra*, University of Groningen

Colloquium Overview Statement

The last decades have witnessed a growing scholarly interest in the Roman provinces. Significant theoretical and methodological attention centered on the study of the cultural integration of the provinces into the Empire. In these debates, provincial communities rise as active agents of change, and as highly diverse groups that seem to resist blanket models of culture change such as Romanization. Instead, research moves towards finding models that have room for local diversity within a cross-provincial or global process of culture change. The purpose of this colloquium is to address this debate by zooming in on perhaps the most local, personal, and contextually specific set of ritual practices: the care for the dead. How were mortuary customs in the provinces maintained, defined, and reinvented in the face of Roman expansion? This colloquium employs a wide geographical scale, in order to outline the full range of responses, and focuses both on migrant communities related to the Roman state, i.e., colonists, as well as non-migrant, local

populations. The first paper (Image, Monument and Memory) examines the archaeological and epigraphic evidence for funerary commemoration at the Roman colony of Augusta Emerita. It illustrates the cultural connection of the colonial population to sculptural and epigraphic traditions of Italy and Cisalpine Gaul, and, over time, the development of distinctive local types of stelae. That demographic change and social mobility produced new provincial identities, which were advertised on the tomb, is also clear in the two papers discussing Roman colonies in Greece (Tombs, Burials, and Commemoration in Corinth's Northern Cemetery and Death and Burial in Roman Patras). The second set of papers investigates culture change from the perspective of local (non-migrant) communities. The paper on Palmyra (Jewelry for the Dead) examines jewelry depicted in funerary sculpture and as gifts for the dead, and argues that these items display influence from the Roman centre, as well as ties to local traditions in the periphery. This interplay between pre-Roman customs and the adaptation of new modes of display are also discussed in the following paper on the epigraphic habit in the Dalmatian capital (Epitaphs and Social History in Salona) and in the final paper (Mortuary Customs and Memory) about tomb architecture and epigraphy in Pisidia. Together, the six papers highlight how both the convergence of aspects of mortuary customs in the provinces and, at the same time, the flourishing of local styles.

Image, Monument, and Memory: Remembering the Dead in Roman Spain

Jonathan Edmondson, York University

This paper explores the archaeological and epigraphic evidence for funerary commemoration at the Roman colony of Augusta Emerita (Mérida) in Rome's westernmost province, Lusitania. It traces the main developments in funerary commemoration from the colony's foundation in 25 B.C.E. until the early third century C.E. It highlights the essentially metropolitan forms of burial and commemorative practices adopted at this veteran settlement and, from ca. 16 B.C.E., capital of the newly established province of Lusitania and argues that the agents of the Roman state resident in Emerita played a key role in this process.

The initial form of grave markers consisted of round-topped stelae of local granite, clear imitations of the most common burial markers in Rome and central Italy in the Late Republic and Augustan age. Following the opening of the marble quarries 75 km west of Emerita in the Late Augustan period, marble plaques and stelae became common, but the fact that most of these were discovered in contexts of reuse makes their original settings difficult to reconstruct. Nonetheless, the form and decorative features of these marble stelae again show an artistic debt to forms produced in Italy and Cisalpine Gaul. From the later first century, marble altars of various sizes and forms became common, while in the Hadrianic period a distinctively "Emeritan type" of funerary monument comprising an aedicula with a portrait bust of the deceased started to appear. These trends emphasize that cultural links between Emerita and the city of Rome were still strong throughout the second and early third centuries. This latter type of monument was favored by ex-slaves, as these newly established families sought to make a mark on the colony's commemorative landscape. In time, these monuments were adopted by higher-ranking members of local society, including local magistrates and soldiers

servicing as part of the Roman provincial administration. The paper also considers two cases of “recommemoration,” where upwardly mobile families built grander monuments to draw greater attention to deceased family members initially commemorated with simpler monuments.

The paper argues that these metropolitan forms of funerary commemoration represent just one strand of the highly Roman cultural milieu that developed in this Roman *colonia* and provincial capital.

Tombs, Burials, and Commemoration in Corinth’s Northern Cemetery

Kathleen Warner Slane, University of Missouri

Corinth, a renowned trading city in the first millennium B.C.E., was annihilated by the Romans in 146 B.C.E. and reestablished as *Colonia Laus Iulia Corinthiensis* ca. 44 B.C.E. The Roman city continued to be occupied until at least the seventh century C.E. I have recently completed *Corinth XXI*, a book with the same title as this talk, which is a study of a series of chamber tombs and graves excavated in the 1960s. These tombs and graves cut across the southern edge of the cemetery that stretched all across the coastal plain below the city. The majority are Roman, but they range in date from the fifth century B.C.E. to the sixth century C.E. Although no funerary inscriptions were found, this series of graves and tombs preserves vivid evidence of the variety of ways in which the deceased were buried and remembered. Local variation among the chamber-tomb plans demonstrates both commonalities and differences from the tombs at nearby Hexamilia and Kenchreai. There are clear differences between Greek and Roman mortuary practices that are revealed by the pottery found in the graves as well as by the burial rites. The materials show that the objects buried with the body in classical/Hellenistic graves served a different function from those found with most Roman burials. Furthermore, Roman colonists brought some funerary practices with them from Italy (cremation, demonstrated by the use of urns with parallels in Etruria and Sicily; collective burial in family groups). In the second and third centuries, treatment of the body and the burial ritual changed, as it did also in central Italy and in the Greek-speaking eastern empire. Perhaps we should be asking whether the resistance so frequently identified at the beginning of “Romanization” was later replaced by homogeneity? The burials also offer the possibility of seeing how specifically Christian practices arose, because they span the period of the third to fifth centuries, when Christianity became widely practiced. For instance, in Corinth the practice of multiple burial became common in the fifth century and preceded the better-known practice of placing the deceased with the head to the west. By the sixth century, the cemetery areas that had been used by both the Greek and Roman inhabitants of the city were abandoned, and new burial grounds were established.

Death and Burial in Roman Patras

Tamara M. Dijkstra, University of Groningen

Ca. 16–14 B.C.E., Emperor Augustus transformed the Greek polis Patras into a Roman colony. Patras, inhabited from the Bronze Age onward, is a strategically

located harbor town but had been a minor player in the affairs of Greece and Rome until the establishment of the colony. Veterans of the Roman army settled at Patras, as did Achaeans from surrounding villages who were summoned to live in the colony to increase the population. The immigration of thousands of foreigners entailed major disruptions to the society of Patras as the social order was significantly altered. The army veterans, who were Roman citizens, found themselves to be the new social elite of the colony, whereas the local population was relegated to a marginal position in society, probably treated as *peregrini* in what used to be their hometown. The creation of Colonia Augusta Achaica Patrensis thus led to a complex social setup in which its inhabitants wielded varying legal rights and social positions. The incorporation of Patras into the empire-wide trade network furthermore resulted in increased migration and economic opportunities, which potentially led to social and economic inequalities within the community of Patras. The imposition of this radically new social structure likely resulted in social tensions.

I explore how the inhabitants of Patras used tombs and funerary ritual to address these social tensions from the end of the first century B.C.E. to the third century C.E. In particular, I focus on the question of how the immigrant and local population defined and redefined their identity as inhabitants of a Roman colony. After the establishment of the colony, enormous changes took place in the cemeteries. The appearance of cremations in urns, Latin epitaphs, communal burial, and monumental tombs along the route to Corinth, for example, can be connected to the immigration of Romans. These practices show significant differences with the local practice of individual inhumation in tile or cist graves. In the second and third centuries C.E., practices became more homogenous as cremation decreased and inhumation in brick built chamber tombs became the norm.

This paper argues that mortuary practices played a significant role in the dialogues regarding social roles in Roman Patras. It traces how the highly variable practices of the early years of the colony became more uniform and addresses the issue of connecting this process to dissolving social boundaries.

Jewelry for the Dead in Roman Palmyra

Andrea Raat, Munich Graduate School for Ancient Studies

Palmyra, a caravan city in the eastern part of the Roman empire, thrived in the first three centuries C.E. During this period, Palmyrenes buried their dead in tombs built near the city. The funerary portraits that decorated the insides of these tombs are well known, especially those of females, who are regularly depicted with a wealth of jewelry. These sculptures often serve as an illustration in studies on Roman women and jewelry in general. However, the portraits have never been systematically analyzed regarding the displayed jewelry and their original funerary context, nor have they been compared with material from the center of the Roman empire. Moreover, another important source of information has been overlooked until now: the actual jewelry items that were found in the tomb, and accompanied the dead as grave goods.

In this paper, I examine the role and meaning of jewelry in the tombs from Roman Palmyra. Both as grave goods and as represented on funerary portraits,

jewelry can reveal particular values, norms, and social relations. Further, by addressing how jewelry is dealt with in burial contexts in the area around Rome, I offer a new perspective in the investigation of the relationship between the two regions. An example of a question here is whether shared customs and conventions are visible, possibly indicating conformity throughout the empire.

To achieve a complete image and avoid a sole focus on typology, several aspects of the jewelry finds and representations are taken into account, including context, expression of gender, age, and social positions. This leads to insights regarding with whom jewelry is found, in what quantity, and with what other objects. This study also considers the specific types of jewelry found with certain persons. One outcome is that in Palmyra the specific types of jewelry items found and their materials proved to be a means of gender and age differentiation.

The results show that the areas display similarities but also that they followed their own traditions and practices. Being incorporated in the Roman empire thus did not mean that the peripheral city necessarily mirrored the central power in the way it dealt with jewelry in funerary contexts; instead, there was a more autonomous interaction.

Hence, this paper demonstrates that focusing on the role of jewelry in burials proves to be an interesting viewpoint from which to examine how provincial societies operated in the Roman empire.

Epitaphs and Social History in Salona (First to Sixth Centuries C.E.)

Dora Ivanisevic, Central European University

Salona, the capital of the Roman province of Dalmatia, yielded a rich corpus of Latin funerary inscriptions from both the early and later empire, which offers a rare opportunity to explore the imperial Latin epitaphic culture throughout its history at an epigraphically self-contained site. By covering it in its entirety, this paper seeks to get around the dominant yet methodologically distorting conceptualization of Roman vs. Christian epigraphy.

Mouritsen reexamined the question of why people put up funerary inscriptions; he offered a thorough analysis of epitaphic population at Pompeii and Ostia, reevaluated the archaeological context of the given funerary monuments, and challenged the prevalent interpretative paradigm of competitive display as the main drive for putting up inscribed funerary monuments. Following Mouritsen's methodology, I address two issues in this paper: what social strata in Salona appropriated the Roman custom of commemorating their dead with inscribed funerary monuments, and what may have been their motivations? The first part of the paper is a comprehensive study of a bulk of epitaphs to which statistical methods are applied. I arrange epitaphs chronologically to trace the changes in population as recorded in funerary inscriptions from the first to sixth centuries; for that purpose, the texts are divided in dedicatory *tituli* and epitaphs. Here the focus is on classifying dedicators, dedicatees, and possible secondary burials based on an individual's (self-)identification and affiliation and on onomastic criteria and familial context as indicators of one's status. In the second part of the paper, I reconsider the pictorial, physical, and locational aspects of funerary monuments

to gain insight into plausible reasons for erecting inscribed funerary monuments in Salona.

Commemorating the dead with funerary inscriptions in Dalmatia was a novel cultural practice taken over from the Romans over the course of the first century C.E. This paper seeks to explore the appropriation and development of epitaphic habit in one of the Roman provinces, its purpose, and how this practice differed from the custom in Italy.

Mortuary Customs and Memory in Roman Pisidia

Lidewijde de Jong, University of Groningen, and *Bilge Hürmüzlü*, Süleyman Demirel University

Roman Pisidia has yielded a rich collection of archaeological and epigraphic evidence for burial customs in the form of tombs, stelae, reliefs, sarcophagi, and epitaphs. The dispersal and decontextualization of these remains, most notably the inscriptions and coffins, and a general site-based approach to research have inhibited a comprehensive study of this region around modern Isparta. It is left out of analyses regarding Anatolian funerary customs as well as those concentrating on Roman provincial integration. Rather than discarding this material in favor of better-published excavations, we intend to assemble the scattered remains and to initiate a comprehensive study of funerary ritual and commemoration in northern Pisidia. This paper presents the first results of this new project, based on new data from the Isparta Archaeological Survey Project and already published data collected at the University of Groningen.

Northern Pisidia is a particularly interesting region, as it received a considerable number of Roman colonies (Antioch, Parlais, Prostanna) and had strong local pre-Roman traditions in mortuary architecture and decoration. The study of the interaction between these populations is one of the key aspects of our project. For instance, what was the role of the pre-Roman past in creating new funerary styles? Older motives, such as “door stelae” of Phrygian and Lydian origin, made their way to Roman-period coffins, sometimes mixed with garlands and so-called Pisidian shields.

The region has also yielded nonurban funerary material, which offers the chance to move away from the better-known urban centers. Rural sites around Tymbrida, for instance, yielded stelae with images of flocks and shepherds and texts in local Pisidian rather than Greek or Latin.

Tombs in Roman Pisidia emitted a variety of messages about the identity of the occupants. Colonists, soldiers, families, shepherds, and farmers were actively memorialized, and their names and faces prominently adorned their graves. The tombs allow us to trace the gradual impact of foreign influences on local practices and the integration of Pisidians into the global culture of the Roman empire in the first centuries C.E. At the same time, they adhered to and perhaps reinvented specifically local (i.e., non-global) commemorative customs.

SESSION 3E: WORKSHOP**Underwater Cultural Heritage: Prospects and Problems for Management, Protection, and Exploration**

MODERATORS: *Elizabeth S. Greene*, Brock University, and *Justin Leidwanger*, Stanford University

Workshop Overview Statement

The 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage entered into force on 2 January 2009. The convention reflects an international response to the looting and destruction of shipwrecks and other submerged sites and answers the desire by states to assert control over the exploration and exploitation of offshore cultural heritage. At the core of the convention are four basic principles: (1) an obligation to preserve underwater cultural heritage (UCH); (2) the consideration of in situ preservation of sites as the first option; (3) a prohibition on the commercial exploitation of UCH; and (4) cooperation among states to protect UCH, particularly through training, education, and outreach. The convention includes an annex outlining rules for research on and sound treatment of UCH based on the 1996 International Council on Monuments and Sites Charter on the Protection and Management of Underwater Cultural Heritage. The legal framework of the convention builds on the 1982 United Nations Convention on the Law of the Sea, which establishes the zones where states can exert different laws and influence. As of March 2014, the convention includes 45 states parties, of which 13 border the Mediterranean Sea. While certain states seem likely to sign the convention in the near future, political considerations may keep others from ratification for the foreseeable future if not indefinitely. Among the “research states” that are most active in Mediterranean waters, the United States, the United Kingdom, and Canada are not current signatories.

In light of the convention’s entry into force and the remaining uneven situation regarding UCH research and preservation initiatives, this workshop brings together archaeologists, scientists, policy experts, and legal specialists to address threats to UCH in national and international waters and the degree of protection provided by the convention and other laws. Participants will explore the current state of UCH protection and the benefits and limitations of the convention for the implementation of “best practices” in the management of submerged heritage. Emphasis is placed on UCH management in North America and the Mediterranean region.

PANELISTS: *Amanda Evans*, Tesla Offshore, LLC, *Margaret E. Leshikar-Denton*, Cayman Islands National Museum, *Ole Varmer*, National Oceanic and Atmospheric Administration, *Richard Leventhal*, Penn Cultural Heritage Center, *Brian Daniels*, Penn Cultural Heritage Center, *Michael Brennan*, University of Rhode Island, and *Della A. Scott-Iretton*, Florida Public Archaeology Network

SESSION 3F**Recent Archaeological Work in Central Italy**

CHAIR: *Kimberly Bowes*, American Academy in Rome

The Upper Sabina Tiberina Project: Third Excavation Season at Vacone

Dylan Bloy, Brooklyn College, *Tyler Franconi*, Oxford University, *Candace Rice*, University of Edinburgh, *Giulia Masci*, Università di Torino, and *Gary Farney*, Rutgers University

The third season of the Upper Sabina Tiberina Project continued excavations at the Roman villa at Vacone under the auspices of Rutgers University. Excavations focused on clarifying the relationship between the main domestic space of the villa and its productive zone, as well as completing the excavation of several rooms along the lower porticus. Our investigations produced new evidence for the habitation of the villa, particularly for phases before and after its Early Imperial phase.

Alongside the cistern wall, a large storeroom with a *cocciopesto* floor was excavated to floor level, producing more than 1,000 sherds of mainly storage and cooking pottery dating as late as the second half of the second century C.E. A second trench connecting the oil-pressing installation to the main terrace of the villa exposed a large buttressed terrace wall; the buttresses extended to a lower second wall in a later phase. This massive reconstruction appears connected to the repurposing of an earlier bath complex as a pressing installation, extending the space available for the pressing floor by the construction of the second terrace wall. This area also produced a large quantity of later-phase ceramics.

The 2014 pottery assemblage and the discovery of later floor repairs in several rooms, including at least one room in which a *cocciopesto* floor was installed above an imperial mosaic, provide evidence for a final phase of occupation just before the abandonment of the villa.

We completed the excavation of three rooms along the villa's porticus, revealing several walls and floors from a Late Republican phase. We exposed earlier floor surfaces below imperial mosaics in Rooms III, VII, and VIII. A vaulted sloping passage to the cryptoporticus found last season contained a deep stratum of pisé collapse above a layer rich in finds sealing a beaten-earth floor, though only a small section of the floor has been excavated.

We completed the excavation of three redeposited skeletons and discovered a fourth mostly intact skeleton deposited on the same floor. In a modern disturbance between the two sets of bones, we found a bronze medallion that may relate to the burials, which commemorated the Papal Jubilee of 1700. Early modern activity at the site may also be reflected in the discovery of a second modern graffito on a Roman rim sherd, which reads "HORATIUS (*sic*)."

These inscriptions likely stem from the tradition begun in the 15th century linking this villa with the poet Horace.

Excavations at the Baths at Carsulae, 2013–2014

Jane K. Whitehead, Valdosta State University

Over the past two seasons, 2013 and 2014, the excavated area of the baths at Carsulae has almost doubled. It has extended to all sides of the small, apsidal structure known from the plans of the previous excavator, Ciotti, from the 1950s to 1970s. The newly opened areas have revealed five possible furnaces located on the north, west, and south sides. Some of these were blocked up in antiquity and thus shed light on the phases of use and rebuilding of the baths over as many as four centuries. On the eastern side of the structure, a large room, originally heated but later unheated, extends toward the Via Flaminia and greatly expands the capacity of what had appeared to be a small bath complex and now seems one worthy of a city such as Carsulae. Yet the objects found within so far remain feminine in character and function.

It had long been assumed that none of the baths' superstructure remained, since it had been famously pillaged almost since the abandonment of the city in the fourth century C.E. In 2014, however, evidence of a vaulted roof was found still in situ above one of the furnaces on the north side; it preserves the original height of the building. More large sections of the figured mosaics that covered the central area of the tepidarium have come to light. The forms are red and white with black outlines and may be those "marine monsters" noted as adorning the baths by Cardinal Carrara in a letter written in 1783 to Pope Pius VI.

As the bath structure is yielding more of its ancient chronology, it is also documenting more of the chronology of the numerous excavators and pillagers who have disturbed its strata over the centuries. These bits of information are gradually composing the historical record of this complex site.

Three Seasons of Excavation of Cavità 254 in Orvieto (Italy)

David B. George, Saint Anselm College, and Claudio Bizzarri, PAAO

Excavations began in Cavità 254 in 2011. After breaking through modern and medieval floors, the excavators came to an Etruscan layer. This layer contained a mix of Etruscan and Greek as well as protohistorical material that was about 50 cm in depth. The latest datable material was ceramic from the end of the fifth century B.C.E. There was no black gloss. Below this locus was 1.5 m of a gray powdery material that was sterile. Everything from the gray layer and above was deposited from an opening in the center of the structure. This material communicated with and filled an Etruscan tunnel joining two spaces (A and B) that are of pyramidal shape (broadening out as the four walls descend). In A, steps carved into the tuff run down two sides of the walls but suffered a collapse in antiquity; they were replaced from the point of the collapse by a wooden structure indicated by holes cut into the walls. All the material below the gray locus was deposited from a point along the stairs. To date, a substantial amount of material has been recovered from the structure (this season concluded with a 2.5 m high locus of pottery to be excavated). The materials excavated include terracotta braisers, gray and black bucchero, common ware, more than 100 Etruscan inscriptions, red- and black-figure Attic pottery, many identifiable to painter or school, Etruscan black-

figure, possibly Corinthian ceramics, architectural terracotta, and bronze. Much of it seems to have a temple or sanctuary context. In this paper, we review what we have learned about the structure and report some of the materials that we have recovered, including a number of unique pieces of red-figure pottery (e.g., a fragment showing a Dionysiac herm with pinakes of satyrs hanging from it) and important architectural terracotta (e.g., an acroterion of a dying giant with a blue beard).

The nature of the finds as well as the relatively tight chronological focus of the material below the gray sterile locus to the mid/end of the fifth century has inclined the excavators to consider a number of functions for the space when it was filled, ranging from a spot for ritual deposit of sanctuary material to a general trash pit. The excavators are as yet uncertain of the purpose for the initial construction of the structure during the Archaic period.

The Large Substructure of the Ancient Town of Ocriculum in Umbria

Arianna Zapelloni Pavia, University of Michigan

This paper represents the first attempt to reconstruct, date, and understand the function of the so-called Large Substructure of the ancient Roman town of Ocriculum. The monument is a large arched building on two floors and, for its dimension and topographical prominence, represents one of the most noticeable archaeological remains of the ancient town. Ocriculum is the first stop north of Rome on the Via Flaminia and one of the most important archaeological sites in modern Umbria; it was first settled in pre-Roman times at the top of a hill and moved during the Roman Republican age to the plain below, near a wide meander of the river Tiber. The city acted as a port and road stop for travelers and goods moving throughout Italy. Because of its commercial position, Ocriculum flourished during the Late Republican and Imperial periods.

Despite the huge dimensions and the undeniable architectonic prominence of the Large Substructure, this monument is little known and has been only scarcely documented in drawings. These, however, do not provide insights into the function of the building, and they have not been part of wider archaeological research on the monument. This research arises from the urge to fill this gap: the paper proposes a reconstruction of the Large Substructure in plan, section, and elevation, making use of existent drawings, new surveys, and three-dimensional reconstructions. In addition to this, it provides a possible temporal framework for the building. From the analysis of the building technique and from using chronological references and individual comparisons with known monuments, the paper suggests dating the building to the second quarter of the first century B.C.E. Furthermore, it proposes that the substructures were one of the first interventions on the landscape after the relocation of the pre-Roman town to the plain below after the Social War of 90 B.C.E. Finally, the study advances some hypotheses regarding the function of the Large Substructure and its spaces. Comparisons with other substructures in central Italy suggest that the Large Substructure constituted a monumental platform for a sanctuary. Regarding the function of the rooms of the substructure, it is possible that the rooms were used for commercial purposes or as a market.

This research represents the first scientific and comprehensive study of the Large Substructure of Ocrinum and illuminates the critical role of the building within the city and within the Late Republican terraced buildings of central Italy.

Seventh Season of Excavation at the Vicus Martis Tudertium

John Muccigrosso, Drew University, Sarah Harvey, Kent State, and Jill Rhodes, Drew University

This year's report of the excavation at the Umbrian site of the Vicus Martis Tudertium along the Via Flaminia is in two parts. The first concerns the continued work this season on the large apsidal building that had been explored for the first time in 2012. The second part is a preliminary report on the human skeletal remains discovered during previous seasons, including the very unusual burial of two legs along with (most of) the hands.

The existence of the 24 x 15 m structure was indicated by the presence of crop marks in the dry summer of 2008 and strong signals in geomagnetic survey. Excavation was expanded to explore the remaining area outside the apse, in what was expected to be the interior of the rectangular portion of the structure. The previous years' work had revealed several structures related to the removal or maintenance of water in and around the building, and so we hoped this season to further elucidate the function of the building and to complete the overall plan. Work was plagued this year, as in most past seasons, by a water table that has risen in recent years; whether this rise is attributable to change in climate or in water usage nearby, especially by the city of Todi, is not clear.

Consistent with the findings from previous seasons, a number of features point toward a significant reworking of the site and the building itself in antiquity, perhaps in an effort to mitigate an abundance of water (a feature of the site strongly attested from the Medieval period until today). In particular, several walls were very clearly built, or better, rebuilt in phases, including one that seems to have been extended after being damaged, but in a completely different style, using repurposed roof tiles. These phases also seem to have included extending the structure beyond its likely original boundaries, resulting in a larger footprint than expected. One room from the latest phases shows a drain running beneath the floor, though evidence of these latest phases continues to be elusive, mainly because of the absence of significant soil deposition.

Detailed physical examination of the excavated human was also begun this year. Although few in number, the skeletons represent a range of individuals in terms of sex, age, and physical condition. Several of the individuals also presented interesting physiological characteristics, suggesting specific occupations during their lives.

New Excavations at Cosa

Andrea U. De Giorgi, Florida State University, Russell T. Scott, Bryn Mawr College, and Richard Posamentir, Universität Tübingen

At the site of Cosa (modern Ansedonia) in Tuscany, excavations, geophysical surveys, and three-dimensional visualization are being carried out by Florida

State University, Bryn Mawr College, and the University of Tübingen to improve knowledge of the city plan and its representation by modeling and to investigate the remains of a bath complex of purported republican date adjacent to the forum of the waterless hill site. Two seasons of work have revealed a sophisticated system of water collection and management dating to the Hadrianic period, which apparently included the use of drive wheels. There are likewise signs of use of the area for similar purposes in two previous periods in the history of the town, the one securely Republican, the other Early Imperial. While the extent of the complex is as yet unknown, its existence has significant local and territorial implications to be addressed in future work.

Fieldwork from the Villa del Vergigno Archaeological Project: Economic Production in the Mid Arno Valley, ca. 100 B.C.E.–400 C.E.

McKenzie Lewis, Concordia College

In 2013 and 2014, a collaborative effort between the University of Wyoming, Concordia College, the Sistema Museale di Montelupo Fiorentino, and Cooperativa ICHNOS reopened excavations at the Villa del Vergigno located 10 miles west of Florence near Montelupo Fiorentino. The first excavators classified the site as a large *villa rustica* that was inhabited from the early first century B.C.E. to ca. 400 C.E. The purpose of this paper is to (re)introduce the site and its finds from the 1990s excavations, to present new information discovered during the 2013–2014 seasons, and to illustrate “PyArchInIt,” a new GIS open-source software designed for use on archaeological projects.

The first excavations at the villa revealed a large structure (52 x 11 m) of 16 rooms, a bath complex, and areas for agricultural production. After 1994, excavation stopped, and reports were never formally published beyond guidebooks by the local *comune*. The early excavations revealed four kilns, one of which fired Lamboglia 2 wine amphoras, a type believed to have come only from sites along the Adriatic Sea. Lamboglia 2 amphoras had a heyday between the late second and early first centuries B.C.E., which suggests that this site was active prior to Rome’s colonization of northern Etruria (80–30 B.C.E.). Current excavations also support this dating.

Recent studies illustrate site continuity in Etruria as it transitioned between its “Etruscan” period into its “Roman” period. Thus, we suggest that this large villa was not a product of Roman settlement but an example of local prosperity that brought Roman settlement to the region. The 2013–2014 excavations have found a fifth kiln on the site in an area with Late Republican and Imperial-period activity.

This site’s location at the confluence of four rivers provides a natural stopover at a crossroads and links the villa’s economy to Volterra, Chianti, the Arno, and overland passage to Florence. The specific location at which the Pesa, Vergigno, and Arno Rivers meet, moreover, has significant economic importance as the farthest point inland that boat traffic could travel from Pisa to Florence before having to portage, which thus provides a natural docking point. Between 1300 and 1700 C.E., this same area became the largest producer of Italian fine ceramics, which may have had its beginning during the long heyday enjoyed by the Villa del Vergigno.

SESSION 3G: Colloquium**Early Mediterranean Islanders: The Nature and Significance of Middle Pleistocene to Early Holocene Insular Archaeology**

ORGANIZER: *Tristan Carter*, McMaster University

Colloquium Overview Statement

Until relatively recently the dominant model for Mediterranean island prehistory located the origins of long-term insular lifeways within the Neolithic. A series of new discoveries are forcing us to reappraise this view, with a number of Paleolithic to Mesolithic sites documented in the Aegean Islands, Crete, Cyprus, and Sardinia.

This colloquium presents new Middle Pleistocene to Early Holocene island data and debates the significance of these finds at the pan-Mediterranean and global levels. The panel includes a number of the major scholars in the field, who will be engaging with the following four questions:

(1) How robust are our data, and what are the interpretative limitations of an early prehistoric archaeology where so much of our material comes from surveys rather than stratified excavations? (2) How secure are our claims for Paleolithic seagoing, and what do these cases tell us about early cognitive and technical abilities? (3) What are the implications of an insular Mesolithic for our understanding of island Neolithization? (4) Why does there appear to be such a distinct history of early island activity between the eastern and western Mediterranean?

The panel starts with an overview of the data pertaining to Lower Paleolithic activity in the Greek islands in the context of current sea-level and tectonic reconstructions for the Pleistocene, detailing those cases that suggest strongly early seagoing (Crete, Melos, and the Ionian Islands) and their global significance for early hominin capabilities.

The role of the Aegean—in the form of either insular stepping stones or a land bridge—is then developed in the presentation on the Stélida Naxos Archaeological Project (one of the largest Neanderthal sites of the larger region), with the argument that while previously Greece was viewed in terms of a Pleistocene cul-de-sac and/or refugium, it might now be seen as an important thoroughfare in early hominin dispersal.

Most speakers then detail how the results of their fieldwork in the Cyclades, Sardinia, the Dodecanese, and Cyprus contribute to our understanding of the birth of a truly maritime Mediterranean world in the Late Pleistocene to Early Holocene and reflect on why the eastern Mediterranean islands were visited so much earlier than those in the west.

The final paper, by the scholar who in the 1980s provided the first pan-Mediterranean model of island colonization and early seafaring, critically addresses the nature of the new early prehistoric insular finds and by extension the interpretative remit and limitations of survey data.

The Early Paleolithic in the Greek Islands: When and How Did Early Hominins Reach Them?

Curtis Runnels, Boston University

Early Paleolithic artifacts have been reported from several Greek islands. At least four of these islands were separated from the mainland during the Pleistocene by open sea, raising the possibility of early hominin seagoing in the Mediterranean. The nature and timing of the presence of hominins on the islands in the early Paleolithic are evaluated. It is probable that hominins were able to reach at least some offshore islands in the Middle Pleistocene, with more widespread contact in the early Upper Pleistocene. Two further questions are addressed: from theoretical and ethnohistorical perspectives, what sorts of watercraft would have been used to reach the islands, and how would early hominins have navigated on open water? It is likely that seagoing rafts, reed boats, dugouts, and skin-covered frames were within the technological purview of early humans using early Paleolithic stone tools and that simple navigational techniques—from reading the flights of birds to the use of rudimentary maps or recognition views—may have been in use.

Neanderthals on Naxos? New Work at the Early Prehistoric Chert Source of Stélida

Tristan Carter, McMaster University, Daniel Contreras, Kiel University, Danica Mihailović, Belgrade University, Theodora Moutsiou, Natural History Museum, Nikolaos Skarpelis, Athens University, and Sean Doyle, McMaster University

The chert source of Stélida, a 118 m high hill on the northwest coast of Naxos (Cyclades), was first discovered by a survey in 1981; the evidence from this work and subsequent rescue excavations suggested strongly that the site was of early prehistoric date. In 2013, we initiated the Stélida Naxos Archaeological Project (SNAP), a two-year intensive geoarchaeological survey aimed at characterizing the nature of the raw material and its history and manner of exploitation.

After a single field and study season, it is clear that Stélida had two major periods of exploitation, the Middle Paleolithic and the Mesolithic. The latter material dates primarily to the Lower Mesolithic and includes microlithic flake-based tools and bladelets that form part of an Early Holocene Aegean Island lithic tradition; it is comparable to material excavated at Maroulas (Kythnos) and Kerame 1 (Ikaria). The Middle Paleolithic material comprised significant quantities of diagnostic flakes and flake tools from discoidal cores, plus Levallois products from both flake and blade core technologies. Bifaces and points are very rare; denticulates, notched pieces, and scrapers are the dominant tool types. Parts of the assemblage likely relate to the “Denticulate Mousterian.” While comparable material is well known from the Greek mainland, this is the first major Cycladic Middle Paleolithic assemblage.

The earlier prehistoric material a precise date is difficult to date precisely, given that it is surface material. The Mesolithic material should be placed between 9,000 and 7,000 B.C.E. (mainly the ninth millennium B.C.E.), while the distinctive Levallois blades might date anywhere between 250 and 100 kya, based on parallels from Israel to Belgium. It remains almost certain that the Middle Paleolithic exploitation

of Stélida was undertaken by Neanderthals. Given our current lack of precise dating, their presence at the source could have occurred anywhere between Marine Isotope Stages 7 and 4; we cannot say whether their visitation involved crossing land or “modest seagoing” from the mainland to the “Cycladean” island mass. With recent Pleistocene sea-level reconstructions suggesting that a land bridge existed between Anatolia and the southern Greek mainland (encompassing what today are the Aegean Islands), the Stélida data are helping us reconfigure our view of Greece from being a Pleistocene cul-de-sac, or refugium, to a potentially major route in early hominin dispersal.

The Early Settlement on the Aegean Islands in the Context of the Eastern Mediterranean

Małgorzata Kaczanowska, Jagiellonian University, and *Janusz K. Kozłowski*, Jagiellonian University

Seaborne contacts between/with the Aegean Islands as early as the Middle Paleolithic are evidenced by finds from the Northern Sporades (Alonessos) and Ayios Eustratios in the northern Aegean. The Cyclades were also likely settled in the Upper Paleolithic (e.g., site KT-21 on Kythnos).

The beginning of the Holocene witnessed repeated and more intensive Early Mesolithic occupation of the islands. These settlements derived from two cultural traditions: the Balkan Epigravettian, which dominates in eastern continental Greece, and the Antalyan—that is, the Epigravettian tradition of western Anatolia. This settling of the Aegean Islands—the Cyclades (Kythnos, Naxos), the Northern Sporades (the Cyclops Cave on Gioura), and the southeastern Aegean Islands (Ikaria, Chalki)—resulted from several migrations from the continent from the first half of ninth millennium cal B.C.E. (Maroulas on Kythnos, Kerame on Ikaria). The evolution of the Aegean Island Mesolithic lasted until the beginning of the seventh millennium cal B.C.E. as evidenced by radiocarbon dates from the younger Mesolithic layers at the Cyclops Cave.

Aegean Mesolithic sites were interconnected in networks of raw material distribution, notably the procurement of obsidian from Melos and Ghiali. Melian obsidian also occurs at continental Mesolithic sites (e.g., Franchthi). These island groups must have been able to navigate across considerable distances: for example, at the site of Nissi Beach on Cyprus the lithic industry shows several features common in the Aegean Mesolithic.

Through contacts with the initial preceramic Neolithic on Cyprus, the way of life, economy, and architecture of the Aegean Mesolithic changed (e.g., Maroulas on Kythnos), and the hypothesis about distant seafaring contributes to the explanation of the process of these changes.

Moreover, the analysis of an assemblage from aceramic layer X from Knossos on Crete (dated at the eighth/seventh millennium cal B.C.E. transition) shows a number of techno-typological components and raw materials (the presence of Melian obsidian) in common with the Aegean Mesolithic. However, the lithic assemblages of Mesolithic sites in the northern Aegean Basin, notably on Lemnos (e.g., Ouriakos, Fisini) exhibit close associations with the Antalyan Epipaleolithic industries of southwestern Anatolia (e.g., from the Beldibi and Belbasi Caves).

Investigations into the Aegean Mesolithic reveal the existence of broad networks of contacts across the entire eastern Mediterranean, in the period between the beginning of ninth millennium cal. B.C.E. and the eighth/seventh millennium cal B.C.E. transition—that is, the period preceding the full “Neolithic package” in the Aegean.

The Excavation at the Mesolithic Damnoni Cave: Its Implications on Early Holocene Obsidian Trade and Lithic Procurement

Thomas F. Strasser, Providence College, and Eleni Panagopoulou, the Ephoreia of Paleoanthropology and Speleology of Southern Greece

The excavation at the Damnoni Cave in southwest Crete has discovered stratified deposits of Mesolithic stone tools. This is the first site on Crete to have in situ Mesolithic remains, and among them are 10 obsidian tools. These were found in an aeolian deposit that bears the majority of the Mesolithic artifacts. This stratum rests on a sterile paleosol. Though the stratigraphy is shallow, like many other Mesolithic sites in the Aegean, the context is secure because of very careful excavation techniques. The 2011 season produced lithics made primarily of quartz but also of local flints. The 2013 campaign found both obsidian and a diversity of other flints, some possibly even imported. Our first impression of the site was that the inhabitants exploited the local materials that are in abundance. The 2013 excavation revealed that they were involved in a trade network that exploited Melian obsidian, as well as flints that do not exist, as far as we can tell, in nearby outcrops. This generates two important questions. First, what were the trade mechanisms by which the Damnoni inhabitants gained access to the obsidian? Second, to what extent do the more exotic flints indicate extensive reconnaissance of the island? Given the location of the site on the southern side of the rather large White Mountains, it seems likely that Crete, like Livari in the southeast, was fairly well explored by the Mesoliths and that the geography of the Aegean Basin was very familiar to them. This would indicate that the Neolithic population was building on an established seafaring knowledge.

Timing and Context of Human Activity on Cyprus Before the Cypro-Pre-Pottery Neolithic B Period

Sturt Manning, Cornell University

This paper reviews three issues: (1) the evidence and dates (and general time frame) of initial human activity on Cyprus from current evidence up to the Cypro-Pre-Pottery Neolithic B period; (2) the context of this Cypriot evidence vs. recent assessments for the dating of the Pre-Pottery Neolithic A (PPN-A) in the Levant; and (3) the relevance of climate context for the Cypro-PPN-A period on Cyprus and for other possible early Cypriot evidence.

Early Holocene Island Colonization and Lifeways in the Western Mediterranean

Carlo Lugliè, University of Cagliari

The Mesolithic and Neolithic human settlement of the western Mediterranean islands was a complex and variable phenomenon. Sicily was already settled in the Upper Paleolithic, but the earliest Holocene peopling of the major part of the other islands roughly corresponds to the real first human presence in these islands more generally. Mesolithic settlement appears to be rather irregular and episodic, with the preferential exploitation of coastal and subcoastal ecological niches resulting in a very low level of island occupation. To date, two culturally distinct spheres can be identified in the southern and central-northern Tyrrhenian region. Whereas in the southern one a possible contact between local Mesolithic groups and the first Neolithic incomers can be suggested, the so-called undifferentiated Mesolithic facies in the central-northern region seems to lack any relation with later Neolithic colonists. Indeed, the gap in the absolute chronology of the two periods evidences a clear discontinuity between the two ethnic components and by extent to different periods of island colonization, as well as quite distinct settlement strategies, raw-material awareness and exploitation, and the whole typo-technological organization of their lithic production. Thus, according to current research, the Early Neolithic in this region was clearly the result of a fast colonization process of unpopulated territories carried out by human communities that rapidly migrated over sea. The radiocarbon dates associated with the Early Neolithic impressed ware facies, coupled with typo-technological analysis of pottery, suggest a mainly north-south direction of the migration through the western Mediterranean that led in many instances to the first permanent human presence in this area. This paper attempts to give a general outline and to discuss the main features of the first Holocene stable settlement of the western Mediterranean insular region in light of current research.

Missing Links: Colonization Horizons and Cultural Transitions in Mediterranean Island Archaeology

Helen Dawson, Freie Universität Berlin

The earliest permanent settlement of the Mediterranean islands is largely a Neolithic phenomenon, but recent archaeological investigations point to other forms of colonization for different purposes during earlier times. On current knowledge, pre-Neolithic colonization involved the largest islands in both the western and the eastern Mediterranean (Sicily, Sardinia, Corsica, Crete, and Cyprus); nonetheless, archaeological investigations increasingly support a Mesolithic horizon on smaller islands also, especially in the Aegean, and seemingly where geographical configuration was conducive to early maritime exploration (e.g., the Dalmatian Islands). These discoveries are filling existing gaps in the archaeological record but are inevitably raising even more questions. Generally, because our data are mostly derived from surface surveys rather than excavations, it has been difficult to prove continuity between different colonization horizons on individual islands, especially for the earlier phases. We are still far from having a clear picture of the degree of overlap and admixture between subsequent lifestyles on the

Mediterranean islands; thus, islands are generally considered to have undergone multiple colonization, abandonment, and recolonization events. In the study of overall patterns of island colonization, biogeography remains a useful explanatory framework for the earlier periods, up to the point when communities were able to overcome geographical constraints and sustain long-term populations on islands through social interaction. After the Neolithic, an island's size and distance were no longer key parameters affecting colonization; nonetheless, several islands were abandoned and recolonized also in later periods. A wide range of environmental and cultural factors contributed to this palimpsest of trends, including changing cultural attitudes toward the sea and the islands, and different motivations for travel.

Known Unknowns of the Mediterranean Insular Paleolithic

John F. Cherry, Brown University, and *Thomas P. Leppard*, International Archaeological Research Institute, Inc.

In reviewing the evidence for Mediterranean seagoing in deep time, perhaps we can frame matters as Donald Rumsfeld famously did on the eve of the Iraq War: there are things we know that we know; there are things we know we don't know; and there are things we don't yet know we don't know. The recent flurry of claimed Paleolithic finds, especially in the Greek islands, has led some to argue for widespread Mediterranean sea crossing by hominins several hundred thousand years ago, in sharp opposition to those who read the same data to imply that the sea was more a barrier than a bridge until almost the end of the Pleistocene.

We need to be clearer about what we do and don't know. Understanding of the paleogeography of the Pleistocene Mediterranean, if still rather impressionistic before the Last Glacial Maximum, is much improved—a known known, in Rumsfeld's terms. This allows us to elide from the discussion present-day islands that have reliably documented Lower to Middle Paleolithic finds but that were not islands at the time or that were so close to adjacent land that water crossings were trivial. Doing so clarifies the distribution of the data and urges caution when drawing wider conclusions about human dispersal.

The critical known unknowns of Paleolithic seagoing are scientifically dated contexts. Prior to the Upper Paleolithic and Epipaleolithic, virtually none of the insular locations with claimed early finds from survey work is associated with radiometric dates. This is in sharp contrast to the situation at the many stratified, well-dated Paleolithic sites on adjacent mainlands throughout the Mediterranean and indeed to the clarity with which we can grasp the directionality and timing of the spread of behaviorally modern humans into Australasia and Near Oceania from 45,000 years ago. That early colonization of islands by modern humans also raises the question of why it is comparatively retarded in the Mediterranean, where evidence of maritime activity during the Upper Paleolithic is slight. It may have less to do with seagoing abilities or cognitive capacities than with the fundamental unattractiveness of small, dry, depauperate islands for hunter-gatherers.

We should also heed Rumsfeld's unknown unknowns. Claims made several decades ago that the Melian obsidian found in Epipaleolithic layers at Franchthi Cave documented the earliest known seafaring in the world now seem quaint;

unknowable future developments may, in turn, make our current debates look hopelessly outdated.

SESSION 3H: Colloquium

Byzantine Maritime Trade and Technology

Sponsored by the Medieval and Post-Medieval Archaeology Interest Group and the Institute of Nautical Archaeology

ORGANIZERS: *Rebecca S. Ingram*, Institute of Nautical Archaeology, Texas A&M University, and *Michael R. Jones*, Research Center for Anatolian Civilizations, Koç University

Colloquium Overview Statement

Seafaring played a crucial role in the political and economic success of the Byzantine empire. Recent fieldwork, both on land and underwater, offers a tantalizing glimpse into the complexity of the Byzantine maritime world. The Theodosian harbor excavation at Yenikapı in the heart of Istanbul is among the most significant of these new discoveries, yielding the remains of 37 shipwrecks and tens of thousands of artifacts related to maritime trade, shipbuilding technology, and daily life in Byzantine Constantinople. However, because the Yenikapı finds are from the hub of a vast maritime network, they cannot be understood in isolation. Results from recent work at a number of Mediterranean sites involving shipwrecks, surveys and excavations of coastal settlements and harbors, and studies of long-distance trade goods are poised to make a major contribution to our understanding of Byzantine trade, society, and culture. To examine this new data within the proper overall context of Late Antique and Byzantine archaeology, this colloquium brings together researchers who focus on a diverse range of topics concerning the Byzantine maritime realm.

Byzantine merchant vessels are the most obvious, and arguably the most technologically complex, instruments of the period's maritime commerce; the first two papers present recent research on shipwrecks from Yenikapı, discussing new evidence for Middle Byzantine ship design and use. Considering the mariners who engaged in the often hazardous operation of such vessels, a third paper examines evidence for religious practices associated with seafaring and their role in tracing long-distance trade networks. Analyses of traded commodities and their containers also provide vital clues for understanding maritime trade. A fourth paper discusses evidence for a contraction in long-distance trade based on changes in the distribution and chemical composition of Byzantine glass. The fifth and final paper details new work on amphoras from the seventh-century Yassıada shipwreck, offering insights into significant changes in Byzantine metrology. Through a greater integration between research from terrestrial and nautical archaeological sites, this colloquium provides an appropriate venue for the dissemination of these recent finds and sheds new light on our understanding of the Byzantine empire.

Coak Construction at Yenikapı: A Middle Byzantine Adaptation of an Ancient Shipbuilding Method

Michael R. Jones, Research Center for Anatolian Civilizations, Koç University

During the past decade, archaeological salvage excavations conducted by the Istanbul Archaeological Museums in the city's Yenikapı neighborhood have exposed remains of the Theodosian harbor of Byzantine Constantinople. Thirty-seven shipwrecks dating from the fifth to early 11th centuries C.E. were discovered, eight of which are being studied by the Institute of Nautical Archaeology at Texas A&M University under the direction of Cemal Pulak. The Yenikapı shipwreck assemblage includes a wide variety of vessel types dating from a period of significant change in Mediterranean maritime trade and shipbuilding technology. This paper discusses how the construction features of Yenikapı ships dating to the ninth and 10th centuries likely illustrate the combined effects of economic, environmental, and cultural factors on Byzantine shipbuilding. Nearly all the Yenikapı ships were built using a form of "shell-first" construction, in which edge-fastened hull planks were assembled to the ship's waterline before the insertion of frames. In the earlier ships, hull planking was fastened using mortise-and-tenon joints, a construction method used throughout the ancient Mediterranean and previously documented on many Roman and Byzantine shipwrecks. However, most if not all the ships dating from the ninth to late 10th or early 11th centuries have hull planking fastened with wooden pegs called coaks rather than mortise-and-tenon joints, a variation found on only a single Byzantine shipwreck excavated outside of Istanbul. Yenikapı 14 (YK 14), a ninth-century merchant ship, exhibits other design features common to this group of vessels; lightly built of oak timbers, this relatively flat-bottomed ship was constructed with distinctive L-shaped floors. The relative lack of evidence for contemporaneous vessels with similar features from elsewhere in the Mediterranean suggests that they are products of a regional Byzantine shipbuilding industry likely centered on the Sea of Marmara and Constantinople. These vessels are particularly unusual in light of the development of "skeleton-first" ship construction in the same period; this method is generally considered to be more efficient than shell-first construction and largely replaced it in the Western world from the Medieval period onward. A close examination of YK 14 and other Yenikapı ships built with coaks suggests that this construction style was developed for several possible reasons, including the functional requirements of operating in their specific maritime environment, the characteristics and limitations of available timber, and a preoccupation with maintaining the advantages of traditional shipbuilding methods while also economizing on time and materials during the shipbuilding process.

Evidence from Yenikapı for the Maintenance and Repair of Byzantine-Period Ships

Rebecca S. Ingram, Institute of Nautical Archaeology, Texas A&M University

Recent excavations at Yenikapı in Istanbul, Turkey, under the direction of the Istanbul Archaeological Museums, have unearthed the extensive remains of Constantinople's Theodosian harbor, including 37 shipwrecks of fifth- to 11th-century

C.E. date. Eight of these shipwrecks, including merchantmen and galleys, were studied by a team under the direction of Cemal Pulak from the Institute of Nautical Archaeology (INA) at Texas A&M University. The well-preserved shipwrecks discovered at Yenikapı, offering critical data concerning hull construction and design in the latter half of the first millennium C.E., are also providing valuable new insights into the maintenance and repair of ships from this period. Although an aging vessel was assessed at three-fifths the value of a new ship according to the Rhodian Sea Law (II.16), it remained a prized asset and, as such, underwent regular maintenance and periodic repair. The annual repair of vessels was an obligation of the *navicularii*, and hull repairs are frequently encountered in excavated shipwrecks dating to the Byzantine period. This paper discusses the impressive variety of repairs evident in the shipwrecks studied by the INA team at Yenikapı, focusing on their significance in the interpretation of hull construction. Repairs to these ships range from simple caulked gaps and graving pieces along damaged plank edges to the replacement of frames and alterations to other substantial timbers. While some repairs reflect a thoughtful attempt to remedy a problem while preserving the strength and integrity of the hull, other repairs may represent crude, stopgap measures carried out while the ship was away from its home port, a situation common enough to be mentioned in contemporaneous literature. Seventh-century shipwreck YK 11 is the most heavily repaired vessel documented by the INA team at Yenikapı; in addition to most of its bottom planking, many of the ship's frames had also been replaced, entailing the temporary dismantling of the ship's interior. The study of YK 11 confirms the admonition by nautical archaeologist Richard Steffy that heavy repairs can easily obscure details of the hull's original construction and lead to an inaccurate interpretation of the shipwright's design philosophy. Overall, the repairs to YK 11 and other ships at Yenikapı indicate the value placed on these profitable assets and underscore the importance of a careful and thorough documentation of hull material.

Seaside and Shipboard Evidence for Byzantine Maritime Religion

Amelia R. Brown, University of Queensland

Byzantine seafarers took to the sea in ships both large and small for many different purposes: fishing, trade, pilgrimage, warfare, or piracy. Yet whether they sailed from the grand Theodosian harbor or a remote island cove, all Byzantine sailors shared one thing in common: they practiced both seaside and shipboard religious rituals to request a safe return to shore. Recent harborside and underwater excavations provide important new evidence for Byzantine maritime religious practices, from pre- and post-travel votives deposited ashore to prayers or icons engraved on ships and cast overboard with their anchors. In this paper, I report on preliminary results from a new survey of material evidence for Byzantine maritime religion, from remains of harborside churches in major Mediterranean port cities to votive inscriptions at dangerous promontories and protective amulets retrieved from shipwrecks. This evidence is significant for our understanding of the distinctive material culture of both the practical and ritual activities of Byzantine mariners from late antiquity up to the First Crusade. However, it also casts light on the long-term development of the Byzantine maritime network, which even in

the Dark Ages transmitted innovative technologies, exotic trade goods, and successful techniques of obtaining divine favor far afield from Constantinople. One of the main drivers of continued maritime trade was the church, which benefitted from material goods and the sailors who brought them. Most ships carried images and relics of maritime protector saints, while the entire bodies of Saints Mark, Nicholas, and Spyridon were eventually carried off by sea to lend blessings to new harbors. Ruins of seaside shrines and wrecks of humble fishing boats alike can help reconstruct the harborside festivals, shipboard rituals, and religious culture that Byzantine mariners once disseminated around the medieval Mediterranean.

Glass Routes: Changes in the Supply of Glass in the Mediterranean During the First Millennium C.E.

Nadine Schibille, University of Sussex

The first-millennium C.E. glass economy in the Mediterranean region was characterized on the one hand by large-scale production of raw glass in a few industrial glassmaking centers in northern Egypt and on the Levantine coast and on the other hand by a multitude of workshops where glass was remelted, colored, and formed into artifacts. This organization into primary and secondary glass production was decisively shaped by the Mediterranean trade routes that linked production sites with consumer sites. Here I discuss how changes in the trade network are reflected in the archaeological record of different Mediterranean consumer sites of the fourth to 12th centuries C.E.

The analytical characterization of glass assemblages from consumer sites can shed light on the connectivity of the Mediterranean based on compositional similarities, the degree of recycling, and the experimentation with new (locally available) raw materials. Changes in the chemical makeup of eighth- to ninth-century glass assemblages appear to be the result of a downturn in long-distance trade. New glassmaking recipes and the use of alternative raw materials likewise suggest changes in the trade pattern and availability of raw materials. Specifically, we see changes in the use of alkali in the ninth century, when mineral soda, so-called natron from the Wadi Natrun in Egypt, was increasingly replaced by more locally available alkali sources such as soda- or potash-rich plant ash in the Islamic Near East and Europe, respectively. Not much is known about Byzantine glass production, yet recent analytical results from Pergamon point to a specifically Byzantine glassmaking tradition that made use of alternative sources of mineral soda in northwestern Anatolia. In this paper, I discuss analytical results of glass from diverse Mediterranean sites (Pergamon, Butrint, Carthage, San Vincenzo al Volturno) that highlight the global and regional developments in the supply of glass and raw materials as well as the underlying trade patterns during the second half of the first millennium C.E.

The Globular Transport Jars on the Seventh-Century Yassiada Ship: Technological and Metrological Aspects of a New Design Within a Historical Context

Frederick H. van Doorninck, Jr., Institute of Nautical Archaeology, Texas A&M University

There are reasons to believe that the seventh-century ship at Yassiada, Turkey, most likely sank in the summer of 626 C.E. while carrying a cargo of wine and oil in approximately 900 amphoras. It was part of an effort to resupply Byzantine troops in northeastern Anatolia via Cilicia, an unrecorded example of Heraclius' use of sea power during his brilliant counteroffensive against the Persians. Just under 800 of the cargo jars were globular. Most, belonging to quite a number of different types and subtypes but all with the same basic form, appear to have been made within just a few years of the ship's sinking. A small number of them have initial transitional forms. The remaining globular jars had been made up to several decades earlier. Neck and handle mass in jars of the new design was significantly reduced, and jar weight was carefully controlled so that the weight ratio of jar empty to jar full of wine was only one to five with remarkably little deviation. Jars were recycled, and considerable effort was made to make them as durable as possible and to minimize the incidence of mouth damage when prying out stoppers. The jars fall into two general size groups, full size and half size, but in either group, there are about a half-dozen consecutive weight sizes for wine at 6 Byzantine pound intervals. It is possible that the later Byzantine system for wine with intervals of 3 pounds evolved out of this system. Some of the jar sizes could be—and were—used to contain standard weights of oil. Jar mouths accommodated stoppers belonging to one of four standard sizes. The diameter of two sizes was based on the Ionic/Roman foot, while the diameter of the other two sizes was based on the Constantinopolitan foot. However, a movement toward using only one of the Constantinopolitan sizes can be detected—one small example of an empire in transition. The size was that used by most of the wine amphoras on the 11th-century shipwreck at Serçe Limanı, Turkey.

SESSION 3I: Colloquium **The Capitoline Hill: Space over Time**

ORGANIZERS: *Ellen Perry*, College of the Holy Cross, and *John Hopkins*, Rice University

Colloquium Overview Statement

From the earliest days of city's history through late antiquity, the Capitoline Hill was a nexus of Roman social, political, and religious life. This colloquium investigates architecture and art along with social changes on that hill across antiquity to highlight the merits of focused topographical study over the *longue durée*. In recent years, several studies have presented diachronic investigations of discrete regions of the city (the Subura, Aventine, Palatine, and Fora), and these have yielded unanticipated glimpses into the vast cultural shifts that ancient Rome saw during its thousand-plus years of history. The Capitoline Hill itself has seen a great deal of

renewed attention, but study has focused on individual monuments, especially the “Tabularium,” the Temple of Juno Moneta, and the Temple of Jupiter Capitolinus.

The papers in this colloquium look to a broad range of monuments from the Early Republic through the High Empire, to questions of religion, social shift, and political self-aggrandizement. Two papers on religious architecture and another on fornices and arches seek to reveal how a broader look at Capitoline topography—beyond the most popular monuments—shifts our understanding of both religious and political motivations for visual grandeur. These same papers along with another on the recreations and refurbishments of the Capitoline Temple suggest a shift in historical scholarship to highlight the effects of viewership on the topographical shift from the very earliest days of Rome to the High Empire. A paper on Sullan inscriptions and monuments and a paper on fornices highlight how key sociopolitical moments, topographical idiosyncrasy, and historical chance can leave unlikely records and skew modern narratives. These papers, together with one on the many temples of Jupiter under the empire, highlight the intertwined nature of subtle sociopolitico-religious relationships over the 400 years surrounding the transition to empire. The colloquium will conclude with a discussant who will bring the perspective of diachronic topographical study to bear on the papers in this panel, which either expressly cover centuries of change or look to ideas of temporal shift in their study of monuments from the hill.

DISCUSSANT: *Lisa Mignone*, Brown University

The Temples of the Capitoline Hill in the Archaic and Classical Era

John Hopkins, Rice University

In recent years, the Temple of Jupiter Capitolinus has begun to take a renewed central place in studies of early Roman topography and Roman temple architecture. Yet as its colossal scale has seen renewed support and added prominence, the Capitoline temple has largely been studied in isolation from its surroundings. Sporadic and unconnected archaeological reports of stone walls, isolated terracottas, and ritual deposits suggest that there was more to the early Capitoline religious milieu, but with the exception of the site of Sant’Omobono on the Capitoline slopes, little has been done to incorporate these finds into architectural or religious study of the hill during this period, especially in relation to the impressive Temple of Jupiter.

This paper argues that whatever its size and grandeur, and however prominent a place it may have held, the Capitoline Temple did not stand alone. New comparative study of stone foundations and terracotta roofing elements from throughout central Italy and especially Rome highlights the correlation between the sizes of terracotta elements and the sizes of temple structures. Using this information and archaeological evidence for architectural terracottas and stone foundations on the Capitolium, the Arx, and the eastern slope, this paper proposes that no fewer than four more temples of modest to monumental size stood in various places on the hill: two on the Capitolium with revetments, sima plaques, and antefixes dating to the late sixth and early fifth centuries; one on the eastern slope with revetments

and roof tiles dating to the late sixth and early fifth century; and another manifest in antefixes and acroterial sculpture on the Arx.

Along with these four temples, ongoing recently published excavations at Sant'Omobono continue to support an early to mid-fifth century date for the reconstruction of monumental twin temples perched off the southwest corner of the hill. In total, the paper concludes that no fewer than seven temples (including the Temple of Jupiter) stood on the Capitoline and its slopes by the end of the fifth century. The purpose of this paper is to expose the scale of monumental construction on the Capitoline Hill in the Archaic and Early Classical periods and to argue for a new view of the changing religious environment of that space from the sixth to early fourth centuries, during a period of cultural, political, and social shift in Rome that is often considered a period of decline.

The Arches of the Capitoline: Reconstructing a “Triumphal” Topography

Anne Hrychuk Kontokosta, New York University

In the Middle Republic, clusters of privileged monuments constructed by particularly eminent patrons emerged within the city of Rome. These clusters produced hierarchies, described by Hölkeskamp as “zones of prominence,” within the urban topography of the city. The most dense and important zone was the Capitoline Hill, an area intimately linked to the city’s origins, the foundation of the *libera res publica*, and the climax of the *pompa triumphalis*. The construction of the first freestanding arches (called fornices) on the Capitoline Hill dates to this period. This paper describes how these fornices (the Fornix Scipionis of 190 B.C.E. and the Fornix Calpurnius erected before 133 B.C.E.) became prominent urban markers in this most venerable part of Rome. Designed with gilded Attic figures that towered above other honorific statues crowding the republican Capitoline, these two fornices extolled the impressive military achievements of their patrons (P. Cornelius Scipio Africanus and, I argue, C. Calpurnius Piso) and their involvement in the expansion of the Roman world.

The continued prominence of the Middle Republican fornices is illustrated by their evolution as centerpieces for large clusters of honorific monuments in the Late Republic. I propose that by the beginning of the Imperial period a link between this monument type and the Capitoline Hill was firmly established, and the arches came to be integrated into larger imperial building programs. The fornices came to be ideologically and topographically associated with imperial arches that were constructed on the Capitoline Hill to honor Nero (ca. 66 C.E.) and Trajan (107–108 C.E.). In this way, the Capitoline Hill came to be home to a greater number of arches, in a considerably smaller area, than the Forum Romanum proper.

Using literary, numismatic, and topographical evidence, this paper reconstructs these important features of the triumphal landscape by tracing the construction, function, reception, architectural and topographical integration, and life span of this significant group of lost arches. Considered an assemblage in association with the Capitoline Temple and the surrounding honorific monuments, the arches of the Capitoline can be understood as long-standing reminders of the military traditions on which the Roman state was based.

Foreign Dedications on the Capitoline Hill Around the Time of Sulla's Dictatorship

Ellen Perry, College of the Holy Cross

For centuries during the republic, foreign states and individuals made offerings to Jupiter Optimus Maximus on the Capitoline Hill to demonstrate obeisance to Rome. These dedications frequently took the form of gold crowns—a nod to the commonplace characterization of Rome as the *caput rerum*, the head of the world; but they could also be statues, statue groups, or sanctuary furniture. It is one of the ironies of preservation that some of the best epigraphic evidence for this practice dates to the dictatorship of Sulla and to the years immediately following; for during these years, there was no Temple of Jupiter Optimus Maximus because the structure had burned down in 83 B.C.E. and would not be fully rebuilt until 69 B.C.E.

This paper argues that one reason for the better preservation of epigraphic evidence from this period is that many of these foreign dedications were set up at or near the Temple of Fides near the edge of the Capitoline Hill. An inscription from Thasos dating to 80 B.C.E. informs us that the Thasians made an unspecified dedication at the Temple of Fides and that they did so to commemorate the renewal of their friendship with the Romans. In addition, inscriptions were found near the original location of the Temple of Fides and in the remains of the temple that had collapsed below the hill. These generally recorded foreign dedications by states and individuals that were deemed *amici et socii* of Rome. In addition, one inscription, the *Senatus Consultum de Asclepiade Clazemenio Sociisque* of 78 B.C.E., was found in a secondary context but contains internal evidence suggesting that it was originally posted at the Temple of Fides. Together, these inscriptions help us understand what it meant in the Sullan period to be an *amicus et socius* of Rome.

Julius Caesar and Augustus both cleared the Area Capitolina of clutter. In fact, Cassius Dio (41.39.1) tells us that Caesar removed all the dedications from the Area Capitolina; however, the position of the Temple of Fides at the very edge of the area may have meant that the Sullan inscriptions escaped notice during the cleaning. This may explain why so many Sullan inscriptions survived antiquity when so much of the remaining evidence of foreign dedications takes the form of literary sources.

Jupiter and the Emperor on the Capitoline

Lily Withycombe, The National Museum of Australia

The Augustan and Domitianic interventions on the Capitoline transformed the hill into a monument of imperial self-representation. Drawing on archaeological, literary, and numismatic evidence, this paper reconstructs the religious topography of the Imperial Capitoline, focusing particularly on Augustus' construction of the temple dedicated to Jupiter Tonans and Domitian's restoration of the temple dedicated to Jupiter Capitolinus. It therefore offers new reconstructions of the Temple of Jupiter Tonans, the Domitianic phase of the Temple of Jupiter Capitolinus, and the layout of the imperial Area Capitolina.

The first part of this paper examines Augustus' dedication of the Temple of Jupiter Tonans, otherwise overlooked in scholarship. Augustus' personal and conspicu-

ous investment in this temple publicly established Jupiter's role as guardian of the princeps and also emphasized a private, imperial dimension of the cult. Literary evidence locates the Temple of Jupiter Tonans immediately in front of the Temple of Jupiter Capitolinus, while its identification with a concrete foundation allows us to draw some conclusions regarding its location and dimensions. Domitian later rebuilt the Temple of Jupiter Tonans and enhanced the custodial role of Capitoline Jupiter by dedicating two new temples to Jupiter Custos and Jupiter Conservator in the Area Capitolina. However, they are survived only by brief literary references; there is much better evidence for Domitian's lavish rebuilding of the Temple of Jupiter Capitolinus, which is the main subject of the second part of this paper.

A large, fragmentary column drum of Pentelic marble, which derived from the Domitianic phase of the Temple of Jupiter Capitolinus, is located in the Caffarelli Gardens. Close analysis allows for a reconstruction of the diameter on its best-preserved side, which, in conjunction with reference to other columnar fragments of Pentelic marble discovered nearby and detailed in 19-century excavation reports, supports a new reconstruction of the colossal facade of the Domitianic phase of the Temple of Jupiter Capitolinus. This reconstruction provides valuable insights into the earlier imperial rebuildings of the temple for which there is otherwise little evidence. Moreover, it allows us to reconstruct and fully appreciate the spatial relationship between the Temple of Jupiter Capitolinus and the Temple of Jupiter Tonans, which were orthogonally aligned and shared an identical orientation. These two temples represented the symbiotic relationship between the emperor and Jupiter on the Capitoline: the emperor as the earthly representative of Jupiter and Jupiter as the guardian of the emperor.

Roman Responses to Rebuilding the Temple of Jupiter Capitolinus

Christopher Siwicki, University of Exeter

Situated on the Capitoline Hill, the Temple of Jupiter Optimus Maximus was a dominant feature of ancient Rome's cityscape from the sixth century B.C.E. to the sixth century C.E. However, its appearance was less constant than its presence, and as recent studies have emphasized, when the temple was destroyed by fire in 83 B.C.E. as well as 69 and 80 C.E., the successive versions were rebuilt on a materially grander and physically larger scale. Excluding its vestigium and forma, the fourth incarnation of the building bore little resemblance to the first.

Key details about the successive versions of the temple are known only from textual sources, which have often been read as candid descriptions of the building, with their wider literary context ignored. I suggest that in two instances this has led to misunderstandings as to what the passages actually convey about the temple: Tacitus' statement that the third version differed from its predecessor in nothing but height; and Plutarch's ambiguous remarks concerning the appearance and provenance of the fourth version's columns. Recognizing the rhetorical nature of the passages implies that the observations should not necessarily be understood as reflections of the physical reality of the temple.

Such comments do, however, provide insight into how the changing appearance of Rome's principal temple was received by contemporaries, which presents a new perspective for interpreting the Capitoline temple's development. While

some of the alterations to its appearance were evidently embraced, opposition toward the manner in which the fourth version was built can also be detected. This stemmed not from an attitude of architectural conservatism but rather from “moral” sensibilities.

This paper’s reassessment of certain textual evidence also puts forward an alternative understanding as to why in 70 C.E. the third temple was rebuilt on the same vestigium as the previous version, an act that is usually considered in light of Vespasianic politics. Both the importance and the irregularity of the involvement of the haruspices in this event have been understated, and instead I propose that the decision comes from, and is better understood in the context of, the first, Sullan, rebuilding. The interpretation depends on and demonstrates the importance of considering the restorations of the temple together rather than in isolation, as the reasons behind architectural decisions in the later rebuildings can be understood only in light of the first.

A Reconsideration of the Extispicium Relief: Evidence for the Third Century Capitoline?

Melanie Grunow Sobocinski, Independent Scholar, and *Elizabeth Wolfram Thill*, Indiana University–Purdue University, Indianapolis

The Extispicium relief (Paris, Musée de Louvre, inv. nos. 978, 1089; Collection Valentin de Courcel) has become known for its unusual representation of Roman religious ritual, as well as its detailed depiction of the Capitoline Temple of Jupiter Optimus Maximus in the background. The relief, however, remains relatively understudied, in part because of heavy damage, including the loss of all portraiture, as well as the loss of the relief fragment depicting the temple’s pediment, known only from 16th-century drawings. We argue that previous attempts to date the Extispicium relief to a specific event during the rule of Trajan or Hadrian are methodologically problematic. Such dates generally rely heavily on the relief’s reported 16th-century findspot in the Forum of Trajan, the name (M. V[LPIUS] / ORE[S]/TES) inscribed on the victim’s hoof, and the identification of a central figure, now lost, as Hadrian. The assignment to the Trajanic or Hadrianic period has led, furthermore, to speculation associating the Extispicium relief with other reliefs (e.g., the Great Trajanic Frieze), buildings (e.g., the so-called Temple of Divine Trajan), and specific events in the lives of Trajan and Hadrian that must have taken place at the Capitoline Temple. Because so many of the relief’s features are the only surviving example of their kind for the medium, however, there is some question as to whether this piece can be dated to the first to second centuries C.E. The inscribed signature, for example, finds no parallel in monumental relief and only offers a terminus post quem. Similarly, despite the popularity of images of sacrifice in Roman art, a full depiction of and focus on a slaughtered sacrificial victim is unique and finds its closest parallels only in rare mid third-century C.E. medallions. In this paper, we reevaluate the evidence, argue for methodological rigor, and examine the limits of stylistic and epigraphic evidence for associating this piece with a particular imperial regime. Finally, we assess the evidence this relief provides for the architecture, decoration, environs, and political significance of the Temple of Jupiter Optimus Maximus in Rome.

SESSION 3J: Gold Medal Colloquium in Honor of C. Brian Rose Intersections. A Panel on Aegean and Anatolian Exchanges

ORGANIZER: *Jeremy McNerney*, University of Pennsylvania

Colloquium Overview Statement

This panel explores Aegean and Anatolian commercial and cultural exchange from the Late Bronze Age through the end of the Roman empire. Drawing on sites from Sardis to Samothrace, the papers in this panel investigate the complex interweaving of archaeological narratives in the northern Aegean and western Anatolia in the Iron Age and later, exploring the ways in which local narratives may contribute to a broader regional history. Analyses of ancient settlements on both sides of the Aegean are surprisingly rare, and they have become even rarer in the wake of the 1974 separation of Cyprus into Greek and Turkish zones. Even though most archaeologists would claim that the modern political divisions between Greece and Turkey do not influence their assessment of the historical evidence, the existing scholarship speaks otherwise. This holds true even for books produced recently: historians tend to focus on either Greece or Turkey, and publications that accord equal treatment to both areas are virtually nonexistent. Consequently, most reconstructions of ancient economy, culture, and society in the Aegean are incomplete, as are discussions of the development of the city-state and regional variations in cults that encompass both the Aegean and Anatolia. One recent and very significant advance in this sphere has been provided by the American Research Institute in Turkey's Aegean Exchange Program, which funds the research of Turkish scholars in Greece under the auspices of the American School of Classical Studies at Athens, but the discussion of archaeological discoveries on both sides of the Aegean within a single scholarly panel is still rare, even at the AIA's Annual Meeting.

Pottery as Evidence for Cultural Interaction: A User's Guide

Andrea M. Berlin, Boston University

Archaeologists use physical remains to understand people—their movements, behaviors, ideas. In the worlds of the ancient Mediterranean and Near East, the most common type of remains is pottery. Taken together, these two truths mean that archaeologists regularly turn to pottery for answers to the questions they ask, despite knowing well a series of more truths: pots do not equal people; pottery was generally not valuable enough to be a critical “signifier” in its own right; using pottery as proxy evidence is tricky and often misleading. Nonetheless, we find so much pottery, in so many types and from so many locales, that we can not resist attributing meaning to it. Since we will not stop trying to make pottery make sense, in this paper I suggest some guidelines, a tool kit for ceramic analysis.

The guidelines rest on attention to four aspects common to all ceramics recovered in survey and excavation: form, material, quantity, and context. Whether posing a question or standing before a pile of sherds, we have these four critical tools in our arsenal. In this paper, I demonstrate their use in three case studies that highlight interactions between native Anatolians and Greeks. The first focuses on

Attic table vessels at Sardis from the sixth to the fourth centuries B.C.E. The second treats the appearance of locally made versions of Attic table vessels in Asia Minor in the fourth century B.C.E. The third examines the wholesale shift in table settings at Sardis in the third century B.C.E. In each case, deploying the criteria of ceramic form, material, quantity, and context allows us to identify the players, track their behavior, and catch a glimpse of their thinking.

Mytilene, the Aeolic World, and Beyond

E. Hector Williams, University of British Columbia

This paper surveys Mytilene's connections with the northern Aegean and the Black Sea in one direction and south to Naukratis in another. Recent work at many sites by many scholars has allowed us to better determine the extent of Mytilene's exports in ceramics, especially Aeolic gray wares, to different areas of the Greek and non-Greek world. This paper also looks at possible cult connections, especially with Kybele, who seems to have shared a sanctuary with Demeter and Kore at Mytilene.

The Ionian Migration: Myths, Texts, and Assemblages

Naoise Mac Sweeney, University of Leicester

According to the story of the Ionian migration, the Ionian cities of Anatolia were founded by colonists from across the Aegean Sea, primarily although not exclusively from Athens. The story appears in literary sources from different periods of antiquity and seems to have been widely known across the classical world. Indeed, the Ionian migration is still the standard account of the establishment of the Ionian cities in modern scholarship. In recent decades, however, the veracity of this story has been questioned, especially in light of new archaeological evidence. It is now clear that the myth of the Ionian migration cannot be taken at face value and does not straightforwardly preserve the "facts" about Ionian origins. Because of this, it is sometimes assumed that the literary texts have little to contribute on the subject of Ionian city foundations. In this paper, I argue the contrary.

I propose a reassessment of the relevant written sources, based on a new approach to the literary material. Rather than approaching the sources as texts—reading them for content and aiming to harmonize the various accounts into a single historical narrative—I suggest we should instead approach the sources as an assemblage. I argue that, to date, too much emphasis has been placed on the stories told and too little on the nature of the literary evidence itself. There are considerable insights to be gained by going back to the written sources and conducting a rigorous assessment of the nature of this material before considering this in relation to its contents. By approaching them as an assemblage, a more nuanced understanding of the literary sources can be reached. This, in turn, can contribute to our knowledge of the Ionian cities, their foundations, and their early histories.

Samothrace Looking East

Bonna D. Wescoat, Emory University

A steady stream of legendary traffic passed between Samothrace and northwestern Anatolia. Native son Dardanos, sire of the Trojan line, floated on a raft from Samothrace to the Troad before the invention of boats; the Argonauts sought initiation en route to Colchis; they returned again on their way west; Odysseus stopped on his long journey home; and according to one version of events, Aeneas (descendent of Dardanos) stopped to collect the Penates on his way westward from Troy. In the mental map of the northeastern Aegean, the mile-high island formed a beacon and touchstone for heroic wayfarers, a fulcrum between east and west. The promised benefit of initiation—salvation at sea—was worth stopping for and seems to have worked on multiple occasions.

Dardanos' ancestral story is told early (Hom. *Il.* 20.213–41) and resonates with later traditions connecting Samothrace and Troy. However, the island's early ethnic, historical, and commercial connections with northwest Anatolia have been questioned, particularly in the face of strong evidence for Thracian natives and Samian colonists. In this paper, I examine the material evidence that can be brought to bear on ties with northwestern Asia Minor that were originally argued by Lehmann. Recent ceramic analysis of the seventh-century B.C.E. G2/3 Ware pottery found in the earliest deposits in the Sanctuary of the Great Gods favors Lehmann's original assertion that the material is connected with Aeolia. Since it remains the earliest identified fine ware on the island, contact with Aeolia should not be excluded. That a large class of later fourth century pottery has a similar composition and can be linked even more firmly with Aeolia (either Lesbos or the Anatolian mainland) highlights the endurance of the connection. The selective exploitation of Prokonnesian marble for the finer architectural and sculptural elements on several Late Classical and Hellenistic buildings in the sanctuary demonstrates an active commercial and architectural connection with the region generally. Citizens of Kyzikos form one of the largest and most active groups of initiates in the mysteries conducted in the Sanctuary of the Great Gods.

While these connections do not eclipse Iron Age ethnic ties with Thrace or later Ionian immigration, they reassert the place of Aeolia in the mix. They demonstrate the multidirectional reach of the island by virtue of its strategic position, extraordinary form, and coveted promise.

Transport Amphoras and Migrations in the Late Archaic Aegean

Mark Lawall, University of Manitoba

Rose's work on the Aeolian migration (*Hesperia* 77 [2008] 399–430) and Osborne's critique of the paradigm of "Greek colonization" (*Greece in the Making* 1200–479 BC [New York 2009] 110–23) pose challenges for studies of artifact style. Increased understanding both of regional styles of transport amphoras and of the jars' distribution patterns allows consideration of such factors as large- and small-scale population movement, interaction between settlers and settled peoples, and trends in long-distance shipping.

The “rat-tail” amphoras of Lesbos are among the earliest, locally distinctive archaic amphora types. While the traditions of west-to-east movement toward Lesbos and Aeolis might predict an eastward spread of this amphora type, the rat-tail style more likely derived from prototypes from the mainland. This shape, in a wide array of fabrics, dominates the late assemblages at archaic Troy and Gordion. Long-distance, maritime exports most often appear among the earliest Pontic sites along with more southerly, Ionian types. A regional koine of amphora shapes appears to have originated in and been reinforced by localized practices even while the area was very active in transregional shipping.

Among the jars accompanying the rat-tail amphoras to the Black Sea was a class with a heavy rounded rim and sharply modeled ring toe (the “Zeest Samian” or proto-Thasian type). Despite their similarity to Ionian types, the class has been linked with the north Aegean, where the shape coexisted with a wedge-rim koine. The wedge-rim jars are rare at archaic Pontic sites. The tradition of the Teian settlement of Abdera may help explain this coexistence of forms. Jars similar to the Zeest Samian type appear commonly in northern Ionian sites, and disparate potters and merchants may well have brought the tradition to parts of Thrace. Their early presence at Pontic sites, in contrast to the rarity of other northern Greek amphoras, could be explained by their Ionian connections. In the aftermath of the Ionian Revolt, the Zeest Samian amphoras continued as a dominant presence in Aegean-to-Pontic shipping even after other Ionian exporters dropped away. In this case, a combination of some level of population movement and long-distance trading networks established and maintained the presence of coexisting amphora shapes.

Such complex processes of cultural transmission and development often become visible only by crossing over the traditional geographical and cultural boundaries within classical archaeology.

SESSION 4A

Etruria

CHAIR: *Anthony Tuck*, University of Massachusetts Amherst

The Aristocracy of the Etruscan Veii: From the Intramural Burials to the Regia

Jacopo Tabolli, Sapienza University of Rome, and *Orlando Cerasuolo*, University at Buffalo, State University of New York

The city of Veii, especially when compared with the rest of pre-Roman Italy, offers an exceptional case for the study of Etruscan aristocracy and its development.

This paper focuses on the most recent results of the Veii Project undertaken by the Sapienza University of Rome since 1996. At the 2014 AIA Annual Meeting, Veii was addressed for the first time in the context of an international meeting, as the focus of a single colloquium. The 2014 excavation season revealed new evidence that confirms the peculiarity of the site and that contributes to the characterization of the emergence of the Etruscan aristocracy. Taking into account these recent discoveries, this year we aim to present a new synthesis of the development of the settlement between the Early Iron Age and the sixth century B.C.E.

It is especially the analysis of the discoveries in the inhabited area that allows us to describe the vibrant society of Veii, from its internal structure to its links with external networks. The new data complete our understanding traditionally derived from the study of the rich necropoleis and sanctuaries. The most impressive new discoveries come from the citadel of Piazza d'Armi, which offers a continuous stratigraphy of more than three centuries. Since the foundation of Veii, Piazza d'Armi represented the center of the aristocratic power of the town. Probably because of this special character, Piazza d'Armi was abandoned when the political transformation of the society resulted in the emergence of the middle class at the end of the sixth century B.C.E.

This paper addresses the following points, which derive from unpublished excavation data:

- The earliest huts of the Iron Age on Piazza d'Armi.
- The trench tombs and other ritual evidence related to the earliest foundation of Veii.
- The evidence of the earliest urban organization in the Late Iron Age following a "regular scheme."
- The transformation of the settlement with the adoption of buildings made of stone and roof tiles.
- The foundation of the aristocratic residences.
- The construction of the so-called *oikos* temple with the earliest sequence of architectural slabs. It is considered to be the earliest cult building of the town.
- Some of the most significant finds from the recent excavation seasons, such as the fragments attributed to the so-called Crane Painter and the statue of the man with his dog.
- The hypogeum cistern made of tuff blocks with its particular covering system, which precedes the invention of the vault.

Orientalizing Economies: Interregional Trade in Central Italy in the Eighth and Seventh Centuries B.C.E.

Katharine Kreindler, Stanford University

The "Orientalizing period" traditionally has been ascribed to the eighth and seventh centuries B.C.E. in central Italy and is thought to be an era when Greeks arrived there, bringing with them materials and practices from the Aegean and transforming central Italian society in the process. According to this narrative, Italian iron ore drew Greeks to the Tyrrhenian Sea, and local central Italian elites, by virtue of their control of such resources, were the primary participants in contact with Greeks and by extension, the recipients of Greek cultural practices.

The eighth and seventh centuries B.C.E. were undoubtedly a time of great political and cultural change in central Italy, and many scholars have attributed such changes to orientalizing. However, this narrative is inherently diffusionist and fails to take into account the economic effect of orientalizing; if the narrative outlined above is correct, orientalizing should have had a significant economic impact on central Italy. In this paper, I examine interregional economic development in the eighth and seventh centuries B.C.E. by tracking the numbers and percentages of imports found at the sites of Caere, Populonia, Rome, and Veii, all major

population centers in central Italy. I argue that the amount of material brought to central Italy from the eastern Mediterranean was far less than the literature on orientalization would suggest. Furthermore, a statistical analysis of deposition contexts of imports indicates that imports were rarely deposited in contexts restricted to local elites but instead were interred in a variety of contexts, with little discernable patterning. This suggests that access to imports was not limited to local elites. This study challenges traditional narratives of orientalization, investigates how central Italians interacted with the wider Mediterranean sphere, and examines economic conditions in central Italy at a time when settlements in the region began to grow powerful.

The Archaeology of Etruscan Water Systems

Lorenzo Caponetti, Independent Scholar

This paper presents an analysis of Etruscan water systems and their possible applications in a contemporary context. Using data collected from a survey in Tuscania, central Italy, I consider both the functional and cultural importance of these tunnels, called *cunicoli*, as well as their similarities to water management systems in the Sahara region. I conclude with suggestions on how an understanding of the *cunicoli* could contribute to a number of important international debates.

Findings were collected and analyzed following a preliminary survey in the Tuscania Nature Reserve, using the criteria developed by the Foggara Project, an EU-sponsored research initiative that studied the functional as well as cultural aspects of water management in both Europe and the Sahara region. I identified 25 independent hydraulic systems in an area of 19 km². These systems suggest a high-density population that made considerable progress in developing the area. As very little is recorded about the complex relations the Etruscans had with the surrounding environment and their efforts to develop sustainable cultivation practices, this is an important first step. Moreover, the discovery of *cunicoli* that were still intact and indeed performing the same function for which they had been designed some 2,700 years ago suggests a promising source of data on the design and implementation of water and sanitation structures.

Investigating the *cunicoli* reveals an intricate web of painstakingly crafted tunnels and cisterns that, when seen as a whole unit, offer a fascinating glimpse into the techniques the Etruscans used to make thriving settlements possible. Comparing these to the African *foggara* showed that even while located in completely different environments, both systems work on very similar principles. By tapping into various sources and water tables, the *cunicoli* and the *foggara* were each able to capture as much atmospheric water as possible, and methods were developed to filter and store this water for later use.

The *cunicoli* thus represent an extraordinary possibility for water management initiatives, one that relies on archaeological expertise to inform a contemporary dilemma. Etruscan engineering has revealed itself to be a fascinating story of technical innovation that acknowledges the importance of maintaining a delicate balance in the surrounding ecosystem. The importance of this only increases as climactic changes, farming crises, and water shortages become an ever more present reality. Moreover, applying archaeological techniques to these problems represents an exciting direction for both scholarship and practice.

A New Interpretation of the Tomb of the Bulls at Tarquinia

Eoin O'Donoghue, National University of Ireland, Galway

The Tomb of the Bulls at Tarquinia stands as a formative example of Archaic-period Etruscan tomb painting, dating to ca. 540 B.C.E. The paintings in the tomb are unique for this time, including representations of events derived from Greek mythology, coupled with images of sexual congress, along with the bulls themselves, after which the tomb is named.

This paper seeks to offer a fresh reading of the tomb's imagery primarily based on a new interpretation of the two representations of sexual activity on the back wall of the main chamber. Previously, one of these images was thought to depict two men engaging in anal intercourse; however, new images of the painting show that the receiving partner is female, wearing typical items of jewelry and also possessing breasts. This reidentification radically changes previous analyses of the tomb, which are often centered on Etruscan attitudes to "homosexuality." Instead, it is shown that paintings in the tomb pertain to broader concerns relating to fertility and fecundity, which were critical issues in an aristocratic society.

In addition, it is shown that this affects the understanding of the depictions of Greek mythology; a representation of Achelous in the guise of a man-headed bull can now be understood as a manifestation of his role in ensuring fertility. Furthermore, the largest single image in the tomb, which portrays Achilles in hiding about to slay Troilus, can be read as a further manifestation of elite concerns for the regeneration of familial lines, read through the lens of what were fashionable Greek stories.

It is suggested that, while being a distinctive example in its use of Greek myth, the iconographic program of the Tomb of the Bulls is consistent with the broader themes represented in Etruscan tomb painting of the sixth century B.C.E.

Does Size Matter? Miniaturization of Tombs and Burial Space in Tarquinia

Allison J. Weir, Algonquin College

In this paper, I focus on the internal layout of tombs and the use of burial space in Etruscan Tarquinia. More specifically, I seek to analyze the change in tomb layout from the Archaic period (ca. 600–490 B.C.E.) to the Hellenistic period (ca. 330–100 B.C.E.). One of the most striking features of this change was the shift from single generational burials to multigenerational depositions in stone sarcophagi placed in large chambers. What does this drastic change mean? Did beliefs about the afterlife change? Did society change? Or was it a reflection of economic decline? The miniaturization of decorative and architectural features that is predominant in tombs of the Hellenistic period can be seen to have its origins in the Classical period. Thus, the answer is to be found in this intermediary period.

I look at the use of loculi in some tombs in the Classical period as a precursor of the miniaturization found in sarcophagi of the Hellenistic period. Two tombs in particular clearly display the origins of miniaturization (Tombs 2327 and 3242, ca. 400–350 B.C.E.). Both of these tombs bear the same architectural features and decoration that can be found in Archaic-period tombs, but on a smaller scale. In these tombs, it is the loculi that are decorated with the key motifs, as opposed to

the chamber itself. Therefore, this miniaturization shows us that the Etruscans at Tarquinia wanted to keep the key elements of their ancestors' burial space. These key elements included domestic architecture (noted by Weber-Lehmann in *Etruscan Painting* [New York 1986]), apotropaic creatures (as noted by Holloway [*AJA* 69 (1986) 447]), and painted scenes of banqueting and dancing (Weber-Lehmann in *Etruscan Painting* [New York 1986]). People at Tarquinia also wanted to use the burial chamber for multigenerational depositions, thus indicating that they wanted to be close to their ancestors. Miniaturization allowed them to bury the dead near their ancestors as well as keep the key features of earlier tombs. The change in the internal space in tombs, therefore, may be reflective of an increasing importance placed on the family in society rather than a change in beliefs about the afterlife. In addressing this suggestion, I also prepare the way for future analysis of why loculi are only a transitional phenomena soon to be replaced by sarcophagi.

Not Just a Pretty Face: An Examination of Etruscan Genucilia Pottery

Alexander Mazurek, University at Buffalo

Etruscan Genucilia plates were first discussed and classified by Beazley in his 1947 work *Etruscan Vase-Painting*. Beazley's name for this pottery was determined by the *dipinto*, *P. Genucilia*, located beneath the foot of a red-figured plate now situated in the Rhode Island School of Design in Providence (inv. no. 27.188). A decade later, Del Chiaro established a typology for this family of ceramics, in addition to charting their distribution, identifying production centers, and providing a chronological sequence (*The Genucilia Group: A Class of Red-Figured Plates* [Los Angeles 1957]).

Fifty-seven years later, Del Chiaro's publication remains accurate in most of its conclusions and well-respected by scholars of ancient ceramics; however, since his publication, significantly more Genucilia plates have been discovered. This is due to the rise of greater systematic excavations along with the increased documentation of artifacts in their context. Genucilia plates have been discovered at sites within Italy, such as Rome, Caere, Tarquinia, and Alba Fucens, but also outside Italy proper at Carthage, Aleria, Sardinia, and Cyrene.

The dating of Genucilia pottery continues to be the subject of debate but safely ranges from the first half of the fourth century until the early third century B.C.E. The shape consists of a shallow bowl, flared rim, and projecting lip that are supported by a short stem and widened foot. Most of the iconography, located within the medallion of the plates, comprises a female head in profile looking to her right or a geometric star pattern, although unusual decoration does exist. A wave pattern surrounds the medallion on the flared rim. The unique shape and the iconography of Genucilia plates have introduced questions concerning their functions, production, and inspiration.

This paper aims to shed more light on the function of Genucilia plates and to revisit Del Chiaro's proposed typology, centers of production, and chronology. I undertake these goals by examining not only the Genucilia plates themselves but their overall provenance and the artifacts found with them. I pay greater emphasis to the excavations that occurred after 1957 and the Genucilia plates discovered as a result. This is due to the greater attention on context that has occurred over time and to the phenomenon that plates discovered at these sites have been well-published in monographs but rarely related back to Del Chiaro's seminal work.

SESSION 4B: Colloquium Morgantina at 60: 1955–2015

ORGANIZERS: *Malcolm Bell III*, University of Virginia (Emeritus), and *Carla Antonaccio*, Duke University

Colloquium Overview Statement

In 2015, we mark the 60th anniversary of the start of American investigations at Morgantina in the Sicilian province of Enna. The occasion coincides with the long-awaited publication of volume 6 of *Morgantina Studies* by Shelley Stone, dedicated to the Hellenistic and Roman fine wares.

Excavations sponsored by Princeton University and later the University of Illinois from the 1950s to the early 1970s uncovered the classical and Hellenistic city's orthogonal plan; its agora, which is framed by stoas and featuring a theater, ekklesiasterion, bouleuterion, and granaries; and blocks of houses interspersed with neighborhood sanctuaries and at least two bath buildings. Early excavations demonstrated that the city was most fully developed in the third century B.C.E. under Hieron II of Syracuse and fell to Rome at the end of the Second Punic War. Recent work has shown that the agora became a center of industrial production in the Roman period, also receiving a macellum that still stands as the earliest known example of the building type. These first decades of research also investigated Morgantina's Bronze and Iron Age as well as the archaic phases. Excavations resumed in the 1980s under the University of Virginia, later joined by Wesleyan University and then Duke University. Fieldwork and study in the Hellenistic and archaic settlements continue into the present, involving new questions, methods, and hypotheses asked of both old and new evidence by a second and third generation of scholars.

This colloquium presents the results of new research that has taken place in the last decade and has focused on the Hellenistic and Roman phases of the site. Close study of major buildings has resulted in radical new interpretations. The first paper presents a new architectural reconstruction of the North Stoa in the agora, including evidence for its having housed a shrine of Hestia and prytaneion, with late conversion to industrial uses; another discusses a Hellenistic sanctuary on the Cittadella in the context of patterns of cult during the later history of the site. A third paper describes a second Early Hellenistic bath building and adjacent sanctuary. A fourth paper presents the results of the first two seasons of excavation in a previously untouched Early Hellenistic quarter in the vicinity of the baths, while a fifth paper reports on the previously unsuspected wide range of connections and traditions among the numerous small bronze objects recovered over six decades. A final paper will report on recent technical analysis of the Morgantina silver treasure.

An Early Hellenistic Office Building on the Agora

Malcolm Bell III, University of Virginia (Emeritus)

The North Stoa closes the north side of the upper agora of Morgantina. Excavated between 1955 and 1967, it was initially identified as a gymnasium, in large

part on literary evidence. Diodoros tells us that Hieron II of Syracuse constructed gymnasia in some cities of his kingdom. Recent study of the building has shown that while the Hieronian dating is correct, there is no evidence to support the identification as a gymnasium. The North Stoa was rather an Early Hellenistic public office building of striking design, with 21 rooms in a bilaterally symmetrical arrangement. There are contemporary parallels for the careful pairing of rooms at Akragas, as in Macedonia. Here, six balanced pairs served as public offices. Two three-room suites at the extremities each encompassed a large banqueting room, and the eastern set also contained a room with an altar. An inscription found in this or an adjacent room in 1963, with the name of Hestia, allows us to identify this suite as the *prytaneion* and *koine hestia* of Morgantina. In the Roman period, the North Stoa housed an oil press, a potter's studio, and several commercial shops; a late wall constructed directly over the altar attests to the willing obliteration, if not actual suppression, of Greek cults.

The Hellenistic Sanctuary on the Cittadella, 1957–2012

Carla Antonaccio, Duke University, and *Shelley Stone*, California State University, Bakersfield

In 1957, Princeton University began excavations on a plateau in the locality known as the Cittadella, a hilltop to the east of the city at Serra Orlando where excavations had commenced two years earlier. Though this area would soon prove to be the location of Iron Age and archaic habitation and cemeteries, the first trench uncovered a Hellenistic sanctuary. It took the form of a multiroom structure with a large central courtyard, entered from a street running south to north down the slope. "Neighborhood" shrines of similar form, all apparently dedicated to Demeter and Kore, are incorporated into the orthogonal plan of the later city. Their use came to an end with the Roman capture of Morgantina in 211 B.C.E.

The excavations of the 1950s also uncovered finds indicating an earlier phase of use, including part of an apsidal structure, probably of the seventh century B.C.E., below the floor level of one room. More recent excavations show that the southeast corner of the sanctuary was founded directly on the floor of a very large Iron Age longhouse that preceded the archaic settlement. In 2012, work focused on completely excavating the sanctuary's southern and western limits, an attempt to better understand the history of the sanctuary. We were able to document the limits of the shrine, locate a secondary entrance, and add to our understanding of third-century patterns of cult throughout Morgantina.

A cache of terracotta figurines found in 1957 included representations of Persephone. A small bronze plaque depicting Herakles was also recovered, but the object later was recognized as an ornamental hook from a belt of Samnite origin and dated to the fourth century B.C.E. In contrast to the richness of the other city sanctuaries, little pottery was recovered. The sanctuary's cistern contained a use fill and fragments of a black-gloss ribbed amphora. At least five vases of East Sicilian Polychrome Ware (formerly "Centuripe Ware") were found in the rooms, but other finds of this period were scanty. The latest coins recovered are issues of Hieron II. It seems likely that the sanctuary was abandoned, along with the community it served, before the approach of the Roman army in 211 B.C.E. It is possible that

most of the votives were removed before the Romans arrived and that the cache of figurines was left to indicate that the temenos was still sacred. The few vases found in the building probably were damaged and discarded during the evacuation.

The South Baths: Reconstruction and Contextualization of a Greek Public Bath

Sandra K. Lucore, Seikei University, and Monika Triimper, Freie Universität Berlin

This paper discusses the design, date, and function of a newly explored Greek public bath at Morgantina and assesses it within local and regional contexts. The South Baths were partially excavated in 1971, 2009, and 2010. At the beginning of a new three-year project starting in 2013, excavation was significantly advanced, and it was completed in 2014. The urban context of the South Baths is unique in the Greek world: they are located across the intersection from another public bath (the North Baths, recently fully excavated) and adjacent to a sanctuary (the West Sanctuary of Demeter and Persephone, partially excavated in 1971). This unusual proximity of two public baths and the contiguity of bath and sanctuary suggest two key questions, both of which were provisionally answered by the 2013 and 2014 seasons: what is the chronological, spatial, and functional relationship between the South and North Baths, and between the South Baths and sanctuary?

First, the plan and bathing program of the South Baths are assessed in comparison with those of the North Baths and other Greek baths in Sicily and south Italy. While the South Baths share with the others a tholos with hip bathtubs, a bottle-shaped furnace, and a double circulation pattern, as well as current evidence suggests that they lack the crucial innovative feature of other equivalent establishments, specifically the communal immersion pool with hypocaust, although they are distinguished by the presence of shop rooms. Diagnostic finds suggest that the South Baths were built sometime after 260 B.C.E. and abandoned in 211 B.C.E. when Morgantina was captured by Rome. Thus, they functioned concurrently with the similarly dated North Baths, and the apparent differences in their bathing programs and decoration must be explained by the original concept. The two baths could have been designed for a different clientele, differentiated possibly according to gender or social or economic status. The presence of shops could indicate the building had a significant economic function.

Second, the relationship between the sanctuary and South Baths and their potential use for religious-ritual-purifying or therapeutic-curative purposes is addressed. Investigation of the partition wall in 2013 confirmed that the sanctuary was constructed and fully functioning before the installation of the South Baths and that there are no interconnecting doors. Full excavation of the sanctuary, planned for 2014/2015, may further confirm the lack of any functional connection between these buildings.

The Contrada Agnese Project: Field Report 2013–2014

D. Alex Walthall, University of Texas at Austin

This paper presents the results from the first two seasons of a new, long-term research and excavation project conducted under the auspices of the American Excavations at Morgantina. Located at the western end of the classical and Hellenistic

city, the area under investigation is referred to locally as the Contrada Agnese. To date, archaeological investigations in the Contrada Agnese have focused largely on two monumental bathing complexes of innovative design and Early Hellenistic date. This project aims to provide a more complete picture of life on the periphery of the ancient city through systematic excavation of the city block (W13/14S) that lies immediately to the south of Plateia B, one of the major east–west thoroughfares of ancient Morgantina. Details of this city block came to light as a result of a geophysical survey conducted in 2012 by members of Cologne University and the American Excavations at Morgantina, which revealed a dense network of walls, streets, and architectural features in what was a previously unexplored portion of the ancient city.

Excavations in 2013 focused on a series of rooms in a yet unidentified complex located along the north–south street that bounds the eastern edge of the block (Stenopos W13). The 2014 excavation season addressed apparent irregularities in the orientation and layout of the block made visible by the geophysical survey. Ceramics recovered thus far in the excavations suggest this quarter of the city was first occupied in the third century B.C.E., late in the history of the city. For this reason, continued fieldwork in the Contrada Agnese is expected to provide valuable testimony for the expansion of Morgantina’s urban center during the Early Hellenistic period. In addition to presenting the discoveries made in 2013 and 2014, this paper briefly considers the preliminary results of environmental and faunal analyses carried out by members of the Contrada Agnese Project and outlines the goals and strategies for further research in upcoming seasons.

New Data on the Silver Treasure from the House of Eupolemos at Morgantina

Laura Maniscalco, Parco Archeologico di Morgantina

Due to their intrinsic value, ancient silver objects have often arrived at museums throughout the world with provenance other than that of regular excavations, and therefore much data regarding the context and the production process in the workshops of origin, as well as the circulation of such objects, are missing. The discovery of silver objects, in fact, is derived from what one may define as non-productive hoarding—archaeological collections created through the formal burial or the furtive hiding in a moment of danger of objects that were never recovered—circumstances that limit the possibility of knowing the primary use of the object in antiquity, in the manner that we can determine much more easily for other classes of materials.

The high artistic level of Macedonian silver objects has led scholars to believe that similar objects of the same period (fourth-third centuries B.C.E.) found elsewhere came from Macedonian workshops, as well, but it is likely that there once were workshops specialized in this craft not only in Macedonia, but also in Thrace, where the production of silver vessels begins in the fifth century B.C.E., at Pergamon, in Syria and in southern Italy and Sicily. The existence of silver production at Syracuse is suggested by several ancient literary sources that refer to the period of Hieron II, but unfortunately very little remains of this output, to which we may attribute only two hoards, which nonetheless are of great importance: the silver from Paterno’ in Berlin and the silver from Morgantina.

In view of the upcoming loan of the silver vessel from Morgantina to the Metropolitan Museum of Art in New York, a campaign of indirect materials analysis was

conducted on these objects at the Museo Archeologico di Aidone (Regione Siciliana), and a database in three dimensions with file resolution up to 0.1 millimeters was created for each. Non-invasive 3D scanning techniques of diagnostic investigation, including radiography, ultraviolet fluorescence, and ultra-sound have yielded information that is extremely useful for an in-depth understanding of the technology of production and the establishment of a unique compositional profile for each object examined. We used a 3D portable scanning system with structured light flash bulb (Artec Spider) in order to create the digital models. These investigations constitute a kind of reverse engineering that helps us to evaluate the state of material preservation of the external and internal portions of the object and permit, each time the collection is moved to a new location, the registration of anomalies and stresses to the object through a systematic program of monitoring.

The Metal Objects from the American Excavations at Morgantina

Holger Baitinger, Römisch-Germanisches Zentralmuseum

The metal objects found in the American Excavations at Morgantina probably form the largest assemblage from Hellenistic times in the Mediterranean world. After the dedications of metal votive objects in Greek sanctuaries largely came to an end during the Classical period and before the Roman military camps north and northeast of the Alps produced numerous metal artifacts, there was a gap in the tradition that has delivered only small quantities of material. The objects from Morgantina mainly dating to the Hellenistic period show quite a broad spectrum, including weapons, vessels, jewelry, fibulae, pendants, belt buckles, chests, spurs, balances, medical instruments, lock elements, mirrors, strigils, etc. They have been found in different contexts such as sanctuaries, public areas, and residential quarters, so it is possible to learn not only about their dating but also about their function in the town. This seems promising against the background of the development of Morgantina, the Romanization of Sicily after the founding of the Roman province after 241 B.C.E., the presence of Iberian mercenaries in the town after 211 B.C.E., and the conflicts between Sextus Pompeius and Octavian at the end of the Roman republic. As Morgantina was almost completely given up about 35 B.C.E., a short time before the Romans occupied the Alpine regions, Germania, Dalmatia, and Pannonia, the metal objects offer the chance to learn about traditions in the material culture from the Late Roman republic to the time of Augustus and Tiberius, an important topic controversially discussed in the archaeology of Roman provinces.

Of particular interest are the numerous bronze fibulae. The roots of brooches of the so-called Middle La Tène type can be located in the central European La Tène culture, though the closest analogies to the examples from Morgantina are to be found in the Iberian Peninsula. Maybe they prove the presence of Iberian mercenaries to whom the Romans handed over Morgantina in 211 B.C.E. Other brooches dating to the first century B.C.E. are mainly distributed in northern Spain, France, and the area south and southwest of the Alps, while in Sicily their absence was supposed until now. Like examples found in other Sicilian sites, such as the Monte Iato near Palermo, the Morgantina fibulae may prove the presence of foreign troops in Sicily in the time of the "sea king" Sextus Pompeius.

SESSION 4C**Ostia**

CHAIR: *Alvaro Ibarra*, College of Charleston,

A New Perspective on the Quattro Tempietti: Agrippa and the Ostians

Mary Jane Cuyler, University of Sydney

The “Quattro Tempietti” at the Roman Colony of Ostia were constructed in the Late Republic on the officially designated *ager publicus* between the Decumanus Maximus and the Tiber River. In the past century, the majority of scholarship on these four temples has been heavily influenced by the belief that they were reconstructed and renovated by generations of the Lucilius Gamala family. Zevi has repeatedly maintained the position that the long-lost inscription *CIL* 14 375 actually records Gamala’s construction of the temples themselves (*MÉFRA* 85 [1973] 555–581; *JRA* 57 [2004] 47–67). The inscription and the temples share no archaeological context, and the correlation does not stand up to scrutiny. Nevertheless, the Gamala connection remains the *communis opinio*, with the result that the place of the Quattro Tempietti in the changing landscape of Ostia is studied only in relation to the Gamala clan (e.g., A.K. Rieger, *Heiligtümer in Ostia* [2004] 85–92).

A new perspective on the Quattro Tempietti, unencumbered by unprovenanced inscriptions, can be found in the published reports and the unpublished journals recording the stratigraphic excavation of the area undertaken between 1911 and 1913. The journals and reports reveal that the history of these four temples is considerably more complex than previously supposed. I present the results of my study of these reports, outlining the construction phases of the temples from their earliest foundations in the second century B.C.E., their reconstruction in the early first century B.C.E., and a substantial renovation after 23 B.C.E. funded by *duoviri* C. Cartilius Poplicola and C. Fabius, along with a number of freedmen. This renovation is examined in conjunction with the Agrippa’s construction of the theater at Ostia ca. 18 B.C.E., a time of significant urban transformation when the designation of *ager publicus* was apparently abandoned. I propose that the theater’s precise architectural alignment with the Quattro Tempietti and the ancient topography of Ostia emulates the relationship between the Theater of Pompey and the republican temples at Largo di Torre Argentina. The construction of the theater and the renovation of the Quattro Tempietti were roughly coeval and probably resulted from a collaboration between Agrippa and the local Ostian benefactors.

What the Earliest Phase of the Caseggiato degli Aurighi (III.x.1) Can Tell Us About Architectural Planning at Ostia

Evan M. Rap, University of Texas at Austin

The past 30 years have seen a flourishing of scholarly interest in the ancient port city of Ostia, especially its architectural and urban development. This paper builds on that body of work by situating the design and development of one building—the Caseggiato degli Aurighi (III.x.1)—in its urban and social context.

I present the first unified plan of the earliest phase of the building and show how the designer(s) of the structure took into account the preexisting social and urban context of the surrounding area when arranging spaces within the building itself.

The Caseggiato degli Aurighi is ideally situated for a contextual analysis of its design. It is in the heart of Ostia's region III, which underwent extensive development during the "building boom" of the second century C.E. It lies between the two most prominent east-west thoroughfares in the western area of the city and north of one of the largest single development projects at Ostia, the so-called Case a Giardino. Given its prominent position in the urban landscape, it is not surprising that Insula III.x has been the subject of a number of studies, although these focus almost exclusively on piecing together its chronological development. The form of the building as it was originally constructed has received scant attention. There has been no attempt to analyze the block in a social or urban context beyond identifying certain areas as "public," "private," "commercial," or "religious."

Although the insula underwent some radical changes later in its life, the original phase is remarkable for its open floor plan, consisting largely of vaults supported by rows of pilasters surrounding a large, central courtyard. I show that, despite its openness, the designer(s) privileged certain lines of movement over others and that these choices were informed both by the different kinds of social space within the Caseggiato and by the nature of the spaces surrounding it. For example, differences in the size and length of certain corridors, as well as the presence of the travertine cornerstones studied by Van der Meer and Stevens—including some not mentioned in their catalogue—show that the designer(s) anticipated different directions and volumes of traffic in discrete parts of the complex. These choices facilitated movement into and through the building, assisting in its apparent function as a large commercial center.

Marble and Wine: A Study of the Marble-Clad Bars at Ostia Antica

Brittany Amiet, University of Akron

In general, our understanding of the Roman marble trade has been shaped by its use in imperial and elite contexts. However, the demand for this precious material, and the understood societal value of it, permeated the Roman world; its influence stretched from imperial villas, public buildings, and upper-class houses to the marble-clad counters at Pompeii, Herculaneum, and Ostia. Over the course of five years the Marble Bars Project (directed by Fant and Russell) has documented 50 surviving bars at Pompeii, eight at Herculaneum, and seven bars at Ostia for a total of 9,500 pieces of marble (overwhelmingly fragmentary).

So far evidence presented by Fant, Russell, and Barker at the 2007 and 2011 AIA meetings and a publication in the 2013 volume of *PBSR* have dealt with the marble-clad bars at Pompeii and Herculaneum. The main focus of this report is the project's final field season at Ostia. This paper discusses four main results: first, the varieties of marble used to decorate the frontages and countertops of the bars at Ostia Antica; second, the distribution of the marble-clad bars within the city; and third, the issue of reuse and the source of marble used for the bars. Analysis of the bars at Ostia will enable us to test the model that the main mechanism for supply was the secondhand market. Finally, this paper compares the overall results

gathered from the Vesuvian bars of Pompeii and Herculaneum with the bars at Ostia. We conclude that there are stark differences, as well as surprising similarities, between the bars in each city in terms of varieties and quantities of marble per bar. Furthermore, these differences reflect varying patterns of marble use in the first and third centuries C.E.

Shop Advertising and Shopkeeper Self-Fashioning in the Commercial Landscape of Ostia

Rhodora G. Venmarucci, University at Buffalo, State University of New York

Advertising in preindustrial societies is a largely neglected topic as a consequence of the traditional view in economic history that the development of marketing strategies was a modern innovation. To the contrary, various methods of consumer manipulation not only existed but also were crucial to the economic success of preindustrial retailers, whose reputations were perceived as synonymous with the quality of their products and business ethics. The correlation between shopkeeper identity and product value was problematic for Roman retailers, who were characterized widely in the literary sources as depraved and deceitful profiteers (e.g., Cic., *Off.* 1.150–51; Ov., *Fast.* 5.674–88). In response, shopkeepers were compelled to promote their reputations along with their goods.

This paper suggests that shop design was the primary means for the self-representation of Roman shopkeepers. Borrowing from environmental psychology, the author examines artistic representations and the physical remains of shops from Ostia to demonstrate how imperial shopkeepers influenced consumer perceptions of store image, financial security, and product quality through the manipulation of environmental cues within the retail setting (e.g., layout, furnishing, décor, color, signage). Marketing strategies focused primarily on the shop facade. Wide-open entryways and status indicators such as polychrome marble created an appealing and disarming shop image that encouraged patronage and purchasing decisions. The efficacy of shop advertising is in part borne out in the increased number of shops that appear in the commercial landscape of Ostia between the first century B.C.E and second/third century C.E. In addition to addressing a lacuna in the scholarship of the ancient economy, this work challenges traditional models of retail history by establishing the shop—a physical construct of shopkeeper identity—as the principal method of advertising for retailers in a Roman town.

Severan Dynastic “Heritage” in the Augusteum of the Caserma dei Vigili at Ostia

Margaret L. Laird, University of Delaware

Galleries of imperial portraits were found in a variety of venues in Roman towns of the Imperial period (e.g., on triumphal arches and in basilicas, imperial cult temples, and theaters). These statuary groups expressed donors’ reverence for the emperors and local perceptions of imperial politics and relations. Scholars assume that these groups were “agglutinative,” gradually growing with the addition of new rulers. This model presumes that portraits were removed only when the subject had fallen from favor, as in the case of *damnatio memoriae*. However, my

analysis of changes made to the second-century portrait gallery found in situ in the Augusteum in Ostia's Caserma dei Vigili provides an important corrective, demonstrating how even statues of popular emperors were repurposed in the quest to craft current and meaningful political messages. The group was dedicated by the seven cohorts of *vigiles* (firemen) between 137 and 162 C.E. In aggregate, the seven statues celebrated the continuity of the Antonine dynasty and the divine lineages of the living emperors. Members included L. Aelius Caesar, Antoninus Pius, Marcus Aurelius (pre- and postaccession), and Lucius Verus. The latest statues, dedicated in 162 C.E. on identical bases decorated with sacrificial implements, honored Marcus Aurelius and a second individual identified as Hadrian or Commodus. In 195 C.E., the *vigiles*, under their prefect Fulvius Plautianus, reinscribed and rededicated this second base to Septimius Severus, who had recently defeated Didius Julianus and Pescennius Niger. Based on formal criteria and comparative data, I argue that the recarved base was originally dedicated to Marcus Aurelius' coemperor, Lucius Verus, who died and was deified in 168 C.E. When first dedicated, the closely matched bases underscored the two emperors' parity. I propose that this quality suggested the base's reuse for a statue of Severus, whom the *vigiles* had supported in his rise to power. Replacing Verus' image with that of Severus, the *vigiles* honored the new emperor and hinted at Severus' membership in the Antonine dynasty, a tie that Severus himself formalized the following year with his "retrospective adoption" but that had been suggested on coins already in 195 C.E. I argue that sensitivity to this rhetoric most likely came through Plautianus, Severus' friend and fellow citizen of Lepcis, who rose to become Praetorian prefect. The destruction of the statue of a deified emperor (Lucius Verus) was effected deliberately to express the *vigiles'* early reception of still-evolving imperial propaganda.

Hot in the City: Fuel Consumption and Heating Systems in Late Antique Ostian Houses

Ismi Miliareisis, University of Missouri

The fourth century C.E. was a time of revival and refurbishment at Ostia, and elaborate heating systems were incorporated into several elite homes at this time, including the Domus della Fortuna Annonaria and the Domus dei Pesci. This paper quantifies the resources needed to maintain these new amenities, examining various possible scenarios of use and function. By modifying a program that I developed to understand heating systems in ancient Roman baths, I am able to synthesize ancient evidence and modern heat-transfer principles to compute the amount of fuel needed to heat these domestic spaces. In addition to determining the cost of fuel, I investigate the relationship of the heated rooms to the other sections of each domus, allowing for a more complete understanding of both how the heating devices worked and what function the heated chambers served for the Late Antique inhabitants.

Heating systems were installed in one or two rooms of these elite houses, but the selected rooms were almost never the luxurious public dining or reception rooms that were modified in this period as well. There is also no direct relation to bathing activities. In fact, even in the Domus dei Dioscuri, which contains a small bathing facility, there is a completely separate heated room not associated with

the bathing sector. Were these spaces used by the family for sleeping? How often were they heated? Would they still serve as a display of conspicuous consumption if they were not viewed or experienced by people who were not members of the private household? The expense of both installing and operating the heating technology in these homes must have been deemed worthwhile by the owners. By determining tangible numbers for how much fuel was consumed and by attempting to answer some of the questions raised above, a more complex picture of elite life in Late Antique Ostia can be painted.

SESSION 4D: Colloquium

Public Archaeologies of the Ancient Mediterranean

ORGANIZER: *Anastasia Dakouri-Hild*, University of Virginia

Colloquium Overview Statement

Since the advent of “public archaeology” in the 1970s, scholarship on the topic has moved beyond public education as effective heritage management and protection in the context of Cultural Resource Management work. It now debates the active or incidental role of archaeology in the shaping of community identities and identity imaginaries, the ethics and economics of managing the past on behalf of communities, and even the very meaning of “public” and “community” to be served by archaeology, recognizing the inherently political nature of these terms. Today, “public archaeologies” vary considerably in approach and objectives, ranging from essentially public relations and fundraising efforts in support of continuing projects, to disseminating, humanizing and deciphering specialist work, to tracing connections with the past as part of community service, to educating the public on the benefits of the discipline as a service to the discipline itself. They may also democratize archaeology at its core by engaging the public in all stages of knowledge production (e.g., constructivist, experiential, hands-on, inclusive, informationally open, crowdsourced archaeologies) in keeping pace with the multivocal, pluralistic, information-rich societies of today.

Despite intense writing and debate along these lines in the broader realms of archaeological thought, especially from the late 1990s, community-friendly archaeologies of the ancient Mediterranean have been comparatively rare, small-scale, or little publicized, with most projects undertaken by museums and governmental entities typically deemed responsible for serving and educating the communities where archaeological research occurs. This colloquium intends to (1) explore the role of Mediterranean archaeologists as educators, mediators, and facilitators and to consider the locally specific resonances (as opposed to a priori-determined benefits) of their work in the lives of local inhabitants; (2) take the pulse of “public archaeology” thinking in the Aegean, Greek, Cypriot, Roman, Etruscan, and Near Eastern scholarly ambits by entertaining ways to deal with multiple, excluded, overlooked, silenced, undesirable pasts; and (3) showcase projects that actively seek to cultivate engagement of different contemporary stakeholders with the past, including traditionally disenfranchised “others,” through excavations, site-based initiatives, community-embedded efforts, media, virtual and online projects, and the like.

Public Archaeology as Collaborative Work in Out-of-the-Way Places: The Example of Gonies, Crete

Aris Anagnostopoulos, University of Kent, and *Evangelos Kyriakidis*, University of Kent

This paper discusses a vision for public archaeology as it can develop in those very common places where remains of the ancient past are somewhat marginal to the heritage industry and unlikely to have a significant impact on the livelihoods of local populations. It presents the community archaeology side of the “Three Peak Sanctuaries of Minoan Crete Project” based on the mountainous village of Gonies, Crete. It claims that long-term engagement through archaeological ethnography can transform heritage management issues into a tool for civic engagement, collaborative work, and sustainable development.

This is a small-scale, low-impact archaeological project that does not depend on a “trickle-down” of knowledge or funds to community stakeholders; instead, it involves locals in seeking out funding and resources that are as crucial for the village as they are for the program itself. It employs the “popular assembly” form to make important decisions on the presentation and dissemination of archaeological knowledge, increasing the participation of such groups as women or the elderly, who are usually left outside decision-making processes. Finally, a collaboratively organized archaeological ethnography summer school aims to create a blueprint for heritage-based development that is sustainable and increases community control of local knowledge.

An Archaeology of/for the Disenfranchised in Greece

Anna Simandiraki-Grimshaw, University of Kent

Public archaeologies have been debated on an international level for a few decades now. Such debates have included the social and community role of the archaeologist, strategies and techniques for reaching a variety of stakeholders, and a discussion of who the latter are. Albeit with some delay, debates and practices of public archaeologies have reached the heritage sector in Greece. Greek public archaeologies of the 21st century are specially (but not exclusively) focused on young-learner involvement (e.g., museum materials and activities), local community education (e.g., lectures, excavation open days, volunteerism) and politicized relics (e.g., repatriation movements, topical exhibitions). They showcase much enthusiasm, imagination, and perseverance on the part of heritage practitioners. Despite such an encouraging turn, however, it is argued in this paper that the Greek archaeological edifice has a long way to go before it can be called “inclusive.” This is a systemic problem—for example, from the archaeological jargon deliberately used to the choice of archaeologies accessed to the audiences reached. After an exploration of the underlying reasons for these limitations, a debate is offered as to who is disenfranchised and how and why they are. Finally, solutions are proposed, and it is suggested that Greek archaeology has huge potential to become a prime example of inclusive public engagement.

The Role of Archaeology, Community, and Heritage in Akko, Israel

Ann E. Killebrew, Pennsylvania State University, and Sandra A. Scham, Catholic University of America

Recognizing that archaeology has historically served a divisive role in the politics of the modern Middle East, this presentation critiques recent attempts to use archaeology and heritage on a community level as a means to encourage mutual understanding and cooperation between diverse populations. Several questions are raised: What is (or should be) the role of multiple, and at times politically divided, communities within the framework of archaeological projects and heritage development? How does one engage these communities, particularly in areas of contested heritage? Is the concept of a “shared heritage” realistic or even desirable? These questions are addressed via a discussion of community-based archaeology programs in the modern state of Israel with a primary focus on projects currently taking place at the UNESCO World Heritage Site of Akko/Acre/Akka. Combining ethnography, ethnoarchaeology, traditional archaeology, and new technologies, these projects aim to implement a more dynamic approach to fostering the participation of modern communities. Public archaeology at Akko/Acre/Akka places equal value on exploring and preserving tangible and intangible cultural heritages through seeking a holistic understanding of both the impressive material remains that testify to the city’s past cultures and the multiple ethnicities and religions that represent its contemporary ones.

Archaeology as a Public Awareness Tool at Komana, Turkey

Coşku Kocabıyık, KU Leuven, and D. Burcu Erciyas, Middle East Technical University

In Turkey, public archaeology is still in its infancy; however, this is a process that needs to change rapidly, since the country’s cultural heritage is dwindling and exponentially being destroyed by expanding urban development, agricultural activities, targeted looting, and construction of large infrastructures such as dams, roads, subways, and pipelines. This paper discusses a recently initiated public outreach program that draws on participatory action research and includes several techniques designed to foster democratic dialogue among the participants and to raise awareness about how knowledge of the past can enrich our contemporary society in the region of ancient Komana (now Tokat) in the central Black Sea region of Turkey. This collaboration between the local people and archaeologists is designed to help preventing further looting in the surrounding area, raise awareness of a shared past, and help change the perspective of the local communities about the archaeological fieldwork conducted on-site. It further aims at fostering deeper commitment at the governmental level to promote initiatives for archaeological heritage. This paper presents the results of three seasons of fieldwork (summers 2011–2013) that involved children and women of Bula, the village hosting the Komana project’s excavation house. While this is still a work in progress, we would like to share our experiences and provide some insights regarding the advantages and limitations of the format with which the research was conducted.

Examining Public Archaeology and Local Perceptions of the Past: The Context of Turkey

Veysel Apaydin, Institute of Archaeology, University College London

Increasingly, public archaeology projects in the west have tended to follow a more participatory approach to ensuring the protection of heritage sites in recent years. In contrast in Turkey, most of the public archaeology projects that have been run by museums, archaeology projects, and NGOs have a more top-down approach that imposes selected knowledge on communities through education programs. These projects rarely consider the ethnic, sociopolitical and economic backgrounds, and priorities of the communities. However, engaging with indigenous and local communities and paying attention to their varied perspectives will allow better involvement and thus protection and preservation of the sites. This paper argues that the protection of heritage sites can be more effectively achieved through an approach that is not only participatory but also more “people centered bottom-up.” Specifically, this paper discusses the issues and problems of public archaeology in Turkey by looking at the formal education system, the general structure of museums, and examines the perception of the communities through case studies of Çatalhöyük, Ani, and Hattuşa. Finally, I also introduce the “people centered bottom-up approach” to demonstrate how it can be effective to increase heritage awareness among local communities.

SESSION 4E: Colloquium

Approaching Mobility and Interaction in the Iron Age Mediterranean

ORGANIZER: *Lieve Donnellan*, Georg-August Universität Göttingen

Colloquium Overview Statement

A myriad of models have been proposed as frameworks for analysis of mobility in the Iron Age Mediterranean. “Colonization,” being the most common term, has been discredited somewhat over the last two decades, and suggested alternatives have been “migration” or “diaspora.” Movements of people, mainly Greeks and Phoenicians, have also been perceived as the prime cause of change in indigenous societies. However, the heuristic validity of these frameworks can be questioned: colonial, diaspora, migration, or indigenous identities are negotiated and result from cultural encounters that may involve other factors, such as gender, power relations, violence, and resistance. These factors are situational, potentially contradicting, and subjective but nevertheless determine the outcome of the encounters. Objects, bodies, spaces, and various practices, either previously present or brought in by foreigners, are used, manipulated, or disregarded by individuals to make sense of the encounters, vis-à-vis a cultural “other” and the community itself.

Macrohistorical approaches to the Mediterranean have been popular from Braudel (*The Mediterranean and the Mediterranean World in the Age of Philip II*) to Horden and Purcell (*The Corrupting Sea: A Study of Mediterranean History*) and Broodbank (*The Making of the Middle Sea: A History of the Mediterranean from the*

Beginning to the Emergence of the Classical World). Little attention has been paid to the microhistorical analysis of the various encounters of Iron Age societies across the Mediterranean. However, the problematic application of all proposed homogeneous grand narratives, such as colonization, migration, or diaspora, proves that such an approach is necessary if we ever want to propose a valid hypothesis of how mobility in the Iron Age Mediterranean functioned and why the outcomes were what they were.

In this session, scholars, active in various parts of the Mediterranean, present their latest research on mobility and interaction in Iron Age societies in the Mediterranean. Contexts, agents, and cultures involved in the encounters varied, but similar questions can be asked: What sort of contacts existed? Exchange of objects and/or mobility of people? Did the nature of these contacts change over time? What effect did these contacts have on the society: what objects and practices might have changed as a result of the encounters? Can we reconstruct some of the aspects of the social contexts of intercultural interaction—for example, elite monopolization, gendered mediations?

Beyond Colonization and Peripherality: The Archaeology of Coastal Macedonia and the Thermaic Gulf in the Iron Age

Antonis Kotsonas, University of Cincinnati

The Iron Age of the Thermaic Gulf in coastal Macedonia is often left on the margins of Aegean and Mediterranean archaeology because of the limitations of the archaeological sample available until recently and the dearth of relevant references in ancient literature. The notion of the peripherality of the region is embedded in both traditional accounts and theoretical approaches such as world-systems analysis and involves assumptions about the merely receiving role of local populations in any interactions. I challenge these preconceptions on the basis of a study of locally produced and imported pottery from Methone of the late eighth and early seventh centuries B.C.E., a site where local populations coexisted with Euboean and perhaps other colonists. Integrating the primary evidence from Methone with current theory and interdisciplinary methodology, I revisit some widely used frameworks of analysis of mobility and interaction in the Aegean and beyond.

Back at Home from the Colonies: How Did the Western Societies Influence the Phoenicians in Their Homeland?

Francisco J. Núñez, Tyre–Al Bass Archaeological Project

Many articles, books, talks, and communications in congresses have dealt with the Phoenician colonial phenomenon and the relationship between the Phoenicians and the indigenous populations. At the same time, depending on the different theoretical paradigms existing in each moment of the research, the attention shifted from one to the other side—that is, from the colonizers to the colonized peoples. An important role in this change was played by theoretical approaches to the archaeological evidence, such as the agency and the idea of identity. However, these approaches have focused especially on the indigenous societies, forgetting

to do the same with the Phoenicians and how they managed these contacts and their consequences.

After an analysis of the material culture of the Phoenician homeland, one is left with the impression that its society was deeply conservative. This conservatism has a clear reflection in their material culture and probably in their traditions. In this regard, Phoenician settlements in the west, even if the presence of indigenous elements has been proven, always kept an oriental character that is observable, for example, in their urbanism, architecture, funerary customs, or material culture. In turn, one way or another, the impact of the Phoenician presence was more evident in the material culture of the colonized societies, whose material manifestations and probably customs and beliefs underwent transformations.

This paper raises some relevant questions: What was the input of these colonized cultures in the Phoenician society of the metropolis? Was the only role of these western societies to provide the metropolis with the goods of diverse nature mentioned in the Assyrian annals or by the biblical prophets? Or was there a real influence in the customs and beliefs of Phoenician society? Is it possible to distinguish any trace of these influences in the recovered material culture?

To answer these questions, this paper presents the most recent data obtained in metropolitan sites. Especial attention is paid to the way in which these metropolitan societies reacted to the influence of foreign cultures—for example, at the beginning of the Iron Age.

What Role for Rhodes? Contacts, Exchange, and Interaction in the Early Iron Age Aegean

Giorgos Bourogiannis, Medelhavsmuseet Stockholm

Situated at the southeastern tip of the Aegean, Rhodes functioned as a major crossroad and enjoyed contacts with the Greek mainland, the Aegean Islands and Crete, the Anatolian landmass, Egypt, Cyprus, the Levantine littoral, and the western Mediterranean. A large island by Aegean standards, strategically located and fertile, Iron Age Rhodes displays an extraordinarily rich and varied archaeological record and fits prominently in the discussion of contacts, mobility, and interaction in the Iron Age Aegean. Furthermore, Rhodes provides some of the best-documented cases of foreign settlers engaged in certain profitable activities.

This paper presents an overview of the latest archaeological research in Rhodes and tackles questions related to the island's external contacts as well as their impact on the Rhodian material culture. Questions to be considered can be summarized as follows: When did Rhodes recover from the collapse of the Late Bronze Age palatial system? Who were the main agents of this recovery? How did they interact with the locals? What sorts of contacts are traceable in Iron Age Rhodes, and what effect did they have on the island's material culture? Did their instigators change over time? How can archaeological contexts be divided, and what sort of information do they provide about Rhodes' political structures and social hierarchies? The chief goal of the paper is to achieve a more comprehensive understanding of Rhodes during the (Proto-)Geometric and Archaic periods based on a holistic approach to the island's archaeological record, epigraphic evidence, and literary sources.

Encounters in Southern Italy: The Archaeological and Osteological Evidence

Giulia Saltini Semerari, VU University Amsterdam, and Hannes Rathmann, Eberhard Karl Universiteit Tübingen

Southern Italy was one of the focal points of settlement and interaction for the Greeks in the Mediterranean. There, much new research has contributed to the creation of a rich archaeological data set that speaks to the nuanced and complex process of interaction between Greeks and indigenous populations from the end of the Early Iron Age to the Archaic period (ninth to sixth centuries B.C.E.). In particular, excavations at a number of sites, including Greek colonies and coastal indigenous sites, have uncovered “mixed” assemblages belonging to the earliest phases of colonization, including dwellings, burials, and pottery-production sites. The interpretation of these contexts has been hotly debated by researchers. Some have favored a more traditional view of the Greek colonization as primarily determined by Greek needs, to the fulfillment of which the indigenous populations were either co-opted or forced. Others have supported an active engagement of the indigenous population in the colonization process. More recently, authors have criticized this binary notion of colonization and proposed more open-ended interpretations where Greek and indigenous groups participated in wider Mediterranean phenomena of connectivity. In this context, identities were negotiated on multiple levels, with concerns of social competition intercepting rapidly shifting ethnic identities and access to an increasingly eclectic set of foreign goods and ideas. In this paper, we discuss the most recent results of a series of archaeological, osteological, and archaeometric analyses of two cemeteries belonging to indigenous and “mixed” sites along the Gulf of Taranto in southern Italy. These analyses have allowed us to test, for the first time, hypotheses of coexistence and intermarriage between Greek and indigenous populations in southern Italy. By cross-correlating these results with archaeological data, we suggest that within the indigenous communities women likely held a key role in mediating the earliest interaction and that indigenous people likely participated in the foundation of the earliest colonial settlement nuclei. Moreover, osteological data allow us to assess the relationship between biological lineages and the cultural construction of identity. In particular, it appears that while it is likely that indigenous people were some of the earliest settlers of the colonies, in time their expression of identity shifted in emphasis toward a greater identification with Greek culture. This, however, was the result of a wider process that involved Greek and indigenous populations across the Mediterranean.

Practices of Interaction in Iron Age Sardinia

Andrea Roppa, University of Leicester

Traditional narratives of the movement and settlement of Phoenician people in the western Mediterranean have long followed a preconceived colonial approach. Much attention has been paid to the role of colonial settlements as part of a greater commercial enterprise, and research has often focused on comparisons with Greek colonialism. As a result, little attention has been paid to contextual analysis of lo-

cal developments and the specific role played by native communities in the social shaping of colonial societies.

On the island of Sardinia, which was one of the earliest foci of Phoenician expansion from the eighth century B.C.E., research on the encounter with local Nuragic communities has been biased by the belief that the local civilization, which had flourished in the Bronze Age, came to an end in the Iron Age, when it was replaced by Phoenician colonial culture. In conventional reconstructions, it is believed that Nuragic elites were incorporated in the social fabric of Phoenician colonies. Recent research trends, however, have begun to change this consolidated picture, pointing to the vitality of Nuragic culture well into the Iron Age.

In this paper, I focus on the site at Nuraghe S'Urachi in west-central Sardinia. This large indigenous settlement had been a regional central place since its foundation in the Middle Bronze Age and retained its focal role until the Republican period. Research on finds has shown that typologically Phoenician material culture was gradually adopted since the Iron Age and became predominant in the course of the following Punic period. Recent excavations have begun revealing the site's structural features in the course of the Punic period, which are characteristic of contemporary large Punic settlements on the island.

I explore the social shaping of the community at Nuraghe S'Urachi between the Iron Age and the Punic period by focusing on patterns of ceramic production. Because ceramic production in ancient societies is a traditional activity embedded in one community's social habits, a study of ceramic practices can provide powerful insights into situations of sustained interaction. By exploring the social development at this site, I wish to provide an alternative view on Phoenician "colonialism" in Iron Age Sardinia, in which key factors are the active contribution of local communities and the "internal" mobility of newcomers, which led to the renegotiation of shared social practices and the formation of a colonial society in the course of the Punic period.

SESSION 4F

Ancient Ritual

CHAIR: To be announced

Reinterpreting the Function of the Delion on Paros as a Filial Sanctuary of Delos Through an Analysis of Archaeological Materials

Erica Angliker, University of Zurich

Literary and epigraphic sources inform us about the existence of Delion—branch sanctuaries of Delos—in several parts of the Aegean such as Paros, Chios, Amorgos, Calymnos, Cos, Nisyros and Syme. As of now, 22 Delia have been identified, mostly on the basis of epigraphic evidence, and, in rare cases, on archaeological materials. Although a handful of scholars have studied this type of sanctuary in terms of their geographical position in relation to Delos, none of them has approached their nature and function by analyzing archaeological materials. This paper thus focuses on the function and cultic nature of the Delion sanctuary by

examining the rich and unique archaeological evidence of the Delion sanctuary in Paros, which includes materials from old excavations and ceramics that have only recently undergone detailed analyses and study. I argue that the earliest cultic evidence can be dated to the Neolithic period, when the focal point of the sanctuary was a natural rock used as an altar. Cult worship, however, did not continue into the Bronze Age, and ceramic evidence shows that it was resumed only in the Geometric period. A multitude of drinking cups dating to this period indicates that meals and feasting played an important role in the cult. The Archaic period witnessed the erection of the first temple on the Delion sanctuary (sixth century B.C.E.), which was replaced in the fifth century B.C.E. by a fine temple built entirely of marble and garnished with a balcony offering a view of Delos. A monumental marble statue of Artemis was placed in this temple. It is therefore only in this period that an explicit connection with Delos was established, testified also by inscriptions referring to the cult of Artemis Delia. Votive deposits from the Archaic and Classical periods reveal that drinking and feasting continued to be important features of the cult (as indicated by the many drinking cups), but personal items and offerings (seals, molded body parts) associated with certain aspects of the cult, such as healing, were likewise present. In conclusion, the archaeological materials from the Delion sanctuary on Paros show that the cult, the main features of which were feasting and healing, was ancient, and that these features continued unabated into the Late Archaic period, when the sanctuary became linked to the worship of the Delian divinities.

Dancing on the Temple: Commemorating Choruses at Fourth-Century Delphi

Philip Katz, New York University

Until recently, our understanding of the pediments to Delphi's fourth-century Temple of Apollo has depended almost exclusively on Pausanias, who noted the presence on the east of Apollo, Leto, Artemis, and the Muses and on the west of Dionysus and his Thyiades. This juxtaposition of deities has long interested literary scholars, but the archaeological community began to seriously consider the pediments only following their 1971 rediscovery in the storerooms at Delphi. A variety of interpretations have subsequently been proposed, most centering on the figure of Dionysus or Delphi's connection to Athens. Recent work on the relationship between ritual and architectural sculpture, however, has suggested that interpretations of such compositions consider not only the figures depicted and the poleis involved in their construction but also the worshipers engaging with them. I here examine the pediments from such a local context, arguing that they are best understood by examining contemporary changes in the treatment of choral activity.

Throughout antiquity, choruses were central to the conceptualization of Delphi's past and the active worship of its deities. The Homeric Hymn to Apollo, for instance, credits the site's foundation to a Cretan chorus, while songs such as Pindar's sixth and eighth paean were regularly performed at Delphi's myriad Panhellenic festivals. The fourth century, meanwhile, saw an explosion in local epigraphic activity: construction records were inscribed, victor lists compiled, and votives given more elaborate dedications. Included in this were choral hymns,

which, after being performed, were now inscribed and displayed throughout the site, most memorably outside the Athenian treasury. This same period, moreover, saw two major constructions associated with or referring to choruses: a permanent theater and the Akanthos Column.

The temple's pediments, I argue, played into this new emphasis on choruses and their material commemoration. Just as in the site's mythology, Apollo and Dionysus here act as *choregoi* leading their respective "choruses," thereby engaging with the rituals occurring below and working along with the inscribed hymns, theater, and Akanthos Column to evoke chorality even on nonfestival days. In so doing, the pediments served dual functions. By depicting gods engaged in human rituals, the pediments reinforced the connection between mortal and divine. The international nature of choruses, meanwhile, highlighted Delphi's enduring Panhellenic prestige. The pediments are thus best interpreted not as isolated works but as functioning within a network of monuments, inscriptions, and rituals that used choral songs, in all manifestations, to foster civic self-awareness and shape Delphi's worshipping community.

Greek Myths, Etruscan Rituals: The Popularity of Tydeus in Etruscan Art (Fifth to First Centuries B.C.E.)

Daniele F. Maras, Columbia University, Italian Academy for Advanced Studies in America

Modern scholarship has long analyzed the close link between myth and ritual, the former being the narrative counterpart of the latter. Although the scholarly debate is still ongoing, it is time to develop a myth-ritualist theory of the Hellenization of religion in the cultures of the ancient Mediterranean.

This approach provides the key to deciphering the peculiarities of the selection and adaption of Greek myth in Etruria, where figural monuments often represent mythological scenes that do not correspond to the narratives preserved in the literary sources.

The myth of Tydeus, chosen here as a "pilot" study within the framework of a broader research project, is much more widespread in Etruscan visual monuments than in Greece. For the most part, Etruscan representations of this myth (77 out of 94) appear on gems. This is even more remarkable when it is compared with its few representations on mirrors, vases, and funerary urns, media traditionally considered the primary source of mythological scenes in Etruria.

Mirrors were mainly connected with women and marriage, while gems were primarily seals of free men: Tydeus was therefore a hero coupled with male ideology. His persistent representation as an athlete and a hoplite makes of Tydeus the prototype of the citizen *par excellence*.

In Greek mythology, the hero of the Seven against Thebes is a wrestler; but the special reference in Etruscan gem imagery to his leg—either scraped, struck by an arrow, or even reduced to an isolated foot—suggests he is also a runner, presumably in connection with the *hoplitodromos*: a race of the Nemean games, which he is reported to have founded.

The appearance of Tydeus on Temple A in Pyrgi (Cerveteri), in an unprecedented central role, shows the Etruscan appreciation of the myth in which Athena

denied him immortality after he devoured the brain of his foe, Melanippos. The myth might refer to sacrilegious behavior toward dead enemies, such as the ritual killing of the Phocaeen prisoners, which Herodotus reports was committed by the Etruscans two generations before, and was subsequently condemned by the oracle of Delphi.

With reference to the same myth, other gems depicting a warrior holding a human head over a decapitated body—perhaps an excerpt of Amphiaraios carrying Melanippos' head to Tydeus—might be connected to the ritual of divination through a severed head, whose existence has been recently hypothesized.

Executioners, Priests, and Entrails: Viewer Response to Animal Sacrifice

Katherine A. Crawford, University of Southampton

The iconographic representation of sacrifice remains one of the most predominant scenes in Roman historical reliefs. Sacrificial scenes, dating from the first century B.C.E. to the fourth century C.E., are generally deconstructed by scholars into a series of stages that include processions, altar scenes, scenes of imminent slaughter, and the pouring of a libation. Despite the numerous depictions of sacrificial scenes, the actual moment of an animal's slaughter or blood sacrifice is rarely portrayed. Theories concerning the relative absence of blood sacrifice in relief range from stating that the entire ritual intends to emulate the animal's death to the theory that items such as the axe or a libation serve as an equivalent depiction. While other scenes of sacrificial representation may accomplish the same purpose as images of blood sacrifice, the question remains as to why certain scenes depicted the animal's slaughter in preference to another mode of representation. This paper considers the spatial context of reliefs containing images of blood sacrifice and how the ancient viewer would have interacted with the relief's monument. The ancient viewer was not intended to view these sacrificial reliefs as documentation of an actual ritual event. The type of monument the sacrificial scene adorned regulated how the viewer was engaged and ultimately dictated how a sacrifice was interpreted. Spatial analysis of how the viewer interacted with scenes of an animal's slaughter provides insight into why that particular scene was chosen over other modes of sacrificial representation.

Contextualizing the Ara Pacis Augustae: Sacred Dedications and Anniversary Commemoration from 30 to 9 B.C.E.

Megan Goldman-Petri, Princeton University

Octavian's Actian victory monument at Nikopolis, which was located on a hill outside the city overlooking the sea, consisted of a wall decorated with the prows of ships captured from Antony's fleet on its lower terrace and a monumental altar at the center of a π -shaped stoa on its upper. Fragments of sculptural reliefs that once decorated the altar reveal that the exterior wall featured two tiers of friezes with Octavian in triumph in the upper register and piles of arms and armor in the lower. Since the discovery of these fragments, the altar at Nikopolis has been understood as a precedent for the Ara Pacis Augustae at Rome. This paper reex-

amines the relationship between the altar at Nikopolis and the Ara Pacis. Rather than understanding Nikopolis as a Greek formal precedent for the Ara Pacis, this paper argues that Nikopolis inaugurated a broader phenomenon of building religious monuments in honor of Augustus, which culminated in 9 B.C.E. with the dedication of the Ara Pacis.

Immediately after the news of Octavian's victory reached Rome, the senate instituted vows for Octavian's health. In Rome, these vows in honor of the princeps' health were celebrated by sacrifices on the Capitol to the Capitoline Triad and Salus Publica. In spaces where no Capitolia existed, however, the performance of these vows necessitated the creation of sacred space and religious monuments at which to perform them. In the Greek East, this involved joining Octavian/Augustus to preexisting cults of Roma. In the Latin West, in contrast, new religious monuments were built. These new monuments in civic centers in the Latin West did not follow a singular centralized model; rather their formal diversity—temples, shrines, altars, and sacred groves—suggest that they were spontaneous responses to accommodate the worship of Augustus in the form of vows for his health. By examining the altars built both within and outside Rome between 30 and 9 B.C.E., this paper shows that the proliferation of the altar in the Age of Augustus was not the result of a taste for Greek monumental forms in the style of the Pergamon altar but rather part of a broader trend of sacred dedications for the celebration of anniversary rites in honor of Augustus.

Romanization and Ritual at the Great Saint Bernard Pass

Zehavi V. Husser, Independent Scholar

According to Livy (21.38.9), the native Sedunoveragri attest that the mountains they populate are named after the local deity Poeninus, whose *sacratum* is found at the summit. The ancient author probably refers to a site on the Great Saint Bernard Pass, the most frequented access route between Italy and the Rhineland. Here, ancient worship of Poeninus is unique, as it provides us with a rare opportunity to glimpse steps in the early process of Romanization of a provincial sacred area, including the hybridization of a Roman god (Jupiter) with the local divinity. In this paper, I trace the Roman impact on the indigenous sanctuary dedicated to Poeninus during the Late Republican and Early Imperial periods. I incorporate information gathered from recent archaeological excavations and consider various types of evidence, such as the rich numismatic and inscriptional material, including the largest collection of *tabulae ansatae* yet discovered. While some aspects of original cult seem to have been preserved and perhaps continued by locals in the earliest years, the initial effects of Roman presence involved modification of the sacred landscape and ritual practice, including the integration of some Roman ritual customs. Of particular interest is the degree to which practical requirements of the terrain and Roman secular priorities for the site seem to have taken precedence in informing many of these ritual changes. As the period progressed, the variety and range of offerings increased. Moreover, based on analysis by Wibl  ("Les tablettes votives," *Alpis Poenina* [Aoste 2008] 94), alteration of the local god, including its hybridization with Jupiter, does not appear to have been an immediate consequence of Romanization but a later one.

SESSION 4G: Colloquium

Great Discoveries in Archaeology: New Insights on Human Evolution from Dmanisi, Georgia

ORGANIZER: *Andrew M.T. Moore*, Rochester Institute of Technology

Colloquium Overview Statement

When did early humans first migrate out of Africa to populate the Old World? And to which species of hominid did these people belong? These are two of the most important questions in paleoanthropology today, and both have been addressed directly in current research at the key site of Dmanisi in Georgia. Excavations there have yielded numerous human fossils, including the well-preserved skulls of at least five individuals and assemblages of Oldowan-type stone tools. Radiometric dates for these remains date as far back as approximately 1.8 million years ago. The dates suggest that humans began to people Europe and Asia very early.

The hominid fossils from Dmanisi are unusually well preserved, enabling the excavators to claim that the inhabitants of Dmanisi were all members of the species *Homo erectus*. This would considerably simplify the hypotheses of human evolution that have prevailed until recently, based on the evidence from Africa.

These discoveries, among the most important made in recent times, are controversial. Several of the speakers in this colloquium are members of the Dmanisi project. They will describe the key results and explain their significance. Other experts will assess the broader implications of the results from Dmanisi, taking into account more traditional explanations.

The Earliest Human Occupations at Dmanisi: Stratigraphy, Chronology, and Archaeology

Reid Ferring, University of North Texas

Recent excavations at Dmanisi have demonstrated that the site was first inhabited even earlier than had been thought, approximately 1.85 million years ago. It is thus among the oldest known sites demonstrating hominin activity anywhere in Eurasia. This paper examines the geological context of the Dmanisi deposits and summarizes the results of the extensive excavations carried out there. It reviews sedimentary profiles from key locations across the site. The chronological evidence for key strata has been derived from stratigraphy, paleomagnetism, and $^{40}\text{A}/^{39}\text{A}$ dating. These dates are assessed in light of broader trends in paleontological research on human evolution. The chipped-stone artifacts, some of them found in situ, are in the Mode I (Oldowan) tradition. The abundance of these artifacts, and of the animal bones found with them, indicates that the site was inhabited repeatedly over 80,000 years, suggesting a sustained regional population. The significance of these findings is considered in relation to current research on human origins in Eurasia and Africa.

Out of Africa I: A View from Dmanisi, Georgia

Martha Tappen, University of Minnesota

Nearly 1.8 million years ago, at Dmanisi, Georgia, at least five hominins died and were buried along with Oldowan tools and thousands of mammal bones. Today the archaeological site contains our best evidence for the early expansion of human ancestors out of Africa, with superbly preserved fossils of hominins and extinct mammals. The most recently discovered hominin found, "Skull 5" (reported this year), is of a large male with big brows, big teeth, and a small brain—he appears as one would imagine the quintessential early *Homo* specimen, almost as an exaggeration of himself. The Dmanisi hominins together display variation in characteristics due to age and sex—to some anthropologists the variation exceeds that which can be seen in a single species—while to others, including the anthropologists on the Dmanisi team, they represent a single polytypic species that one could call "*Homo erectus ergaster georgicus*." This debate rages on. Meanwhile, the hominins' skeletons and tooth wear, the archaeological and fossil mammal remains, provide important clues as to how the site formed and how the hominins behaved. The evidence from the fossils indicates the site was formed over a very short time period. Alternative hypotheses of the causes of our ancestors' first expansion into Eurasia can be tested with information from the site, such as the role of hunting and scavenging, interactions with superpredators, environmental change, and other social hypotheses. The hominins did not exit Africa with a large migration of other African mammals. The direct association of large hyenas, saber-toothed cats, wolves, deer, antelope, rhinoceroses, and mammoths, as well as cut-marked bone, speaks to the habitats hominins occupied and to their relationships with superpredators and large herbivores. Early *Homo*'s range expansion during "Out of Africa I" was due to significant changes in their behavior.

On the Preservation of Bone from the Lower Paleolithic Deposits of Dmanisi, Republic of Georgia

Francesco Berna, Simon Fraser University

Dmanisi has produced some of the most important hominin and faunal skeletal remains dating back to nearly 1.8 million years ago. The exceptional state of preservation of some of the bones is particularly astonishing. Here I present the microscopic, chemical, and mineralogical characterization of bone material collected from different excavation areas and associated sediments. The bone organic component, collagen, and other proteins are degraded below the detection limit of the techniques used to investigate them. The bone mineral component (carbonate hydroxyl apatite) appears to be transformed differently in different depositional settings (natural pipes, gullies, open areas). The best-preserved bone is generally associated with the rework sediment that is filling the bottom of the natural pipes. The relevance of the presented results for taphonomic studies, stratigraphic correlation, and isotopic and molecular studies is discussed.

Diversity at Dmanisi

Ian Tattersall, American Museum of Natural History

The five crania and other hominid bones discovered at the Georgian site of Dmanisi are important for many reasons, not least because they are the oldest hominids found outside Africa. They present a very wide range of morphologies that their describers admit is at least as wide as what is already known from the already overcrowded genus *Homo* elsewhere. Yet apparently because the fossils were found fairly close together and were deposited over a period of no more than a few hundred years, the Dmanisi researchers have chosen to cram them into the previously unheard-of minor category of sub-species, as *Homo erectus ergaster georgicus*. However, to do this represents the effective abandonment of morphology as a criterion in paleoanthropology, and I suggest that the possibility of species-level diversity in the sample be seriously considered as a more rational alternative.

Technology Is Destiny? The Archaeology of *Homo Erectus* in Light of Dmanisi

Michael Chazan, University of Toronto

The spectacular discoveries made at Dmanisi provide an opportunity to fundamentally rethink the evolutionary trajectory of *Homo erectus*. For archaeologists, the major question to emerge is the relationship between technology and biology in human evolution. One of the most puzzling aspects of Dmanisi is that the earliest evidence of expansion of *Homo erectus* out of Africa is found at a site that shows a very restricted repertoire of material culture. In this paper, I focus on the identification, based on the Dmanisi fossils, of a trend of increasing brain size through time within *Homo erectus*. I argue that this trend is consistent with a continuous interplay between technological development in domains including the use of fire, tool manufacture, and hunting and the selective pressures determining the range of variability found in hominin population.

SESSION 4H: Colloquium**Appropriation as Tribute: The Case of the Parthenon**

ORGANIZERS: *Jenifer Neils*, Case Western Reserve University, and *Olga Palagia*, University of Athens

Colloquium Overview Statement

The Parthenon was built by the Athenian democracy as a temple of Athena on the Acropolis in the period 447–432 B.C.E. The famous architects Ictinus and Callicrates were involved with the architecture, while Phidias created the colossal cult statue of precious materials. Sculptural decoration was lavished on the temple and on the cult statue and its base.

The Parthenon and its unprecedented decorative program exerted a considerable influence on the craftsmen of ancient Greece and Rome, but the reception of the Parthenon is a subject that has not been investigated in great depth. Through-

out its later history in antiquity, the Parthenon continued to influence the art and architecture of the Mediterranean, as artists appropriated motifs, styles, and compositions, often in unexpected ways. Architects, sculptors, vase painters, gem carvers, coin die cutters, and coroplasts from Spain to southern Russia adapted imagery and forms from the temple, its cult statue, and its architectural sculpture. By exploring the ancient afterlife of a single major monument, the papers in this colloquium demonstrate how appropriation in antiquity amounted to tribute; its referential and reverential aspects carried messages to the viewer about the enduring value and significance of the arts of classical Greece.

The discussant and participants in the colloquium are all scholars who have published books or articles on the Parthenon. The five papers focus on specific instances of appropriation. Already in the fifth century B.C.E., Attic vase painters adopted relief imagery from the metopes, frieze, and shield of the Athena Parthenos; the first paper demonstrates how the Melian amphora in the Louvre derived its duels of gods and giants from the interior of the shield. The impact of the Parthenon's Ionic frieze on the figural style of the numerous marble funerary stelae produced in Athens in the late fifth and fourth centuries B.C.E. is the subject of the second paper. A third paper analyzes how Roman sculptors were inspired by pedimental statues of the Parthenon when carving sarcophagus lids, decorative statuary, and architectural sculptures. The chryselephantine statue of Athena had perhaps the greatest impact on artists, and its reception in a variety of materials from vases and statuary to small luxury objects is the subject of the fourth paper. Finally, the ways in which the Doric and Ionic architecture of the Parthenon is echoed in later classical monuments are presented in the last paper, followed by the comments of the discussant.

DISCUSSANT: *Andrew Stewart*, University of California, Berkeley

The Parthenos Shield as Reflected in the Melian Amphora

Jenifer Neils, Case Western Reserve University

While it is well known that the novel subject of the west pediment of the Parthenon is reflected in a few late fifth-century vases (e.g., Pella hydria) and that horsemen resembling those on the frieze are popular on Attic vases, it is surprising how little Parthenonian imagery was appropriated by vase painters. The relief sculptures closest to the viewer were those in the cella—namely, the base of the Athena Parthenos, her sandals, and her shield (diam. 4 m). Neo-Attic reliefs preserve many figures from the exterior of the shield, but its interior is the most elusive part of this now-lost cult statue. According to ancient sources (Plin., *HN* 36.18), it was either painted or engraved with a Gigantomachy.

Attempts by scholars to reconstruct the interior have focused on a fragmentary krater in Naples (Museo Archeologico Nazionale di Napoli, inv. no. 2045), but this paper argues that the closest parallel for the individual duels of gods and giants is the Melian amphora attributed to the Suessula Painter in the Louvre (inv. no. S1677). Here, 14 gods battle giants at different levels, suggesting a hilly terrain as shown on the front side of the shield. Confirmation that this particular

Gigantomachy is derived from the shield is provided by the otherwise anomalous dead Amazon in the middle of the scene, who was clearly derived from the other side. Stylistically, these painted figures are “Phidian” and demonstrate how an Athenian vase painter of ca. 400 B.C.E. successfully adapted a monumental composition to the curved surface of an amphora. In assuming this challenge, he pays homage to one of the greatest monuments of classical antiquity.

Stylistic Appropriation and Intergenerational Storytelling on Attic Grave Stelae of the Fourth Century B.C.E.

Elizabeth McGowan, Williams College

Athenian workshops produced scores of sculptured grave stelae to mark family tombs in the Kerameikos cemetery in the late fifth and throughout the fourth century B.C.E. On many, the human figures are patterned after individuals, both mortal and divine, on the Parthenon frieze, which was completed in 438 B.C.E. Those appropriations have been attributed to the idea that the stelae’s sculptors were either protégés of the Parthenon’s sculptors, or, later on, innately conservative. We can interpret the relationship between the Parthenon frieze and grave stelae differently if we view the stele as a vehicle not only for private family memory but for collective social memory as well. The adoption of the heroes and deities from the Parthenon frieze for the private citizens represented on stelae, I propose, is an attempt on the part of the monument maker and his patrons to link past, present, and future generations of Athenians in one sculptural image, a reference to the intergenerational storytelling found in the Parthenon’s sculptural program.

The intentional allusion in style and pose to the figures on the Parthenon frieze would remind visitors to the tomb site of the deceased individual’s debt to Athenian society and thereby provide visual continuity between the deceased and the common citizens, ancestors, heroes, and gods of the larger social group that makes up the city. Sculptural style is not an unconscious workshop habit or mere imitation but an important part of message making. Through the allusion to the Parthenon on a grave relief, a family might situate itself so far as civic, political, and religious identity were concerned at a time when the integrity of the restored democracy was under considerable stress.

Reflections of the West Pediment of the Parthenon in the Sculpture of the Eastern Roman Empire

Olga Palagia, University of Athens

The west pediment of the Parthenon was mentioned by Pausanias (1.24.5) as representing the contest of Athena and Poseidon for the land of Attica. Even this brief statement, however, is significant, since Pausanias did not often notice architectural sculptures. This pediment must have been an artistic landmark copied and imitated not only locally but also as far away as Ionia.

Individual figures from the west pediment captured the imagination of sculptors active in Athens, Attica, and Ephesos in the first and second centuries C.E. They were adapted independently of their original context or meaning. The river

god reclining in the northern corner of the pediment inspired the colossal statue of the local river god Marnas that decorated a fountain house in Ephesos in the time of the emperor Domitian. He was also adapted into a reclining semidraped figure on a sarcophagus lid from the estate of Herodes Atticus in Marathon. Poseidon (from the center of the pediment) is reflected in the colossal Tritons decorating the north facade of the Odeum of Agrippa in the Athenian Agora, which was rebuilt in the Antonine period to serve as an auditorium for sophists. Herodes Atticus is known to have lectured there. Finally, small-scale adaptations of Kekrops and his daughter were used in the pediment of the rape of Persephone that decorated Temple F in Eleusis, which was built in the time of the Antonines.

The Parthenonian overtones of the new figures, which were created to fill new needs in the Roman Imperial period, indicate that the Parthenon continued to be significant to the Graeco-Roman world as symbols of a golden age of artistic achievement.

Clarissimum per omnes gentes: The Ancient Reception of the Athena Parthenos

Kenneth Lapatin, The J. Paul Getty Museum

Although described by Pliny the Elder (*HN* 36.18–19) and Pausanias (1.24.5–7) and mentioned more briefly by a host of other Greek and Roman authors, Phidias' monumental chryselephantine statue of Athena, commonly known as the Parthenos, is best known from ancient representations on hundreds of artifacts in diverse media. It is depicted in vase and wall paintings; on terracotta, bronze, and marble sculpture, both freestanding and relief; and on coins, gems, and jewelry. This wealth of evidence, first created within a generation of the completion of the statue and continuing well into the Roman period, has long been employed by scholars to reconstruct the appearance of Phidias' lost image. Here, in contrast, it is explored as an index of the statue's wide and varied reception. The shifting contexts of the ancient representations of the Parthenos provide vivid testimony of the diversity of meanings the statue held for different groups and individuals in various places and periods. Depicted on coins minted at Athens, for example, the head of the Parthenos had a significance distinct from that on a gold brooch deposited in a tomb on the shores of the Black Sea or a Neoclassical Roman gem. A large marble erected in a public library evidently embodied learning, while on a seal ring the goddess might offer protection as well as wisdom. The Parthenos type also entered narrative contexts on vases, reliefs, and architectural sculpture. In short, outside of the Parthenon, the image of the Parthenos was as multivalent as Athena herself.

The Sincerest Form of Flattery: Appropriation of the Architectural Language of the Parthenon

Barbara Tsakirgis, Vanderbilt University

The Parthenon manifested features of monumental architecture that had been in development for more than a century. Optical refinements were first used a century earlier, and the Doric and Ionic orders were combined in the Temple of Athena

in Paestum long before the two were put together in the Parthenon. Architectural sculpture had been deployed previously, but no temple before the Parthenon was so bold in its sculptural adornment. The accomplishment of Ictinus and Callicrates was to do all this and thereby to create both a delight for Athena and a model ceaselessly imitated by and inspiring to later architects.

Soon after the construction of the Parthenon, the appropriation of its architectural and sculptural language began in earnest. The Propylaea paid such tribute in its borrowing that it served as a preview of coming attractions for the Parthenon. At Olympia, the refashioning of the Temple of Zeus was motivated by the need to accommodate Phidias' chryselephantine image. The sculptor's presence in Olympia and his serving as the overseer of the building of the Parthenon present the possibility that he was instrumental in determining how this temple quoted from the Parthenon's interior space. Even if Pausanias was incorrect in his identification of the builder, features of the Temple of Apollo at Bassae echo those of Ictinus' Parthenon. Eastern Greek tributes to the Parthenon experiment even further but remain true in spirit to the original. The Temple of Athena Polias at Priene uses the Attic Ionic foot as its module while embracing the Ionic and not the Doric order. The Altar of Zeus at Pergamon manipulates the Ionic frieze, borrows the theme of the Gigantomachy, and changes the vehicle to an altar, thus celebrating Pergamon with an architectural language appropriated from classical Athens. The debt owed to the Parthenon by Augustus' Ara Pacis is well known, but quotations of Periclean architecture pervade the architectural program of the first emperor. So, too, was the architecture of the Hellenizing Hadrian influenced by Parthenonian models.

While much of the above has been explored before, this paper examines the impact of the Parthenon from post-Parthenonian Greece into the Roman empire to understand the motivations for the appropriation. It is argued that later architects paid tribute to the Parthenon all the while expanding on the innovations of the temple for the benefit of both the deities and the human benefactors of the buildings constructed elsewhere.

SESSION 4I: Colloquium

The Excavation of Petsas House: Current Research, New Finds, and New Insights into Late Helladic IIIA2 Mycenae

ORGANIZER: *Kim S. Shelton*, University of California, Berkeley

Colloquium Overview Statement

This colloquium presents current archaeological work and ongoing research of the Archaeological Society's excavation at Mycenae of "Petsas House." The building, destroyed late in the Late Helladic (LH) IIIA2 period, was used for habitation, ceramic production, and storage. The papers in this colloquium examine the physical remains, artifacts, and ecofacts recovered and the preliminary findings of the evidence for the social and economic life in a settlement context; showcase the work of established scholars; highlight the research of younger scholars and graduate students; and spotlight lesser-known materials and aspects of the site itself.

The six papers begin with a field report from the 2012–2013 excavation seasons at Petsas House with their focus on the peripheral areas of the building and the site's earlier occupational and construction history. This examination of the evidence for ceramic production provides further insight into the socioeconomic relationship of the settlement to the citadel and elucidates further finds from both Early Mycenaean settlement and post-Mycenaean activity.

The second and third papers combine scientific and humanistic analyses of faunal remains from a vast deposit related to the building's destruction. This approach sheds light on the nuances of the economic, political, and social roles of animals that exist beyond the scope of citadel-focused written accounts, using taxonomic and species abundance studies combined with stable isotope analysis.

The fourth and fifth papers focus on specialized ceramic production and the technical characteristics involved in manufacture, first with petrographic analysis of the cooking ware vessels and then with macroscopic study of undecorated fine ware vessels. Both ware groups originate from the postdestruction phase well deposit and provide information for sophisticated and industrialized ceramic production.

The sixth paper takes a look at the significant fresco deposit from a nontraditional perspective—from the back. This examination provides interesting insight into the production and application techniques of lime-plaster surface layers and the chronological phasing of an impressive and unique data set from the 14th century B.C.E.

The goal of this session is to generate discussion on current research conducted at Petsas House and the settlement of Mycenae during LH IIIA2, the height of the Palatial period. By emphasizing new methodologies or by focusing on lesser-known material, this session enriches understanding of the social, political, and economic life of the settlement and its craft production and their relationship to the palace and to the greater Mycenaean and Mediterranean world.

DISCUSSANT: *Vassiliki Pliatsika*, Office of the General Director of Antiquities and Cultural Heritage, the Ministry of Culture of Greece

The 2012 and 2013 Seasons at Petsas House, Mycenae: Architecture, Industry, and Early Settlement Features

Kim S. Shelton, University of California, Berkeley

This report presents results of the last two seasons of the Archaeological Society's excavation at Mycenae in the structure known as "Petsas House." The building, destroyed late in the Late Helladic (LH) IIIA2 period, was used for habitation, ceramic production, and storage and is one of the few examples of multiuse space in a palatial settlement during this period of expansion and centralization.

After a decade of research, excavation continues to reveal evidence for the industrial use of the building, both within its walls where pottery was manufactured and outside of it with the discovery of a kiln. The report presents further ceramic material produced in this workshop together with evidence for the violent destruction of the building, including additional fragments of wall paintings from

the upper-floor residence. Work in and around the middle and lower terraces of the structure, including areas partially explored in the 1950s, reveals more evidence for the early building history of the settlement of Mycenae as well as a much clearer understanding of the architecture of Petsas House itself. Three rooms, newly discovered or newly excavated, exhibit significant phases of occupation prior to the construction of the LH IIIA building, including a habitation phase during the Early Mycenaean period with indications of industrial activity recovered from one of two wells and a phase of burial use earlier in the Middle Helladic period. The report also details further evidence for post-Mycenaean construction for habitation in the Archaic and Classical periods and use of the landscape through terracing for agriculture.

Finally, a brief summary of Mycenae's settlement, its history, and what it can tell us about craft and culture during the height of the Palatial period is presented through an analysis of the finds from Petsas House and their relationship to the palace and to the greater Mycenaean and Mediterranean world during the 14th century B.C.E.

A Zooarchaeological Investigation of Variation in Animal Use at Petsas House, Mycenae

Jacqueline S. Meier, University of Connecticut

Linear B tablets serve as valuable indicators of animal management and distribution processes under the control of the palatial administration during the Late Bronze Age. The study of fauna used outside elite areas sheds light on the nuances of the economic, political, and social roles of animals that exist beyond the scope of the citadel-focused written accounts. The large, well-preserved faunal assemblage excavated from a well at Petsas House, a Late Helladic (LH) IIIA2 structure at the site of Mycenae, has yielded a unique, high-resolution view of the faunal economy and the taphonomic history of this domestic and industrial-use area located outside the walls of the state-provisioned hilltop citadel. This study builds on a preliminary combined faunal and isotopic study to further investigate the type of animal use practiced in this multifunctional structure and whether it reflects small-scale, household animal management, importation of faunal resources, surplus production for external distribution, or a combination of goals. Species abundance analyses are applied to establish the range of taxa used at Petsas House. Likewise, I address the economic specialization of certain animals, such as sheep, which are frequently described in Linear B texts and figure prominently in many Late Helladic sites. Sheep and goats are common at Petsas House; however, other species are as well represented. The minimum number of individuals was calculated to further compare the populations of different animals that were used at the site. In addition, body-part representation, bone butchery, burning, and fragmentation analyses of sheep and other key taxa were undertaken to investigate variation in carcass preparation and deposition. Although the political importance of sheep is well established by Late Bronze Age historical texts, the numerous zooarchaeological methods employed in this study combine to reveal important details of their economic and social roles during LH IIIA2.

Isotopic Contributions to Mycenaean Faunal Economy During the Late Bronze Age

Gypsy C. Price, University of Florida

In this paper, I present light and heavy stable isotope (^{13}C , ^{15}N , ^{18}O , and $^{87}\text{Sr}/^{86}\text{Sr}$) data derived from four species of fauna (sheep, goat, cow, and pig/wild boar) recovered from two disparate economic spheres at the Late Bronze Age palatial site of Mycenae: Petsas House, an industrial/domestic structure located downslope from the citadel, and the Cult Center, an ideological complex located within the confines of the citadel walls. As isotopic analysis affords us the ability to assess diet and movement within a landscape at the individual level, it allows us to investigate inter- and intrataxonomic variation on multiple scales. The excellent preservation of the Petsas House assemblage affords the unique opportunity to explore resource management and distribution in a nonelite context of a palatial settlement. Building on ongoing zooarchaeological analyses, Petsas House isotopic data are used to (1) identify intertaxonomic disparities in provisioning or foddering strategies; (2) establish discrete intrataxonomic feeding groups that may indicate differing origins or herd patterning; (3) assess seasonal movement practices; and (4) identify instances of animal importation and distribution. These results are then compared with data gleaned from fauna exploited at the Cult Center. These findings are used to investigate the following questions: Is there evidence of imported faunal resources being exploited at the settlement of Mycenae during the Late Bronze Age? If so, is the exploitation of these imported resources reserved for state-sponsored efforts? And finally, do these results suggest that there were multiple faunal economies operating concurrently at the palatial settlement of Mycenae during the Late Bronze Age? Possible interpretations of the variation in animal acquisition, management, and distribution at Petsas House are explored in comparison with that of the Cult Center to elucidate the nuances of the faunal economy of Mycenae as well as subsequent implications for social, economic, and political organization at Mycenae during the Late Bronze Age.

Cooking Pots and Politics at Petsas House

Debra A. Trusty, Florida State University

The Petsas House excavations have revealed extremely large quantities of decorated and undecorated fine ware vessels but also significant amounts of coarse ware. This presentation looks exclusively at cooking pots, which account for as much as 6% of ceramics removed from specific closed deposits on the site. The evidence from Petsas House is extremely unique and is the product of long-term excavations where all ceramic wares are preserved and stored instead of counted and tossed, as many early excavators were prone to do, especially with cooking and other coarse ware vessels. With a complete reservation of all materials, we are now able to conduct more in-depth scientific studies.

For this paper, I offer an interpretation of the social, political, and economic conditions, at Mycenae based on recently completed petrographic analysis. In particular, I first identify important minerals and rock fragments present within the different shapes and sizes of Petsas House's cooking vessels to determine production groups and subgroups. I then identify and eliminate possible clay and

raw material sources to determine the site of production or the potter's location. Finally, I draw from petrographic evidence of cooking vessels at other sites, such as Zygouries, Korakou, and Aegina (to name a few) to provide comparative data.

From this information, I argue that the inhabitants at Mycenae made a conscious decision during Late Helladic (LH) IIIA to sever ties with Aegina. These connections are present in earlier deposits at Mycenae, specifically Grave Circle B, which contained several Aeginetan cooking vessels. Yet these vessels and their fabrics are markedly absent from Petsas House, despite their existence at a wide range of contemporary sites, some as far away as Italy, Turkey, and Cyprus. I argue that this dramatic break from Aegina was deliberate, either as a result of a political and economic agenda formulated by elite members at Mycenae or as a response to closing or fluctuating trade routes.

While the divergence from Aeginetan style is also visible in the morphology and decoration of fine ware vessels, cooking vessels serve as scientific markers of political and economic changes because their large inclusions are easier to identify through petrographic analysis. Cooking vessels, therefore, offer a unique and enhanced view into Mycenae's relationship with Aegina during a crucial formative and transitional phase for the citadel as it progressed into the dominant source of power and control by LH IIIB.

Pots of Clay in the Age of Bronze: The Production of Undecorated Fine Ware Vessels from Petsas House, Mycenae

Lynne A. Kovpil, Butler University

This paper presents the results of a pilot study on the production of undecorated fine ware vessels from Petsas House, a residence and ceramic workshop in the Late Bronze Age settlement at Mycenae. While several studies have made strides in elucidating the production process for ceramic vessels in the prehistoric Aegean, the data are largely derived from groups of ceramics deposited in post-use contexts. This paper adds to the available evidence through the study of traces of the formation and shaping processes that remain on whole or mostly whole undecorated fine ware vessels that were deposited in the workshop itself prior to distribution and use.

Petsas House was in use throughout the 14th century B.C.E. and was destroyed by earthquake and fire at the end of the century. It is one of the few sites to preserve a record of independent or semi-independent craft production during a period of palatial expansion, and it is a rare example of a ceramic workshop. The study discussed in this paper focuses on the undecorated fine ware vessels belonging to a deposit excavated from a well located within Petsas House. When Petsas House was destroyed, debris, including a massive amount of pottery (decorated and undecorated fine ware, among other wares), was dumped in the well in a failed attempt to clear out and recover the building. Because the majority of the pots were unpainted, they preserve traces of the potting process that were intentionally removed from, or are obscured on, finely finished, painted vessels.

The data for this project are derived from the measurement and macroscopic analysis of whole or mended vessels from the well deposit. Marks left during the formation and shaping of individual vessels, when compared with measurements

taken from each pot, indicate complexities in the production process and suggest the number of people involved. Patterns in the location and direction of smoothing and tool marks point to the production sequence, the number of potters working, and the division of labor. The modular production of composite vessels or the use of premade blanks for the construction of different vessel types indicates a different production style and thus suggests the presence of multiple potters using different production styles and possibly the presence of apprentices. The results of the study indicate that the potting process was complex and varied even within a single workshop.

Frescoes “Got Back”: Revealing the Untapped and Undecorated Side of Frescoes from Petsas House

Deanna Mellican, Thayer Academy

Scholarship on Mycenaean frescoes has for good reason focused largely on the visible, decorated parts of the wall painting. The vibrant colors, figural depictions, abstract patterns, and surreal landscapes provide scholars with an ample amount of material to explore not only the aesthetics of Mycenaean art, such as style, iconography, technique, and composition, but also the social and religious practices of the Mycenaean world. This paper, however, focuses on the rarely discussed, and largely ignored, back, or undecorated, side of frescoes and presents the potential value to the reconstruction process, sequential phasing of fresco layers, and our understanding of the application of frescoes to wall surfaces.

The decade-long excavations at Petsas House have produced the largest collection of Late Helladic (LH) IIIA1–2 frescoes from any palatial or nonpalatial context so far found on the Greek mainland. A substantial portion of this collection, which serves as the primary data set for my research, came from a fresco dump found on the lower terrace of the structure, just west of Room Tau. This area, which was not walled on all sides or completely roofed, appears to have been an ideal location for disposing of discarded architectural material.

Preliminary observations indicate that several large sections of preserved fresco, along with fragments ranging in size from large to small, had raised grooves on the undecorated side that form geometric patterns. The geometric pattern on the back of some of the frescoes allows them to be divided into two major categories, grooved and smooth. These categories, combined with a spatial analysis of the find contexts for the frescoes themselves, allow for an innovative approach toward reconstructing their original location. This new approach also highlights the different processes used to secure frescoes to the wall and provides a preliminary phasing of the fresco layers that once adorned the rooms of Petsas House.

SESSION 4J: Colloquium

Social Life in Public Baths in the Ancient Mediterranean and Beyond

ORGANIZER: *Alissa M. Whitmore*, University of Iowa

Colloquium Overview Statement

While scholarship on Roman public baths has been popular for some time, sustained dialogue between specialists of different regions has often been limited. Scholars of urban public baths typically have only passing familiarity with military bathhouses, and researchers focusing on Romano-British baths often have limited acquaintance with those in the eastern provinces. Given the vastness of the empire, no scholar can attain expertise in all facets of ancient bathing, but the lack of integration in bathing scholarship can prevent researchers from becoming familiar with other cultures, approaches, and data sets. Furthermore, this isolation limits our knowledge of similarities, differences, and temporal changes in public bathing culture in and around the Mediterranean.

To acknowledge and address this issue, this colloquium offers an inclusive and diachronic study of social life in ancient public baths. Session papers, integrating a variety of approaches and data sets, focus on bathing culture in different time periods, regions, and societies. "Violence and Vulnerability" incorporates ancient literature, inscriptions, and iconography to reveal the higher risk of violence that women, children, and slaves faced in Roman baths. "Decoration and Discourses" analyzes freestanding and architectural sculpture to evaluate the differential experiences of elite and subaltern bathers in the Baths of Caracalla. "Bathing on the Edge" uses small finds and architectural layouts to investigate the activities and social identities of bathers in Romano-British and Gallo-Roman military baths. "Drawn to the Baths" evaluates graffiti and inscriptions found in the Near Eastern 'Ayn Gharandal fort and military baths to illuminate the significance of bathing for ancient soldiers. "The Influence of Christianity" integrates ancient texts and architectural spaces to examine the impact of religion on changing bathhouse layouts in late antiquity.

With its range of approaches, regions, and time periods, this colloquium represents a step toward a more integrated study of ancient bathing. Each paper situates public baths in their larger cultural contexts, revealing similarities and differences between bathing cultures and underlining the interplay of baths, social organization, power, and belief systems. Several papers, as well as the diachronic nature of the colloquium (first to seventh centuries C.E.), provide insights into temporal and cultural changes in ancient bathing culture. Others offer a more comprehensive understanding of the social experiences of lower-class bathers and life in military baths. Together, these papers illustrate diverse approaches that can shed light on ancient social life and the utility of a more unified study of public bathing.

DISCUSSANT: *Fikret Yegül*, University of California, Santa Barbara

Violence and Vulnerability in the Roman Baths

Adrienne M. Hagen, University of Wisconsin–Madison

Baths in Martial's epigrams rarely provide a calm retreat from the hustle and bustle of urban life; rather, the poet and his fellow bathers struggle anxiously—and at times aggressively—to ward off threats to their moral, social, and physical integrity. I explore this site of vulnerability and violence using a selection of Martial's epigrams with support from inscriptions and iconography found at Roman baths. Seneca (*Ep.* 63) famously complained of the noise emanating from nearby baths, but Martial gives a sense of how it felt to be in the baths rather than above them. His poems have provided evidence for specific aspects of ancient bathing culture, including the presence of women and the consumption of food, and for architectural features of the bathhouses themselves. Moving beyond the physicality of the space and the composition of its crowds, this paper examines the potential negative consequences of corporeal exposure in Roman baths, focusing on disadvantaged members of society and their susceptibility to assault.

Those members of society who were already especially vulnerable to attack— young boys, women, and slaves—were exposed to even greater harm when nude in public. We find the theme “beauty surprised while bathing” prevalent in ancient literature and in visual representations in Roman baths (e.g., Diana and Actaeon). A goddess may have been able to defend herself, but others were not so fortunate: Hylas, a favorite of Hercules who was kidnapped by water nymphs, appears in about a dozen of Martial's poems, sometimes accompanied by Hermaphrodite, another mythological youth who was assaulted while bathing. Remote streams and rustic pools were thus potentially dangerous settings (see also *Epigram* 4.22, in which the speaker tries to assault a woman while she bathes outdoors); Martial portrays similar danger indoors at Roman bathhouses, especially those that were poorly lit or frequented by less savory characters. Roman bathers may have hoped to deflect this danger with threats of violent retribution (as in *Epigram* 11.63) and apotropaic imagery; money could buy protection in the form of access to safer facilities and a larger retinue of personal slaves. As is often the case, however, those who already faced the most danger were also the least likely to be able to protect themselves.

Decoration and Discourses on Social Status Within the Baths of Caracalla

Maryl B. Gensheimer, University of Maryland

Within the Roman cityscape, baths were enshrined as necessities of daily life and familiar urban landmarks. Numerous modern studies explain the popularity of Roman baths in general, and of the so-called imperial *thermae* (constructed 25 B.C.E.–337 C.E.) in the city of Rome in particular, by virtue of the fact that these facilities provided free recreation for thousands of bathers each day. In this view, the imperial *thermae* were tantamount to “villas for the people,” a luxurious retreat from the surrounding cityscape. Yet this important idea of baths being assimilated to villas can be nuanced beyond a general picture of gratuitous access.

This paper suggests that aspects of the *thermae*'s decorative programs were fundamental to the deliberate promotion of an ambience of villa-like lavishness.

Taking the comparatively well-preserved Baths of Caracalla (inaugurated 216 C.E.) as its major case study, this analysis departs from previous scholarship to arrive at a new understanding of the complex relationships between elite and subaltern within the context of Roman public baths. An interdisciplinary approach to the archaeological data, to the textual, epigraphic, and visual sources, and to social network theories brings the social integration fundamental to the quotidian use of a grandiose public space into dialogue with the original appearance of the monument itself.

This reassessment examines the specific mechanisms through which imperial patrons could use bath decoration to simultaneously consolidate and upset the social hierarchies that were rigidly maintained elsewhere in the Roman public sphere. To a certain extent, the dividing lines between elite and subelite collapsed. Indeed, baths consciously provided incomparable public environments of luxury—and, by extension, achieved unprecedented levels of social integration—by upending traditional dichotomies between elite and subaltern. At the same time, however, the emperor could adroitly exploit his patronage to emphasize through decoration his own unique sociopolitical position.

The architectural and freestanding sculpture addressed herein demonstrates that decoration was purposefully chosen. Analysis of the imperial connotations underlying this masterfully staged display unveils the visual experience of the baths for a broad audience. Thousands of people each day would have followed the visual cues embedded in the baths' polychrome decoration to explore and interpret these spaces. This study demonstrates that even while shared recreation collapsed social binaries between high and low, the unified decorative program—and the messages of imperial power therein—affirmed traditional social distinctions between the assembled bathers and the eponymous imperial patron.

Bathing on the Edge: Roman Military and *Vicus* Baths in the Northwest Provinces

Alissa M. Whitmore, University of Iowa

While a variety of ancient sources describe social life in public baths in and around Rome, far less is known of the inner workings of provincial military bathhouses. These baths, built by and presumably for the Roman army, are ubiquitous within military forts and the *vicus* communities surrounding them. Given the close ties between forts and *vici* and recent scholarship suggesting an increased presence of civilians within military forts, we must ask who bathed in these military baths. Were leisure activities, so prominent in Italic baths (Sen., *Ep.* 56), available for soldiers? What, if any, differences exist in bathhouse social life between the legionary baths located within forts and the *vicus* or auxiliary baths located outside fortress walls? While Rome and cities in Italy had ethnic diversity as well, is it possible to detect any variations in bathing culture that could be attributed to the larger proportion of local peoples, from the army or *vicus*, who were bathing in these provincial military baths?

To address these questions, this paper focuses on the material culture and architectural layouts of Romano-British and Gallo-Roman military and *vicus* baths. Most of our information on the social environment of military baths comes from the abundant artifact assemblage recovered from the Caerleon Legionary fortress

baths. I place the Caerleon finds in context with material culture recovered from nine other baths in Britannia and Raetia, dating from the first to fourth centuries C.E., to obtain a wider picture of military bathing culture. In addition to locating similarities between assemblages, which suggest that a given bathing population or activity was not an isolated occurrence, I also highlight differences that appear between legionary and *vicus* baths and between Romano-British and Gallo-Roman baths. Following the approach of DeLaine and Revell, I also analyze the architectural layouts of military baths, seeking to isolate spaces that would have promoted socialization and examining variations in the use of space between legionary and *vicus* military baths.

Drawn to the Baths: Daily Life and Desert Leisure in the *Cohors II Galatarum*

Robert Darby, University of Tennessee

Recent investigations of the Late Roman fort and bathhouse at the site of 'Ayn Gharandal, Jordan (ancient Arieldela), by the 'Ayn Gharandal Archaeological Project (AGAP) have created a steadily growing corpus of important ancient documents produced by its inhabitants. The discovery in 2013 of a monumental Latin building inscription atop the collapsed remains of the fort's main gate naming its garrison as the *cohors II Galatarum* is but the latest epigraphic addition to this collection. Prior to its finding, in 2011 the AGAP uncovered several fragmentary but well-preserved *dipinti* of an official nature from within the *principia* of the fort and in 2010 discovered a fascinating and complex assortment of textual, figural, and symbolic graffiti still adorning the walls of the nearby bathhouse, which were first presented at the 2011 AIA Annual Meeting. This paper reexamines the 'Ayn Gharandal bathhouse graffiti in light of these subsequent discoveries; together they illuminate much about the identities and lives of the soldiers stationed at this desert outpost on the eastern frontier of Syria-Palaestina at the beginning of the fourth century C.E.

The graffiti from the bathhouse with allusions to both maritime and desert life, although stylized and minimalistic, vividly reflect the lived experiences of those using the baths. Through a shared visual language inherent in this imagery, individual visitors to the bathhouse—in this case primarily soldiers—were reminded of the environmental conditions in which they spent the majority of their daily lives while simultaneously engaging in the much more enjoyable and leisurely activity of bathing in a built environment indoors. The ironic juxtaposition of images related to *opus* placed within a space traditionally dedicated to *otium*, I argue, may not have been unintentional and speaks volumes about quotidian life for soldiers of the *cohors II Galatarum* and the important social role that bathing played.

The Influence of Christianity on the Culture of Bathing and Bathhouse Design

Stefanie Hoss, University of Cologne

With the rise of Christianity in late antiquity, many aspects of bathing that had hitherto been considered positive were now seen differently. The traditions of an institution that had for centuries cultivated the pleasant physical aspects of life

had to be redefined and adapted to fit into a world where modesty, simplicity, and the denial of pleasure were increasingly regarded as virtues. In addition to the moral danger from the simple physical pleasures of bathing, the church fathers also saw moral depravity in the *balnea mixta* and were anxious about idolatry in connection with the many statues of emperors or gods receiving sacrifices. But gradually, these problems were overcome through a reinterpretation of statues and by regulating bathing times. Eventually, a Christian symbolism was developed that connected (not equated) physical with spiritual purity.

During the same period (third to fifth centuries C.E.), the Near East experienced a boom of bath buildings, both public and private. In every town and city, bathhouses were erected, and many private villas had baths as well. Most large and elaborate public bathhouses in the region date from the third century onward, with an emphasis on the Byzantine period (fourth to seventh centuries C.E.). But while their numbers increased, the form of the bathhouses started to develop away from the archetype of the Early Roman bathhouse.

One example is the lack of a palaestra in the classical sense, the space often being taken up by a shady courtyard not large enough to make intense exercise possible, a model noticeable in the whole Near East (and in contrast to Asia Minor). Another marked difference was the preference for small individual hot water pools replacing the large communal hot water pools common in baths of the first and second centuries C.E. A third architectural motive typical of Byzantine baths is the merging of the functions of the apodyterium, the frigidarium, and the bath basilica into a single area and the reduction of the frigidarium pool into an ornamental basin or fountain.

As form follows function in bathhouses, this must mean that the bathing habits were different from those developed in and around Rome during the first century C.E. In this paper, I demonstrate that while other considerations also played a role, the main influence shaping these changes in bathing habits and subsequently in the construction of bathhouses was the rise of Christian morals.

SESSION 5A

Cyprus

CHAIR: *Michael K. Toumazou*, Davidson College

The Maintenance of Identity: Prehistoric Pottery from Idalion, Cyprus, and 19th/20th-Century Cypriot Pottery Traditions

Rebecca M. Bartusewich, University of Massachusetts Amherst

Archaeological research on prehistoric pottery can benefit from being characterized and understood through comparison with modern (19th/20th-century) pottery production practices. The cultures that still produce pots, such as Cyprus, parts of Greece, and parts of Latin America, have a long history of production stretching back to prehistory. In this paper, I consider modern Cypriot pottery production and prehistoric pottery at Idalion, Cyprus, to explain the importance of this connection between the past and present for material culture. On Cyprus,

traditional pottery manufacture has been carefully recorded, and I compare it to prehistoric pots at Idalion, Cyprus. This site has a plethora of plain ware pottery from many contexts providing data on production. With preliminary analysis of cooking pottery from a bothros excavated in the 1990s, it is clear that through time both the clay fabric and some shapes change little, but the production style shifts. In fact, in ethnographic reports, 19th/20th-century potters follow some traditions in shapes that began in the Late Bronze Age on Cyprus and are continued through the modern period. Traditional shapes can characterize the identity of producers and consumers and in turn these identities can be illuminated through macroscopic analysis of sherds and full pots. Production is linked to identity because all potters have a particular way they produce pots while also creating shapes and products that are actively pursued by consumers. I define identity as characterized by the transfer and maintenance of traditions through an interaction with movable and immovable objects and people. In Cyprus, tradition is influenced by a long history of pottery production, and potter identity is based on this same history.

Seal Stratigraphies from Late Bronze Age Enkomi, Cyprus

Joanna S. Smith, University of Pennsylvania

Figural designs and inscriptions engraved on the surfaces of cylinder seals were often recarved, sometimes up to four or five different times in the life of a single object. Today we can parse the layers of carving on stone seals to identify what artists chose to preserve, change, eliminate, and add over time; some seals were in circulation for hundreds of years. One can identify changes in carving techniques and compositions as well as the appearance of new subject matter and how images were adapted to convey new ideas. Seal stratigraphies connect the layers of carving on different seals from various contexts at the same site and among sites, offering dynamic views into the biographies of objects across time.

This paper draws on work with the more than 300 seals from the Late Bronze Age (ca. 1650–1050 B.C.E.) settlement of Enkomi, Cyprus. Excavations by four different teams have unearthed more seals there than at any other Bronze Age Cypriot site. Enkomi's corpus includes stamp and cylinder seals made on Cyprus, cylinder seals made in Syria and Mesopotamia, including examples recut on Cyprus, and stamp seals from Egypt, Anatolia, and Greece. Some examples were found in the only seal workshop yet found on the island. Nearly half of the seals are cylindrical in shape, and, of those, more than half are recarved. Carving histories there show interconnections among households and professions, changes across time, and links with and divergences from other settlements on Cyprus and cultures overseas.

The 2013 and 2014 Seasons of the Lycoming College Expedition to Idalion, Cyprus

Pamela Gaber, Lycoming College

The Lycoming College Expedition was in the field from 24 June to 9 August 2013, and 23 June to 8 August 2014. Work concentrated in the City Sanctuary be-

low the west acropolis palatial complex. In 2012, the founding levels were reached on bedrock. Again in 2013, we found the very end of the Late Cypriote III period and the beginning of the Protogeometric period, ca. 1200 B.C.E. This is by far the earliest material yet found in this area, although we know there were industrial installations on the west acropolis, Ambelleri, and in the lower city dating back at least to the 12th century B.C.E. This very early place of worship may have been in use not long after those pottery works began. Some of the most interesting finds were discovered beneath the now-famous standing stones reported in previous seasons.

These stones were revered from the fifth century B.C.E. through the Roman period and at least to the first century C.E. During the 2014, season we discovered that the area continued in use during the Byzantine period. In 2013, we uncovered a platform on which stood three wooden pillars. These were dramatically burned in 450 B.C.E. when the palatial complex was destroyed by the Kitian Phoenicians. The destruction of the xoana was undoubtedly part of that transfer of power.

These two seasons of work confirm what we have reported in the past. First, there are numerous Cypro-Syllabic inscriptions in this sanctuary and none in any other language. Second, nothing else in the ancient city was burned at the time of the destruction. After the burning of the three wooden poles, a thick, brickly floor was laid over the burn remains. Two standing stones were placed in an ash pit to the north, and a small baetyl was placed on a platform inside a bell-shaped pit to the south of the altars that continued in use.

The 2014 season removed remaining baulks in the western end of the complex and excavated Hellenistic and Roman levels to the east and north in the sanctuary. An area involved in food preparation, perhaps for feasting, was completely revealed with its own associated standing wooden pillar.

These two seasons have extended our knowledge of the use of the sanctuary from 1200 B.C.E. to 700 C.E.

SESSION 5B

The Athenian Acropolis

CHAIR: To be announced

The Approach to the Erechtheion from the Propylaea at Athens

John R. Caulk, AIA Member at Large

Since the time of the Mycenaean kings, the topography of the Acropolis at Athens has been bifurcated by the Mycenaean palace terrace, which was elevated some 3–4 m. The “old” temple of Athena Polias was constructed on this terrace. In the Classical period, the route to the new Great Altar of Athena Polias was to the south of this feature, rising up to palace level and to the tract of infill east of the Erechtheion where the altar and its supporting facilities had also been raised. The approach to the Erechtheion, by contrast, was routed to the north into the lower area sometimes known as the Kekropion, where the giant votive column to Kekrops had been located, as were the expanded theatral area, the *thalassa* cited by

Herodotos, and the two tokens of the gods. The southern approach was broad and at bedrock, suitable for throngs of festivalgoers, horses, and sacrificial beasts. The northern way was more formal, leading to the tokens, the theatral area, and the cults of the Erechtheion. The xoanon housed in the Erechtheion was the most revered object on the Athenian Acropolis. The traditional reconstruction of the area between the sanctuary entrance and the north porch of the Erechtheion envisions a seemingly aimless walk along an undefined path to a porch that could not be seen from the Propylaea.

This paper examines another concept, one that greets the eye with a clear path and destination: a raised stone walkway to a portico and stoa leading into a forecourt defined by Athena's great olive tree, entering into the north porch through a shaded formal entrance. The north porch is examined as a nodal point in the organization of the Erechtheion plan, leading directly to the elaborated Salt Spring of Poseidon, the 200-seat theatral area, and the huge north door on the axis of the archaic image of Athena Polias.

Traditional reconstructions have relied on Iakovidis' 1961 locations of the Mycenaean retaining walls and then "fit in" the other components mentioned in the literature, generally relying on their individual reconstructions in *The Erechtheion of 1927* by Caskey et al. This paper examines the tangible archaeological evidence to locate the retaining walls, altars, and monuments cited in the literature in a well-knit architectural setting for the approach to this iconic Periklean structure.

The Ferryman and the Bride: Charon and the Athenian Sanctuary of the Nympe

Renee M. Gondak, George Washington University

This paper examines both the decoration and context of a pair of unpublished red-figure loutrophoros fragments (NA-57-Aa3185) from the Sanctuary of the Nympe on the Athenian Acropolis. Dating to ca. 440 B.C.E., the two fragments preserve a figure resembling Charon, the ferryman of the dead. Like contemporary representations of Charon on white-ground lekythoi, this figure is homely and disheveled, with a straggly beard and unkempt hair. His back is hunched and his only (preserved) item of clothing is a sheepskin cap. Next to him are the heads and shoulders of three female figures, two of whom hold torches. While torches are not characteristic of Charon's iconography, they are familiar features of Athenian wedding scenes. Interestingly, then, it seems the painter has combined nuptial objects with an eschatological theme.

While it is remarkable that no other extant loutrophoroi display Charon, and there is only one other example of him in red-figure, the greater significance of this discovery lies in its findspot. Located on the southern side of the acropolis and active from the seventh to third centuries B.C.E., the Sanctuary of the Nympe was an area sacred to either Aphrodite or a single nymph who scholars believe was the personification of the Athenian bride. Finds from this sanctuary include some of the oldest loutrophoroi known, perfume and oil vessels, lamps, masks, and figurines, all things readily associated with brides. Aside from its overt associations with marital rites, the sanctuary appears to have had a chthonic aspect as well. There, during the 1955–1958 excavations, a fourth-century B.C.E. stele dedicated to Zeus Meilichios (NA-89-1957) was discovered. Ironically meaning "the gentle"

or “the gracious one,” Zeus Meilichios in the fifth century was Zeus in his underworld aspect. Although this stele is often thought to be an odd intrusion and unconnected to the sanctuary, the finding of our funerary-themed loutrophoros strengthens the complex’s eschatological connection, thereby adding a more nuanced sense of how this site functioned for the Athenians. Just as the rites of marriage and death were sometimes conflated in the Greek literary and archaeological record, visitors to Sanctuary of the Nympe may have been dedicating objects to brides both living and dead.

Hekate in the Parthenon’s Gigantomachy: A Reinterpretation of East Metope 5

Josh Parr, University of Kansas

The poorly preserved figure in East Metope 5 of the Parthenon has traditionally been identified as Amphitrite. This interpretation, however, rests on little evidence. The figure in metope five drives her chariot toward Poseidon in Metope 6. Because Hera drives her chariot toward her husband Zeus in Metopes 7 and 8, respectively, it is argued that Metopes 5 and 6 depict another husband-and-wife pair. Amphitrite, however, appears in few artistic depictions of the Gigantomachy and in no literary sources. Furthermore, Amphitrite is not a warrior goddess—she’s a nymph—and she features in only a few obscure myths. Given the limited space provided by the 14 metopes that make up the Parthenon’s Gigantomachy, it is unlikely that such an unimportant character would have been included.

Hekate is a far better identification for this figure. Hekate is commonly included in literary and artistic depictions of the Gigantomachy: in Apollodorus’ *Library* she burns the giant Clytios with her torches, and this same scene appears on the Pergamon Altar and the Suessula amphora in the Louvre. Hekate is also more thematically appropriate than Amphitrite. All the Parthenon’s metopes depict battle scenes, and Hesiod tells us that Hekate was a goddess revered by warriors (Hes., *Theog.* 404–52). In this same passage, Hesiod also tells us that Hekate was revered by athletes, which makes her more appropriate for the Parthenon as a whole, associated as it was with the Panathenaic Games.

Finally, Hekate appears elsewhere on the east facade: on the east pediment, standing to the right of Demeter and Persephone. This juxtaposition recalls the myth that Hekate aided Demeter in her search for Persephone and thereafter became Persephone’s mentor. In addition, on frieze block East IV, Demeter carries a torch, the typical symbol of Hekate. This may also make reference to Hekate’s assistance in the search for Persephone. Indeed, this idea is reinforced by the placement of the frieze block roughly below the pedimental statue of Hekate. Metope 5 is located between these two, further emphasizing the importance of Hekate.

Hekate is not only a more appropriate identification for the east metopes in particular, but her presence there adds a greater sense of cohesion to the entire eastern facade. This reidentification of the figure in Metope 5 affects future interpretations of the eastern facade as well as our understanding of the importance of Hekate in Athenian art and cult.

Cloisonné Jewelry in the Parthenon Inventories: A New Interpretation of *chrysos dialithos*

Jasper Gaunt, Michael C. Carlos Museum, Emory University

The inventory lists of the Parthenon Treasures record several pieces of jewelry fashioned from a combination of gold and stone, *chrysos dialithos*. These include earrings, necklaces, miscellaneous elements, griffins, seals, collars, chains, and a wreath. To these may be added a pair of bracelets and a piece of unspecified jewelry dedicated by Glyke, daughter of Archestratos. The first of these are recorded at the end of the fifth century. Twenty years later, they disappear from the inventories, ca. 385/4 B.C.E.

Hitherto it has not been noticed that the technique, combining gold and stone, reveals that these items are clearly not of Greek manufacture. Classical Greek gold jewelry is precisely that—gold. The great catalogues of classical Greek jewelry in the British Museum by Marshall and in Berlin by von Greifenhagen are complemented by Jacobsthal's work on Greek pins and more recently by Williams and Ogden's memorable exhibition, *Greek Gold*; these show collectively that it was only in the Hellenistic period that Greek jewelry started regularly to set stones, often garnets. Liddell and Scott, followed by many scholars, among them Harris, translate "dialithos" as "set with stones." This phrase describes to perfection Late Roman and Early Byzantine jewelry, but in the fifth century B.C.E. it is misleading. At that time, when gold jewelry was adorned with stones, it was inlaid using a technique known as cloisonné. The most favored semiprecious stones, some imported over great distances, were lapis, turquoise, and carnelian (also used for gem engraving). The technique originated in Egypt but spread to Achaemenid Persia, where a court workshop has been identified.

The presence of Achaemenid cloisonné jewelry in classical Greece has long been known at a small scale from gold sequins with inlays excavated at Dodona and Samothrace. To these may be added a spectacular torque, now in the Miho Museum, whose reverse bears a Greek inscription recording its weight, demonstrating that it had once been inventoried as part of a treasury.

The effects of the presence of cloisonné jewelry in classical Greece and its utterly un-Greek aesthetic can be detected in the rising popularity during the fourth century and thereafter of the use of colored enamelwork on gold jewelry, the pale green and dark blue imitating turquoise and lapis, respectively.

SESSION 5C

Recent Histories of Ancient Objects

CHAIR: To be announced

All Is Not Lost: An Object Biography of a Greek Mirror "Vanished During World War II"

Mireille M. Lee, Vanderbilt University

A bronze caryatid mirror formerly in the Schlossmuseum Gotha was among the thousands of objects that went missing in the wake of World War II. Although

many were later recovered, the fate of the Gotha mirror is unknown. While this object is currently unavailable for personal autopsy, it should not be dismissed from the corpus or from further study. Object biography can elucidate important information about the missing mirror and Greek mirrors in general, from ancient Greek technology and trade to the social functions of mirrors and ideologies of gender to modern historiography and cultural-heritage issues.

An object biography of the Gotha mirror begins with the mining of ores and transport of raw materials to the bronze workshop where the object was created using various metallurgical techniques. Its purchaser was most likely a man who exchanged the mirror as a gift to its intended female recipient, either a hetaira or a bride. During its use-life, the mirror was essential for the performance of the feminine toilette, especially hairstyling; it may have been used for other purposes as well, including prophesy and magic. As symbols of ideal femininity and wealth, mirrors were frequently dedicated in sanctuaries and buried with the dead.

While we do not know the depositional context of the Gotha mirror, its "after-life" began in the 19th century, when it appeared on the antiquities market. The French antiquarian Julien Gréau sold his esteemed collection of ancient bronzes in 1885, and the mirror found its way into the newly complete neo-Renaissance museum commissioned by Duke Ernst II of Saxe-Coburg-Gotha. During the chaos of World War II, the Gotha collections were devastated. While many thousands of objects were returned by Russia in 1956, it is unclear whether the caryatid mirror was among them; many others remain unaccounted for.

The methodology of object biography not only rescues the Gotha mirror from oblivion; it makes a contribution to its future lives. This approach not only allows for lacunae in the data (including, in this case, the object itself), it considers the *longue durée* of the object and emphasizes the relationships between objects and people. Finally, object biography provides classical archaeology a conduit into the current theoretical discourse on things in the humanities and social sciences.

Spreading the Word: The Role of a Medical Missionary in Bringing Ancient Christian Books from Egypt to America

Brent Nongbri, Macquarie University

In the first half of the 20th century, three important groups of ancient Christian codices from Egypt were purchased by American collectors: the Greek biblical manuscripts bought by Charles Lang Freer (now in the Smithsonian), collections of Coptic codices bought by J. P. Morgan (now in the Morgan Library and Museum in New York), and substantial portions of the Chester Beatty biblical papyri bought by the University of Michigan and John H. Scheide (now at the University of Michigan and the Scheide Library at Princeton). In the records pertaining to each of these acquisitions, one finds the name of David Askren, an American Presbyterian missionary and medical doctor active in Egypt from 1899 to 1939. Askren's name also turns up in connection to less-prominent purchases of papyri and assorted artifacts for Yale University and other institutions. Askren, whose patients sometimes included the Egyptians who unearthed the ancient manuscripts, often acted as a middleman in transactions.

Published accounts of the Freer and Morgan purchases and unpublished archival records at Michigan and Princeton indicate that Askren worked with leading international antiquities dealers, such as Maurice Nahman (based in Cairo), as well as with local dealers, first in Asyut and later in the Fayum. He also appears to have played a role in the “papyrus syndicate” headed by the British Museum’s H.I. Bell. The present report tracks Askren’s activity in the antiquities market and begins to compile a list of purchases in which he was involved. It also serves as a plea for assistance in tracking down further information on Askren and determining the whereabouts of his own personal correspondence. As papyrologists and archaeologists address the troubling issues raised by the antiquities market and unprovenanced artifacts, it is crucial to gather and consolidate the information that we do have about figures involved in the trade, even figures as seemingly unlikely as David Askren.

The Old Acropolis Museum, Athens: An Overdue Necrology

Nassos Papalexandrou, University of Texas at Austin

Since its inauguration in 2009, the New Acropolis Museum has been positively received by scholars and critics. This paper problematizes the lack of attention to the dismantling of the Old Acropolis Museum. It also attempts to delineate a biography of this museum, paying attention to its various reincarnations since 1874 and, most importantly, to Ioannis Meliades’ installation of the 1950s. Meliades held that his installation work was an artifact of its own times, rich in aesthetic claims and epistemological implications. It is, therefore, imperative to remember and analyze Meliades’ “artifact” even as we formulate the question of what precisely was lost when the Old Acropolis Museum was dismantled. My analysis is premised on the notion that a museum is a relational nexus whose dismantling may have wider implications for viewers, visitors, scholars, and artifacts. I also address the question of the limits between the historical character of museums and the installations inside them. I delineate a “necrology” of sorts for the Old Acropolis Museum and its current status as memory or past reality studied only academically.

Seeing Icons

Chelsey Q. Fleming, University of California, Los Angeles

Since the birth of the modern museum in the 18th century, the way viewers interact with what they see has changed drastically. In the classical world, sculpture was inherently potent, even magical; Plutarch described sculpture as immutable. The fact of a statue’s permanence, however, does not delimit its meaning across time. Understanding the way we see enables us to understand how we construct our own values through objects—museum objects in particular are germane to this conversation because they attain the cross-cultural status of iconicity. This paper examines the relationship between modern viewers and classical art in an era of hypervisuality, where an oversaturation of images requires viewers to renegotiate their relationship with art. Data on audience engagement and modern viewership

behaviors with classical works at the Louvre are presented, with the Venus de Milo, the Nike of Samothrace, the Kore of the Cheramyes Group at Samos, and the Auxerre Maiden serving as foci.

These works range in period, style, and degree of public recognition, but each is significant in the corpus of classical sculpture. The ability of an image to convey complex ideas, to serve as an icon or symbol, is well documented. What, however, is the impact on an audience when these symbols are adopted pop-culturally, re-contextualized, and reproduced? Does this improve their communication efficacy, or the opposite?

SESSION 5D

Recent Work in Western and Central Asia

CHAIR: To be announced

Swimming/Drowning in Ancient West Asia and Egypt

Karen Carr, Portland State University

People in Egypt (and more generally throughout Africa) were good swimmers in the Bronze Age. They swam a good overhand crawl stroke with a flutter kick. Fishermen dove to recover their nets, and nude women swam enticingly around ornamental ponds. This seems natural given the heat and the availability of the Nile River. In neighboring west Asia, however, despite a similar climate, most people could not swim and were afraid of the water. In the Code of Hammurabi, men accused of crimes are thrown into the water, and if they sink it proves their guilt. Nobody swims on Mesopotamian cylinder seals, despite their varied representation of practically every human activity from sex to beer drinking.

The first indication of swimming coming to west Asia comes from an Egyptian representation of the Battle of Kadesh (1275 B.C.E.), where the Hittites swim across the Orontes to escape the Pharaoh's attack. Had the Hittites learned to swim under the influence of the New Kingdom expansion into west Asia? Or is this merely an Egyptian artist's representation based on his own assumptions? By 860 B.C.E., on the carved stone walls of Nimrud, Assyrian men and their enemies were depicted swimming, but nobody swims very well. Both the Assyrians and their fleeing victims use inflated goat skins to support them as they swim, blowing into them assiduously through reeds to keep their floaties inflated. Even in the Iron Age, most west Asians were still not good at swimming. Confirmation comes from textual sources as well. The Old Testament barely mentions swimming; the Assyrians continued to rely on trial by water to prove an accused person's guilt. Herodotus tells us that the Persians could not swim, and that Zoroastrians regarded rivers as sacred and did not pollute them by swimming in them or even washing their hands in them.

Why did this difference exist? As more extensive exploration of the history of swimming will show, since the Stone Age the people of central Asia, and people influenced by central Asians, were not able to swim: the Scythians and Turks and Mongols of central Asia, the Indo-Europeans, the Mesopotamians, the Persians

and Parthians. Though some of these, such as the Greeks and the Romans, learned to swim, they were not as good at swimming as the people of Africa, east Asia and southeast Asia, or the Americas.

The Subtlety of Temporality: Time, Control, and the Roman Empire

Elizabeth Fagan, University of Chicago

In 46 B.C.E., Julius Caesar added days to the Roman calendar, or *fasti*, in an attempt to align the civic calendar with the movement of the heavens. The resulting 445-day year, or the *annus confusionis ultimus* (Macrob., *Sat.* 1.14.3), was not merely the consequence of a calendar whose length no longer matched that of the astronomical year; rather, it was the accumulated effect of decades of various politicians' deliberate manipulations. The *fasti* enumerated the days on which it was necessary to celebrate religious holidays and on which it was possible to conduct business, so controlling the calendar meant dictating the rhythms and activities of Roman life. At the end of the Republican period, the manipulation of the calendar for political gain clearly illuminated the relationship between the *fasti* and power or authority. Such a connection between the control of temporal rhythms of public and even personal life and control of the populace might lead to the conclusion that the calendar was forced on all subjects of Rome as a tool of hegemony. And yet, in the Imperial period, Rome did not forcibly impose its calendar on its subjects and neighbors of its empire.

This paper argues first that explicit temporal representations like the *fasti* reveal only one aspect of what might be termed Roman temporalities, or representations and conceptions of time. Roman conceptions of time are explicitly evident in the rhythms of public life inscribed on the monumental *fasti*, on the images of farming and seasons on mosaics, and even in the practice of reusing monumental ornamentation as spolia. Temporalities, however, are also implicit on official and private monuments and their representations of individuals' lives.

Second, this paper argues that an examination of such rhythms, or temporalities, is a fruitful approach for understanding the impact of empire on the individuals within its reach. The *fasti* may not have been a hegemonic tool of direct imposition, but the subtleties involved in power relations lead us to ask what role the calendar in particular, and temporalities in general, might have played in the legitimation of the Roman empire and the maintenance of its authority. This paper examines a few Roman monuments erected at the edge of its empire, in Armenia, to demonstrate how subtly structural temporalities can influence individuals and how individuals adopt and adapt them for their own purposes.

Kani Shaie Archaeological Project: Report of Two Seasons of Excavations at an Early Bronze Age Settlement in Iraqi Kurdistan

Steve Renette, University of Pennsylvania, Ricardo Cabral, University of Coimbra, and André Tomé, University of Coimbra

The small site of Kani Shaie is located in the center of the Bazyan Valley, on the road between Kirkuk and Sulaimaniyah. The valley forms a corridor between

the plains of Kirkuk and Chemchemal to the west and the Shahrizor Plain in the Zagros Mountains to the east. As such, the valley served as a conduit for communication between northern Mesopotamia and the Zagros Mountains, while at the same time forming a border between these two regions with the impressive Bazyan Range. The site is small but contains material of a wide range of periods. This makes Kani Shaie an ideal site to explore a stratified sequence of local material culture, which is still very poorly understood.

The main mound of Kani Shaie was primarily occupied during the fourth and early third millennium B.C.E., the Late Chalcolithic and the beginning of the Early Bronze Age, respectively, while we also retrieved material dating to the start of the second millennium B.C.E. A low extension to the northwest of the main mound appears to represent the remains of a small village during the Early Islamic period and possibly earlier. All these periods are severely underrepresented in the current research program in the region. Therefore, Kani Shaie has the potential to fill significant gaps in our knowledge of this part of the Near East. The discovery of southern Mesopotamian Uruk-style pottery associated with traces of monumental architecture and the discovery of a seal-impressed numerical tablet suggest that Kani Shaie was part of the still-enigmatic Uruk expansion. At the beginning of the third millennium B.C.E., Kani Shaie became a rural settlement but remained tapped into interregional networks, as evidenced by a multitude of painted ceramic styles at the site that show connections to northern Mesopotamia (Ninevite 5 pottery), Lake Urmia (Hasan Ali Ware), and the western Zagros.

In this paper, we present some preliminary results of our work at Kani Shaie and lay out a research program for the coming years. Our efforts focus particularly on issues of chronology and interregional interaction networks to elucidate the early history and formation of ethnic groups and local polities that are known from later historical sources.

Rescripting the House of the Scribal God: The Temple of Nabu at Nimrud and Khorsabad

Kiersten Neumann, Oriental Institute Museum, University of Chicago

The archaeological material and textual evidence from Neo-Assyrian temples, hereafter referred to as “houses of the gods,” of the first millennium B.C.E. demonstrate the ways in which this built environment controlled and isolated spheres of practice that served critical functions in the dynamics of the Neo-Assyrian royal court. The house of a god served as a mediating point between the king and the *ummânus*—scholarly experts and skilled craftsmen—and both with the gods. The attitudes and preferences of particular kings toward scholarly knowledge and the gods found expression in their work and practice related to these divine dwelling places.

This paper demonstrates how the archaeological material and textual evidence from the House of Nabu at the capital cities of Nimrud and Khorsabad manifest the unique prioritization and development of this particular house of a god during the Neo-Assyrian period, beginning under Adad-nerari III (810–783 B.C.E.) and lasting until the fall of the empire at the end of the seventh century B.C.E. This period saw the evolution of the House of Nabu into a space that could accommodate the practices associated with the newly elevated god of writing and an

exclusive group of scholars, who brought about the high cuneiform intellectual culture that came to define the Neo-Assyrian period and culminated in the “library of Ashurbanipal” at Nineveh. Internal features that set this building apart from other Neo-Assyrian gods’ houses included chambers to serve as the *akītu* suite—the locus for the Neo-Assyrian *akītu* festival held in honor of Nabu and his consort Tašmetum—and rooms devoted to scribal and scholarly activity. Visual imagery similarly demonstrates a growing affiliation with Neo-Assyrian scholarship, including glazed-brick panels, metal relief bands, and carved stone statues that were placed at temple doorways; the inscription on one such statue of a divine attendant from Nimrud declares the supremacy of the god of wisdom: “Whoever you are, after me, trust in the god Nabu! Do not trust in another god!” Royal inscriptions reaffirm the Neo-Assyrian kings’ attempts to insert themselves into this growing scholarly tradition, the kings’ laying claim to the same body of exclusive knowledge—the “secrecy” of the intellectual elite—and assuming the integral role as the decision-maker in the construction programs of gods’ houses. Together, this archaeological and textual evidence signals the multifaceted quality of the Neo-Assyrian House of Nabu, setting it apart not only from the house of the king and common humans but also from the houses of other gods.

Observation and Babylonian Astronomy

Grace Erny, AIA Boulder Society

Astronomy, especially as practiced by Babylonian scholars beginning in the second millennium B.C.E., was recognized by ancient Mediterranean societies as one of Mesopotamia’s great contributions to the history of science. Greek and Roman authors such as Plato and Manilius traced the origins of astronomy to the ancient Near East. In more recent years, however, Neugebauer has dismissed the bulk of Mesopotamian astronomy before the Hellenistic period as “crude and merely qualitative” and has claimed that the accuracy of Babylonian observations is “only a myth.” At first, textual evidence seems to confirm this argument. Mesopotamian astronomical texts clearly indicate that a major goal of Mesopotamian astronomy was the type of qualitative descriptions that would aid in the interpretation and prediction of celestial omens. Furthermore, no explicit physical models of the cosmos such as those propagated by early Greek astronomers survive from a pre-Hellenistic Mesopotamian context. In this paper, however, I use archaeological evidence to argue that the observational capabilities of pre-Hellenistic Babylonian astronomers and their ability to recognize some of the physical truths about the solar system ought not to be dismissed.

I focus mostly on Babylonian astronomy in the beginning and middle of the first millennium B.C.E., before the beginning of the Hellenistic period. I assess the possibility that Babylonian astronomers of this time period created and used optical technologies, specifically lenses, to aid their observations of the heavens. Finally, I examine the textual and archaeological evidence for Babylonian ziggurats of the first millennium and consider how their architecture and decoration may reflect knowledge of the spatial organization of the solar system. The evidence from these ziggurats suggests that Babylonian astronomers were able to observe a difference between the interior planets (Mercury and Venus, the planets orbiting

inside Earth's orbit) and exterior planets (Mars, Jupiter, and Saturn, the planets orbiting outside Earth's orbit). I argue that they could have done so based on careful observation of an astronomical phenomenon known as retrograde motion.

SESSION 5E

The Iberian Peninsula

CHAIR: *Scott De Brestian*, Central Michigan University

Imperial Portraiture in the Late Antique Villa of Milreu (Estoi, Portugal)

Sarah E. Beckmann, University of Pennsylvania

New excavations of villas and the reexamination of materials from 19th- and early 20th-century excavations have brought to light an interesting phenomenon of the Roman statuary "habit": the collection and display of antique sculpture in late Antique villas of the western provinces. These collections range from early imperial mythological sculpture in fourth- and fifth-century villa contexts (El Ruedo, El Munts) to large assemblages that juxtaposed antique portraits with contemporary pieces (Chiragan, Montmaurin). My recent work in the Algarve situates the villa of Milreu (Estoi, Portugal) and its collection of imperial portraiture into ongoing discussions of the role of sculpture and the mediation of status in the Late antique domus.

Over the course of a century of excavations at Milreu, archaeologists have uncovered three imperial busts of Agrippina the Younger (49–59 C.E.), Hadrian (117–138 C.E.), and Gallienus (253–268 C.E.). Though these portraits have received attention as art objects, previous scholarship has been hesitant to associate them with known occupation phases at the site, as none were found in the most recent stratigraphic excavations. Yet after a detailed examination of the finds and their archival history, I believe that we can associate these portraits with Late Antique occupation levels. I also suggest that the collection of imperial portraiture was larger than has previously been assumed, given the presence of two second-century fragments wearing the *paludamentum*, and fragments of a colossal statue.

Furthermore, the specific character of the Milreu collection, by virtue of its antiquity and imperial focus, challenges our conventional understanding of Late Antique landowners as a remarkably homogenous group, especially in the western Mediterranean. When these portraits are considered in context as a product of their local environment, it is possible to associate their collection and display with a specific sociological type of villa owner, who may not have been part of the imperial circle, as scholars often assume. Instead, I focus on the display of antique portraits as a form of classical reception and highlight universal values associated with these busts. I then suggest that the display of these imperial portraits evinces a *dominus* who sought to borrow the authority of the Roman empire to establish firmly his local preeminence. Through an examination of sculpture along with other evidence from Milreu's domestic assemblage, I suggest that local networks and peer-polity exchanges were powerful in the Roman Algarve and remind us that elite identity is constituted on both macro- and microlevels.

Reconstructing the City in Late Antiquity: The Use and Abuse of Roman Public Spaces in Augusta Emerita

Daniel Osland, University of Otago

Augusta Emerita (Mérida, Spain) retained its role as a primary center for economic, political, religious, and social exchanges throughout late antiquity, long after the collapse of the Roman administrative system. However, the nature and the physical setting of many of those interactions changed significantly in the Late Antique period, in Emerita and in other cities around the Mediterranean. In this paper, I present evidence for the Late Antique spoliation and reuse of Roman Emerita's monumental public spaces. I argue that this evidence is not just symptomatic of economic decline but also illustrates a process of urban regeneration that began in the fourth century and continued through the sixth.

In Emerita, the divergence from a theoretical classical urban ideal is most apparent in the archaeological record from the late fifth century onward. Yet this stark contrast is the result of a series of changes, some of which began centuries earlier. Recent excavations in the so-called Colonial Forum, near the Templo de Diana, have revealed new evidence—primarily architecture and ceramics—that helps illuminate the changing cityscape in late antiquity. The remains suggest the transition to a post-Roman city plan was well underway by the late fourth century; public spaces were being used for new activities, but new organizing principles governed these activities. Domestic waste was deposited in specific areas of the forum courtyard in the early fifth century, while other areas of the courtyard and the flanking porticos were subjected to dismantling and spoliation. By the late fifth century, new structures stood to the south and east of the temple, and a dirt road cut across the center of the forum.

While the rate and timing of urban change would have varied from one city to the next, the portrait drawn from Emerita's archaeological record may be helpful in reconstructing a general model for several stages of change experienced by urban centers in the course of late antiquity. The dismantling and reuse of the traditional Roman structures of Emerita serve, perhaps counterintuitively, as an illustration of the ongoing vitality of the city center. As residents and officials encountered a new set of economic, political, religious, and social demands, they reshaped their urban environment to adapt to these new circumstances. The result, "post-Roman" or "Visigothic" Emerita, deviated substantially from the ideal classical city but now stands as a vital expression of the Late Antique urban ideal.

The Roman Republican Camps at Renieblas (Soria, Spain): Historical Problems and Archaeological Perspectives

Alicia Jiménez, Duke University, Jesús Bermejo, York University, and Martin Luik, Ludwig-Maximilians-Universität München

In the central years of second century B.C.E., when even Carthage had been razed to the ground, Numantia, a small town in the middle of the northern Iberian Plateau, resisted the attacks of one Roman consul after another for 20 years. The end of the Numantine Wars after a prolonged siege in 133 B.C.E. was so tragic (the Numantines decided to commit suicide to avoid slavery according to Appian,

Hisp. 96–7) that this episode still is one of the most quoted examples of resistance against a foreign invader in nationalist narratives of Spanish history.

Twenty centuries after Numantia's defeat, a German scholar, Adolf Schulten, traveled to Spain and claimed to have found the exact location where the terrible events took place. His excavations at the Roman camps that encircled the Celtiberian town as well as at a hill located 7 km away (Talayón de Renieblas) unearthed an unusual number of stone structures, ceramic, arms, armors, and coins.

Renieblas figures prominently in analysis of the Roman republican army and the early phases of the conquest of Hispania in today's books. A map of one of the five Roman camps found at the site often illustrates discussions about the basic structure of the army described by Polybius in the book 6 of his *Histories*. The site is also important to elucidate the vexed questions of the supply to the army in the Early Roman provinces, the pay of the republican army, and the beginning of local coinage in a large area of Hispania Citerior. However, the certainties about Renieblas are few because the bulk of materials published by Schulten in the 1910s and 1920s are devoid of archaeological context. Thorough recent studies of militaria, ceramics, and coins from Renieblas at the Römisch-Germanisches Zentralmuseum (Mainz, Germany) by Luik and Jiménez indicate possible alternative interpretations that challenge in some cases traditional views on the site heavily biased toward the information transmitted by classic authors.

In this context, an international team lead by Duke University is setting up a new archaeological project with the aim of shedding new light on complex historical questions.

The Forvm MMX Excavations at Cástulo, Spain (2011–2014)

Justin St. P. Walsh, Chapman University, and *Marcelo Castro López*, Conjunto Arqueológico de Cástulo

The ancient city of Cástulo, 7 km from modern Linares in Jaén province, Spain, was one of the most important in ancient Iberia. The urban center occupied a plateau of approximately 34 ha overlooking the Guadalimar River (which joins the main river of southern Spain, the Guadalquivir, just a few kilometers away). The surrounding region was rich with silver and lead mines. The site thus controlled significant resources and was a major crossroads for trade and interaction. It was founded by Iberians by the seventh century; there is clear evidence for contact with Phoenician traders from the earliest period. As the capital of Oretania, and because of its mines, Cástulo was an important ally for Carthage in the Second Punic War. It had a long history under Roman control and was also prominent in the Early Christian and Visigothic periods. The evidence for long-distance trade includes the many examples of Athenian stemless cups now known as the Cástulo type.

Previous excavations by Blázquez and others between the 1960s and the 1980s investigated several necropoleis on surrounding hills, an orientaling extramural religious precinct by the river, Iberian and Roman fortifications, and a Late Antique bath complex within the city walls.

This paper serves to introduce the first four years of work at Cástulo by Forvm MMX to an English-speaking audience. The project is working to clarify all phases of the site's occupation through carefully targeted excavation. We have several specific goals: to identify the town's forum during the Roman period, to understand the management of water at the site, to reveal the sequence of Iberian urbanism at Cástulo, and to investigate the area of the ancient port. In the course of this work, we have uncovered several Iberian and Roman structures, including a building of late first-century C.E. date that was decorated with an almost-complete mosaic measuring 72 m² and depicting romantic myths and personifications of seasons, and a large stone sculpture of a lion from the area of the town's North Gate. We have also identified evidence for the existence of a Late Antique Jewish community in the city.

In addition to the finds made by the Forvm MMX team, another important innovation presented here is the development of an electronic system to record strata, loci, and finds on-site so that they are instantly saved to our database, housed on a server in the archaeological museum in Linares.

The Olive Oil Press from the Roman Villa of Villaricos (Mula, Murcia, Spain)

Lucia Pinheiro Afonso, AIA Member at Large, Rafael González Fernández, Universidade de Murcia, José Antonio Zapata, Ayuntamiento de Mula, and Francisco Matallana, Universidade de Murcia

The Roman villa of Villaricos (Mula, Murcia, Spain) is a rural settlement with one of the largest excavated olive oil presses in the Iberian Peninsula. The villa of Villaricos is located 5 km east of the local town of Mula and 2 km from the river Mula. Villaricos is also 2 km from the Roman road Carthago Nova-Complutum. With an occupation expanding from the first to the sixth centuries C.E., Villaricos follows the shared improvements of the countryside Roman villas in the Iberian Peninsula. Most countryside Roman-Iberian villas, as is the case with Villaricos, are characterized by early first-century C.E. small and simple residential and working structures. Some architectural changes followed around the second century, but the great expansion and beautification of this villa, as with most countryside Roman villas in the Iberian Peninsula, occurred within the third and fourth centuries C.E. Specialized agricultural buildings, such as wineries and olive presses, were added along with storage areas and baths. By the fifth to sixth centuries, a basilica and tombs made their appearance at Villaricos. This last development, though common, is not as widespread as the earlier architectural transformations. This architectural and economic development seen at Villaricos and in most countryside Roman villas in the Iberian Peninsula matured as a consequence of Roman geopolitics and economic landscapes—the incorporation of the Iberian Peninsula into the Roman territorial, fiscal, and administrative organization.

This paper presents the various uncovered Villaricos archaeological structures with particular emphasis on the olive oil press building. The goal is to understand as much as possible, through the archaeological remains, about the olive oil production of the villa of Villaricos, a production that was intended for export and that was facilitated by its proximity to a main road, a river, and the major Roman port of Carthago Nova. Carthago Nova had gained importance soon after the Ro-

man general Africanus Scipio seized this Carthaginian port in 209 B.C.E. Not only was Carthago Nova an important point of departure for the Roman conquest of Spain, it was also central for the silver and lead mining around Carthago as well as for the commercialization of products such as garum, wine, and olive oil. Villas such as Villaricos were part of the imperial Roman commercial network.

SESSION 5F

New World Archaeology

CHAIR: To be announced

A Tale of Two Cities: Amazonia from the Belle Époque to Pre-Columbian Metropoleis

Anna Browne Ribeiro, Museu Paraense Emílio Goeldi, and *Helena Pinto Lima*, Museu Paraense Emílio Goeldi

Beneath the lush, apparently pristine Amazonian jungle, evidence in the form of elaborate ceramics and expansive archaeological sites attests to long-lost cities buried in time. A strategic post on the lower Amazon, the city of Gurupá commanded the entrance to Amazonia from the 17th through 20th centuries. This urban hub acted as a major political and economic center, a role likely inherited from its pre-Columbian predecessor. Among the sites that evince a pre-Columbian network of towns in Gurupá, Carrazedo is among the most impressive, extending more than 2 km along a riverine terrace.

Established ca. 1670, Carrazedo reached its peak during the Amazonian Belle Époque (18 to 19th centuries), an era of unfathomable wealth. Amazonian cities thrived in this period, participating in global markets and housing families wealthy enough to send expensive garments to launder in Europe. This era also gave birth to the famous Opera House of Manaus, which boasts frescoes by Italian painters, French glassware, English ironworks, and Iberian linens. Today, the material remains of this colonial "golden era" have been largely destroyed or buried beneath contemporary cities such as Manaus and Belém.

Until about 40 years ago, the story of Carrazedo paralleled that of most other Amazonian cities: contemporary towns were built on historical and pre-Columbian sites, often obscuring or completely destroying their archaeological integrity. However, financial strife and the lack of urban infrastructure forced the inhabitants of Carrazedo to abandon the city; they were attracted to the river margins by better access to food and conditions of sanitation. Community members remember the old city and continue to use its centuries-old cemetery; high on the terrace, the city ruins remain untouched.

Carrazedo thus presents a unique opportunity to study the remains of the Belle Époque and earlier periods. The ongoing project presented here has the potential to illuminate the rise and fall of this "golden era," also furnishing data about what could have been one of the most impressive Amazonian cities during the apex of pre-Columbian Amazonian civilization. Research at Carrazedo has revealed a large stratified pre-Columbian town/site, and regional survey indicates that this

site was a major center in the lower Xingu and Amazon Basins. Furthermore, the stylistic traits of Carrazedo ceramics suggest the presence of “something else”—an undiscovered Amazonian cultural tradition, perhaps?—between the known pre-Columbian cultures of Marajó and Santarém.

Deforestation, Drought, and Humans: The Collapse Theory Is Dead—New Evidence of Adaptability and Survival

Candace Gossen, Independent Researcher

What happened to the trees on Rapa Nui (Easter Island)? Popular theory says these ancient humans cut down their forests, causing ecocide and collapse and leaving a barren island with thousands of stone Moai lying facedown in testament. There is a well-documented cultural collapse caused by the stealing of more than 1,400 Rapa Nui people in 1862, but the story of the trees is a more difficult voice to hear because they are now extinct. Newly uncovered evidence is changing the old story into a new one based on survivability, sacredness, adaptation, and hope.

Challenging the previously accepted theory that humans deforested the island for the sole purpose of moving the Moai around, I focused rather on uncovering the role of climate change that may have altered the ecosystem. Sediment cores obtained from the crater lake Rano Kao were radiocarbon dated using *Scirpus* seeds. The 9 m of core were sampled for oxygen isotope analysis of the lake-water changes and revealed global climate events beginning with the Last Glacial Maximum, the hottest point on record at 9,225 BP, and 6,000 years of a slowly increasing drought that left the crater lake completely desiccated by 3,500 BP. Detailed palynological studies of pollen and nonpollen palynomorphs uncovered changing vegetation patterns that aligned with a 700-year drought cycle.

Returning to core the floating mat, a 2–4 m thick tangled quagmire of *titora* and *tavari* plants, this mat holds the last 1,000 years of change on the island. Within the cores, 40 native plants were identified, of which 17 were trees, including four previously undiscovered palms. With rapidly depleting ecological diversity, there were cycles of smaller-scale droughts and a major cold-dry event that began in 1390 C.E. and lasted 115 years, until 1505 C.E. The palm pollen did not disappear as previously thought but rather continued on, even sparsely so, well into the 1800s.

In the spring of 2014, a new water area was discovered and excavated. It was a sacred water fertility site where people were intentionally planting palm trees in a ceremonial pavement below an *ahu* with a single Moai. Experimental cores were taken in the waterfall below this site, and pollen and isotope evidence will soon unfold a deeper story between the trees and people who honored the giants. This is not a story of collapse but rather one of a strong resilient place called the Navel of the World.

Trash Pits and Sinkholes: A Critique of Landscape Archaeology in the Maya Area

Melanie P. Saldaña, California State University, Los Angeles

In reviewing the archaeological literature from 1995 to 2005, Smith and Schreiber note that, “For the Classic Maya, studies of sacred landscapes are dominated by research on caves” and that “[i]n contrast to the empirically grounded cave research, other work on Classic Maya sacred landscapes is highly speculative in nature.” The more speculative studies are often attempts to read meaning into the built environment by drawing on plans from traditional archaeological investigations that were conducted with little or no interest in sacred landscape. Furthermore, these sacred landscape studies rarely engage the physical landscape as an experiential process. In general, non-cave Maya archaeologists appear to be at a loss as to how to engage with sacred landscapes because they are mired in an ecological materialist mind-set. An underappreciated aspect of the Petexbatun Regional Cave Project was its articulation of an explicit model of the general principles on which ancient Maya landscape was conceptualized. The model adopted an indigenous understanding of the term “cave” to approximate the Maya word *ch’een*, which refers to almost any part of the environment that penetrates the earth and includes a range of natural features, such as caves, canyons, cenotes, sinkholes, springs, crevices, and any number of other holes.

This paper details the results of investigations carried out by the California State University, Los Angeles Archaeological Project at the site of La Milpa in northern Belize in the summer of 2014. The project focused on a sinkhole that had been previously interpreted as a trash pit, possibly one serving a lithic workshop. Initial inspection noted several courses of unshaped stone visible in the sidewall at the southern end of the pit and a discontinuous line of rocks at the same level in the sidewalls of the remainder of the sinkhole. Three excavation units along the sides of the sinkhole revealed a rubble-cored platform that once encircled the feature. Excavations in the floor of the sinkhole and within the cave-like enclosure at the northern end revealed a heavy concentration of ceramic, obsidian, and other artifacts. The Maya clearly formalized the space surrounding this sinkhole, leaving no doubt that this was a noteworthy sacred landmark. Such features abound in the karstic landscape, providing surface archaeologists with great opportunities to empirically document the sacred landscape within their site boundaries. Clearly, a rethinking of current practices is required.

An Opportunistic Glimpse at 19th-Century New Orleans Medicine: An Analysis of Human Remains Disinterred from the Charity Hospital Cemetery #1 During the Construction of the Hurricane Katrina Memorial

Ryan M. Seidemann, Louisiana Department of Justice

Following the devastation to southeast Louisiana by Hurricane Katrina in 2005, the Orleans Parish Coroner’s Office was left with nearly 100 bodies of those who died in the storm that could not be identified using modern forensic methods. This is not their story. The then-coroner and others raised money for the construction of mausoleums to house the remains of Katrina’s unidentified dead—construction that would be done in the now-closed Charity Hospital #1 Cemetery on Canal

Street. This construction activity affected numerous 19th- and early 20th-century burials in the cemetery, and an analysis of those remains was required to comply with permitting requirements. This analysis provided a unique insight into pathological conditions experienced by the poor of New Orleans in the 19th- and 20th-centuries as well as into the teaching practices for medical students from the city's medical schools. The results of this research are presented here and placed into context with other such examinations in the Old and New Worlds.

SESSION 5G

City of Rome

CHAIR: *Francesco de Angelis*, Columbia University

Percussion Coring Survey at Sant'Omobono: Accessing New Data on Early Habitation in Rome's River Valley

Andrea L. Brock, University of Michigan

Having served as a cult center adjacent to the archaic river harbor, the Sant'Omobono Sanctuary is fundamental to understanding the urbanization process in early Rome but is complicated by unusually deep stratigraphy. Situated in a natural valley on the southwest slope of the Capitoline Hill known as the Forum Boarium, the complex stratigraphic sequence at Sant'Omobono extends more than 10 m below the modern street level. To access the earliest levels of habitation, our team conducted a percussion coring survey across the site during the 2013 and 2014 field seasons. This paper presents preliminary results from this deep coring survey, including intriguing evidence of prearchaic anthropic activity at depths never previously documented.

Working in conjunction with the excavation of Sant'Omobono, our team made a total of 18 deep cores in strategically selected locations around the site. We particularly focused on placing bore holes at the bottom of completed trenches, to access extremely deep archaeological and geological levels. Using Cobra TT percussion drilling equipment, these cores are capable of reaching more than 5 m in depth. Across 18 separate entries, our team produced and has begun analysis on more than 70 linear meters of stratigraphic data, which include repeated samples at and below archaic levels. In areas of the site rendered physically impossible to excavate through traditional methods, these bore holes have provided a valuable extension to the stratigraphic sequence at Sant'Omobono, as well as rich data on the natural landscape of the river valley.

This paper discusses coring data and preliminary conclusions associated with early Rome. The results fall into four interrelated categories: (1) natural topography, including the position of the Tiber River and the geological profile of the Capitoline Hill; (2) archaic building techniques in a flood-prone region; (3) human impact on the environment, including efforts to raise the valley floor; (4) new evidence of anthropic material at unprecedented depths, which predates activity previously documented in the river valley. Thus, this set of data sheds new and valuable light on Rome's urbanization story. Implications of this data necessitate

further coring survey in the region immediately surrounding Sant'Omobono. Upcoming research will provide an extensive sample of bore holes across a wider area in the Forum Boarium, from which we aim to acquire an even more expansive understanding of the topography and environment of Rome's river valley.

Trajan's Column, the Temple of Mars Ultor, and 12 May 113 C.E.

Martin Beckmann, McMaster University

The *Fasti Ostienses* (tablet J.2.53–6) record that on 12 May 113 C.E. the emperor Trajan dedicated both the Temple of Venus in the Forum of Julius Caesar and, in this forum, his column. Simpson noted the connection between the dedication of Trajan's Column and the dedication on the same day in 2 B.C.E. of the temple of Mars Ultor in the Forum of Augustus (*Ov., Fast.* 5.545–98). The implications of this connection have never been fully investigated. In this paper, I argue that the dedication of Trajan's Column was part of a much larger propagandistic event orchestrated by the emperor to mark the beginning of his new war with Parthia. The first part of the paper reconstructs the events recorded in the *Fasti Ostienses* in their topographic context. The two dedications required Trajan and his attendants to move from the Forum of Caesar through the Forum of Augustus with its centerpiece, the Temple of Mars Ultor, before entering the Forum of Trajan. Procession through this monumental landscape physically established Trajan's connection to the first of the Caesars, to Augustus, and to Mars Ultor. The second part of the paper places these events in the context of May 113 C.E. Coinage issued early in 113 (and directly connected to the first appearance of Trajan's Column in that medium) honors the Roman army (by depiction of legionary standards), hopes for the good outcome (*Bonus Eventus*) of an unspecified event, and evokes Fortuna Redux (goddess of safe return). This suggests that the dedication of the column happened at the same time as a significant event involving the army and the departure of the emperor on a dangerous journey: most probably the Parthian War. By choosing 12 May to dedicate his column, Trajan made a specific connection between his past victories and his forthcoming Parthian campaign and perhaps even to the departure of Gaius for his Parthian campaign of 2 B.C.E., an event that Weinstock argued coincided with the original dedication of the Temple of Mars Ultor. Trajan exploited the still-current connection between the Temple of Mars Ultor and vengeance for Roman defeats at the hands of the Parthians in the first century B.C.E. to stage his own new campaign and to link it to his own past accomplishments.

The Tarentum in the Campus Martius as a Commemorative Space for the Ludi Saeculares

Susan Dunning, University of Toronto

A region of the Campus Martius near the Tiber River was marked out as a space for the commemoration of the Ludi Saeculares in 17 B.C.E., after Augustus established the festivals by adapting republican traditions. These games were to be held at intervals of approximately 110 years. Fragments of cippi recording the events,

or “Acta,” of the games of 17 B.C.E., 47 C.E., and 204 C.E. have been found in this area, which was called Tarentum. In this paper, I argue that while individual performances in the ritual sequence of the games were held at different locations in Rome, inscriptions set up at Tarentum highlight the centrality of that space in the ceremony. I show that the act of commemorating the games through inscriptions at Tarentum constituted an essential part of their performances, memorialized imperial achievements, and influenced later literary descriptions of republican *Ludi Saeculares*.

The presence or tradition of a republican altar at Tarentum lay behind the Augustan decision to commemorate the games in that same space, which was already associated with sacrifices to chthonic deities, a key ritual in the *Ludi Saeculares*. Verrius Flaccus, Valerius Maximus, and Zosimus describe an altar dedicated to *Dis Pater* and *Proserpina* at Tarentum in accounts of the origins of the games. The Augustan Acta record that, even before the games were held, plans were made to set up bronze and marble inscriptions at Tarentum to preserve their memory. These inscriptions served as permanent offerings and reminders for the gods of ephemeral religious performances in a fashion similar to the Acta of the Arval Brethren. But the Acta of the *Ludi Saeculares* may have played a greater role in preserving details of rituals for future generations, unless the college who oversaw the games was able to preserve written records of performances held very infrequently. These inscriptions can be linked with other Augustan memorials in the *Campus Martius*, such as the *Res Gestae* at his mausoleum, or the *Ara Pacis*.

Later emperors who celebrated the *Ludi Saeculares* followed the Augustan example: in addition to the Acta of Claudius and Septimius Severus mentioned above, coins with images of cippi survive commemorating the games of Domitian (88 C.E.) and Philip the Arab (248 C.E.). This enduring tradition seems to have influenced Zosimus, a historian of the sixth century C.E.: he alone records the existence of an altar at Tarentum inscribed to commemorate games in 509 B.C.E.

The Afterlife of the Porticus Aemilia: A New Storage Function

Raphaëlle-Anne Kok-Merlino, University of Amsterdam, and *Gert-Jan Burgers*, VU University Amsterdam

Between 2011 and 2013, a series of excavations were carried out between some of the standing remains of the building commonly identified as the *Porticus Aemilia*, in the Roman neighborhood of Testaccio. The excavations took place in the context of a collaborative project of the Soprintendenza Speciale per i Beni Archeologici di Roma and the Royal Netherlands Institute in Rome, with the aim of investigating both the spatial configuration of this monumental building as well as its history of occupation.

The *Porticus Aemilia* is named after the aediles Marcus Aemilius Lepidus and Lucius Aemilius Paulus, who, according to Livy, in 193 B.C.E. started construction works on a porticus outside *Porta Trigemina* (Livy, *Ab Urbe Condita*, 25.10.10.11–12). The *Porticus Aemilia* has received much attention by numerous scholars regarding its original, republican phase. This has left the later history of the building mostly in the dark. The lack of systematic archaeological research until now has resulted in an image that is mostly based on written sources and

epigraphic evidence. Therefore, instead of approaching the excavation results in light of one-sided interpretations of the porticus, either as *navalia*, *horrea*, or porticus, this lecture aims to shed a light on the successive phases of this famous monumental complex. It focuses especially on the Imperial age from the first half of the second century onward, during which large-scale restructuring took place inside the Porticus Aemilia. The stratigraphic evidence indicates that by then the building was no longer seen as a joint, homogeneous structure but rather was used as an architectural space for new buildings that altered its original layout once and for all, in accordance with new demands. In fact, in the 16th aisle the spectacular remains of a cella of a *horreum* have been explored. The state of conservation of this cella has permitted the first scientific excavation of *suspensurae*, the typical floor systems for *horrea*, in the Urbs.

SESSION 5H: Colloquium

Exploring Mobility and Interconnectivity in the Roman World

Sponsored by the Roman Provincial Archaeology Interest Group

ORGANIZERS: *Samantha J. Lash*, Jukowsky Institute for Archaeology and the Ancient World, Brown University, and *Sarah H. Davies*, Whitman College

Colloquium Overview Statement

The mobility and connectivity that characterized the “Roman world” has spurred a great deal of scholarly interest over the years, particularly in terms of trade entrepôts and individual contact “nodes.” However, broader landscapes and routes of exchange, as well as the complexity of the networks through which material, personnel, ideas, and religious beliefs maneuvered, remain underemphasized. Recently, global models and applications of network theory have proved productive in explorations of the ways in which various settlements and peoples came to be connected. This panel explores interdisciplinary approaches and new methodological frameworks to evaluate “Roman” interconnectedness.

Our first paper, “A Migratory Turn in the Study of the Ancient Societies: New Categories and New Approaches,” begins with a discussion of the historical trajectory of the study of human mobility. The paper addresses major issues faced and possible new directions, serving to contextualize the panel and the subsequent papers. The second paper, “Connectivity and Predictive Modeling: Challenges of Simulating the Development of the Roman World,” follows a methodological vein focusing on the applications of simulation models to reconstructing historical processes. Drawing on an international effort, this paper illustrates the potential and challenges inherent in technological reconstruction through case studies on Roman properties of economic and political connectivity.

The third paper, “Pinning Down the Nodes: Undocumented Migration and Informal Networks in Punic and Roman Sardinia,” moves away from an object-centered approach. Focusing on Punic-Roman Sardinia, this paper centers on the migrants themselves as well as interaction practices to illustrate the central and multifaceted nature of Mediterranean migration. Our fourth paper, “Regionalism, Connectivity, and Social Networks in Northern Imperial Italy,” takes a multivari-

ate perspective, applying quantitative social network analysis to archaeological data, from building mortar to terracotta lamps, to investigate a comparison of pre-Roman “boundaries” through patterns of economic connectivity and interaction. The final paper, “Mobility and Maritimity: Creating Socioeconomic Communities Around the Northeast Mediterranean,” explores the possible role of maritime networks in daily life through a case study of Cyprus. This paper uses GIS-based analysis of maritime and terrestrial topography to investigate infrastructure, accessibility, and connectivity in distinct but overlapping scales of regional and interregional activity.

Our session will end with two leading scholars providing provocative comments on the preceding papers and the theme of connectivity in general. Ultimately, this panel demonstrates contemporary methodological and theoretical currents in the consideration of “Roman” mobility through the archaeological record.

DISCUSSANTS: *Irad Malkin*, Tel Aviv University, and *Nicholas Purcell*, Oxford University

A Migratory Turn in the Study of Ancient Societies: New Categories and New Approaches

Claudia Moatti, University of Southern California

My purpose is first to discuss the different shifts that have taken place in the study of human mobility in ancient societies, mainly under the influence of anthropology and the sociology of migration (e.g., the notion of mobility, interest in transnational phenomena, relation to space). I then address more precisely some issues (the role of the actors; the distinction between identity and identification; the Mediterranean as a “politically neutral space”) and finally explain why it is necessary to reintroduce a political approach to the study of human mobility in the ancient Mediterranean.

Connectivity and Predictive Modeling: Challenges of Simulating the Development of the Roman World

Walter Scheidel, Stanford University

Realistic simulation of historical processes is a final frontier for the study of the past. The ultimate purpose of simulation is to test causal hypotheses regarding the nature of the determinants of observed outcomes. This approach rests on the ability to assess the impact of different variables in an interactive model, an ability that requires concurrent consideration of factors such as geography, ecology (climate, land cover), natural endowments (such as mineral resources), the distribution of population, and the real cost of connectivity in terms of time and price, which is itself a function of geographical, infrastructural, and technological conditions as well as institutional constraints. Recent years have witnessed considerable progress in discrete areas of simulations. The most notable examples include increasingly sophisticated raster-based simulation of state formation (PNAS 110, 2013,

16384-9) and geospatial modeling of the patterning of connectivity created by real transfer costs (Orbis 2.0, July 2014). We now also have access to spatial models for population and land use (e.g., HYDE) as well as to a growing number of geo-referenced data sets for various features such as settlements and certain types of deposits. What is still missing is proper integration of all these diverse elements, which is a vital precondition for meaningful multivariate simulation and hypothesis testing. Cooperation among different project teams has been or is in the process of being established to pursue this goal, both specifically for Roman history and more globally. This paper, which draws on an international collective effort, seeks to illustrate the potential and challenge inherent in this ongoing endeavor by means of case studies (currently in progress) that focus on the properties of economic and political connectivity in the Roman world.

Pinning Down the Nodes: Undocumented Migration and Informal Networks in Punic and Roman Sardinia

Peter van Dommelen, Brown University

As connectivity, mobility, networks, and globalization continue to be widely debated in regard to the classical and Roman Mediterranean, the scale of analysis is accordingly expanding. As a result, attention is increasingly turning to overarching and large-scale networks and connections. At the same time, networks and connectivity are habitually reconstructed by tracking particular (categories of) finds to their presumed place(s) of origin and between the places where the items in question are encountered.

This object-centered approach tends to overlook how such connections were forged, however, and consideration, let alone discussion, of people actually moving—migrating—is rarer still. Despite an abundance of evidence suggesting that migration in one form or another must have been a fact of life for many communities in the Mediterranean, archaeologists have tended to skirt around what I argue is a central and multifaceted phenomenon of the Mediterranean past and present.

In this paper, I briefly discuss these general points before moving on to the island of Sardinia in the Punic to Roman periods to show what insights may be gained by focusing squarely on migrants and the practices of interaction.

Regionalism, Connectivity, and Social Networks in Northern Imperial Italy

Emma Blake, University of Arizona

At the time of the Roman conquest, peninsular Italy was divided into myriad regional groups: the Veneti, Picenes, Etruscan, and others. With little post-Augustan evidence of regional distinctiveness surviving, it would seem that becoming Roman in Italy around the first century C.E. meant the overwriting of earlier identities and relations with a new Roman identity. When regional groupings reemerged on the peninsula after the Roman period, did they constitute an atavistic return to pre-Roman identities that had always been percolating under the veneer of Roman culture, or did they represent the emergence of something altogether new? On the one hand the boundaries of some post-Roman regional groups do map

onto purported pre-Roman territorial divisions, but on the other hand there is no convincing evidence of linguistic survivals from pre-Roman times in the emergent Latin-based languages. With few traces of regionalism for hundreds of years in the interim, the debate has stalled.

This paper adopts another tack, seeking traces of regional groups in Italy in Imperial times not through active expressions of identity or elite rhetoric but through patterns of economic connectivity and interaction. This interactionist approach to community detection posits that groups will, whenever possible, favor intragroup interactions over intergroup ones. Therefore, if those regional groupings did still exist after Augustus, they would reveal themselves in relatively dense clusters of interaction at the regional level. So, while local markets and exchanges were certainly occurring in Roman Italy, the goal is to determine whether local biases in connectivity honor pre-Roman territorial boundaries. Taking northern Italy as a case study, I use quantitative social-network analysis of various published archaeological materials, from building mortar to terracotta lamps, to track the patterns of intraregional connectivity in Imperial times. A comparison of pre-Roman groupings with the Imperial-period networks suggests the former did not survive.

Mobility and Maritimity: Creating Socioeconomic Communities Around the Northeast Mediterranean

Justin Leidwanger, Stanford University

Roman ports served not only as interfaces between land and sea but also as central gathering spaces for cultural and economic exchange. With the growing adoption of network metaphors and analytical approaches to maritime connectivity, considerable emphasis has been placed on the centrality and critical “hub” function of major harbors in binding together the far reaches of the Roman world into a vast network. Far less clear, though, is the practical impact of such large-scale structures beyond the major port cities and how empire-wide links may have interacted with maritime networks operating on local or regional levels. To what extent did seaborne communication and exchange comprise a highly integrated Mediterranean web centered on urban hubs? Can a single network model account not only for this vast geographical area but also for the entire range of products, ships, distances, agents, communities, and economic mechanisms involved? What role might smaller, secondary, and opportunistic ports have played in structuring maritime interaction and socioeconomic life in their hinterlands? To what extent were different communities in different localities tied into different maritime networks?

Using Cyprus as a case study, the approach adopted here explores the possible role of maritime networks in daily life, particularly beyond the island’s larger harbor hubs. A GIS-based analysis of maritime and terrestrial topography explores the spatial patterning of settlements and ports, providing a clearer picture of how dense maritime facilities and ease of mobility on and around the island created a low threshold for seaborne connectivity. Rather than relying on the nearest major harbor city, populations outside coastal urban centers enjoyed proximity and easy access to some form of simple port or beachside anchorage, allowing the sea to play a dynamic role in the forging of links and socioeconomic life more generally

across much of the island. The maritime networks that developed were dense but hardly universal or uniform, forming distinct but overlapping scales of regional and interregional activity that reflect the diverse needs of different communities, the complex movements of goods and people, and the varied agents involved.

SESSION 51

Imaging Archaeology

CHAIR: To be announced

New Perspectives on Neolithic Agricultural Villages in Eastern Thessaly (Greece) Through Remote-Sensing Applications

Apostolos Sarris, Institute for Mediterranean Studies (FORTH), *Carmen Cuenca-García*, Institute for Mediterranean Studies (FORTH), *Jamieson C. Donati*, Institute for Mediterranean Studies (FORTH), *Tuna Kalaycı*, Institute for Mediterranean Studies (FORTH), *Meropi Manataki*, Institute for Mediterranean Studies (FORTH), *François-Xavier Simon*, Institute for Mediterranean Studies (FORTH), and *Konstantinos Vouzaxakis*, 13th Ephorate of Prehistoric and Classical Antiquities

The Neolithic period in Europe (7000–2000 B.C.E.) is widely considered a key epoch in the evolving relationship of human beings and their livable environment. Migrant hunters and gatherers gave way to permanent agrarian societies preoccupied with animal husbandry and the cultivation of food crops for sustenance. Carbon isotope dating and artifact analysis indicate that the earliest European farming communities appeared in the southern Balkan Peninsula and the Aegean Islands from populations originating in southwestern Asia. Recently, interdisciplinary studies have combined traditional forms of archaeological exploration with evolutionary biology, archaeozoology, phylogeography, and predictive models to provide novel insights into the patterns of Neolithic culture and the behavior of Neolithic peoples. The field now attracts the attention of a wide range of theoretical archaeologists, social scientists, statisticians, and scientists in the applied fields.

Within this new scientific framework of investigating Neolithic cultures, this paper presents the preliminary findings of a multiyear geophysical and remote-sensing campaign to study the physical landscape and living dynamics of Neolithic settlements within the coastal hinterlands of eastern Thessaly (Greece), where a rich sequence of Neolithic culture is known most famously at sites such as Sesklo and Dimini. Although hundreds of Neolithic settlements have been identified in Thessaly through nonintensive field survey and archaeological excavations, the broader characteristics of these early farming communities still remain vague, such as the extent and makeup of the built environment; the internal social hierarchy, production capabilities, the exploitation of the natural environment; and the intercommunal contact of Neolithic peoples on a localized and regional scale. Remote-sensing methodologies have been successfully used to document the diverse spatial composition of dozens of Neolithic sites in Thessaly. Some sites are core habitation mounds of modest proportions, while others are sprawling

communities several hectares in size with more than 50 individual buildings. The variability in the size and internal organization of buildings at certain settlements raises important questions on the social hierarchy of these communities. Despite the great range in settlement size and internal composition, the habitation zones of the majority of sites are surrounded with concentric ditches and/or walls. Taken as a whole, this new evidence for early farming communities is an important contribution to the study of the Neolithic period in Europe.

“Westward Ho! Down Below”: Low-Altitude Aerial Reconnaissance of the Western Outpost of Alkali Station, Nebraska

Tommy Ike Hailey, Northwestern State University of Louisiana

During the 1860s, Alkali Station, Nebraska, served a brief but colorful role in the westward expansion of the United States as settlers journeyed across the plains on the Overland Trail toward what they hoped would be a better life in California or Oregon. During its relatively brief occupation, Alkali Station served as a Pony Express station, a post office, a stage station, and a military post whose soldiers protected stagecoaches, wagon trains, and settlers from attacks by roving bands of understandably hostile Native Americans seeking to defend their ancestral lands. Soon, however, the telegraph lines and railroads stretched from the East Coast to the Pacific Ocean, and these new methods of communicating with and traveling to and from the western settlements diminished the need for outposts like Alkali Station. It was abandoned, fading into the footnotes of history, and the structures associated with the site fell into ruin, until assorted depressions and rises were the only things that remained to provide mute testimony of past human activity. From the ground level, spatial patterning in these depressions and rises is not readily discernible because of the large area they encompass, but the site's location in the Nebraska grasslands seemed ideal for identifying archaeological features from the air. Available aerial images were of insufficient resolution to provide a detailed view of the site, so in May 2012 and 2013, aerial reconnaissance of the Alkali Station site was undertaken. Using a powered parachute as a low-altitude aerial platform, it was possible to capture high-resolution digital photographs and thermal images of the site and associated features, including the ruins of the military post, wagon ruts, and a number of structures to the northeast of the remains of the fort. Analysis of these images provides valuable new insights into this all-but-forgotten outpost on the American frontier.

Flashdance: Application of Reflectance Transformation Imaging to Wall Inscriptions from Pompeii and Herculaneum

Jacqueline DiBiasie, University of Texas at Austin

This paper presents the methods, challenges, and results of reflectance transformation imaging (RTI) application to ancient graffiti from Pompeii and Herculaneum. This work is part of the Herculaneum Graffiti Project, which aims to record and digitize the graffiti from Herculaneum. Ancient graffiti were typically lightly scratched into wall plaster, which makes them difficult or impossible to photo-

graph with normal photography techniques. Further, poor lighting conditions and degradation of the wall plaster makes photographing them even more difficult. I argue that the use of RTI enables researchers to read the graffiti more easily and is a better method of digital preservation for the future.

RTI is a computational photography technique that amalgamates multiple photographs of an object under different lighting conditions into one file. The user can then manipulate the resulting image by changing the direction of the light on the graffiti. Essentially, this process allows for raking light—which has long been the standard in photography of incised graffiti—from all angles. Furthermore, RTI is able to enhance the surface of the wall, which further clarifies the graffiti.

I begin by presenting the basics of RTI and special challenges I encountered in applying this technique to graffiti. Some of the issues included photographing columns, shadows on the graffiti, and ambient light. Next, I present the results of this application to several graffiti from Pompeii and Herculaneum. The benefit of the process was immediately obvious. RTI produced clear images of the graffiti that could be manipulated to create the best possible lighting conditions for reading the text. Further, these images can be disseminated to allow interested scholars to examine the graffiti for themselves. Previously, since photographing graffiti has proved so difficult, scholars have usually provided only line drawings of the text in publications. RTI enables scholars from anywhere in the world to examine the graffiti and offer new readings. Further, the images serve as thorough documentation of the graffiti for cultural-heritage management, especially as graffiti from both sites are disappearing at an alarming rate. I show that this methodology allows for the best possible reading of the graffiti and should become the standard for documenting and preserving these inscriptions in the future.

Medieval Ceramics and Three-Dimensional Models: A Case Study from the Nemea Stadium, Greece

Effie Athanassopoulos, University of Nebraska–Lincoln, and *Kim S. Shelton*, University of California, Berkeley

Ceramic sherds are one of the most plentiful and valued archaeological artifacts. Standard methods of pottery documentation include photographs and illustrations, which are not ideal since they represent two-dimensional renderings of three-dimensional objects. In the last decade, considerable technological improvements have made high-resolution digital documentation available to archaeology. As three-dimensional modeling methods continue to become more user-friendly and affordable, they offer an attractive alternative for artifact documentation, analysis, and sharing of data. The advantages of three-dimensional technology over the traditional methods are significant. Several studies have demonstrated that three-dimensional scanning is not only more accurate than manual illustration it also provides much more information, and is actually a more efficient method. For example, Karasik and Smilansky used three-dimensional scanning technology to obtain models of more than 1,000 pottery fragments and concluded that it was more cost-effective compared with traditional methods. This and other studies have used three-dimensional scanning for accurate data acquisition, includ-

ing two-dimensional profiling, and the calculation of attributes that are harder to measure by traditional means—for example, volume, surface area, and symmetry.

This paper builds on the growing body of three-dimensional laser scanning applications to the study of ceramics. It presents three-dimensional models of a selection of medieval ceramics from Nemea, specifically pottery from a series of closed deposits from the Nemea Stadium that were excavated in 1975 and 1980. These deposits have yielded a large assemblage of glazed and coarse wares. They represent household refuse dating mainly to the 12th and 13th centuries C.E. The three-dimensional models allow us to accomplish more effectively the documentation of ceramic variability in these deposits and aid in the analysis, interpretation, and sharing of results. Furthermore, the detailed three-dimensional models reduce the need for a descriptive presentation of the pottery; thus, the focus can shift to more complex issues such as (1) establishing explicit criteria for categorizing and dating medieval pottery; (2) documenting with visually effective means the composition of the assemblage; (3) extracting information on social aspects, including food preparation and storage; and (4) reconstructing consumption patterns of the rural households, their access to markets, and participation in regional trade networks.

Finally, digital technologies such as three-dimensional scanning strengthen the connection between research, heritage, and preservation by broadening participation and making accessible material that previously had been available only to specialists.

Representing Uncertainty in Three-Dimensional Visualization: The Geison Course of the Northeast Temple at Antiochia ad Cragum

Geraldine Dobos, University of Nebraska–Lincoln

In this paper, I address questions pertaining to representation of uncertainty in three-dimensional digital architecture, using as a case study the recently excavated Northeast Temple at Antiochia ad Cragum in southern Turkey. The study of this temple is part of the Antiochia ad Cragum Archaeological Research Project codirected by Hoff (University of Nebraska–Lincoln [UNL]), Townsend (Clark University), and Erdoğmus (also UNL). From 2011 to 2014, I worked under Townsend on the reconstruction of the geison course, the topic of my recently completed master's thesis. I am currently working on the three-dimensional modeling of this part of the temple under the mentorship of Sapirstein (UNL).

The state of preservation of the Northeast Temple's geison blocks presents specific problems for reconstruction and representation. The precise sequence of blocks is open to question owing to missing blocks and uncertainty of joins between individual surviving members. Of particular concern are the alternation of the cassettes and modillions of the overhang and the spacing of the lion's-head waterspouts and rafter cuttings. Each of the elements involved belongs to a different face of the block. Three-dimensional representation allows rotating views, which permit consideration of the different elements simultaneously, opening both new potentials and challenges for a clear and articulate graphical display of complex spatial problems. I explore various approaches to visualizing the geison course of the Northeast Temple in three-dimensions.

Three-dimensional visualization in archaeological work enables new types of presentation that complement and confirm traditional documentation, analysis, and reconstruction of ancient sites and their structures. Online access to the scholarly information provided by these representations makes them increasingly accessible to diverse groups of the community, creating a broader potential audience but also a wider range of demands. Interactive models might engage the nonspecialist, whereas measurement precision would be more compelling for researchers' purposes. Particularly relevant to this case study is the problem of representing uncertainty in the models—which in a polished, three-dimensional rendering tend to present the reconstruction as established fact rather than revealing the underlying evidence and the thought processes of the illustrator. Because architectural reconstructions can take on a semblance of reality to a greater degree than ever before, it is all the more important to consider questions of balance between the real and the ideal.

SESSION 5J

Trade and Contact in Bronze and Iron Age Greece

CHAIR: To be announced

Palace-Province Interactions in Mycenaean Central Greece: A Network Perspective

Margaretha Kramer-Hajos, Indiana University

This paper uses aspects of network theory to arrive at an explanation for the ups and downs in settlement patterns in the Euboean Gulf area. Mycenaean settlement in the Euboean Gulf area follows a curious pattern of decline during the palatial Late Helladic (LH) IIIB period, followed by recovery during the Postpalatial LH IIIC period. This is a pattern shared to some extent with other "provincial" areas, and explanations for it revolve around the exclusion of these marginal areas from the palatial economy.

In this paper, I explain this exclusion by invoking network theory. Pottery from Chalkis suggests that in the Early Mycenaean period (LH IIA), Chalkis was connected with other coastal sites in a maritime network stretching to the southern Aegean. However, as early as LH IIB, links with Boeotia become visible in the appearance of certain types of pottery, and by LH IIIA2 the pottery suggests that Chalkis is part of an overland network stretching across Boeotia, Achaea, and Elis. This suggests a reorientation of (pottery) networks, from maritime/coastal and roughly north-south to land based and roughly east-west. The decline of sites like Chalkis starting in LH IIIA2 suggests that this new network cut through the maritime network and disrupted it, marginalizing coastal sites that no longer capitalized on their natural advantage of maritime access.

Network structure changed as well: in the Early Mycenaean period, settlement along the Euboean Gulf and in Boeotia was characterized by the existence of a number of centers that were involved in elite consumption and appear to be peer-polities. By LH IIIB, the palatial center of Thebes monopolized the consumption of

exotic imports. Thus, the earlier distributed network transformed into a far more centralized network.

The weakness of any centralized network is the vulnerability of its hub: if the hub is taken out, the entire network falls apart. This seems to have happened throughout Mycenaean Greece at the end of LH IIIB, with the collapse of the palaces. The result is that settlement in the Boeotian interior dwindled in LH IIIC; along the coasts, however, the maritime distributed network was rebuilt, and a number of centers thrived, taking over the trade routes to the southeastern Aegean. The importance of ships and the sea for these centers is shown in depictions of these subjects on pictorial kraters from, for example, Kynos and Lefkandi.

Locating the Maritime Coastal Communities of Mycenaean Greece: An Ethnoarchaeological Contribution

Thomas F. Tartaron, University of Pennsylvania

Despite ample artifactual evidence for Mycenaean maritime activity, few anchorages and harbors of the Mycenaean period have been identified on Aegean coasts. Linear B texts reveal little about maritime activity; Mycenaean ships and boats have not been recovered; the Mycenaean apparently did not construct built harbors; and coastlines are transformed over time by erosion, sedimentation, and tectonic uplift and subsidence. Yet we know even less about the communities that inhabited and exploited the coasts. How were these people organized spatially and socially, and how did they form networks, both maritime and terrestrial, on local and regional scales? How can we characterize their relations with other coastal peoples by sea and with inland power centers (including palaces) on land? We gain certain insights from iconography and through a critical reading of the Linear B texts and early Greek literature (Homer, Hesiod). But in this paper, I focus on the largely untapped potential of ethnography and ethnoarchaeology, using a comparative approach as a means to better understand the lives of coastal people in early state societies. I report on the preliminary results of oral history interviews among elder fishermen and women in the Saronic Gulf and Aegean Thrace in Greece, and in the state of Kerala in south India. The interviewees lived in an era before commercial fishing and the use of motorized boats and modern technological aids such as GPS. Their occupations and daily lives were more similar to those of their ancient counterparts than of the fisher folk of today.

My objective is to identify cross-cultural patterns in “traditional” societies that might shed light on the archaeological record. Some common patterns emerge from the interviews and ethnographic data from other world areas: (1) the partial physical and/or social segregation of the seafaring community within the broader, local society; (2) the existence of an esoteric body of maritime knowledge transmitted from generation to generation in the form of practical instruction and maritime “lore”—that is, a maritime *habitus*; and (3) the peripheral status of the coastal/island dwellers relative to continental/inland centers whose power is based on agriculture, herding, and the acquisition of exotic goods in long-distance trade. I discuss how these life conditions engendered a distinct coastal identity and how

the findings can contribute to an ethnoarchaeological approach to reconstructing Mycenaean coastal communities and their networks, using the concepts of “coast-scapes” and “maritime small worlds.”

Italo-Aegean Network Dynamics During the Bronze Age to Iron Age Transition (ca. 1250–1000 B.C.E.): The Case of Achaia and the Argolid

Kimberley A.M. van den Berg, VU University Amsterdam

This paper presents a comparison of the evidence for Italo-Aegean relations between Achaia and the Argolid during the Bronze Age to Iron Age transition. It seeks to explain how these areas remained connected with Italy during the 12th-century B.C.E. crisis by drawing attention to regional trajectories in network dynamics. It is argued that, although the evidence shows some generic points of convergence at the regional scale, Italo-Aegean networks in Achaia and the Argolid each demonstrate specific local dynamics that need to be considered.

The organization of external relations in the Late Bronze Age Aegean is poorly understood. For the Palatial period, it is generally assumed that the Mycenaean palaces fulfilled a primary role in maintaining external relations. However, this does not explain how contacts continued after the destruction of the palaces ca. 1200 B.C.E. Drawing on network theory, this analysis starts from the position that aside from the palaces, there must have also been other highly connected nodes (“hubs”). It is hypothesized that these nonpalatial hubs played a key role in the survival of Italo-Aegean networks during the Postpalatial period.

One of the advantages offered by network theory is that it allows one to move effectively across scales. Local dynamics affect the network structure as a whole. Conversely, a single network observed at the regional scale may comprise distinct network communities at the local level. Therefore, to test the hypothesis of nonpalatial hubs, the nonpalatial region of Achaia and the palatial region of the Argolid are compared at different analytical scales.

In this comparison, the focus lies on the so-called Urnfield bronzes, a heterogeneous class of weapons, tools, and ornaments that first appeared in the Aegean ca. 1250 B.C.E. First, the diachronic and spatial distribution of these bronzes is examined for each region during the Palatial and Postpalatial periods to obtain a general picture of network dynamics and to identify regional hubs. Second, selected contexts are analyzed as a means to consider the dynamics and hubs at the local level. Third, the local and regional scales are confronted as a means to fully reconstruct Italo-Aegean networks.

This analysis indicates the importance of nonpalatial hubs for both palatial and nonpalatial regions. However, despite this correspondence, the preference for different types of Urnfield bronzes and the disparity in their distribution demonstrate that the nonpalatial hubs in Achaia and the Argolid had their own strategies for remaining connected to Italy.

Trade, Power, and Commodity Distribution in Early Greece: Truly an Age of Bronze?

Sarah C. Murray, University of Nebraska–Lincoln

On the Greek mainland, the transition between the Late Bronze Age and the Early Iron Age is widely understood as a period of significant change in trade systems. According to the traditional model, international trade during the Mycenaean period was directional to the palaces, with selective redistribution onward down the line to regional centers. However, postpalatial trade was characterized by localized control on the part of regional elites and wider access to desirable goods from abroad by those outside erstwhile palatial centers. In this paper, I examine the corpus of imported finished goods and bronze objects (which require imported tin to make) from the Late Helladic (LH) III B, LH III C, and Protogeometric periods to determine whether the archaeological data fit the prevailing model of devolution in the control of trade across the Bronze to Iron Age transition.

To test the traditional scenario, I present a comprehensive database of all imports and bronze objects known from pre- and postcollapse sites in Greece and examine changes in the intra- and interregional patterns of their spatial distribution over time. The data show that palatial centers did indeed monopolize both bronzes and imports with remarkably little local redistribution of either internationally acquired finished goods or bulk commodities (for which I use bronze objects as a proxy). During the LH III B period, bronzes and imports occur preferentially at palatial sites, especially in the Peloponnese, where more than 80% of all known bronzes and 90% of all known imports occur at or in the immediate vicinity of palatial centers. In the LH III C period, however, the distribution of both imports and bronzes widens out to a higher percentage of total sites in a greater diversity of locations, a trend that continues into the Protogeometric period.

I draw three significant conclusions. First, the data confirm the notion that imported objects and commodities were closely controlled as an instrument of symbolic power during the Mycenaean period and that this control was lost after ca. 1200 B.C.E. Second, I argue that the distribution of imported goods refutes the notion that the local redistribution of imports played a significant role in the perpetuation of power during the Late Mycenaean period. Finally, I suggest that the increasing availability of bronze, rather than a lack of access to imported tin, resulted in the move toward iron as the elite metal du jour during the Protogeometric period.

SESSION 5K**Undergraduate Paper Session**

CHAIR: *Steven L. Tuck*, Miami University

Visualizing an Iconographic Network Between Athens and Vulci in the Sixth Century B.C.E.

Tara M. Trahey, Duke University

The figured vase trade between ancient Athens and the Etruscan city of Vulci during the sixth century B.C.E. involved a complex arrangement of local and external networks that transmitted both physical material and cultural ideologies. This paper aims to visualize these relationships through a case study stemming from provenance research on twin Attic black-figure vases showing a “woman riding a bull.” In this paper, I use iconography, rather than traditional economic data, to construct our understanding of the ancient historical economic network between Athens and Vulci. Iconographic decision-making within Attic workshops depended on influences from both Athens and Vulci. I explore why ancient Athenian vase painters made particular choices in subject matter and how particular ideologies may have disseminated throughout production and export. I use the web-based visualization platform, Palladio, and an expanded data set of 100 vases with like iconography to create a set of network visualizations that explore how and why particular choices in subject matter were made. Connectivity is visualized between attributed hand, destination, shape, and trademarks. From the visualizations, I argue that the identity of the woman on the bull is purposefully ambiguous, and I demonstrate the cultural and economic reasons why such ambiguity was advantageous for the ancient pottery industry. Ultimately, the case study of the “woman riding a bull” presents an organization and visualization of a complex set of interactions, local and external. Through the use of network visualizations, the traditional established considerations for discussing iconography may be reevaluated in the context of visualizing the dynamic trade network of the sixth century B.C.E.

A Difference in Local Involvement: Comparing Scotland and Guatemala

Asia Alsgaard, Boston University

In Scotland, there is a strong connection between archaeological projects, the government, and the local community; in Guatemala, the native community’s voice is rarely heard. I argue that Scottish archaeological public outreach could be used as a model for Guatemalan archaeological sites in an effort to provide a way of connecting the local population with nearby heritage.

I compare and contrast experiences from two sites: the Ness of Brodgar, a Neolithic site run through the University of the Highlands and Islands Archaeological Institute by Dr. Nick Card, and Xultún, a Classic Period Maya site in Guatemala managed by Dr. William Saturno. I argue that at the Ness of Brodgar, there are three effective heritage-management traits: strong public outreach and interaction,

strong governmental support, and local involvement, all of which create an interactive site providing opportunities for the local inhabitants and visitors to support the project through either monetary donations or volunteer work.

In contrast, while governmental presence is strong in Guatemala, the working and environmental conditions can make public outreach on active archaeological sites difficult. This makes local involvement and investment that much more important to the longevity of the project; yet, only recently have local inhabitants begun to be included in archaeological projects.

I suggest Guatemalan archaeology would benefit from increased local involvement and public outreach as elucidated by community archaeology projects outside of the normal working relationship both in Guatemala and in other countries. I discuss specifically how the Ness of Brodgar works to connect the local population through archaeological sites using methods such as museum posters, archaeological digging opportunities, and local outreach. I highlight the methods most transferable to Guatemalan archaeological practice. Ultimately, I convey the message that it is local involvement in these projects that provides for continued investment and protection of these sites.

Pirates and Merchants: Evidence for a Thriving Hellenistic Crete

Elizabeth Cummings, University of Colorado at Boulder

From a geographic perspective, the island of Crete was well-positioned to engage in the rapidly expanding trade networks that flourished in the Hellenistic period. According to ancient historians such as Polybius, however, Crete's main form of subsistence was piracy and warfare. Modern historians and some archaeologists suggest only a simplistic agrarian economy existed on the island. This perception is furthered in modern scholarship by a dearth of archaeological research and publication on Hellenistic Crete. Such a combination of ancient negative accounts and lack of scholarship has discouraged consideration of increasingly valid arguments on Cretan history and economics during the Hellenistic period. This paper reexamines the prevailing theory that Crete was primarily agrarian, overwhelmingly piratical, and lacking a competitive economy.

By systematically reviewing the archaeological evidence of East Cretan Cream Ware, Hadra hydriai, and numismatics, this paper postulates that Crete maintained complex internal and external economies during the Hellenistic period. East Cretan Cream Ware and Hadra hydriai found throughout the Mediterranean and Egypt suggest a strong history of local production and export. An explosion of Cretan coin production in large urban areas points toward a flourishing economy. This archaeological evidence, in conjunction with Perlman's analysis of the First Cretan War, suggest bias against Crete in the ancient and modern literary record. Powerful entities such as Rhodes may have had reason to slander Crete because of competition in trade. In this paper, I argue that mounting evidence indicates prosperous Cretan merchants were transformed into "pirates" through the lens of history.

Evidence for the Eastern Origin and Transmission of the Cult of Dionysos

Simone Bates-Smith, University of Cincinnati

The image of Dionysos is one of the most common subjects of vase decoration in classical Athens. Through iconography, archaeology, and literature, it is evident that the Greeks believed that the cult of Dionysos originated in the east. This paper considers the possibility of Phrygia as the most plausible origin of Dionysos and aims to determine why the Greeks held this belief. It also examines how the knowledge of Dionysos was transmitted to Greece by analyzing archaeological data from Gordion and other Anatolian sites and literary evidence from classical Greek authors such as Homer, Hesiod, and Herodotus. Through this investigation, I found that Dionysos was lost in the literary tradition after the Late Bronze Age, while the archaeological tradition shows how cultural borrowing linked Thrace, Phrygia, and Greece, leading to the resurgence of Greek knowledge of Dionysos.

Linear B evidence indicates that Dionysos was a member of the pantheon during the Mycenaean period. Yet works from Hesiod, Homer, and Herodotus show Dionysos as a newcomer or latecomer into the Greek religion with non-Greek characteristics such as drunkenness and irrational mania during cult worship. These foreign characteristics point to eastern influences, specifically Phrygian, which was itself a blend of Brygian, Phrygian, and Anatolian cultures. Brygian and Anatolian influences in Phrygia can be tracked by the diffusion of pottery styles that suggest the migration of the Brygian people from Thrace into Phrygia. It also suggests trade and the diffusion of ideas between the civilizations within the Thracian-Phrygian cultural zone. This evidence leads to the conclusion that Hesiod wrote during the height of Phrygian civilization (ca. 750 B.C.E.); his work embraced the height of Greek interaction with Phrygia and Phrygian influences in Greece. The classical Greek authors, such as Herodotus, used their conceptual geography of the east and their cultural memory of the importance of Phrygia. They all used the foreign characteristics of Dionysos and the belief that he traveled from Phrygia into Greece to create a legitimizing biography for the god that explains his eastern character. I argue that the knowledge of the Dionysian cult was spread from Mycenae to the Brygians in Thrace in the Bronze Age and then to the Phrygians in Anatolia and back to the Greeks in the Iron Age. This route accounts for the disappearance of Dionysos in the Late Bronze Age and his reemergence in the Classical period as well as his eastern character when he returns to Greece.

Investigating the Relationship Between Spiritual and Artisanal Practices in Etruria: The Case of Cetamura del Chianti

Courtney Miller, University of North Carolina at Asheville

The Late Etruscan (third- to first-century B.C.E.) site of Cetamura del Chianti possesses one of the best-preserved Etruscan kilns for the production of brick and tile. Cetamura is significant because a number of artisanal facilities, which include the kiln complex, are situated within the boundaries of a clearly delineated sacred space. Remains of ceramic wares found within the kiln indicate a relationship between kiln firings and ritual activity. Evidence of ritual is common throughout Etruria, particularly vessels purposely broken and vessels whose purposes were

solely ritual—*paterae*, for example—found in strata that correspond to significant events during the use of the kiln, such as its opening and closing. However, multifarious diagnostic ceramic remains representing each variety of ware used at Cetamura, from utilitarian wares to finely manufactured gloss-coated wares, were collected in high density throughout all stratigraphic layers within the kiln. These findings illustrate that ritual practices were undertaken with much more frequency than has been previously evidenced at other Etruscan kiln sites. Since the kiln at Cetamura is one of the best-preserved Etruscan brick and tile kilns surviving and since as such the ceramic remains were not a product of this kiln, the types of wares found within indicate that they were placed in the firing chamber for ritual purposes. Analysis of these wares shows that they served the purpose of ensuring a safe firing for batches of brick and tile. The evidence of these rituals reveal a reverential attitude toward the metamorphic and transformative powers of fire, which ultimately demonstrate the elevation of certain natural phenomena as a means of communicating with the supernatural world.

SESSION 6A

Women in the Ancient World

CHAIR: *Allison Sterrett-Krause*, College of Charleston

Women Gone Wild: The Iconography of Female Susceptibility on Two Attic Vases

Lillian B. Stoner, Institute of Fine Arts, New York University

Aristotle expressed a popular belief when he described female physiognomy as dangerously porous, fluid, and fundamentally unbalanced. These characteristics made women indispensable for the performance of certain religious activities in archaic and classical Greece in part because it rendered them susceptible to the influence of divinely induced ecstasy and strong emotion. The following paper examines images of women on two red figure Attic vases (Berlin F2290 and Athens CC1167), which are particularly fine examples respectively of maenads cavorting around a krater and men and women lamenting around a bier. Although their ritual activities are on the surface unrelated, strong iconographical resemblances link their actions and comportment. While the structural similarities between the state of mind of maenads and mourners in literature have been studied, how they were reflected in the numerous depictions of Dionysian and funerary activity produced in the late sixth and fifth centuries B.C.E. has not been sufficiently investigated.

On the two vases in question, the wildly disordered hair of the female participants – so unlike the numerous contemporary representations of contained or covered tresses – is explored as an exceptionally expressive visual indicator of emotional distress and discussed in terms of female ritual agency. The rare iconographical marker of disheveled, unbound hair is demonstrated to have become a manifestation of innate ‘female’ qualities activated by the fifth century B.C.E., corresponding to a prevailing interest in madness in contemporary drama. The red figure technique and its potential to legibly render the trope of the ‘untamed’ female is considered as a crucial technological development. Disordered hair is

further revealed to be an indispensable means for Greek artists to communicate pathos to a receptive audience, and a motif that would later be taken up exuberantly in the Hellenistic period and beyond.

Women in the Sanctuary: New Evidence for Female Participation in Ritual at the Northern Etruscan Sanctuary of Poggio Colla

Gretchen E. Meyers, Franklin & Marshall College, and *Ann Steiner*, Franklin & Marshall College

The past 20 years of excavation at Poggio Colla in northern Etruria have produced a rich picture of a religious site and its evolution over five centuries, ca. 700-200 B.C.E. Several key deposits and categories of material evidence permit the reconstruction of ritual at the site, many in connection with significant architectural changes, including the building of a monumental temple; an altar and courtyard building; and the final abandonment of the site. Previous scholarship (Meyers, *AJA* 117 [2013], 247-274) lays out evidence from the number and deposition of ceramic textile tools at the site to suggest that the divinity honored at the site may be female.

This paper furthers interpretation of the site through an additional methodology that examines interrelations between artifact types in order to achieve two goals: 1) to reconstruct the activities of mortal women, using material evidence to reveal ways they may have engaged in a wide spectrum of religious acts beyond the one-time ritual events so richly represented; and 2) to consider specific artifact assemblages in order to link the activity of women at Poggio Colla and funerary ritual as practiced at other sites in the region and elsewhere in Italy.

The authors focus on two categories of artifacts from sixth- to fourth-century B.C.E. contexts at Poggio Colla: ceremonial spinning equipment in the form of bronze spindles or distaffs, of which two previously unpublished examples are presented here; and unpublished skyphoi *sovradipinto*, a type of drinking vessel that has been strongly correlated with female tombs at nearby Monte Tamburino (Vitali, *La necropoli di Monte Tamburino a Monte Bibebe* [Bologna 2003]). The intriguing overlap at the sanctuary of Poggio Colla, articulated here for the first time, between assemblages typically found in female graves throughout Etruria such as tools for spinning and weaving, fibulae, jewelry, and drinking vessels and their corresponding record in a non-funerary, sanctuary context is striking, providing new insights into the life of the sanctuary through its worshippers. The new evidence presented here not only enhances interpretations of ritual at an important northern Etruscan sanctuary, but also offers new lines of inquiry about the role of functional and ceremonial objects as markers of identity.

Epigraphic Evidence of the Erection of Monuments by and for Important Local Women in Larinum

Elizabeth C. Robinson, Binghamton University, The State University of New York

This paper discusses the roles played by female members of the aristocratic families of Larinum in the period from the Late Republic to the Mid-Empire (first

century B.C.E. to second century C.E.). Larinum, located in Italy on the eastern edge of Samnium, was an important regional center that became a Roman municipium shortly after the Social War. During the Imperial period various families from the town bearing local gentilician names rose to power locally and at the empire-wide level. Epigraphic evidence shows that men from these families were honored both in Larinum and throughout the Empire.

The epigraphic record also provides important information about the women from these aristocratic families. Multiple women appear as benefactors and dedicators of monuments, as well as honorees and recipients of statues in the town. The inscriptions preserve evidence of the important roles that these women played in Larinum. These women include Cluentia Asiaticae, a wealthy freedwoman who erected a funerary monument for herself and her family. They also include Oppianica and Biliena, two daughters who erected a fashionable, large round funerary monument to their mother, Didia Decuma. Perhaps the most epigraphically visible of all the women of Larinum was Coelia Tertulla, who at the age of seven served as priestess of the cult of Divine Livia. This honor is recorded on an inscribed statue base naming her as the first of all the women of Larinum to receive this honor. The statue base was erected by her grandmother, Gabbia Tertulla. Two additional honorary inscriptions were also erected by Coelia Tertulla herself. She may have been related to another ambitious woman of the Gabbia gens who paid for the rebuilding of an unknown structure while serving as the priestess of a female imperial cult.

This paper explores the possible motivations of these women, as well as their leadership roles within the town. While the men of Larinum received direct political advantages from their patronage to the town and their presence in the epigraphic record, the benefits for the women are less obvious. Should we assume that they sought to promote their family names for the political benefit of the male members, or were there other motivations behind their actions? Many of the inscriptions focus on the women alone, and on their roles as commissioners of the inscriptions, suggesting that these women had their own means and their own reasons for erecting these monuments.

Cosmos and Cosmetics: Reading Women's Desire on a Flavian Bronze Mirror

Herica Valladares, Independent Scholar

Feminist scholarship on Roman art has long been concerned with questions regarding the representation of women's status and identity on public and private monuments. More recently, however, greater emphasis has been placed on the problem of how women's desire, their sense of self and their aspirations were both molded by and communicated through the images that surrounded them. This paper aims to further this particular line of inquiry by analyzing the iconography of a Roman bronze mirror dated to the late first century C.E. Found on the Esquiline Hill in the late nineteenth century, this mirror presents us with an unusual set of images: on its richly decorated back, we see a couple making love on an ornate bed in a room that is filled with luxury items (e.g. voluminous blankets, elegant serving vessels, jewelry, an erotic panel painting, and of course the bed itself); while on the other side, framing the mirror's reflecting surface, we find a representation

of the zodiac. What was the meaning of this uncommon juxtaposition? And for whom was this object created?

The lovers' unabashedly sensual embrace has led scholars to theorize that this mirror must have belonged to a courtesan, deeming its iconography too risqué for the eyes of proper matrons. Instead I will argue that the images on this mirror encapsulate a Roman fantasy of a sensuous, emotionally fulfilling private existence in which the bond between husbands and wives was predicated on mutual desire and affection. Like contemporary Roman sculptures that fused individualized portraits of everyday women with the idealized bodies of goddesses such as Venus, this mirror presented a domesticated view of sexuality, whereby women's desire and pleasure were inextricably connected with notions of fertility and the perpetuation of the family line. At the same time, the Flavian mirror from the Esquiline was meant to elicit not only aesthetic, but also intellectual delight. Latent in its design, we find a witty wordplay between Greek kosmos and Latin mundus—a term that referenced both the universe (symbolized by the zodiac) and the collection of objects used by women to adorn themselves, the mundus muliebris. Created for a highly sophisticated female viewer, this mirror reflected an idealistic view of daily life onto which one could project oneself and, thus, momentarily blur the lines between reality and fantasy.

A Juno in the Kitchen: Representations of Women in Domestic Shrines

Shannon Ness, University of Michigan

The painted lararia of Pompeii are often dismissed as homogeneous in their compositions of serpent(s), Lares, and genius. However many shrines feature sacrificial attendants and gods other than the Lares. I examine five shrines in which a woman accompanies the genius. This figure is identified as the female equivalent to the genius, a juno—the tutelary spirit of a woman.

If this female figure is a juno, I seek to understand her inclusion within the lararium and how this inclusion may reflect changes in Roman domestic religion during the first century C.E.

To begin, I compare the dress and stance of each potential juno against contemporary representations of goddesses, mythical women, and real Roman women in various mediums. I exclude one shrine from further consideration on the basis the female is a deity by her iconography. I then consider the other elements depicted in the shrines: sacrificial attendants and offerings, additional participants, the costumes of the figures, and any additional iconography. This information I reference against the surviving literary evidence of domestic holidays, particularly those in which the materfamilias has an active role.

Many of the holidays in which the materfamilias participates involve the slaves of the household. I identify a large group of slaves as the spectators of a sacrifice in the shrine from the House of L. Helvius Severus. It seems possible this shrine represents a particular pious act, perhaps the Saturnalia, rather than a generic one. Relatedly, the shrines are located within and adjacent to spaces associated with slaves, such as the kitchen.

Finally, I consider the literary and epigraphic evidence. By the early Principate, a juno is a concept understood as the spirit of a woman and equivalent to man's

genius as seen in the Arval Acta belonging to the reign of Nero (CIL VI 2043). Pompeii has inscriptions associated with *lararia* that record vows made by freedman in honor of their former master's genius, including the shrine from the House of C. Julius Polybius, which also depicts a *juno*.

As preserved at Pompeii, the *juno* seems strongly connected with the slaves and freedman of the house. As women gain and wield more influence during the early empire, they also gained a tutelary spirit of their own. And as citizens offer sacrifices in honor of the spirit of an empress, I argue the servile family members would offer similar reverence to their *domina*.

Intersections: Gender and Context in the Expression of Isiac Identity

Lindsey A. Mazurek, Duke University

In Book XI of the *Metamorphoses*, Apuleius describes the Isiac procession in Kenchreai as a swirling mass of color, sound, and exotic ritual. Women and men walked together, dressed in strange, multicolored garments that denoted their status within the cult. These costumes also performed a key function when the normally cloistered cult entered the public sphere: they aligned the wearer with the Egyptian gods and the sense of exoticism that permeated the cult.

In this paper, I study honorific portrait statues and grave reliefs of female and male Isiac worshippers from Delos, Athens, and Marathon. As M. Swetnam-Burland has demonstrated for Italy, devotees used Isiac costumes in mostly private contexts, suggesting that the choice of whether to include Isiac dress in the representation depended on the portrait's audience and location. In Greece, however, the presence of a large corpus of publicly-displayed funerary monuments depicting women in cultic dress, studied previously by E.J. Barrett, suggests a more complex decision-making process that also factored in local ideas about gender and context.

In order to understand how these competing concerns intersected, I analyze differences in cultic and gender expression in public and private contexts. In sanctuaries of the Egyptian gods, which were usually restricted to devotees, few men are depicted, but the few that do appear wear priestly dress. Women, on the other hand, often represent themselves in traditional Graeco-Roman clothing. In these funerary examples, women frequently employ cultic dress, but men appear in the Graeco-Roman chiton and himation. Context also factors into these representations: while honorific portrait statues from Egyptian sanctuaries would have been visible only by other initiates, grave stelai would have been displayed in more public spaces accessible to non-devotees. These variances in costume suggest that women and men emphasized cultic status in different social and cultural contexts, allowing us to ask new questions about how divergent cultural and religious interests interacted in the production of Hellenistic and Roman honorific portraiture.

Women in Trouble. A Gendered Analysis of the 'Confession Inscriptions' from Asia Minor

Irene Salvo, Royal Holloway, University of London

An ever-growing corpus of inscriptions from Asia Minor, the so-called 'confession inscriptions', allows us to study the personal religious experiences of ancient Greek women in different situations of trouble and distress. I intend to present a selection of the most exemplary texts in order to show how these texts effectively contribute to rewriting the history of women in antiquity.

'Confession inscriptions' are a group of over 140 documents from the regions of Lydia and Phrygia. They are dated from the first to the third century C.E. and were inscribed on stelae dedicated in sanctuaries (see the main catalogue in G. Petzl, *Die Beichtinschriften Westkleinasiens*, in *EpigAnat* 22 [Bonn 1994]; since then, new documents have appeared in other publications). Men and women considered any sickness, misfortune, or death occurred to them or their family as divine punishments for a criminal offence, for a sin against the gods, or for a violation of purity and cultic rules. The public confession of the committed wrongdoings resulted in an inscription that exalted the power of the god and appeased the divine wrath. Offering information on specific circumstances, these texts reveal the religious attitude of private individuals.

Scholars have primarily analyzed the religious mentality and the ritual practices behind these texts. Others studies have focused on the social construction of emotions, on the diffusion of literacy, or on legal customs. However, still less attention has been paid to the gender issues aroused by these documents. My aims are to explore this material specifically under a gender perspective and to examine women's agency in ancient social communities.

In these texts, women appear in a variety of roles: mothers, daughters, sisters, wives, widows, slaves, concubines. We hear stories of disease, perjury, theft, gossip, sex, fertility problems, and more. An example is a text that may help to understand magical practices about abortion, and how they were accomplished by women for women (Petzl 1994 no. 59, ca. 150–250 C.E.). In this analysis I highlight how women were autonomous from men. However, women should not be considered as a separate group on its own: they need to be investigated as agents of culture. Social and economic factors are to be taken into consideration in the definition of gender categorizations. A productive interaction between epigraphy, history, and social sciences, offers a fresh perspective to the social contexts of gender differences in imperial Asia Minor.

SESSION 6B: Colloquium**Recent Archaeological Work in the Sanctuary at Claros, Turkey**

Sponsored by the French American Cultural Exchange and Andrew W. Mellon Foundation

ORGANIZERS: *Deborah N. Carlson*, Institute of Nautical Archaeology, Texas A&M University, and *Jean-Charles Moretti*, CNRS, Institut de Recherche sur l'Architecture Antique, Université Lumière de Lyon 2

Colloquium Overview Statement

The Sanctuary at Claros (Turkey) is known from literary sources to have been the site of one of the most important ancient oracles of Apollo. It was located in the early 20th century, and subsequent excavations by French archaeologists Louis Robert (1950–1961) and Juliette de La Genière (1988–1997) revealed propylaea, temples and altars dedicated to Apollo and Artemis, hundreds of inscriptions, dozens of marble statues and honorary statue bases, and very rich ceramic, numismatic, and metallic assemblages. Since 2001, excavations have continued under the direction of Turkish archaeologist Nuran Şahin, who will open the colloquium with a paper summarizing the evidence for the founding of the sanctuary in the Late Bronze Age as well as for the worship of a female goddess in the Archaic period.

Some of the most robust research conducted during the last decade has focused on the architecture of the massive Temple of Apollo, beneath which is an exceptionally well-preserved oracular suite comprising winding corridors and an adyton with a well from which sprang the prophetic water. Evidence for the two major construction phases of the Temple of Apollo (fourth century B.C.E. and Hellenistic/Roman) will be delivered in two separate papers by the French team directing this ongoing research led by Jean-Charles Moretti. German archaeologist Ulf Weber will discuss construction marks on the blocks as evidence for the organization and assembly of monuments within the Claros sanctuary, including the altars, which offer precious direct evidence for how Greek priests conducted the hecatomb. Underwater archaeologist Deborah Carlson will deliver a paper summarizing recent collaborative efforts to identify the marbles used in the Temple of Apollo, a project that springs from her excavation of a Late Hellenistic shipwreck at nearby Kızılburun, Turkey (2005–2011), which was transporting pieces of a column destined for the facade of the Temple of Apollo.

The rich corpus of inscriptions from Claros has done much to elucidate the sanctuary's complex history between Colophon and Notion, the variety of people who visited the oracle, and the identities of political and religious officials. Epigrapher Denis Rousset's recent work on an inscription describing land acquisition at Claros provides precious evidence for one of the most ancient tribes of Ionia. This colloquium, which is funded by the French American Cultural Exchange and the Andrew W. Mellon Foundation, honors the contributions of French researchers by bringing their work at Claros to the most prestigious archaeological venue in North America.

Evidence for the Early Sanctuary at Claros from Recent Excavations (2001–2014)

Nuran Şahin, Ege Üniversitesi, and *Gulsah Gunata*, Koç Üniversitesi

The Sanctuary of Apollo at Claros is within the borders of the modern town of Ahmetbeyli, in the Menderes district of Izmir Province, Turkey. It is situated 13 km southeast of Colophon (Değirmendere) and 1,600 m north of Notion (Colophon by the Sea). The sanctuary at Claros functioned as a “Prophecy Center” from its foundation in the 13th century B.C.E. until its abandonment in the fourth century C.E. The first research related to Claros started at the end of the 19th century.

During excavations carried out between 2003 and 2008, bronze knives, bronze arrowheads, fibulas, a Mycenaean kylix, and terracotta human and animal figurines that date to Late Helladic IIIB/C were found under the circular altar in the sector of Apollo. These finds are decisive evidence for the foundation of the sanctuary in the Mycenaean period. An inscribed marble fragment with an image of Apollo was found in 2008 in the sanctuary. This fragment is evidence for both the relation of Claros with Delphi and the arrival of a new cult in Claros.

During the campaigns of 2009–2011, we conducted surveys southeast of the Temple of Apollo in search of the north side of the Sacred Way. The work led to the discovery of various pieces of gold, electrum, and bronze jewelry and ornamentation, along with female votive statuettes. Materials from an archaic temple and altar—revealed in the BOA sector during the excavations in 2009–2013—indicate a goddess. Does the discovery of pendants, figurines, and elements of female adornment support the idea that two walls discovered south of the Temple of Apollo belonged to a building dedicated to Leto Claria in the Archaic period? We explore the possibility that Leto had, south of the Temple of Apollo, an area of worship symmetrical to that of Artemis north of the temple.

The Temple of Apollo from Its Beginnings in the Late Fourth Century B.C.E.

Jean-Charles Moretti, CNRS, Institut de Recherche sur l’Architecture Antique, Université Lumière de Lyon 2, *Nicolas Bresch*, CNRS, Institut de Recherche sur l’Architecture Antique, and *Jean-Jacques Malmary*, CNRS, Institut de Recherche sur l’Architecture Antique

Recent research on the Temple of Apollo at Claros has clarified the date of its construction, its relationship with the archaic temple, and the overall plan of the building. It was atop the ruins of the archaic temple, which was likely destroyed by the Persians, that a new temple was begun in the last decades of the fourth century B.C.E. Construction of this temple was abandoned when, in the early third century B.C.E., the Colophonians were deported by Lysimachus to found New Ephesus. The central part of the temple was occupied by a courtyard where there was a well, which was already present in the archaic temple. The crepidoma had five levels decorated with astragals, a symbol of oracular activity that is also found on the coinage of Colophon. The temple was designed as a peripteral Doric building with six columns in front and back and 11 on the sides.

Although the arrangement of the vestibule remains unclear, it appears that the temple shares some of its features with that of Didyma, and the process of consulting the oracle in the two sanctuaries was probably comparable. It is nevertheless

surprising that a Doric order was chosen at a time when the Ionian renaissance required Ionic almost everywhere. One is tempted to report a willingness to maintain the same order as in the archaic temple, but the absence of any single archaic architectural fragment during excavations leads one to wonder whether the choice is not better explained as a reference to the Temple of Apollo at Delphi, which was rebuilt in the fourth century B.C.E.

The Evolution of the Temple of Apollo During Hellenistic and Roman Times

Nicolas Bresch, CNRS, Institut de Recherche sur l'Architecture Antique, *Jean-Charles Moretti*, CNRS, Institut de Recherche sur l'Architecture Antique, Université Lumière de Lyon 2, *Isabel Bonora*, Musée du Louvre, and *Olivier Riss*, Architect

The Temple of Apollo was abandoned at the beginning of the early third century B.C.E., with neither the columns nor the walls complete. Construction of the temple resumed in the course of that century or at the beginning of the second century. The plan of the sekos (inner chamber) was totally transformed, but the layout of the peripteral colonnade was preserved. In the courtyard, a crypt was installed with a room for inquirers and another room where one finds the well for the person who delivered the oracles. Above the crypt, the naos was arranged with a statuary group representing Apollo seated between his sister, Artemis, and his mother, Leto. It was preceded by a distyle Doric pronaos, in front of which one gained access to a corridor of black marble that led to the crypt. Such a transformation of the original project is probably to be understood as a modification of the method for consulting the oracle. Now, some inquirers would have had the right of accessing the crypt directly to hear the oracular speech, as was the case at Delphi. Inscriptions of the Imperial period suggest that at Claros, inquirers could descend into the crypt after participating in the celebration of the mysteries.

The work seems to have progressed slowly. The crypt and the sekos were completed during the Hellenistic period, but work on the peristyle continued into the Imperial period. The discovery of the Kızılburun shipwreck confirms that they were already underway in the first century B.C.E. The inscription credited to Tiberius on the pronaos entablature proves that the entablature of the temple facade was not in place during the reign of that emperor. The entablature of the peristyle was installed with the East pediment only in the time of Hadrian, who financed part of the work but left the temple unfinished with six columns in front, only five on the long sides, and none at the rear. This explains why Pausanias (VII.5.4) classifies the sanctuary of Claros, as well as that at Didyma, as unfinished buildings.

The Sources and Shipping of Marble Used in the Temple of Apollo

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Between 2005 and 2011, the Institute of Nautical Archaeology (INA) at Texas A&M University excavated the remains of an ancient marble carrier that sank off

the coast of Kızılburun, Turkey, while transporting more than 60 tons of newly quarried marble in the form of eight column drums, a Doric column capital, and various blocks, headstones, and basins. Ongoing analysis of ceramics and other artifacts excavated from the wreck, which are currently being conserved at INA headquarters in Bodrum, Turkey, suggests that the shipment dates from the first century B.C.E. Chemical analysis of some stone artifacts indicates that the marble cargo originated on the island of Proconnesos in the Sea of Marmara, while careful metrological study shows that this massive Doric column was almost certainly destined for the Temple of Apollo at Claros.

The Kızılburun shipwreck provides direct archaeological evidence for the maritime transport of marble between the quarry and the construction site. Other ancient shipwrecks often reveal evidence for points of origin or intended destination, but very rarely have both been determined for a single voyage. Comparison of the eight unfinished column drums from Kızılburun with the finished parts from the Temple of Apollo at Claros provides a measurable value (3–5 cm/1–2 inches) for the “quarry coat”: the amount of marble left on blocks of this size to protect them during transport by sea. The match in size and shape between the unfinished capital and drums on the shipwreck and the finished parts at Claros suggests close contact between masons at the quarry and builders at the sanctuary.

In this paper, we present the results of our ongoing efforts to collect and analyze marble samples from architectural pieces at the Claros temple to determine their likely source(s) using a combination of methods including stable isotope analysis, electron paramagnetic resonance (EPR), and cathodoluminescence (CL). Preliminary data suggest that some of the blocks were extracted locally from the quarries at Ahmetbeyli, while others (such as the Kızılburun column) were imported from Proconnesos Island at a distance of 200 nautical miles. Logistical simplicity and cost-effectiveness typically dictated that ancient engineers use local marble sources whenever possible, but the results of these analyses may make it possible to explore questions about whether difficult decisions at the construction site were dictated by the availability or by the desirability of different marble types.

New Construction or Reconstruction? How Assembly Marks Enlighten Building History at Claros

Ulf Weber, Martin-Luther-Universität Halle-Wittenberg

Mainly used in Greek architecture for building in stone, assembly marks played an important role in guiding the implementation of blocks in the correct order. These marks usually consisted of ordinal numbers engraved on cut stones to mark contiguous elements. The numbers were mostly Greek letters, and it is sometimes possible to identify successive numbers in neighboring blocks. Assembly marks were used in ancient architecture for new construction, for repairs, or for repurposing groups of elements or even entire buildings. Present in nearly all Greek sites, assembly marks are also found at Claros, on at least five buildings including the Hellenistic Temple of Apollo, the two Hellenistic altars of Artemis and Apollo, the monument foundation in conglomerate, and the Exedra of Heracleides.

Assembly marks on the column drums of the Temple of Apollo were etched during its construction and help determine both the number of drums that com-

posed a column and the height of the column. By contrast, assembly marks on the four buildings east of the sanctuary were used to guide masons tasked with their second assembly. New altars to Apollo and Artemis were constructed during the third and second centuries B.C.E. and then dismantled, enhanced, and reinstalled in the same place at the end of the second century B.C.E. Such enhancement is not unusual at Claros, as evidenced by the archaic and classical altars of Apollo and Artemis. On several occasions over the centuries, these altars were raised to prevent them from disappearing in the sediments of the river Ales.

The conglomerate foundation, which is the base of a votive monument, was transplanted from an unknown site to its current location at the end of the second century B.C.E. The Exedra of Heracleides was also relocated, but probably later, perhaps in the middle of the first century B.C.E. Moving votive monuments, accompanied by burning a new dedication, was a common practice in ancient sanctuaries. The construction of new buildings or large spaces frequently accompanied changes of this type. Such was the case at Claros, where they enlarged the sacrificial area between the temples and the altars of Apollo and Artemis to install stone blocks with bronze rings to accommodate the sacrifice of 100 cattle known as the hecatomb.

The Stele of the Geleontes from the Sanctuary of Claros

Denis Rousset, École Pratique des Hautes Études

Among the many inscribed monuments discovered over the past century in the Sanctuary of Claros in the territory of Colophon is a beautiful stone unearthed in 1995 during excavations directed by Juliette de La Genière. The stone carries the longest complete inscription ever found in the territory of this Ionian city. Arranged around a prancing horse carved in low relief, this set has six different documents spread over 195 lines, of which two texts are engraved in small letters that are very difficult to decipher. These documents, dating from ca. 200 B.C.E., account for the acquisition of fields and rural properties because of two purchases and a donation to benefit the community of Géléontes. About 246 of them contributed by making individual donations, making this one of the most comprehensive lists among the Greek public registers. The study of these documents, which provides an opportunity to revisit the political and numismatic history of the Colophonians, who were divided between Old Colophon and Colophon by the Sea, constitutes an important contribution to the knowledge of their place-names and their institutions: the Géléontes there formed a political subdivision, very probably a *genos*.

SESSION 6C: Colloquium

The Consumer's Choice: Uses of Greek Figure-Decorated Pottery

ORGANIZERS: *Thomas H. Carpenter*, Ohio University, *Mark Stansbury-O'Donnell*, University of St. Thomas, and *Elizabeth Langridge-Noti*, American College of Greece

Colloquium Overview Statement

As the publications of excavated contexts become more plentiful and as older contexts are reexamined, it is increasingly possible to study Greek figure-decorated pottery from the perspective of its use and to move from there to the possible meanings images had for the individuals who obtained the objects on which they appear. The papers in this colloquium explore the relationships between image, shape, and use in different contexts with a focus on the consumer—Greek and non-Greek—rather than on the producer. Each paper focuses on a pot or pots with a specific definable context of associated objects and explores possible reasons for the choice of the image or shape based on a broader understanding of the occurrences of similar images or shapes.

The chronological and geographic ranges of the objects discussed in the five papers are broad, from eighth-century B.C.E. Attica to fourth-century B.C.E. Apulia, from Gordion to Macedonia to Etruria.

The first paper examines a large eighth-century pitcher found in a shaft grave of a female in Nea Makri (eastern Attica) on which more than 83 dancers are depicted in two friezes that circle the vase. The author explores the implications of this extraordinary vessel for Attic funerary practice.

The second and third papers consider Attic black-figure vases from the mid sixth century. One suggests the possible ethnic significance of a group of Little Master cups found at Gordion that date to just before the Persians took the site from the Lydians ca. 540. The other argues for the social implications of a column krater found in a rich tomb of a boy under the age of 10 at Sindos in northern Greece.

The fourth paper examines the depiction of a woman with a handloom on a fifth-century Attic red-figure hydria used as a cinerary urn, which was found in a tomb from the Valle Trebba necropolis at Spina. The paper replaces the traditional view—which identifies women with hand-looms as prostitutes—with a nuptial interpretation. The fifth paper starts with a large, Attic red-figure skyphos from a tomb at Rutigliano in Apulia, which was found with eggshells in it. The author demonstrates how different cultural entities could appropriate Greek shapes and use them to fit their local needs.

These five papers illustrate the potential for examining figure-decorated vases in their archaeological and cultural contexts rather than as individual works of art that represent stylistic or iconographic developments.

Interpreting a Giant Pitcher from Marathon

Vicky Vlachou, CReA-Université Libre de Bruxelles

A unique vessel, a giant pitcher reaching 78 cm in height, was found in 1995 during rescue excavations along Marathonos Avenue, at the southern entrance of

the Marathonian plain. Although the burial was partly disturbed, the large vessel seems to have been placed with the burial of a young female, along with two small stranded bowls and two simple bronze finger rings. The burial can be dated to the Late Geometric period and forms part of a larger burial ground of the Geometric and Archaic periods that has been investigated in the same area to the west of Brexiza. Our interest is placed on the extraordinary and at the same time highly unusual figured decoration that covers the whole surface of the vessel and leaves no vacant space at all. A mixed dance of 40 figures, alternating males and females, is placed in a continuous frieze on the lip of the vase, and a second dance is represented on the lower part of the body, with 43 female figures; six panels can be seen around the belly of the pitcher depicting human figures, animals, and real and mythical creatures.

The imagery of the pitcher suggests a festive gathering, despite its placement with a burial. The choice of certain iconographical themes, such as the winged horse, the capture of a feline, and the male-female union, have no precedents in Geometric iconography, while the large number of the dancers depicted finds no parallels in Greek art. Style demonstrates strong connections with the concurrent Athenian workshops, although a local production is suggested by its technical characteristics.

I argue that a specific class of pottery, the large pitchers that are found only in Athens and Attica, is inextricably associated with Attic funerary behavior, most probably toward young females. Such vessels seem to represent special commissions presumably related to the class and gender of the deceased. The Marathon pitcher, however, is the only vessel painted with such dense and original figured decoration, which taken as a whole seems to illustrate the intended effort of the painter to depict a certain story.

Gordian Cups and Other Attic Black-Figure Cups at Gordion in Phrygia

Kathleen M. Lynch, University of Cincinnati

The contexts of Attic black-figure kylikes—including Gordion cups—from the Phrygian site of Gordion suggest that occupying Lydians may have used them, not the native Phrygians.

The site came under Lydian control in the early sixth century, and the Persians took the site by force ca. 540 B.C.E. A mid sixth-century tumulus with two Gordion cups, K-V, is the only burial context with Attic pottery, despite many known tumuli of this period. K-V is odd in other ways, indicating that its owner wished to distinguish himself from others. Another Gordion cup was found in a dump of debris created by the Persian sack of the site. Altogether, excavators recovered fragments of about 20 mid sixth-century Attic black-figured cups, many from the fortified barracks used by the Lydians to defend the city against the Persians. The iconography of the black-figure cups from Gordion is typical for the shape: sphinxes, dolphins, and decorative nonsense inscriptions. However, vases attributable to Lydos, Kleitias and Ergotimos, and Sondros do indicate that quality pottery workshops served the Gordion market. Since no black-figure cups are found farther inland in Turkey, Gordion must have been the destination for the trade.

The predecessor to the Persian Royal Road, which started at Sardis and ran through Gordion, was the main trade route in the sixth century. Excavations at Sardis, the Lydian capital, found a similar number of Attic cups. It seems plausible that the users of the mid sixth-century black-figure cups at Gordion were Lydian, not Phrygian, and wished to distinguish themselves from native Phrygians through use of imported Greek objects in Lydian drinking or dining activities. The kylix shape may have appealed to Lydians because of their own tradition of stemmed dishes. The rarity of imported or local kraters and oinochoai from the assemblage, however, indicates that the Lydians were not holding Greek-style symposia.

Too Young to Fight (or Drink): A Warrior Krater in a Child Burial at Ancient Sindos

Vivi Saripanidi, CReA-Université Libre de Bruxelles

The subject of this paper is an Attic black-figure column krater by the Painter of Louvre F6. The vessel is dated to ca. 540 B.C.E. and is decorated with a scene of a departing warrior on the front and a group of animals on the back. This is one of the four imported and locally made vessels that were found in Grave 66 of the archaic to classical cemetery of ancient Sindos, which is located in northern Greece a few kilometers to the northwest of Thessaloniki. The excavation of this cemetery in the early 1980s brought to light 123 mostly lavishly furnished burials that belonged to men, women, and children. Although the ethnic identity of this population remains uncertain, the mortuary practices attested at the site are indistinguishable from those recorded at Macedonian cemeteries, such as the one at Vergina.

Grave 66, a rather richly equipped pit grave that also yielded several golden and iron artifacts, had received a young boy, less than 10 years old, who died ca. 530 B.C.E. Taking into account the patterns of the mortuary consumption of vases attested at the cemetery, this paper demonstrates that the krater mainly functioned as a sympotic vessel. More precisely, as such it alluded to the high social rank ascribed to the dead boy and perhaps also to his cultural identity. However, since the boy was buried with the attributes of a warrior (a sword, two spears, and a knife), the paper also considers whether the subject of its figural decoration may also have affected the selection of this vase as a gift for this particular burial. In this frame, it examines the presence and reception of Attic pottery, and especially of vases by the same painter, in the broader region of modern central Macedonia during the third quarter of the sixth century B.C.E.

Reconsidering Handlooms on Athenian Vases

Sheramy Bundrick, University of South Florida St. Petersburg

A fifth-century Athenian hydria attributed to the Group of Polygnotos and discovered in Tomb 703 of the Valle Trebba necropolis at Spina features a characteristic scene of women in a domestic setting, but with an unusual central figure: the young woman seated on a klismos busily works on a handloom, observed by two female companions. Previously undiscussed within the larger corpus of Athenian

vases depicting textile production, the Spina hydria is one of fewer than 20 that include handlooms and one of only four in which the woman is shown at work. The hydria's iconography and documented findspot, used as a woman's cinerary urn, invite reconsideration of this motif in both Athenian and Spinetic contexts.

Women with handlooms on Athenian vases have commonly been identified as prostitutes making hairnets or head coverings in their spare time, perhaps to earn extra money. The Spina hydria, whose imagery fits soundly into the repertoire of "respectable" women on other Polygnotan hydriae, calls this reading into question. The woman does appear to be working in the sprang technique, as has been proposed for other representations, and thus the suggestion that she is crafting a head covering or headband is reasonable. The sprang technique, however, could also be employed for other items, such as belts and girdles. Examination of contemporary vases yields a new hypothesis: the women on the Spina hydria and in other scenes seem to be making a *mitra* (headband) or a girdle as bridal wear at a wedding. The motif of a *parthenos* tying a girdle around her waist or a *mitra* around her head has previously and persuasively been given a nuptial interpretation. Two vases actually show a woman with a handloom and a woman tying a girdle in the same scene.

The few vases with both handlooms and a known context further support this reading, for they come from tombs at Athens, Akragas, and Spina. It seems unlikely that a vase thought to show a prostitute would be chosen for a grave. In the case of the Spina hydria, since we do not know whether the deceased woman whose ashes were interred here was Greek or Etruscan, I demonstrate that the imagery of textile making would be appropriate and meaningful in either case.

Unexpected Uses of Greek Shapes in Central Apulian Funerary Contexts

Bice Peruzzi, Grand Valley State University

In 1977, a large Attic red-figured skyphos attributed to the Penelope Painter came to light during the excavations of a fourth-century B.C.E. central Apulian tomb in the necropolis of Rutigliano. Inside it, the excavators found the remains of eggshells.

The skyphos was decorated on both sides with scenes of women making offerings and pouring libations. The use of this shape as a container is rather unusual, as skyphoi have always been considered drinking vessels; however, it could have been its iconography that made this vase appropriate for the purpose of storing offerings. Yet food offerings in central Apulian burials have been found mainly in undecorated pots (including an Attic black-gloss lekane and a black-gloss South Italian skyphos). Therefore, the decoration—although suitable—might not have been the deciding factor in the selection of this vase.

This skyphos was part of an elite funerary assemblage, which also included metal artifacts and more than 90 vessels: a mix of local wares, Apulian red-figure pottery, and several other Attic red-figure vases. Using this burial as a case study, my paper explores how imported objects were appropriated by central Apulians and used in concert with locally produced objects to stage identities in death.

Traditionally, archaeological literature has approached the study of Attic pots abroad through the lens of Athenian behavior. As the adoption of elements from

the Greek drinking set is still often interpreted as a sign of the “Hellenization” of a population, scholars usually assume that the role and function of Greek vases everywhere mirrored that of their counterparts in Athens.

Yet, as the skyphos from the necropolis of Rutigliano indicates, different cultural entities could appropriate Greek shapes and imagery and use them—in unexpected ways—to fit their local needs. Once appropriated by the consumers, the imports became part of a broader narrative made of local needs, logics, and strategies; thus, we must reexamine our assumptions about the function of vases in non-Greek contexts to understand their meaning and shed light on the identity of their consumers.

SESSION 6D: Colloquium

Etruscan Tarquinia: New Discoveries and Interpretations

ORGANIZERS: *Nancy T. de Grummond*, Florida State University, and *Giovanna Bagnasco Gianni*, University of Milan, Italy

Colloquium Overview Statement

Recent work carried out at Tarquinia, the “mother” of the religion of the Etruscans and one of their foremost cities, is the theme of the colloquium. All papers are focused on the reconstruction of the activities of the Etruscans of Tarquinia, embracing a chronology of more than nine centuries and addressing a spectrum of evidence from topography, architecture, painting, and ritual in the city, sanctuary, and cemetery. Theoretical and methodological considerations are integrated into the papers and further highlighted at the end.

“Discovering Etruscan Tarquinia: Recent Work” presents the cognitive framework of the Tarquinia Project and the most recent research on the origins of the religion and civilization of the Etruscans. These origins are rooted in the layout of the area known as the “monumental complex” on the city plateau (Pian di Civita), coinciding with the very beginning of the story of Tarquinia known so far.

“Villanovan Tarquinia: New Data from the Inhabited Area” shows the cultural and memorial meaning of the multifaceted rituals in a chronostratigraphical sequence (tenth to eighth centuries B.C.E.) and the “nonverbal” systems of communication activated to involve and guide the ancient worshipers. Detailed ritual actions at the “monumental complex” are also explored in light of divination in “Animal and Human Sacrifice and Divination at Pian di Civita, Tarquinia.” It is here argued that the antlers of deer, carved in particular shapes suggesting that they were ritual tokens, were used in divination by lots (Latin *sortes*). “Messages of Ritual and Continuity: A New Reading of the Moldings at Temple III (Ara della Regina) at Tarquinia” explores memorial symbolism and visual communication in the role of temple moldings in the topographic and chronological setting of the Ara della Regina sanctuary. “The Tombs of Tarquinia: New Results and Perspectives” is the natural completion of field and theoretical investigations of the “living spaces” of the ancient city. Through a systematic analysis of recurrent associations among every individual feature of the painted tombs of the Monterozzi necropolis (UNESCO 2004), in their architectural and pictorial setting, this paper represents a

radical change in current approaches, demonstrating how the symbolic dimension of the Tarquinian tombs is mainly devised to guide the perception of the living.

The concluding paper describes the technical aspects of the ICT platform implemented for the Tarquinia Project to bring together humanistic and science-based methodologies and to provide a solid framework for the above-mentioned topics.

DISCUSSANT: *Nicola Terrenato*, University of Michigan

Discovering Etruscan Tarquinia: Recent Work

Giovanna Bagnasco Gianni, Università degli Studi di Milano, Italy

Tarquinia is one of the foremost Etruscan cities, and its necropolis with the famous painted tombs is a UNESCO site (2004). According to literary sources, Tarquinia is at the beginnings of both Etruscan history (Tarchon, hero-founder of Tarquinia and the Etruscan dodecapolis) and the Etruscan religion (Tarchon and Tages).

The University of Milan (Università degli Studi di Milano) is in charge of the excavations and complete research on the Pian di Civita plateau and carries out the investigation of the meaning of the painted tombs from antiquity to their impact in world heritage. Despite the current use of multidisciplinary methods, archaeological interpretation of invisible activities, cult practices, and the relationship of ancient communities with their environment is still entrusted to preconceived theoretical models. In the case of Tarquinia, we implemented a new powerful cognitive tool to shift from the materiality of archaeology to the idea of the invisibility of ancient life through the identification of the invisible syntactic links connecting the material aspects of the documentation left by ancient communities. Bringing together humanistic and novel science-based methodologies in an interdisciplinary environment supported by ICT, we carried out global archaeological research at a small, medium, and large scale involving groups from the University of Milan, the Politecnico of Milan, and other sectors of the university.

The paper explores the historical and religious traditions of the Etruscans from the point of view of the material evidence of the ancient cult through the recurrence of ritual practices in Tarquinia. We are in a position to outline actions connected to organic and inorganic remains offered to the most important goddess of the Etruscans. We can follow her development over the centuries, give her names (Uni and Chia) from epigraphic documents, and grasp the deeper meaning of the Etruscan supernatural entities as active forces interacting with human beings instead of as anthropomorphized gods. Evidence from the “monumental complex” and tomb groups contextualize in a similar way the impact of Greek epics on a local religious system connected to the foundation of the city of Tarquinia. In the foundation of the “monumental complex” and the later foundation of the Ara della Regina sanctuary, we can anchor the story combining the autochthonous element (Tages) and the immigrant Oriental personage (Tarchon), thus suggesting relevant input for the beginnings of the Etruscan civilization. These themes will be further addressed in other papers.

Villanovan Tarquinia: New Data from the Inhabited Area

Claudia Piazzini, Università degli Studi di Milano, Sapienza Università di Roma

At the beginning of Etruscan civilization, the so-called Villanovan culture displayed one of its strongest expressions in the city of Tarquinia. In 1968, the pioneering work of the American scholar Hugh Hencken, starting from the systematic study of hundreds of tomb groups, brought to light a cultural complexity in which clearly appeared a very well-structured hierarchical system able to manage relationships with other rising Etruscan communities and with different cultures of both the Mediterranean and northern Europe.

Ongoing excavations on the Pian di Civita of Tarquinia in the “monumental complex,” after more than 30 years, have shed light on a sacred area lasting from the 10th century B.C.E. to Romanization. Evidence of the inhabited area in the Iron Age, corresponding to the Proto-Villanovan and Villanovan phases (10th to eighth centuries B.C.E.), occupies more than a quarter of a hectare. Such extensive evidence made it possible to carry out qualitative and quantitative analyses to monitor recurrence of data constantly verified according to a chronostratigraphical criterion.

It is well known that digging protohistorical evidence is not a simple task, since structures are usually made of perishable organic materials, leaving only weak traces on the ground. In this period, functional differences between structures are not yet revealed by architectonic items, making it hard to distinguish, for example, between sacred and domestic functions. Thanks to a continuity of approximately 10 centuries, it is now possible to understand better the use of features that could be interpreted only according to their recognizable functional purpose such as huts, wells, pits, hearths, and human burials. The diachronic layout of the monumental complex is crucial to give context to such evidence.

Through the study of the arrangement of the various constructions of the ‘monumental complex’ and space organization within the same premises, this paper explores the evidence for an awareness in shaping “living spaces” according to specific needs conditioned by the particular aspects of the identity of the Etruscans of Tarquinia. Some of the structures were part of a “nonverbal” communication pattern in the layout of the complex that was evidently perceived by the community members and maintained over the centuries. Such nonverbal communication tools were supported by a thorough systematic apparatus created on purpose in terms of shapes and decoration.

Animal and Human Sacrifice and Divination at Pian di Civita, Tarquinia

Nancy T. de Grummond, Florida State University

Ongoing excavations on the Pian di Civita of Tarquinia in the sacred area of the “monumental complex” have confirmed the presence of human sacrifice in at least one of the 10 burials thus far published: a child aged eight, decapitated, with the feet inserted under a wall. The burials included males and females—adults, children, and newborns. The bodies were all inhumed, even in periods when the prevailing burial rite in Etruscan cemeteries was cremation. The burial ritual was consistent in orientation (feet on the west, head on the east), paucity of grave

goods, and placement of the body in a shallow trench. More than one skeleton showed signs of physical abuse, dismemberment, or decapitation.

A prominent cavity in the ground (diam. ca. 80 cm) and a burial nearby—the earliest one known (ninth century B.C.E.)—seem to have been the focus of the cult in this area of the Pian di Civita. This burial (“Individual 1”) also contained an eight-year-old child, but the child seems to have died of disease. Its skull was grossly misshapen, and a team of anthropologists deduced that it had suffered from epileptic seizures. The combination at Pian di Civita of cavity and epileptic child evokes in an uncanny way the famous Etruscan myth about the revelation of the *etrusca disciplina* described by Cicero (*De divinatione* 2.23) and others as taking place when a farmer at Tarquinia drove his plow deep into the ground, and a child named Tages (a newborn in one version) popped out of the furrow and recited the principles for worshiping the gods. The hero-founder of the city, Tarchon, recorded and interpreted the mysterious messages for the Etruscans who gathered around.

This paper explores the evidence for divination and revelation at the sacred area at Tarquinia, looking at animal sacrifice and especially at the antlers of deer that are ubiquitous at the site and must have had some special meaning. They are carved in particular shapes—e.g., oval, octagonal, sickle-shaped—suggesting that they were ritual tokens. It is here argued that they were used in divination by lots (Latin *sortes*). New evidence at the site for the use of divination using human remains is presented in a discussion of the as-yet-unpublished Individual 11 excavated at Pian di Civita.

Messages of Ritual and Continuity: A New Reading of the Moldings at Temple III (Ara della Regina) at Tarquinia

Ingrid Edlund-Berry, University of Texas at Austin (Emerita)

Even today, the ruins of the temple of Ara della Regina (Temple III, “the altar of the queen”) dominate the central area of ancient Tarquinia. The continuity of its history (from the archaic Temples I and II) and the very size of its foundations (ca. 77 x 35 m) make a strong statement of permanence and majestic grandeur.

As documented by Bonghi Jovino and Bagnasco Gianni, the temple, erected in the fourth century B.C.E., incorporates features from its predecessors while at the same time presenting interesting architectural innovations. A large terrace, reached by stairs, was added in front of the temple to the east, and an altar and enclosure, set at an angle at the southeast corner of the terrace, mark the spot of an earlier stone chest perhaps connected with Tarchon, the founder of Tarquinia.

Temple III is characterized by innovative ways of combining elements from different time periods and of respecting earlier cult practices in creating the master plan. In addition, there is one architectural element that clearly, although seemingly subtly, unifies the focus on both ritual and continuity within the sanctuary complex.

This element consists of blocks with double Etruscan round moldings, preserved on the north long side of the temple and at the entrance to the terrace at the east end. While such moldings are of a type that one could expect on a temple podium, providing support for the building proper (e.g., at Sant’Omobono, Rome), here they extend the line of vision from the temple at the back to the front

terrace, accentuated by the set of steps. In this way, the terrace, although most likely unroofed, became part of the ritual space, designated for the cultic activities performed there.

Also, the choice of the Etruscan round moldings highlights the continuity of a form whose history can be followed at Tarquinia and elsewhere from the Archaic period through the centuries. Although Tarquinia was part of the commercial and cultural koine of the Mediterranean as seen in imports of, for example, sarcophagi and pottery, the moldings are local and assist in portraying the sanctuary of Ara della Regina as a stronghold of Etruscan power, second to none, at a time when many of the Etruscan cities, including Tarquinia, were threatened by their aggressive neighbor, Rome.

The Tombs of Tarquinia: New Results and Perspectives

Matilde Marzullo, Università degli Studi di Milano, Sapienza Università di Roma

Etruscan tomb paintings are widely known as pure works of art. For editing purposes single images or details are often presented separately, and their meaning in relation to the burial space for which they were conceived is often missing.

This contribution presents a systematic study of the Tarquinian painted tombs based for the first time on the complete number of monuments available so far (N = ca. 500). It was carried out according to the latest research perspectives, aiming to explore the main aspects of the relationship between paintings and their architectural context. The new methodological approach supports a philological, iconological, and intuitive point of view by means of new tools offered by information technology and graphic design. The three-dimensional layouts of 60 tombs have been reconstructed to fully monitor the effect of the paintings within the space for which they were designed.

A thorough analysis of every detail concerning the tombs, including the grave goods, produced a reliable chronological grid, making it possible to improve accuracy in the chronology of already-known painted tombs and to date the unpublished ones, assembled thanks to recognition of photographs preserved in the archives of the Lerici Foundation in Rome. Starting from this chronological grid, it is now possible to contextualize every feature of both painted decoration and architectural layout, eventually perceived as a whole, and present the development of the main phases of the Tarquinian painted tombs.

The present contribution explores in a diachronic process the idea behind the design of local burial spaces considered sacred. The deeper meaning of every attribute composing the burial space helps in understanding that the architectonic aspects were not setting the rules of the complete composition. Rather, it was the idea underlying the entire program that gave shape to the space. This idea is clearly expressed by the layout of linear decoration that was meant to abolish the sensation of the actual architectural space. The complete monument produces an imaginary space characterized by variable size and shape, always coherently arranged according to precise and long-lasting criteria from its beginnings in the seventh century B.C.E. to the Hellenistic period.

ArchMatrix, an Ecosystem of Tools and Services for Tarquinia: Changes in Perspectives

Andrea Garzulino, Politecnico di Milano, *Matilde Marzullo*, Università degli Studi di Milano, Sapienza Università di Roma, *Claudia Piazzzi*, Università degli Studi di Milano, Sapienza Università di Roma, and *Stefano Valtolina*, Università degli Studi di Milano, Sapienza Università di Roma

This paper describes an interactive system for digitizing the concept of the Harris Matrix in a solution that can provide researchers with a visual representation of stratigraphic units highlighting geometric, topological, and temporal relationships. Stratigraphic units are necessary to detect the relative chronological sequence of the entire excavation site, but they also produce a number of supplemental data that are not included in the concept of the Harris Matrix.

In general, such data are stored in the excavation archives, and they represent the material evidence of the knowledge accumulated during each excavation phase that needs to be linked to the Harris Matrix. Thus, a number of heterogeneous data and analyses addressed to reconstruct different semantic spheres related to the site under observation (ancient productions, environment, etc.) need to be assimilated and synthesized to produce integrated results together with stratigraphic units. This situation involves different disciplines and the related activities of comparing and contrasting information coming from different data sources. Reliable interpretation in archaeology is nowadays based on new science-based methodologies, while environmental specialists need information on the nature and status of specific deposits. To support such a complex and interdisciplinary decision-making activity, we studied an approach based on graph drawings as a possible solution for visualizing data. The final system, named ArchMatrix, is implemented as a web application that uses a graph visualization as a tool for knowledge assessment and sharing. The structure of the matrix is stored using the Neo4J graph database (www.neo4j.org), whereas for enabling advanced information retrieval strategies ArchMatrix uses and extends a JavaScript library named D3 (d3js.org). D3 is used for visualizing and handling graphs and provides archaeologists with interaction solutions through which they can define queries and algorithms able to explore stratigraphic units and the information retrievable from excavation databases or other knowledge sources, such as data from geographic systems. This ecosystem of tools, together with other implemented features, allows archaeologists to develop new opportunities for their investigation (both individual and collaborative), to increase their knowledge, to improve their traditional working practices, and to develop new ones.

This paper explores new strategies for exploiting techniques from the data mining, visualization, and machine learning fields that will enable researchers to understand the dynamic phenomena in individualized user-centered solutions by also taking into account the possibility of creating a social network of domain experts bringing together humanistic and new science-based methodologies.

SESSION 6E: Colloquium

Getting Elemental: Integrating Isotopes and Archaeology

ORGANIZERS: *Catherine Kearns*, Cornell University, and *Jeffrey Leon*, Cornell University

Colloquium Overview Statement

Archaeometric investigations of stable and radioisotopes have, since the establishment of radiometric dating methods in the 1950s, become increasingly common in archaeological investigations. From analyses of local herding practices to broader models of past climate, new work continues to highlight the potentials for isotopic analyses in reconstructions of ancient social, political, and cultural practices. These advances are possible because interdisciplinary approaches are integrating archaeological and isotopic data, thus avoiding the unproductive “gap” between archaeology and the natural and physical sciences. This colloquium brings together scholars applying isotopic analyses to archaeological questions to draw examples of these new applications into dialogue, examining the limitations and challenges of isotopic research and exploring the potential of these techniques to answer social, economic, and political questions about the ancient world.

This three-hour colloquium will be divided into two sessions. A first session investigates the advantages and limitations of isotopic analysis on diverse materials such as stone, clay, and charcoal. These papers examine how scholars are interpolating isotopic data in multiscalar archaeological research, from the exploitation of building materials (“Interpreting Isotopes from the Regional Marble Quarries of Aphrodisias, Turkey: An Interdisciplinary Approach”) and craft production (“Using Lead and Strontium Isotopes to Trace Pottery Provenance in the Eastern Mediterranean”) to broader human-environment relationships (“Problematic Proxies of Paleoclimate in the Eastern Mediterranean: A View from Cyprus”).

The second session concerns isotopic techniques applied to human and faunal osteological data sets and addresses the challenges of using stable and radioisotope data in studies of demography and cultural and socioeconomic practice. Two papers investigate identity and population in mortuary contexts in the ancient Aegean (“Isotopic Investigation of Late Antique Human Population Movement in Cemeteries from Corinth, Greece” and “Integration of Stable Isotopic and Contextual Analyses of Mortuary Data from Early Iron Age Halos, Greece”). A third comparative paper turns to subsistence ecologies and dietary practices from the household to the state, employing diachronic data sets from various sites across Greece (“Integrated Stable Isotope Study of Human, Faunal, and Botanical Remains from the Aegean Neolithic to Bronze Age: Implications for Land Use and Dietary Practice”). A fourth paper will end the session with a broad, synthetic overview (“Advantages and Limitations of Stable Isotope Analysis in the Ancient Mediterranean”), which will lead into discussion aimed at interrogating the approaches advocated in the papers and at encouraging dialogue that attends to the possibilities of interdisciplinary, integrative work.

Interpreting Isotopes from the Regional Marble Quarries of Aphrodisias, Turkey: An Interdisciplinary Approach

Leah Long, Virginia Commonwealth University of Qatar, and *Carola Stearns*, University of Michigan

Geochemical analyses were a crucial part of an interdisciplinary project in which an archaeologist and a geologist partnered to document eight marble quarries newly discovered in the territory of the Graeco-Roman city of Aphrodisias, Turkey.

Samples collected from individual quarries and buildings within the city were subject to ^{13}C and ^{18}O isotopic tests; analyses confirm that the regional quarries supplied Aphrodisias with materials for civic building. This paper considers the isotopic results in light of the methodologies used during fieldwork. Because the largest quarries of antiquity are often considered archaeological sites unto themselves, they are described as existing separately from their larger environs; yet quarries and other extractable natural resources were often exploited in multiple areas over wide geographical areas in the Roman period. Regional reconnaissance is useful in the study of quarries because it opens the scale of inquiry from the site to the region and contributes more data to the chemical provenance of quarry sources. Our survey covered a small area (475 km²) within the Menderes Massif, the largest metamorphic terrane in western Turkey (40,000 km²). Geologic sampling included marbles across a regional stratigraphy and took place in a variety of geologic settings. The isotopic data indicate that carbon isotopic values are strongly controlled by the original sedimentary chemistry, and the oxygen values by proximity to silicate rocks. These observations have important implications for marble provenance studies across the entire Menderes Massif. In the valley of Aphrodisias, a unique isotopic signature of a distinctive Late Paleozoic marble in a single quarry at Yazır along with other geologic observations made it possible to identify it within the monuments of Aphrodisias. In contrast, the Mesozoic signatures from the six white marble quarries have similar isotopic signatures, and the use of the individual quarries within the city cannot be distinguished. Collaboration with natural scientists both on isotopic analysis and geologic context adds nuance to the archaeological interpretation of the economics of marble exploitation and trade. Given the importance of the Menderes Massif as a marble production zone in the Roman period, our marble quarry survey shows the need for further regional survey and detailed chemical investigation of sources.

Using Lead and Strontium Isotopes to Trace Pottery Provenance in the Eastern Mediterranean

Virginie Renson, University of Missouri

It has been recently demonstrated that lead isotope analyses, widely used as tracers on lead-rich artifacts such as glazes, glass, or metals, constitute an efficient tool to document the origins of pottery in Cyprus. There is also evidence that combining lead isotope analysis with elemental chemistry and petrography has a strong potential to trace pottery provenance.

Here we are using lead isotopes on multiple Late Hellenistic to Late Roman wares (including Eastern Sigillata A, Cypriot Sigillata, Cypriot Red Slip, and

related wares) excavated at Tel Anafa in northern Israel and/or at various sites distributed on Cyprus. These fragments were previously analyzed by neutron activation, a long-established method to trace the source of artifacts, which resulted in hypotheses, sometimes contradictory, regarding their origin on Cyprus or in the Levant. Isotopic data are compared with the lead isotopic composition of Cypriot clay sources and ceramics. In addition, strontium isotopes are applied to selected pottery fragments to explore how they can be used to refine the lead isotope results.

This study aims not only to better document the origins of these ceramics but also to develop approaches combining isotopic and elemental chemistry to trace pottery provenance and use the results to better understand interactions between ancient civilizations.

Problematic Proxies of Paleoclimate in the Eastern Mediterranean: A View from Cyprus

Catherine Kearns, Cornell University

Recent paleoclimatic research employing isotopic analysis has greatly expanded our understanding of ancient environmental conditions using indirect and direct proxies of climatic variables, such as solar activity, sea surface temperatures, and precipitation. As more and more highly resolved data become available, these records are refining our interpretations of landscape dynamics in the Mediterranean ecumene, affording new insights into periods of environmental and sociopolitical change. When interpolated with archaeological evidence, however, these paleoclimatic data often generate oversimplified, generalized causal explanations of human-environment relationships, most notably in studies on societal collapse that assume “bad” climate leads to decline and disorder. Without indulging in either environmental or cultural determinism, this paper argues for a nuanced, integrative approach to human-environment relationships that attends to the ways in which human groups incorporate environmental change into the social and political ordering of daily practice.

My work uses carbon ($^{13}\text{C}/^{12}\text{C}$) stable isotope analysis on archaeological wood charcoal as an indirect proxy for changing water availability, examining a diachronic range from the mid second millennium B.C.E. to the mid first millennium C.E. It uses samples of mostly pine, oak, and olive from several archaeological projects on Cyprus, which has until recently lacked high-resolution paleoclimatic data. In this paper, I first address the challenges of this stable isotopic technique, particularly in discerning the effects of carbonization on original isotopic content and calibrating the data against modern meteorological records. I then integrate these new records with archaeological survey data from two river valleys (the Vasilikos and Maroni) in the south-central part of Cyprus to investigate how emergent communities engineered new landscape practices, taking as a case study the early first millennium B.C.E., a period of significant climatic fluctuation. Such an approach exposes several limitations of resolution and scale, in both the isotopic and survey evidence, and highlights the exciting potential for combining paleoenvironmental data with archaeological methods and theories.

Isotopic Investigation of Late Antique Human Population Movement in Cemeteries from Corinth, Greece

Larkin Kennedy, Texas A&M University

Ancient Corinth was an important center in Roman and Byzantine Mediterranean political and trade networks as the capital of the province of Achaia, but its prominence was diminished during the Late Antique period. Scholars have suggested that earthquakes, plagues, and invasions interrupted the city's economic growth and led to its abandonment in the seventh century, followed by its resettlement by foreign invaders. The excavations of ancient Corinth by the American School of Classical Studies at Athens have documented Late Antique cemeteries around the perimeter of the city walls, often near churches. These cemeteries collectively represent a wide range of mortuary behavior. Study of grave morphology and the presence of key artifacts, such as weapons or belt buckles, have led archaeologists to identify the graves as belonging to foreigners. Parallels for these artifacts have been discovered throughout the Roman world, and similar grave assemblages have been found in Greece, leading to the popular assumption that these graves belong to members of a class of "wandering soldiers," possibly Slavic in origin, that were stationed throughout Greece during this period. Stable isotope analysis has the potential to identify geographic residence at the time of tissue generation and therefore to form an appropriate test of archaeological hypotheses of population movement and integration. Although isotopic studies in Greece have long been used to examine diet, recent research highlights its utility in identification of geographic origin. This focus is enhanced by the availability of isotopic ratios for contemporary sites throughout the Roman empire and its frontiers.

In this paper, I use isotopic analysis in conjunction with the examination of osteological material in mortuary contexts to test the contributions of biology and geographic origin with the cultural identity indicated by grave form and the artifacts interred with the deceased. Using samples from 71 individuals from 43 graves selected to span the observed range of mortuary behavior, I discuss the utility of strontium ($^{87}\text{Sr}/^{86}\text{Sr}$) and stable oxygen ($^{18}\text{O}/^{16}\text{O}$ ratio, reported as $\delta^{18}\text{O}$) isotopic ratios from tooth enamel in testing the presence of foreigners in Late Antique cemeteries at Corinth. These data establish the "local" isotopic signatures for Late Antique Corinth and present evidence for the potential childhood residence for skeletal remains from graves displaying distinctive mortuary behavior. I present suggestions for the bioarchaeological and mortuary behavior-based sampling methodology in isotopic studies of cultural identity.

Integration of Stable Isotopic and Contextual Analyses of Mortuary Data from Early Iron Age Halos, Greece

Eleni Panagiotopoulou, Groningen Institute of Archaeology, Anastasia Papathanasiou, Ephorate of Speleology and Paleopathology of Southern Greece, Elisavet Nikolaou, Archaeological Institute of Thessalian Studies, and Fotini Tsiouka, Ephorate of Prehistoric and Classical Antiquities, Karditsa

Halos is an extended burial ground located in Thessaly, Greece, dating to the Early Iron Age. The study focuses on two cemeteries dating to the Protogeomet-

ric period (1100–900 B.C.E.)—Voulokaliva and Kephlosi. Voulokaliva includes a wide range of ages from infants to adults, and Kephlosi includes exclusively sub-adults from newborns to nine years. The two cemeteries exhibit considerable variation in funerary practices, such as tomb types, mortuary treatment, and offerings. This variation is poorly understood, as there are very few systematic analyses of mortuary and skeletal data from this period. This variation might be attributed to internal social differentiation. In this paper, we integrate the results of the contextual and isotopic analyses to make inferences about the social makeup of the Halos community. For the contextual analysis, we examine the different features of the mortuary practices in Halos, such as location and spatial organization, tomb types, treatment, and offerings, against gender, age, and status. Thereafter, we sample the skeletal material for stable isotopic analysis followed by a strategy designed based on the outcomes of the contextual analysis regarding the social differentiation patterns. We then conduct stable carbon and nitrogen isotopic analysis ($\delta^{13}\text{C}$, $\delta^{15}\text{N}$) from bone collagen to reconstruct differences in diet. The contextual analysis reveals differentiation between age and status groups, while gender differences are less pronounced. Additionally, the isotopic analysis shows that there is dietary variation in this population associated with the results from the contextual analysis. In this paper, we stress that in-depth contextual analysis of mortuary data is a prerequisite for an isotopic analysis study, and the integration of the methods allows us to make inferences about the formation of past societies.

Integrated Stable Isotope Study of Human, Faunal, and Botanical Remains from the Aegean Neolithic to Bronze Age: Implications for Land Use and Dietary Practice

Erika Nitsch, University of Oxford

Urbanization and social stratification in the Aegean Bronze Age have been linked with agricultural intensification, often defined as a process of greater labor investment per unit area resulting in greater yields and larger-scale surplus production. Other mechanisms for increasing surplus include mobilization of small-scale surpluses from subsistence producers and extensive strategies based on the application of labor-saving technologies (e.g., specialized plow oxen). Stable isotope analysis provides an opportunity to test hypotheses related to intensification, extensification, and the relative importance of different resources to human diet. Our study uses stable carbon and nitrogen isotope analysis to reconstruct the wider crop and animal and human subsistence ecology, comparing northern Aegean sites, such as Neolithic Makriyalos and Bronze Age Archontiko and Toumba Thessalonikis, to the larger-scale urbanization that occurred at Neolithic to Bronze Age Knossos. This case study demonstrates how an integrated approach to stable isotope analysis (plants, animals, and, where possible, humans) can reveal the strategies used to produce crops, the relationship between crop production and animal husbandry, and the relative importance of cereal crops compared with animal products in human diet.

Advantages and Limitations of Stable Isotope Analysis in the Ancient Mediterranean

Robert H. Tykot, University of South Florida

Since the first stable carbon isotope analysis of human remains in the Mediterranean 25+ years ago, a number of studies have addressed dietary practices from the Mesolithic through Medieval times. Many studies have expanded the isotopes analyzed to include nitrogen and in some cases oxygen and to include samples from different tissues (e.g., bone collagen, bone apatite, tooth enamel, tooth roots, hair), while the relatively modest cost for stable isotope analysis has allowed statistically significant numbers of samples to be tested. The main questions being addressed in the Mediterranean and Europe are the importance of seafood or freshwater fish in the diet and the introduction of millet, a C₄ plant. Analyzing individuals allows comparisons to be made based on age, sex, and status. The importance of analyzing potential dietary constituents (animals and plants) has also been realized as it is important to have specific numeric isotope ratio baselines to interpret the values obtained for humans. This in turn has led to some studies of fertilization of agricultural fields and of animal fodder.

In this presentation, I focus on the advantages and limitations of stable isotope analysis for studies in the Mediterranean and elsewhere. I discuss what future research projects may be feasible (or not) in addressing hypotheses about diet and what that means for the technological, economic, and sociopolitical characteristics of the culture involved. Several questions have been raised: Is it possible to estimate the weaning age of individuals and breastfeeding practices in general? Can we identify marital practices (e.g., matrilocality vs. patrilocality) by comparing childhood and adult diets for men and women? Was there seasonal variation in the menu prior to large-scale grain storage (and freezers like we have today)? When was the secondary-products (milk and cheese) revolution? Might we identify dietary practices for ritual/religious holidays and events? What about fish on Fridays? In addressing these questions, I include results from my own unpublished and published research on several sites and time periods in Italy, Greece, Spain, Portugal, and Malta along with their incorporation in other studies. Inter-laboratory standardization and comparison of data are also discussed.

SESSION 6F

Recent Work in Southern Italy and Sicily

CHAIR: To be announced

A New Temple in Ancient Samnium (Central-Southern Italy)

Tesse D. Stek, Leiden University

As a result of our ongoing fieldwork in the Adriatic part of ancient Samnium (modern Molise, in Central Southern Italy), we have recently discovered a formerly unknown monumental building. The site, well hidden in a thickly wooded area on a small plateau overlooking a valley, is currently being investigated in

detail. The outline, size, and monumentality of the building, as well as the presence of column bases and other archaeological material dating from the Archaic to Hellenistic-Roman periods, strongly suggest that the structure can be interpreted as a Samnite temple.

In this paper, the new discovery is for the first time presented and placed within its local and regional context. The impact of the discovery on the broader interpretation of the sacred landscape of ancient Samnium is consequently discussed. The socio-political function of rural Samnite sanctuaries is currently at the center of a heated scholarly debate, and this new sanctuary site adds important new insights into Samnite society and the pivotal function of sanctuaries within it.

Archaeological Survey in the Basentello Valley of Basilicata, 2012 – 2014

Myles McCallum, Saint Mary's University

The Basentello Valley Archaeological Research Project (BVARP) is concerned with modeling cultural change associated with the imperialist expansion of Rome in southern Italy, and the role played in this process by an imperial estate at San Felice/Vagnari. As part of this project, a team of archaeologists from Saint Mary's University in Canada has, with the permission of the Soprintendenza per i Beni Archeologici della Basilicata, engaged in extensive archaeological survey in the region of the Basentello Valley of Basilicata in an effort to contextualize excavations at San Felice/Vagnari and to understand how settlement patterns within the region changed over time as part of the process of cultural change within the interior of southern Italy. This spatial data, including precise measurements of each scatter of cultural material, is recorded in the field using Trimble Yuma tablets with GPS receivers and has been collated into an ArcView GIS database with an integrated Access database containing our finds data, including scatter densities. To date, our results indicate several periods of substantial change in settlement patterns and settlement types throughout the survey zone, including the transition from the Archaic to the Classical period, during the first century B.C.E., and during the early part of the Late Antique period, which saw the formation of small agricultural villages in this part of the Basentello Valley. Overall, the archaeological data suggests that the countryside of the Basentello Valley was not deserted during the Roman period, that there was some continuity of settlement during the transition from the pre-Roman to the Roman period, and that there may have been a substantial amount of capital investment in the region during the Late Antique period, possibly as a result of increased cereal agriculture. Data in certain parts of the survey territory now also allow us to reconstruct certain aspects of land ownership, particularly with respect to larger properties, from the fifth century B.C.E. to the seventh century C.E.

A New Approach to Roman Villas in Calabria

Rosemarie Trentinella, Rollins College

Although scholarly investigation of Roman villas in the southern Italian region of Calabria has a long history, the art historical and social aspects of this ancient

phenomenon remain uncharted territory. Although little known, and sometimes not well published or excavated, the surviving remains provide a means of reconstructing a vivid impression of villa culture in this seemingly inhospitable part of the Italian peninsula.

This paper introduces a new line of inquiry into the architectural and decorative nature of Roman villas in Calabria, and articulates the as-yet untapped contribution that this body of evidence can provide for villa studies in the Italian peninsula at large. I begin with a brief overview of the current state of villa scholarship in Calabria, including a geographical and historical introduction to the region itself. I then lay out my methodologies for refocusing attention to the art historical and social aspects of villa sites, and will present some general conclusions and proposed future lines of inquiry. In particular, I suggest that the disparate surviving evidence can support conclusions about the particular decorative choices made by ancient villa owners in this region, especially when considered alongside the relationship these sites enjoyed with the unique topography of the region.

The data are of varied type and level of preservation. These include, among others, some standing architectural remains, a few examples of decorative sculpture and mosaic pavements, and one group of silverware. When this material evidence is considered in combination with the region's topography as well as archival documents such as plans and photographs from selected excavation reports and field publications, an unexpectedly rich opportunity to expand our understanding of the Roman villa in Italy emerges.

For example, the topographical distribution of Roman villa sites along Calabria's distinctive coastal plateaus appear to follow a regular pattern, with each site enjoying both a spectacular view over either the Mediterranean or Ionian sea (reflecting the villa's historically perceived role as primarily a pleasure institution), as well as easy access to hinterland and coastal facilities that supported a variety of agricultural and other economic enterprises (supporting the recent recognition of the multifaceted nature of the villa's role in ancient Roman life).

This presentation demonstrates that the available evidence for villa culture in Calabria, while challenging, provides an unexpectedly rich opportunity to expand our understanding of the Roman villa in Italy by taking more fully into account this neglected southern region of the peninsula.

"Water, water, every where, nor any drop to drink": Fieldwork Results at the Lago di Venere Site on the Island of Pantelleria

Carrie Ann Murray, Brock University, *Clive Vella*, Brown University, and *Thomas Urban*, Oxford University

This paper presents the results of a survey season, particularly the use of Ground Penetrating Radar in volcanic terrain, and explores themes of water use and religious ritual during the Punic and Roman periods on Pantelleria.

The island of Pantelleria in the Strait of Sicily played a pivotal role in the central Mediterranean throughout prehistoric, classical, and medieval periods. A locus of activity appears to be located at the Lago di Venere site near the north-eastern coast of the island. The Brock University Archaeological Project at Pantelleria (BUAPP)

is a new project being conducted with kind permission of the Soprintendenza per i Beni Culturali ed Ambientali di Trapani.

This project is looking at the archaeological evidence of long-term activity at the Lago di Venere area. Previous archaeological investigations interpreted a structure in this area as a Punic temple site (see Acquaro and Cerasetti 2006). BUAPP is working in a larger area surrounding the proposed sanctuary. One of the central foci at this stage of the project is considering the importance of physical environment in relation to religious activity. The Lago is a brackish, volcanic crater lake. Its appearance in the landscape could be considered a place of awe in nature, potentially explaining the long-term importance of the site. Curiously, however, fresh water is not available anywhere near the lake, and is an extremely scarce resource across the entire island.

In the summer of 2014, the team conducted a survey season in the Lago di Venere area. Surface finds revealed ceramic sherds of Punic, Republican, and Imperial dates. The volcanic nature of the terrain was a critical factor in determining our survey methodology. The Ground Penetrating Radar survey produced results revealing previously unknown, large-scale architecture. Our interpretations of the survey data are guiding our plans for further work to include excavation of the buried structures as well as geochemical and morphological analysis of the lake sediments.

Determining the function and longevity of the buried structures will reveal the degree to which syncretization or cultural rupture characterizes the Lago di Venere site. It will also be questioned how the practical needs of water were met. These findings will illuminate the connections amongst groups on different parts of Pantelleria over several time periods, as well as the relationships with other communities elsewhere in the Mediterranean region.

Shards of a Roman City: Arcadia University Archaeological Explorations in Syracuse (Sicily)

Davide Tanasi, Arcadia University, and Stephan Hassam, Independent Researcher

Syracuse, founded in Sicily by the Corinthians in 733 B.C.E., became over centuries one of the most splendid Greek cities of the ancient Mediterranean, as testified by historical sources and the majesty of the public monuments discovered in quite a century of urban archaeological explorations. Quite poor is, on the other side, the archaeological evidence about the Roman phase of the city, that started with its re-foundation as Roman colony by the will of Augustus in 21 B.C.E.

Between 2013 and 2014, the Arcadia Sicily Center, academic filiation in Syracuse of the College of Global Studies of Arcadia University carried out the exploration of a region of the Catacombs of St. Lucy, representing the most relevant archaeological complex of city during the Roman empire.

Set in the north eastern district of the city, in the core of the ancient quarter of Tyche, the Catacombs of St. Lucy are one of the largest underground cemetery exploited by the local Christian community between the third and the fourth century C.E. The characterizing trait of this site stands in the decision of the ancient excavators to incorporate in the underground cemetery different prior hypogeal structures, as branches of aqueducts, cisterns, shrines, and columbaria, in order to spare manpower.

The Arcadia University archaeological explorations focused on the sector F of the region C of the catacombs, a part of the cemetery just superficially explored in the 50s and mainly left unexcavated. Here, puzzling traces of prior structures survived to the overall modification brought to the excavation of tombs quite everywhere in the course of the fourth century C.E.

Achaean Roofs and the Identity of the Achaeans in Southern Italy

Nicola Giaccone, University of Pisa

Recent archaeological debate has long questioned the possibility of detecting identity and ethnic belonging on the basis of material culture, often with very skeptical conclusions. Furthermore, many scholars have denied the existence itself of an ethnicity of Achaea in the Archaic period, supposing that the creation of Achaean identity has a relatively late origin. This work suggests that Achaean roofs could have played a role in Achaean culture and they could actually constitute an important clue to understand the development of that culture.

These roofs have been found in Metapontum, Sybaris, Kroton, Kaulonia and Paestum (all founded by the Achaeans), as well as in the sanctuaries of Olympia and Delphi. They share many characteristics and clearly pertain to the same artistic language. They can be dated from the end of the seventh to the middle of the sixth century B.C.E. This class of materials has never been found in Peloponnesian Achaea so far, therefore it is highly likely that this is a characteristic of Southern Italian workshops. These roofs are known for many years, but they have been studied in their entirety only recently and their number has significantly increased in the past few years.

Analyzing the technical, chronological, historical and geographical aspects of this class and reconstructing its evolution over time, this paper aims at demonstrating that these roofs were produced only in the cities founded by the Achaeans on the coasts of Italy and they had a great cultural meaning, being constructed to decorate temples, often in places of great ideological importance (such as the sanctuaries of Olympia and Delphi).

The closeness and the encounter of the *apoikoi* with the natives and with Greeks of different origin stimulated the awareness of Achaean identity and, simultaneously, the need for their own recognizable form of decoration of the most important buildings of the community

Although archaeology is not very effective in identifying ethnicities and cases in which it can operate successfully in this respect are very rare, the Achaean roofs would seem a valuable exception to the rule.

The Institute of Fine Arts - NYU Excavations on the Akropolis of Selinunte, 2010-2014

Clemente Marconi, Institute of Fine Arts, New York University

This is a presentation of the work carried out on the Akropolis of Selinunte by the IFA, in the years 2010-2014. Our investigations have focused on the southern sector of the main urban sanctuary, especially around the area of Temple R. This

nonperipteral building was first excavated in 1876 and repeatedly investigated over the course of the nineteenth and twentieth centuries. What earlier researchers appear to have missed, is the fact that in ca. 300 B.C.E. the interior of Temple R and the surrounding area were covered by a thick fill, which was part of the restructuring of this area of the settlement in the Hellenistic period. This fill had sealed the Archaic and Classical phases of Temple R, never explored before our intervention.

Our excavations in the area of Temple R allow us to propose a complete reconstruction of the life of this building between the Archaic and Hellenistic periods. The temple was erected ca. 580 B.C.E., within the context of the new urban plan of Selinus, and it represents the earliest monumental building at the site. The original plan and elevation can be restored with some accuracy, including the polychrome roof and equestrian akroteria. The discovery of several votive offerings against the inner cella walls allows for the reconstruction of the cult and rituals associated with this building—attributable to a goddess, most likely Demeter—and the surrounding area within the sanctuary during the Archaic and Classical periods. Temple R was damaged in 409 B.C.E. within the context of the Carthaginian takeover of Selinus, but it was soon restructured prior to the end of the fifth century. Ultimately, over the course of the fourth century, the temple ceased to be used for its original function: in its last documented phase, it might have been used as an arsenal during the First Punic War.

No less significant are the discoveries made underneath the foundations of Temple R: our findings include evidence for Bronze Age occupation at the site, the remains of a series of structures datable to the seventh century, and a layer underneath datable to the phase of foundation of the Greek colony. The material culture associated with this early phase sheds new light on the first phase of life of the Megarian colony and on the dynamics of cultural interaction in Western Sicily.

Archery, War, and Identity during the Second Sicilian War: New Evidence from Selinunte

Andrew Farinholt Ward, Institute of Fine Arts, New York University

In 409 B.C.E., a regional conflict between the Greek city of Selinus and the Elymian city of Segesta would take on international significance, with the Carthaginians under Hannibal Mago besieging Selinus and razing it in a matter of days. As famously related by Diodorus Siculus, this event was significant not only for the brutality of the sack, but also for the conflict it initiated over the next three years which saw the destruction of Greek cities across the island, forever changing the geopolitical landscape of the Western Mediterranean.

During excavations within Temple R on the Acropolis of Selinunte by New York University's Institute of Fine Arts, clear evidence of this sack has been found, ranging from extensive signs of burning to well over 75 arrowheads found in a clear destruction layer. Beyond speaking to the brutality of the conquest, a careful investigation of the typological nuances of these arrowheads and their comparanda across the Mediterranean reveals several significant conclusions about Punic archery and Western Mediterranean warfare generally. While the heterogeneity of arrowhead types found at Marathon and Thermopylae make ethnic or national distinctions difficult in such cases, in the case of Selinus types found almost exclu-

sively in Ibiza, Iberia, and Carthage, as are types popular in Italic contexts from which the Carthaginians drew mercenaries. While not an argument for arrowheads as ethnic identifiers, the material from Selinus does suggest a far greater degree of regionalism in military technology than previously allowed in scholarship.

The arrowheads of Selinus favor the growing understanding in classical scholarship of the importance of archery in military conflict, a reaction to the earlier view of such warfare as a prelude to more decisive hand-to-hand combat. This view may be challenged based upon not only a numerical analysis but also an extensive study of the wear patterns upon the arrowheads of Selinus. Such studies clearly point to these arrowheads being used in the sack itself, rather than being discards or votive in nature, fundamentally challenging certain conceptions of Classical warfare.

From a class of objects too often ignored in field reports and publications, one can thus not only evaluate the veracity of Diodorus Siculus' account, but also learn far more about the actors involved in one of the most important battles of the Pre-Roman Western Mediterranean.

SESSION 6G: Colloquium

Building Capacity for Global Cultural Property Protection

ORGANIZER: *Laura Childs*, CHAMP

Colloquium Overview Statement

This colloquium will explore various methods, techniques, and opportunities for building capacity to protect cultural property with host nations. Despite the conflicts and revolutions that have endangered so many sites, museums, and artifacts, there are many programs that help host nations develop and grow their own internal capacity to protect and conserve their cultural property. Many universities, museums, and government and nongovernment organizations have designed cooperative ventures with their counterparts in host nations. Speakers will address training programs, site and museum policing, safe construction methods, and conservation techniques. Audience members will have an opportunity to discuss these topics with the speakers after their presentations.

DISCUSSANT: *Laurie Rush*, Fort Drum Cultural Resource Manager

Museums Facing Conflict: A Regional Workshop for West African Museum Professionals

Corine Wegener, Smithsonian Institution

In 2012, jihadist groups occupying northern Mali destroyed, looted, and vandalized a number of cultural heritage sites, including the famous saints' mausoleums and manuscript collections of Timbuktu. After the jihadists were pushed out by the French military in early 2013, the Smithsonian Institution was one of many organizations invited to assist with Malian cultural recovery. The result was "Mu-

seums Facing Armed Conflict: A Regional Workshop for West African Museum Professionals.” This week-long workshop was organized by the Smithsonian in partnership with the International Council of Museums, the National Museum of Mali and Malian Ministry of Culture, UNESCO, and the French Ministry of Culture. Museum professionals from Mali and eight West African nations met with international facilitators to discuss disaster risk reduction, security, and community engagement and peace-building in museums. This workshop could serve as a model to develop resilient institutions faced with instability and armed conflict.

Support to Egypt During Their Internal Conflict

Sarah Parcak, University of Alabama at Birmingham

There is major global interest in the issue of archaeological site looting, with new reports from the Middle East nearly every day about stolen and recovered objects. What specialists have not done, however, is quantify in a scientifically valid format the total amount of site looting in each country affected (Egypt, Syria, and Libya). In addition, no one has successfully tracked the looting networks from the ground to the owners’ homes/museums. The best way to do this is by using high-resolution geospatial data sets. This information can be used to locate archaeological sites affected by looting and to show governments and international agencies such as UNESCO the full extent of affected sites. This has major implications for the protection of archaeological sites for future generations.

This paper focuses specifically on Egypt, which has seen a 100% increase in archaeological site looting since January 2011. It talks about many of Egypt’s major sites and discusses the potential reasons behind the looting, as well as solutions. It also discusses a methodology for the mapping of looting pits using a combination of new and archived high-resolution satellite imagery. Google Earth is discussed in terms of its crowdsourcing possibilities. How we process the imagery using standard satellite image programs to enhance the visibility of the looting pits is discussed, as well as how ESRI products (GIS) can help to quantify and map each pit (compared with before imagery or a time series of images taken over the past four years).

The National Museum of Afghanistan and the Oriental Institute: Lessons Learned for Building a Sustainable Partnership

Gil Stein, Oriental Institute of the University of Chicago, and *Laura D’Alessandro*, Oriental Institute of the University of Chicago

The partnership between the National Museum of Afghanistan and the Oriental Institute is a three-year, U.S. State Department-funded program to develop a database, conduct conservation assessments, train staff, and carry out the first full inventory of the museum’s holdings in the wake of 35 years of war, looting, and devastation by the Taliban. Building on an earlier training program for Afghan conservators in Chicago in 2007, the current partnership in Kabul focuses on simplicity, appropriate technology, and sustainability as guiding principles. In this paper, we describe the project and the strategies used to develop and implement

its infrastructure. We argue that successful capacity building for cultural heritage preservation must (1) take place in country; (2) involve local stakeholders from the outset as full partners in developing the work plan that fits local needs and constraints; (3) train local partners through extended hands-on experience; and (4) implement systems that will continue to be used by the heritage professionals of the host country even after the foreign partners leave.

Protecting the Past, Preserving the Future: The Oyu Tolgoi Cultural Heritage Program

Jeffrey Altschul, Statistical Research, Inc.

Mongolia is a country rich in culture and steeped in history. Like all nations, it struggles with finding a balance between maintaining traditions and historical sites and developing its natural resources. The objective of the Oyu Tolgoi cultural heritage plan is to allow Mongolia and Mongolians to define a process by which their heritage is not only preserved but also enhanced at the same time that the country's natural resources are appropriately developed. The objective of this study is to create a cultural heritage program specific to Ömnögovı province. The goal is for the Oyu Tolgoi cultural heritage plan to serve as a model for the country.

Site Management Support and Training For Local Agencies, Archaeologists, and Site Guards (Conflict and Postconflict)

Katharyn Hanson, University of Pennsylvania Cultural Heritage Center

In areas of crisis, those who work at cultural heritage sites are the first line of defense against damage. For archaeological sites in particular, it is vitally important that local agencies, archaeologists, and site guards have the equipment and skills to map, monitor, and maintain their sites. This paper explores several recent training efforts in cultural heritage management in postconflict and crisis areas.

Drones for Good: Using UAVs to Monitor Archaeological Site Looting Along the Dead Sea Plain in Jordan

Morag Kersel, DePaul University

In cooperation with the Jordanian Department of Antiquities under the umbrella project of Follow the Pots, the Landscapes of the Dead Sea Research Project is using unmanned aerial vehicles (UAVs) to study archaeological site looting. This will allow better understanding of both the ancient and modern uses of an Early Bronze Age mortuary site. A small fixed-wing UAV provides a platform for stable, low-elevation aerial photography, making it possible to document looting and destruction at Fıfa, as well as to generate spatial data for digital mapping. The early seasons of aerial site monitoring are part of a five-year plan to revisit the site at the same time each year to investigate change over time and to assess the potential impact of the Department of Antiquities of Jordan's anti-looting campaigns and local community-outreach programs.

Capacity Building at Gordion

C. Brian Rose, University of Pennsylvania Museum of Archaeology and Anthropology

The increased road and building construction throughout Turkey during the last decade has also entailed an increase in the number of earth-moving machines, many of which have been used in the looting of archaeological sites. Areas that had escaped looting in the past are now at risk, which means that new strategies for the year-long protection of archaeological sites are essential. This paper explores community-outreach programs in the village of Yassıhöyük, in which the archaeological site of Gordion is located, to increase awareness of and respect for the ancient settlement and its inhabitants. Turkish and American archaeologists collaborate on site interpretation through community forums and promotion of tourism.

SESSION 6H**Mycenaean Greece**

CHAIR: *Bryan E. Burns*, Wellesley College

"Disturbing Agents" and the Decay of the Palace: a Geoarchaeological Comparison of Human and Natural Impacts on Erosion following Palatial Collapse at Mycenae, Argolid, Greece

Daniel J. Fallu, Boston University

In his 1864 work, *Man and Nature*, George Perkins Marsh used the example of ancient Greece to illustrate the effect of humankind as a "disturbing agent," which upsets natural equilibrium and brought about environmental degradation. Subsequent scientific analysis has demonstrated, however, that this relationship is often more complex on the regional scale. Erosion studies in the Argolid, for example, have demonstrated an apparent proportionate response of slope loss in response to the changes in land-use and climate during the Early Helladic Period, while little evidence has been uncovered to show that Late Helladic economic expansion had any effect on erosion rates. Investigation of deposits post-dating the palatial collapse at Mycenae demonstrate the primary role of climate in landscape change, while illustrating the minor role of the built environment in initiating short-distance transport of sediments.

The Lower Town of Mycenae excavation, located in the small torrential valley south of the Bronze Age citadel, demonstrates a sequence of semi-continuous natural deposition spanning Late Helladic III C to the Middle Geometric. Samples for micromorphological and granulometric analyses were taken from sediments originating in the area of the Bronze Age citadel and upland "off-site" deposits. Similar long-term fluctuation in grain-size demonstrated by the two sediments suggests that climate change is the primary controlling factor. A greater extent and degree of variation, however, in the sediments originating from the built environment of the citadel (north) and Panaghia Ridge (west) suggest that human disturbance gener-

ated continued (if weak) disequilibrium through this period of supposed abandonment. Morphological and micromorphological observations demonstrate the alternation between water-lain and colluvial deposits overlying fine, unlaminated mudflows, suggesting variations in the natural retaining vegetation.

Fine-scale geoarchaeological observations demonstrate the regular and cyclical transport of sediments from the built and natural landscapes of Mycenae during the centuries following the collapse of the palatial establishment. Although further micromorphological and archaeometric analyses are necessary, it would appear that, amid the changing climate and landscape of the post-palatial period and Early Iron Age, the built environment of the Mycenaean citadel generated an increased capacity for erosion which continued until some point in the Early or Middle Geometric, when climatic conditions allowed for the re-stabilization of the surface. The erosional record for this period, which is marked by general stability in the Argive Plain, demonstrates the complexity of the relationship between anthropogenic activity and erosion and the necessity of a multi-scalar approach.

Mycenae's Lower Town During the Geometric Period

Antonia Stamos, American University of Kuwait, *Christofilis Maggidis*, Dickinson College, and *Katie Lantzas*, Rutgers University

The geophysical survey and systematic excavation of the Lower Town at Mycenae (2003–2013) revealed an extensive Mycenaean settlement outside the citadel. Protected by an outer fortification wall with gates, the Lower Town also revealed overlying structures and buildings dating to the Early Iron Age and the Archaic period. A continuous, well-stratified occupation of Mycenae in all the successive periods from the 13th century B.C.E. to the sixth century B.C.E. has been established for the first time.

The Mycenaean remains of the Lower Town were filled-in, sealed, and protected from later intrusions by a thick, sterile, natural red fill which accumulated gradually from slope erosion and river overflow as a result of the abandonment or destruction of the Mycenaean infrastructure in the early post-Mycenaean period. Geometric (tenth-eighth centuries B.C.E.) and Archaic structures (seventh/sixth centuries B.C.E.) were either founded upon this natural fill or cut into it. The most important Geometric structures include a pottery and/or ivory workshop equipped with a cistern (possibly for storage of fine clay), a multi-room house with a courtyard which yielded three intramural burials of infants, and two circular silos (granaries) used for storing and processing agricultural products, as indicated by their ground plan and associated finds. Abutting high onto the eastern face of a Mycenaean wall was a rectangular, rubble-built cist grave of the late ninth century B.C.E. which was found practically undisturbed. An earlier, Protogeometric apsidal structure was also uncovered below the floor of the multi-room house.

Strong confirmation of a continued presence following the decline of the palatial center of Mycenae and the subsequent political decentralization, economic collapse, and social dissolution becomes very important. It complements and reinforces the post-Mycenaean archaeological picture of transition in the Early Iron Age Argolid (Argos, Tiryns, Mycenae, Asine), and substantiates cultural continuity in the region.

Bridging the 1200 B.C.E. Divide in Boeotia: A Preliminary Report on the Late Bronze Age Pottery from Ancient Eleon

Bartłomiej Lis, Institute of Archaeology and Ethnology, and *Trevor Matthew Van Damme*, Cotsen Institute of Archaeology, University of California, Los Angeles

In our paper, we will provide the first overview of the Late Bronze Age ceramic sequence from the site of ancient Eleon in Boeotia. The focus will be on the ceramics of the Late Helladic (LH) IIIB and IIIC periods, which constitute the bulk of Late Bronze Age pottery found at the site so far. At ancient Eleon we have been able to isolate palatial deposits of both LH IIIB1 and IIIB2, and for the post palatial period, we have identified two LH IIIC (early) horizons, and likewise two LH IIIC (middle) phases. Thus, after only three excavation seasons, ancient Eleon appears to be one of the most important sites on the Greek mainland for investigating developments in pottery production and consumption on both sides of the 1200 B.C.E. divide. The importance of this continuous sequence is strengthened by the role that ancient Eleon played during the palatial period, since it is clearly one of the settlements administered by the Theban palace. After the final destruction of the palace there, one might also expect major changes in its dependent settlements, but both ceramic and other evidence from ancient Eleon suggest a fair degree of continuity. This continuity, however, makes the differentiation of the earliest LH IIIC material a real challenge, and we will present some of our preliminary thoughts on that matter. During the final phase of Late Bronze Age occupation represented at ancient Eleon, the LH IIIC Middle period, the nature of the ceramic deposits seems markedly different, and they have produced some of the most intriguing and unusual vessels recovered at the site so far.

2014 Excavations at Ancient Eleon: Memorializing the Past

Brendan Burke, University of Victoria, *Bryan E. Burns*, Wellesley College, and *Alexandra Charami*, 9th EPKA

The Eastern Boeotia Archaeological Project (EBAP) continued its investigation of ancient Eleon with six weeks of excavation and analysis in June and July 2014. The chief goal of the Greek-Canadian synergasia was to reveal architectural contexts for the most important discoveries of previous seasons, including extensive assemblages of Late Helladic IIIB-IIIC material and more isolated deposits of the Late Archaic-Classical period.

The Mycenaean occupation uncovered thus far in two distinct areas of the site features architectural units with large rooms and tiled roofs. Substantial stone walls are reused in several architectural phases with associated deposits dated to LH IIIB2, IIIC early and IIIC middle periods. Without the major disruption recorded at many other Mycenaean sites, the population of Eleon continued to be active in agricultural, pastoral, and industrial activities suggested by grind stones, storage vessels, and textile tools. A stone jewelry mold suggests access to imported resources (glass and precious metals) during the IIIB period. A destruction deposit of the IIIC early period preserves a number of bronze blades and vessels. The broad array of ceramic fine wares and figurines suggest a concentration of ceremonial and ritual practices in the IIIC middle period.

We have evidence for early Mycenaean constructions at Eleon but their exact function awaits further excavation. The early remains are framed within an elaborate well-built Mycenaean bastion showing several phases of building toward the end of the Late Bronze Age. These constructions form a massive entrance system, which perhaps inspired the builders who returned to the site of Eleon after a hiatus of nearly 500 years. The prominent polygonal wall at Eleon also makes use of earlier remains, structurally and ideologically. A test trench along the exterior face of the polygonal wall revealed important evidence to associate construction of the wall with the late Archaic period. This coincides with a large deposit of votive pottery and figurines of the sixth through fifth centuries B.C.E., as well as drinking vessels. Given the proximity and conscious preservation of earlier remains, we suggest that cult activity and memorialization of the past were of key importance to the people at Eleon throughout its history.

Ancient Methone Archaeological Project

Manthos Bessios, KZ Ephoreia of Prehistoric and Classical Antiquities, Greece, *John K. Papadopoulos*, University of California, Los Angeles, and *Sarah P. Morris*, University of California, Los Angeles

Located on the western shore of the Thermaic Gulf at the mouth of the Haliakmon River in northern Greece, Methone enjoyed a strategic position and long history from the end of the Neolithic period, attracting Mycenaean, Euboian, Athenian, Phoenician, and finally Macedonian traders, prospectors, colonists, and conquerors. Linking Aegean maritime traffic to the rich interior of Macedonia, Methone was a leading northern harbor until its destruction by Philip II (354 B.C.E.). The coastal settlement served as a conduit for the movement of commodities, peoples, and ideas across a relatively large area of the Greek world, with input from various Aegean, Balkan, and eastern Mediterranean peoples, in both the prehistoric and historic periods. Our project aims to explore these connections and the interplay of Aegean cultures with the various indigenous populations of the north and others attracted to this important north Aegean middle-ground, site of trade, transport, and manufacturing.

This paper presents the results of the first season of fieldwork conducted as a collaboration between the American School of Classical Studies at Athens and the KZ Ephoreia of Prehistoric & Classical Antiquities. Fieldwork for the 2014 season was conceived as a four-pronged project, aiming at a full geoarchaeological study of both the site of the ancient city as well as the nearby Macedonian garrison established by Philip II. A particular goal of the project is to explore the dynamic river/maritime landscape of the site and the fluvial geomorphology of the Haliakmon delta, which today skirts the site to the north and has silted up much of the original Thermaic Gulf. Geomorphological coring will be conducted together with a full geophysical survey of the site, using a variety of techniques. In addition to these two surveys, the project will initiate in 2014 an intensive surface reconnaissance of the ancient city and its setting, complemented by targeted excavations on the West ("Acropolis") Hill, the location of archaic and classical workshops, Early Iron Age domestic deposits, and Bronze Age tombs. Finally, an initial trial of LIDAR technology aims to explore surface features of the ancient city.

An ongoing goal of the project is to contextualize and fully publish the remarkable discoveries already made at the site by the KZ Ephoreia (2003-2013), including one of the largest corpora of early Greek alphabetic inscriptions. Ancient Methone thus offers new vistas to our knowledge, not only of this little known region of the north Aegean, but of the long-term history of the broader Aegean and the eastern Mediterranean.

The Methodology and Ceramic Study of the Keros Island Survey 2012-13

Jill Hilditch, University of Amsterdam, *Michael Boyd*, University of Cambridge, *Neil Brodie*, University of Glasgow, and *Joshua Wright*, Oberlin College

Since the 1960s, archaeological investigations on Keros have focused on the western coast of the island, particularly within the areas known as Dhaskalio and Kavos, including the Special Deposit North. The exceptional nature of Kavos and the great importance of the settlement at Dhaskalio came better to be defined during the recent excavations between 2006-2008, but these areas are only a tiny part of the landmass of Keros, and the use of the wider island through time was an open question. What was the extent and nature of any wider habitation on Keros, and how might that have changed through time? Was there significant occupation of the island in periods other than the relatively narrow time-frame of the Kavos sites? Might other specialised sites, such as a workshop for finishing marble objects, or a site related to the breakage of the choice materials deposited in the sanctuary, exist somewhere else on the island? To answer these questions, a pedestrian survey of Keros was carried out over a twelve-week period between 2012-13. This project was a collaborative undertaking involving the specialist input of a large body of contributors, including geologists, geomorphologists and specialists in GIS, ceramics, lithics, metallurgy and architectural planning.

This brief overview highlights some of the first steps in interpreting the wealth of data now to hand. We have clarified in detail the extent of wider habitation on Keros during the period of the Kavos sanctuary and the settlement on Dhaskalio. The initial conclusion is that Keros was inhabited and utilised to a much greater degree in the bronze age than had hitherto been suspected. The material recovered allows us to confirm significant land use and probable occupation in a continuous strip of which the settlement on Dhaskalio may now be seen to form the western end. Diachronic aspects of settlement have also been clarified: the middle to late bronze age, the archaic to hellenistic, and the late Roman to early Byzantine periods were major periods of the use of the island that tell us much about the place of Keros in wider systems of occupation and exchange.

The “Squatter Building” at the Bronze Age Menelaion: Questioning Narratives of Abandonment and Reuse

Rebecca Worsham, University of North Carolina at Chapel Hill

The identification of impermanent or informal reoccupation of abandoned monumental architecture as “squatter” activity is not uncommon in archaeological scholarship, although it has been noted that “squattling” is seldom adequately

defined. In general, it has strongly derogatory connotations, implying that the reuse of particular structures is carried out by peoples who have no prior or contemporary claim to these buildings; their occupation of these structures is illegitimate. Such attitudes have led to a failure in many cases to examine squatter phases thoroughly, resulting in oversight of important formation processes, and particularly in a dismissal of the human activity and motivations that these levels reflect. This treatment, partially a product of the difficulty of interrogating remains that are by definition ephemeral, is closely tied to ideas of periodization, and particularly to narratives of decline and fall, which have been rightfully contested in recent scholarship. Rather than basing interpretive models on linear notions of the settlement's comprehensive success and failure, recent work in Central American archaeology has placed the idea of squatting within a framework of ongoing processes of abandonment and reuse occurring throughout the life of the settlement. Squatters are assessed as an active component in larger patterns of use and reuse within the settlement, and as barometers of changing attitudes toward abandoned architecture and the settlement past.

Using these ideas, I reconsider the Late Helladic (LH) IIIC "Squatter Building" and associated occupation on the south slope of the Aetos Hill at the Menelaion site in Laconia. This structure overlies and is integrated with a partially-reconstructed LH IIB–IIIB2 complex; it has been tentatively associated with a foreign presence at the site, with the implication that this is therefore an "illegitimate" re-occupation in a period of site-wide stagnation and decline. By contextualizing this building within the contemporary history of abandonment and reoccupation at the Menelaion site, a much more nuanced picture of the discontinuous, non-linear development of the settlement can be proposed. In particular, I explore a possible abandonment of significant portions of the site in LH IIIA2, followed by revivals in LH IIIB and then LH IIIC, the last manifestation of which may be represented by the Squatter Building and associated reconstruction. This model may better reflect the vicissitudes in the fortunes of the site as its inhabitants responded to competition from rising powers elsewhere in Laconia, emphasizing the value of divorcing squatter levels from overarching narratives of decline.

SESSION 6I

Greek Sculpture

CHAIR: To be announced

The "Strangford Apollo" in its Anaphian Context

Jane Francis, Concordia University

The "Strangford Apollo" is a sculpture well known to many, but it has received little in-depth academic attention since its acquisition by the British Museum in 1864. Said to be made of Parian marble and found on the island of Anaphe, its source and place of manufacture are unknown. Stylistic analyses from the late 19th and early 20th centuries presented comparisons with works from Aegina and Boeotia as well as the Cyclades. The chronology of this sculpture is also uncertain.

Long accepted as a late-Archaic work, this idiosyncratic statue nonetheless displays features not seen in other more securely late-Archaic kouros figures. A recent re-interpretation of the Strangford Apollo's origins proposes that it dates instead to the first century B.C.E. as part of an archaizing movement. An almost complete lack of archaeological research on Anaphe also means that the statue cannot be connected artistically, historically, or culturally with its probable findspot.

This paper aims to fill this gap and to consider the "Strangford Apollo" within the historical and archaeological context of Anaphe. By piecing together evidence for the island's wealth, its foreign contacts, ritual sites and their requirements, inscriptions, and the sculptural traditions of the Cyclades, it is possible to assess whether Anaphe could have supported—or required—the acquisition and use of such a statue in either the sixth or first centuries B.C.E. Such an analysis, in turn, may enable a more concrete determination about the date of the "Strangford Apollo" and provide it with a more secure art historical niche.

The Cult Statue of Herakles Alexikakos in Melite

Daniel Dooley, Johns Hopkins University

An allusion at Aristophanes, *Ranae* 501, combined with scholia ad loc., attests that the Attic deme Melite possessed a cult dedicated to Herakles Alexikakos ("Averter of Evil"). Here the slave Xanthias assumes the implements of Herakles, which Dionysos has proved unworthy of donning. After Xanthias vaingloriously styles himself as Hērakleioxanthias, the god tells his attendant that indeed he now resembles hōuk Melitēs mastigias ("the rogue from Melite").

Whereas most scholars regard this reference as appealing to a general familiarity with the cult, this paper argues that the dramaturgy of the scene should revolve around Xanthias' adopting the specific pose of the cult statue of Herakles Alexikakos. Glimpses of that pose may well be found in a series of images in the minor arts that portray a bow- and club-wielding Herakles striding forward aggressively. Woodford has already argued (*AJA* 80 [1976], 291-4) that this "Promachos" type accords with the cult epithet Alexikakos and that the early evidence for it accords with the time and attested oeuvre of the cult statue's probable sculptor, Hageladas of Argos.

The statue's attribution (contained in the scholia to *Ran.* 501) is the thorniest issue related to the cult, as several scholars (e.g., Vollgraff in *id.* and Beyen, *Argos et Sicyone* [The Hague: 1947]) have sought to reconcile conflicting evidence that Hageladas' floruit apparently began circa 520 B.C.E. while the cult image or even the cult itself was supposed to have originated at the time of the great plague that struck Athens in 430/429. By augmenting Woodford's evidence for reflections of the cult image to include works like a cup by the Theseus Painter (*Taranto, Mus. Naz.* 6515), this paper contends that the type did originate under the Peisistratids and enjoyed special cachet after the Battle of Marathon. Herakles' purported epiphany at that battle may even have been the impetus for the epiklēsis Alexikakos.

Melite was a busy urban deme, and the Herakleion there is called epiphanestaton ("most conspicuous"; regarding its exact location, Lalonde argues one of the stronger cases in *Hesperia* 75 [2006], 83-119). While the principal structure

was perhaps a small shrine of the open-air, tetrastyle type studied by Frickenhaus (MDAI[A] 36 [1911], 113-44), a major sculpture from the Argive school would have commanded attention. Thus the combination of the statue's physical prominence, Late Archaic date, and distinctive appearance would have rendered even a brief gesture to it by Xanthias intelligible to Aristophanes' audience.

Demosthenes' Statue, the Athenian Agora, and the Politics of Location

Julia L. Shear, Boğaziçi University

In 281/0 B.C.E., the Athenians voted to award the orator Demosthenes a bronze statue to be set up in the Agora and various other honours in return for his services to the city. His image's appearance is now known through various Roman copies, as well as a number of written sources. Despite this evidence, the exact location of the statue in the Agora remains a source of scholarly contention; it is, therefore, difficult to elucidate the figure's interaction with its larger setting. As I argue in this paper, reexamination of the two crucial sources demonstrates that the statue did not always stand in the same place. While it was originally set up near the Altar of the Twelve Gods ([Plut.] *Mor.* 847A), by the second century C.E., it was located to the south along the road on the west side of the Agora (Paus. 1.8.2-4). It was most probably moved to this position in the Augustan period when the Agora was the site of major construction and relandscaping. This history has further ramifications for understanding the ways in which the figure fitted into the larger setting of the Agora. In its first phase, Demosthenes' likeness was located near the Stoa of Zeus Eleutherios and its associated military monuments. This context emphasised the honorand's military contributions and his commitment to the city's freedom, images also conveyed in the request for the honours ([Plut.] *Mor.* 850F-851C), which formed the basis for the necessary honorary decree, and in the epigram on the statue's base (e.g. Plut. *Dem.* 30.5). When the statue was moved south to its second location along the road on the west side and between the Monument of the Eponymous Heroes and the Temple of Ares, it was removed from this context and the associations with the city's freedom and military monuments were broken. In its new position, the figure was brought into association with statues of Eirene and Ploutos, Lykourgos, and Kallias the fifth-century statesman. This context focused on Demosthenes as a bringer of peace, as various scholars have noted (Worthington 1986; von den Hoff 2009). The civic attire of the figure will have reinforced this imagery. Under the Roman empire, this emphasis on peace-bringing was much more appropriate than the original focus on military contributions and the city's freedom which the *pax Romana* had now rendered obsolete.

A New Reading of the "Slipper-Slapper" Group from Delos

S. Rebecca Martin, Boston University

The under life-sized Hellenistic sculptural group (Athens NM 3335) known conventionally as the "Slipper-Slapper" or "Sandal Slapper" was found on Delos in a complex operated by a *koinon* of Phoenician businessmen, the Poseidoniasts. It shows Aphrodite holding her right sandal, Pan reaching out to her, and Eros

flying overhead grasping one of Pan's horns. The group's Aphrodite quotes the late-Classical Knidia by Praxiteles, while reversing the position of the prototype's arms and swapping the Knidia's robe for the eponymous sandal. The meaning of the Slipper-Slapper is debated and hinges on the significance of its reference to the Knidia and new narrative details. Aphrodite's sandal is alternatively interpreted in terms of eroticism, even prostitution; genre scenes; or religious word-play. Most often this Aphrodite is understood as brandishing her sandal at Pan in order to fight off his unwanted sexual advances. Eros, for his part, seems bemused by the feeble attempts of the unsophisticated suitor, though his pose is ambiguous: either he grasps Pan's horn to bring him closer to his mother—or to shove Pan away. Complicating any reading is the group's accompanying inscription that makes clear it was a religious, if private, devotional work dedicated to the "native gods" of its Phoenician patron, Dionysios of Berytos.

This paper presents a new interpretation of the Slipper Slapper group that rejects the idea that the work was designed for a strictly frontal view. From the side, it clear that Pan is fully seated on a stump, his right leg kicked up in the air behind Aphrodite. The stump is draped by an animal skin, against which leans Pan's lagobolon. Thus Pan is shown deliberately at rest in his milieu, the wilderness. These details refute the typical interpretation of Pan as the sexual aggressor, perhaps having seized upon Aphrodite after her bath. Rather, the reverse must be true: Aphrodite has approached Pan. The paper will consider the implications of this observation, arguing that the Slipper-Slapper group is appropriating not only the pose of the Knidia, but also elements of the latter's implied narrative. Both works reference Aphrodite in sexual pursuit, which suggests that the intended object of her affection is Adonis. The paper concludes by exploring the meanings of the Aphrodite-Adonis/Ashtarte-Adon pairing in both works.

Hermes and Dionysos at Olympia and the Antikythera Shipwreck

Aileen Ajoatian, University of Mississippi

Since its discovery in 1877 at Olympia, the marble group of Hermes and Dionysos has generated controversy. Is the composition Classical, an original work by the fourth-century sculptor Praxiteles (according to Pausanias), is it a Hellenistic or later copy of his lost original, or a Roman statue with no connection to the Athenian sculptor? Right now, the pendulum of opinion appears to be swinging back to the fourth century scenario. This argument rests in part on the assumption that the sculpture is made of Parian marble (no scientific testing has been done). The work would then be fourth-century or early Hellenistic, because Parian marble was not used much at Olympia after this, thus supporting the Praxitelean attribution. There may be another solution to this problem. Hermes' body, highly polished in front, was originally finished smooth but matte in back. The drapery cascading over the tree trunk on the god's left side is plastically dimpled. A thick square strut connects the trunk to the figure's left leg. The marble may be Parian. A look at marbles retrieved from the Antikythera shipwreck may provide clues to the origins of Hermes and Dionysos. Carved from Parian marble, statues preserving their original surface, like a crouching boy (Athens, NM inv. no. 2773) were highly polished in front, with a matte finish in back. Large square struts supported

the boy's pose. A drapery fragment (Athens, NM inv. no. 15561) displays plastic modeling similar to the mantle draped over Hermes' tree trunk. The Antikythera wreck, dated to the early first century B.C.E., provides a terminus ante quem for the statuery, which may have been produced on Delos or at Pergamon. Over 100 years of dispute concerning the date of Hermes and Dionysos at Olympia have distracted scholars from two important issues. Originally, Hermes' back was finished and then reworked, his hair was also recut, there is an ancient drilled hole at the base of his back. He may first have been a satyr. Furthermore, the real star of the piece probably was the baby Dionysos. The marble group at Olympia may have been a late Hellenistic dedication produced by the same workshops that created the marbles in the Antikythera group. The motivation for the votive gift might be connected with the college of Sixteen Women at Olympia, administrators of the Heraia, the women's sacred foot race, who worshipped Dionysos, and organized his festival at Elis.

The Dilemma of the Prima Porta Augustus: Polykleitos or not Polykleitos?

Gianfranco Adornato, Scuola Normale Superiore, Pisa

The main purpose of this paper is a formal and typological analysis of two of the most celebrated sculptures of the Greek and Roman world: the Prima Porta Augustus and its supposed model, the Doryphoros by Polykleitos. After the discovery of the Prima Porta Augustus, scholars firstly directed their attention to the meaning and interpretation of the statue and its chiselled cuirass (Henzen 1863). In 1895 F. Wickhoff connected the proportions and the pose of the statue to the Doryphoros. In his analysis, the Prima Porta Augustus was not perceived as a true copy (*Nachbildung*) of the classical statue, but it was described as influenced by it (*Nachempfindung*). After Wickhoff's analysis, scholars have defined the Doryphoros as the sculptural model of or as the main source of influence for the Prima Porta Augustus.

Despite the widely-accepted *communis opinio* that the Doryphoros represents the sculptural model of the Prima Porta Augustus, I argue that two crucial aspects must still be thoroughly investigated: style and typology. The first part of this paper is dedicated to the stylistic and anatomical analysis of the two sculptures, in order to identify specific elements of a possible artistic dependence. In the second part I discuss the sculptural type and typology, neglected in recent articles (Pollini 1995). I show that a reading of the Prima Porta statue in terms of opposition between naked Greek forms and clothed Roman features as recently proposed by Squire (2013) is not satisfying, since the statuery type and the transmission of a typology play no role in his analysis. I shall conclude that the cuirassed statue (*loricatus* type) is unambiguously related to a different typology and tradition that has no link with Polykleitos and the naked Doryphoros, and that the portrait of Augustus has no significant common points with the classical forms of the fifth-century statue.

Reliefs from Early Roman Corinth

Mary C. Sturgeon, University of North Carolina, Chapel Hill

In this paper I present marble reliefs found during excavations in ancient Corinth conducted by the American School of Classical Studies at Athens under auspices of the Greek Archaeological Service. These excavations took place southwest of Temple E and in the Gymnasium area north of the theater.

During the investigations of 1996, southwest of Temple E, two relief fragments were recovered from late period walls. Similar to these is a relief previously found before the West Shops. A relief of related subject was discovered in the Gymnasium excavations. Analogous in style and date are two copies of heads from the 'Three-figure reliefs' of late fifth century style, one found at each end of the Forum. I argue that all these reliefs date to the Early Roman period and form a group that provides important information about the early decades of the Roman colony.

The first three slabs derive from a monument, an altar or statue base, which shows nearly life-size figures in a procession. Evidence for their date is provided by a coiffure and by symbols they carry. The female head wears a nodus hairstyle, which establishes a general date in the Augustan period. The second figure carries an incense box, *acerra*, and fringed cloth. The third figure carries an *aphlaston*, the decoration of the stern of a ship, which symbolizes a naval victory. The subject appears to be a religious ceremony, celebrating an important naval victory (*Actium?*).

A relief from the Gymnasium area contains the head of a youth, mantle worn over his head, *capite velato*. The costume and long hair identify him as an attendant in a religious ceremony. The material and style indicate that this relief derives from a different dedication than the one found near Temple E. The resemblance of the youth to portraits of Augustus helps place this monument also in the Augustan period.

Sculptural activity of a different type is shown by two heads that derive from the Three-figure reliefs. One, recognizable as Orpheus by his Thracian cap, comes from a plaque with Hermes, Eurydice, and Orpheus. The second reproduces the central Peliad in the scene of Medea and the daughters of Pelias. These finely-made figures exemplify the Classicizing interest of the Augustan period.

This group of reliefs provides evidence for major sculptural activity at Corinth in the Early Roman period, a period with which, until now, few monuments have been securely associated.

SESSION 6J**Recent Work in Latium**

CHAIR: To be announced

Settlement and Burial in Iron Age Gabii. Results of the Gabii Project Excavations, 2013-2014

J. Marilyn Evans, Intercollegiate Center for Classical Studies (ICCS) in Rome, and *Marcello Mogetta*, Freie Universität Berlin, and *J. Troy Samuels*, University of Michigan

Since 2009, the University of Michigan has been excavating at the site of ancient Gabii, a Latin city just east of Rome. In 2013 and 2014, archaeological investigation continued in a sector of the site containing the earliest levels of occupation. Beneath the remains of an archaic stone building, at least two, and possibly three, hut structures were identified in association with a series of infant burials, all belonging to the seventh century B.C.E. Although the huts are ongoing excavation, they likely comprise a discrete cluster of habitation. A rock-cut channel delimits the area to the north and east, enclosing at least two of the huts. The largest of these lies in the center of the area and probably constitutes the main locus of habitation; the smaller, located to the northeast, was used contemporaneously, although its function remains unclear.

This arrangement is consistent with other examples in Iron Age Italy, but what sets it apart are the infant burials found at the northern and western limits of the central hut, as they are the richest known from this period and location. All four are rock-cut trenches that contain the inhumed remains of infants along with elaborate sets of grave goods. The grave good assemblages contain a wide array of bronze, ceramic and amber items. The richest burial, for instance, includes 15 intact ceramic vessels, a bronze dish, several bronze fibulae, and an assortment of ivory, amber and glass beads. These graves belong to a category of burial known as *suggrundaria*, a term used by ancient and modern sources to refer to infant burials located beneath the eaves of huts and houses. The location of these burials at the northern and western limits of the central hut, quite possibly beneath the eaves, supports this identification.

These finds make significant contributions to our understanding of urban development in the Gabii-Castiglione region. The evidence for habitation in what later became the site of the archaic city offers strong indication that urbanization was well underway in this area during the seventh century. It also suggests that the urban center emerged from small clusters of habitation, occupied by elite families for generations. The wealthy burials and the delimitation of the huts point to the elite occupation of the area; the close alignment of the archaic house to these features suggests a continuity in the use of the area over time.

A Monumental Mid-Republican Public Building at Gabii

Andrew C. Johnston, Yale University, Nicola Terrenato, University of Michigan, and Anna Gallone, Gabii Project

Excavations at the Latin city of Gabii in 2012–2014 conducted by the Gabii Project, directed by Prof. Nicola Terrenato of the University of Michigan, uncovered a monumental building complex, hitherto known only partially from previous excavations in the 1990s. Organized on three artificial terraces that regularized the slope of the volcanic terrain, it measures some 60 x 35 m, occupying an entire city block. It is prominently situated at one of the most central locations within the city, on the main urban thoroughfare at the important intersection of the roads from Tibur, Praeneste, and Rome. Stratigraphic evidence and construction techniques tentatively date the original phase of the building to the mid third-century B.C.E.

The lower terrace was dominated by a monumental portico, which opened onto a series of rooms paved in tufo slabs. The middle terrace was principally organized around a large courtyard, paved in slabs, delimited to the east and west by a quasi-symmetrical arrangement of alae and small rooms, and to the north by three larger rooms. Most of these rooms were adorned with fine *cocciopesto* floors consisting of geometric patterns of limestone tesserae in a field of crushed red ceramic, and with painted plaster walls. To the west, there is a smaller porticoed courtyard, with an impluvium at the center, one of several features that attest to an elaborate subterranean hydrological engineering system. Access to the upper terrace—a large, open space with walls in polygonal masonry—was gained by means of a grand staircase consisting of twenty-one steps, and this transition between elevations was further emphasized by a spectacular facade, a retaining wall built in *opus quadratum*.

The building seems to have undergone reorganization already by the beginning of the first century B.C.E. By the Augustan age, the upper terraces were entirely abandoned, and in the course of the next two centuries were filled by dumping activity, while the lowest terrace was redeveloped into a series of modest *tabernae* that represent the last phase of occupation of the city.

The preliminary interpretation of this complex is as a public building, with spaces designed for a variety of political and ritual functions. It now represents one of the very few examples of public architecture other than temples and fortifications known from the mid-Republican period, and sheds important light on the development of Latin cities in the crucial and obscure period between the Latin War and the Second Punic War.

Decorating Space: Minturnae's Portico in Context

Sophie Crawford-Brown, University of Pennsylvania

Found at Roman sanctuary complexes throughout Latium, pi-shaped porticoes represent a critical, if understudied, feature of Late-Republican architecture. In addition to regularizing space and visually framing a central building, such porticoes offered a unique opportunity for innovative decorative schemes. Indeed, a range of ornamental types appear in second and first century B.C.E. examples, including architectural terracottas, worked stone, and even first-style wall painting.

While it has typically been possible to reconstruct the ground plans of second and first century pi-shaped porticoes in Latium, the scope of their terracotta decoration has remained problematic. In cases such as Fregellae and Praeneste, the architectural terracottas were badly disturbed at the time of excavation, complicating their attribution to particular buildings within the complex. Minturnae, by contrast, offers a relatively well-documented example, providing valuable insight into the decorative programs of Latial pi-shaped porticoes. Yet Minturnae's architectural terracottas have received little scholarly attention in the 80 years following Jotham Johnson's 1935 excavation report. Given the dramatic increase in available comparanda from central and southern Italy, a reexamination of Minturnae's portico within the broader context of Latin sanctuary sites is an urgent desideratum.

The finds from Minturnae suggest a sharp contrast between the ornamentation of the portico and that of the Capitolium it surrounds. While Minturnae's Capitolium drew conservatively from the most standard features of terracotta architectural decoration, its portico displayed an unusual, even eccentric, combination of motifs. The best comparanda for the portico's unusual antefix types (a nude flute-girl and satyr syrinx-player with Hercules attributes—both winged) come from Fregellae and Praeneste. This similarity suggests not only the near contemporaneity of these antefixes, but a sudden and widespread interest in utilizing porticoes, a new architectural form for Latial sanctuaries, for innovative decorative designs.

Comparative analysis of portico decoration has further implications for our understanding of Minturnae as a colony. Situated on Latium's southern border, Minturnae is geographically close to the towns of northern Campania, yet it displays an unmistakably northward orientation, and appears to have participated in the visual language of more distant Latial and Etruscan sanctuary complexes. In addition, the impetus for such building appears to have derived not directly from Rome, but from contact between colonies. An examination of Minturnae's portico and its decoration therefore provides an opportunity to explore colonial interaction as well as visual manifestations of public identities, all of which complement the current scholarly shift from Rome-centered models of colonial influence.

New Light on the "Villa of the Antonines": The 2014 Investigations

Timothy Renner, Montclair State University, *Deborah Chatr Aryamontri*, Montclair State University, *Carlo Albo*, Independent Scholar, and *Carla Mattei*, Independent Scholar

The 2014 campaign of excavation added important dimensions, both in terms of physical extent and with respect to architectural design, to our knowledge of the "Villa of the Antonines" located alongside the Via Appia in modern Genzano di Roma, once part of the ancient Ager Lanuvinus. To the north of the previously known amphitheater and baths, a series of rooms including a black and white mosaic of a similar design to one at Villa Adriana, Tivoli were uncovered near where our 2013 geophysical survey had pointed to the presence of additional structures. The new remains, located about 150 m up-slope from the amphitheater with an impressive view of the plain and sea, suggest the presence of residential quarters. They give credence to our growing picture of a complex organized on a series of terraces below the southern rim of the Lago di Nemi, to be identified as a villa

of the Antonine family based on literary references, particularly Commodus' reported exploits in an amphitheater in his residence at Lanuvium, and on the 1701 discovery of marble busts of members of this imperial dynasty, today in the Musei Capitolini in Rome.

Investigations continued in the area of the amphitheater in order to further clarify its physical relationship to the baths and its post-Antonine development, while additional geophysical survey sought to locate other buildings of the villa to the east. Fresco fragments—especially a group with a delicate blue-green floral design—unearthed this year in both the newly investigated area and in the amphitheater, alongside elements of costly white and colored marble veneer and opus sectile decoration, fragments of glass mosaic, and countless glass mosaic tesserae of a wide variety of the chromatic spectrum, add new evidence for the lavishness of this complex and indicate elite wealth and taste in the owners. The finds, especially the brickstamps, continue to fit well into the second century timeframe, as does as the motif of the new black and white mosaic with interlocking circles defining hexagons, of which we have other well-known examples not only in the Hospitalia at Villa Adriana, but also in a second-century redecorated room at the Villa of Livia at Prima Porta.

These developments significantly broaden our knowledge of the site and continue to validate the commonly accepted identification of these remains with the imperial residence of the Antonine dynasty at Lanuvium.

APAHA Tibur 2014: A New Excavation Project at Hadrian's Villa. Preliminary Report on the First Season

Daira Nocera, University of Pennsylvania

In June 2014, the Advanced Program of Ancient Art and Archaeology (APAHA) of Columbia University, led by Francesco de Angelis and Marco Maiuro, launched a new archaeological project at Hadrian's Villa in Tivoli. The first season was aimed at investigating two areas of the villa that presented different yet equally intriguing research questions. This paper provides the preliminary report of the first season of excavation; it presents the strategy, methodology, and data processing adopted by the project, and it offers a first interpretation of the findings.

Excavation in area A coincided with the so-called Lararium, close to the Great Vestibule of the Villa. This area is characterized by an extremely well preserved wall enclosure built in front of a small temple. It had been very partially excavated (and insufficiently documented) through few small sondages in the 1930s. APAHA's investigation revealed new architectural features that modify the plan of the area and shed new light on the function and architectural history of this little known yet very prominent sector of the villa.

Excavation in area B was located in the so-called Macchiozzo, a previously unexplored sector roughly placed at the center of the villa and covered with thicket. The excavation, which was preceded by geomagnetic prospections, revealed the existence of a large compound of Hadrianic age combining elements of luxury architecture, such as marble-faced walls, with more utilitarian structures. The large amount of kitchenware found during the dig—an unusual feature for Hadrian's Villa, which is better known for the finds of statues—appears to resonate with

E. Salza Prina Ricotti's hypothesis that the kitchens of the complex were located there. No less important was the identification of Late Antique and Early Medieval phases, attested by both architectural structures and copious findings; their analysis will shed light on the hitherto understudied post-Hadrianic life of the villa.

Access and Surveillance at Hadrian's Villa

Benjamin Crowther, The University of Texas at Austin

Architectural settings were vital for managing the tension between accessibility to the person of the Roman emperor and imperial security. As the emperor was patron par excellence in the Roman world, there existed certain expectations that particular public and semi-public activities take place within an imperial residence. At the same time, for the dual reasons of security and exclusivity, imperial residences were by no means completely open to the public. While modern scholarship has often considered this accessibility, or lack thereof, in the abstract, the architectural remains of known imperial residences offer an opportunity to investigate how this process played out on the ground. This paper examines how the spatial arrangement of one such imperial residence, Hadrian's Villa in Tivoli, shaped and controlled the movement of individuals. Traditional studies of Hadrian's Villa have focused on its architectural innovation and/or Hadrian's role in developing these forms, but recent examinations of the villa have made it more and more apparent that a large number of guests, slaves, servants, and guards were all present at any given time. This paper repopulates three separate complexes within the villa (the Central Vestibule, the Scenic Triclinium and the Residence) to determine how the architectural arrangement of each resolved tensions between access and security. Within each area, particular rooms possessed privileged sightlines across central access points and were crucial for the regulation of human movement. This investigation of the villa's architecture through the lens of access and surveillance reveals design considerations extending beyond the aesthetic and offers a preliminary model for considering control over movement within the context of an imperial residence. Ultimately, the architectural arrangement of the villa did not create a strict dichotomy between a public and private zone, but provided several strategies for managing access and maintaining surveillance through either the concealment or display of security forces.

SESSION 6K: WORKSHOP

Projections for the Future: Best Practices for the Preservation and Publication of Geospatial Data

MODERATORS: *Adam T. Rabinowitz, The University of Texas at Austin, and James Newhard, College of Charleston*

Workshop Overview Statement

In the last two decades, geospatial data have taken on a fundamental role in archaeological documentation. Most archaeologists now use geographic information systems in some capacity, and vast quantities of spatial data are being gener-

ated in the course of archaeological research projects. Federal and private funding agencies have taken note of this explosion of digital documentation and increasingly require data-management plans in grant proposals. This is straightforward for text documents or tabular data. But spatial data sets are often complex, relational, idiosyncratic, and made up of multiple file types. Long-term archival solutions can require substantial and costly efforts on the part of both data producers and repository managers. Furthermore, many archaeological projects would like to take advantage of a growing array of tools for the online, interactive publication of their spatial data—but are blocked by a lack of infrastructure or technical expertise. The result is a growing dark, inaccessible, and vulnerable archive of geospatial information stored in a variety of formats with little metadata on individual hard drives and servers.

Data-management plans, repository ingests, and online publication can be facilitated by choices about data structure and documentation made at the beginning of a project rather than the end. Existing best-practice guides for the collection and description of geospatial data include instructions relevant to the initial stages of data set development, but these guides do not take into account the variety of archival options available, nor do they address online publication. Most importantly, archaeologists whose geospatial data have evolved organically often come to such guides only at the end of the process, when the structure of their data sets has already been established.

This workshop seeks to bring together archaeologists, repository managers, representatives of granting organizations, librarians, and online data-publication experts to discuss how geospatial data sets can be structured in ways that facilitate online publication and long-term archival preservation. At the beginning of the session, panelists drawn from each of these fields will offer their perspectives on the importance of a system of best practices to create solid data-management plans and guarantee future preservation and access. This will be followed by a broader discussion of basic best practices for geospatial data among all attendees. The intended result is a white paper produced under the aegis of the Geospatial Interest Group that outlines expectations, standards, and guidelines for the archiving and dissemination of geospatial information collected by members of the AIA.

PANELISTS: *Adam Brin*, the Digital Archaeological Record (tDAR), *Tom Elliot*, Institute for the Study of the Ancient World, New York University, *Eric Kansa*, Open Context, *Jennifer Serventi*, National Endowment for the Humanities, and *Katherine H. Weimer*, Texas A&M University Libraries

SESSION 7A: Colloquium**New Light on Old Stones: Greek and Roman Architecture in the 21st Century**

ORGANIZERS: *Jessica Paga*, Washington University in St. Louis, and *Adrian J. Ossi*, Washington University in St. Louis

Colloquium Overview Statement

This panel seeks to illuminate the rich variety of interpretive approaches that are available to architectural historians and the benefits of questioning what has become canon. In recent years, the study of architecture has been invigorated by new digital recording and reconstruction techniques, but these must serve as tools for sociohistorical contextualization rather than interpretive ends in and of themselves. The contributors to this colloquium seek to reframe the discussion of the ancient built environment through the use of new and revised interpretative strategies that draw on the intersecting and interdisciplinary fields of history, anthropology, art history, and classics. In a field where much of the available evidence has long been known and studied, this panel demonstrates how renewed attention to fundamental issues and problems in Greek and Roman architecture has the ability to reveal previously overlooked nuances, complicate standard interpretations, and underscore the continued vitality of ancient architecture.

Each presenter is responding to long-standing assumptions that have arisen from the historiographical tradition surrounding particular case studies. These responses allow us to reassess well-known corpora and structures within their historical context to come to a new understanding of the mechanisms and motivations behind their construction. This approach is employed by the first, second, and third contributors in reassessing the built environment of two of antiquity's most familiar cities, Athens and Rome. Others, such as the third through sixth contributors, investigate neglected building types, sites, or geographic regions that offer an alternative window into the ancient built environment in which cross-cultural interaction was often a significant factor. A major theme in several papers, including the first, second, fourth, and fifth contributors is how we can use construction processes and their material traces to investigate the reciprocal interaction between society and the built environment. Above all, the papers in this panel present a critical return to problems left unexamined and questions left unanswered or even unasked, while simultaneously demonstrating how dynamic and complex the study of ancient architecture has the potential to be. Concluding remarks from the discussant will tease out these threads and emphasize the benefits of integrating historiography, attention to tradition, digital advances, and critical evaluation in the continuing conversation about the role of architecture in the ancient world.

DISCUSSANT: *Bonna D. Wescoat*, Emory University

Architecture and Epigraphy: The Telesterion at Eleusis and IG 1(3) 386 and 387

Marya Fisher, Institute of Fine Arts, New York University

The Telesterion at Eleusis is one of the most ritually important buildings in ancient Greece. Mentioned frequently in ancient sources, the Telesterion was the building at the center of the Eleusinian cult and its mysteries and has, since its discovery in 1812, been a subject of much scholarly interest. Yet despite the wealth of archaeological evidence and documentary material, both epigraphic and literary, the building continues to pose unresolved questions for architectural historians. Of these, the most perplexing and inscrutable may be how best to interpret and date the building's many phases. Among the important documentary evidence is a pair of inscriptions (IG 1[3] 386 and 387) that record a list of architectural members associated with the Telesterion among the inventories of the Eleusinian *epistatai*, or cultic overseers, for 408/7 B.C.E.

This paper reconsiders the chronology and number of phases of the Telesterion in the fifth century B.C.E. based on a close reading of these inscriptions and a thorough consideration of the building projects and practices at Eleusis during this period. Of special interest are the two or three phases of the Telesterion conventionally associated with the leadership of Kimon and Perikles. Because of the date of the inscriptions, these texts offer unique insight into this period in the building's history and may help unlock the mystery of the Telesterion at an important moment in its long use-life.

A close examination of the inscriptions allows for a more nuanced view of both the history of the Telesterion in the fifth century B.C.E. and the nature and afterlife of its building material. Because the inscriptions record not only stone architectural members but also those of more ephemeral materials that are not preserved in the archaeological record, they provide a unique opportunity to consider the architecture of the Telesterion in its totality. Moreover, since the inscriptions deal with the building materials after their initial use in the Telesterion, the texts afford an understanding of the status, reuse, and survival of architectural members at Eleusis that would be otherwise inaccessible.

The Early Democratic Building Program in Athens

Jessica Paga, Washington University in St. Louis

The concept of an ancient building program as the brainchild of a single individual has long stood as a fundamental means of architectural categorization. We commonly speak, for instance, of the Periclean and Lykourgan building programs in Athens, in addition to those associated with particular tyrants. In this paper, I complicate that traditional assumption by emphasizing the role of administrative and financial centralization over the dictates of an individual. In this way, we might detect evidence of a building program even in the absence of a specific historical personality. As a case study, I posit an early democratic building program in Athens at the end of the sixth and the beginning of the fifth century B.C.E. The result is a more nuanced conceptualization of ancient building programs, in addition to a means of measuring the robust flourishing of the early Athenian democracy in architectural terms.

Over the course of approximately 25 years, from 508/7 to 480/79 B.C.E., 32 monumental structures appeared in Athens and Attika. They include temples and sanctuary structures, civic and administrative buildings, large-scale votive dedications, multipurpose theatral areas, and infrastructure such as walls and drains. Nineteen of these structures were built in the *astu* of Athens, while the rest appear in the demes of Attika. Many of the structures were built partially of marble or include marble features; most are situated in prominent and highly visible areas; and nearly all suffered some amount of destruction or damage at the hands of the Persians.

Several of these structures have previously been associated with the Peisistratidai and used as evidence for a tyrannical building program in Athens. This characterization is largely drawn in comparison with other tyrannical building programs, such as in Corinth, Samos, and Syracuse, all of which can ultimately be traced to Aristotle's generalization of the relationship between tyrants and building (*Pol.* 1313b). My research, however, demonstrates that the Athenian tyrants did not build many of the structures that have been attributed to them by modern scholars. Rather, the decades after the reforms of Kleisthenes stand as a markedly more dynamic period of building activity than anything that occurred in Athens and Attika before. The range of structures, their geographic distribution, and their monumentality overwhelmingly speak to a period of concentrated and accelerated construction activity during the very time when the Athenians were struggling to enact and realize the reforms that would make the polis into a democracy.

The Vanishing Classical Stoa at Thorikos and Its Afterlives

Margaret M. Miles, University of California, Irvine

Shifting winds forced Julien-David LeRoy's ship to put into a small harbor near the site of Thorikos, where for two weeks in 1754 he and his crew explored the nearby ancient site. They discovered some standing columns from a Doric building, what LeRoy took to be the remains of a Greek temple, built of marble with a plan of 6 x 13 columns. Le Roy missed some upper drums and reconstructed the colonnade with a short height; he did not recognize that the columns were unfinished and that their fluting was not completed. The errors led him to suppose the temple to be a very early building in his posited history of Greek architecture because of what he thought were short, stumpy, rough columns. This error was soon rectified by subsequent visitors, including Edward Dodwell (1805) and Francis Bedford (1813), who speculated that the building was a classical stoa, but with 7 x 14 columns.

Because it is near a floodplain at Thorikos, in the course of the 19th and 20th centuries the building was completely lost to view three times and then partly reexcavated. In 1893, V. Staïs associated the building with Demeter, on the basis of literary traditions and chance finds nearby. His label for the building still sticks, although with only slender evidence.

The building is of particular interest because of its innovative, double-faced plan, which is now documented thanks to the more complete excavation of the mid-1990s carried out by the Greek Archaeological Society, which revealed the foundations for a long, central cross wall. In this paper, I trace the history of mod-

ern views about the building, and I propose a significant modification to the most recent reconstruction of the stoa, a central doorway; this structure likely served both as a stoa and a propylon.

The original building dates to the last quarter of the fifth century B.C.E., but its plan anticipated the more sophisticated design of stoas that would reappear later in the Hellenistic period. Some of its superstructure was reused in the Roman Imperial period for a temple in the Athenian Agora: the stoa had an afterlife providing a classical aura for the central city. The double stoa at Thorikos illustrates the great creativity in the architecture of the later fifth century B.C.E. and the subsequent creative use of this period's architecture in the Roman era.

Hellenization and Invention in Roman Architecture

John R. Senseney, University of Illinois at Urbana-Champaign

The broad outlines of Rome's relationship to Greek architecture appear all too familiar: Etrusco-Italic forms gave way to Hellenized design approaches as native Greek architects, materials, building types, and models of patronage infiltrated Rome during the Middle and Late Republic. Likewise, Greek architectural theory influenced Vitruvius, though neither would significantly affect the so-called Roman architectural revolution (Ward-Perkins) of concrete, vaulted architecture.

This paper critically reassesses this traditional narrative by interrogating how we relate notions of architecture, design, and theory to Greek and Roman contexts. The investigation reveals not merely semantic problems but rather wholly inadequate conceptions of the character and development of the ancient art of building. Emerging interpretations of literary evidence underscore distinctions between architecture as a discipline and architecture as a profession, carrying new implications for the related ranges of social standing and educational backgrounds of Late Republican builders. The revised portrayal of this climate enables a radical new understanding of classical architecture not as a readily recognizable entity that simply evolved from archaic origins but rather as an intellectual formation capable of differentiation and scrutiny for the first time only in the first century B.C.E. In illustrating recent discoveries concerning Greek tools and techniques, I frame the question of Greek-to-Roman continuity in reference to construction rather than anachronistic considerations of "design." I also clarify the distinction between theory and standard Greek writings about construction, demonstrating *theoria* as a shared mainspring for changes to both building and discourse. Finally, I show how theorized construction and writing converged with Varro's upper-class Roman invention of *architectura*, from which Vitruvius' writings, as well as the Vitruvian lens through which posterity has viewed Greek building, derive.

Observing the significance of this turning point carries important consequences. First, we may invert the simple model of Greek architecture influencing Rome, recognizing instead the dependence of our image of Greek architecture largely on intrinsically modern readings of Vitruvius' supposed concern with design and its Greek origins. Secondly, in place of modern insistence on a disconnect between Vitruvius' writings and the realities of the so-called New Style (MacDonald) of imperial architecture, we may discern these as different but fundamentally related responses to a theorizing shift in the approach to instruments, techniques, pro-

cesses, and principles traditional to the construction (and not design) processes of the Greek art of building. These implications shed new light on the intellectual dimension of Rome's political and aesthetic revolutions in transitioning from the Hellenistic world.

The First Public Monument in Roman Paris: The Pillar of the Sailors, 14–37 C.E.

Kimberly Cassibry, Wellesley College

Roman Paris began to take shape between 25 and 50 C.E., when the monumental forum was constructed in the area now known as the Latin Quarter. The Pillar of the Sailors, rising to a height of 5.25 m, dates to this moment of urbanization. The monument's decoration—relief sculptures representing Greek, Roman, and Gallic gods—has inspired studies of imperial syncretism. This paper, in turn, analyzes the social processes that led to the monument's architectural and material form and the pillar's impact in establishing the commemorative component of Paris' evolving urban fabric.

In the Latin dedicatory inscription, the patrons identify themselves as the *Nautae Parisiaci*, sailors from the Parisii tribe. The only known shipping corporation from Paris, they likely took charge of transporting the stone necessary for the forum's construction. The same limestone, quarried near the Seine River, was the material for both the forum's buildings and the pillar.

The words of the inscription indicate that they dedicated the monument to Jupiter during the reign of Tiberius. In the past, the Parisii had offered unnamed gods organic or metallic gifts, typically deposited in earth or water. Under Roman rule, the tribe's shipping experts seem to have taken the lead in adopting the classical habit of dedicating inscribed stone monuments intended for long-term public display. This material change in ritual practice was key to urbanization, because the accumulation of such monumental dedications reshaped the cityscape and hastened its transition to durable stone. The agency of the *Nautae Parisiaci* in the process of urbanization has been overlooked, even though dedications elsewhere in Gaul reveal that shipping corporations enjoyed enduring social prominence.

The end of the pillar's life also marked a new era of urbanism. In the fourth century, the pillar joined other pagan funerary and religious monuments as building material on Ile de la Cité. At that time, the city center shifted from the Latin Quarter to the more defensible island. In a Christian city, the pillar's public appeal to Gallic and Roman gods no longer held sway. The monument's rediscovery in the Late Antique wall beneath Notre Dame helped generate the urban myth that Paris first took shape on the island.

Communication and Architectural Creativity in the Roman-Era Monumental Arches of the Eastern Mediterranean

Adrian J. Ossi, Washington University in St. Louis

This paper situates the Roman-era monumental arches of the Greek East within their specific urban landscapes and the broader regional built environment, in order to move beyond the common and erroneous interpretation that they are

unambiguous signs of “Romanization.” Building on recent research that debunks the traditional mythology of the “triumphal arch” and emphasizes a wide range of motivations for their construction by varying sponsors in the provinces, this paper argues that the comparatively unique and varied form of monumental arches in the Greek East is not a peculiarity to be explained away or ignored but rather an essential characteristic that provides a window into the motivations of architects and patrons.

Especially when compared with better-known arches in the western empire, monumental arches in the Greek East exhibit great formal variety that prevents neat typological seriation. Specialist studies of arches typically favor a focus on the well-preserved examples in Italy and southern Gaul while treating eastern arches as unusual anomalies or ignoring them entirely. When eastern arches are cited, it is usually for one of two reasons: to illustrate what are posited to be empire-wide trends in the development of the monument type or to assert the presence of strong Roman influence in a specific location at a particular historical moment. Often one particular monument, the Arch of Hadrian at Athens, stands for all arches in the East, with its comparatively odd form contrasting with the typologically more comprehensible arches in the West.

When we consider eastern arches on their own terms, the varied corpus illustrates how eastern architects perceived the type as a malleable medium through which they could communicate a wide variety of social and cultural relationships. As both gateway and statue base, an arch was a dual-purpose monument. Eastern architects perceived and exploited the creative possibilities at the intersection of these two structural types by drawing on the region’s deep architectural history, which was embodied in its multifaceted urban landscapes. Through an analysis of architectural forms, iconographic programs, epigraphic content, and siting within the urban landscape, the case studies presented in this paper highlight the ways that local donors manipulated these variables to communicate specific messages about their city’s and their own status within the local and broader imperial setting. The unique and often innovative solutions embodied in eastern arches attest to the continuing vivacity of architectural creativity in the eastern Mediterranean under Roman rule.

SESSION 7B: Colloquium

Roman Processions Reconsidered: Physical Space and Material Contexts

ORGANIZERS: *Maggie L. Popkin*, Case Western Reserve University, and *Susan Ludi Blevins*, University of Georgia

Colloquium Overview Statement

Research on Roman processions has long centered on reconstructing their constitutive elements and topographical routes. Recently, in addition to reconstructing these specific aspects of processional rituals, scholars have emphasized broader questions about how Roman processions related to the urban, architectural, and artistic spaces in which they unfolded. This colloquium presents a cross-

section of current research on these issues as they affect how ancient observers and participants would have experienced, conceptualized, and remembered Roman processions.

The first three papers examine the mutually constitutive relationship between monuments and Roman processions. Taking as case studies the routes of the *pompa circensis*, the triumph, and the birthday celebrations of Augustus, they stress how the physical spaces of processions activated individual and collective memories, knowledge, and identities—and how, in turn, memory and historical knowledge shaped the physical spaces of processions. The second and third of these first papers also explore how cognitive research on visibility and memory impact our understanding of reciprocity between space and ritual in Rome. A fourth paper demonstrates how material representations shed light on processional experience in antiquity. Analyzing formal strategies for depicting human figures in motion in Late Antique wall painting, this paper argues that we must consider artistic representations as well as archaeology and texts to understand the psychology of Roman processions.

The final two papers center on how new advances in digital technologies help envision the relationship between physical context and processional ritual. They use digital renderings of archaeological and epigraphic data and interactive technologies to highlight the complexities of ritual movement and experience and the rich narrative potential of monuments in, respectively, republican aristocratic funerals and the consular procession of Honorius in 404 C.E.

Offering a fresh view of how archaeology, material culture, and cutting-edge technologies can help us understand the importance of space and place to these rituals, this colloquium highlights recent research and signals the direction of future research on the important topic of Roman processions.

The *Pompa Circensis* as an “Urban Image” of Rome: Symbolic Landscape and Personal Resonance

Jacob A. Latham, University of Tennessee

The city of Rome in many ways lay at the core of Roman identity—that is, to be lost in the city also implied the dissolution of self. Drawing on the remains of the itinerary and monuments, (largely funerary) representations of ritual participants, and literary texts, the paper employs Lynch’s “image of the city,” perhaps a bit shopworn but still essential, to argue that urban ceremonies, like the *pompa circensis*, helped one to image the city as a way to place oneself on the ground and in the imagination. The “image of the city” remains a fundamental model for urban way finding; however, its function as a framework for identity has often been overlooked.

For example, on the one hand, by its itinerary and its participants the *pompa circensis* constructed Rome as the Senate and the Roman people (SPQR)—together with their gods—a very venerable representation of the city. The circus procession, comprising what was imagined as a cross-section of Roman society, began at the Capitoline Temple of Jupiter, whose divine sovereignty founded Roman political authority, but just before entering the arena, it approached the Temple of Ceres, the

seat of the plebian aediles. In short, the *pompa circensis* staged a striking production of Roman politico-history.

On the other hand, even the most storied places had individual resonances. The president of the games, who conducted the procession, had himself been inaugurated in the Capitoline sanctuary. As the procession traversed the Forum, this elite political player may well have passed his own honorific statue. Similarly, the elite young men who rode on horseback behind the game giver had likely recently donned their *toga viriles* in a ceremony that culminated on the Capitol. These same youths would then pass the Temple of the Castori, which they could also pass by in their annual *transvectio equitum*, and the Lupercal, where they could also take part in the sexualized and serious Lupercalia. Echoes may have reverberated for the professional burlesque dancers whose attire resembled that of the statue of Marsyas in the Forum and also recalled the skimpy apparel of the Luperci.

In short, processions like the *pompa circensis* produced both abstract, generalized urban images, such as SPQR+gods, while at the same time, the same processions, traversing the same itineraries, imaged the city in deeply individual ways.

The Imperial Roman Triumph and the Architecture of Spectacle

Maggie L. Popkin, Case Western Reserve University

Triumphal processions, celebrating Roman victories over foreign peoples, traversed the city of Rome throughout the Republican and Imperial periods. Numerous monuments came to line and define the triumphal route; scholars have most commonly focused on triumphal monuments such as manubial temples and arches. Yet, especially in the Imperial period, most people who attended triumphs watched the ritual from the seats of an entirely different category of monuments: spectator buildings. Structures such as the Theater of Marcellus, the Circus Maximus, and, I argue, the Colosseum welcomed tens or even hundreds of thousands of spectators at an imperial triumph. Scholars often overlook the spatial, visual, and experiential aspects of this facet of triumphs' paths.

To gauge the impact of circuses, theaters, and amphitheaters on the triumph—and the impact of the triumph on the location, appearance, and decoration of these monuments—I analyze extant structures themselves (including recent archaeological investigations of, e.g., the Circus Maximus), material evidence such as the Severan Marble Plan and numismatic representations, epigraphic evidence (e.g., the dedicatory inscriptions of the Arch of Titus in Circo and the Colosseum), and ancient Greek and Latin authors who describe triumphs passing through spectator buildings. Spectator buildings had an outsized impact on how Romans experienced and remembered triumphs, as cognitive research helps illuminate. Yet the triumph also affected how—and where—emperors built permanent spectator buildings. Monuments such as the Theater of Marcellus (dedicated by Augustus in 13 or 11 B.C.E.) and the Colosseum (dedicated by Titus in 80 C.E.) and projects such as Trajan's overarching monumentalization of the Circus Maximus (dedicated in 103 C.E.) responded to spectatorial demands of triumphs, creating lavish structures in which Romans could view triumphs as a unified group. I conclude that they sought to heighten the extravagant pageantry of triumphs, intensify the

experience of triumphs, and ultimately make them more memorable precisely as they became more rare under the empire, when they were restricted to the emperor and his heirs.

The Temple of Divus Augustus and Processional Choreography as Knowledge Construction

Susan Ludi Blevins, University of Georgia

With the dedication by Caligula of the Temple of Divus Augustus in 37 C.E. in honor of the first Roman emperor deified by the Roman senate came a gradual yet unmistakable transformation in the Roman processional landscape. Though recent cognitive studies of religion argue for the mutually constitutive relationship between culture and religious knowledge, curiously such studies primarily address textual sources and only rarely the role of material culture. In contrast, by examining topographic and spatial connections established by incorporation of the Temple of Divus Augustus into the Roman processional landscape, this paper highlights the role of the built environment, as activated through processional movement, in the expression of religious and cultural knowledge.

I examine the architectural, epigraphic, and literary evidence for two Roman processional traditions that predated the Temple of Divus Augustus yet were likely altered to include it, thereby transforming the understanding of the processions as well as the temple. First, alteration of the *pompa circensis* to include the Temple of Divus Augustus not only created a focus for devotion to the Julio-Claudian dynasty but also categorized Divus Augustus as one of the eternal state gods whose statues processional participants deposited in a *pulvinar* at the Circus Maximus. Second, construction of the Temple of Divus Augustus along the triumphal route or a potential spur of the triumphal route may have been intended to reciprocally strengthen symbolic associations of architecture and procession. Triumphal processions by successors of Augustus would have brought to mind Augustus' renowned triple triumph as well as the greatest triumph of Rome's founder, the triumph over mortality. Perhaps most telling was the creation of processional traditions in response to the new temple, such as the two-day birthday celebration in honor of Divus Augustus recorded in the records of the Arval Brethren. The explicit topographical connection of the Temple of Jupiter Optimus Maximus and the Temple of Divus Augustus through processional movement and ritual sacrifice concretized the divine status of the new god while simultaneously demonstrating that the prosperity and divinely ordained imperial mission of Rome depended on its oldest and most revered god as well as the newest member of the Roman state pantheon.

Art Imitating Life or Life Imitating Art? Ritual Movements, Gestures, and Compositional Strategies in Late Roman Wall Painting

Susanna McFadden, Fordham University

Rituals by nature are both timeless and specific. We know, for example, from a variety of ancient sources that Roman ceremonies involving procession were en-

acted at particular times and places, but the symbolic values of these events were rooted in past traditions intended for perpetuation into the future. By extension, this tension between historicity and atemporality can be found encoded in the representations of Roman ceremony. This paper examines examples of processional imagery in Late Antique wall painting from the third and fourth centuries C.E. to explore the nature of this visual code. As has been noted by other scholars, depictions of ancient processions rarely contain detailed representations of the physical context of the ceremonies pictured, making it difficult to recreate accurately the spatial environment as well as the momentary psychological impact of the experience on participants. But while the painted representations of procession examined in this paper may lack precise topographical information, it is argued that instead, the formal strategies employed for depiction of the human figure in motion, coupled with analysis of the physical context of the image, can greatly inform our understanding of the ancient ritual experience writ large.

Monumental Narrative in the Roman Aristocratic Funeral

Christopher Johanson, University of California, Los Angeles

Like all processions, that of the Roman aristocratic funeral unfolded in four dimensions, moving forward through specific spaces at specific times. It is now almost a commonplace that the built form and monumental context influenced the ancient experience and determine the modern interpretation of moments of spectacle. The most striking examples are the spatial interrelationships established during triumphal processions. For the funeral procession, however, the actors, not the route, have received the most concentrated study.

Many questions remain about the funeral procession as a mechanism for activating, manipulating, and altering the experience of the built-form environment. The events surrounding a funeral could involve radical interventions into the surrounding space, and they occurred, up until the Late Republic, without carefully controlled scheduling. Death, of course, initiated the ritual. Since the dedication of a monument could not be scheduled to coincide with a funeral, the players had to adapt. Therefore, processions might pass by meaningful buildings still under construction, burnt shells of monuments, a gleaming new building celebrating the works and deeds of another, or temporary structures built rapidly to accommodate the event.

The funeral procession provided manifold opportunity for variation. Only one fixed point endured throughout the republic: the procession of the aristocratic elite would always stop in the northwest corner of the forum at the speaker's platform, the rostra. The route was otherwise determined by family custom: the procession began at the home of the deceased and ended at the family tomb. Like the triumph, this journey provided an opportunity to construct a visual narrative.

In this paper, I present an experiential, diachronic analysis of the context of republican funeral processions, beginning with that of Lucius Aemilius Paullus in 160 B.C.E. and ending with that of Julius Caesar in 44 B.C.E. Though no detailed description exists of any one funeral procession, the monumental contexts can be reconstructed. These contexts contain implicit narrative that can be read and interpreted only by walking through the spaces and investigating what could be

seen by those in motion in the procession and those watching from the sidelines. Using a digitally reconstructed landscape and an interactive, avatar-based tool, I contend that the complete narrative of any one funeral can be understood only by first establishing what was visible and what it meant.

Representing the Ritual Space of Honorius' Consular Celebrations in Rome

Gregor Kalas, University of Tennessee

In 404 C.E., the western emperor Honorius commemorated his sixth appointment as consul by parading through the Roman Forum, riding in a chariot with the military commander Stilicho. Numerous inscribed plinths and additional epigraphic evidence indicate that public monuments were displayed to commemorate both Honorius and Stilicho along the processional route. Claudian's poem, *On the Sixth Consulship of Honorius*, praises the emperor while crafting a voice for Roma as the personified city who speaks to the ruler and thereby embeds the panegyric in urban space. Inscriptions and physical evidence of Honorius' interventions within the Forum have provided the basis for producing a digital environment capturing the monuments that once lined the Via Sacra and were displayed on top of the Augustan Rostra. I reflect on the creation of *Visualizing Statues in the Late Antique Roman Forum* (<http://inscriptions.etc.ucla.edu>) produced under the auspices of the University of California, Los Angeles. I argue that localizing the archeological and epigraphic data at specific geographic locations works primarily as a tool for conducting research rather than supplying an image of the past.

Analysis of Honorius' consular procession focuses on the emperor's activities in the Roman Forum because the monuments installed there cohere with the themes presented in Claudian's panegyric. This condition raises a concern for techniques through which to articulate how Claudian's poetry narrates the actual occasion on which it was initially read aloud. Configuring the information within an immersive representation invites audiences to proceed through the digital space as if to experience the environment, which emphasizes the physical context. In fact, *Visualizing Statues* configures digital renderings of the more than 100 statues installed in the Roman Forum during the fourth and fifth centuries CE. This experiential space calls attention to geographic coordinates as the points from which to access archeological data. The process of gathering, categorizing, and visualizing the data offers terrific opportunities to build tools that prompt scholarly analysis. I present the insights gained from building *Visualizing Statues*. Yet the digital environment might be perceived to serve less as a tool than as the final research product, which prompts reflection on the optimal approaches to visualization for presenting an argument about a procession. Thus, this paper comments on the complexities of using visualization for capturing a ritual performance as recounted by Claudian, since the author deployed various voices to frame Honorius' staged appearance in Rome.

SESSION 7C**Death and Ancient Egypt**

CHAIR: *Maura Heyn*, University of North Carolina at Greensboro

What Does it Mean to Be a God? Identifying Markers of Apotheosis in Ancient Egypt

Julia Troche, Brown University

This paper is part of a larger project investigating the origins of apotheosis in ancient Egypt with an emphasis on material evidence. Apotheosis—the process by which a human becomes deified—was rare in ancient Egypt, but when it did occur, deification was a status typically awarded posthumously. Most scholarship focuses on the Late, Ptolemaic, and Roman periods (ca. 600 B.C.E.–395 C.E.), due to the relative explosion of evidence during this period of increased foreign influence and cultural entanglement. Instead, this paper investigates the earliest occurrences of apotheosis, from the Old through Middle Kingdoms (ca. 2700–1650 B.C.E.), in order to better understand the phenomenon in the Egyptian socio-religious landscape while avoiding problematic anachronistic interpretations. This research necessitates a framework that identifies potential markers of deification in the archaeological record—in essence, defining the characteristics that must be present to categorize the evidence as an attestation of apotheosis.

Tension exists in the scholarship against identifying these distinguished dead as “real” gods, with preferences given to terms such as “saints,” “heroes,” or “demi-gods.” A dynamic mortuary cult in which “average” dead are provided offerings and are invoked by the living further complicates this identification. I argue, however, that certain dead possess markers of “real” divinity and as such should be understood as having undergone apotheosis. Because these markers of divinity were not consistently applied or preserved because of concerns of decorum and incomplete archaeological records, I suggest that only one of the following conditions need to be fulfilled in order to indicate that someone who has died has become a god: (1) the identification of the dead as “god” (*netjer*); (2) the invocation of the name of the deceased in epigraphic formulas otherwise reserved for gods; (3) the inclusion of the dead in divine mythologies (that are distinct from the Osirian associations of “average” dead) and/or divine pedigree; (4) the establishment of a shrine, separate from the tomb and, thus, distinguished from the mortuary cult, dedicated to the cult of the dead in his divinized form; (5) the establishment of a priesthood charged with the upkeep of the cult, especially one that is locally financed and/or independent from any mortuary cult donations; (6) the dead as a principal actor in festival. Through select case studies, this paper elaborates and justifies these markers of apotheosis and shows how this framework can be successfully implemented.

Mortuary Culture, Elite Identity, and the Ptolemaic-Roman Transition in Egypt

Thomas P. Landvoatter, Valparaiso University

Though the era of Ptolemaic and Roman rule in Egypt is often grouped together as a single “Graeco-Roman” period, the Ptolemaic dynasty and the Roman empire were fundamentally different social and political entities. The Ptolemies ruled Egypt as an independent state, sitting atop a hierarchical system of power and relying on traditional elites to project influence. With the incorporation of Egypt into the Roman empire, the center of political power shifted, and the old hierarchy was undermined. This shift had important implications for how social identity was conceived of and displayed by Egyptian elites. In this paper, I examine changes in the materialization of social identity among Egyptian elites across the Ptolemaic-Roman transition through an analysis of mortuary practices.

Among Ptolemaic Egyptian elites, the range of acceptable mortuary treatments and funerary objects was generally restricted, constituting a broad koine across Egypt—at least outside areas of immigrant settlement such as Alexandria—that drew largely on traditional forms. This can be seen most clearly in a set of ubiquitous grave goods common throughout Egypt, which included *shabtis*, canopic jars and chests, Ptah-Sokar-Osiris statues, amulets and jewelry, and inscribed wooden coffins. I demonstrate the existence of such a koine through the analysis of excavated assemblages from Thebes, Abydos, and Memphis. Such consistency is in part because of the centralizing nature of the Ptolemaic elite and the hierarchical structures of the Ptolemaic state. As in previous periods of Egyptian history, acceptable behavior and styles were being set by the political center, which defined what constituted proper expression of elite identity.

Once incorporated into the Roman empire, local elites’ relationship with the state was fundamentally altered. Roman reforms empowered local elites at the expense of traditional groups such as the priesthood and upended the existing hierarchy. This structural shift affected the way elites defined themselves through funerary culture. In the Roman period, the array of acceptable practices increased, including the appearance of naturalistic portraiture, while traditional funerary equipment fell into disuse. Striking examples of these changes can be found in the mummies of Hawara and Akhmim. This shift is due in part to elite engagement with wider Roman Mediterranean culture, but such engagement was enabled by the lack of a central Egyptian elite to perpetuate a koine in funerary practice. Traditional Egyptian practices were more readily transformed as local elites defined themselves as part of a broader Mediterranean world rather than solely an Egyptian one.

Osiris Mummy Shrouds and the Expression of Gender and Identity in Roman Egypt

Lissette M. Jimenez, University of California, Berkeley

Throughout the Roman period in Egypt, decorated shrouds with images of the god Osiris were used in funerary rituals and wrapped around the mummified body of the deceased. Full-length painted images of the dead in the guise of Osiris, flanked by scenes from the Book of the Dead, were effective modes of

representation that reveal how gender was used to facilitate the transfiguration of the deceased and aid his or her journey in the afterlife. Through the imagery and texts on the shrouds, intimate connections were forged between the patron deity of the underworld, Osiris, and deceased male and female individuals. This paper examines gendered expressions of self-presentation and specifically investigates the iconography and composition of the Osiris mummy shrouds. An analysis of the inscriptions and representations of both males and females on the shrouds adds a new comparative dimension, arguing that gender relations were fluid and dynamic—being made and negotiated through new and innovative magical and material resources. I explore the problematic relationships between death, Osiris, and the potency of masculine regeneration over feminine reproductive powers and how these concerns were iconographically and textually addressed to preserve and commemorate the age and gender of the deceased. I conclude by revealing how the individualizing portraiture and the adaptable iconographic repertoire of the shrouds, along with personalized inscriptions, indicates a growing concern with the posthumous expression of gender and identity in Roman Egypt.

Signaling Syncretism: Contextualizing “Graeco-Egyptian” Material in the Roman Catacombs of Kom-el-Shoqafa, Alexandria

Sean O’Neill, Hanover College

The primary middle-level tomb in the catacomb complex at Kom-el-Shoqafa has been characterized for more than a century as a quintessential example of the architectural and artistic effects of a unique brand of religious and cultural syncretism at work in Roman Alexandria. While several authors have singled out this main tomb, which dates to the second century C.E., for its references to long-standing indigenous architectural traditions and its “updated, Hellenic treatment” of pharaonic funerary motifs, I present a case for a slightly different approach: namely, one that focuses on the placement of the tomb along the evolutionary course of a distinctive Graeco-Egyptian sphere within the spectrum of post-pharaonic material culture. The development of this syncretistic realm, which traces its roots to the early Ptolemaic era, was given added momentum during the era of Roman rule, at which point it found expression not only through the blending of Hellenic and Egyptian styles, themes, and symbols but also via the creation of new iconographic markers and architectural forms. I contend, therefore, that the employment of the particular, widely adopted motifs and forms that were part of this evolving sphere (i.e., as it existed in the second century C.E.) reflected a set of conscious ideological choices made by the commissioning family—a set of choices shared by numerous others. In order to outline the development of these Graeco-Egyptian features after the Roman conquest and to test their applicability to other archaeological materials from Imperial-era contexts, I aim to examine three sources of comparanda: the architecture, painting, and relief sculpture associated with other tombs and catacomb burials discovered at Alexandria, including the near-contemporary Tigrane tomb; the range of forms and stylistic content of the artifacts found within these various tombs and catacomb burials; and the rapidly expanding range of Graeco-Egyptian reverse-types used on coins produced at the Roman mint in Alexandria during the first two centuries C.E. I proceed to con-

clude that the placement of the main tomb at Kom-el-Shoqafa within this wider context can help to produce reasonable notions about the identity of the deceased, including hypotheses regarding the likelihood of magisterial status and the possibility of membership in an Isaac guild. In addition, I argue that when viewed in this light the tomb can and should be viewed as an important archaeological benchmark for a pervasive social phenomenon that affected both Alexandria and the metropoleis scattered throughout the Egyptian province.

A New Interpretation of Santa Costanza and the "Ebersolt Fragment" in Istanbul

Jackson Perry, Baylor University

Santa Costanza, a church located on the premises of Sant'agnese fuori le Mura in Rome, was originally constructed as an imperial mausoleum for Helena, Julian's wife, to hold her sarcophagus as well as that of her sister, Constantina, Constantine's daughter. While incredibly well preserved architecturally, the building's original decoration has been reduced to the ambulatory vault mosaic and a replica of one of the porphyry sarcophagi placed in the central apse.

Because of the chapel's modern arrangement, it has long been assumed that one sarcophagus, the higher-quality box porphyry sarcophagus, was placed initially in the central apse, and that a bathtub sarcophagus, moved from the chapel in the 17th century, is original to the chapel as Constantina's sarcophagus. Using the architecture of the chapel and the iconography of the chapel's decoration, extant and recorded, I argue that the bathtub sarcophagus was not original to the mausoleum, and that instead, two identical box porphyry sarcophagi were placed in either side apse. Correspondingly, I assert that the structure of the central apse indicates an altar that was intended for the prayers for the dead.

The second box sarcophagus exists as a fragment in Istanbul. When originally discovered, the fragment was misidentified as Constantine's sarcophagus, based on a misreading of Nicholas Mesarites' "Description of the Church of the Holy Apostles," which did not take into account contemporary changes to the sarcophagi in the church. Instead, I argue that the Ebersolt fragment reveals a sarcophagus identical in design and size to the sarcophagus in Rome, both of which were constructed to be placed in the mausoleum built in order to unite the two sisters in death. The quality of the tombs' reliefs correlates with this purpose, and its symbolism interacts compellingly with the symbolism evident in the larger structure of the mausoleum, as is expected in modern analysis of sarcophagi in situ.

In addition, the mausoleum's structure suggests that the side apses displayed box sarcophagi. The side apses were sunk into the floor, a fact which previous analyses of the chapel have neglected. The depth is only fitting for tombs with substantial bases, which all extant box porphyry sarcophagi share. The combination of these structural and iconographic factors indicates a mausoleum designed to contain two identical sarcophagi placed in the side apses with an altar in the central apse. Furthermore, it identifies the fragment in Istanbul as that of Helena's sarcophagus, and not Constantine's.

In the Likeness of Osiris? Symbolic Objects in Roman Egyptian Funerary Portraiture

Mareile Haase, University of Toronto/Ruhr-Universität Bochum

Funerary portraiture in Roman Egypt—painted panels and linen shrouds and individualized plaster or cartonnage portraits dating between the first and third, and possibly as late as the fourth centuries C.E.—has been a focus of recent scholarly attention. Discussion has centered on the dates of portraits and the identification of workshops or on the question of portraiture’s function in commemorative ritual. Its iconography remains less thoroughly researched and is the focus of my paper.

Some of the portraits show the deceased with a limited repertoire of objects, which current scholarship has treated only summarily: wreaths of flowers or bundles of twigs, papyrus scrolls, wine cups, or the ankh-hieroglyph signifying life. These objects appear either individually or in recurring combinations, and my paper investigates them with a view to their symbolic meaning. Since only some of the portraits depict objects, I inquire whether these portraits represent local workshop traditions or chronologically limited trends. Discussing a selection of representative portraits, I explore to what extent specific objects are assigned according to age or gender or must be linked to religious choices such as the mysteries of Osiris and Isis or even to Christian concepts.

I hold that by displaying a limited repertoire of polysemantic objects, funerary portraits are deliberately meant to offer possibilities of “double readings” in the sense proposed by Török for Late Antique art more generally (*Transfigurations of Hellenism: Aspects of Late Antique Art in Egypt, AD 250–700* [Leiden 2005]). I thus argue against the one-sidedness of current interpretations. For instance, a wreath of pink flowers has been read, in a Graeco-Roman perspective, as a generic symbol of life (M. Laubenberger, in W. Seipel, ed., *Bilder aus dem Wüstensand* [Vienna 1998] 128). Others have interpreted it as the wreath of roses that distinguishes the deceased favorably judged by Osiris; they have thus assumed a continuation of traditional Egyptian funerary and eschatological concepts in the Roman period (M.-F. Aubert and R. Cortopassi, *Portraits de l’Égypte romaine* [Paris 1998] 16, 128, 136). My paper shows that such divergent interpretations need not be mutually exclusive.

In a broader perspective, my paper thus sheds light on the question, addressed recently for instance by Riggs (*The Beautiful Burial in Roman Egypt* [Oxford 2005]), of how social, ethnic, and religious identities in Roman Egypt are construed by means of burial equipment and funerary symbolism.

SESSION 7D: Colloquium

Etruria in the Third to First Century B.C.E.: Political Subordination and Cultural Vitality

ORGANIZER: *Fabio Colivicchi*, Queen's University

Colloquium Overview Statement

The period following the submission of the Etruscan cities to Rome is a sort of "gray zone" of research. Etruscan archaeologists consider it the "long twilight" of Etruscan civilization, while Roman archaeologists focus on the appearance of villas, the production of amphoras and pottery, and other phenomena from a Romano-centric point of view as evidence for the "Romanization" of Etruria. The goal of this colloquium is to present new research that considers this period in its own right, neither in relationship to an Etruscan "Golden Age" nor in relationship to the Roman conquest of Italy. Political subordination does not mean decadence and the end of any original cultural production. The case studies presented here highlight the continuing vitality of Etruria and adopt a prevalently local point of view to identify the responses of individual Etruscan communities to the challenges and opportunities of three centuries of great changes. The introductory paper will set the tone by presenting a complex and dynamic view of the Etruscan society in this period and by addressing the general question of how Etruscan identity was negotiated. The papers on Caere present new data that allow a reevaluation of the period following the incorporation of the city into the Roman *res publica* and disprove the almost catastrophic view that prevails in current scholarship. The papers on Perugia and Chiusi deal with the originality of Etruscan culture in visual art and the role of images in the construction of personal, group, and ethnic identity. The paper on Cetamura provides a review of some of the latest finds and relates them to overall themes of the economy of this site, revealing a strong Etruscan identity and continuity in the third and second centuries B.C.E. The aim of this colloquium is to help restore Etruria to its rightful place in the debate on Middle and Late Republican Italy and disprove the traditional view of a nostalgic culture entrenched in the repetition of old rituals and customs that slowly faded in its provincial isolation while the rest of Italy was experiencing fast and dramatic changes. It will be clear that Etruria played an active and original role in those changes and was fully connected to the trends developing in the rest of Italy.

Epigraphy in a Changing Society: Etruria 300–1 B.C.E.

Enrico Benelli, CNR-ISMA, Rome

Some Etruscan cities developed a sophisticated epigraphic culture, which met specific social needs, especially involving self-representation by prominent as well as emerging family groups. This kind of evidence is particularly interesting in that it reflects behaviors and choices about a perceived identity, originating from inside the portion of society that could attain epigraphic visibility. Funerary and (most) votive inscriptions were not laid down by public authorities, and, although their nature cannot be considered fully "private," official ideologies probably in-

terfered little in their composition and outlook. In the last three centuries B.C.E., various responses to the growing integration into the wider Roman world can be discerned, with differences from city to city and even (where there is enough evidence) between various social groups. Etruscan epigraphy can thus provide something very near to an insider's view of the historical, cultural, and economic process we usually call the "Romanization of Italy." Particularly interesting are the different attitudes toward their own political identity showed by families of different social standings in the decades immediately following the integration into the Roman state after the *Lex Iulia* of 90 B.C.E., which can suggest that within every Etruscan city(-state) very different ideas did exist about the meaning of being "Etruscan" and/or "Roman." Equally meaningful in terms of (perceived) identity is the behavior by migrant families, who settled in various Etruscan cities especially after the final fall of political boundaries following the *Lex Iulia*—a process bound to boom further after the redistribution of landed property following the various outbursts of civil war that troubled the best part of the first century B.C.E.

Inscribed Identities: Figural Cinerary Urns and Bilingualism in Late Etruscan Funerary Contexts at Chiusi

Theresa Huntsman, Harvard University Art Museums

The necropoleis of Chiusi are the source of an overwhelming number of Etruscan inscriptions dating from the later third century through the mid first century B.C.E. The majority of these inscriptions come from tomb contexts containing cremation urns bearing the names of the deceased, and because of the extended onomastic formula preferred by the Etruscans, we are often able to reconstruct genealogies and chronologies of the burials in family tombs. The number of individuals with access to formal burial increased exponentially during the Hellenistic period, and this is most visible in the substantial corpus of moldmade, serially produced terracotta cremation urns with figural lids and boxes with mythological relief scenes. Each urn was inscribed with the name of the deceased, and in tombs with multiple burials many were situated along the dromos (entry hall) in niches sealed with terracotta roof tiles that also bore the name of the deceased. In the later second century, Latin name inscriptions began to appear on these cremation urns, often in the same tomb as urns with Etruscan inscriptions.

The Latin language circulated widely in inland Etruria, even before Chiusi became a *foedus* of Rome, but the prevalence of one tongue over the other as a spoken language in Chiusine territory remains unknown for the later Hellenistic period. Scholarship has demonstrated that the name inscriptions on these terracotta urns show every stage of the linguistic transition process, from the shift to a Latin alphabet to the full Latinization of the Etruscan onomastic formula. When examining the language shift in conjunction with the urn forms, however, it becomes apparent that urns with Latin inscriptions consistently shun the uniquely Etruscan iconography for a more generic, simpler depiction of the deceased. The urns illustrate a turn away from the depiction of specific myths or specific scenes of violence and the "heroization" of the reclining deceased as a banqueting figure to a "quieter" depiction of a recumbent figure on a simple kline. This paper investigates bilingual tomb contexts at Chiusi to examine the ties between linguistic and

iconographic shifts in late Etruscan funerary culture, as well as to consider the role language plays in the construction of individual and familial identity.

The Continuity of Etruscan Culture in a Roman Praefectura: Caere After 273 B.C.E.

Fabio Colivicchi, Queen's University

At the end of a long history of increasingly close relationships with its neighbor, the Etruscan city of Caere became a sort of "satellite state" of Rome and was eventually transformed into a *praefectura* in 273 B.C.E. Historians have focused on the institutional aspect of the process, with the progressive "softening" of the political frontier between the two cities through the *civitas sine suffragio*, which paved the way for eventual assimilation. Archaeologists have considered this event as the end of the glorious history of Etruscan Caere. The pessimistic view of the establishment of the *praefectura* as the "end of history" for Caere, after which the city would have experienced only recession and crisis, with a short-lived resurgence in the Julio-Claudian period, has long conditioned the interpretation of the archaeological record. Scholars have been quite reluctant to date any important building project to the period following the "catastrophe." New evidence from the ongoing excavation by Queen's University at Vigna Marini is presented. It demonstrates that the third century B.C.E. was a period of especially intense building activity, probably even of large-scale renovation of this sector of the urban area. The reevaluation of other contexts also contributes to serious questioning of the traditional image of a city prostrated and in deep recession. The intensification of public projects, especially the renovation of religious buildings, in the wake of the *praefectura* may have also had ideal significance as a visible sign of the vitality and continuity of the city in an especially delicate period of transition.

Etruscan Tombs in a "Roman" City: The Necropolis of Caere Between the Late Fourth and the First Century B.C.E.

Maria R. Ciuccarelli, Soprintendenza per i Beni Archeologici delle Marche

This paper examines the cemeteries of Caere between the late fourth century B.C.E. and the first century B.C.E., especially focusing on the area of Bufolareccia near the monumental necropolis of La Banditaccia and the cluster of tombs of Laghetto. The analysis of this cemetery reveals changes in tomb assemblages and burial customs and episodes of continuity and interruption in the use of this space, with the construction of new tombs and the reoccupation of old ones. The decades preceding and following the incorporation of Caere into the Roman state are examined in detail. The picture emerging from the study of Bufolareccia is compared with the necropolis of La Banditaccia and the area of Tombe del Comune, in particular the Tomb of the Inscriptions and the Tomb of the Clavtie. This study tries to define not only the social standing of the families buried in the tombs but also the consequences of the change in the political status of Caere for those families and the general impact of that momentous change on the funerary behavior of the population.

Myths on Etruscan Urns of Perugia

Marco Giuman, University of Cagliari, and *Chiara Pilo*, Soprintendenza per i Beni Archeologici di Cagliari e Oristano

The production of the cremation urns of Perugia is one of the most important of north Etruria. Perusian workshops produced many urns with complex scenes from mythology, the number of which has recently grown thanks to excavations and recoveries from the illicit art market. This paper considers the urns with mythological representations, also including several still-unpublished pieces of the Archaeological Museum of Perugia and the Antiquarium of Il Palazzone. The urns of Perugia have been studied especially from the point of view of style and typology, but a systematic and complete study of their iconography is still missing. The meaning of a myth is strictly related to the social and cultural context. Indeed, the reception of an iconographical theme depends on the specific cultural setting, and each society perceives and reelaborates the same image in different ways. This paper investigates the use of specific themes of the Greek mythological tradition for the local Etruscan context of the second and first centuries B.C.E. Some subjects in particular, such as the sacrifice of Iphigenia, enjoyed success much greater on the urns of Perugia than they did in Greek contexts. The themes of Perusian urn production, their selection, and their modification from the Greek model reveal the creative approach of the Perusian sculptors and the needs and culture of their patrons, the upper class that emerged after the wars against Rome and ruled the city until the civil wars.

Religion and Industry at Cetamura del Chianti in the Late Etruscan Period

Cheryl Sowder, Jacksonville University, *Laurel Taylor*, University of North Carolina, Asheville, and *Charles Ewell*, Syracuse University, Florence

Excavations at the hilltop site of Cetamura del Chianti near Siena have uncovered a sanctuary on the north slope (zone II) dedicated to the gods Lur and Leinth. Dating to the third to second centuries B.C.E., it features a courtyard, chambers, altars, and votive pits. Immediately adjacent to the sacred area is an artisans' quarter, where evidence of ironworking, spinning and weaving, ceramic production, and possibly ring making and polished-stone production suggests a vigorous and diversified industrial operation. Ongoing excavations here and in a deep well on the highest part of the site (zone I) are providing new information that enlarges the picture of the relationship of these twin aspects of the Etruscan economy—religion and industry—in this late period.

The well, though not yet fully excavated, thus far has a stratigraphic column going down from the early Roman empire into the early first century B.C.E. and continuing into the key period of the third and second centuries B.C.E. Many of the finds interrelate with those in zone II. For example, Etruscan bronze buckets decorated with sculpture establish a trade link with Populonia, making it likely that the iron ore used in zone II came from the rich mines there. Numerous iron objects have been found in the well, along with objects of bronze that were most likely offerings. Craftsmen's tools made of bone and bronze and ceramic weaving implements relate to similar objects found in the workshops in zone II. Coins,

found around zone II and in the well in zone I may be evidence of commercial transactions, as well as perhaps offerings, made by visitors or even the artisans themselves. Miniature objects occur in both areas, as well as finger rings and polished or carved stones. A prodigious number of knucklebones and ceramic tokens from the well are comparable to “good luck” offerings made by the artisans in the sanctuary.

This presentation provides a review of some of the latest finds, mostly unpublished, and relates them to overall themes of the thriving economy of Cetamura, centered on industry and religious practices, revealing a strong Etruscan identity and continuity in northern Etruria in the third and second centuries B.C.E.

SESSION 7E

The Greek Landscape

CHAIR: *Betsey A. Robinson*, Vanderbilt University

Sanctuaries of Zeus: Mount Lykaion and Olympia in the Early Iron Age

Mary Voyatzis, University of Arizona, and *David Gilman Romano*, University of Arizona

Archaeological remains from the mound-shaped ash altar at the Sanctuary of Zeus on Mount Lykaion, Arcadia, suggests that the cult of Zeus may have begun fairly early in the Mycenaean period and continued there for more than a millennium until the Hellenistic period. The evidence consists of an essentially uninterrupted sequence of pottery (mainly drinking vessels), votive offerings, and large quantities of burnt animal bones, dated by ¹⁴C. In addition to the discovery of a Mycenaean cult place on the southern peak of Mount Lykaion, there are indications that ritual activity continued after the collapse of the Mycenaean palaces, and that this activity escalated in the Early Iron Age, with the dedication of large amounts of skyphoi and cups, revealing similarities and connections with Messenia, Laconia, and Ithaka. On the basis of the ceramic remains from Mount Lykaion, we can postulate that there were significant movements of peoples following the Mycenaean collapse and into the Early Iron Age that may have played a role in Olympia's emergence as a new and prominent sanctuary site. This renowned Sanctuary of Zeus at Olympia located some 22 miles away from Mount Lykaion also had a famous ash altar of Zeus, but the earliest archaeological evidence for the cult of Zeus at Olympia (based on the recent German excavations) is from the late 11th century B.C.E. According to Pausanias (5, 13, 8–10), the ash altar at Olympia was shaped in the form of a huge mound, 22 feet high, on a circular base. Although the German archaeologists did not find this structure, they discovered its remains, consisting of black ashy soil mixed with dedications, spread throughout the area of the Pelopeion and the Heraion. Recent German investigations have revealed evidence that the ash altar of Zeus was originally located in the area of the Pelopeion beginning in the late 11th century B.C.E. and later moved to the northeast when the sanctuary was reorganized and the Heraion built, ca. 600 B.C.E. The new discoveries from both Mount Lykaion and Olympia therefore allow us to suggest

that the cult of Zeus was developed in the Late Bronze Age, on the southern peak of Mount Lykaion (which in the historical period was known as one of the birth-places of Zeus) and then, hundreds of years later, transmitted to Olympia, where the principal feature of the original Arcadian cult place was deliberately recreated on the flat Olympian terrain in the form of a mound-shaped ash altar.

The Sanctuary of Zeus on Mount Hymettos: Local and Regional Networks in Attica During the Seventh Century B.C.E.

Annarita Doronzio, Ludwig Maximilians University Munich

The paper examines the position and role of the Sanctuary of Zeus on Mount Hymettos within the route system of archaic Attica and its sacred landscape. This peak sanctuary is located between the plain of Athens on the west side and the plain of the Mesogeia on the east side.

Although the earliest finds date to the late Protogeometric age, the sanctuary seems to have flourished in the seventh century B.C.E. Shrines built on prominent hills became a distinctive feature in the religious landscape of Attica during this period, to which scholars refer as the "Seventh Century Gap," thereby highlighting the general scarcity of finds and settlements. The flourishing of peak sanctuaries has been considered as evidence for a shift toward regionalism. According to this line of thought, each hilltop sanctuary would serve the needs of a small, individual community. As a consequence, the sanctuary on Mount Hymettos would only serve the Athenian plain and its inhabitants.

A reappraisal of the archaeological evidence and the road system of ancient Athens suggests an alternative reading of the site and of the broader issue of peak sanctuaries. Close examination of the paths toward Mount Hymettos from both the city of Athens and the Mesogeia plain provides in fact a more detailed and nuanced picture than has been previously acknowledged. The paper dismantles the established notion of a poorly connected archaic Attica and, more precisely, the view of Mount Hymettos as isolated from the main communication routes throughout the region. Instead, the archaeological evidence indicates that the sanctuary on Mount Hymettos was crucially placed in the center of a well-developed, dense network of roads between Athens and southern Attica.

Scholars agree that Mount Hymettos remained excluded by all paths that connected the dispersed communities of Attica and that all principal routes from Athens to the Mesogeia ran along the mountain's north slope. The paper argues instead that the main routes from Athens to southern Attica, instrumental to the political and commercial exchange between city and countryside, passed through the sanctuary on Mount Hymettos. Hilltop sanctuaries may therefore constitute primary evidence for a well-structured and widespread network of paths between the many settlements of seventh-century B.C.E. Attica, including Athens, rather than regionalism and uncoordinated dissemination of settlements and cults.

The Multipolar Polis: Landscape, Ritual, and Performance in the Classical Attic Countryside

Erin Warford, University at Buffalo

When the Persians invaded Attica in 480 B.C.E., they famously sacked the Athenian Acropolis as well as other temples at Rhamnous, Brauron, Sounion, and Eleusis. By the mid fifth century, all were being rebuilt. Athens chose to invest in these sanctuaries in the early years of its democracy, weaving them into its ritual fabric with regular festivals and processions that highlighted the connection between center and periphery. The location of these sanctuaries played a major role in their development and significance to the Athenians. All four sanctuaries sit on the borders of Attica, in topographically prominent places suited to their deity, standing as monumental testaments to the power and wealth of the new democracy.

François de Polignac's theory of the bipolar polis provided a useful model for studying the relationship between archaic poleis and their extraurban sanctuaries, but it fails to capture the complexity of the Athenian sacred landscape. Classical Athens used not one but four sanctuaries to express its power and authority—not a bipolar polis, but a multipolar polis.

These connections between Athens and its border sanctuaries were multifaceted, manifested through both mundane and ritual travel as well as more symbolic links. The processions that traveled to Eleusis, Brauron, and Sounion were explicit, physical expressions of the Athenians' connection to the Attic land, landscape, and society. They were territorial, performing Athenians' claim to Attica as a whole. They had a historical dimension, as worshipers passed the tombs of their ancestors, as well as various monuments, memorials, and places with mythic or historical stories attached to them. They afforded a particular sensory experience that, in combination with the landscape of the destination, clearly marked this type of travel as out-of-the-ordinary or liminal. The processions were also a spiritual experience, providing a ritualized transition to a heightened religious consciousness. The temples themselves, built with state funds, indicate an economic connection, while the regular festivals surely brought additional revenue. The subjects and design of the architectural decoration and votives speak to further symbolic and material links between city and sanctuary. The roads formed a physical, practical bond utilized throughout the year by citizens, merchants, government officials, soldiers, and worshipers. This articulation of the multifaceted connection between Athens and her borders, made explicit through worshipers' travel to these sanctuaries, built and reinforced the cohesiveness of the democratic community.

Apollo Agyieus: Searching for the God of the Roads in Attica

Johanna Best, Bryn Mawr College

While Hekate and Hermes are the gods most commonly associated with roads and travel in antiquity, Apollo Agyieus also is connected with streets and boundaries. The fragmentary evidence of Apollo Agyieus is illustrative of the difficulties inherent in the study of roadside religious spaces in Attica. As part of a larger study that focuses on the ways in which roadside religious spaces served as im-

portant areas for worship, this paper addresses the evidence of Apollo Agyieus specific to the region.

The literary testimonia confirm that Apollo Agyieus was represented primarily as an aniconic image. In the fifth century B.C.E., Apollo Agyieus is first attested in plays, which indirectly indicate that the god was placed at entrances to sanctuaries and houses. While some comedic works hint at Apollo Agyieus' neighborly nature, in some tragedies, Apollo Agyieus is invoked for serious reasons. In this period, the form of the god's image is not described explicitly, as it would have been generally well known. Literary works from the second century C.E. and later continue to link Apollo Agyieus with streets, boundaries, and front doorways, but the descriptions of the standard image of the god seem vague and changeable.

Athenian epigraphical evidence from the third century B.C.E. and first century C.E. emphasize the recognizable form of Apollo Agyieus, reconfirm his association with boundaries, and highlight his role as a protective deity. However, the epigraphical evidence and the literary sources stand in contrast with the sparse archaeological evidence from Attica. An exploration of Apollo Agyieus' areas of purview may help to direct the search for material evidence, and an explanation of the chronological gap apparent in the literary sources and epigraphical material is considered in light of the Hellenistic and Roman history of Attica.

The integration of the literary, epigraphical, and archaeological evidence for Apollo Agyieus encourages a reexamination of the god's form, placement, functions, and periods of importance in Attica. The evidence for Apollo Agyieus in the road and before doorways adds to our understanding of day-to-day religious experience in neighborhoods and hints at another aspect of the rich and vibrant religious life on Attic roadways.

Mountains on Fire: Topography and Sacrifice in Ancient Greece

Alexis Belis, J. Paul Getty Museum

Mountains dominate the landscape of Greece, their peaks recognized as sacred places, inspiring the dedication of numerous sanctuaries on top of them. This study focuses on the mountains of the Greek mainland. The archaeological evidence for the existence of cult activity on mountaintops is often limited to the remains of sacrifice, identified by a deposit of ash and burnt animal bone mixed with pottery fragments and votive offerings. Although many Greek sanctuaries eventually marked places of sacrifice with a built stone altar, in certain cases the accumulated remains of repeated animal sacrifice became a permanent feature of the sanctuary—referred to in modern scholarship as an “ash altar.” While the most renowned example of this kind of altar is that of Zeus at Olympia, my research reveals that such altars were associated predominantly with ritual activity on mountaintops.

Ash altars have been investigated through excavation and archaeological survey on numerous mountains in Greece. This paper focuses on four examples that are exceptional with respect to their immense scale (measuring between ca. 600 m² and ca. 2,000 m²) and striking topographical setting: Mount Oiti, Mount Lykaion, Mount Apeas, and Mount Arachnaion. The size of these altars indicates an extraordinary number of animal sacrifices—based on the volume of the deposit

excavated on Mount Oiti (ca. 1,200 m³), the number of victims was estimated in the tens of thousands. Such remarkable patterns of sacrifice have been recognized since antiquity, and even then were considered an extraordinary phenomenon in Greek religion. A series of literary accounts describing ritual activity on the summits of Mount Olympos, Mount Athos, and Mount Kyllene attests to a tradition of preserving sacrificial remains on mountaintops. Ancient authors record how heaps of ash and burnt bone from annual sacrifices remained undisturbed on the summit of the mountain from one year to the next.

Clearly, these non-architectural masses of ash and burned material were significant markers of Greek religion. Using both the archaeological and literary records, this paper explores the relationship between ash altars and the landscape and the consequent patterns of sacrifice and ritual activity.

Retracing the Aliakmon/Sarantaporos Valley: Landscape, Archaeology, and History in Late Classical/Early Hellenistic Western Macedonia (ca. 350–150 B.C.E.)

Martin Gallagher, University of Oxford

An ever-increasing body of archaeological evidence from western Macedonia has the potential to address long-standing issues regarding the cultural and especially economic integration of Macedonia after the campaigns of Philip II in the mid fourth century B.C.E. Rivers were a key aspect of Macedonian self-identification, as the path of their mythological/historical migrations, and provided a strong basis for the development of the most vital and successful hegemonic power within Greece. This paper focuses on the most famous route, the Haliakmon River, which led from the Thermaic Gulf through the ancestral capital of Macedon as well as those of smaller kingdoms made cantons under Philip II (Elimia, Orestis), before joining the Sarantaporos, one of the main passageways through the precipitous Pindus range toward Epirus. Three sites along this passage have highlighted the changes and continuity as well as the diversity of settlement during the ascendancy of Macedonia as hegemon of the Greek world. Aiáne, Velvendos and the Kastro of Polyneri comprise the capital of a smaller kingdom/canton, a traditional village and a defensive foundation on Macedonia's western frontier. Recent exploration and rescue excavation have also helped to fill in the settlement map along the Haliakmon/Sarantaporos and put these sites into context, notably the Crossing Pindus mission, which has identified at least three well-fortified Late Classical/Early Hellenistic routes linking Macedonia and Epirus, and the Ilarion Hydroelectric Dam Project, which has led to the identification of numerous sites throughout the prefecture of Kozani, in which Aiáne is located.

This archaeological activity has increased our understanding of historical Macedonian settlement substantially. Despite the tradition of Philip II and later kings as movers of people, we can now establish that the general distribution of population in Macedonia did not change markedly. Settlement types existed along a scale, which makes strict functional distinctions between towns, villages, and forts even more difficult than in other parts of Greece. Although the primary motivation for settlement may have been defensive, Macedonian expansion created trade monopolies for metals, salt, and timber. When control of this broader territory could be sustained, it led to substantial economic growth, as is implied by the Ro-

man sanctions after the third Macedonian war (167 B.C.E.). Hellenistic settlement adaptations have traditionally been pursued from historical sources, but it is now possible to understand some of their material correlates and the strategies for site locations and the use of territory, which were applied in other places.

Creating Heroic Landscapes? Tumuli Visibility and Territorial Organization in Pergamon

Christina Williamson, Brown University, and *Ute Kelp*, Deutsches Archäologisches Institut, Berlin

Cityscapes in Graeco-Roman Asia Minor were typically defined by necropoleis with monumental tombs lining the main access routes. Tumuli especially occupy a large place in the views of several cities today. Notable among these is ancient Pergamon, with no less than 11 major burial mounds. The greatest of these is Yığma Tepe, in the plain below Pergamon, with a ground surface area comparable to the Acropolis and neatly aligned with the axial orientation of the Temple of Athena. But how do other tumuli impact the spatial organization of this emerging grand city? What role did their locations play in shaping the social and political landscape?

Two outlying tumuli in the region of Pergamon, both recently investigated under the auspices of the German Archaeological Institute, provide case studies to examine these issues in closer relief. The İlyas Tepe tumulus, though certainly not the largest, nonetheless occupies one of the most prominent places in the wider environment as it crowns the crest of the great hill immediately east of Pergamon. This tomb dates from the second half of the third century B.C.E. and its unusual location on a hilltop, rather than among the other tumuli below the city, may well be connected to the reign of Attalos I. A second case study is related to Elaia, Pergamon's principal harbor and maritime base. The Seç Tepe tumulus has been tentatively dated to the second century B.C.E., when Elaia blossomed under Attalid rule. Most of Elaia's burials are located closer to the city walls, yet this tumulus is situated across the bay to the southeast, on a low rise along the coastal route from Izmir to Pergamon. One of the first features that a traveler from the south would encounter, this tomb visually connects the coast, the bay, and Elaia.

In this paper we use architectural and visibility analysis to interpret these monumental tombs in their spatial contexts. We demonstrate how they were positioned at strategic locations and served as landmarks. The allocation of such prime sites for these tumuli is held up against the background of funerary space, social relevance, and political objectives. Taking into account the changing conception of heroization in Hellenistic times, we pursue the idea of creating a heroic landscape as a determining factor. Going beyond the cityscape, we argue that these tumuli played an important role in developing a sense of territory and tradition in this rapidly emerging kingdom.

SESSION 7F: Colloquium

Foodways in Archaic and Roman Italy

ORGANIZER: *Angela Trentacoste*, University of Sheffield

Colloquium Overview Statement

Food offers far more than simple nourishment. It provides a powerful medium for expressing similarities and differences, evidences man's relationship with the landscape, and constitutes one of the most basic units of economic exchange. Between the Iron Age and Roman period in Italy, the social, cultural, and economic practices surrounding food production and consumption changed significantly. Urban populations grew in tandem with the intensification of agriculture, and people in cities faced new challenges when disposing of domestic debris. The scale of production shifted with the development of markets, and new foods provided new opportunities for social display. Thus, foodways represent an important line of inquiry into archaic and Roman Italy, but one that demands an interdisciplinary approach. Recent scholarship has broadly investigated food production and consumption in this period using a variety of evidence. However, studies are often separated along methodological lines, and specialist knowledge is not well integrated across the discipline. Although we have access to a large body of data on what people ate, many questions remain on why subsistence strategies and taste preferences developed as they did. This colloquium brings together diverse scholarship on the interrelated factors that underpinned diet in ancient Italy. The papers combine evidence from environmental remains, ceramics, and historical sources to explore how foodways influenced and were influenced by their wider cultural and environmental context. By drawing together different methodologies, the colloquium aims to facilitate knowledge exchange between researchers and to bring new meaning to subsistence practices in this period. The limited geographic scope of the session allows discussion to focus on regional and chronological variation within Italy and the relationship between different social and cultural groups. By approaching foodways in this manner, we hope to understand not just what and how people ate in ancient Italy but also why they raised, traded, and consumed the foods they did.

DISCUSSANT: *Kimberly Bowes*, American Academy in Rome

Plant Staples in Iron Age and Archaic Central Italy

Laura Motta, University of Michigan

The contribution of archaeobotanical research to the study of Iron Age and archaic central Italy was traditionally very small. Only a handful of sites were sampled on a very small scale. In recent years, however, there have been a growing number of new projects that have incorporated the study of plant remains. This paper reviews the state of the discipline in light of these new discoveries, collating data from sites such as Gabii, Sant'Omobono, the north slope of the Palatine,

and others. The emerging picture is contrasted with the current reconstructions of foodways, diet, and staple exchange networks, which are typically based primarily on the written sources. Significant differences are notable, pointing to the existence of multiple local cultural traditions that influenced the choice of crops and their processing. This is in contrast with the more homogenous narratives relying on historical documents that are likely to present, if they are at all accurate, the situation of the city of Rome itself rather than that of the rest of central Italy.

A Pentchant for Pork: Etruscan Expansion and Rome's Favorite Food

Angela Trentacoste, University of Sheffield

If we were to associate one animal with Roman cuisine, it would have to be the pig. By the Imperial period, pork had become central to the Roman diet, and an increase in pork consumption has been associated with the Romanization of Italy and the provinces. However, a similar taste for pig meat had already developed in northern Italy by the Archaic period. With the evolution of Etruscan cities in the Po Plain, livestock-management strategies broke from Bronze Age practices. Both urban centers and villages developed a characteristic pig-focused system of livestock husbandry—a new, Etruscan style of animal management that separated northern Etruscan settlements from contemporaneous Venetian and Alpine sites. While a long-term increase in pig consumption also characterizes the development of central Italian agriculture, this process was slower and widespread emphasis on the species less pronounced than in northern Italy. With the exception of Rome, northern sites adopted a management strategy that focused on pigs earlier and more emphatically. These changes in animal management suggest a relationship between northern Etruscan dietary practices and those traditionally viewed as Roman, and they encourage us to reevaluate the relationship between Etruscan and Roman foodways. Scholars normally link the rise in Italian pork consumption with urban population growth and new demographic pressures. However, the appearance of this agricultural system in marginal and modestly sized settlements challenges the current model and encourages a more nuanced approach. This paper summarizes the development of Etruscan and Early Roman livestock farming and explores the wider environmental, economic, and cultural context of pork consumption. Discussion moves beyond urban provisioning to consider the role of these animals in long-distance trade and their association with cultic activity and social display. This investigation suggests additional reasons for Etruscan and Roman emphasis on pork consumption and highlights the complexity behind archaic foodways.

Roman Foodways Through Integrated Ceramic Analysis

Laura M. Banducci, Carleton University

Following the pioneering work of Michel Bats, only a handful of studies in the past few decades have explored the link between ceramic function and food in the Roman world. The study of vessel morphology is most prominent in these works, and there is often a focus on a single class of material (either fine wares or

coarse wares). This presentation describes the importance of the integrated study of several classes of domestic pottery for understanding changing food behaviors during the period of Roman expansion in Italy. It combines morphological study with the additional technique of ceramic use-wear analysis to draw out patterns in vessel use. Each site in this study (Musarna, Populonia, Cetamura del Chianti, and Gabii) had lively pre-Roman habitation before it came under Roman political control during the republic. I demonstrate how the large-scale examination of whole ceramic assemblages (i.e., cooking and serving vessels) reveals nuanced changes in urban foodways during this period. Beyond the foods available (as evidenced through the study of environmental remains), the functional analysis of pottery allows us to consider the important dimension of how this food was prepared and how it was served, contributing to an understanding both of domestic technologies and of the social and cultural dimensions of food. Using the ceramic record, we can glean changes in taste preferences, household makeup, hosting behaviors, and even access to differing food qualities. These changes at the domestic level can then be brought into dialogue with the larger-scale processes of “Romanization” in the city and landscape of Italy.

Diet, Nutrition, and Social Class in Roman Italy

Geoffrey Kron, University of Victoria

Although food and diet in classical antiquity has been the subject of considerable research and several recent books and monographs, as well as several substantial edited volumes, very little research has been devoted to systematically investigating how standards of diet and nutrition varied according to income and social class. Anthropometric and stable isotope evidence suggest that an adequate diet relatively rich in protein was enjoyed by Romans from a wide range of social backgrounds and that there was a consistent policy on the part of successive Roman governments to ensure low and stable prices for critical staples such as wheat. Yet it has been widely assumed that the diet of the mass of the population, as in 19th-century western Europe or early 20th-century southern Italy or Greece, was largely based on cereals, supplemented with wine and olive oil, and rarely included much meat, seafood, fowl, or substantial quantities of fresh fruit or vegetables.

As early as the 1970s, however, studies of the Roman military diet mining both documentary and archaeological evidence, most notably from zooarchaeological studies of animal bones and shells, began to reveal a much more varied diet on the part of ordinary legionaries. Moreover, subsequent studies of the varied diets of relatively poor workers, such as the quarry workers at Mons Claudianus, suggest that the traditionally pessimistic view of mass diet needs to be qualified and that there is considerable potential for a more thorough investigation of the relationship between diet and social class in Roman Italy. Although detailed studies that thoroughly survey the archaeological evidence for diet across a wide range of social contexts are relatively rare, a few do exist, such as the recent survey of archaeobotanical evidence from Pompeii and Herculaneum.

In this paper, I briefly survey some of the most informative documentary, zooarchaeological, and archaeobotanical evidence for variations in diet in Roman Italy based on income and social class, laying out what we can reasonably conclude

regarding which foods were readily affordable and widely consumed, as well as which foods, most notably certain types of wild game and fresh fish, were particularly prestigious and expensive and were consumed primarily or disproportionately by the wealthy.

City Slickers and Slackers: Comparative Investigations of the Role of Meat in Roman Urban Contexts

Michael MacKinnon, University of Winnipeg

Roman urban centers often contain relatively cosmopolitan and demographically diverse populations, which in turn may leave a range of behavioral activities within their archaeological material record. A comparative investigation of recovered animal bones from various Roman urban sites in Italy, with particular focus on the better-known centers of Ostia and Pompeii, indicates a basic level of uniformity in overall patterns of animal contribution to diets among occupants of these cities. It also displays evidence for individual variation, particularly among households. Both Pompeii and Ostia register low relative frequencies of cattle bones, especially at the household level, suggesting a fairly minimal contribution of beef in the Roman Italian urban diet, at least in the areas of central Italy explored here. Nevertheless, cattle bones tend to be relatively more frequent in outlying areas of these cities, indicating different spatial divisions in processing and disposing of animals for the urban market, depending on the size of the animal. The frequency of pigs increases fairly consistently across all contexts within Roman urban sites, reaching peak values during Late Republican and Imperial times, presumably from mass marketing of pork during this phase and a more diversified consumption base that included both elites and commoners. Indeed, contrary to opinions that Roman poorer classes were effectively vegetarian, available zooarchaeological evidence suggests rather that both elite and poor status groups augmented their intake of meat, notably during the Imperial period. Overall, dietary and depositional patterns in Roman cities in Italy indicate that most households were relatively clean—that is, they had removed the bulk of their faunal waste—while others disposed of rubbish internally in garden pits, in latrines, and along edges of walls, and externally in streets and gutters. Such aspects generally show no dramatic variation in terms of reconstructed patterns of wealth or identity that might be established within these households. In other words, some manner of cultural uniformity, uniting rich and poor, underlies faunal consumption and disposal activities in Roman urban centers.

Economic Change and Unexpected Foodways in a Nonelite Area of Pompeii

Emily Holt, State University of New York at Buffalo

The Late Republic and Early Empire have been identified as times when Roman Italy probably experienced low levels of real economic growth. What effect, if any, did such growth have on the majority of Romans? This paper uses data from the Pompeii Archaeological Research Project: Porta Stabia to reconstruct a background of local economic change through patterns of animal consumption in

a nonelite area of Pompeii. This economic background is then used to understand the foodways in specific structures as indicated by finds that can be contextualized and dated more closely. In particular, evidence of unexpected foodways with elite connotations—such as the consumption of dormice—are explored in relationship to historical and literary expectations for nonelite Romans.

SESSION 7G

Recent Work on Minoan Crete

CHAIR: To be announced

New Excavations at Knossos-Gypsades: Report on the First (2014) Season

Eleni Hatzaki, University of Cincinnati, *Ioanna Serpetsidaki*, 23rd Ephorate of Prehistoric and Classical Antiquities, *Amy Bogaard*, University of Oxford, and *Gianna Ayala*, University of Sheffield

More than 100 years after David Hogarth's 1900 excavations at Hogarth's Houses A and B and Sinclair Hood's 1957–1958 excavations in the same region, the 23rd Ephorate of Prehistoric and Classical Antiquities and the British School at Athens have initiated new excavations in this part of the Bronze Age town of Knossos. The aim of the project is to excavate a Knossian neighborhood in order to elucidate daily life and social geography beyond the palace. This paper presents the results of the 2014 excavation season.

Defining Cultural and Political Entities Through Religious Spaces: The Case of Stavromenos Peak Sanctuary in Anatoli, Ierapetra (Crete)

Chryssa Sofianou, 24th Ephorate of Prehistoric and Classical Antiquities, *Yiannis Papadatos*, University of Athens, and *Konstantinos Chalikias*, University of Athens

Recent excavations by the 24th Ephorate of Prehistoric and Classical Antiquities, in collaboration with the University of Athens, Department of History and Archaeology, led to the discovery of a peak sanctuary above the village of Anatoli, near Ierapetra, in east Crete. The site produced a large number of anthropomorphic and zoomorphic figurines, fragments of stone vases, and copious amounts of Minoan, archaic, classical, Hellenistic, and Roman pottery. Even though the finds are intriguing, our interest lies mainly in the importance of the sanctuary for the several settlements that used it throughout antiquity.

The available evidence suggests that in the Neopalatial period, the site was the dominant peak sanctuary for the Minoan settlement(s) in the broader area of Ierapetra. Moreover, during this period the sanctuary was located in close proximity to a large Minoan administrative building, at the site of Gaidourofafas, which was controlling the exploitation of mountain resources and the distribution of the products to the lowlands. Indeed, this year's excavations produced sufficient evidence for the connection of the building at Gaidourofafas with the Minoan sanctuary at Stavromenos.

In historical times, Stavromenos was most likely used as an open-air sanctuary during the Geometric-Classical periods, since it was conveniently located on the border between two city-states (ancient Mala and Kalamafka Kastelos), while in the Hellenistic and Roman periods, the sanctuary must have served the emerging and powerful city-state of Hierapytna. With its characteristic conical formation, raising 950 m above the sea, it dominates the skyline above modern Ierapetra and the surrounding sea- and landscape, particularly for those who are traveling by the sea. The excavation and the study of the finds are still at a very preliminary stage, but the existence of a sanctuary on a high peak at this particular location may be connected with the Hieron Oros (Holy Mountain) mentioned in Ptolemy's *Geographia*, or even with the name of the ancient city of Hierapytna (Holy Rock).

Feasting or Not? A Neopalatial Ceramic Deposit from Sissi (Central Crete)

Ilaria Caloi, Université Catholique de Louvain

In this paper I present an unusual deposit of Neopalatial vases excavated during the 2011 campaign at Sissi in central Crete, east of Malia. This ceramic deposit was dumped inside a box-like structure formed by the remains of earlier walls within the southeast part of what is called Building F. Plaster fragments found with the vases could imply that the deposit was originally kept within a bench and was a foundation deposit. The deposit is composed of a large number of undecorated vases, mostly handleless cups of various shapes as well as a few cooking pots and bowls. The preservation condition of the vases in the deposit is good, making it likely that they were used for a single occasion. This factor, combined with the limited typology of vessels and the large number of handleless conical cups, suggests that the deposit is the result of a feasting event. Moreover, the occurrence within the deposit of a rhyton, as well as of a peculiar figurine representing the head of a snake, seems to point to the ritual nature of the ceramic deposit.

The number and the variety in the manufacturing techniques of the handleless conical cups may imply the participation of different groups in the feasting event, perhaps to be connected with the renovation or reconstruction of the building in which it was found at the beginning of the Neopalatial period.

Monumental Architecture, Political Economy, and Religion at Hagia Triada on Crete: Making Sense of a Late Bronze Age Hiera Polis (Late Minoan IIIA–B, 14th–13th Centuries B.C.E.)

Santo Privitera, National University of Athens

This paper draws on the results of a three-year research program on the monumental architecture of the Final Palatial period at the Villaggio of Hagia Triada on Crete, which I carried out since 2011 as a post-doctoral fellow at the University of Athens and will be published as a monograph in 2015. While presenting the major stages in the complicated building history at the site from the early 14th through the late 13th century B.C.E., I intend to draw attention to the peculiar combination of distinct functional sectors, respectively cultic, residential, and economic in character, that make this site stand out against the framework of the contemporary

Late Bronze Age Aegean. The interrelation of the three sectors of Hagia Triada is further supported by the architectural settings depicted in local wall paintings of a religious character (processions, libations, and animal sacrifices). These scenes confirm that in Late Minoan IIIA–B Hagia Triada, buildings and open spaces were clearly intertwined not only by a complex of diversified practical functions, but became components of a built environment endowed with symbolic connotations. In this context, the members of the local ruling group celebrated themselves in being portrayed not as warriors or hunters, as often is the case with Mycenaean iconography, but as individuals endowed with priestly functions, being in straight contact with the supernatural world. Accordingly, one can wonder whether the entire site of Hagia Triada, which appears as a “Houseless town,” was recognized as a sacred place, representing a kind of “Sanctuary-Town” or Hierapolis, thanks to a “metaphysical” prestige that was probably framed by lost mythical tales.

Geoarchaeology and Landscape Change in Bronze Age East Crete: The Case of Post-Theran Palaikastro

Rachel E. Kulick, University of Toronto

Phase 4 of the Palace and Landscape at Palaikastro (PALAP) project has revealed, through survey and ongoing excavations, additional areas of the Bronze Age Minoan settlement at Palaikastro. Moreover, the new excavations involve multiscalar geoarchaeological analyses that allow observations on landscape transformations over the last 5,000 years, both on-site and in the surrounding coastal area. Such analyses assist in answering questions about site formation and urbanization, as well as help to explore environmental questions of landuse and sustainability at the site. This paper addresses a commonly posed question concerning the environmental conditions during the early Late Minoan (LM) period: what were the effects of the Theran eruption on Late Minoan society?

Driessen and Macdonald (*The Troubled Island: Minoan Crete Before and After the Santorini Eruption* [Liège 1997]) argue that the material culture and architecture changed significantly from LM IA to LM IB, and that these changes may signal substantial organizational shifts. These diverse Late Minoan transformations have sometimes been linked to major landscape alterations after the Theran eruption, such as tsunami- or earthquake-activated erosion or ash-polluted water sources and fields. In turn, these modifications could have severely impacted the subsistence economies of the Late Minoan towns, but there is insufficient environmental information from Crete in the LM IB period, and in subsequent periods, to help us understand the roles of the numerous processes involved in these various changes.

At Palaikastro, Bruins et al. (*JAS* 35 [2008] 191–212) propose that a tsunami devastated the LM IA town, located only 300 m from the modern-day coastline. However, their paper does not draw on any direct archaeological evidence from the town itself. The current paper presents the geoarchaeological information gathered from on-site contexts in the town of Palaikastro in the 2013 and 2014 excavation seasons to reassess this hypothesis of a LM IA tsunami-caused destruction. Evaluation of the direct micromorphological data, in conjunction with the archaeological excavation data, coastal stratigraphies, and paleoenvironmental data, does not support a site-wide, tsunami-caused LM IA destruction. These geoarchaeological

observations provide new environmental information on the impact of the Thera eruption and make apparent the need to consider other transformative factors that caused the possible LM IA to LM IB reorganization.

Where was the Protopalatial Palace at Gournia?

D. Matthew Buell, Trent University, and *John C. McEnroe*, Hamilton College

In the 1908 publication of her groundbreaking excavations at Gournia, Harriet Boyd Hawes insisted that no part of the palace was built before the Late Minoan I period. In his 1991 study of the palace, Soles essentially concurred, while allowing that some Middle Minoan III material from the earliest part of the Neopalatial period might eventually be found beneath the later floors (*AJA* 95 [1991] 26). Until now, however, no one has identified the remains of an earlier Protopalatial palace at Gournia.

In association with the Gournia Excavation Project, directed by Vance Watrous, we are conducting a new architectural investigation of Gournia. As a result, we are now able to trace the outline of a significant portion of the Protopalatial palace. In addition, we propose that the Protopalatial palace is associated with fragments of other monumental structures in the northern section of the site. The identification of these early structures fundamentally alters our understanding of the development and social organization of this important Minoan town.

Seals and Documents from the Recent Excavations at Gournia, Crete

John G. Younger, University of Kansas

In addition to the seals, sealings, and documents found by Harriet Boyd in the first years of the 20th century, recent excavations at Gournia (2010–2014) under the direction of L. Vance Watrous, have produced more seals and sealings, texts written in Cretan Hieroglyphic and Linear A, and interesting marks on pots.

A Protopalatial clay stamp (Middle Minoan IIA context) carries a retorted maze-like spiral. Two serpentine lentoids come from late Protopalatial or early Neopalatial contexts; one carries dotted circles, the other has architectonic designs. A fourth seal was a chance find: a lentoid with a goat in the Cretan Popular style (Late Minoan I). All four were found in areas identified as workshops, and their mid-level styles seem appropriate for workers.

The impressed material includes a jar handle stamped by a seal belonging to the Border-Leaf group (Early Minoan III–Middle Minoan I). From palace Room 16 (Late Minoan I context), comes a nodule impressed by a Kamilari Agrimi seal (Middle Minoan III) and a document sealing impressed by a lentoid with a lion scratching at a spear in its chest. From fill in the Mycenaean Megaron comes another nodule impressed by a lentoid with two bulls belonging to a transitional style between Almond Eyes and Dot Eyes (Late Minoan I–II). Again, it is the impressed material that shows a high-status interest in Gournia.

Among the many pot marks are two that reflect script; a sign on a potter's bat that resembles Hieroglyphic sign *084 (the predecessor to Linear B LANA?); and a jar incised with Linear A sign *335. Two more marks on potter's bats seem more

artistic than textual: one carries a bold yin-yang symbol; the other presents a carefully drawn heifer with a lightly incised calf inside.

There are also new inscriptions. A potter's bat carries a boldly incised Hieroglyphic inscription (now GO #001). And a Linear A tablet (now GO 2 also from palace Room 16) records names, commodities by logograms, and small quantities and fractions appropriate for a redistribution document.

While Gournia lacks (so far) a Linear B document, its Hieroglyphic and Linear A documents and the inscriptions and drawings on pots and potter's bats all indicate a high level of literacy, not only in the palace but also in the workshop areas and houses of Gournia.

SESSION 7H

Iconography

CHAIR: *John Oakley*, College of William and Mary

A Bulwark of the Sybarite Achaeans: Pylios Fights Taras on a Late Corinthian Neck-Amphora, ca. 570–550 B.C.E.

Ann Patnaude, Independent Scholar

This paper examines a rare visual representation of a rivalry between the south Italian settlements of Metaponto and Taranto on a late Corinthian neck-amphora in the manner of the Tydeus Painter (ca. 570–550 B.C.E.). On the amphora, four warriors engage in two duels. Each of the warriors are labeled: Ajax fights Dolon, while Pylios battles Taras. The first set of names is from epic, the second is toponymic. Pylios indicates that the warrior is "of Pylos," whereas Taras refers to the eponymous hero of Taranto. The vessel is significant, as it offers the earliest extant attestation of Taras and the only known portrayal of this eponymous hero in vase painting. Indeed, the neck-amphora provides a visual antecedent for existing literary testimony by at least 125 years.

Building on the premise that foundation stories reflect an ongoing process of structuring a community's identity, I argue that a duel between Pylios and Taras represents a contemporary rivalry between the south Italian poleis of Metaponto and Taranto. Legend has it that Pylians returning from the Trojan War were the first to settle Metaponto. After its destruction and abandonment, Metaponto was resettled eventually by Achaeans from Sybaris (ca. 630 B.C.E.).

One of the reasons for Metaponto's refounding was to prevent Taranto from expanding west. Metaponto, therefore, was to act as a buffer between Sybaris and Taranto. The scene on the neck-amphora seems to portray this idea. Ajax, well-known from epic as "the bulwark of the Achaeans," reflects visually Pylios, here a representation of Metaponto. Like Ajax, Pylios acts as a bulwark for the Sybarite Achaeans in his battle with Taras. Similarly, Dolon, the "ill-favored" of the Trojans, is likened visually to Taras. Combining past and present, the scene portrays a competitive relationship between Metaponto and Taranto, suggesting that such rivalry was an intricate part of identity formation in southern Italy at this time.

Dangerous Deeds: The Calydonian Boar Hunt into Perspective

Alessandro Poggio, Scuola Normale Superiore

The Calydonian Boar Hunt is one of the most durable myths in the Greek and Roman worlds both in literature and visual arts. It was one of the main episodes in Meleager's tale, already mentioned in the *Iliad* (9.529–99), and visual arts representations of the Calydonian Boar Hunt were widespread in various media and geographic contexts, examined in the important surveys of Daltrop (*Die kalydonische Jagd in der Antike* [Hamburg-Berlin 1966]) and Woodford (*LIMC* 6.1 [Zürich-München 1992] 415–18). Scholars have considered Meleager's deeds as a pivotal case in the investigation of how different versions of a myth may convey valuable clues as to the contexts of its use, as exemplified by Hölscher's analysis of the scene on the François Vase (*Im Spiegel des Mythos. Bilderwelt und Lebenswelt / Lo specchio del mito. Immaginario e realtà* [Wiesbaden 1999] 28–9).

With regard to the fruitful combination of literary and visual evidence, one aspect deserves further attention, the boar's victims, who represent the most dramatic side of the struggle against the wild animal. Literary sources transmit numerous incidents affecting Meleager's fellow hunters, though as far as we know the Greek iconography represents maximum one injured participant. An outstanding exception is the fourth-century monumental tomb in the Lycian dynastic seat of Trysa, on which the preserved slabs of the Calydonian Boar Hunt frieze reveal the presence of three wounded hunters assisted by companions, as remarked by Körte (*JdI* 31 [1916] 263–65) and Nollé (*Die Abwehr der wilden Schweine. Schwarzwildjagden im antiken Lykien* [München 2001] 27–9).

Starting from this particular iconographic aspect, my paper puts the rich literary and visual evidence of the Calydonian Boar Hunt into a new perspective stressing strategies and messages conveyed by various media. Moreover, with regard to visual art, my analysis considers how the iconography changed according to context, offering a fresh view of the use of Greek myth outside the Greek world.

Lame Hephaistos

Maura Brennan, The College of William & Mary

The Return of Hephaistos to Olympus was a popular scene in Attic vase painting from the beginning of the sixth century through the end of the fifth century B.C.E., and it is found occasionally on other pottery fabrics as well. According to myth, Hephaistos was lame, and this disability is sometimes depicted on painted pottery, almost always in scenes of his Return. The most well-known example is the François Vase, which is often the only vase cited when discussing instances of Hephaistos' lameness on Athenian pottery. Although three other Attic vases are occasionally cited as showing the disability, one of which does not show his Return, but instead the Birth of Athena, there are actually quite a number more Attic vases that depict his lameness than have previously been recognized. In this paper I present seven new Attic examples that clearly display his lameness, and I consider both the different ways in which his disability is rendered and how they relate to the various epithets associated with him. For example, Hephaistos is often associated with the epithet "clubfoot", and while there was an established

iconography of clubfoot Corinthian komasts, the god's disability is never rendered in this manner on Attic vases. Instead, he is depicted in ways more similar to other epithets associated with him. Most notably, four vases represent the disability in a fashion that seems to be connected with Hephaistos' most common Homeric epithet, "ἀμφιγυῆεις", or "with both feet crooked."

Karneia and Kitharoidos: Rereading a Laconian Cup in the Michael C. Carlos Museum

An Jiang, Emory University

In Attic vase painting, representations of cultic activities are plentiful and have long been studied, but very few such scenes have been identified on Laconian painted pottery. This paper focuses on the iconography of one such rare example in the Michael C. Carlos Museum. The scene in the tondo of this Laconian drinking cup depicts a large standing figure holding a lyre in the center, surrounded by six smaller figures, three on each side and arranged on two levels. This unusual, if not unique, image has been formerly interpreted as a Dionysiac celebration with Dionysos and komast dancers. However, it is difficult to reconcile the problematic combination of the wine god and the lyre. This paper offers a new interpretation: this image may be understood as a visual synthesis of one of the most celebrated festivals in archaic Laconia, namely the Karneia.

This new interpretation derives not only from a close reexamination of the iconographical details in the scene that have hitherto been overlooked but also from comparisons with other Laconian vase paintings and bronzes. Two of the small figures on the left can be identified as runners, perhaps the staphylodromoi recorded at the Karneia. The size and the solemnity of the kitharoidos in the center suggest that he is the god Apollo himself who manifests the musical aspect of the festival attested by the Laconian historian Sosibios and other ancient authors. The dancers on the right are shown performing the "Karneia dance," which is known from several Attic and South Italian vase paintings. This sophisticated composition may therefore be read vertically in three parts; each evokes one major religious component of the festival of Apollo Karneios: the race, the music contest, and the dance. This scene is thus an important document of the religious life of ancient Laconians, which provides us a rare opportunity to look into how they may have visualized their own cultic experience.

Images of Power in Seleucid Persis: A New Study of the Victory Coinage from Susa

Laure Marest-Caffey, University of California, Berkeley

The silver coinage featuring a helmeted male head on the obverse and Nike crowning a trophy on the reverse, minted by Seleukos I Nikator at Susa, has long been the object of scholarly interest. The striking portrait, with its idiosyncratic iconography and the rarity of the type, has made it a prized possession of collectors as well as a target for imitators—ancient and modern. Historians and archaeologists have used it to illuminate the early history of the Seleucid empire

and more particularly its relationship with local elite in Persis, a topic of much significance in the current effort to reappraise Seleucid strategies.

The last decade has seen an increased number of new “trophy” appearing on the market as well as a better understanding of Seleucid administration and policies. The conclusions of the last—and only—die study of the mint of Susa, published in 1997, are thus in need of updating. The goal of this paper is twofold: first, to present the results of the die study; and second, to provide a new commentary on the iconography and significance of the series.

Since no hoard containing “trophy” has been unearthed west of Babylonia and most came from Persis, the victory coinage was clearly conceived and circulated as an “Eastern” coinage. The intended audience explains the innovations and short life of the type. A strict *interpretatio graeca* impoverishes the complexity of this polysemous coinage, cleverly incorporating elements of Persian iconography of power with Greek visual and cultural traditions.

Esteemed Ornament: An Overlooked Roman Aesthetic Concept and Its Implications for Reading the Ara Pacis Augustae

Nicola Barham, University of Chicago

In this paper, I present my research on the application of the terms *ornamentum* and *kosmos* in Roman epigraphy, papyri, and literature to works of visual culture. The notion of “ornament” emerges as a prominent and respected classical conceptual paradigm that was used to define works as different as floor mosaics and colossal sculpture, paintings and gardens, buildings and jewelry, as well as both figural and nonfigural images. This paradigm esteemed a work’s external impact, celebrating the power of aesthetic materials to adorn their environment. Nor did the designation as *ornamenta* suggest expendability or superfluity, as modern-language glosses of “ornament” might lead us to expect. On the contrary, as dedicatory inscriptions make clear, it emphasized the importance of each medium’s aesthetic power over its environment and the honor this could bring. *Ornamenta* were perceived as vital.

I propose that this Roman value of *ornamentum* is a paradigmatic governing concept for Roman visual culture, offering fresh insight and suggestive solutions for key problems in Roman art. Taking the reliefs of the Ara Pacis Augustae as a prominent case in point, I argue that reading these reliefs with a respect for this terminology advances understanding of the kind of viewing these sculptures were designed to draw.

The Ara Pacis has often been synonymous with ornament in contemporary classical scholarship—but ornament in Kant’s sense (*Critique of Judgment*, Pt 1, §14), not with the meaning that I demonstrate the classical term conveys. A significant proportion of the literature on the altar grapples with the purpose of the presence of the simple acanthus motif over so much of the surface of this important monument (e.g., D. Castriota, *The Ara Pacis Augustae and the Imagery of Abundance in Later Greek and Early Roman Imperial Art* [Princeton 1995]). The giving of a thereby smaller space to the upper register of reliefs that represent Rome’s imperial family has seemed problematic. Yet in view of the application of the Roman terminology of ornament to each of these types of relief alike, as well as to the monument as a

whole, and even to the built complex of which it formed a part, I argue that these reliefs were in fact similarly appreciated as contributory ornaments, each with both terpnopoeitic qualities and mimetic strategies, lending beauty and honor to spaces and persons beyond themselves. Each was set at the service of a still greater dynamic of ornament.

The Power of Images: Tarpeia and Barbarians

Jaclyn Neel, York University

In this paper, I analyze the iconography of the Tarpeia panel of the Basilica Aemilia frieze and argue that we have misinterpreted its significance. Although the frieze is fragmentary, its pictorial program has typically been understood within an early Augustan context: by focusing on key myths of the early city, the monument promoted Rome's religious and moral piety. Among the recognized scenes are a city foundation, the rape of the Sabine women, and the burial of the traitor Tarpeia by Sabine soldiers. These last scenes are often interpreted as relating to Augustan marriage legislation. But the negative exemplum of Tarpeia is an unusual addition to the otherwise pro-Roman iconography. Moreover, a recent study by Lipps suggests a lower dating for the remains of the basilica as a whole. If we accept Lipps' chronology, the connection between the frieze and contemporary moral legislation becomes tenuous. I argue that the Tarpeia frieze of the Basilica Aemilia instead refers obliquely to contemporary military campaigns.

That the subject of this panel is Tarpeia is clear. Iconographic parallels with two coins, one republican (*RRC* 344/2a–c) and one Augustan (*RIC* I2 Aug. 299), show the same pose: arms raised, half-buried in shields. This is similar to literary accounts of Tarpeia as either a traitor or hero. Despite this widespread agreement, two differences between the basilica's iconography and the coinage complicate our understanding of the panel. First is Tarpeia's bared breast; second, and unnoticed since Carettoni, is Tarpeia's hair.

The Basilica Aemilia depicts Tarpeia with cropped hair, while the coins show Tarpeia's hair streaming long and unbound. Tarpeia's short hair is quite unusual in Roman iconography, and unparalleled in the surviving remnants of the frieze. This cropped hair suggests a non-Roman model for Tarpeia's appearance, and I argue for a polyvalent reading of Tarpeia as both barbarian and Roman. Such an interpretation helps explain why this negative tale held a position of such prominence in public art.

Christianity and the Demythologization of Roman Sarcophagi: Numbers and Purchasing Power

Mont Allen, Southern Illinois University

A perplexing development sweeps over Roman sarcophagi of the Late Empire: the unexpected *Entmythologisierung*, or "demythologization" of their imagery. These relief-carved coffins had featured bold mythological scenes since the very beginning of their mainstream production early in the second century, when inhumation had replaced cremation as the favored means for disposing of the dead.

How then to make sense of this repertoire's peculiar withering and subsequent abandonment on later specimens, as mythological narratives were truncated, gods and heroes were excised, and genres featuring no mythic content whatsoever—such as the late third century's endless procession of sarcophagi featuring bucolic shepherds and studious philosophers—came to the fore?

Was it perhaps driven by a burgeoning Christian faith? To put it more succinctly, was mythological relief a casualty of Christianization? This explanation proposes that sarcophagi featuring seasons, shepherds, philosophers, and hunters gained in popularity because their imagery was religiously neutral and thus capable of appealing to both old pagan and new Christian clientele alike, a flexibility that the older mythological sarcophagi did not have. To be mythless meant to be non-affiliated, and thus palatable to all. In a time of religious transformation—which for funerary art always means a time of market transformation—this, so the argument goes, was a selling point.

Of all the explanations commonly offered for sarcophagi's demythologization, this is perhaps the most popular, with a pedigree stretching from Rodenwaldt (1921) to Zanker (2010), yet the argument itself has never been subjected to real scrutiny. It rests on three fundamental assumptions: (1) that Christians did actually purchase neutral/mythless "pagan" sarcophagi for their own use; (2) that they did so in numbers sufficient to affect the repertoire of pieces that pagan workshops produced; and (3) that Christians continued to buy neutral sarcophagi even after Christian ones were available. For critical traction on these assumptions, this paper turns to a close examination of the surviving monuments themselves, supplemented by social scientific reconstructions of Christian expansion and purchasing power. It argues that the archaeological record offers minimal evidence for Christian purchase of mythless sarcophagi, and that Christian numbers and purchasing power for most of the third century were simply too low to have contributed in any significant fashion to the shift in market production toward demythologized pieces. A nascent Christianity, in conclusion, can have played no real role in the extinction of mythological imagery on Roman sarcophagi.

SESSION 7I

The Levantine Coast

CHAIR: To be announced

Excavating New Kingdom Jaffa: The 2014 Season

Amy B. Karoll, University of California, Los Angeles, *Aaron A. Burke*, University of California, Los Angeles, and *Martin Peilstöcker*, Mainz University

In 2014, the Jaffa Cultural Heritage Project conducted its fourth season of excavations within the New Kingdom Egyptian fortress in Area A at Tel Yafo. The effort is part of a research design, which is funded by the National Endowment for the Humanities from 2013 to 2016, that explores the archaeology of insurgency and social interaction by examining contexts of violence and social integration at the fortress throughout the Late Bronze Age between various social agents, includ-

ing both Egyptians and Canaanites. The excavations build on the Kaplan Excavations Publication Initiative, which seeks to publish the excavations of Bronze and Iron Age contexts at Tel Yafo by Jacob Kaplan (1955–1974). Excavations since 2011 have made possible an enhanced interpretation of the fragmentary records from Kaplan’s work. The 2014 report includes an overview of excavations in Area A of both the gate complex to the east and contemporaneous contexts within the fortress to the west in what is known as the Lion Temple.

The 2008–2013 University of Melbourne and Bar-Ilan University Excavations of the Philistine Sector at Tell es-Safi/Gath, Israel

Louise A. Hitchcock, University of Melbourne, Aren M. Maeir, Bar-Ilan University, and Brent E. Davis, University of Melbourne

“To be a Philistine” has entered our language to mean uncouth or barbaric, a perception deeply situated in biblical thought. Just as the Greeks described non-Greek neighbors as “barbarians,” so, too, did the biblical writers describe people settled along the southern coast of the Levant in derogatory terms. Current scholarship regards them as Sea People migrating from Greece (ca. 1180 B.C.E.) and colonizing the coast of southern Canaan. We present results from the University of Melbourne’s excavations in the early Philistine levels in Area A on the east slope of Tell es-Safi/Gath, undertaken in collaboration with Bar-Ilan University. Tell es-Safi/Gath is one of the five cities of the Philistine Pentapolis and is associated with the legendary giant Goliath in the Old Testament. Our findings indicate a peaceful transition from the Bronze to Iron Age, a complex stratigraphic sequence with multigenerational reuse of architecture as well as the manipulation of highly charged artifacts in open spaces and in activity areas to promote cultural identity in the early centuries of Philistine habitation. These practices were followed by a reorientation of the community in the ninth century B.C.E., with the construction of new megalithic, hammer-dressed buildings. We propose that the archaeological remains of the Philistines at Tell es-Safi/Gath reveal them to be a culturally mixed group that resulted from multiple groups of migrants settling among the local Canaanite population, creating a socially and economically advanced, technologically innovative (iron production), artistically sophisticated (decorated Mycenaean-Greek style pottery), and cosmopolitan culture.

The Tel Gezer Excavations: Iron Age Urbanization and City Planning

Steven Ortiz, Tandy Institute for Archaeology

The Tel Gezer Excavation and Publication Project is a long-term project addressing ethnic and social boundaries and state formation in the southern Levant. Gezer is an ideal site to address these current research paradigms as it was an important site in the history of ancient Palestine and is mentioned in several historical texts. It is strategically located, situated near the junction where the Via Maris meets the trunk road leading to Jerusalem and vicinity. Although previous excavations have revealed much of Gezer’s history, there are still many questions left unresolved that are key to the reconstruction of ancient Palestine. Renewed excavations of the

past seven seasons have revealed an Late Bronze Age pillared building constructed over the Middle Bronze Age fortifications, two Iron Age I destructions, a series of 10th-century buildings, a ninth-century destruction, and a major eighth-century building phase with administrative buildings and a large four-room house destroyed in the eighth century. The results have led to new interpretations of the fortification and urbanization processes of the ancient city, particularly in the Iron Age II period.

Since last reported at the AIA Annual Meetings, the excavation project at Tel Gezer, sponsored by the Tandy Institute for Archaeology at Southwestern Baptist Theological Seminary and its consortium of schools, has continued to reveal remains located immediately to the west of the Iron Age six-chambered gate and east of Hebrew Union College's field VII. We have uncovered additional finds dating to the Late Bronze Age–Iron Age IIB. This new material allows us to better characterize the remains than we were able to do previously and also indirectly addresses the dating and history of the six-chambered gate. This report focuses on the two major destructions of the Iron Age II period attributed to the Egyptian pharaoh Shishak and the Hazael campaign uncovered in the last three field seasons.

Different Vessels, Different Meals: Phoenician Dining Habits in the Fifth Through First Centuries B.C.E.

Barak Monnickendam-Givon, The Hebrew University of Jerusalem

Recent excavations at Phoenician sites along the northern coastal plain of modern Israel yielded a rich sequence of well-stratified and datable tablewares assemblages from the fifth to the first centuries B.C.E. Close examination of the tableware assemblages, from both urban and rural sites, reveals a significant change in the shapes and amount of tableware vessels the Phoenicians used. These changes reflect different approaches to dining habits.

During the fifth and early fourth centuries B.C.E. (the Persian period) the Phoenicians used a very limited assemblage of tablewares. It comprised a small amount of plain vessels, mainly intended for food preparation. The limited collection of Attic and East Greek fine ware vessels, dedicated to wine drinking, and the lack of use of those vessels in rural sites, reflects the idea that wine-drinking ceremonies were limited to the Phoenician elite.

From the end of the fourth century B.C.E. through the first century B.C.E. (the Hellenistic period), the Phoenicians used a more varied set of tablewares. The major change occurred in the use of large amounts of personal tablewares such as cups, bowls, and plates, along with a variety of kraters and mortars. The assemblage of small containers became more varied as well, with a growing number of jugs and bottles.

The rapid change from using a poor and limited assemblage to using a rich and versatile set of tablewares suggests a transformation in the way the Phoenicians ate their meals and drank their wine. The lack of personal vessels in the Persian period indicates the Phoenicians ate directly from the preparation vessels. During the Hellenistic period, the Phoenicians used a larger set of personal tablewares as a mediation between the preparation vessels and the people who ate. The second

change is that ritual wine-drinking practices trickled down from being an elite habit to a common and widely employed Phoenician practice, as shown by the large number of small bowls and cups used in both urban and rural sites.

In my paper, I discuss the origins of these changes in Phoenician dining and drinking habits. I place them in the broader context of the Hellenistic world, comparing them with similar trends around the Mediterranean and the social trends that these changes represent in the Phoenicians' daily life.

Archaeology of Ritual?: Examples from En Hazeva, Israel

Erin Darby, University of Tennessee

The archaeology of ritual is characterized by wide-ranging disagreements over the proper way to interpret archaeological remains, the relative importance of architecture and small finds, and the extent to which the actions or intentions of cultic participants can be inferred based on the material record alone. Many of these issues come to the fore in Syro-Palestinian archaeology, where long-standing theoretical disagreements plague the interpretation of cultic remains. Yet, an even more basic problem exists—the quality of published archaeological data. Far too many sites have been poorly excavated or published. Despite this, cultic sites figure prominently in scholarly syntheses focusing on religion and figure prominently in discussions of monotheism, idolatry, sacrifice, heterodoxy, ethnicity, and state religion.

One such site is the cultic area at En Hazeva, in Israel's Negev desert. In 1993, an impressive cache of cultic objects was recovered outside the Iron Age fort complex. While the iconography of these objects has received significant attention, little energy has been devoted to the unpublished archaeological context of the objects or the putative shrine with which they may have been associated. Nor has any comparison been made between cultic objects found in the favissa and those found in other areas of the site. Nevertheless, due to the site's location in a border region, its cultic iconography has been used frequently to support the existence of an "Edomite" vs. "Judean" religio-cultural horizon, even though the data at this and comparable sites in Jordan problematize any such interpretation.

In light of subsequent excavations and publications of shrine locations in the Levant, the time is ripe for a reevaluation of the archaeological context of the En Hazeva shrine deposit. In order to model a more comprehensive archaeological approach to cultic sites, especially those in the southern Levant, the current paper reviews all unpublished archaeological data relating to the context of the En Hazeva deposit and the adjacent architecture and compares the results to known Iron II shrines from Israel and Jordan in an attempt to better understand the archaeological context of this and similar ritual assemblages throughout the region.

And Now, For the Rest of the Story: Interrogating Small Finds from Tel Anafa, Israel

Katherine Larson, University of Michigan

The rural site of Tel Anafa, excavated over 10 seasons from 1968–1986, is best known for its elite residence dated to the Late Hellenistic period (ca. 125–75 B.C.E.). The Late Hellenistic Stuccoed Building (LHSB) features a courtyard plan, a bath with mosaic floor, rooms with painted wall plaster, and portable material culture consistent with a wealthy Hellenized culture, including imported fine ware pottery and cast glass vessels. These displays of consumption are just as conspicuous now as they were in antiquity and accordingly have attracted the majority of scholarly attention regarding the character of the site and its occupants, thought to be wealthy Phoenicians who settled the inland region of the Hula Valley.

Thanks to a policy of total retrieval and thorough publication, the final volumes of which are now published and in press, we know much more about both the elite practices of the proprietors of Tel Anafa and the daily lives and habits of those who maintained the household, produced food, and worked the surrounding land. While Berlin's study of the coarse ware pottery began to illuminate these issues, the subsequent documentation of the metal agricultural tools, groundstone artifacts, weaving tools, and other objects categorized as small or minor finds have revealed aspects of non-culinary practices. Such studies, alongside a careful examination of "luxury" objects including glass, wall plaster, and beads, indicate that the residents of Tel Anafa were self-sufficient for many daily needs, including animal husbandry and agricultural production, the manufacture of textiles, and the processing of grain and baking of bread. Mapping small finds both spatially and temporally against the standing architectural remains facilitates the identification of activity areas and changing use of space even over the short lifespan of the building. For example, spindles and whorls are found scattered throughout the excavated area, while stone mortars, pestles, and handstones were clustered in the southern and western wings near the baking tanurs; the different patterns of distribution of jewelry and weaving implements invites a reconsideration of gender and class. This paper examines the nature and function of the LHSB at Tel Anafa in light of the entire corpus of material from the site and argues for the importance of small finds in reconstructing ancient behaviors.

SESSION 7J: Joint AIA/SCS Colloquium **Making Meaning from Data**

Sponsored by the Digital Classics Association

ORGANIZER: *Neil Coffee*, University at Buffalo, State University of New York

Colloquium Overview Statement

This is the second in a planned series of joint AIA/SCS colloquia sponsored by the Digital Classics Association. The 2014 colloquium, "Getting Started with Digital Classics," was intended to provide AIA and SCS members with an overview of rapidly developing digital approaches to classical antiquity. The 2015 colloquium, "Making Meaning from Data," builds on this conversation by addressing how different areas of classical research face the challenge of understanding the large amounts of data digital methods can produce. These issues cross disciplinary

boundaries and present common problems of method and interpretation, making for a good opportunity for dialogue among AIA and SCS members.

After an introduction setting out the shape of these problems for classical studies, the first presentation, "Inside-Out and Outside-In: Improving and Extending Digital Models for Archaeological Interpretation," offers two complementary perspectives on making sense of the mass of archaeological data often made available by excavation, survey, and other means. It begins with an investigation of how three-dimensional models must be carefully designed with consideration of how they will affect interpretation, taking as an example data on urban spaces from the Gabii Project. It proceeds to demonstrate a process of developing digital models for space use from textual accounts (here, the anonymous "Byzantine Treatise on Defense") that are then fitted iteratively to archaeological survey data, in this case to demonstrate that a series of artifacts in northern Anatolia were most likely defensive systems.

The second presentation, "Trees into Nets: Network-Based Approaches to Ancient Greek Treebanks," takes on the challenge of representing overall syntactical relations within texts. The authors represent these relations within Greek authors as networks and then compare the different network properties of the Greek poets Aeschylus and Sophocles with those of the historical prose writer Herodotus to arrive at a global sense of stylistic and conceptual differences.

The third presentation, "Enhancing and Extending the Study of Intertextuality," offers two related perspectives on interactions between classical texts. The first deploys a machine-learning algorithm adapted from biological studies to enable us to grasp the overall flows and relationships between texts that current tools for intertextual study produce largely as lists. The second shows how the study of intertextuality can be extended to secondary literature to illuminate how scholars have addressed texts over time and what sorts of connections they see between texts.

The fourth presentation, "Beyond Rhetoric: The Correlation of Data, Syntax, and Sense in Literary Analysis," introduces the question of how we make the establishment of meaningful data part of pedagogical practice. The authors demonstrate how teams of scholars and students work together to produce digital transcriptions, editions, and annotation of Greek funerary inscriptions. Each text is mapped to the monument it is inscribed on to justify editorial choices and provide data on text layout. Each text is also annotated for word form and syntax. The result is a close marriage of the text and the material that provides rich data for how these texts were used and understood in their physical environment.

The fifth and final presentation, "What Do You Do with a Million Links?," rounds out the session with a large-scale reflection on the infrastructure for classical research data. Emerging linked data systems, in which each piece of information has its own identifier and set of attributes, seem likely to make available novel and highly useful forms of search and representation of information. Linking the textual evidence of Perseus, for example, with the spatial identifiers provided by Pelagios is already proving highly illuminating. This presentation explores the promises and challenges of building and using this infrastructure for making meaning from data.

Inside-Out and Outside-In: Improving and Extending Digital Models for Archaeological Interpretation

Rachel Opitz, University of Arkansas, *James Newhard*, College of Charleston, *Marcello Mogetta*, University of Michigan, *Tyler Johnson*, University of Arkansas, *Samantha J. Lash*, Brown University, and *Matthew Naglak*, University of Michigan

The growth in synergies between classicists and other disciplines forms an active place where time-tested processes of inquiry are augmented, providing an environment where interpretations can be challenged, strengthened, and improved. We offer complementary points of reflection on current and emerging processes for modeling the ancient world.

We begin by asking how three-dimensional modeling affects the interpretation of remains of an urban environment. Digital techniques for recording field data and modeling in three dimensions have advanced rapidly in recent years, creating new opportunities for the study of urban space while presenting interpretive challenges. Such challenges include balancing the model's emphasis on visual and spatial aspects of townscapes and the contributions of nonspatial data. More practically, one needs to understand the crucial impact of user interface design on the interpretive process. Using examples from the Gabii Project and the digital archaeological publication project "21st c. Data, 21st c. Publications: 3D Model Publication and Building the Peer Reviewer Community," we illustrate the importance of understanding the links between media and message, beyond paradata and metadata, particularly when using partial evidence from an ongoing excavation of a town with imperfect preservation. Referencing research on domestic space at Pompeii and rural and ritual landscapes, we emphasize the impact of design choices in a modeling environment on interpretations of the use of spatial and visual cues that guide interaction with(in) urban places.

We then consider how models based on textual, archaeological, and geographical evidence can be developed to strengthen interpretative frameworks. As an example, archaeological survey presented investigators with concentrations of artifacts in contexts that led to their identification as "watchtowers." Rather than take this functional assignment as a given, the investigators developed a means to model a variety of functional landscape elements based on prior archaeological and textual resources and then to evaluate the artifact patterns. The model not only confirmed these concentrations as defensive but discriminated between different types of defensive systems. We employed an iterative, flexible framework for analysis, where additional insights and data could be incorporated.

In sum, emerging approaches offer both an "inside-out" perspective on how to build better models starting from material data and an "outside-in" perspective on how to build models from proxy data that test interpretations.

Trees into Nets: Network-Based Approaches to Ancient Greek Treebanks

Francesco Mambrini, Deutsches Archäologisches Institut Berlin, and *Marco Passarotti*, Università Cattolica del Sacro Cuore

“Networks” are rapidly evolving into the dominating model for scientific knowledge. Networks—it has been argued—“will drive the fundamental questions that form our view of the world in the coming era.”

Very recently, linguistics, too, has been touched by this paradigm shift. Graphs based on synonyms or co-occurring words (where words are the nodes, and the proximity in a given text creates links between them) were compared to the complex networks studied in computer sciences, physics, or sociology. Yet co-occurrence is only a superficial phenomenon that hardly accounts for the structure of a language. By encoding information on the syntactic relations between each word, dependency treebanks can drastically improve the quality of the available resources for network analysis.

In this paper, we apply this new approach to the domain of Ancient Greek literary texts for the first time. We take our data from the Ancient Greek Dependency Treebank (AGDT) and Pragmatic Resources in Old Indo-European Languages (PROIEL), two dependency-based treebanks that include texts from the Archaic and Classical periods with complete morpho-syntactic annotation. Networks where the nodes are represented by the lemmata and where the dependency relations between them are the (directed) edges are generated from a subset of these collections. Difficult authors, such as Sophocles and Aeschylus (from the AGDT), are analyzed using the standard metrics that are employed to describe the structure of a network (its topology): average path length, clustering coefficient, and degree distribution.

The observations on the tragic poets are compared with a similar network based on a contemporary prose author (Herodotus), whose text is partially annotated in PROIEL.

We discuss whether even the difficult texts of the Greek tragic poets comply with the model of small-world, highly clustered networks that are commonly observed in physics or sociology. At the same time, our analysis poses other questions that are crucial for the field of classics and the humanities. What are the peculiarities of a network representing literary works? What word classes play the role of the highly connected “hubs”? And ultimately, can this approach tell us anything about the language or the style of a work?

Enhancing and Extending the Digital Study of Intertextuality

Joseph P. Dexter, Harvard University, *Matteo Romanello*, Deutsches Archäologisches Institut Berlin, *Pramit Chaudhuri*, Dartmouth College, *Tathagata Dasgupta*, Harvard University, and *Nilesh Tripuraneni*, Harvard University

This presentation discusses two related efforts to substantially advance research in the emerging area of digital intertextual studies: a novel approach to large-scale intertextual study and an extension of digital methods to take account of citations in secondary literature.

First, to be useful, “big data” must be accompanied by “big interpretation.” Too often, however, the data generated using new high-throughput methods can overwhelm traditional analytical approaches. The Tesseract Project has pioneered the computational study of intertextuality through implementation of search tools for specific intertexts. As more tools are developed to capture the full range of linguistic, thematic, and metrical allusions in classical literature, the capacity to generate intertextual hypotheses threatens to outpace the ability of any one critic to evaluate them.

The application of machine-learning clustering algorithms to intertextuality can help address this problem. In this part of the presentation, we reflect on the value of unsupervised machine learning for large-scale, unbiased studies of literary intertextuality, using techniques from biological studies. In the 1990s, the development of microarray technologies enabled simultaneous measurement of the expression levels of thousands of genes, and standard machine learning clustering algorithms k-means and hierarchical are now routinely applied to genome-wide studies. Here we discuss the application of a more robust version of standard clustering algorithms, non-negative matrix factorization (NNMF), to intertextual studies, taking as a test case the influence of the *Aeneid*, the *Metamorphoses*, and Senecan tragedy on Silver Latin epic. This analysis appears to support a shift away from viewing Silver Latin epic primarily through a Vergilian lens. A key advantage of clustering is that it accounts for both discovery and (initial) interpretation; beyond generating lists of potential intertexts, clustering can indicate thematically associated parallels.

In parallel with development of large-scale analytical techniques are efforts to use digital intertextual approaches to understand the history of scholarly discussions. Canonical citations of primary sources in journal articles and other secondary sources can indicate intertextual parallels as well as, more generally, text passages the author believes to have some relationship. By capturing canonical citations, we can track over time how texts and parts of texts have been studied, essential pieces of information for a data-driven study of intertextuality and text reception. Canonical citations can be envisioned as a network, where the nodes are the citing texts (e.g., journal articles) and the cited text passages of the primary sources, connected by edges (i.e., links) representing the actual citations. Citation networks among modern publications on classics and archaeology have been extensively studied. The networks of citations between modern publications and ancient texts, however, remain largely unexplored but have great potential, particularly for the study of intertextuality and text reception.

We address here technical challenges that need to be solved to capture automatically canonical citations and their meaning. This key service in the emerging cyberinfrastructure for classics will be complementary to recently developed tools, such as Tesseract, that allow scholars to discover new possible intertextual parallels. At the same time, the visual exploration of a vast citation network poses challenges for data visualization. We conclude with examples to illustrate the proposed approach to visualization drawn from two different but essential corpora: the journal articles contained in JSTOR and the analytical abstracts of the *L'Année philologique*.

Beyond Rhetoric: The Correlation of Data, Syntax, and Sense in Literary Analysis

Marie-Claire Beaulieu, Tufts University, J. Matthew Harrington, Tufts University, and Bridget Almas, Tufts University

Syntactic structures are a key element of the rhetorical force and nuance of texts, and the objective interpretation and comparison of these structures presents a crucial opportunity for evolving the discipline. Freed from the limitations of print media and connoisseurship, new digital tools, methods, and vocabularies enable us not only to accumulate analytical data on the texts but also to systematically collect and describe provenance information about the data underlying scholars' arguments. This metadata ensures the reproducibility of the scholarly analyses, down to the smallest detail.

The *Satires* of Juvenal illustrate the value of a structural analysis of massively parallel constructions as an integral aspect of the author's argumentation: a correlation of syntax with sense. Such a literary argument relies on digital tools for its demonstration and its evaluation. Further, a syntactic analysis of a text can be linked to the precise version of the digital transcription on which it was based, which in turn can be linked to a digital image of the physical manuscript or inscription. We can also record any decisions made and algorithms used during tokenization of the individual words and identification of the syntactic units that might impact the outcome of the analysis. Application of linked-data best practices and standard vocabularies and data models, such as Open Annotation and PROV, facilitate the shareability of our data, allowing for aggregation of distributed data sets and for new knowledge to emerge, as we can now view analyses that were once isolated within a larger context and compare them objectively.

One such analysis is currently being performed at Tufts University, as teams of students and scholars collaborate on producing digital transcriptions, editions, and annotations of Greek funerary inscriptions. Each text is mapped to the monument it is inscribed on to justify editorial choices and provide data on the layout of the text. In addition, a full morphological annotation of each text is performed using the treebanking module. The resulting data give unprecedented insight into the inner workings of each text and support broad corpus analysis. We can now justify or disprove scholarly claims about the poetics of funerary inscriptions and compare this data with the remainder of the manuscript tradition.

This model of scholarship enables those with varying degrees of expertise to engage the materials and evaluate the validity of the claims while collaborating in the creation of a new level of textual analysis.

What Do You Do with a Million Links?

Elton Barker, Open University, Pau de Soto, University of Southampton, Leif Isaksen, University of Southampton, and Rainer Simon, Austrian Institute of Technology

What use is linked data for the classics? We use this term as shorthand for a middle ground between structure and scalability. A million links isn't Big Data by today's standards; yet producing and making use of semantic connections between content—that is, the very business of interpretation—remain arguably the

biggest challenges facing the digital humanities community. In this paper, we use the Pelagios project as means of flagging up the benefits of taking a central path.

Research projects in classics have produced a critical mass of digital resources that hold the key to a successful linked-data approach. Perseus has pioneered the encoding of online classical works so that fragments of texts can be canonically cited. The online ancient world gazetteer, Pleiades (<http://pleiades.stoa.org/>), allocates uniform resource identifiers (URIs) for each ancient place. Resources such as these are not merely valuable in their own right; they act as essential nodes in an evolving cloud of connections much greater than the sum of its parts. Pelagios (<http://pelagios-project.blogspot.co.uk/>) is representative of this growing trend, allowing users to link different data (visual and textual, literary, and archaeological) that until now have been stored in separate “silos,” with only occasional and unidirectional links. Of course, the ability to link is not enough: Prescott argues that “we need to be clear about why we are linking data, what sort of data we are linking, and our aim in doing so.”

This paper tackles the differing but complementary benefits of statistical and dimensional approaches on the one hand with graph-based inferencing on the other. The former are exceptionally powerful for crunching big data, producing summary values, and identifying patterns following well-known distributive laws. Yet they are less robust when applied to small data sets and tend to reduce results to just a few key parameters, making it hard to notice phenomena that are not already part of the model. Semantic approaches are much better suited to “rich” data, allowing them to be queried and combined in a more nuanced fashion. Nonetheless, the cost of encoding and normalizing such data is extremely high—so high in fact that it can be hard to scale beyond the level at which an individual human can already operate effectively.

SESSION 8A

Recent Work in Egypt

CHAIR: To be announced

The Role of Crop Weeds in Ancient Egyptian Agriculture: A Study of Third-Century B.C.E. Archaeobotanical Remains from Giza

Claire J. Malleson, Ancient Egypt Research Associates

Excavations by Ancient Egypt Research Associates in 2009 at a settlement dating to the fifth–sixth Old Kingdom dynasties (2472–2150 B.C.E.) yielded charred plant macrofossils that were instantly recognized as being exceptional in many ways. This paper presents the results of a study that took place over six months in 2013.

The preservation levels of this archaeobotanical assemblage was exceptional; charred plant remains were extraordinarily abundant, and the condition of the specimens was remarkable—even the most fragile plant elements were still intact. As a result, I was able to identify many items to a higher taxonomic level than is usually possible with charred plant remains.

Therefore, I have been able to draw a number of interesting conclusions about the activities in this town. I can state with some confidence that cereals (emmer wheat and hulled barley) stored and consumed in this town were grown on the edge of the Nile floodplain, close to the desert edge, possibly not far from the town itself. The fields seem to have been infested with a wide range of crop weeds, including large amounts of clover (*Trifolium* sp.) and ryegrass (*Lolium* sp.); very little crop-husbandry was practiced; the much-reduced crop yield resulting from this infestation was clearly not a problem for the ancient farmers here. The cereals were harvested very low to the ground, meaning that all the weeds were also collected; leading to increased labor “costs” to clean the crops—again, something that was apparently not considered to be a problem. The grains were deposited in granaries still only partially threshed, uncleaned of chaff and still mixed with large quantities of weed seeds. On a regular basis, as part of routine daily activities, the cereals were taken out of storage as-and-when needed and cleaned of the chaff and weeds. The mass of by-products from this cleaning (the chaff and weed seeds) was utilized as a domestic fuel, supplementing wood charcoal.

It has long been recognized that the by-products of cereal cleaning were a valuable commodity. The results of this specific study have led me to conclude that the “weeds” may have been considered an integral part of the crops, and that the value of the by-products was great enough to justify the crop yield losses and increased labor “costs.”

Augustus as Emperor and Pharaoh in Egypt

Erin Peters, University of Iowa

The diverse residents of Roman Egypt regularly saw Augustus represented both as emperor and as pharaoh. At Philae, for example, the walls of the temple of Isis were carved with images of Augustus as pharaoh, identified as such through their hieroglyphic epithets. At the same site, a temple to the imperial cult may have been the original location of the famously lifelike bronze head of Augustus found later at Meroe. And at Karnak, an imperial cult chapel built in front of the Temple of Amun was outfitted with bases that held statues of Augustus in pharaonic poses. Focusing on such shared display contexts, this paper argues that both kinds of image addressed the same diverse audience, rather than separate ones, as is usually maintained in the scholarship.

Epigraphy indicates that a transnational community interacted with Augustan imagery in Egypt’s ritual landscapes. As evidenced by votive dedications, acts of adoration, and informal graffiti, this audience comprised local and pilgrim populations from Egypt, Nubia, and the wider Mediterranean world. At Karnak, for instance, the bases displaying statues of Augustus as pharaoh bore dedications in Greek, and Greek pilgrims’ graffiti were inscribed on the temple walls. Similarly, at Philae, the temple to the imperial cult was dedicated in Greek, while the languages represented in the numerous graffiti carved at the temple of Isis include demotic Egyptian, Greek, and Meroitic. The shared contexts of this diverse textual evidence has been overlooked in separatist analyses of the imagery.

Images of Augustus as pharaoh of Egypt are not well known, while images of Augustus as first emperor of Rome are some of the most recognizable in the

western world. The material record for both is impressive. There are more images of Augustus as emperor surviving in statuary and relief than of any other Roman emperor, and there are more representations of Augustus as pharaoh in statuary and relief than any other Roman ruler of Egypt. However, modern scholarship tends to isolate Augustus' pharaonic depictions. This separation artificially divides his imperial and pharaonic personae, which coexisted in the provincial context. Taking an interdisciplinary approach to the evidence offered by Egypt's architectural, artistic, and epigraphic traditions, this paper ultimately argues for a more integrated approach to the experience of empire in Egypt.

Excavating Colonial Encounters in Graeco-Roman Egypt: The Significance of Recent Discoveries at Tell Timai for Understanding Egyptian-Greek Cultural Interaction

Jessica L. Nitschke, Stellenbosch University

The settlement of Thmouis, modern Tell Timai, was established near the end of the Dynastic period in the northeast Delta on the Mendesian branch of the Nile. The town prospered during the time of Ptolemaic and Roman rule, growing into a midsized (ca. 90 ha) metropolis in the second century C.E. and supplanting Mendes as capital of the Mendesian nome. Despite serving as a rare example in the Delta of a Graeco-Roman site free of modern occupation, boasting substantial amounts of preserved standing mudbrick architecture, Tell Timai remained little studied prior to the beginning of the University of Hawaii expedition in 2007. It had been known amongst scholars mostly for its small collection of carbonized papyri, a handful of marble and bronze statues fortuitously discovered, and its famous high-quality mosaics—material that has traditionally served to support narratives of a general “hellenizing” cultural tendency amongst the urban elite in post-pharaonic Egypt.

The University of Hawaii excavations have produced a number of contextualized material finds that can potentially be used to construct a more nuanced picture of the cultural character of urban life in the Delta in the Ptolemaic and Roman periods. This paper considers the relevance of these recent discoveries—in particular the temple platform, figurines, and in situ domestic pottery assemblages—to current discourse concerning cultural interaction and ethnic identity in Hellenistic and Early Roman Egypt. The debates concerning cultural mixture vs. cultural separation have relied largely on data provided by the documentary and literary sources. Archaeological testimony from urban centers has played a far more limited role, in part because of the paucity of such material and in part because of the difficulty of coordinating such evidence with the perspectives formed from the analysis of written material. This paper focuses on the plurality of potential interpretations of the apparent ethno-cultural affiliation of excavated buildings and objects at Tell Timai and questions the extent to which such material can plausibly be used to support or contradict the generalized characterizations (like “hellenized Egyptian”) that have long been favored by many in the field. It also considers the logistical, circumstantial, and methodological challenges facing archaeologists in carrying out a field project that can comprehensively address questions of cultural development and affiliation.

Mudbrick Geoarchaeological Analysis and Conservation in Tell Timai, Egypt

Marta Lorenzon, University of Edinburgh

This paper offers the preliminary results of a mudbrick geoarchaeological analysis in Tell Timai during the June–July 2014 season. Geoarchaeological analysis of earthen architecture helps to determine fluctuations in raw source materials as well as variability in manufacturing and construction practices. This allows archaeologists to plan the best possible preservation for the site.

Tell Timai is a unique example of Graeco-Roman mudbrick architecture, and it represents one of the best-preserved sites in the Egyptian Delta. The geoarchaeological study of the architecture will contribute greatly to the study of Graeco-Roman-Egyptian life. The mudbrick manufacturing, production, and construction techniques have been investigated both with analytical techniques, such as particle size analysis, and ethnographically.

The areas analyzed during the 2014 season included an outstanding mudbrick building, Building 1, which has a preserved height of 12 m, as well as domestic architecture from two different areas of the tell, grid N8 and grid Q13. Preliminary results highlight a strong difference in composition and construction technique between the public building and domestic architecture as well as temporal changes in the mudbrick composition between different building phases. Additionally, this study will help determine the best conservation practices for the site, to address such issues of deterioration as spalling, material loss, mudbrick crumbling, which have led to extensive failure of parts of the structures.

SESSION 8B

Numismatic Research from the Hellenistic Age to Late Antiquity

CHAIR: *Sebastian Heath, New York University*

Coins from Kastro Kallithea: New Insights into Coin Circulation and Inter-City Relations in Hellenistic Achaia Phthiotis

Tracene Harvey, University of Saskatchewan

The numismatic history of Thessaly, including Achaia Phthiotis, has been greatly informed by the scholarship of Rogers on the copper coinage of Thessaly (*The Copper Coinage of Thessaly* [London 1932]) and more recently by Reinders (*Housing in New Halos: A Hellenistic Town in Thessaly, Greece* [Lisse, Netherlands 2003] 138–45), who has done considerable work on the coin finds from New Halos. The body of evidence relating to the coins of this region continues to grow and develop through the ongoing archaeological work at Kastro Kallithea, which may be the Hellenistic city of Peuma, near Farsala in Thessaly, Greece. This paper provides a statistical and comparative analysis of the coins found in recent survey and excavations of this site in relation to coins found at other cities in Achaia Phthiotis such as Farsala, New Halos, Demetrias, and others.

Analyses of the coins found so far at Kastro Kallithea reveal significant information about the dates of occupation of the site, as well as the political and economic

relations of this city within the region of Achaia Phthiotis. The coins from this site show characteristics of coin circulation consistent with those of other cities in the region, including similar denominations and a lack of silver coins, which may have been used primarily for larger transactions by merchants traveling to the region from other parts of Greece via the Pagasitic Gulf. While the coins provide valuable information on the economic activity of the site, they also testify to the political and military climate of Achaia Phthiotis and the rest of Thessaly during the Hellenistic period, which was influenced greatly by Macedonian kings such as Antigonos II Gonatas (ruled 276–239 B.C.E.), as well as by the presence of the Aetolian League, and the Roman military. The paper also addresses the prominence of Thessalian League coins at the site, brought about in part by the dominance of the Romans over the region after their defeat of Philip V of Macedon in 197 B.C.E.

Conquest, Colonization, and Coinage: The Roman Subjugation of Gaul in the Late Republic

Marsha McCoy, Southern Methodist University

The Roman subjugation of Gaul challenges long-held assumptions about Roman practices of conquest, colonization, and coinage (cf., e.g., M. Crawford, *Roman Republican Coinage* [London 1975] 71). In 120 B.C.E., two Roman generals defeated Gallic tribes in southern Gaul and celebrated typical triumphs in Rome; Roman denarii of 119 B.C.E. show typical displays of “conquest” iconography, with a helmeted Roma crowning a trophy of typical Gallic war emblems. In 118 B.C.E., however, the Romans authorized the foundation of Narbo Martius in southern Gaul, the first Roman colony ever founded outside mainland Italy, and its organization likewise deviated from previous Roman practice. While foundation laws typically authorized three commissioners to supervise the foundation of new settlements (Livy 32.29.3–4), only two commissioners were appointed for Narbo Martius, despite its strategic and political importance (*Cic. Brutus*, 158–60). In the same year, an issue of denarii appearing in connection with the colony displayed features so unusual in design, iconography, and organization that they also raise questions about Roman intentions and practices regarding Gaul at this time. Typically, a board of three moneyers responsible for the production of coinage each year placed their names on the coins and controlled their design and iconography. For the Narbo Martius issue, however, there were five moneyers, and these were subordinate to the two foundation commissioners, whose powers had been expanded to include minting responsibilities. Neither the five moneyers nor even the two foundation commissioners had control over the iconography on the coinage, since the design on all the coinage is the same. The iconography of the coinage itself differs significantly from typical “conquest” iconography, with a triumphant Gaul standing astride in a biga, carrying a *cornyx*, the Gallic war trumpet, and a Gallic shield. This contrasts starkly with both the denarii of the previous year and Caesar’s later denarii depicting his conquest of Gaul.

The subjugation of southern Gaul in 120 B.C.E. was a major victory for the Romans, and it was initially celebrated in the usual manner of triumphs and triumphal coinage. Thereafter, conquest, colonization, and coinage went in seemingly atypical directions, and this secondary conquest in 118 B.C.E., through the creation

of a Roman colony with a new foundation structure and the production of a coinage with a new production structure and new iconography, should be incorporated into a new understanding of a more flexible and innovative Roman expansion policy in the late second century B.C.E.

Taxes, Liberty, and the Quadrantes of Caligula

Nathan T. Elkins, Baylor University

Quadrantes of Caligula, whose obverses bear an image of the *pilleus*, the cap awarded to a freed slave at his manumission, and an attribute of *Libertas*, and whose reverses depict "RCC", have traditionally been understood as referring to Caligula's remission of the unpopular ½ percent tax on auction goods sold in Italy. In this reading, RCC is expanded to *Remissa Ducentisima*. Recently, objections to this interpretation have been offered owing to a discrepancy between Suetonius and Dio as to the rate of the tax at the time of Caligula's abolition of it. I argue that these new interpretations are tenuous and that the need to search for an alternative interpretation is exaggerated. Instead, there is plenty of evidence to associate the coins with the remission of the tax, although all evidence has not yet been brought to bear on account of traditional widespread acceptance of the interpretation. I use comparative evidence in iconography that indicates there was a link between the use of *Libertas'* imagery and the concept of freedom from taxation, and there is also literary and historical evidence that suggests that the theme of liberty could be linked with freedom from burdensome taxation. Although this study focuses on a single coin type of Caligula, the study's ramifications suggest that in some instances the theme of *libertas* on other first-century C.E. coins may refer to tax abolition and tax reform.

Who's Minding the Mint? The Evidence from Imperial Portraits on Roman Provincial Coins in the Black Sea Provinces, 235–268 C.E.

Lee Ann Riccardi, The College of New Jersey

Cities in the Roman provinces of Bithynia-et-Pontus and Paphlagonia produced a large bronze coinage in the mid third century. This coinage was used locally, in issuing cities, and was mostly a token coinage without intrinsic value. Large transactions, inter-city commerce, and salaries for Roman officials and soldiers used gold, silver, and bronze coins produced on the denarial system in official mints. Roman provincial coins, however, despite their limited range, served not only as monetary exchange but also as a vehicle for transmitting propaganda, and therefore it is normally thought that Roman officials oversaw at least some aspect of the process, such as the portraits of the ruling emperor or imperial family that were displayed on the obverses.

The imperial portraits displayed on the local coins of this region, however, exhibit astonishing variety. Comparison with the portraits of the same individuals on official coins shows that sometimes the appearance of an individual corresponds closely to an official image, but most do not, and they show instead radically different portrait types than those of the same ruler produced in Rome. My exami-

nation of hundreds of these coins reveals that some patterns emerge concerning when official portrait types were followed and when they were not. At times between 235 and 249, official types were used as models by the Black Sea die-engravers, but after 250, they virtually never were. Something, therefore, changed at that time. The historical circumstances suggest both attitudes of die-engravers and the availability of imperial models may have been responsible. Goths had begun raiding the Black Sea provinces ca. 250. Despite some half-hearted attempts, Rome did not defend the region for almost two decades. The raids exacerbated an already weak relationship between Rome and her subjects in the area and led to them supporting usurpations against the legitimate emperors in 253 and again in 260–261. Unhappiness with Rome might also have led to die-engravers deliberately ignoring official models. The raids may also have interrupted the availability of official coins with portraits that could serve as models. The approximate dates of the foreign invasions and the challenges to the legitimate emperors correspond to the disappearance of any reference to official portraiture on the obverses of the coins minted in this region. It seems clear that during this period, Rome did not have any oversight over provincial coin production in the Black Sea provinces.

Heroes of Rome: Castor and Pollux on the Coins of Maxentius

Gwynnaeth McIntyre, University of British Columbia

In 306 C.E., Maxentius was declared emperor in Rome by the Praetorian guard and gained control of Italy, thereby ruling in direct conflict with the Tetrarchic system established by Diocletian. He then proceeded to promote himself as the savior of the city of Rome and the individual responsible for restoring her to her former glory. This paper examines one aspect of this promotion, namely the coin types that include two figures from Roman mythology, Castor and Pollux. In the Greek tradition, Castor and Polydeuces were best known for their sharing of divinity, and this characterization played an important role during the Roman Imperial period, as these figures served as a symbol for the relationships between members of the imperial family and the divine nature of the ruling house. However, when they were first adopted into Roman myth from the Greek tradition, they served as heroes who came to Rome's aid in the fight against tyranny at the Battle of Lake Regillus in the early years of the Republic and later served as heralds of victory when the survival of Rome hung in the balance. The different ways in which Castor and Pollux were represented throughout Roman history makes these figures an excellent case study for examining the role myth played in defining and promoting different ideologies at specific moments in time.

This paper argues that Maxentius used Castor and Pollux on his coins in a way that was contrary to how these figures were presented in the iconography of the Tetrarchy. For the Tetrarchs, Castor and Pollux served as the ideal figures to symbolize the importance of concordia in the collective rule of like-minded individuals for the Tetrarchs and were promoted both in their art and on their coins. However, Maxentius used Castor and Pollux in connection with other symbols of the city of Rome (such as Romulus, Remus, and the she-wolf) on his coins to promote the restoration of the city of Rome and his position as princeps. By contextualizing his use of Castor and Pollux in this way, Maxentius reacted against the ideology

of the Tetrarchs and their symbols of concordia by demonstrating his devotion to traditional *romanitas* and thereby legitimizing his position within the city of Rome.

SESSION 8C

Gaul and Britain

CHAIR: *Elizabeth M. Greene*, University of Western Ontario

Underground Gaul: Continuity and Change in the Architecture of Sacrificial Practices in Pre-Roman and Roman Gaul

Claudia Moser, University of Puget Sound

Animal sacrifice, whether occurring in an elaborate monumental complex or around a simple open-air ditch hallowed by generations of use, acquires much of its specific character from its emplacement in the landscape and in architectural space. In pre-Roman northern Gaul (third–first century B.C.E.), the practice of sacrifice took place not within a built setting but rather around small irregular ditches surrounding a large, deeper, entrenchment, a so-called subterranean altar. This ritual often entailed exposure of sacrificial carcasses (most often horses and dogs) and the subsequent deposition of their skeletons; sacrificial animal remains were not consumed, burned, or buried. With increasing Roman political domination of the region, both the religious activities and the design of the sanctuaries were transformed, to some interpreters, almost completely. New sacrificial practices, new species of animals, new modes of slaughter (all of which bore an increasing similarity to the ritual practiced in Roman Italy) were introduced and were staged in a markedly different, monumental setting. Beginning in the Augustan period, cattle, sheep, goat, and especially pig were cremated on monumentalized platforms, on altars, or in cellae constructed directly above the earlier subterranean sacrificial ditches, their ashes placed in or around similar, nearby ditches. Yet, even as the locations for sacrifice became monumentalized in the Imperial period and its settings and accompanying practices certainly appear quite different, the actual sites of pre-Roman ritual were in fact nearly always maintained and conserved.

This paper primarily examines centuries of sacrifice at two geographically disparate sanctuaries in northern Gaul, both of which provide abundant data of a strikingly similar character. The sites of Gournay-sur-Aronde (Bellovaques), north of Oise, and Vertault (Lingons), south of the Seine, reveal that despite changes in ritual practices, architecture, and, presumably, meanings, there is a persistent conservatism in Gaul regarding the location of ritual. Through these two illustrative case studies, this paper argues that while the Romans might have transformed the stage for new practices, establishing and generating settings and rituals that fell more into line with Roman religious activities and concepts of sacred space, their innovations to the practice of sacrifice and the architecture of the sanctuary did not ignore or completely sever connections with earlier local traditions of religious experience. Instead, these changes carefully conserved the memory of the emplacement and setting of pre-Roman sacrificial practices.

Offerings and Rituals: Comparing Assemblages from Sacred Springs in Roman Gaul

Katherine Erdman, University of Minnesota-Twin Cities

Studies of offerings from Roman Gaul have often focused on the objects as independent pieces, and less on how they were used as ritual items or how they relate to other offerings from the same site. Figurines and coins, for example, are typically studied as separate categories that focus on chronology and production. While this information is important for dating activities at sacred places, it neglects to answer what people actually did there and the significance of material objects in rituals. To understand ritual practices and conceptions of sacred spaces, one must consider the entire assemblage.

The Source of the Douix, a freshwater spring located in eastern France, was a site of ritual activity since the Early Iron Age and was one of several regional springs actively venerated in the Gallo-Roman period. Unlike many nearby sites, little is known about the Douix, which has no known architecture, cult statues, inscriptions, or contemporary written accounts. It does, however, have substantial quantities of offerings deposited intentionally into the water, identifying it as a sacred spring. In this analysis, coins, portable statues, numerous forms of personal ornamentation, and other objects are studied collectively and are compared with deposits from other regional spring sanctuaries. Through this approach, it is possible to interpret the significance of offerings from the Douix and their role in ritual practices.

An Imperial Image: The Bath Gorgon in Context

Eleri H. Cousins, University of Cambridge

The Gorgon from the pediment of the Temple of Sulis Minerva at Bath is one of the most famous and captivating works of art from Roman Britain. It also remains one of the most challenging to interpret. Carved in the first century C.E. by craftsmen from northern Gaul, it has often been held up as the epitome of "Romano-Celtic" art, "the perfect marriage of classical standards and traditions with Celtic taste and native inventiveness", as Jocelyn Toynbee put it. Yet, in making the Gorgon the iconic image of Roman Britain, scholarship has lost sight of the role it plays as the centerpiece of a pediment. The pediment of the Temple of Sulis Minerva is dominated by imagery invoking imperial might, perhaps not surprising for a building erected not long after the Roman conquest of Britain. How does the Gorgon connect with the rest of the pediment's iconography?

In this paper, I first look briefly at the historiography of discussion of the Gorgon and the challenges it presents. After introducing the pediment and the rest of its iconography, I then move on to place the Gorgon into the wider artistic context of the western provinces. I argue that there are demonstrable links between the Gorgon and contemporary monuments in Gaul and Spain that imitate the iconography of the Forum of Augustus in Rome. By putting the Gorgon into this wider context, without losing sight of the elements that do make it unique, we can move beyond facile discussion of "Celtic" art and reach a better understanding of how the Gorgon and the pediment as a whole functioned to connect this Romano-British religious site to the wider world of the empire.

Stories from the Clay: Distributions of Stamped Brick and Tile in Western Britannia

Jason Lucas, The Open University

Examining the production, use, and distribution of brick and tile can reveal the underlying social, political, and economic structures. Stamping provides a link between the place of creation and the place of use or deposition, allowing investigation of the structures and interconnections within which tile was transported. This paper examines stamped brick and tile from within the western portion of the Roman province of Britannia, focused on the region around the River Severn, including the hinterlands of the towns of Cirencester (Corinium) and Gloucester (Glevum), England, and of the fortress of the Legio II Augusta at Caerleon (Isca), Wales.

The region has yielded an unusual variety of civilian tile stamps, with nearly 20 distinct stamps known, although many of these only from a small number of examples, or often a single example. The roughly 600 examples of civilian stamped tile are complemented by almost 1,100 examples stamped by the Legio II Augusta. In this region, the practice of stamping tiles is restricted mainly to the second and third centuries C.E., although some examples may date to the early fourth.

This paper presents the results of spatial analysis of the distribution of stamped tiles, which illustrates the variation in the distribution among not only different tileries but also among stamps produced at the same tilerie, both in terms of supply to military, urban, and rural sites and in the geographic breadth of their distribution. Although, unsurprisingly, the distribution underscores the importance of the road network for transporting these heavy materials, these varying patterns also help to illuminate the overlapping economic and political structures within which they moved—for example, suggesting zones of exclusive civilian and military supply. Additionally, I explore how the inclusion of magistrate names on many of the tiles from Gloucester can be related to creation and maintenance of communal identities, in this case that of the urban elite.

Corbridge White Ware: Commercial Imitation in Romano-British Mortaria?

Kelsey Koon, University of Alberta

Mortaria are a particular and distinctive type of ceramic, and their presence, use, and production in Roman Britain has been extensively documented. Their unique appearance compared with other ceramics, as well as the fact that they were luxury goods that required skilled craftsmen to produce, have made them useful markers of economic activity in Britain during the Roman period, particularly at military sites on Hadrian's Wall and the Antonine Wall.

This paper deals with a specific type of Romano-British mortarium known as Corbridge White Ware, produced at the Roman town of Corbridge on Hadrian's Wall in the second century C.E. These vessels achieved a notable regional distribution across the militarized zone of northern England and southern Scotland; and the time frame in which they were produced seems to show a connection between the presence of official military garrisons at Corbridge and the production of mortaria at the site. These factors, along with the appearance of the vessels themselves,

raise the question of whether Corbridge's mortarium production was intended to fuel the demand of a military market for these distinctive Roman vessels and, further, whether these vessels were produced as cheaper imitations of better-quality mortaria that were not necessarily available at the margins of the Roman empire. This paper examines both of these questions based on the surviving fragments of Corbridge White Ware vessels, the distribution of sites at which they were found, and the evidence for commercial imitation in Romano-British ceramics industries.

SESSION 8D

Archaeological Survey

CHAIR: To be announced

Predictability Modeling in Dorian Crete

Jesse Obert, University College London, and *Luke Kaiser*, University of Arizona

Utilizing landscape analysis, intensive archaeological prospection, inscriptions, and artifact assemblages, we propose a new model to identify Early Archaic Dorian settlements on Crete. This model involves mapping the geopolitical landscape and has allowed us to discover new Dorian sites in Crete. It leads to further conclusions about the technological achievements and socioeconomic situation of the Early Archaic period.

Our model has generated four specific requirements for predictable site conditions: a geographically isolated agricultural area; narrow passes, hereafter referred to as choke points; a defensible acropolis, with a notable preference for twin acropoleis; and a clan-state political structure.

Using a combination of remote sensing, field walking, and systematic survey, we argue that Lato is the ideal archaeological site for this model. Though Lato's cultural influence peaked in the Classical period, its location above the agricultural plain of Mesa Lakkonia epitomizes the Dorian settlement model. The slope and hillshade tools on ArcGIS emphasize the isolation of the Lato plain and reveal its choke points. The northern acropolis has a panoramic view of its agricultural plain. The plain has five choke points that may be blocked by Early Archaic hoplites operating in a phalanx. These heavily armored hoplites, forming a mobile fortification, are deployed when regional diplomacy fails. The site is strategically located between two acropoleis on the same promontory, which was continuously occupied through the Archaic period. The Early Archaic elite who resided between the twin acropoleis operated as professional soldiers to protect the farming villages in the agricultural plain. Law codes, treaties, and political ties confirm the settlement's clan-based political system and Dorian culture.

In conclusion, the Dorian tendency to rely on natural defenses and an equally equipped elite class, operating as a mobile fortification, strengthened the cultural ideals of the early Greek polis. Consequently, Early Iron Age Crete experienced an important sociopolitical revolution that influenced the development of later western politics.

Integrating the Evidence of Paleoclimatology and Survey Archaeology with the Historical Record of Fourth-Century B.C.E. Greece

Ruben Post, University of Pennsylvania

Concerns over global shifts in climate and their effects on humankind have become pervasive in recent decades, prompting an efflorescence of scholarship on climate change throughout history. This has led many paleoclimatologists to produce studies with promising results for scholars of the ancient world. Much work remains to be done, however, on how such evidence can be incorporated into reconstructions of ancient history.

In this paper, I argue that one particular episode of climate change—the extreme fluctuation of temperature and precipitation that accompanied the grand solar minimum of ca. 360 B.C.E.—provides a fixed point from which to begin analyzing the effects of climate change in ancient Greek history. By comparing the effects of this grand solar minimum with those of another that occurred ca. 1680 B.C.E., we can begin to address how such paleoclimatological research may be integrated with other scholarship analyzing ecological changes in fourth-century Greece.

I propose that data obtained from archaeological surveys provide a key first step in bridging the *longue durée* of climate change and the *histoire événementielle* of ancient Greece. Such data indicate that this area of the Mediterranean suffered a series of droughts and severe winters from the second quarter of the fourth century B.C.E. onward, and especially toward 300 B.C.E. All these changes had major effects on Greek civilization in this period. I conclude by offering preliminary observations on how ancient historians might fruitfully work with the evidence of paleoclimatological studies, survey archaeology, and textual sources to illuminate large-scale trends in Greek history.

A Study of the Maritime Trade Relations Between Greece and Illyria During the Classical and Early Hellenistic Periods

Kelci M. Martinsen, East Carolina University

In recent years, extensive surveys performed along the eastern coast of the Adriatic Sea have contributed a wealth of data to the almost barren archaeological record of the Illyrian coast. However, most of the resulting publications pertain to the periods of Roman occupation. Instead, this presentation reports on the extent of the maritime economic interactions between the eastern coast of the Adriatic Sea and Greece during the Classical and Early Hellenistic periods. Historical sources support the presence of maritime trade along the eastern Adriatic, particularly between Greece and Illyria, but the physical evidence for these trade patterns has been lacking. In this presentation, I introduce an analysis of several underwater sites documented through fieldwork as well as research data. The data from the sites was collected by means of scientific diving and through use of a remotely operated vehicle, an autonomous underwater vehicle and a sector scanner. The analysis includes an examination of the type of artifacts present at the sites, primarily Corinthian and Rhodian type amphoras, the ratio of artifact typology per site location, the origin of the artifacts, as well as the change in frequency of artifacts over time. In addition, I present an analysis of parallel data from assemblages

of artifacts documented at terrestrial sites along the eastern coast of the Adriatic Sea dating to the Classical and Early Hellenistic periods. Based on these analyses, I propose a reconstruction of trade routes, commodities, and direction of trade along the eastern coast of the Adriatic Sea in the pre-Roman period.

Corinth's Economic Basis in the Eastern Adriatic During the Fifth–Second Centuries B.C.E.

Jeffrey Royal, RPM Nautical Foundation

A systematic littoral survey of the eastern Adriatic coast began in 2007 with initial fieldwork in Albania through the Illyrian Coastal Exploration Program (ICEP), which included fieldwork along the coasts of Albania, Montenegro, and Croatia. These are the first systematic archaeological surveys on these sections of the ancient Illyrian coast, and have as a goal to survey and document all submerged cultural material. Although all finds are recorded and documented for the archives of each respective government, this paper focuses on the finds dated between the fifth and second centuries B.C.E. associated with Corinthian overseas trade. To date, nine wrecksites have been discovered that demonstrate significant transport of foodstuffs and building materials northward along the eastern Adriatic route. These wrecksites along with other discoveries bring to light previously unknown evidence that addresses overseas exchange routes and connections, colonization, and artifact distributions between Corinth and the eastern Adriatic. Indications of Corcyra's involvement in Corinthian overseas transport are also present. Additionally, the maritime evidence points to substantial overseas mercantile connections with Illyrian populations located north of Corinthian colonies. The pattern of Corinthian overseas trade during this time period stands in contrast to the maritime evidence for other trading centers in the central and western Mediterranean.

SESSION 8E

The Intellectual Heritage of Archaeology as a Discipline

CHAIR: To be announced

The Dawn of the Modern Grand Tour: Thomas Cole and Samuel James Ainsley Go to Sicily in 1842

Brian E. McConnell, Florida Atlantic University

Studies of the Grand Tour have developed into a major discipline of research, and those focused on the island of Sicily find a wealth of material in the letters of 18th-century travelers such as Patrick Brydon and J.H. Riedesel and artist-authors such as the Abbè Jean Claude Richard de Saint Non and the painter Jean Houel. But travelers of the 19th century saw an island that was somewhat different, an island that had been created as a "storied landscape" by the nascent efforts of the Kingdom of the Two Sicilies. Development plans promoted by the reigning government and carried to fruition by noble men of letters, such as the Duke of

Serradifalco and the Prince of Biscari, focused on fashioning archaeological sites that could be visited by an increasing number of travelers from abroad, such as American painter Thomas Cole and the British painter Samuel James Ainsley, who later would become a significant early explorer of Etruria. These two men traveled around the island on a 24-day tour in the spring of 1842 that brought them to major archaeological sites, including Segesta, Selinus, Akragas, and Syracuse, as well as the sublime volcanic majesty of Mount Etna. What they witnessed was the formation of the cultural landscape as we know it today and the historical forces that led the Bourbon kingdom to see its own identity rather precociously in the cultural heritage of its domain continue to inform the mission of the island's cultural resource administration. This paper presents the first systematic collection of illustrations, paintings, and other documentary sources for the trip of Cole and Ainsley, which are preserved in museums, galleries, and libraries in the United States and Britain, as a form of posthumous "voyage pittoresque," and it integrates these colorful, detailed sources with information provided by the naturalist Jeannette Power, who published a handbook for travel in Sicily in the same year. The development plans put into action just years, sometimes months, before Cole and Ainsley made their trip also continued beyond the fall of the Bourbon kingdom to the Risorgimento and the Unification of Italy. A second guidebook published in 1863 by George Dennis, who worked for some time with Ainsley in Etruria, is evidence of the impact and significance of this early cultural resource development into the second half of the 19th century.

Above the Law? Local Priests and Local Archaeology in Sicily Under the Kingdom of Italy (1861–1915)

Antonino Crisà, University of Leicester

Once Garibaldi landed in Sicily and defeated the Bourbon army, the island was annexed to the new Kingdom of Italy (1861). Local and national authorities had to face many troubles that afflicted the island and that had caused notable social and economic instability (e.g., the growth of powerful criminal organizations and their connection with politics, unresolved land reform, lack of public education). But in terms of archaeology, the new kingdom could count positively on a well-developed system of safeguarding antiquities and sites, which the Bourbon government had previously created and had implemented during the first half of the 19th century: indeed, the Commission of Antiquities and Fine Arts was maintained after the Unification and was only later suppressed by a Royal decree (1875) (C. Marconi, *L'attività della Commissione di Antichità e Belle Arti in Sicilia*. Pt. 1, 1827–1835 [Palermo 1997]).

Current research, including the author's studies at the state archives in Rome and in Palermo, is producing new data on the history of Sicilian archaeology during the post-Unification period (1861–1915). Records offer information on sites, excavations, and also the activities of local authorities to protect antiquities. In this historical and social context, the Church and its priests played a surprisingly significant role. The archival research is demonstrating how questionable and equivocal was the relationship between local authorities and priests in Sicily in terms of safeguarding archaeological sites. The primary aim of my paper is to present

two striking case studies on this intriguing conflict, which has been neglected by scholars until now. First, I outline how priests performed illegal excavations at the archaeological site of Contrada Diana at Lipari (Messina) (1883)—part of the Greek and Roman necropolis of Lipara—despite national, regional, and local authorities having previously put severe restrictions on those lands, imposing the need to request a permit to excavate.

Secondly, I use the records to trace the debatable conduct of priests at Tindari (Messina), a small town that preserved much archaeological evidence of the ancient Tyndaris. While they cultivated lands and dug to prepare for building work, priests often put at risk the protected monuments, which understandably alarmed the regional authorities from Messina and Palermo, who had to deal with these casual discoveries and to confiscate the finds (1894).

The Cretan Question: 19th and 20th Century Political and Intellectual Discourse of Archaeological Heritage and the Enosis

Aimee M. Genova, University of Chicago

This paper explores concepts of identity through the 1913 unification of Crete with Greece—also known as enosis. Particular attention is placed on whether modern conceptualizations of Crete's ancient past affected the process of enosis and vice versa. Although the Cretan Question (1897–1908; 1908–1913) has been pervasive in recent scholarship, the role of Crete's ancient history has yet to be placed in context with contemporary politics regarding Crete's unification with Greece. The objective of this paper is to understand both the literary record and material culture of Crete and how the ancient past has potentially influenced political, intellectual, and legal discourse regarding the island's enosis. In order to understand the dynamics of rhetoric involving the status of Crete, there is a need to engage with these three types of discourse prior to, during, and after the enosis of 1 December 1913. These aforementioned categories are used to describe the sentiments of groups and individual patrons invested in Crete's political and social structure during the 19th and 20th centuries (including but not limited to Eleftherios K. Venizelos, Iosif Hatzidakis, Stefanos Xanthoudides, and Stephanos Skouloudis).

Situated around a specific problem relating to the politics of identity formation in Crete, this paper serves to engage in a broader discussion regarding the theoretical levels of identity and national consciousness. Consideration is given for nationalism and the production of archaeological knowledge with regard to Hellenic-Cretan appeals to the past. The question is whether a perceived continuity of identity from the Minoans to modern Greeks penetrated Cretan consciousness during the 19th and 20th centuries and if so, whether this affected enosis on a social level.

David Robinson's Excavations at Olynthus Plagiarism Scandal

Alan Kaiser, University of Evansville

In 1931, shortly after Mary Ross Ellingson completed her master's thesis on terracotta figurines she had helped to uncover at David Robinson's excavations

in Olynthus, Greece, Robinson published her thesis under his own name as the seventh volume in the *Excavations at Olynthus* series without acknowledging that she had written it. Twenty years later, Robinson published Ellingson's dissertation as a contribution to *Olynthus* 14, again removing her name and substituting his own without her knowledge or permission. Recently, several editors and anonymous reviewers have defended and even excused Robinson's actions, claiming Robinson did not commit plagiarism; rather, his actions were typical of archaeologists and even scientists before and after World War II. They further justified his actions by pointing out he was the sole holder of the excavation permit for most of the excavation seasons at the site and therefore controlled all the site's intellectual property. Their final conclusion was that this story did not need to be told.

This paper sets out the case that such protestations are based on a misunderstanding of the standards of publication acknowledgement between 60 and 80 years ago. An examination of the behavior of other contemporary American classical archaeologists, New World archaeologists, and scientists in a variety of fields establishes the standard understanding that the contents of a thesis or dissertation belonged to the author. This etiquette is further confirmed by explicitly stated rules on the subject at Robinson's home institution of Johns Hopkins University. Moreover, while principal investigators may have held permits for the excavations they conducted, most were happy to share the intellectual property rights with their graduate students, helping those students to publish the material and launch their careers. Robinson himself allowed a number of his students to publish Olynthus material under their own names or jointly with him. Robinson's treatment of Ellingson's thesis and dissertation stands in stark contrast to his treatment of most of his other graduate students. Rare letters discovered among Robinson's papers at the University of Mississippi archives illuminate Robinson's own definition of plagiarism and contain a tepid apology to Ellingson for having left her name off the publication of her dissertation. All this evidence forces us to stop excusing Robinson's actions as simply standard behavior of his day. We need to acknowledge what he did for what it was: the most egregious act of plagiarism yet documented in the history of American classical archaeology.

Mad Men: W.K. Simpson, the Yale Peabody Museum and the Use of Archaeology in Foreign Relations from 1952–1975

Alicia Cunningham-Bryant, Temple University

The current pervasive western fascination with ancient Egypt has been something 50 years in the making. It is the result of a purposefully designed, marketed, and mythologized PR campaign begun by the Egyptian government in 1955 that sought to support the creation of an infrastructure for the newly liberated United Arab Republic. While the instigating factor may have been the Aswan High Dam, the ultimate result of Egyptian, UNESCO, and foreign cooperation was an established and propagated international curiosity that continues to make tourism central for the economy of the Republic of Egypt.

In keeping with the Eisenhower doctrine and the concepts of economic and cultural suasion, from 1952 to 1975 the United States government sought to combat communism in the Middle East by fostering ties with the United Arab Republic via

the UNESCO Nubian Salvage Campaign and the organization and funding of the first two Tutankhamun exhibits. While later descriptions, biographies, and books on American involvement in the UNESCO campaign focus on the centrality of ancient Egypt to the intellectual heritage of humankind and the friendship between Egypt and the United States, the addition of an entirely new corpus of material from the Yale Peabody Museum, namely the William Kelly Simpson Archive, fundamentally shifts the modern historical narrative. The picture provided through extensive correspondence between the U.S. Department of State, the U.S. Cultural Attaché to Cairo, the Egyptian Ministry of Cultural Affairs, numerous museums, and personal communications demonstrates a consciously subtle implementation of American foreign policy utilizing archaeology as a mechanism of diplomacy in order to forestall the encroachment of communism. The policy, rather than being made public, was purposefully rebranded to make Egypt the benefactor and friend of the United States, therefore encouraging broader U.S. economic support of the Republic.

SESSION 8F: WORKSHOP

Thinking Outside the Box: Alternative Careers Within Academia

MODERATORS: *Maryl B. Gensheimer*, University of Maryland, *Megan J. Daniels*, Stanford University, and *Sabrina Higgins*, University of Ottawa

Workshop Overview Statement

Graduate programs in the humanities and social sciences traditionally prepare their students for careers as faculty members, and yet a tenured faculty position is just one of several possible academic career paths. Indeed, Ph.D. graduates often find the difficulty and instability of securing tenure-track faculty positions unpalatable, particularly when geographic flexibility is limited. At other times, those who do manage to secure a full-time position find the demands of the job ill-suited to their personalities, research interests, family responsibilities, and so on. Nonetheless, these and other such graduates may still enjoy—and flourish—working in an academic environment, and they may wonder how one might continue to use aspects of graduate training within new career paths.

In light of the difficulty of securing full-time, tenured faculty positions in today's academic job market, this workshop offers a panel on alternate academic careers for graduate students in archaeology, art history, classics, medieval studies, and related fields. Alternate academic careers (commonly referred to as "Alt Ac" careers) are those jobs within academic institutions, such as museums and universities, that stand apart from faculty positions but that nonetheless require advanced degrees. Such positions include, but are not limited to, academic advising, program and curriculum development, and work in academic libraries. Outside the university setting, alternate academic careers can include employment in international organizations and nonprofits, publishing, and funding and cultural heritage agencies.

Through this workshop, a variety of Alt Ac careers will be brought to the attention of advanced graduate students and recent Ph.D.s. Our speakers will draw

on a wealth of personal experience to discuss their own academic training and the paths that took them to their current careers, highlighting the transferrable skills derived from their graduate work. Panelists will discuss both the rewarding and challenging aspects of their Alt Ac positions and will offer advice to students and recent Ph.D.s with regard to looking and preparing for alternative careers. Finally, our speakers will indicate aspects of Alt Ac positions that allow for continued teaching and/or research, as well as advice on how to remain engaged with professional opportunities in one's original academic field. Students at all levels, especially those engaged in dissertation research and those looking to the job market, as well as recent graduates, will benefit from this comprehensive look at alternative careers within academia.

PANELISTS: *Michelle Berenfeld*, Pitzer College, *Scott Pentzer*, Tulane University, *Laurie Rush*, U.S. Army, *Peter Schertz*, Virginia Museum of Fine Arts, *Gary Talarchuk*, Tulane University, and *Sheila Winchester*, University of Texas at Austin

SESSION 8G

Greek Architecture

CHAIR: *Barbara Tsakirgis*, Vanderbilt University

Were the Columns of the Heraion at Olympia Originally Wooden?

Philip Sapirstein, University of Nebraska-Lincoln, and *David Scahill*, American School of Classical Studies at Athens

In a lecture titled "Photogrammetry, Three-Dimensional Modeling, and New Interpretations of the Heraion at Olympia" delivered at the 2014 Annual Meeting of the AIA, we presented several results of recent research at the site. We created detailed three-dimensional models of the Heraion, and the fieldwork stimulated several lines of investigation about its architectural history. Among other things, we questioned a fundamental theory about the temple: that it was originally designed with wooden columns that were gradually replaced over the following centuries with stone. The talk stimulated a lively, critical discussion of this problem, which was by no means settled.

The colonnade of the Heraion is central to the history of Doric origins. That it originally had wooden columns is cited as key support for the tectonic theory, which locates the synthesis of the Doric system in lost, wooden antecedents to the first monumental stone Doric temples. However, the existence of wooden colonnades at the Heraion is a modern interpretation of the stone remains now in situ. First, the wide variation in the dimensions of the columns and the chronology of their capitals has suggested they were replacements. Second, traces of crescent-shaped cuttings on the stylobate have been understood as lifting devices for the shafts of wooden columns. Encouraged by a comment in Pausanias, most scholars have concluded the original columns were wood.

We examine this problem again, following on another season of recording and study of the Heraion this summer. We have completed the three-dimensional recording of the building, including the associated blockfields, and have refined the models to ± 1 mm accuracy. This new three-dimensional resource has enabled a detailed examination of the stone columns and capitals, which have not been measured and illustrated since the original 1892 publication (it has proven to be inaccurate). For the first time in the 135 years since the Heraion's excavation, we are now able to reconstruct the stone colonnades as well as the positions and approximate dates of the capitals. Our new examination tells a very different story about the construction of the temple, forcing us to conclude that most if not all of its peristyle columns were originally executed in stone.

Preliminary Observations on the Hellenistic Temple at Perivolia

Sara Jane Franck, AIA Member at Large

In the region to the west of the Temple of Apollo at Bassae in the Peloponnese, concentrating in the area of Phigaleia and the Neda River Gorge, lay the foundations of a small, rural Hellenistic temple that has only recently been excavated. The remains of the temple were first discovered during the period of 1969–1972 by Frederick Cooper while he was taking breaks from his research at the Temple of Apollo. Pausanias does not mention the small temple, and later travelers had also not noticed it. To date, it is dedicated to a yet-unidentified deity.

In 2005, 33 years after Cooper first discovered the temple, the Ephoreia at Olympia, Gia Chatzi, commenced excavations at Perivolia that continued to the fall of 2011. During the excavations, the Ephor was in contact with Cooper and me with the hope of eventually collaborating on a reconstruction project of the temple. Unfortunately, Cooper passed away in the fall of 2011 before beginning the project. Cooper's photographic documentation from the 1970s has not been published, but photographs were taken of signature blocks and finds. This material has become invaluable, as a number of architectural pieces have disappeared from the site since his documentation, including column fragments and a piece of stone with a carved anthemion.

Using material left by Cooper from the 1970s, combined with Chatzi's material from recent excavations, I now present the preliminary findings on the temple at Perivolia. Cooper's archives include aerial photographs, architectural drawings and photographs, and notes from a brief period of clearing he undertook in 1976. Mrs. Chatzi has generously provided me with copies of state plans, select block drawings, photographs of several finds, and a preliminary reconstruction sketch. The collection of this material, along with my own on-site observations and analysis, allows me to bring the general assessment of this fascinating temple to light, which contributes to a wider discussion regarding the network of Hellenistic rural temples in the Peloponnese.

The Ancient Corinth-South Stoa Roof Project: Previous Restoration and Conservation Treatments-New Approaches

David Scahill, American School of Classical Studies at Athens, and *Nicol Anastassatou*, Corinth Excavations

In 1954, Oscar Broneer published his results from excavations of the South Stoa at Corinth. Prior to this, in 1947, Broneer reconstructed part of the original stoa roof on the site. We are now carrying out new conservation of this material along with the study and conservation of hundreds of additional fragments from this roof assemblage as part of on going site conservation, preservation, and presentation of the South Stoa. Included among this assemblage are a number of decorated antefixes and simas with lion's head water spouts from the original Early Hellenistic roof, the remains of which constitute one of the best and most complete assemblages of a Corinthian roofing system ever discovered. While the materials used for the previous conservation were very popular at the time in eastern Mediterranean countries for use in the restoration of ceramics, conservation approaches and treatments have changed, and we are now forced to deal with this earlier intervention. The adhesive used was a natural resin, and for gap filling and structural reinforcement of the tiles, plaster of Paris and in some cases metal dowels were inserted. We describe our investigation and recording of previous treatments and new treatment of those objects with current materials and techniques, including the use of digital photogrammetry and 3D modeling of the objects. By bringing together current conservation methodology and new recording methods for architectural study of the building, we demonstrate the potential of new approaches for investigating, documenting, and preserving material assemblages from ancient sites such as Corinth.

The Unknown Excavation in the Basileia of Alexandria by the Expedition Ernst von Sieglin

Ingrid Laube, Universität Tübingen

The Expedition Ernst von Sieglin, which was undertaken during the years 1899 through 1902, is primarily remembered for its excavation of the famous Serapeum of Alexandria. But the team also explored the coast in the area of the Basileia at the east harbor of Alexandria. However, only parts of the expedition were ever published, while the bulk of it and its findings remained unpublished. Fortunately, numerous finds—for example, ceramics, terracotta figurines, as well as sketches and written documents, found their way into various archives in Munich and Tübingen, where the author was able to study them. In addition, previously unknown written documents have recently come to light, which enable us now to reconstruct and interpret the site at the coast.

Among the recently discovered documents is the hitherto unknown excavation diary of the young architect, Ernst Fiechter, who had been responsible for the trench in the so-called inner part of the Basileia. Together with Fiechter's sketches, which were already known to be in the archive of the Architektur Museum München, the diary enables us to pinpoint the location of the site, now overbuilt by a modern road in Alexandria. In addition to the documents held at Munich, a

significant part of the finds were deposited at the University of Tübingen. They were only published selectively, since the context was previously lacking. In light of the recently discovered diary, the fragments of architecture and the finds of the site can now be understood in their social context.

This examination of the newly available documents, the photos and the sketches, allows us to interpret and date the remains at the coast. They were identified as Roman baths in the nineteenth century. I argue instead that this structure could have belonged to a temple built in Roman times. Furthermore, the surrounding buildings were adorned with painted stucco walls and floor mosaics; in other words, luxuriously equipped rooms. Therefore, the whole area has to be seen in the context of our knowledge of the Basileia of Alexandria and its description as known from written accounts, (e.g., Strabo), which provide information about these domestic quarters. This paper presents possible interpretations of the ruins and analyzes the structure's significance within the context of Alexandria's topography.

SESSION 8H

Greek Ceramics

CHAIR: To be announced

Put a Bird on It! Multiple Agency in the Consumption of the Etrusco-Corinthian Kylix

Haley Bertram, University of British Columbia, and *Bryan E. Burns*, Wellesley College

The sixth-century expansion of Greek and Phoenician networks into the western Mediterranean provided new commercial and cultural opportunities for local communities. The southern coast of France, for example, was transformed not only by the establishment of a Greek colony at Massalia but also by the broader adoption of Greek, Phoenician, and Etruscan wares across the region. Imported objects and adopted styles helped forge new bonds with external trade partners, and the conspicuous consumption of these goods confirmed social status and connections within changing communities. This paper highlights the activities of ceramic production and consumption in Italy and France that signal the participation of multiple actors in Italy and France in archaic Mediterranean exchange.

Our study focuses on a particularly intriguing artifact type: the Etruscan cup that plays off the well-known animal friezes decorating Corinthian vases. Throughout the first half of the sixth century, a network of potters in and around Vulci produced cups featuring the same figural motif of two right-facing birds, with only slight variations among the vessels. The consumption of the bird cup alongside Corinthian and other Greek wares, as preserved in tombs within and beyond Etruria, demonstrates that this product was valued as a complement to imported vessels.

The circulation of this distinct commodity to other cultural environments reinforces the active role of multiple participants within the rich market of drinking

cups in Greek styles. Particularly significant evidence is found in settlement contexts in southern France, at Massalia and the neighboring indigenous settlement of Saint Blaise. At both sites, repeated acquisition through multiple periods indicates the lasting appeal of the Etrusco-Corinthian product. Similar to the Etruscan tomb deposits, the bird cups appear in assemblages that include a diverse selection of imported and locally made drinking vessels, but for everyday, domestic use. This shared desire to demonstrate access to a full range of goods available through the archaic trade networks underscores the cosmopolitan nature of multiple Mediterranean actors, and draws attention to the varied sources for different types of Greek pottery.

A Case for Late Attic Black-Figure

Ross Brendle, Johns Hopkins University

Most Attic black-figure vase painting of the late sixth and early fifth centuries does not compare to contemporary red-figure in terms of the naturalistic quality of its painting. Red-figure artists innovated in the depiction of anatomy and experimented with more visually striking compositions, while black-figure painting became repetitive, hasty, and even automatic. It has been generally assumed that black-figure survived mostly as a cheap alternative for “better” and more expensive red-figure, and as a result it has received little scholarly attention or appreciation.

If black-figure was a low-end substitute, it should follow that we would find high-end (i.e., red-figure) vessels from the same period produced for the same function. For the most part, this is not the case. The Panathenaic Prize Amphoras are the obvious example of a form only found in black-figure, but additionally the black-figure lekythos remained the grave offering of choice into the fifth century, even after red-figure had become the predominant technique for *symposion* vessels. Finely drawn black-figure funerary lekythoi are the exception rather than the rule at this time. Early fifth-century funerary lekythoi with sketchy, hasty decoration are found in even the most ostentatious burials, and more importantly, black-figure was the only option for the decoration of funerary lekythoi before the adoption of white-ground outline-drawn lekythoi.

Using the example of the funerary lekythoi, I argue in this paper that the nature of the drawing on late black-figure vases is not the result of their being cheap, low-quality products. Examination of burials of the period in the Athenian Kerameikos, as well as other prestigious burials such as the Marathon tumulus, show that even the most significant tombs were filled with this supposedly low-end pottery. These vases were not chosen because of financial limitations of the consumer. They were clearly acceptable items for use in important burials and in no way substandard.

The view that these lekythoi are inferior to other contemporary vase painting is the result of modern cultural constructions that see naturalism as the aesthetic pinnacle of the history of art. These vases are the product of a culture that did not consider less naturalistic imagery problematic or a marker of inferior quality. This paper seeks to reexamine the place of this body of material in the history of art and argues for its archaeological and historical value.

More Than Just Cups: Multicultural Influence on the Production and Decoration of Attic Black-Figure Beakers or “Kalathoi”

Lisa Çakmak, Saint Louis Art Museum

In 1922, the Saint Louis Art Museum (SLAM) acquired a black-figure beaker with an unremarkable scene of naked youths and draped older men, possibly meant to be athletes and trainers. The SLAM vessel—a stemless, handle-free form—sometimes referred to as a kalathos, is relatively rare; fewer than 20 extant examples in both black- and red-figure are known. In this paper I focus on the eight black-figure examples in order to situate the SLAM vessel within the shape’s overall production and reception.

All eight black-figure beakers share a similar conical shape, with flaring rim and ring foot. Several are decorated with dancing youths or komasts. The black-figure decoration demonstrates a similar style or hand, which has been associated with followers of the Amasis Painter. The combination of this shape, which is foreign to the Attic ceramic corpus, and the association with the Amasis Painter, who may have been an Egyptian working in Athens, is intriguing. While the beaker shape has been tied to Achaemenid Persia, where similarly shaped beakers in silver were produced and are depicted on the Apadana Reliefs, the form is most at home in Egypt, where conical vases were produced in alabaster and other stone as early as the Predynastic period. Here I explore the possibility that the Attic black-figure beakers were products of the Amasis Painter’s workshop, whether conceived and decorated by the Amasis Painter himself or his followers. I close with a consideration of the influence of the larger eastern Mediterranean region on Athenian vase shapes.

Data Mining and Athenian Red-Figure Vases in Context

Shannon O’Donovan, University of Denver

Most figured Greek vases of the Archaic and Classical periods have been found not in domestic Greek contexts but in the funerary contexts of Etruscan Italy. Despite this, Greek vases have been used primarily as cultural informants of Athenian society. The underlying assumption is that these artifacts are representative of their manufacturing society, Athens, and the cultural context in which they were recovered is irrelevant to their interpretation. Various analytical methods have been used to support this practice, ranging from qualitative techniques of the art historian to quantitative methods of descriptive and inferential statistics. Their theoretical grounding in classical archaeology and art history and their reliance on a priori assumptions unifies these apparently diverse methods. In this paper I use common commercial data mining and machine learning algorithms to analyze the relationship between findspot and observable attributes of ~4,700 Athenian red-figure vases to provide insight into both the nature of cultural identity and trade between Athens and Etruscan Italy and to demonstrate the efficacy and inefficiencies inherent in this approach.

Properly executed data mining allows us to seek the voice of the data, unadulterated by the a priori assumptions of hypothesis testing and the biases inherent in any discipline. Properly interpreting the results of a data mining study requires

understanding how data mining works, how it differs from traditional statistics, and how the data is sourced and prepared for analysis. As is often the case in data mining, the results of this study range from the ludicrous to the identification of intriguing relations, many of which challenge our traditional assumptions about Athenian pottery trade to Etruscan Italy. In aggregate, the results indicate that certain painted subjects dominated in Italy, while others dominated in Attica, with comparatively few being common to both challenging the exclusive use of these artifacts as informants of Athenian culture.

Rhetoric and Narrative in Beazley's Connoisseurship

Eric Driscoll, University of California, Berkeley

John Beazley's legacy has been caught up in contemporary anxieties regarding the status of painted Athenian pottery as an object of study for classical archaeology. An intellectually serious understanding of Beazley's connoisseurship is therefore more urgent than ever, yet he has received little nonpolemical critique. In this paper, I demonstrate that Beazley reconciled fundamentally incompatible impulses in his intellectual project, between its "scientific" and "aesthetic" tendencies, by emplotting them in a narrative of artistic development. The former tendency motivates *Attic Red-figure Vase painters*, in which Beazley offered a kind of natural history of Athenian painted pottery, presented, laconically, as straightforward empirical data. The work projects a scientific air. Most important, a pot's quality did not matter in *ARV*. By contrast, Beazley's early articles treated at length (up to 48 *JHS* pages) the corpora of individual "Masters," as he called them, geniuses with "new and strong [artistic] personalit[ies]."

The transition from monographic article to encyclopedic natural history reveals a thoroughgoing change in Beazley's conception of the connoisseurial project as well as profound inconsistencies within it. *ARV* includes the work of artists Beazley detested alongside those he loved, as well as works he was unable to attribute to a specific painter. This system is the logical outcome of Beazley's operational procedures. Yet, at the same time, Beazley continued firmly to believe that an artist's style was "a sacred thing... the man himself" (*ABV* x). What, then, is the status of a grouping such as "in the manner of...?"

In this way, Beazley's technical praxis clashed profoundly with his understanding of style as "sacred." He was able to reconcile these incompatible ambitions by framing his painters as players within a historical narrative of artistic development. The case of "Mannerism" provides a clear illustration. The early red-figure Mannerists were a group of painters Beazley disliked (aside from the Pan Painter), and which he named on a developmental analogy with the Antwerp (not Italian) Mannerists. Both groups specialized in an "incongruous mixture" of old and new elements and "the reduction of both to a pretentious calligraphy." But this Renaissance art history provided a narrative frame that enabled Beazley to ascribe meaning to painters, such as the Mannerists, located at his aesthetic horizon's margins. Narrativization let him pursue connoisseurship at once as a scientific enterprise and as a project of communion with the "sacred" styles of the artists he conjured out of mute clay.

Local Ceramic Production at the Hellenistic Panhellenic Sanctuary of Nemea: New Evidence Through Petrographic Analysis

Heather Graybehl, University of Sheffield, and *Kim S. Shelton*, University of California, Berkeley

One of the most unique features of the Hellenistic Panhellenic sanctuary at Nemea is the presence of a large kiln complex situated within the boundaries of the sanctuary. This complex, dating from the late fourth to mid third centuries B.C.E., contains three kilns as well as a clay mixing pit and a well. The complex was interpreted by the excavators as the site for the production of tiles used in the rebuilding program taking place in the sanctuary in the Hellenistic period. As part of ongoing Ph.D. research on Hellenistic ceramic production and distribution at Nemea and the greater northeast Peloponnese, this study is the first attempt to characterize the full repertoire of the kiln complex through the analysis of the complete range of ceramic objects found within and surrounding the complex, through a combination of assemblage study and petrographic analysis. Ceramic petrography, the main analytical component in this study, reveals that the complex produced a single homogeneous fabric, using local raw materials that were widely available throughout the Nemea Valley. The analysis demonstrates that the complex produced a wide range of ceramics using a single recipe—tiles, jugs, lekanai, mortaria, pithoi, loomweights, kiln furniture, and even architectural terracottas. The tiles display a great range of styles, with both Corinthian and Lakonian types being produced, as well as a series of stamped tiles bearing the name “Sosikleos.” The evidence suggests that the Kiln Complex was a skilled workshop mass-producing tiles and other goods needed in the sanctuary for a variety of functions.

The ceramic vessels represent a small range of shapes relating to food storage and preparation, as well as industrial uses. Interestingly, the pithoi, lekanai, mortaria, and jugs are attested at the site in other fabrics, but in some cases, the shapes remain exactly the same. These include both Corinthian and Argive shapes, which were also studied petrographically. It seems clear that the potters were copying popular shapes already present in the sanctuary. These imitations seem to be a purely local phenomenon for use only in the sanctuary, as they have not been found in the surrounding Nemea Valley. It is clear that the Kiln Complex made the sanctuary independent in some respects; but it was still dependent on the surrounding region for other types of ceramics. This study has not only fully characterized the repertoire of the workshop, but it has also contextualized ceramic distribution in the sanctuary.

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