

## **Session 7A: Presidential Colloquium**

### **The 2011–2019 Excavations at Huqoq in Israel’s Galilee**

Organizer: *Jodi Magness*, University of North Carolina at Chapel Hill

#### **Colloquium Overview Statement**

Since 2011, excavations at Huqoq in Israel’s Galilee have been bringing to light the remains of a monumental, Late Roman (fifth century C.E.) synagogue paved with unparalleled mosaic floors depicting a variety of biblical and non-biblical scenes. The papers in this colloquium present various aspects of the excavation results, beginning with an overview of the excavations and followed by descriptions and analyses of the synagogue mosaics, the painted and molded plaster decoration of the synagogue, the architecture of the synagogue and a medieval reuse of the building, and the coins from the excavations, including a hoard of fifteenth-century gold and silver coins discovered in 2018.

#### **The 2017–2019 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, *Dennis Mizzi*, University of Malta, and *Jocelyn Burney*, University of North Carolina at Chapel Hill

Since 2011, Jodi Magness of the University of North Carolina at Chapel Hill has directed excavations in the ancient village of Huqoq in Eastern Lower Galilee, assisted by Shua Kisilevitz of the Israel Antiquities Authority. The excavations have brought to light parts of the Jewish village of the fifth to sixth centuries and the Ottoman period Muslim village of Yakuk. In this paper, we report on the results of the 2017–2019 excavation seasons, which focused on a monumental, Late Roman (early fifth century) synagogue paved with extraordinary mosaics depicting an unparalleled series of biblical scenes including Jonah and the fish; the building of the tower of Babel; and the four beasts of Daniel’s vision. There is also a Helios-zodiac cycle, and the first non-biblical story ever discovered decorating an ancient synagogue. The synagogue was expanded and reused as a public building, apparently in the later Middle Ages (fourteenth to fifteenth centuries), when the stylobates and pedestals were lifted one meter, and the aisles were paved with mosaics. The results of the Huqoq excavations contradict a widespread view that Jewish settlements in Lower Eastern Galilee declined after coming under Christian rule in the fourth century, while the imagery in the synagogue mosaics revolutionizes our understanding of late antique Judaism.

#### **The Architecture of the Huqoq Synagogue and the Late Medieval Public Building**

*Martin Wells*, Austin College

Since 2011, the Huqoq Excavation Project has been excavating the remains of a monumental building in the hills northwest of the Sea of Galilee. Excavation over

the last seven seasons has revealed the entire east wall, and parts of the south and north walls of a large synagogue building dating to the fifth century. The plan of the building uncovered to date indicates that it was a basilica, with the short walls on the north and south sides. A pi-shaped stylobate carried bases with columns decorated with painted vegetal designs, creating aisles on the east, north, and west sides. The plan, together with architectural fragments (decorated *voussairs*, a Corinthian capital) recovered from later medieval constructions, are typical of Galilean type synagogues.

While the plan of the synagogue is clear, if not complete, the bigger mystery is the appearance and function of the even more monumental fourteenth/fifteenth century building. The late medieval builders repurposed much of the original architecture, using the north and east walls as foundations for the walls of their larger structure. They used the architectural elements of the synagogue, either dismantled or destroyed in an earthquake, for benches around the walls and to raise the level of the floor nearly a meter. They also appear to have reused the original stylobate and column bases to support a portico roof, leaving the center of the building open to the air. This paper will examine the architecture of the Late Roman synagogue and its transformation into this enigmatic late medieval structure.

### **The Painted Plaster and Stucco Decoration of the Huqoq Synagogue**

*Shana O'Connell*, Howard University

Due to its relatively delicate nature, most ancient wall painting survives in an advanced state of deterioration. In this respect the painted plaster of the Huqoq synagogue is not exceptional. However, the large quantity of fragments at Huqoq, the existence of comparable material from a small number of ancient synagogues, and digital technology make the original appearance of the painted plaster at synagogue within our reach. In my paper I discuss the remains of the painted plaster walls and columns at Huqoq as well as their phases of painting and repainting.

At present the fragments do not indicate that the interior architecture featured any true figural representation. While it is too early to fully rule out the possibility of figural motifs in the painted plaster at Huqoq, I propose that at least two types of painting derive from the imitation of marble and vegetal motifs, respectively. Even if a complete reconstruction of the painted plaster at Huqoq is impossible, the quantity of material and its consistency offers an important corpus of evidence for the decor of fifth-century synagogues in the region and the tradition of ancient painting in Israel.

### **Recent Mosaic Discoveries from the Huqoq Synagogue: Emerging Themes and Shifting Paradigms**

*Karen Britt*, Northwest Missouri State University, and *Ra'anana Boustan*, Princeton University

Since 2011, the Huqoq Excavation Project has been bringing to light a monumental, Late Roman synagogue paved with stunning mosaics. As in previous seasons, the subject matter of the most recently uncovered mosaics departs in significant

ways from the common repertoire of images found in other synagogues in the Galilee. After providing an overview of the mosaics discovered in 2017–2019, we offer preliminary observations concerning their relationship to the mosaics uncovered in previous seasons, as well as to comparable material from Galilee and beyond. We argue that the distinctive character of the Huqoq mosaics challenges conventional scholarly assumptions concerning the limited range of imagery used in synagogue mosaics. In particular, the Huqoq synagogue contains a series of panels depicting narratives from the Hebrew Bible that seldom appear in other synagogue mosaics, considerably expanding the corpus of biblical scenes. The excavation is ongoing and therefore it would be premature to identify overarching programmatic principles for interpreting the Huqoq pavement. Nevertheless, a number of overlapping themes appear to recur in the panels thus far uncovered, most notably Israelite military victory over “foreign” rulers, the destructive or punitive power of the seas, and God’s guiding hand in the fate of both the people of Israel and the rest of humanity. We suggest that these emerging themes shed light on some of the pressing concerns of the Jewish community at Huqoq, even as they also demonstrate the wide variation in attitudes, preferences, knowledge, and resources from one local community to another.

### **The Coin Finds from Huqoq**

*Nathan T. Elkins, Baylor University, and Robert Kool, Israel Antiquities Authority*

The coin finds from the Huqoq Excavation Project span approximately 2,400 years, from the Hellenistic period to the British Mandate, and attest to the long history of the site from antiquity, through the Middle Ages, and to the abandonment of the Arab village in 1948. The coin finds number approximately 350 in total and most date to the late fourth century C.E. Many coins come from critical contexts such as the foundation trenches of the synagogue and provide important chronological information on the site and the date of the synagogue. Other coin finds come from later periods of occupation, such as the modern village.

During the 2018 excavation season, an exceptional find was made of two medieval hoards buried in pots, containing fifteenth-century Venetian and Mamluk gold and silver coins. The careful disassembly of the two juglets revealed some 300 gold and silver coins with earrings, pendants and a ring. Venetian silver *grossi* and gold *ducats* seem to have been widely accepted as currency in the fifteenth-century Mamluk state. Their presence coincided with a chronic shortage of local silver money but more important, with the golden period of Venice’s trade on Mamluk Syria and Palestine.

## **Session 7B: Joint AIA/SCS Colloquium**

### **Social Networks and Interconnections in Ancient and Medieval Contexts**

Organizers: *Eleni Hasaki*, University of Arizona, *Sandra Blakely*, Emory University, and *Diane Harris Cline*, George Washington University

#### **Colloquium Overview Statement**

Social network analysis (SNA), a quantitative method used in the social sciences since the 1940s, is deployed by an increasing number of scholars to visualize and analyze interconnections in the ancient world. Data sets both textual and material support analyses that bring together in a shared methodology such diverse cultural entities as correspondence, civic institutions, trade in raw materials, political and philosophical affiliations, finely crafted goods and ritual practices. Significant methodological challenges distinguish archaeological from contemporary network studies: how, for example, to negotiate the indeterminacies of location, time, and fragmentary data; to integrate questions of materiality and agency; and to navigate the intersection between networks and Cartesian geographic systems.

The proposed AIA/SCS panel—the first with an SNA focus in the Annual Meetings—brings together a representative sample of case studies that foreground the divergences, the commonalities, and the theoretical groundwork being laid in network analyses. Their projects cover a wide chronological spectrum from Archaic times to the Early Middle Ages over broad geographical horizons stretching from eastern Mediterranean to western Europe dealing both with terrestrial and maritime contexts. The panelists utilize an array of SNA programs to mine their datasets of textual, archaeological, epigraphical, and numismatic sources.

Half the papers focus on material objects with textual force. Models of the social networks behind Beazley's world of Athenian potters support an investigation of how innovations in artistic styles may have developed and spread in the Kerameikos. The Hellenistic proxenic network of Samothrace, positioned within the archaeologies of coalition and consensus, offers a model of moral networks in which mythic, emotional, and ritual dynamics are integrated with quantitative analyses. A social network analysis of the strategic placement of monuments built by Attalus I of Pergamon shows how monuments make their political impact. Analysis of the networks of scholars working in the intellectual milieu of the Carolingian empire, and of the movement of new ideas in connection with Jupiter's cult in Roman Imperial Italy, offers models of information flows in diverse historical networks and the role of such interpersonal connections in religious change. Prosopography forms the foundation for a study of female agency in Rome in the Middle and Late Republic.

These papers together highlight new discoveries, new theoretical boundaries, and new hypotheses for investigation. They also represent the caveats which characterize the robust degree of debate within the community of scholars pursuing Social Network Analysis. That debate is positioned across the divides of chronology, region and disciplines that make up the study of the ancient and medieval Mediterranean: its continuation indexes the fruition of interdisciplinarity at the digital frontier.

Discussant: *Giovanni R. Ruffini*, Fairfield University

**Maritime Networks and Moral Imagination: Samothracian Proxeny as an Archaeology of Coalition**

*Sandra Blakely*, Emory University

Hellenistic *proxenia* decrees from the island of Samothrace offer a case study in the challenges as well as the potential for network analysis to blend qualitative and quantitative data, bridge civic practice and ritual promises, and make productive use of non-Mediterranean comparanda. Samothrace is as rich in proxenic inscriptions as the granting city is underexplored archaeologically and poorly attested in historical documents. Excavations on the island have focused on the sanctuary of the mystery cult, positioned just outside the city walls. Four inscriptions from within those walls confirm that its *proxenia* entailed maritime benefits—*asylia*, access to the *boule*, *eisploun* and *ekploun* in pursuit of trade. All of these would render Samothrace's port more welcoming, and are consistent with historical arguments, since Weber's *Wirtschaftsgeschichte* (1923), for the maritime functionality of *proxenia* decrees. The economic attractions of a Samothracian visit are deduced from its broader historical setting rather than any curated collections of material evidence. The island's Greeks seem the pioneers of Odryssian trade, benefiting from cooperative relationships with the Thracians who controlled overland networks and the river routes that tied the coasts to inland centers. The geospatial range of the island's *proxenoi* corresponds to one of five routes which ran into the Hellespont from prehistoric period onward; Samothrace itself figures in three of these sea-lanes, suggesting that the promise of its mysteries—safety at sea—was a more natural function of the island than its one poor harbor would suggest. The epigraphic data help us deduce what neither remains nor texts reveal: the island's chief export may have been connectivity itself, and its proxenic decrees the civic realization of the island's mystic promise.

Network analysis offers a methodology for synthesizing the face to face encounters in which the island's *proxenia* would be realized. The numerical data alone, however, fall short of the potential of the inscriptions. *Proxenia* represents a moral network: it both rewards past behavior and enjoins future collaboration and relies, as Mack has argued, on emotional intensity as well as economic calculation (W. Mack, *Proxeny and Polis*, 2015). This recommends an approach through the archaeologies of coalition and consensus and collective action theory which have been applied to case studies in regions from the American southwest to southeast Asia (E. DeMarrais, "Making Pacts and Cooperative acts: The Archaeology of Coalition and Consensus," *WA* 48.1:1–13). These offer models for integrating qualitative data—including mythic, emotional, and ritual dynamics—into quantitative analysis. Brought to Samothrace, this approach yields a more nuanced model for dominant nodes in the island's network, one which foregrounds the potential for some sites to prefer the mythic to the civic deployment of Samothracian affiliation. The dynamics of collective action theory offer resonance with the scale and decentralization of the proposed network, and foreground the flexibility which underwrote the longevity of *proxenia* as well as the promise of the rites.

### **An Examination of Epigraphical and Numismatic Evidence for the Invocation of Jupiter in Roman Imperial Italy Using Network Analysis**

*Zehavi Husser, Biola University*

My overarching project aims to examine conceptions of the ancient Romans' highest deity, Jupiter, in Italy during the Imperial period by tracing the networks involved in transmitting components of the worship experience of the god including epithets employed, the purpose for invoking the deity, as well as how the god was propitiated. Here, network analysis is applied to various types of material and inscriptional data as a proxy for studying the transmission and distribution of ideas about the god in Roman Imperial Italy.

At this stage of the project, the focus of this paper, I analyze multiple datasets in order to better understand the actors who invoked Jupiter, which manifestations of the god they favored, and how they portrayed various forms of the deity iconographically. This paper presents a study of hundreds of epigraphic documents (including votive dedications, building inscriptions, calendars, etc.), as well as hundreds of imperial coins minted in Italy. Data is processed using the *igraph* package of R. Visualizations of one- and two-mode networks are created using *Gephi*; maps are produced using the *ggplot* package of R.

Results suggest that Jupiter was invoked by a wide diversity of actors with a range of statuses and occupations. It appears that certain types of persons were more likely than others to invoke a given form of the god. For instance, Jupiter Optimus Maximus, which had the widest Italian distribution of the manifestations studied, appears to have been invoked by the broadest range of actors in epigraphic evidence, but he is presented by name far less frequently by the imperial authority in numismatic evidence. Jupiter Conservator tends to be petitioned on inscriptional documents by actors with an official relationship to the state or city/town; correspondingly, this manifestation of Jupiter is by far the most frequently invoked in imperial coinage.

### **Books on the Road: Exploring Material Evidence for Social Networks in the Early Middle Ages**

*Clare Woods, Duke University*

In order to reconstruct social networks for the early medieval period—whether friendship or patronage networks, or teacher-student relationships—scholars typically mine surviving letters and letter collections. While the information gleaned from letters is undoubtedly important, what survives from the early Middle Ages is patchy. Further, analysis of the networks we reconstruct from this data are all too often divorced from any material or geographical reality. We gain a more holistic picture of intellectual and social interaction, I argue, if we also explore the material evidence for the exchange and circulation of texts composed by medieval authors. Extant manuscripts are key pieces of physical evidence for intellectual connection, holding as they do geographical, temporal, and sometimes personal markers for interest in a particular text. Despite this, they remain an underused source in medieval network studies. This paper applies spatial and material dimensions to the project of mapping early medieval social networks by layering together two

different kinds of evidence: (1) geolocated, contemporary manuscript evidence for some of the most widely-copied Carolingian (ninth-century) texts and (2) the Roman transportation network, still a relevant infrastructure model for the early medieval period. (Data available from the Stanford Orbis project.)

When we aggregate and visualize manuscript data (whether multiple texts by one author, or multiple texts by multiple authors) patterns emerge that invite scrutiny as to the realia of book travel. In my data visualizations, a small number of ecclesiastical centers stand out for the number and range of manuscripts they owned. Layering manuscript data with a transportation network allows us to appreciate the ways in which these centers were connected beyond the known personal networks of “in-house” authors or scholars. My paper focuses on two centers, St Gall and Lyon. Although long recognized as possessing rich collections of medieval manuscripts, no one has yet considered location as a factor in these centers’ ability to acquire new texts. In fact, both St Gall and Lyon lie at or near to important nodes in the Roman transportation system, specifically in areas that were gateways to key Alpine passes. As this paper demonstrates, by including material and practical evidence to reconstruct early medieval intellectual connections, we gain a much more nuanced understanding of the ways texts and ideas circulated, of the routes books traveled, and the role of travel itself in shaping ecclesiastical libraries.

### **Female Agency in the Late Roman Republican: A Social Network Approach**

*Gregory Gilles, King’s College London*

In this paper I employ social network analysis to study female agency in the late Roman republican period. My project uses female centered networks to connect women, and men, during this period as visualization enables an easier identification of different patterns of connectedness, whether they be social, familial, and/or political. With the use of the Digital Prosopography of the Roman Republic created at KCL (<http://romanrepublic.ac.uk/>), as well as various ancient sources, such as Cicero’s letters, Plutarch’s biographies and the histories of Livy, Polybius, Appian, Suetonius, and Cassius Dio, I have created familial data sets so as to identify connections within four generations (one above and two below) of the various central female nodes. Through trial and error, focusing on four generations not only enables the identification of possible repeated familial connections, but also pinpoints new connections forged with powerful men or families in subsequent generations. There are, in total, twelve different female centered networks which include over 150 elite and equestrian women from Rome with dates ranging from ca. 250 B.C.E. to ca. 10 B.C.E.

The numerous female centered networks provide data to help answer four key questions: Were marriages mainly used to cement, or initiate, political alliances between powerful men and/or families? Findings indicate that certain elite families appeared to remarry into each other every second or third generation. Was the often great age disparity between spouses intentional and the norm, or was it simply due to the military and/or political careers that Roman men had to undertake before they could marry? The networks cannot definitively answer this, but analysis of first marriages correlate with findings by Richard Saller (*Classical*

*Philology* 82 [1987] 21–34) and would indicate that men’s public careers took precedence over marrying at a young age. Was a rich widow or divorcée an attraction for politically aspiring new man/impoverished noblemen? The majority of networks demonstrate that this is not the case. Did stepmothers play an active role in the upbringing of their husband’s other children? The networks highlight that most stepmothers were of similar ages to their new stepchildren and so an active role would often not have been required.

This paper, therefore, showcases the networks that have been created from the analysis of literary materials and demonstrates how social networks can be used to answer these, or similar, historical questions. The issues with the data, and their impact on the creation of these networks, as well as their analyses, will also be discussed.

### **Attalus I and Networks of Benefactions**

*Gregory Callaghan, University of Pennsylvania*

In the span of a century, the Attalid dynasty of Pergamon grew from a single city to ruling over the majority of Western Anatolia, attaining a remarkable legacy as patrons of the Greek world in the process. Gruen ascribed their success precisely to that patronage (“Culture as Policy: The Attalids of Pergamon” (2000, 17–31). An extensive series of benefactions and euergetic interventions defined Attalid foreign policy. Network analysis is a powerful tool to visualize these varied benefactions of statues, buildings, financial contributions, and other gifts. Such networks are difficult to generate, as they require a great deal of subjective judgment as to what qualifies as a link, combining evidence from literature, inscriptions, and archaeology. It is well worth the effort, however, as the resultant networks allow for holistic considerations of the entire system of Attalid patronage. The insights generated from such visualizations enable a deeper and more nuanced understanding of the ways in which Attalid foreign policy used “culture.” In this paper, I explore the foreign policy of Attalus I, through an analysis of his network of foreign benefactions and alliances.

This analysis reveals three important aspects of Attalus’s foreign policy. First, the scale of his network eclipsed those of Philetaerus and Eumenes I, representing a significant increase in Attalid interstate interactions. Second, the geographic clustering of the network suggests that Attalus approached local, regional, and trans-Aegean interactions differently. Third, his network presents a distinct chronology, which reveals how Attalus’s foreign policy evolved over time in response to various successes and setbacks. Altogether, network analysis of Attalus’s interstate interactions reveals how the dynasty’s interstate relations were shaped by his reign, and the extent to which the kingdom owed its success to his foreign policy. That policy utilized the dynasty’s status in the Aegean—acquired through networks of benefactions—to claim increased interstate authority for the king beyond his military capabilities.

**The Social Networks of Athenian Potters (SNAP) Project: Modeling Communities of Artists**

*Eleni Hasaki*, University of Arizona, and *Diane Harris Cline*, George Washington University

The Social Networks of Athenian Potters (SNAP) Project is the first of its kind to attempt to apply Social Network Analysis (SNA) to the study of Attic black-figure vase painting. In general, SNA seeks to uncover commonalities and links inside a network, while also revealing cliques, clusters, and groups. In our study, we used SNA to find and then graph the relationships between Athenian potters and painters—recording, visualizing, calculating, and evaluating the connections between individual artists, groups, and the shapes they made in common. In order to do so, we mined data from J. D. Beazley's *Attic Black-figure Vase-Painters* (1956) and *Paralipomena* (1971) for the names or attributed identities and their relations. We found 595 discrete entities, either people, groups, shapes of vases, or classes, with 767 relationship pairs.

SNA projects always face methodological constraints linked to the biases inherent in the available data, and our experiment was no different. The complex world of black-figure artists as described and envisioned by Beazley is seductive but is also perhaps a mirage, for he has been criticized by some for possibly populating the potters' quarter with "fictional" artists (or "hands with no bodies"). Certainly, the lack of precise definitions for his thirty relational terms such as "close to," "in the manner of," "near," and more presented a challenge for us in trying to map the relationships.

At the completion of this stage of our SNA project, we were able to build a preliminary model for the development of Athenian potters' communities spanning over 200 years, which has never been done before. Our comprehensive SNA graphs (sociograms) can highlight information often obscured in the linear format of an 800-page volume. Such visualizations allow researchers to see the panoramic view while also zooming in on specific clusters. Using centrality metrics, we were also able to evaluate who was important because of their position in the network as a broker, bridge, or influencer, as well as who was central, or peripheral, in the network, and to examine how each artist's position in the network compares with the place they appear to hold in art history based on style. We use social network metrics to compare a few relatively obscure artists who play important roles in the network with the social network metrics for prominent artists, such as Exekias or Nikosthenes. Despite the idiosyncratic and challenging nature of this particular data set, the Social Networks of Athenian Potters Project can serve as a prototype for applying SNA to other communities of interrelated artists working in the ancient world and beyond, as well as to other aspects of classical archaeology.

## **Session 7C: Colloquium**

### **Origins and Romanization of Bithynia et Pontus**

Organizer: *Owen P. Doonan IV*, California State University Northridge

#### **Colloquium Overview Statement**

It is a commonplace that the Pontic region remains one of the least known Roman provinces despite its cultural and political importance, particularly during the second and third centuries C.E. Recent archaeological fieldwork in this region has contributed greatly to our understanding of this diverse and complex province. This colloquium brings together results of some of the most significant excavations and surveys in north Anatolia that shed light on the urbanized core of Bithynia, the coastal cities of Pontus and the sparsely populated Pontic Alps. The chronological range of the case studies ranges from the Archaic and Classical *poleis* of Tieion and Sinope, the Hellenistic and early Roman Imperial sites of Kurul Kalesi and the Örukaya dam, and the remarkable urban transformations of Nicaea and Nicomedia as the latter emerged as the capital of the eastern empire.

The organizer will offer a brief introduction to the session (10 minutes) and moderate a discussion following the presentations. Each paper will be allotted 20 minutes. The first paper presents the results of the recent excavations at Archaic through Roman Tieion, a Milesian colony on the Black Sea coast. Important new findings on the early colony provide some of the earliest evidence for Ionian activity in Black Sea Anatolia. The presentation also considers evidence for the Romanization of the city. The second paper considers the walls of Sinope as a stage for the performance of civic power. This interpretation offers a useful context for understanding the Roman dismantling of the walls by replacing towers with arched gateways. The third paper presents the results of new excavations at Kurul Kalesi, a major Pontic stronghold in the mountains south of modern Ordu. The site offers an unparalleled example of the mountain citadels that formed the predominant military framework of the Pontic Kingdom and an in situ cult image of Kybele. Paper four examines an important strategy for creating and maintaining control of a difficult territory in northern Anatolia. Water management infrastructures were among the most visible, impressive, and ultimately indispensable systems through which Romans projected power into urban and rural communities. The fifth and sixth papers present new findings from the two great rival cities of the region. Paper five presents a new urban survey in Nikaia, while the sixth presents representations of agonistic festivals in imperial Nicomedia.

#### **Nikaia in Bithynia: Profiles of a Roman City**

*Christof Berns*, University of Hamburg, *Ali Altin*, Uludag University Bursa, and *Ayşe Dalyancı*, Technical University of Berlin

Nikaia (modern İznik) is situated on the shore of Lacus Ascanius (İzник Gölü). It has been a major center of the historical landscape of Bithynia from the Hellenistic period onwards and one of the metropolises of the Roman province of Pontus-Bithynia together with Nikomedia. In 325 C.E. the city hosted the first ecumenical council. The basis of our presentation is an urban survey of Nikaia/

İznik we conducted from 2012 to 2015 with funding from the German Research Association (DFG). This survey was the first systematic approach to document and analyze all stone material from the town other than the inscriptions already published in a catalog by S. Şahin in 1979. Special attention was paid to the abundant evidence of spolia reused in later buildings. We collected a broad body of material representing building activities and tomb decoration in the Roman Imperial period. A second focus was on the documentation of monumental buildings such as the impressive fortifications of Nikaia. Looking at these buildings as well as at architectural elements and tomb stones, we aim at defining patterns of representation of individual as well as collective commissioners and set them in relation to each other according to three temporal phases, roughly the first, second, and third centuries. We intend to develop an agent-based picture of the processes of Romanization in Nikaia, leaving space for diverse and sometimes contradictory developments. The overarching goals are to enhance recent attempts for a better knowledge of Bithynia and to contribute to current discussions on Romanization.

### **Water and Power: Investigating Roman Dominance through Water Management Systems in Corum**

*Emine Sokmen, Hitit University Çorum*

Political hegemonies, ancient as well as modern, create and maintain their legitimacy of power through hydraulic projects. This paper argues that the Roman dominance in the Alaca district of Çorum (central Black Sea region of Turkey) arose through the construction and usage of a dam in what is now Örükaya village. This dam is a rare example of hydraulic know-how and engineering of Romans in Asia Minor. The dam has been contextualized through the investigation of hydrology, topography, climate, geology, and combining that data with the water technology that was utilized to provide water systems, the details of the social organization that dominated the landscape (cultural and natural).

The Roman dam was built with large rectangular masonry and its retaining wall lying between two outcrops with 5 meters wide and 35 meters long, has an impermeable concrete core (*opus caementicium*). Its most obvious use was collecting water, thus providing some carry-over storage from the rainy season for irrigation. This water management system imprinted on the landscape and local communities. The Romans created visual dominance through technology by shaping the landscape to their purposes in order to secure water for domestic and civic life. It has been proposed that the dam dates roughly first to second century C.E., after intervening Romans in the Northern Anatolia to end the Mithradatic dominance set their presence consistently.

### **Archaic Tieion: Results of Recent Archaeological Investigations and implications for Early Colonization and Romanization of the City**

*Şahin Yıldırım, Bartın University*

The ancient city of Tieion is located on the western part of the south Black Sea littoral, next to the outlet of the Billaos river (Filyos) which was considered as the

border between Bithynia and Paphlagonia. It is known as a Milesian colony, which was founded in the second half of the seventh century B.C.E. Ionian pottery dating to the seventh/sixth century B.C.E. has been excavated on the acropolis of Tieon, confirming the dates established in the written sources for the foundation of the city.

Recent archaeological excavations in the vicinity of the acropolis have documented the ruins of several buildings belonging to the foundation periods of the city. Dug-out pit huts with stone masonry linings were found in round, oval, and rectangular forms. Within and around these structures, wild goat style ceramics dating to the last quarter of the seventh century B.C.E. and local ceramics in dark gray, black, and brown hand-made wares have been found. Strata just beneath the colonial levels have yielded the terracotta horse figurine fragments dating to the Late Geometric Period together with local wares. Thus, the concrete evidences of Greek colonization of the southern Black Sea have been acquired.

Under Roman administration, Tieion was transformed into a typical Roman city with a well-preserved ancient harbor, a temple on the acropolis, aqueduct, baths, and theater.

### **Theater of War: Performing Power on the Walls of Ancient Sinope**

*Owen P. Doonan IV, California State University Northridge*

Aeneas Tacticus, *How to Survive under Siege* (40.4–5), recounts a vivid episode in which the women of Sinope fooled the invading satrap Datames into believing they were male soldiers. The women dressed in armor and clanged pots and pans to fool the enemy into thinking that the city was protected by a much larger force than they had. The importance of ancient fortification walls derived from the creation of a stage on which power could be performed as much as from their function as defensive infrastructure. A generation or two after the brave women of Sinope turned back Datames, an impressive wall complete with large towers, catapult, and arrow ports furnished with swinging wooden doors replaced the humble stone and mud brick construction on which they had promenaded. The wall impressed Strabo, who pronounced the town “beautifully walled” among other praise (Strabo, *Geogr.* XII.iii.11).

Sinope prospered under Roman administration, was host to a Roman colony, and the limited evidence indicates a flourishing Roman city. Nonetheless, at some point during the Roman administration, the city wall was dramatically altered by replacing at least three large towers with arched gates. An unusual local bronze issue from the time of Caracalla depicts a triple arched gate topped with honorific statues. This is most likely a depiction of the entrance to the city. A recent review of the destructions and plundering throughout Pontus in the early phases of Roman occupation has suggested a deliberate program of cultural erasure (Polanski 2013). Given Strabo’s praise for the walls of Sinope, the dismantling of the city walls may not have been carried out in the immediate aftermath of conquest but may have been associated with the intrigues leading up to the ascension of Septimius Severus whose rival Pertinax was backed by several cities in Bithynia et Pontus.

### **The Fortress of Kurul Kalesi, a Pontic Stronghold in the Final Battles between the Romans and the Pontic Kingdom**

S. Yücel Şenyurt, Ankara Hacı Bayram Veli Üniversitesi

The fortress of Kurul is located 7 km south east of the modern provincial seat of Ordu, Turkey. Scientific excavations at Kurul were initiated in 2010. It was the first long-term archaeological excavation in eastern Black Sea Anatolia. The fortress, associated among others with Mithradates VI Eupator (120–63 B.C.E.), is situated on the Kurul hill at altitude of 571 m overlooking both the valley of Melet River (Melanthius) and its wide delta at the coast. It has a conspicuously strategic location that controls the coastal route of Black Sea as well as the course of Melet River. In addition to the steep slopes of the hill, the excavations have demonstrated that the fortress has a remarkable fortification wall with the gate where a seated statue of Cybele was excavated in situ in 2016. The cult image was placed in a rectangular niche (*naiskos*) in the vestibule by the gate. The architectural remains demonstrate the destruction and renovation phases under Pontic and Roman rule. Finds such as pottery, coins, metal weapons, round shots, sling bullets, terracotta, and figurines revealed at the excavations witness to the reign of Mithradates VI as well as the battles with the Roman army commanded by Sulla and Pompey. The finds from the excavations and the fortification itself clarify the Pontic defensive strategy of Mithradates VI against the Roman invasion, a pattern erased by Roman the dismantling of nearly all of the other major citadel sites in the Pontic mountains.

Session	7D:	Colloquium
Advances in Mycenaean Bioarchaeology		

Organizers: *Olivia A. Jones*, West Virginia University, *Ioanna Moutafi*, University of Cambridge, and *Kaitlyn Stiles*, University of Tennessee

#### **Colloquium Overview Statement**

Bioarchaeological approaches to Mycenaean mortuary contexts have greatly increased in recent decades producing a large amount of bioarchaeological data. Several new methods have been employed by these analyses, which have focused on various biocultural aspects of Mycenaean life and death such as disease, demography, migration, diet, and mortuary practices, while also confronting significant archaeological issues such as poor preservation, excavation methods, and the special problems posed by fragmentary, commingled remains. Despite this influx of information and significant advances in the interdisciplinary nature of our approaches, true integration of the different strands of biological and cultural data has yet to be reached. Furthermore, much of this data is site-based and has not been synthesized at a regional or supra-regional level. The goal of this session is to combine data sets and evaluate the aforementioned research themes in Mycenaean bioarchaeology in order to gain a more comprehensive picture, detect major problems, and propose realistic ways forward in the discipline.

The session is structured around representative papers tackling key issues at the forefront of current Mycenaean bioarchaeology. The papers address the following

principle questions: (1) What are best practices for excavation of Mycenaean tombs and graves? (2) How can we explore the biocultural history (osteobiography) of multiple individuals interred in a single grave within a chamber in the Mycenaean period? (3) What is the amount of trauma observed in Mycenaean samples and to what extent does it coincide with current archaeological interpretations of Mycenaean society? (4) What combination of methods is best for reconstructing ancient diet and what are the specific challenges of such approaches to Mycenaean samples? (5) How has strontium analysis improved our understanding of migration in the Mycenaean period? (6) To what extent is biodistance analysis useful in the study of biological relationships among individuals in the same cemetery, and how might the results be interpreted within the broader Mycenaean sociocultural context? (7) How can bioarchaeology contribute to a more nuanced understanding of burial practices, and to what extent is it possible to integrate cultural and biological data when facing challenges such as legacy data and poor preservation?

This session is an important opportunity to bring together Mycenaean bioarchaeologists and archaeologists in order to promote interdisciplinary collaboration.

Discussants: *Joanne M. Murphy*, University of North Carolina-Greensboro, and *James C. Wright*, Bryn Mawr College

### **It All Starts in the Field: How to Improve the Excavation of Human Remains in Mycenaean Mortuary Contexts and Why it Matters**

*Ioanna Moutafi*, University of Cambridge, *Yannis Galanakis*, University of Cambridge, and *Panagiotis Karkanas*, The Malcolm H. Wiener Laboratory for Archaeological Science, American School of Classical Studies at Athens

The well-established research interest in Mycenaean mortuary archaeology has in recent years been met with an increasing number of bioarchaeological studies. Despite significant advances in interdisciplinary bioarchaeological methodologies, the main prerequisite of all our research, the excavation of mortuary contexts and the recovery of human remains, is often overlooked. An integrative bioarchaeological design for the recovery of human remains and contextual information is rarely in place before excavation, adequate resources are often lacking, the bones are seldom excavated by specialists, while financial and time restrictions are always pressing. As a result, valuable information is lost, with detrimental effects to further research.

This paper puts a spotlight on the excavation of human remains. The aim is to underline its primary significance for any successful bioarchaeological research, to review current advances in relevant excavation techniques, to identify the most common drawbacks, and to propose some effective, but also feasible, suggestions for the optimal documentation and recovery of human bones in Mycenaean mortuary contexts. Based on the recent excavation of a uniquely large Mycenaean chamber tomb at Prosilio, Boeotia, we will present a holistic excavation methodology, which addresses equally the recovery of biological, cultural, and geological data. Such an approach requires a thorough interdisciplinary design prior to the excavation, careful planning for obtaining all necessary resources, the availability

of specialists in the field, and the combination of a state-of-the-art technological package (including GIS spatial recording and photogrammetry) with up-to-date methodology for bone recording (informed by archeoethnology and funerary taphonomy). To allow further research to reach its full potential, a successful excavation needs to ensure timely, meticulous, and fully detailed recording, recovery, and sample procurement in the field.

### **Parts and Parcels: Insights into the Scalar Nature of Late Bronze Age Collective Identity through the Individual**

*Gypsy C. Price*, Appalachian State University, *Kim Shelton*, University of California, Berkeley, and *Lynne Kvapil*, Butler University

Investigations into non-palatial Mycenaean mortuary populations reveal deviations from the collective "Mycenaean" identity that have been masked by generalized, top-down models which have dominated interpretive narratives in the past. Mortuary practices involving multiple interments within a single mortuary context, such as those practiced in the Late Bronze Age Aegean, indicate an emphasis on some form/s of collective identity in death, at least, if not in life. The scale of that collectivity, however, can be difficult to discern. As collective identities are predicated on networks of interrelationships between individuals, interpretations must be built from the ground up, starting at the unit of the individual. Recent theoretical approaches to Mycenaean mortuary studies that bring the "under-theorized individual" to the forefront of interpretive frameworks give us insight into how agency and personhood construct collective identity, but it can be problematic to apply these approaches practically due to difficulties in identifying the individual in the archaeological record. This is especially true in long-term use mortuary contexts such as chamber tombs, where not only are multiple individuals interred, but they are interred at different times and often re-interred or treated in various ways.

This paper explores these difficulties through the construction and examination of osteobiographies of individuals interred in a single, central cist within a Mycenaean chamber tomb in cemetery of Aidonia, Greece. By employing a biocultural approach and focusing on the lived experiences embodied in the remains of those interred, we can elucidate individual life histories and interrelationships of the dead at level of the cist, laying the groundwork for larger scale interpretations at the chamber, tomb, and cemetery level. Studies such as this inform questions of inclusion and exclusivity amongst Mycenaean populations, providing a better understanding of the scalar nature of Late Bronze Age collective identity as interpreted through mortuary practices.

### **Provenance, Bones, and Strontium Isotopes**

*Argyro Nafplioti*, University of Cambridge

The application of strontium isotope ratio ( $87\text{Sr}/86\text{Sr}$ ) analysis to the study of archaeological human skeletal remains has revolutionized research on past population provenance and residential mobility and contributed to a nuanced understanding of the human past.

Isotope ratio analyses measure a chemical “fingerprint” within skeletal remains, which can be directly linked to food and water ingested by the individuals during life. Strontium isotopes in particular largely relate to local bedrock geology and can therefore provide direct information as to one’s geographical origin. The applicability of strontium isotope analysis depends on the variation in geology and the dietary resources locally available and is therefore directly relevant to the specific contexts examined.

Whilst America and Northern Europe have a long tradition in this type of research, it is only relatively recently that this began to be employed in Aegean archaeology. More than ten years following the announcement of the first ever strontium isotope ratio results from Bronze Age Crete in the Tenth Cretological Congress at Chania, it is high time we critically reviewed the data in hand. This paper characterizes the particularities of the Aegean context and describes what can and cannot be achieved through research of this kind. By reviewing published work in the field the author systematically assesses the potential of strontium isotope ratio research to investigate population mobility in relation to pertinent archaeological questions of cultural change and discontinuity, social organization, marital patterns and identity in the Mycenaean period. She also reviews the potential of other isotope systems to trace provenance and mobility in the past. Given the growing interest in strontium analysis among archaeologists researching in this context, as evidenced by the new studies that use (or consider using) isotope skeletal analysis, this paper is ever so timely.

### **Family Matters: Bioarchaeological Perspectives into Mycenaean Kinship**

*Efthymia Nikita*, The Cyprus Institute, and *Kaitlyn Stiles*, University of Tennessee

This presentation explores the study of kinship in the Mycenaean era based on human skeletal data. Currently available methods are briefly presented, stressing their strengths and limitations. The site of Golemi Agios Georgios is used as a case study to examine the applicability of kinship analysis in a Mycenaean setting. Most scholars have assumed that chamber tomb cemeteries were comprised of kinship groups. This cemetery provides an “ideal” assemblage because three different types of tomb clusters have been identified based on: (a) the spatial proximity of the tombs, (b) the archaeological record, and (c) bioarchaeological markers. It also provides a way to test the extent to which kinship influenced the organization of the cemetery. Because this cemetery contains secondary depositions of commingled remains it represents a challenging yet commonly encountered type of Mycenaean assemblage. The sample size, ranging from 12 to 180 elements, provides an avenue through which to discuss issues pertaining to the statistical power of different tests. Analysis was based on cranial and dental nonmetric traits, which are heritable and have been used extensively in biodistance studies. The Mean Measure of Divergence (MMD) was estimated and visualized using a dendrogram to test whether the biodistance clusters matched those already identified. Binomial probabilities were estimated per trait to evaluate whether the tomb clusters exhibited a frequency of traits that was statistically unlikely to have occurred by chance, thus suggesting that the individuals buried together share a common ancestry. The results identified cases where it is likely that the individuals buried in the same

tomb cluster were related. However, these cases were scarce and the dominant pattern is one of non kinship-based clustering. These findings are discussed in relation to other lines of evidence from the cemetery indicative of social structuring, while suggestions for future research directions are provided.

### **Slinging Bullets: Studying Mycenaean Warfare through Skeletal Remains**

*Kaitlyn Stiles*, University of Tennessee, and *Maria Liston*, University of Waterloo

The impacts of Mycenaean battle are rarely observed in the skeletal record. In this study, we consider cranial impact wounds and suggest potential sources of this wound type. Four crania from three Mycenaean chamber tombs at Golemi Agios Georgios (henceforth, "Golemi"), in northeast central Greece, and a single skull from the Athenian Agora offer evidence for projectile wounds with small foci. The Golemi individuals survived their wounds and healing of the bone obscured some details of the injury. Nevertheless, it is clear that each was hit with a rounded or amygdaloid object with enough force to crush the outer table of the skull. In two skulls, the wounds appear to have also impacted the inner table of the skull. The skull from the Athenian Agora suffered two perimortem wounds from high velocity impacts. One injury on the right parietal shattered the bone, with crush injuries at the point of impact and radiating fractures across the cranial vault. A second injury on the back of the skull produced an internally beveled wound, with a small impact point on the exterior. The wound resembles a small caliber bullet wound, indicating the skull was struck with considerable force at high velocity. We suggest that these wounds are the result of sling bullets or stones. Both rounded stones and amygdaloid stone and lead bullets have been identified in Mycenaean sites and illustrated in Mycenaean imagery such as on the silver Siege Rhyton from Mycenae. Although the sword was the most revered instrument of warfare in the Mycenaean period, evidence for the use of the sling indicates that significant damage was inflicted by weapons available to common soldiers. The evidence presented here illustrates the potential for the Late Bronze Age skeletal record to broaden our knowledge warfare and weapon use in the Mycenaean period.

### **Bioarchaeological Research of Mycenaean Mortuary Practices: Current State and Ways Forward**

*Olivia A. Jones*, University of Groningen

Mycenaean mortuary practices have long been a popular topic for research in Greek archaeology. Traditionally this research has relied almost exclusively on material culture, such as tomb architecture and grave goods, leaving the human remains, especially those without grave goods or that are poorly preserved, without any framework for study. Fortunately, the recent increase in bioarchaeological study of Mycenaean mortuary contexts is providing useful methods and insightful data to supplement archaeological evidence and explore the complexity of burial practices; however, much of this data has not been synthesized. This paper combines data from recent bioarchaeological studies in order to evaluate patterns

within Mycenaean burials such as burial exclusion, secondary manipulation of human remains, and tomb reuse.

This paper draws on data from multiple regions and employs bioarchaeological methods including taphonomic methods, standard age and sex estimation, and radiocarbon dating. Taphonomic methods, such as bone preservation, are vital for distinguishing between purposeful manipulation versus natural damage in deposits of disarticulated and commingled human remains labeled as “secondary burials.” These methods and data demonstrate the value of questioning the evident disorder observed in some deposits of human remains. In addition, the use of standard estimations of age and sex show that burial exclusion likely occurred on the basis of age and sex in different regions and at different times in the Mycenaean period. Lastly, the use of radiocarbon dating in multiple tombs throughout the Mycenaean world allows archaeologists and bioarchaeologists to more accurately reconstruct the timing of tomb reuse and date burials lacking dateable grave goods.

Combining multiple methods within a bioarchaeological framework provides a more holistic picture of Mycenaean burial practices. This paper synthesizes and evaluates current bioarchaeological evidence of Mycenaean mortuary practices and proposes realistic ways forward for the study of these complex mortuary deposits.

### **Mulling over Mycenaean Diets**

*Anastasia Papathanasiou*, Ephorate of Speleology and Paleoanthropology, Athens, and *Efrossini Vika*, Department of History and Archaeology, University of Athens

Twenty years ago, analytical breakthroughs in paleodietary reconstructions with isotopes came to confirm that the Late Bronze Age hierarchical system of organization was reflected in consumption patterns, with divisions finding their way to the table. Theoretical approaches to “taste” emerged, and Mycenaean dietary behaviors were established. This paper synthesizes older isotopic studies in light of new data and updated methodology in order to reevaluate the current paradigm on Mycenaean diets and its implications for social organization.

Recent research in Late Bronze Age sites, like Voudeni, Kalamaki, Agia Triada, Agios Vasiliios, Glyka Nera, Thebes, Lokris, Velestino, Kazanaki, and Pieria, together with methodological advancements including less studied elements, such as sulfur, call for a rigorous reevaluation of previous data on diets. The present study takes into account all the latest case studies, together with the most recent analytical advancements, with the goal to discuss whether it is still possible to link everyday diets with social organization in Mycenaean times.

The results show that traditional isotopic approaches are more difficult to show differences in everyday diets and therefore are less likely to pick up social differentiations related to food procurement and consumption. It can therefore remain impossible to talk about elite diets. Rather, it is imminent to start discussing questions like differences in the use of natural resources or food trade in prehistory, and the combination of methods, like isotopes, archaeobotany, and archaeozoology, as a standard practice. This calls for the setting of a new agenda on Mycenaean dietary studies.

**Session 7E: Colloquium**  
**Water Management and Cults in Etruria (Fourth to First Century B.C.E.)**

*Sponsored by the Etruscan Interest Group*

Organizer: *Ugo Fusco, University of Rome "Tor Vergata"*

**Colloquium Overview Statement**

Interest in the archaeological and religious-historical problems connected to springs (fresh and thermo-mineral waters) has increased significantly in recent years. We thus propose to organize a colloquium on this issue, focusing on Etruria. As the title "Water Management and Cults in Etruria (Fourth to First Century B.C.E.)" suggests, the aim is to survey the main historical and archaeological issues connected to water within towns, with reference to a specific timeframe: the end of the Etruscan period and the early phases of the Roman conquest.

As concerns water management, it is essential to distinguish between the different types of springs available to a site (town, settlement, sanctuary): oligomineral and/or thermo-mineral. Whilst the former were used for all the purposes essential to the religious, civic, and economic life of the community, the latter, already in antiquity, had a prevalently therapeutic function. One objective is thus to verify, in the instances considered (the towns of Veii, Cerveteri, Vulci, Arezzo, and Cosa), how they supplied themselves with water, what types of springs were present and which structures were connected to these. We also consider it helpful to compare the data between Etruscan foundations and a newly founded city, like the Latin colony of Cosa, to identify any continuities or discontinuities in forms of water use.

The issue of cults is of primary importance for the colloquium given the very close links between religious life and water (considering both types of springs). The cultic aspect is considered from different perspectives: which sanctuaries belonging to the site in question continued to be frequented during the relevant period; what types of water management structures were in use (distinguishing between newly built structures and those reused from the previous phase); the deities venerated and, where present, the type of spring (thermo-mineral or oligomineral), with a special focus on identifying potential forms of cultic continuity or discontinuity with the preceding or following phase. The final paper of the colloquium will consider the rituals connected to the closure of water facilities and thus represents an appropriate conclusion to this topic. The time period (fourth to first century B.C.E.) was chosen to highlight some specific aspects connected to the Roman conquest, such as potential changes in water management and the relevant structures, whilst on the cultic level the aim is to identify which religious processes were attested with the Roman conquest (continuity or discontinuity in cult places and the deities venerated).

### **The City of Veii before the Birth of the Imperial Municipium: Water and Gods**

*Ugo Fusco, University of Rome "Tor Vergata"*

In recent years, the state of knowledge of the site has made significant leaps forward thanks to the publications of the British School at Rome and the multiyear "Progetto Veio," started in 1996 by La Sapienza, University of Rome. From a topographical point of view, the town of Veii stands on a plateau (h 185) and is skirted by two watercourses, both still active today: the Fosso Valchetta, the ancient Cremera, and the Fosso Piordo. It has been proposed that the water supply system during the Etruscan and Roman phases was rationalized by constructing large cisterns that, thanks to specific conduits, supplied the various parts of the town, without specific infrastructure (such as an aqueduct). Of particular interest is a passage by Dionysius of Halicarnassus (XII, 15) that provides a fairly exhaustive overview of the environment and water resources of the town and territory: water is abundant, not brought in from the outside, and of excellent quality for drinking. This passage thus explains the absence of an aqueduct to supply the town with water: the site's abundant water simply made it unnecessary. In the history of Veii, the date of 396 B.C.E., the year of the Roman conquest, is without doubt the most catastrophic event suffered by the Etruscan town. As such, to determine the possible transformations or continuities of use occurring with the Roman conquest, I think it helpful to start by presenting an overview of the civic organization, water resources and sanctuaries present during the phase of the seventh to fifth centuries B.C.E. Afterwards, with the help of plans and tables, I will analytically present the following data, falling into the timeframe proposed by the colloquium:

- (1) the size and characteristics of the new settlements of the Republican period, preceding the imperial Municipium;
- (2) analysis of the water-related facilities from the previous phase still in use and description of newly built structures;
- (3) overview of active thermo-mineral springs and the potential evidence for cults;
- (4) description of the urban sanctuaries frequented during the Republican period and the type of water-related structures present;

The conclusion will compare the two historical phases examined. I believe that the methodology described is the most helpful with a view to identifying continuities and discontinuities in the use of water during the various phases of occupation, before the establishment of the imperial Municipium.

### **The Gift of Clepsina: The Spectacle of Water at Caere**

*Fabio Colivicchi, Queen's University, Kingston Canada*

In 2017 and 2018, the team of Queen's University completed the excavation of the monument known in scholarly literature as "the hypogaeum of Clepsina," an underground complex dedicated by the first Roman prefect of the city. The focus of the complex is an underground room with wall paintings and inscriptions, the earliest of which mentions C. Genucius Clepsina, consul at Rome in 276 and 270 B.C.E. The text was carved on wet plaster during the construction of the building and dates it to about 273 B.C.E. with a precision that is absolutely exceptional for

such an early period. The inscription reveals a crucial piece of information, the name of the person responsible for the formal absorption of Caere into the Roman state. Clepsina was a member of the Genucii, one of the most prominent families of Rome, but was also of Etruscan—and possibly Caeretan—origin. Scholarly debate on the interpretation of the monument and the circumstances of its construction has been intense. However, all proposals so far have been based on incomplete data, since the full extent of the complex was unknown. This paper will present a complete picture of the monument, one that is much different from all previous assumptions. The “hypogaeum of Clepsina” was actually a spectacular multilevel nymphaeum with waterfalls and light effects, the earliest of its kind that survives in central Italy. Such an impressive project was sponsored by a Roman magistrate from a clan with local roots to celebrate the beginning of the new phase in the history of the Etruscan city, now fully integrated into the Roman *res publica*. Practical functionality met dazzling aesthetic experience to send a powerful message of prosperity.

### **Vulci 3000: The Archaeology of Water in Etruscan and Roman Times**

*Maurizio Forte, Duke University, Nevio Danelon, Duke University, and Katherine McCusker, Duke University*

The Vulci 3000 project is focused on the study and interpretation of urban transformations in the transition between Etruscan and Roman cities, their public spaces, and specifically on the unique case study of Vulci (Viterbo, Italy), a still intact and non-investigated archaeological deposit with over 1,500 years of continuous occupation. A Duke University team started the archaeological excavation of an important area close to the Big Temple in 2016. The excavation identifies several public buildings, foundation walls and, more specifically, an Etruscan cistern and a groundwater well, connected with a complex system of pipes and tunnels (still to be excavated). The concentration of these and other water infrastructures (in and off site) is mainly located close to the area of the Big Temple and not far from the Roman West Gate: this would suggest the preexistence of ritual activities in relation to the use of public water.

The Etruscans are known for their advanced hydraulic engineering, as seen by their extensive well systems connected through underground aqueducts and tunnels as well as sewerage drainage systems using slopes. Vulci, one of the major cities in southern Etruria and an economic powerhouse, would have had a large water management system spanning throughout the city. A lack of focused study on the hydraulic structures at Vulci leaves a gap in our understanding of how Vulci managed and controlled water and sewerage in the city. Water access is a crucial aspect of social relations, as well as ancient urban planning. This paper aims to examine the visible remains of ancient water systems at Vulci in both Etruscan and Roman times. We will begin by studying the three remnants of aqueducts, one coming to the city from the west, one from the north, and one from the east. The location of known wells will be noted, followed by a spatial analysis of remote sensing data to hypothesize on additional well or cistern locations and the routes of underground tunnels connecting them. We will use this analysis to discuss the

layout and management of water systems at Vulci, adding a new layer of understanding to the social, urban life of the city

### **Water Management at Cosa**

*Andrea U. De Giorgi*, Florida State University, and *Ann Glennie*, Florida State University

Cosa is situated on a waterless hill; the site has no surface water, no accessible aquifers, and was never provisioned with an archetypal Roman aqueduct. As a consequence, the water supply of Cosa was dependent solely upon rainwater harvesting. Not only do domestic structures at Cosa have cisterns—a practice common throughout the Mediterranean—but public buildings, both civic and religious, are provisioned with cisterns, many of them monumental. Additional water reserves could be impounded in three large-scale stand-alone reservoirs. Though these cisterns and reservoirs have been well documented during Cosa's long excavation history, there are several related avenues left to explore. How were public cisterns maintained? How was the water utilized? Who could or could not access these reserves? Did water scarcity ever contribute to the cyclical decline noted throughout the course of the colony's history? Or was there in fact a water surplus which instead contributed to these recessions? This paper addresses the issue of water supply at a less than optimal setting. How the local agency adapted to it and, over time, developed a unique set of skills for impounding and husbanding water is the thrust of this paper.

### **The Economy and Cults of Water in Arezzo**

*Ingrid Edlund-Berry*, The University of Texas at Austin

Unlike other Etruscan cities, there is little archaeological evidence for the city of Arezzo during the Archaic period since, in all likelihood, the early remains are today buried under the Fortezza and churches or other monumental structures on the hills of the city. The importance of water is documented through the Archaic votive deposit at the Fonte Veneziana outside the city limits, but it is not until the fourth century B.C.E. that we can follow Arezzo's rise to economic power through a judicious use of sources of water at places of worship and at places of production of pottery. Although, of course, all Etruscan settlements were dependent on a good water supply, Arezzo may serve as a particularly good case study for proposing a well-functioning city administration that controlled the distribution of land for sacred as well as secular purposes.

Although hardly visible today, the river Castro was in antiquity an important water source for the city (including Roman baths), and served as a boundary between the two sets of hills that constituted ancient Arezzo (conference held at the Accademia Petrarca, 18–19 December 2017; see <http://www.toscana.beniculturali.it/articoli/il-fiume-e-la-citt%C3%A0-arezzo-e-il-castro-dallantichit%C3%A0-ad-oggi>). As can be expected, the major production areas for pottery were located near the river, mostly outside the city (G. Fülle, *JRS* 87 [1997], 111-55) and cult places marked the bridge crossings leading into the city (votive deposit with bronzes,

including the “Aratore”; M. Scarpellini, *Atti e Memorie della Accademia Petrarca* 59–60 [1997–1998], 29–55). Throughout the city, springs and wells are marked as cult sites, often with votive offerings (S. Croce, S. Niccolò), and an extraurban sanctuary at Villa Fatucchi is located by a spring.

Although the archaeological evidence for water use in Arezzo during the fourth to first centuries B.C.E. is somewhat sketchy, it seems valid to state that the city benefited greatly from its location and water sources. While all of Italy witnessed changes in politics and military endeavors, Arezzo seems to have maintained a continuous profile of economic and cultural strength, probably created already in the Archaic period, but certainly enhanced with time. While the presence of abundant water may seem like an obvious requirement for success, judicious maintenance is a sign of political and economic stability that cannot be taken for granted in antiquity, or now.

### **A Well at Caere: Wells, Cisterns, and Ritual Practices in Etruria and Latium**

*Fallon Bowman*, Independent Researcher

After the discovery in 2015 of a series of vases at the bottom of a well system at Caere in an apparent ritual closing, a study project was developed to determine whether or not this practice was widespread across Etruria and Latium, and what the practice could possibly mean. A survey of archaeological reports and articles on wells and cisterns published over the past one hundred years revealed some very interesting similarities and differences between them and the Caere well system. The practice of ritual deposits in wells was indeed frequent across the two areas. There seems to be some uniformity in particular during the Roman Republican period with wells containing the deposit of vases in varying degrees of completeness, and certain types of materials seem to recur in each well such as lead objects, knucklebones, and writing styli.

It appears that the ritual deposits were at least in some cases used to close off a well or cistern as it is a conduit that exists between the living and the world below, and leaving it exposed could be dangerous to the living population.

## **Session 7F: Colloquium**

### **Carthage: World City**

*Sponsored by the Archaeology of Maghrib Interest Group*

Organizer: *J. Andrew Dufton*, Institute for the Study of the Ancient World, New York University

#### **Colloquium Overview Statement**

The city-state of Carthage was a leading polity in the Mediterranean throughout the first millennium B.C.E., both in terms of its internal, urban development and in terms of its economic, military, and cultural involvement abroad. Carthage’s heritage was doubtlessly shaped by its historic and geographic context, according to traditional narratives settled by colonists from Tyre and occupying a unique

position between the Mediterranean littoral and the North African heartland. Yet Carthaginians also in turn shaped the course of Mediterranean history, not only through overseas campaigns but also through deep commercial relationships with Sardinia, Sicily, mainland Italy, and beyond. Carthage must be treated as a truly cosmopolitan environment, a perspective which invites observations on the role of the city beyond merely serving as a foil for Syracusan or Roman interests. After its Roman refoundation, the city again took on a leading role as both an economic and cultural center of the western Mediterranean, a position lasting well into the Late Antique period.

This colloquium focuses on the development of Carthaginian society, culture, and empire, its urbanism and impact both in North Africa and beyond, at any point in the course of its long history. Rather than merely situating the archaeology of Carthage within dialogues of Tyrian or Roman colonization, we invite a comparative perspective for evaluating aspects of the city of Carthage and the Carthaginian world. The collected papers focus primarily on the Punic material at the height of Carthage's influence, but also situate these developments in a much longer history of the city. They draw upon materials from recent excavations at the site itself and across North Africa, as well as presenting new synthetic approaches to published materials.

Overall, the panel—taken within the context of current scholarly interest in questions of globalization and connectivity when describing hegemonic or imperial behaviors—seeks to assess the extent to which Carthage came to manifest itself as a “world city,” regardless of the time period.

Discussant: *Josephine Crawley Quinn*, University of Oxford

### **The External Relations of Early Punic Carthage: Ceramic Data from the Settlement**

*Roald Docter*, University of Ghent

The Early Punic settlement of Carthage has been investigated since the early 1980s. Since then, excavations by the German Archaeological Institute in Rome, the Universities of Hamburg, Amsterdam, Ghent, and Tunis I, as well as the Institut National du Patrimoine (Tunis) have considerably enriched our understanding of the appearance of the nascent metropolis, its architecture, and its material culture.

This paper addresses the widespread external relations of the city from its foundation—traditionally dated to 814/13 B.C.E., in historical accounts; to the late ninth century B.C.E. by C14 dating; or to the second quarter of the eighth century B.C.E. by conventional typo-chronology of the ceramics—to the end of the seventh century B.C.E. The presentation is based upon ceramic material for the early settlement drawn from a number of smaller published data sets as well as on a single large data set that is currently being published thanks to a generous grant of the Shelby White and Leon Levy Program for Archaeological Publications.

### **Tunisian Excavations in the Sanctuary of Ba'al (the 'Tophet') at Carthage**

*Imed ben Jerbana, Institut National du Patrimoine*

The discovery of ash urns capped by *stelai* on private property near the area of the Sanctuary of Ba'al (the "tophet") of Carthage has led to a series of new archaeological campaigns, carried out under the Rue Jugurtha and subject to numerous constraints owing to the urban nature of the site. These works have taken place at a time when the debate surrounding the nature of the tophet has reached its limit, as it continues to be informed primarily by disparate and lacunose ancient documentary evidence. A new excavation is not only an important development in itself, but one which affords an occasion to revisit the textual record and reinterpret the sanctuary.

This project is based on a multidisciplinary approach, involving archaeologists, epigraphers, anthropologists, and zooarchaeologists. Detailed stratigraphic recording notes period-specific changes in the activities within and the function of the tophet over time, and it is now possible to speak of highly localized spatial developments thanks to these methods. If later features did not intrude onto the urns throughout the majority of periods, successive strata can even be connected to particular actions. Specific examples include layers of stone which cover the urns, or thick layers of sterile soil which constitute the end of a site phase. Furthermore, it is worth emphasizing that micro-stratigraphic recording allows the establishment of a direct relationship between the urns and their associated *stelai*. Urns and *stelai* are often found inserted in the same trench, but the former were arranged in various positions (e.g., upright or horizontal) and were sealed in different ways. Analysis of the bone assemblage is in progress, and will permit for the first time a direct relationship between the contents of the ash urns and the text of the *stelai* in this important sanctuary.

### **Carthaginian Imperialism: The Colonial Perspective**

*James Prosser, University of Michigan*

The topic of Carthaginian imperialism remains understudied within the wider scholarship of the ancient Mediterranean and is typically seen as a foil to the growing power of Republican Rome. From the middle of the sixth century B.C.E., Carthage expanded its controlled territory through a combination of conquests and foundations both locally in North Africa and overseas in Sardinia, Sicily, and the Iberian Peninsula. This expansion resulted in what we now consider the "Carthaginian Empire." The relationship of Carthage to its overseas territories was complex and variable, generally involving regular tribute and specific obligations owed to Carthage in times of crisis.

I first situate the Carthaginian expansion along the lines of Carla Sinopoli's cross-cultural understanding of imperialism. I then specifically discuss the ways in which integration into the Carthaginian empire affected the development of urban centers outside of the immediate area of Carthage and North Africa. This is illustrated with case studies from Sardinia (Tharros and Monte Sirai) and Sicily (Motya and Selinunte). The historical development of these settlements and how they came under the control of Carthage is compared, before moving on to the

remains of each of the urban centers and their changes during the Punic period. Through these analyses, I illuminate the ways in which Carthaginian imperialism affected the urban development of its holdings, particularly those peripheral to Carthage.

### **Live and Let Live? Forms of Land Occupation by Carthage**

*Paul Scheding*, Ludwig Maximilian University of Munich, and *Sami Ben Tahar*, Institut National du Patrimoine

During the period of Punic cultural expansion in the fifth and fourth centuries B.C.E., new emporia, settlements, and cities developed all over the Mediterranean. The idea of a territorially bounded empire ruled from the city of Carthage still features in popular accounts, even if such a traditional model was likely never a historical reality. Without firm knowledge about the strategies of Carthaginian occupation, however, the processes of settlement formation in an area have to be evaluated from the evidence itself.

Diverse forms of settlement suggest that there was a highly differentiated idea about the value of a region, which in turn required a flexible interaction with each region's inhabitants and natural resources. It is quite clear that aside from single cities and settlements larger administrative territories also existed. The *pertica* of Roman Carthage, for example, was based on the former Punic territory; the settlements within were certainly dependent on Carthage, even if they had their own city councils. Furthermore, cities were established in more distant regions like the shore of eastern Tunisia and Libya which required specific forms of communication between Punic inhabitants, indigenous communities, and Carthage itself. Interactions between Carthaginians, Greeks, and Romans have been studied primarily for their political or military importance, but the interdependent reception of culture, architecture, and urbanism can also be observed.

In this paper I discuss the various forms of land occupation by Carthaginians. Were there specific concepts for installing settlements in different microregions? Are there individual architectural and urbanistic solutions for the challenges of a given area? How does the archeological record reflect the interaction between Punic settlers and indigenous inhabitants? Starting with the example of the Punic city of Meninx (Djerba, Tunisia) and its indigenous settlement of Bourgou, I will outline the interactions of Punic settlements with both the environment and existing populations.

### **Carthage: A Case Study of Late Roman Tableware Trading Networks**

*Carina Hasenzagl*, University of Ghent

The large quantities of African Red Slip Ware (ARS) produced in the Roman provinces of modern day Tunisia, Algeria, and Libya and exported across the Mediterranean world and beyond indicate both highly standardized mass production and systems of trade between producers and consumers. In analyzing these economic relationships, Carthage is of special relevance because it is not only a consumption site of ARS but also a hub for long- and short-distance distribution.

Located on the North Tunisian coast of ancient Africa Proconsularis, Carthage received ARS from potteries in (North) Tunisia and acted as a sort of switching device, keeping one part of the ARS in the city and trading the other part inland as well as shipping it across the Mediterranean basin. The fact that almost all table wares in late antique Carthage are of African provenance provides high quantities of comparable samples. This paper presents selected site-specific data from the excavations at the Bir Messaouda/Massouda site in the center of Carthage in order to gain new insights on the production, distribution, and consumption of ARS in late antiquity, and to contribute to a better understanding of Carthage's role in these ARS trading networks.

## **Session 7G: Open Session**

### **Digital Frontiers in Archaeology**

#### **Underground Digitization: Digital Photogrammetry and Terrestrial Laser Scanning Applied to the Roman Hypogeum of Crispia Salvia in Lilybaeum (Sicily)**

*Stephan Hassam*, University of South Florida, *Davide Tanasi*, University of South Florida, *Kaitlyn Kingsland*, University of South Florida, and *Rossella Giglio*, Parco Archeologico di Segesta

The hypogeum of Crispia Salvia in Marsala, Sicily (ancient Lilybaeum) gets its name from a painted inscription above a tomb naming the deceased. This uniquely well-preserved funerary chamber contains an important series of frescoes that depict a funerary banquet, a ritual dance with musician, and various pagan funerary motifs that are part of a distinctly Sicilian style for the period, and are clear antecedents to the development of paleo-Christian funerary art. The hypogeum was discovered relatively recently during the construction of an apartment complex in the 1990s, which has made it relatively underrepresented in the literature despite its uniqueness in Sicily and the excellent state of preservation of its frescoes. The site, covered by private property, is very difficult to access, contributing to the difficulty scholars face in researching the site. Considering the gradual improvement of 3D visualizing technologies, the University of South Florida Institute for Digital Exploration (USF IDEX), as part of a wider digitization project of Sicilian cultural heritage, digitized the hypogeum of Crispia Salvia in 2018 in order to increase its visibility in scholarly circles and to the public. Digitization was carried out using digital photogrammetry and terrestrial laser scanning. The results of the digitization project provide an accurate photorealistic virtual version of the hypogeum, accessible to the public and researchers interested in the frescoes and morphometrics of the site. The virtual Crispia Salvia is available to a global audience via the online viewing platform Sketchfab, and via the IDEX website ([www.usfidex.com](http://www.usfidex.com)), and is being incorporated into the local museum that manages the site. This digitization project allows for greater accessibility and visibility of the site to the general public and interested research community while simultaneously allowing for international collaboration and accurate measurements for research, education, and the dissemination of knowledge and the site.

### **Cartography for Archaeologists in the Age of GIS**

*Valerie A. Woelfel, Independent Scholar*

Maps play a vital role in the analysis and visualization of archaeological data. Research has shown that maps increase the recall of information in a document, and a map may be remembered more easily than the text itself. A poorly designed map can hide information, undermine an argument, or mislead the viewer. For much of the history of archaeology, a surveyor or architect trained in cartography was a common team member. In the digital age that role is often filled by a GIS specialist. That specialist may be self-taught in the software or have been through a training program with little coverage of cartographic skills.

This paper introduces a few basic concepts of cartography with the goal of encouraging archaeologists to look more critically at the maps they are creating or choosing for publication. For example, visual hierarchy focuses attention on important information while pushing other elements further down the visual plane. This creates a map that effectively communicates the patterns and connections so important in archaeology. Understanding appropriate symbology, such as different methods to visualize quantitative vs. qualitative data, is another way that archaeologists can create better maps. What to include and not include in a legend is also a basic skill that mapmakers should develop.

This paper will also take a brief look at some common mistakes made by novice mapmakers, such as leaving off vital elements and getting enticed by the special effects available in modern software. Even if not creating the map from scratch, the archaeologist should be aware of elements to look for when choosing a map for publication. Good cartography allows us to communicate with colleagues, the public, and others with the confidence to know that the message will be clear.

### **Gabii Unbound: Layered Narratives, Digital Outreach, and the Future of the Archaeological Monograph**

*Tyler Duane Johnson, University of Michigan, Matthew Naglak, University of Michigan, and Zoe Ortiz, University of Michigan*

Over the past two years, members of the archaeological excavation at Gabii (Rome, Italy) have participated in the University of Michigan's "Book Unbound" Humanities Collaboratory, a multivalent initiative exploring the possibilities of enhanced, peer-reviewed digital publication formats. Featuring a multidisciplinary team from Classics, Screen Arts and Cultures, Information Sciences, the Sweetland Center for Writing, Michigan Publishing, and the Michigan Libraries, Book Unbound seeks to craft academic publications which avoid the standard linear narrative format in favor of the concept of "multilayering," offering a pyramidal range of experiences for different types of readers. Creating a multilayered publication that satisfies the needs of academic specialists while engaging a broader non-specialist audience is by no means straightforward; it requires attention to how text, media, and data are presented and involves deep collaboration between authors, editors, technologists, and designers. To this end, the project has brought together disciplinary and functional specialists to develop digital publications for three unique long-form projects from the worlds of archaeology, film, and writing.

It seeks to elaborate on existing best practices and provide ongoing guidance in the creation of effective multilayered publications.

With Book Unbound nearing completion, we present our preliminary results, including an initial look at the new digital features in the upcoming Gabii Volume 2 publication. At the same time, we consider our efforts in utilizing layered narratives to engage non-specialists, whether the general public or students in the classroom. Although each field in the humanities faces unique challenges, our work has clarified some of the general challenges involved in using digital data to engage a diverse audience. It is hoped that an open discussion of our achievements and failures will encourage other teams to seek out the extensive and involved forms of collaboration necessary to take the next steps in digital data publication.

### **pXRF Analysis and 3D Scanning of the Prehistoric Paintings in the Genovese Cave, Levanzo, Sicily**

*Andrea Vianello*, University of South Florida, *Davide Tanasi*, University of South Florida, *Robert H. Tykot*, University of South Florida, *Kaitlyn Kingsland*, University of South Florida, and *Elisa Bonacini*, University of South Florida

The Genovese Cave, discovered in 1949 on the islet of Levanzo in the Egadi Islands of western Sicily, has prehistoric engravings and painted art with the most complex pictures and largest cycle of depictions in the south-central Mediterranean. The red-painted figures are thought to date to the Late Mesolithic (ca. 7000 B.C.E.), and the black-painted figures to the Late Neolithic-Chalcolithic (ca. 3500 B.C.E.). Non-destructive elemental analyses using a portable XRF were done on many figures to determine the types of pigments used.

Terrestrial laser scanning of the main chamber was performed to study the layout of the paintings and observe them from multiple viewpoints and different types of lighting. We had previously performed a limited analysis of visual perspectives, which in comparison provides insights on the actual usefulness of 3D scans for these types of studies. The high level of detail of the texturized 3D models is providing additional appreciation of the layout and composition of the scenes and depictions, helping particularly in visualizing overlapping scenes on stone independently by changing viewpoints and illumination. Similar layering of images is common in rock art and cave paintings elsewhere in prehistoric Italy. The current research suggests that the observation point and the lighting were the main factors to consider in accessing some images, and indeed obscuring others. This makes it possible to reread the multi-layered scenes depending on different viewpoints. This may reveal a path within the cave along which scenes are revealed in succession, or different areas in which the viewpoints concentrate, pointing to separate panels, perhaps marking different times of use of the cave.

The combination of pXRF data, which discriminate figures on a compositional basis, and 3D data that helps in finding viewpoints is particularly helpful in our attempts to compare different areas of use both chronologically and spatially.

### **Designing Digital Antiquity: Approaches toward Immersive Applications in Archaeology**

*Will Loder*, University of Arkansas, *Rhodora G. Vennarucci*, University of Arkansas, and *David Fredrick*, University of Arkansas

Digital applications have inundated the field of archaeology in the last twenty years. This rapid transformation has revolutionized how archaeologists conduct research, educate students, and engage the public. 3D reconstructions are now common accompaniments to presentations and publications (e.g., Opitz et al., *A Mid-Republican House From Gabii* [2016]), and other digital programs such as ARC-GIS help archaeologists perform larger scale top-down analyses of sites that provide valuable insight into aspects of the ancient world (e.g., Kaiser, *Roman Urban Street Networks* [2011], Poehler, *Measuring the Movement Economy* [2016]). While useful, they lack the “lived experiences” of Roman society. What did an individual experience walking along the most trafficked pathway? Approaches to this question have largely been reserved in scholarship for phenomenological thought exercises after analyzing archaeological evidence (e.g., Hartnett, *The Roman Street* [2017]). These informed, descriptive scenarios paint a holistic picture through experiential analysis of material culture; however, they remain verbal representations.

By integrating educational game design principles like procedural rhetoric for learning (e.g., Bogost, *The Rhetoric of Video Games* [2008]) into an interactive 3D application designed to afford a sense of place, this paper presents an innovative analytical resource for investigating embodied experiences in past environments. More specifically, this paper presents the methods and theoretical approaches behind the creation of an immersive virtual reality application of the Felt Shop of Verecundus on the via dell’Abbondanza in Pompeii (IX.7.5–7), built with on-site photogrammetry and 3D assets placed in the Unity 3D game engine for use on the Oculus Quest. As part of the Virtual Roman Retail project, this model is used to explore the multisensory experiences of Roman street life and commercial architecture, helping us to better understand how transient environmental stimuli (e.g., lighting, sound) impacted the rhythms (movement, social interactions) of urban society.

### **Session 7H: Colloquium**

#### **The Archaeology of Traveling and Cult Practices in the Ancient Mediterranean**

Organizer: *Erica Angliker*, ICS-University of London

#### **Colloquium Overview Statement**

In antiquity, the fantastic interplay of sea, land, large islands, small archipelagos, and coastal areas in the Mediterranean fostered complex interactions and gave rise to a rich variety of religious space, from easily accessible coastal sites to more secluded rural sanctuaries. Such interrelated cultic places served as cultural terrains for communication and interaction on a regional and supra-regional level. Central to some of them was the undertaking and completion of a journey.

As residents and visitors moved through sea- and landscapes to reach these cult sites, they helped create networks and articulate social functions and meaning, from control over land to community identity and human connections. Although Mediterranean archaeology has dedicated a lot of attention to networks, trade and intercultural exchange maritime religion and travelling has been overlooked by scholars. The aims of this colloquium are to trace evidence (archaeological, literary, and epigraphical) of travel to cultic sites in the Mediterranean and investigate further the cultic structures used by the travelers. The first paper, therefore, discusses seawards sanctuaries of Aphrodite in the eastern and central Mediterranean and shows that most of these were established in contact zones of trade and travelling. The second paper shows how sailors carrying their patron deities by sea established a complex network of seaside cults, sanctuaries, and votives during the Classical era. The third paper examines select sites in the Adriatic during the Roman period in order to trace the development of the marine belief system. The fourth paper assesses the balance between international and local cults by examining archaeological assemblages deposited by those travelling to Yeronisos and to nearby Cape Drepanum. The fifth paper examines internal traces of travel at the Cycladic sanctuary of Kea, where a cult was established in an abandoned settlement and used by local and distant travelers. The final paper in this panel offers a fascinating glimpse of the experience of visitors engaged in sacred tourism in Egypt, where they visited the Memnon colossus. Collectively, the papers in this panel shed light on the underexplored topic of religion, travel, and cultic practice in the ancient Mediterranean by scrutinizing various issues such as the movement of people and its relation to the locations of cultic sites along sea routes, cultic installations that provided travelers with space for their religious practices, the topography of these sanctuaries and the gods worshiped in the context of seaborne travel, and the travelers themselves. The six papers presented here cover not only different areas of the Mediterranean (Adriatic, Cyclades, Cyprus, Egypt, the eastern and central Mediterranean) but also a vast span of time from the Bronze Age to the Roman period and Late Antiquity.

Discussant: *Mantha Zarmakoupi*, University of Pennsylvania

**Sanctuaries of Aphrodite: Multicultural Contact Zones in the Context of International Seaborne Trade in the Late Bronze and Iron Age**

*Martin Eckert*, Archaeological Museum Hamburg

Although the focus of Mediterranean archaeology is shifting towards maritime networks, seaborne trade, and intercultural exchange (A. G. and S. Sherratt, A. B. Knapp, E. H. Cline), far less attention has been paid to individual protagonists in these areas or the facilities and institutions used by them (e.g., shelter and supplies for seafarers and places that served their social and religious needs). This paper tries to cover this gap by examining seaward sanctuaries of Aphrodite based on excavation reports, monographs, personal visits and on-site examination, paleogeomorphological and nautical studies, as well as literary and epigraphic sources. It covers sanctuaries throughout the eastern and central Mediterranean

(Kition, Palaepaphos, Polis, Milet, Thera, Kommos, Kenchreai, Locri, Gravisca) focusing on their topography, architectural settings, their body of finds (especially foreign votives and imports), and the presence of foreign deities and their adaptation by local populations. Its aim is to show that a significant number of seaward sanctuaries of Aphrodite and related Cypriot-Near Eastern goddesses were intercultural contact-zones for international seaborne trade. By contrast, some of the deity's cult sites, primarily those later established in the hinterland, served other functions and must therefore be methodically separated from the seaward sanctuaries. Moreover, seaward sanctuaries of other, primarily female deities (Hera, Artemis, Kybele, Hathor, and Astarte) but also of Apollo, the Great Gods, Herakles-Melqart, Baal, and Amun should be studied together within the context of international harbor- or contact-sanctuaries. The detailed study presented in this paper concludes that their rich material sheds light not only on the protagonists of international maritime trade as well as their seaways and modes of operation, but also on the processes of cultural transfer and the institutions introduced to provide solutions for various challenges confronting early societies that grew from the agglomeration of a broad array of foreigners in harbor cities and emporia throughout the Mediterranean.

### **Thetis and the Nereids as Patrons of Ancient Greek Mariners**

*Amelia B. Brown, Queensland University*

Archaeological evidence shows ancient Greek sailors carried their patron deities by sea as images and ideas, establishing a complex network of seaside cults, sanctuaries, and votives by the Classical era. Aphrodite, Artemis, and Hera are prominent at coastal locations, yet most studies of the Nereids treat them as figures of mythology and literature rather than cult. Yet Herodotus (7.191) credits Magi with the Persian navy at Cape Sepias ("Cuttlefish") as sacrificing to Thetis and the Nereids to end a storm, advised by Ionians that the Cape was sacred to Thetis, as she was carried off by Peleus there. Magnesian mariners probably first named the Cape after its resemblance to a cuttlefish viewed from the sea, but it was Ionian sailors with the Persian fleet who advised the Magi, and made the connection between myth, place, and ritual. While not every literary toponym can be connected with real cult topography, Classical worship of Thetis, the Nereids and Artemis by mariners does help explain commonalities at sanctuaries in coastal Thessaly and Euboea, to the east and up into the Black Sea. Sea routes, epigraphy, and common coastal cults link Thessaly to Skyros, Lemnos, the Hieron at the mouth of the Black Sea, and even the far northern island of Leuke, granted to mariners by Thetis to ensure a safe haven there (Philostratus Heroicus). Devotion to her accompanied her son Achilles at ports around the Black Sea. Archaeology and epigraphy thus provide another perspective on the textual tradition, and help explain common place-names, sanctuaries and cult practices related to the Nereids.

### **Island Pilgrimage: Aphrodite, Apollo, and Sacred Travel in Western Cyprus**

*Joan Breton Connelly, New York University*

The Pan-Hellenic sanctuary of Aphrodite at Palaepaphos, among the most sacred places on earth, drew pilgrims from across the Mediterranean from the Bronze Age through Roman times. The shrine is roughly 23 km, or a day's walk, from Nea Paphos and its great port. In contrast, the pilgrimage destination of Yeronisos ("Holy Island") sits 18km to the north of Paphos. In the first century B.C.E., the islet became a significant setting for local worship of Apollo. This paper examines the venerable pilgrimage tradition of the Paphos region and contrasts sacred travel to the great Panhellenic sanctuary of Aphrodite with the short sail to the small, remote, ex-novo shrine of Apollo. It explores larger themes of international and local cult, periphery and center, traditional Cypriot worship and its fusion with Ptolemaic Egyptian cult interests.

In the sixth century C.E., three Christian basilicas were erected on the mainland just opposite Yeronisos at Cape Drepanum. Known today as Agios Georgios tis Peyias, the place name suggests St. George was sacred here from at least the Justinianic period on. Recent excavations at the small harbor of Maniki that serviced this site reveal vast dumps of Roman amphorae at shoreline. These "Gaza jars" (fourth-sixth centuries C.E.) and quantities of Palestinian "bag-shaped" amphorae (fifth-sixth centuries C.E.) attest to pilgrimage movement between Agios Georgios and the famous monastic centers of south Palestine during late Roman/Early Byzantine times. Thus, across the centuries, Cape Drepanum and its little island remained an important destination for sacred travel, just as the process of crossing the water remained a dynamic act of purification in approaching the divine.

### **Pathways to the Past: Travelling to Cult Places of Abandoned Settlements in the Cyclades in the Late Bronze Age and Early Iron Age; A Case Study of Ayia Irini in Kea**

*Irene S. Sanches, EPHE – Paris*

This presentation explores long-forgotten traces of travel in the Cyclades. Certain cult practices were established and conducted in long-abandoned settlements in the archipelago in the Late Bronze and Early Iron Age. One can infer from the archaeological evidence that locals as well as long-distance travelers were involved. The settings of these cult sites, seemingly remote from settlements, signified a distance that had to be covered by occasional or regular visitors. The island of Kea is an inspiring case study. The Temple at Ayia Irini remained a cult site after the settlement stopped serving a residential function. Some still partly unexplored sites on the island have yielded traces of human activity from the twelfth century B.C.E. to the Late Geometric Period. Combining a wide range of evidence, including shifting settlement patterns and navigation routes, I retrace a dense network of ancient footpaths including that of *kalderimi*, the modern road network. With the help of geological and geomorphological maps, I draw one of the Late Bronze and Early Iron Age routes in Kea. I also estimate the distance and time needed to travel from potential sites to Ayia Irini and back. Long distance travelers may also have participated in the rites performed at the abandoned settlement—a seaside

location and one of the island's safest natural harbors. Finally, I show that measuring the distances traveled by worshippers offers insight into how communities and individuals viewed the abandoned site and why shifts in cult practices were recorded. In sum, my paper examines how travel distances were perceived by ancient communities in Kea and within the Cycladic context as a whole.

### **Sacred Tourism in Egyptian Thebes: The Vocal Miracle of Memnon**

*Patricia A. Rosenmeyer*, University of North Carolina, Chapel Hill

In 130 C.E., Hadrian and Sabina sailed up the Nile to visit the Memnon colossus in Egyptian Thebes. A century earlier, an earthquake had damaged the monolith: its head fell off and the base began to emit a high-pitched noise at dawn. Scholars now think the sound originated from the cracked base expanding at sunrise, but in Hadrian's time, the statue was honored as the Homeric hero Memnon, lamenting his fate each morning to his mother, Eos. Hearing Memnon's voice was a mark of divine favor, and visitors from diverse backgrounds (e.g., emperors, soldiers, poets) traveled to this desert site to experience the vocal miracle, leaving behind elaborate *proskynemata* on the statue's surface.

A total of 107 inscriptions (Greek and Latin, prose and verse) exist in situ, spanning two centuries: the earliest documented visitor was Strabo in 24 B.C.E.; the latest inscription dates to 205 C.E. Most express religious awe mixed with a kind of "worship" of Homer and the Greek past; in addition, they reveal names (including four women), dates, occupations, details of the journey (overland or by boat) and even a kind of "postcard mentality" ("wish you were here!").

The Memnon inscriptions offer a fascinating glimpse into the expectations and experiences of visitors engaged in sacred tourism in Egypt during the first two centuries C.E. Some inscribers went on to leave their names at neighboring sanctuaries; but unlike other sacred sites, the cult of Memnon was based on aural, not visual, evidence. This paper highlights those inscriptions that clearly describe both travel to and behavior at the sacred site, emphasizing the sonic and ephemeral nature of the Memnon statue's "epiphany."

### **The Maritime Belief System in the Adriatic during the Roman Era (Third Century B.C.E. – Second Century C.E.)**

*Federico Ugolini*, ICS - University of London

During the Roman era, Adriatic port cities hosted a complex web of sanctuaries and coastal shrines, the remains of which offer unique evidence of religious practices involving sailors, seafaring, and maritime trade. Although some scholarship has looked at isolated examples of religious practices at such sights (Alfieri 1938; Brusin 1938; Maioli 1980; Bertacchi 1990), little attention has been paid to the network of maritime sanctuaries in the Adriatic, even though this large sea lay at the heart of the Roman Empire. This paper is the first to examine the maritime sanctuaries of Roman Adriatic centers (e.g., Aquileia, Ancona). Drawing on literary, geographic, and archaeological sources, it traces the development, operation, and relevance of the maritime belief system in the Adriatic. The first part focuses

on the archaeological evidence of travel and its relation to religious, devotional, and ceremonial activities, as well as on social and commercial routes and connectivity. The second part considers the historical background of the aforementioned selected sites, examining their construction, scale and layout, and assessing their settings. Topographic and excavation data are combined to determine the characteristic features of these sanctuaries. Likewise examined are the arrangements of the sanctuaries' facilities within their urban contexts as well as the relationship between them and travel to port and city as revealed in inscriptions, ceramics, itineraries, and sanctuaries, as well as social and commercial interactions between sanctuaries and ports. The paper then gauges the maritime belief system's role as a vital interface between the Adriatic and the Roman world. In doing so, it draws conclusions on the relevance of the maritime belief system in fostering travel and movement in the Adriatic region in the Roman era.

## **Session 7I: Open Session**

### **Disaster, Collapse, and Aftermaths**

#### **A Methodological Approach for Interpreting Disaster Response in Antiquity**

*Allison A. Marlyn*, University of British Columbia

Earthquakes posed a significant hazard to the ancient inhabitants of the Mediterranean region, just as they do to people in the modern day. Scholarly interest in these ancient disasters has grown in recent years, and research has primarily focused on the occurrence of these events and their impact on human populations. However, little has been written on how past peoples have chosen to deal with the aftermath of a seismic event, limiting our ability to understand the material record at sites affected by earthquakes in antiquity. When people's responses are discussed, it is often from an inductive perspective focused on a single category of evidence, which fails to consider the multiplicity of ways an earthquake can impact a population, from shelter destruction to food scarcity. I thus put forth a deductive, disaster-oriented approach to studying people's reactions to the impact of a seismic event, built from modern sociological research concerning disaster response. This allows greater focus on the factors which shaped people's reactions, restoring agency to ancient populations.

I demonstrate the utility of this approach through its application to the interpretation of evidence from Kourion, a Roman site on the island of Cyprus which was abandoned after an earthquake in the late fourth century C.E., and then reoccupied in the early fifth century as a Christian settlement. Kourion serves as an excellent example of people's reactions to earthquakes due to the presence of clear evidence of a destructive seismic event, the most notable example being the Earthquake House. This study also takes a particular focus on the relationship between the earthquake and the adoption of Christianity at the site. This is reflected in the construction of new types of religious spaces after the earthquake, such as in the Episcopal Precinct, where an Episcopal complex replaced a Roman basilica.

### **Analyzing Mobility and Conflict During the Collapse of the Bronze Age in the Aegean and Balkans**

*Barry Molloy, University College Dublin*

Presenting material from the later second millennium B.C.E. from the Balkans and Aegean, this paper uses new empirical analyses of human and artifact mobility to explore social aspects leading up to and following a major historical turning point—the collapse of Bronze Age systems. Taking account of the collapse of the Mycenaean palatial system in southern Greece ca. 1200 B.C.E., we take a wider regional perspective that brings together new excavations, site surveys, archaeometallurgy, ancient DNA, stable isotope, mortuary and bioarchaeological analyses conducted by our team. This is used to explore the complex issue of what we mean by collapse in the Aegean and southeast Europe.

The role of migrations and conflict in this key historical turning point have been debated for well over a century. From narratives of Dorian invasions to the raids of the Sea Peoples, conflict and interregional mobility have long been contentious issues in explanations of social upheavals around 1200 B.C.E. in the East Mediterranean. New data from the Balkans indicates that large-scale social changes were being experienced there at this same time, and so we argue that it is crucial to evaluate both regions together in order to better understand if, or how, mobility and conflict (social and violent) were factors shaping change. This also requires us to revisit how and why material culture traditions and social practices from the north and west of Greece came to play important roles there immediately before and after the collapse of palatial systems.

Studying human remains, we explore mobility and life experiences of the people living during this transitional period. Through survey and excavation, we explore the social world of newly discovered mega-forts in the Balkans. By studying transcultural metalwork that emerged throughout each of these regions, we also analyze the movement of practices and traditions across cultural boundaries.

### **The Palace of Nestor Falls Down; Then What?**

*Julie Hruby, Dartmouth College*

Most scholars believe, based on the results of multiple archaeological surveys, that Messenia and Laconia were largely depopulated after the collapse of the palaces at the transition between the LH IIIB and IIIC periods. I argue that archaeologically, the effects of poverty and of depopulation appear comparable, and that while there may have been some decline in population levels, it cannot have been as stark as has previously been claimed.

While field surveys have not identified much Early Iron Age (hereafter EIA) material, several excavations have, and survey material can be misleading if we assume that the presence of identifiable pottery is necessary for the identification of people. Ancient ceramics production required a substantial investment of time, effort, and skill, and we have vastly underestimated the frequency with which other, more perishable materials, such as basketry and wood, were used for ancient vessels. What ceramics do come from the EIA are difficult to recognize; cooking pots were low-fired and soft, we lack a relevant chronologically based cooking

ware typology, most ceramic surfaces are degraded, and those wares that were painted mimic material from other periods. Even the shifts in the local flora and environmental patterns that appear at the end of the Bronze Age are as consistent with impoverishment as with depopulation.

Stated simply, if the Laconians invaded Messenia in the eighth and seventh centuries B.C.E. and turned the inhabitants into helots, there must have been someone to do the invading and there must have been people to have been made into helots. The combination of the highest possible birth rates with the estimated helot populations in later periods require that people have been present throughout the EIA. This is particularly true given the documentation of Messenian out-migration, however debatable its date.

### **Peopling Malthi: Estimating the Population of an LH I-II Settlement**

*Rebecca Worsham*, Smith College, and *Michael Lindblom*, Uppsala University

The Middle to Late Bronze Age settlement of Malthi in Messenia is exceptional in that it is completely excavated within the limits of the fortification wall. Because it is clearly bounded and fully exposed, it is an ideal candidate for considering questions of household and population size, despite the challenges posed by these methodologies. Such work has rarely been attempted on sites of this period in mainland Greece, largely as a result of the poverty of settlement remains. While demographic data can be derived from mortuary evidence, the relatively low number of burials at Malthi—most investigated by Natan Valmin during the original excavation in the 1930s—means that the work of peopling the settlement must rely largely on architectural data.

Based on the overall extent of the settlement, a population of about 140 was suggested by the Minnesota Messenia Expedition (McDonald and Hope Simpson 1972, 136). This figure is, however, a static snapshot of the population within a dynamic, changing community. Drawing from new work carried out at Malthi from 2015 to 2017, we reevaluate this estimate, as well as Valmin's discussion of the functional division of the site. After defining the domestic space at the settlement, we use the total area of the houses to argue that Malthi is likely to have been more densely populated, possibly to a significant degree, as might reasonably be expected of a walled town. Particularly on the west side of the fortified area, the almost complete infilling of the space may be suggestive of a growing population, although patterns of abandonment over time should also be considered. In providing an estimate of the population at Malthi, this study establishes a point of comparison for contemporary settlements and allows us to approach an early Mycenaean site as a living community.

## Session 7J: Open Session Subjects and Objects in Early Archaeology

### **Pompeii on the Potomac: Constantino Brumidi's Nineteenth-Century Roman-Style Frescos in the US Capitol**

*Elise A. Friedland, George Washington University*

The convening of the AIA/SCS annual meeting in Washington, DC, provides an ideal opportunity to consider *Classica Americana*, the adoption and adaptation of Greek and Roman literary, philosophical, political, and artistic traditions in the United States. Specifically, this talk examines the role of artistic *Classica Americana* via one nineteenth-century example of public art at the center of our nation's capital city: the 1858 Pompeian-style mural cycle painted in the former US Naval Affairs Committee Room in the US Capitol Building. Here, the Italian-born artist turned American citizen, Constantino Brumidi, in one of his earliest commissions for the Engineer of the Capitol, Montgomery Meigs, surrounded members of the Naval Affairs Committee with nine blue panels, at the center of which appeared Pompeian-style floating maidens, holding contemporary attributes related to the sea and seafaring. On the ceiling, seven Graeco-Roman aquatic deities and a female personification of America oversee the floating maidens (and committee members) below. My new iconographic and archival research demonstrates that the patron, Meigs, was interested specifically in Pompeian style murals and that the artist, Brumidi, delivered by adopting and adapting contemporaneously discovered Roman wall paintings, accessed through a German tour-de-force of color lithography: Wilhelm Zahn's landmark 1829 publication, *Die schönsten Ornamente und merkwürdigsten Gemälde aus Pompeji, Herculenum und Stabiae*, Vol. 1, which I can now demonstrate was available to Brumidi at the Library of Congress. This paper documents this mode of transmission and Meigs's and Brumidi's goals in their purposive and learned adoption and adaptation of Roman artistic heritage. It underscores the role of books and libraries in the dissemination of classical art and architecture and the importance of the Library of Congress to artists and patrons in the mid-nineteenth century. Finally, it highlights the use of public, Classicizing art to shape the narrative of early American history.

### **Greeks Bearing Archaeological Gifts: The Marathon Stone, Lewisohn Stadium, and the Influence of the Classical Art and Architecture at City College in the Early Twentieth Century**

*Elizabeth Macaulay-Lewis, The Graduate Center, The City University of New York, and Matthew Reilly, City College, The City University of New York*

Over the years, New York City has received archaeological objects as gifts. The best known example is that of Cleopatra's Needle in Central Park, which arrived in 1881. The obelisk, given by the Egyptian government to New York was intended to curry favor with the United States, one of Egypt's new trading partners, and to secure more American financial support for Egypt. A column from Jerash, Jordan, was also given to the City of New York by the late King Hussein as part of the

Jordan Pavilion of the 1964–1965 World’s Fair. Along with the pavilion, the gift of the column was intended to strengthen ties between Jordan and the United States. Less well known than these examples is a fourth-century B.C.E. Greek funerary stele, now on display in the Metropolitan Museum of Art. Dr. John Finley, the third president of City College and a classicist, saw the stele when he was walking in Greece and asked the Greek Government to give the stele to the college. With much fanfare, the stele, incorrectly named the Marathon Stone by Finley, was dedicated and proudly displayed at City College. This paper explores the context around the gift by drawing on contemporary newspaper reports, Finley’s erroneous association of the stele with the battle of Marathon, and the gifting of an archaeological object as a means for promoting ties between City College and Greece. The paper then examines the context for the display of the stele: the Lewisohn Stadium, whose design was inspired by Roman amphitheaters and ancient theaters. Finally, the paper argues that the display of the stele and erection of Lewisohn stadium—in other words, classical art and architecture—embodied Finley’s aspirations for City College, nicknamed the Harvard of the Proletariat, to rival Columbia University and New York University.

### **Excavating Armageddon: Chicago’s Quest to Uncover Biblical Megiddo**

*Eric H. Cline, George Washington University*

The numerous publications produced by the Chicago excavators who dug at Megiddo from 1925–1939 are still used, and debated, by archaeologists working in the region today. However, these provide only a small window into the daily activities of the team members and the stories behind their discoveries. Fortunately, they also left behind a treasure trove of other writings—more than three decades worth of letters, cablegrams, cards, and notes exchanged by the participants, as well as their diaries, that are now in the archives of the Oriental Institute, the Israel Antiquities Authority, and the Rockefeller Foundation, as well as in the hands of their descendants and other family members. Digging through these materials provides us with a glimpse behind the scenes, including intrigues, infighting, romance, and dogged perseverance over the years, before the digging ended abruptly after the 1939 season. Their story frequently reads more like the script for a daytime soap opera, for the improbable cast of characters included a field director who was one of the best excavators in the Middle East but who couldn’t manage a team of diggers; his successor who had no college degree and no formal training in archaeology; a surveyor who sued for wrongful termination, but who may have also been spying for the Haganah while at the site; a staff member who was fined for smuggling antiquities but went on to a successful academic career nevertheless; and a high school dropout without a degree in archaeology and a geology student initially without an undergraduate degree, who together published as much as the three field directors combined, including co-authoring *Megiddo I*, the final publication documenting the first ten seasons at the site. They also nearly ended the excavations just one week after they began; paid rent for the excavated land to the wrong people for the first three years; and were the first, or among the first, to use a Munsell color chart and balloon photography on an excavation in the Near East. That story can now be told.

**Engaged Scholarship: The Liberal Education of Harriet Boyd, Survival and Success in Crossing the Gender Divide in Early Aegean Archaeology**

*Susan Heuck Allen, Brown University*

In the nineteenth century, women could only engage in field archaeology through marriage, as did Sophia Schliemann. For singles, breaking into fieldwork seemed impossible. At foreign schools of archaeology in Athens, while men participated in excavation, women conducted library research. It was not until women left the library, learned modern languages, and proved themselves capable of hard work through engaged scholarship that they earned the respect of male peers and entered the excavation arena. Their role model was Harriet Boyd. In this essay, I discuss the Boyd's trajectory from a scholar drawn to classical antiquity, to a humanitarian invested and embedded in collaborative wartime interactions with Greeks, to an engaged pioneer excavator who set a course for her colleagues and generations of women who followed her. I draw on unpublished diaries and correspondence, autobiographies, essays, and journalistic accounts housed in the Harriet Boyd Hawes Papers, Smith College Archives.

Boyd was aided by an iron will forged in childhood, but her archaeological success depended her experience as a nurse in the Greco-Turkish War of 1897. Her acquisition of Modern Greek enabled her to communicate directly with Greek royalty and peasantry alike. Her acquisition of important social and political contacts impacted her ability to gain excavation permits; her immersion and engagement led to her empathy with contemporary Greeks; opening hospitals demonstrated her ability to take charge and lead men and women in difficult circumstances; her forging of female partnerships provided support in a hostile male environment and taught her the necessity of collegiality and teamwork; her acquisition and practice of observation and communication skills helped her express and promote her ideas in the US and Europe. After navigating the gendered hierarchy of relief work, Boyd blazed a trail for women colleagues through a minefield of bias while acting within acceptable gender constraints.

**Preserving Wildflowers and Exhibiting Diplomacy: Writing A Cultural History of Ancient Greece at the Smithsonian Institution**

*Alexander Nagel, Smithsonian Institution, National Museum of Natural History*

When the "Classical Bouquet," a volume of original drawings of ancient Greek monuments and pressed wildflowers picked up on sites such as Athens, Corinth, and Sparta, entered the collections of the young Smithsonian Institution in Washington, D.C., in 1857, it already represented a powerful testimony of the role of the legacy of ancient Greece in modern diplomacy. Presented by Elisavet Contaxaki (ca. 1818–1879) from Athens through the U.S. consulate in Constantinople and the State Department, the volume went on display in the first National Museum and became a treasured item in the Smithsonian's Secretary reception room, before it was deposited in the Institution's Rare Book division in 1932. This presentation will contextualize the "Classical Bouquet" in the framework of ongoing research on a multi-authored volume on a cultural history of ancient Greece in the Smithsonian Institution. Which individuals connected the worlds of Washington, D.C.,

and Athens since the nineteenth century, and why? What role did ancient Greek materials play in diplomatic exchange and exhibition cultures between the two capitals? What do we know about the provenance of the materials such as sculptures and vases in the collection? Highlighting both archaeology and the development of Greek-American diplomacy and scientific exchange since the middle of the nineteenth to the current day, this presentation will be the first to introduce new research in archives and collections, and provide new information on individuals such as Elisavet Contaxaki, John Koumaris (1879–1970), Richard Howland (1910–2006) and Lawrence Angel (1915–1986), who worked actively on promoting Greek anthropology, archaeology, and research in Athens and America's capital.

**Tanagra Mania and Art: Fashioning Modernity via Ancient Greek Female Imagery**

*Beth Cohen, New York Society, AIA*

Illicit excavations of ancient tombs near Tanagra, Greece, in and around the 1870s, unearthed hundreds of brightly painted Hellenistic terracotta figurines, largely representing fashionably dressed women. Considered genre depictions, these seemingly informal artworks were avidly acquired by museums and collectors, and also forged. As this paper explores, Tanagra mania also provided artists with a fresh source of ancient Greek female imagery. For example, Tanagra figurines in the private Ionides Collection inspired American expatriate James Abbott McNeill Whistler, usually associated with the influence of Japanese art, to paint classically draped women (e.g., *Woman with Fan*, ca. 1870s, Maier Museum of Art, Lynchburg, VA). Another prominent display at the Paris World's Fair of 1878 reinforced the mania. The French Academician Jean-Léon Gérôme personified the archaeological site itself in a (once colored) marble statue showing a nude woman holding an invented hoop-dancer figurine (Tanagra, 1890, Musée d'Orsay, Paris), and he envisioned a female artisan coloring figurines sold in an ancient shop (*Sculpturae Vitam insufflat Pictura*, 1893, Art Gallery of Ontario, Toronto). By the early twentieth century, Tanagra figurines counted among the Classical sources that inspired costumes and dance movements of the Paris-based Ballets Russes. The *New York Times* proclaimed in 1912 that Parisian Spring fashions "will Adopt the Flowing Draperies of Tanagra Statuettes." In her Manhattan beauty salon, Helena Rubenstein displayed Tanagra-influenced terracotta statuettes depicting *The Four Seasons* (ca. 1912, New York Historical Society) by Elie Nadelman, a Polish émigré who had been prominent in the Parisian avant-garde. Finally, eloquently underscoring the Tanagra's trendy cosmopolitan artistic role, American Impressionist Childe Hassam, in *Tanagra* (*The Builders*, New York; 1918, Smithsonian American Art Museum, Washington, D.C.), showed a fashionable blonde woman admiring a Tanagra figurine while standing before an Asian screen as a skeletal skyscraper rises outside her window.

## **Session 7K: Workshop Imagining Islands, Meditating on Mainlands**

*Sponsored by AHRC, the University of Cambridge, and the A. G. Leventis Foundation*

Moderators: *Anastasia Christofilopoulou*, University of Cambridge, and *Naoise Mac Sweeney*, University of Leicester

### **Workshop Overview Statement**

This workshop will adopt a forum format to explore the construction of island identities in relation to mainland identities in the Iron Age Mediterranean. This topic is the focus of a major new project based at the Fitzwilliam Museum, Cambridge, UK. The project involves the archaeological investigation of island identities on Cyprus, Crete, and Sardinia during the period ca. 1100–600 B.C.E., and will culminate in a large-scale exhibition in September 2021. The aim of this workshop session is to kick-start the project with a radical and open exchange of ideas, adopting a comparative and interdisciplinary perspective to develop new approaches to the topic. It will begin with the presentation of a case study—that of Cyprus and Cilicia. Subsequent speakers will respond to this, and workshop participants will be encouraged to use the example case as a jumping off point to explore other instances and broader implications. The workshop will be moderated by project's P.I. and Lead Curator.

Panelists: *Jo Quinn*, University of Oxford, *Marian Feldman*, Johns Hopkins University, *Evi Margaritis*, The Cyprus Institute, *Jana Mokrisova*, Birkbeck College, University of London, *Louise Hitchcock*, The University of Melbourne, and *Jeffrey P. Emanuel*, Harvard University

## **Session 7L: Colloquium Methods and Approaches in Numismatics**

Organizer: *Martin Beckmann*, McMaster University

### **Colloquium Overview Statement**

This colloquium highlights innovative methodological approaches to the study of Greek, Roman, and Late Antique coins and the new knowledge that can be obtained through the development of new methodologies, the innovative application of old ones, or a critical approach to established practices. Numismatic methodology is famously varied, spanning a range from technical studies applicable only to coinage such as die analysis or hoard studies, to methods commonly employed outside the field, such as iconographic analysis. The first paper in the session highlights the benefits that can be obtained from a critical approach to coin hoard studies. The authors argue that a coin hoard found in controlled excavation at Eleusis and traditionally dated to 520–500 B.C.E. in fact belongs to the years after the Persian destruction of 480/479; this has important chronological implications

for the dating of the Telesteria at Eleusis. The second paper examines the methodology employed by scholars using Hellenistic coin portraits to identify three-dimensional sculptures of rulers. The author argues that this methodology should be refined by focusing on the recovery of the characteristics of the presumed prototype, rather than on assembling a catalog of general characteristics. In the third paper, "Methodological Problems with Imperial Small Aes Coinage," the author shows how by combining established methodologies (die analysis, metrology, and iconography) in new ways it is possible to solve old numismatic problems; here the great difficulty of differentiating between denominations in the small bronze coinage of Sabina. In the fourth paper, "A New Approach to Understanding the Monetary Policy of the Roman Imperial Period," the author proposes a new methodology for the study of ancient coin production, based on a relative frequency calculation adjusted to account for varying durations of production. When integrated with iconographic and metallurgical approaches, this methodology can shed light on the reasons behind changes in production volume. The final paper, "The FLAME Project," presents interim results and demonstrates two newly built databases created to facilitate the study of the role of coin circulation in the Late Antique and Early Medieval economy.

Discussant: *William E. Metcalf*, Washington, D.C., AIA Society

### **The FLAME Project: Mapping Coin Production and Circulation for the Transition from Late Antiquity to the Early Middle Ages**

*Alan M. Stahl*, Princeton University, and *Lee Mordechai*, National Socio-Environmental Synthesis Center

The FLAME (Framing the Late Antique and Early Medieval Economy) project is an ongoing collaborative effort of a dozen scholars worldwide to track the production and circulation of coinage in western Eurasia from 325 to 750 C.E. in order to investigate the transition from ancient economies to those of the Middle Ages in Europe, North Africa, and Western and Central Asia. The core of the project is a database with two distinct data sets. The first data set records all of the coinage issues throughout the regions and periods under study and presents the data either as maps or data that can be customized by time spans and regions and can be downloaded. This minting phase of the project is online at <http://coinage.princeton.edu>, and live examples of the search protocol will be part of the AIA presentation. The second database includes the records of hundreds of thousands of finds of coins of the period throughout the regions under study; it uses input from published reports and the transfer of data from ongoing surveys in Great Britain and Israel as well as the Coin Hoards of the Roman Empire database. The presentation at the 2020 Annual Meeting of the AIA will include a public introduction to the newly developed query, report, and mapping capabilities of the circulation phase of the project.

### **Attempting to Understand Roman Imperial Monetary Policy**

*Benjamin Hellings, Yale University Art Gallery*

One of the great debates in numismatics has been concerned with the methodology and implications of calculating the total quantity of produced coins. Without mint or mining records, the study of the coins themselves has provided the best source for any calculations. Traditionally, these calculation estimates have come through die studies or, more recently, though analysis of the surviving number of coins in absolute terms. Each of these methods has a different set of data, problems, and limitations. Using coin finds, this paper seeks to present a different method—a relative frequency calculation that also considers the duration of production periods. This alternative method provides a glimpse into the operation of the Imperial mint while also offering the potential to assess reasons for changes in coin production quantities. Since coins were issued in fluctuating quantities, it is imperative to consider the relative frequency of different emissions in terms of absolute numbers but also to compare this to adjusted per day calculations to account for different production lengths. When these fluctuated frequencies are considered together with iconographic changes and metallurgical data, we can further our understanding why production rates changed as well as the nature of a particular reform while also questioning its reason.

### **Methodological Problems with Imperial Small Aes Coinage**

*Fae Amiro, McMaster University*

The radiate crown on the emperor's portrait on dupondii to differentiate them from the as was eliminated in 128 C.E., making the distinction between these denominations difficult for modern scholars. In antiquity, these two denominations would have been differentiated by a difference in color, stemming from their different alloys, which has largely been lost today due to discoloration. These denominations also had different ideal diameters and weights, but they were very close. Due to the different levels of wear between the various specimens, it is very difficult to tell if a specific artifact is a dupondius or an as due to its weight or dimensions. As a result, these dupondii and asses have until now been left undifferentiated. This has left numismatists with an incomplete understanding of the iconography and metrology of these coins.

To facilitate the differentiation of these coins, I used a combination of die study and metrology. I assembled a database of Sabina's dupondii and asses, all of which were minted post-128 and conducted a die study of these coins. To establish the weight standard for Sabina's dupondii and asses, I used Hadrian's pre-128 dupondii and asses, those visually differentiated by the radiate crown. I graphed the weights of these coins on violin plots, calculated the median weights and then graphed the coins' weights by obverse and reverse type. The results demonstrate that there were some obverse and reverse types which were used exclusively for one of the two denominations. These methods can be applied to other coins whose denominations are unclear to gain a more complete understanding of the typology and production of Roman imperial coinage.

### **Identification of Hellenistic Ruler Portraits: Towards a Better Understanding of Numismatic Evidence**

*Laure Marest, Museum of Fine Arts, Boston*

Numismatic evidence is regularly marshaled to support various identifications of Hellenistic ruler portraits. The method is well known and seemingly straightforward: a numismatic portrait, identified as a specific ruler through inscribed legends or numismatic tools such as die studies, is used as the basis for empirical comparison with unidentified portraits in the round. However, the approach is in need of methodological introspection. It has produced uneven results in practice, because the numismatic evidence is not understood on its own merits. For instance, there is little acknowledgement of the physiognomic differences in numismatic portraits of the same ruler, not only among different types but also within the same type. Too many proponents of this identification method are guilty of picking and choosing whichever numismatic representation suits them best. This paper evaluates the use of coins as comparanda to identify Hellenistic royal portraits and proposes guidelines based on a better understanding of numismatic practices. It is argued that the selection of comparative numismatic material for the purpose of identification should be guided by the principle of closeness to the prototype as opposed to consistency across issues or dies.

### **Coin Hoard Studies, IGCH 5, and the Chronology of the Eleusian Telesteria**

*Kenneth A. Sheedy, Australian Centre for Ancient Numismatic Studies, Macquarie University, and G. Davis, Australian Centre for Ancient Numismatic Studies, Macquarie University*

This paper reconsiders the methodology of coin hoard studies and the use of material within the “Perserschutt” (both at Eleusis and the Athenian Acropolis) as a critical peg for Athenian chronology. In particular, we examine the interpretation of hoard evidence as part of a broader approach to resolving chronological problems associated with our understanding of the late archaic period in Attica. We highlight the apparent isolation of numismatic research within current attempts to revise the chronology of Attic buildings and monuments once dated to the years before the democracy. The small hoard of archaic Athenian and Eretrian coins found at Eleusis in 1883 (IGCH 5) has been largely overlooked, despite the details of its findspot provided by the excavator, Demetrios Philios. This neglect can be attributed to the loss of the hoard until its rediscovery in 1982 (in the Athens Numismatic Museum), and to the curious fact that Philios himself never mentioned the hoard in any of his reports. Today it is conventionally dated to the decades 520–500 B.C.E. on the basis of the coins themselves and the evidence of the findspot was carefully recorded by Ulrich Köhler after discussions with Philios. In this paper we seek to demonstrate that that this apparently unique example of an “archaic” hoard found during the controlled circumstances of excavation belongs to the years after the destruction of Eleusis by the Persians in 480/479 B.C.E. Furthermore, our examination of the stratum in which the coins were found casts doubt on the revised chronology of the late archaic and early classical Telesteria proposed by T. L. Shear from an interpretation of the epigraphic evidence.