

have been removed from their contexts. Scientific modes of study allow for conversations that are focused on the pigment, the object on which the pigment was used, as well as the broader implications of such use within larger contexts.

Presenters contribute from a broad range of specialties, including but not limited to conservation science, art history, archaeology, museum education, chemistry, and anthropology. Presentation topics include the study of abstract polychromatic Mycenaean painting, painted Etruscan terracotta antefixes, Masonry-Style wall plasters from Stymphalos, an Egyptian mummy-case footboard, and Fayum portraits. Throughout, presenters share a unified theme: to determine what can be understood about ancient artists' materials and techniques. Finally, a recent exhibit at the Kelsey Museum on ancient color provides a case study for exploring the ways in which museum educators can adapt topics such as materials analysis and the ancient palette for the general public.

This array of brief presentations is chosen to facilitate and encourage discussion between panelists and audience alike in order to further our understanding of the complex history, use, and study of pigments in the ancient Mediterranean world.

Panelists: *Eleonora Del Federico*, Pratt Institute, *Kate Smith*, Harvard Art Museums, *Katherine Eremin*, Harvard Art Museums, *Georgina Rayner*, Harvard Art Museums, *Jen Thum*, Harvard Art Museums, *Georgina Borromeo*, RISD Museum, *Ingrid Neuman*, RISD Museum, *Alice Clinch*, Cornell University, *Roxanne Radpour*, *Christian Fischer*, *Yuan Lin*, *Giacomo Chiari*, *Marie Svoboda*, *Monica Ganio*, *Ioanna Kakoulli*, *Caroline Roberts*, *Catherine Person*, Kelsey Museum, University of Michigan, and *Christina Bisulca*, Detroit Institute of Arts

## **Session 6A: Gold Medal Colloquium**

### **Diachronicity: Celebrating the Career of Jack L. Davis**

Organizers: *Michael L. Galaty*, University of Michigan, and *William A. Parkinson*, The Field Museum

#### **Colloquium Overview Statement**

Jack L. Davis, the 2020 winner of the AIA's Gold Medal, has had an indelible impact on the field of archaeology. In a career spanning five decades, he has touched multiple Mediterranean regions, unbound by space and time. Calling his record "eclectic" is an understatement. This session, organized in his honor, captures the spirit of Jack's past and ongoing work. It takes a diachronic approach, highlighting those key contributions he has made over the years. Ultimately, it is Jack's willingness to think outside the box, to take chances, and question authority—despite becoming one himself!—which make his life and accomplishments well worth celebrating.

While a student in the 1970s, Jack studied pottery from Kea and Melos, launching interests in both islands and ceramic analysis. This early work touched on various issues of continuing import: contact and exchange, technology transfer, and the importance of the so-called "Western String" of Cycladic islands. Also during

this period, Jack undertook his first in a series of intensive survey projects, arguing that surface remains, if systematically collected, might reveal broad patterns of historical change. His contributions to survey method and theory are indisputable, and not just in Greece, also in Albania, to which survey was introduced, by Jack, in 1998. Jack's career is firmly grounded in Aegean prehistory, but also ranges forward into historical periods, including the Medieval and Early Modern. His research at the Mycenaean Palace of Nestor has been transformative, and while most scholars working in Greece ignored the Ottoman conquest, Jack embraced its archaeology and pioneered efforts to obtain, translate, and contextualize Ottoman (and Frankish) documents. Finally, Jack has worked intensively in modern libraries, including those of the American School of Classical Studies at Athens, which he directed from 2007–2012, focused on histories of archaeology in Greece and the Greek state.

### **Setting the Table for the Feast to Come: Jack Davis's Works on Aegean Bronze Age Pottery**

*Jeremy Rutter, Dartmouth College*

Having chosen to write his dissertation on the history and chronology of the prehistoric fortifications at Ayia Irini on Kea (1977), Jack Davis set about becoming an authority on the terminal Middle Bronze and earliest Late Bronze Age pottery of not just the Cyclades but of the eastern Greek mainland and Crete as well. Within four years he published articles of steadily increasing length and importance in the *Athens Annals of Archaeology*, *American Journal of Archaeology*, and *Hesperia* dealing with various aspects of the pottery of the so-called Shaft Grave era, culminating in a detailed analysis of a major Late Helladic I settlement deposit from Korakou (1979) that continues to be of fundamental importance for the ceramic definition of this initial phase of Mycenaean culture in its northeast Peloponnesian heartland.

In the same year, the first of his many seminal collaborations with John Cherry appeared in the form of their coedited *Papers in Cycladic Prehistory*, within which Jack's article entitled "Minos and Dexithea" explored Cretan relations with the Cyclades through the novel lens of a postulated "Western String" of Cretan-dominated entrepôts on Thera, Melos, and Kea. This was to be the first of multiple investigations of the "Minoanization" phenomenon from different angles, many of them grounded in ceramic analysis, some with collaborators like Harriet Lewis and Evi Gorogianni, and some without.

By the mid-1980s, Jack's intellectual targets had shifted considerably as he moved into a stage of his scholarship dominated by his interest in surface survey. But right from the start of his career he had shown exceptional interests in breadth of coverage, collaboration, and a steadily more holistic approach to the study of Aegean culture through time. His intellectual appetite has thus constantly expanded at a metaphorical table carefully set by way of his early focus on ceramic containers.

**Jack Davis and Islands**

John F. Cherry, Brown University

Jack Davis's long and distinguished academic career began on an island: Kea, in 1973. His advisor, Jack Caskey, had handed him his dissertation marching orders: study the fortifications of Agia Irini. This he did with distinction in his 1977 doctoral dissertation and in his 1986 monograph on the Middle Bronze Age material of Period V. During the late stages of doctoral work, he was invited at short notice to undertake the study, along with myself, of the LB 1 pottery and all the small finds from Renfrew's excavations at Phylakopi on Melos.

That collaboration instigated the idea of organizing a Cycladic symposium at these meetings in 1978, leading to a book that came out the following year, *Papers in Cycladic Prehistory*. Its preface gives some inkling of the new and exciting ideas about islands that were then circulating. They led directly to an innovative, intensive archaeological survey on Kea, which we were eventually able to carry out in 1983–1984; the final monograph on this project, *Landscape Archaeology as Long-Term History*, won the Cotsen Prize in 1991.

Jack never again undertook island-based fieldwork, moving on to other survey projects on the Greek mainland and in Albania, and eventually back to excavations at Pylos. But he continued to contribute to Aegean island studies in important ways, as this paper will discuss. For example, in 1991 he published a massive article in *JMA*, blending the archaeological and archival evidence from the Ottoman Cyclades: nothing like this had ever been published before. And in 1992 (updated in 2001) he provided a magisterial overview of the Aegean islands for the first of *AJA's* Review of Aegean Prehistory series. These are contributions of lasting value to the field of island archaeology, even if Jack's later career took him in other directions.

**The Deposit-Centered Survey as a Method for Discovering Paleolithic and Mesolithic Sites in Greece**

Curtis Runnels, Boston University

As a result of my experiences with intensive regional surveys in the 1970s and 1980s, it became clear that archaeological remains from the earliest time periods are systematically underrepresented. Paleolithic and Mesolithic remains are difficult to identify with the techniques of linewalking and visual inspection of the surface used in such surveys. The low visibility of stone tools from these periods, as well as the masking effects of natural processes, such as erosion and marine transgression operating over long periods of time, are the chief problems. Accordingly, I developed a method with Tjeerd van Andel of targeting places in the landscape that are likely to preserve such remains. This approach is based on geomorphological principles and was tested successfully in Thessaly, Epirus, and the Argolid in a series of surveys between 1991 and 2003. Just one of these surveys, at Kandia in the Argolid, doubled the number of known Mesolithic sites in Greece. The method can be refined. At the suggestion of Justin Holcomb, the approach is now known as Deposit-Centered Survey and is used to identify targeted geologic deposits of the requisite age that are searched by specialized teams of experts for

stone tools and paleontological and anthropological fossils, in order to expand the record of the Paleolithic and Mesolithic. This approach was used on the island of Crete between 2008 and 2016 to identify evidence for the Mesolithic and Paleolithic periods, discoveries that have implications for the study of these periods on the Aegean islands in particular, and for the study of early hominin dispersals in general.

### **Jack L. Davis and the ‘Modern Concept’ of Doing Archaeology in Albania**

*Ols Lafe, Universiteti “Aleksandër Moisiu” Durrës, Albania*

I first met Professor Jack L. Davis during the month of May 1998 in Tirana, Albania, when I was just a freshman at the University of Tirana, pursuing archaeology, which had been added as a course of study only recently, after the collapse of communism. Today, I am proud we all honor him as the 2020 winner of the AIA’s Gold Medal.

Jack has made impressive contributions to the modern practice of archaeology in Albania, primarily by encouraging a regional perspective. Starting with MRAP, the Mallakstra Regional Archaeological Project, which aimed to explore the hinterland of the ancient Greek colony of Apollonia, and continuing with DRAP, the Durrës Regional Archaeological Project, we gained a first, systematic overview of the hinterlands of Albania’s two Greek colonies. Jack’s commitment to intensive survey and a landscape approach led to a sea change in Albanian archaeology. In the last twenty years, numerous regional projects have been launched and countless new sites have been identified; some of them, like the Archaic temple of Bonjakët, found by MRAP near Apollonia, have also been excavated and will soon be published.

The ultimate result? A total and complete shift in perspective regarding how and when ancient Greek colonists interacted with local Illyrian peoples. We also now have a better sense of what life was like in both regions before the founding of the colonies and after their incorporation into the Roman Empire. This is in no small part the direct result of the methods that Jack L. Davis and his team applied without compromise, methods that had worked so well elsewhere in the Mediterranean, but were unknown in Albania. The future always reserves surprises for archaeologists, but one thing we can know for certain: Jack’s legacy in Albanian archaeology will be a lasting one.

### **By the Sword of Perseus or the Bow of Herakles? Developing a ‘Hinterland’ in the Early Mycenaean Period**

*Kim Shelton, University of California, Berkeley*

Perseus and Herakles are two legendary heroes who, in addition to being known for their international exploits, are often associated with the foundation of sites and families, landscape infrastructure, and the protection of elite property and landholdings during the Bronze Age. They are especially connected to the northeastern Peloponnese and the earlier age/generations of heroes. Even though mythological, Perseus and Herakles represent, in some ways, the early

Mycenaean, pre-palatial period when, rather than consolidated under the “scepter of Agamemnon,” the settlements of the Argolid and Corinthia were fragmented into hamlets and small regional centers with elites enmeshed in local sociopolitical hierarchies.

With the Nemea Valley Archaeological Project (NVAP), Jack Davis and his co-directors innovatively investigated the long prehistory and deep sociopolitical history of the southern Corinthia, and its complexity, as it developed into, and became, the hinterland of palatial Mycenae. This research led to a better contextual understanding of neighboring regions as well, and even of Mycenae itself. Building on this foundation, new research continues to contribute to our understanding of the political geography and the process of regional development throughout the Late Bronze Age.

Using evidence both old and new, such as material from Aidonia, this paper examines the northern Argolid and southern Corinthia, during the Early Mycenaean period, when a number of sites in this region could have become a center and other areas, the hinterland. It is in the archaeological record that we can detect, among objects and features of symbolic displays of wealth and power and expressions of elite competition, an emerging sociopolitical landscape that indicates the creation of regional relationships and networks; as a kingdom is developed, so too its hinterland.

### **Jack Davis at Pylos**

*Sharon Stocker, University of Cincinnati*

Jack Davis has had a long and distinguished career as an Aegean Bronze Age archaeologist. He has diachronic interests that span from the Paleolithic to the early modern period. His work in the vicinity of the Palace of Nestor, beginning with the Pylos Regional Archaeological Project, has played an integral role in his understanding of the Aegean Bronze Age and the early Mycenaean period in particular. PRAP helped define the extent of the Mycenaean settlement on the Englianos Ridge and subsidiary sites in the surrounding countryside. That, in turn, has led to a greater understanding of the size and structure of the Pylian kingdom.

The new University of Cincinnati excavations, beginning with the discovery of the Grave of the Griffin Warrior in 2015, have changed our understanding of the mortuary landscape of ancient Pylos. In the course of the recent work, we have uncovered extensive new evidence for contact between the mainland and Crete at the beginning of the Late Bronze Age. Evidence for contact between Pylos and the rest of the Aegean world extends, peripherally, to the islands and beyond, bringing full circle the continuing relevance of Jack’s early work on Crete, Melos, and in the Corinthia. Artifacts from the grave of the Griffin Warrior and other areas currently under excavation shed light on Early Mycenaean trade networks that extend beyond the Aegean to Egypt and the Near East and underscore the centrality of Pylos at that time.

### **Post-Medieval and Ottoman Archaeology in Greece: A Multidisciplinary Approach**

*Effie F. Athanassopoulos, University of Nebraska-Lincoln*

In this colloquium, we are celebrating Jack's substantial contributions to Aegean/Mediterranean archaeology. His main research interests may lie in prehistory, however his work has also transformed the archaeology of historical periods, especially the study of the Post-Medieval, Ottoman and Early Modern pasts. A pioneer of the diachronic landscape approach, he has led by example and expanded the scope of archaeological surface survey research into less well-known time periods. Earlier surveys, such as the Minnesota Messenia Expedition, had made few contributions here, treating the Medieval-Early Modern periods as the domain of history, where historical records and standing monuments take center stage.

Jack's appreciation of the rich textual and material records of the Ottoman era has opened new paths for the study of rural regions in the Eastern Mediterranean. The systematic study of Ottoman tax registers offers a wealth of demographic and economic information, which, in conjunction with archaeological field surveys, can provide a model for interdisciplinary regional investigation. For example, the Ottoman cadastral survey of the province of Anavarin (1716) is the focus of a monograph coauthored by a historian (Zarinebaf), and two archaeologists (Bennet and Davis); it reconstructs in rich detail the agricultural and settlement systems of the region of Navarino, in Messenia, using multiple historical sources (Ottoman, Venetian, French), as well as archaeological and topographic research. Rural settlements played a major role in the regional and interregional trade networks of the eighteenth and early-nineteenth centuries. It is within this period that national identities and movements were formed, leading to the independence of Greece and other Balkan countries. Thus, the multidisciplinary perspectives that have defined Jack's work have made vital contributions to the study of the Post-Medieval period and offered a better understanding of the significant historical change and transformation that characterizes this era.

### **From 'Warriors for the Fatherland' to 'Dollies and Doilies': Embedding Historiography in the Study of American Archaeology in Greece**

*Natalia Vogeikoff-Brogan, American School of Classical Studies at Athens*

Jack L. Davis made his debut as an intellectual historian and historiographer in 2000 when he published "Warriors for the Fatherland: National Consciousness and Archaeology in 'Barbarian' Epirus and 'Verdant' Ionia, 1912–1922." There he discussed two cases of state-supported archaeology, challenging the processes by which notions of cultural identity had been shaped, as well as the role that archaeologists had played in the advancement of ahistorical claims in the lands of Epirus and Ionia. "It was a hard paper to get the right tone for. And it was then that I realized that the future lay in examining our role as foreigners, not that of Greeks and Greece," Davis recently confessed when I asked him about it. That article laid foundations for his subsequent scholarship in historiography, which has focused on the role of the foreign schools, especially the American School of

Classical Studies at Athens (ASCSA or the School hereafter), in supporting nationalist agendas, either U.S. or local, “in the land of others.”

During his ASCSA directorship (2007–2012), through the study of the School’s institutional records and personal papers of American archaeologists, Davis further explored subjects such as American philanthropy, philhellenism, and the politics of U.S. volunteerism in Greece. Searching for evidence among primary sources and adopting an historical approach, he sought to revisit archaeological policies, contextualize individual motivations, offer counter-narratives, examine the institutional habitus of the American School, and suggest new ways to adapt to evolving realities.

In this presentation I review his landmark essays and critical reflections on the historiography of American archaeology in Greece before World War II. By this work Davis has inspired others to follow in his footsteps.

### **Session 6B: Colloquium**

#### **Hephaistus on the Athenian Acropolis: Current Approaches to the Study of Artifacts Made of Bronze and Other Metals**

Organizers: *Nassos Papalexandrou*, The University of Texas at Austin, and *Amy Sowder Koch*, Towson University

#### **Colloquium Overview Statement**

The study of artifacts in bronze and other metals from the Athenian Acropolis has always lagged behind monumental sculpture and architecture, in part because of the relatively poor preservation of metallic artifacts in bronze and the total absence of their silver and gold counterparts. Although Kavvadias’s excavations revealed great quantities of bronze fragments, publications have been few whereas the dispersal of the finds between the collections of two museums has impeded their accessibility and study. The result of these difficulties has been that our poor understanding of metals from the Acropolis today sharply contrasts with the prominence of metals in the sanctuary and its cultic practices known from literary and epigraphic sources and on works of art from the site. Recent publications and current research seek to correct this imbalance and restore Athens’s position as an important repository of a great wealth of metallic artifacts that were dedicated as votives, housed as treasures, and used as ritual objects in cult. Indeed, the wealth of metals housed on the Acropolis in certain periods is comparable with that documented at Olympia and Delphi.

For example, in 2006, Scholl revisited the votive vessels from the Geometric and Archaic periods, proposing that the objects and their figurative decoration can be viewed as symptomatic of the early sociopolitical transformation of Athens into a *polis*. In 2017, Tarditi’s publication of more than 1,000 attachments of bronze vessels from the Acropolis showcases their potential to illuminate the development of metallurgical production in Athens during the Archaic period as well as important aspects of cultic practice and votive behavior.

Building on these contributions, this session examines various types and aspects of metallic artifacts from the Acropolis from the Geometric through the Classical

period, aiming to reassess the presence and roles of these objects, to understand the social status of dedicants vis-à-vis the social networks that resulted in the deposition of the objects, to establish Athens's position as a center of bronze production, and to highlight new and spectacular finds that shed light on ritual practices that have been unknown to us until now. Reassessing the metal finds from the Acropolis allows us to recover key aspects of ancient Greek artistic production as well as better understand the functionalities of ritual practice. These gleaming objects conferred wealth and prestige to Athena and her city and would have contributed to the construction of the otherworldly ambience of her sanctuary.

### **The Social Life of Bronzes: Actor-Network Theory and the Athenian Acropolis**

*Diane Harris Cline*, George Washington University

The Athenians, like most other Greeks, used metals to make a wide array of objects, some of which ended up on the Acropolis, known to us today because they were either excavated, referenced in literature, or recorded in inscriptions. Bronze votive objects ranged in size from finger rings to giant cauldrons, from figurines to statues, and from lamps to incense burners and tripods. Helmets, shields, and other arms and armor were deposited on the Acropolis as well. What Actor-Network theory (ANT) provides is a way for us to move from our endless catalogs of artifacts (e.g., Harris 1995) to mapping the social associations with and uses of these objects.

The ANT approach examines the technological, economic, and socio-religious practices and processes which tied humans to the material objects. A *chaîne opératoire* correlates the bronze objects deposited on the Acropolis with human activities like importing, crafting, buying, selling, transporting, performing rituals, inscribing, and inventorying (or not). The behaviors associated with habitually depositing metal objects on the Acropolis resulted in constant demands on trade and technological production, to satisfy these needs through the materiality of the metals. Using the additional lenses of entanglement and relational materiality, we can follow the technologies, material objects, traditions, and experiences associated with dedicating metal artifacts on the Acropolis of Athens.

Ultimately the life cycle of a metal object on the Acropolis is social. No metal artifact could end up on the Acropolis by itself. Each was a visible manifestation of many social acts passing through many hands, and as the end-user on the Acropolis lets it go and leaves it behind, the final act of donation is also in a social context. We conclude that ANT provides a new method for examining both the structures and related behaviors of cultic practice.

### **The Inscribed Bronze Dedications from the Acropolis of Athens**

*Androniki Makri*, Hellenic Educational and Research Center, Athens, Greece, and  
*Adele Scafuro*, Brown University

The subject of our study are the inscribed bronze dedications from the Acropolis. A full corpus of these dedications, approximately one-hundred in number, is a desideratum. Almost all date before 480 B.C.E. and most are in fragmentary



condition: they are statuettes and bases, small objects such as heads of animals, small shields, discs, mirrors, and especially basins and *phiaiai*. The most recent systematic publication on the subject (Tarditi 2016) focuses on bronze vessels and excludes other objects; moreover, the inscriptions are not studied thoroughly because the emphasis is on stylistic analysis. Our focus is more epigraphic with a view to emphasizing the social context of these productions. Here, we limit ourselves to inscribed bronzes which were published after IG I<sup>3</sup> and not included in that corpus.

In an earlier study, we focused on bronze *aparchai* and *dekatai* dedications. Our main conclusion was that, the bronze dedications—suggestive of a widespread practice of dedication and thanksgiving—were probably not the gifts of poor Athenians, who would probably have dedicated *pinakes* or other more “humble” votives nor the gifts of the elites. Their skillful craftsmanship and inscriptions indicate they were dedications of a middle class of craftsmen, merchants and traders, or moderately prosperous farmers—and also of professional women, metics and foreigners. We argue that this middle economic class must have been prominent at the time and is substantially represented in the inscribed corpus of bronze dedications from the Acropolis.

Apart from the new pieces that we add to our “catalogue” we further contextualize the social and political background; many of them must have been “*neopolitai*” of the Cleisthenic tribal reforms; see Arist. [*Ath. Pol.*] 21.2. and especially Arist. *Pol.* 1275b, where Cleisthenes, after the expulsion of the tyrants, is said to have “enrolled in his tribes many resident aliens who had been foreigners or slaves.”

### **Hephaistos in Athens: Bronze *Hydriai* from the Akropolis and beyond**

*Amy Sowder Koch, Towson University*

Greek bronze *hydriai* were made in plentiful numbers and have survived in great quantities—complete examples and fragments of over 600 have been identified to date. Decorative elements on their cast handles have attracted a fair amount of attention, allowing productive typological assessments and an understanding of chronological developments in shape, technique, style, and decorative motifs. Inscriptions on at least seventy surviving vessels, together with ancient artistic representations, literary references, and epigraphic mentions of the objects have broadened our understanding of the functions of the shape, particularly in bronze. When recorded, documented provenances have enabled at least a partial understanding of the movement of the vessels across a wide geographic area, both within and outside of Greek territories. Pinpointing bronze production centers has proven notoriously difficult, however, which has left many questions of manufacture unresolved. While Athens’s preeminent role in painted pottery production is well attested, its position as a metalworking center has been less clear. Stylistic recognition of Lakonian and Corinthian products sometimes has been possible, but the lack of a comprehensive account of bronze *hydria* fragments from Athens has hindered our understanding of Athenian production. Drawing on evidence presented in C. Tarditi’s volume, *Bronze Vessels from the Akropolis* (2016), this paper evaluates bronze *hydria* fragments from the Athenian Akropolis as a group and compares them with the wider catalogue of surviving *hydriai* in order to identify

Athenian preferences. Through analyses of style, techniques, and iconographic motifs, we can identify products made in local workshops and track them across the Mediterranean, identifying routes and changing patterns of distribution from the Archaic through the Late Classical period. Through this study, we can reassess Hephaistos's work in Athens and better understand the roles bronze *hydriai* played on the Akropolis and beyond.

### **The Monumental Tripods from the Acropolis of Athens between the Eighth and Seventh Centuries B.C.E.**

*Germano Sarcone, Scuola Normale Superiore, Pisa*

The paper proposes a reexamination of the monumental bronze tripods from the eighth and seventh centuries B.C.E. from the Acropolis of Athens. This class of materials is attested by several fragments of bronze hammered sheets pertaining to legs and handles, discovered by G. Kavvadias during the excavations of the site in the late-nineteenth century. These fragments testify that large tripods were increasingly produced and dedicated from the middle of the eighth century B.C.E. in the sanctuary of Athena Polias. They were made with different techniques and decorated with geometric or figured patterns. I offer a new study of these old Acropolis finds, with particular emphasis on a selection of a few large bronze handles and legs. A comparison of these artifacts to other similar items of Geometric and Orientalizing-period manufacture from Delphi and Olympia discloses the technological virtuosity of the Athenian material. Moreover, the detailed study of this evidence makes possible a new graphic reconstruction of the original tripod-cauldrons which facilitates our understanding of their intended monumental effect as never before. The findspots of the fragments and the consideration of the original topographical contexts provide a better understanding of their original locations and their importance in the shaping of the sacred landscape of the Acropolis of Athens during the Archaic period. The reconstruction of the material and visual nature of the Acropolis tripods is fundamental for comprehending the political, symbolic and religious significance of the tripods and understanding their roles in the Sanctuary of Athena Polias in Athens, in particular.

### **Monsters on the Athenian Acropolis: The Orientalizing Corpus of Griffin Cauldrons**

*Nassos Papalexandrou, The University of Texas at Austin*

The corpus of seventh-century bronzes from the Acropolis comprises a small number of significant remnants of the so-called "orientalizing" cauldrons. These stereotypically orientalizing specimens are ten griffin protomes and four "siren" attachments. Although almost all of these artifacts were found during controlled excavations of the nineteenth century, they are insufficiently published and scholars have analyzed them exclusively in stylistic terms. This paper attempts to restore these artifacts to their immediate functional relationships (as appendages to vessels) and on the basis of this methodological step, reevaluates their original significance and their contribution to the sacred ambience of the Acropolis.

The griffin protomes represent ten cauldrons of various dates and sizes ranging from minuscule to impressively monumental—for example, a griffin head (Athens, NM 6635) should be restored to a sizeable cauldron of up to 2 m of diameter at the belly. With one exception, all protomes have been securely attributed by (Gehrig, Samos IX) to prolific Samian workshops, the products of which have been documented in considerably wealthier sanctuaries such as Olympia, Delphi, and Samos. The “sirens” represent three or four cauldrons dating from the first quarter of the seventh century.

The variegated nature of this corpus in conjunction with evidence from contemporary pictorial and coroplastic media in Athens suggests that the traditional interpretation of these cauldrons as showy dedicatory objects needs a thorough reconsideration. I argue that the griffin cauldrons of the Acropolis were collected by sanctuary authorities primarily as cultic equipment for performative events characterized by a high level of restricted physical and cognitive accessibility. Although the dedicatory function cannot be altogether excluded, the deposition of griffin cauldrons to the Acropolis was probably motivated by a local need to attune the sanctuary’s symbolic behavior to that of the growing Panhellenic sanctuaries of Delphi and Olympia.

### **A Bronze Phiale in the West Entablature of the Parthenon**

*Eleni Karakitsou*, Acropolis Restoration Service, Ministry of Culture and Sports, Greece

During restoration works in March 2012 on the southwest corner of the Parthenon, a unique discovery was made in a quite unusual place. Within a void behind the second metope from the corner, following the removal of an undisturbed earthen fill, there was revealed an inscribed, Archaic, bronze, mesomphalic phiale, with *repoussé* decoration, and part of a bone flute with an internal bronze pipe.

Previously in the Parthenon, there have been two other such discoveries of bronze, phiale-shaped vessels. They had accidentally fallen into constructional gaps between architectural members and were clearly utilitarian vessels, specifically paint pots, judging from the red ochre they contained. Unlike these other vessels that lay in random positions and locations, the latest phiale appears from its depositional circumstances to have been carefully placed right-side up at this precisely selected point. Traces of fire in the fill and on the flute fragment found inside the phiale point to a particular religious ritual, probably a libation, performed at this spot during the temple’s construction.

The paper examines various questions and possible interpretations that arise from the discovery of the bronze phiale at this location on the monument. The structural importance of the southwest corner where the phiale was found and its orientation towards the sea/Poseidon, as well as the weight of other religious and ideological beliefs or artistically transmitted messages associated with this part of the temple may have contributed to the choice of location for this sacred, ritualistic offering of gratitude, performed to ensure the safe, successful completion of the building project.

## **Session 6C: Open Session Rome!**

### **New Evidence for the Design and Spatial Integration of the Fora of Caesar and Augustus in Rome.**

*Wladek Fuchs, University of Detroit Mercy*

The paper will argue that the Forum of Augustus was envisioned by the patron and the architect as integrated with the Forum of Caesar into one monumental complex.

The two projects followed the same general spatial concept. Their history and form are well recognized through archaeological excavations. However, the actual architectural form of the transition between the two spaces is still buried below the Via dei Fori Imperiali. Thus the design is open to speculation. It has been traditionally represented in the literature as a solid wall, with either three or five openings allowing passage between the two spaces, implying that separate ideas and designs were at the foundation of each Forum.

Analysis of the archaeological data shows that Octavian made a series of changes to the Forum of Caesar. The two wings of the portico were modified, they were also extended by 20 m, and a new entrance to the complex was added in the form of an open colonnade on the southeastern end. Consequently, the design change described by Suetonius must be seen as a result of problems with land acquisition on the opposite northwestern side of the new project. The geometric analysis shows that the form and size of the Temple of Mars Ultor were established to create a single composition with the Temple of Venus Genetrix.

In conclusion, the paper will propose that Octavian saw his forum as a continuation of the project of his adopted father, in the same way as his political role as a family legacy. Spatially, the idea was embodied by the main entrance to the complex through the Forum of Caesar, a monumental open portico between the two open spaces, and the carefully designed relationship between the two focal points of the fora: the Temples of Venus Genetrix and Mars Ultor.

### **The Signum Vortumni Project: Results of Excavations in the Horrea Agrippiana on the NW slope of the Palatine Hill (2016–2019)**

*Matthew J. Mandich, ISAR, Dora Cirone, ISAR, and Alessio De Cristofaro, SABAP Roma*

The remains of the Horrea Agrippiana, an imposing, multi-story imperial warehouse dating to the time of Augustus, were first brought to light in the early 1900s during excavations directed by Giacomo Boni. The site is located at the base of the Palatine Hill's northwestern slope and is bordered by the famed vicus Tuscus—one of Rome's oldest roads that ran between the Palatine and Capitoline Hills, connecting the Forum with the Circus Maximus and the Velabrum area. According to the literary tradition a statue of the god Vortumnus (the Etruscan god of change) stood somewhere on or near the vicus Tuscus, seemingly in proximity to the later site of the Horrea Agrippiana—hence the name of the project. Following

Boni's investigations the building was the subject of additional topographical and architectural studies, allowing for the documentation of multiple building phases ranging from the Augustan era until at least the seventh century C.E. However, until recently, the site was not the subject of scientific stratigraphic archaeological exploration. Following promising preliminary probes carried out in 2003–2005, in 2016 The International Society for the Archaeology, Art and Architecture of Rome (ISAR) was granted an official excavation concession by the Ministero dei Beni e delle Attività Culturali (MiBAC) for the Signum Vortumni Project. The aim of this project is to uncover and reconstruct the pre-Imperial topography of this important area in the monumental center. Following four seasons of excavation, the remains of several diverse structures have come to light, including a large *opus quadratum* building, a later Republican *domus*, and an early brick-built *insula* or storage building. Based on the results of these excavations, this paper will attempt to reconstruct the pre-Augustan topography of the northwestern slope of the Palatine Hill in addition to providing insights concerning late antique phases of site use.

### **Arches and Gates in Augustan Rome**

*Anne Kontokosta, New York University*

Although they share a similar arcuated structure, Roman freestanding arches, monuments traditionally erected to celebrate individual military victories, and city gates in defensive walls played distinct roles in the urban landscape during the Republic. However, long-established functional and iconographical boundaries between these monuments began to blur in the Augustan period. Although Rome had already outgrown its old city walls, the regional reorganization of Rome in 7 B.C.E. was a significant urban “turning point” (Haselberger 2007) as the city gates of the Servian Wall were officially liberated of their defensive function and transformed into elaborate “gateway arches” (Coarelli 1988). Under Augustus, these gateways, such as the *porta Caelimontana* and *porta Esquilina*, were lavishly ornamented using iconography borrowed from Rome's most famous freestanding arches. And while the old gateways were elaborated to recall the storied victory monuments of the Republic, Rome's city walls themselves were symbolically allowed to fall into ruin. This visual juxtaposition clearly proclaimed that through military might Rome had become a city so powerful it no longer needed conventional defenses.

This paper investigates the relationship between freestanding arches and city gates before and during the period of Augustus. I argue that the Augustan transformation of city gates to emulate freestanding Roman arches does not indicate, as many have suggested, that these two monument types were previously related. Nor does it warrant the frequent inclusion of city gates into studies of freestanding arches. Instead, I propose that the adoption of the freestanding arch as a model for city Augustan gates both reflects the importance of the freestanding arch within the republican city and marks the beginnings of its demise as an independent victory monument associated with some of the most significant individuals of the Republic.

### **Fire! Fire! Rethinking the Excubitorium of the VII Cohors Vigilum in Rome**

*Simonetta Serra, Sovrintendenza Capitolina – Roma*

The Excubitorium of the VII Cohort of the Vigilum was discovered in 1866. Attention focused immediately on the ninety-two graffiti discovered on the walls, but the monument in itself has never been the subject of a specific analysis. Even the marine mosaic, which disappeared in the early-twentieth century, has never been properly studied.

In this paper I will reconsider the structure of the monument and, on the basis of an analysis of the different building phases still recognizable but never considered, I will propose a more elaborate reconstruction of the development of the monument where at least three phases can be documented between the first and the third centuries C.E.

This new analysis will also provide original information about the lost mosaic, which could belong to a phase that precedes the arrival of the firefighters in the Trastevere building. The subject of the mosaic, a marine scene with Tritons and imaginary animals, is normally found in baths or private houses, so it is possible that originally it belonged to a building with a different destination of use.

A final goal of this paper is a more general examination of the distribution of the Cohorts in Rome and the nature of the barracks known as *excubitoria*. A recent article by Filippo Coarelli proposes a new hypothesis on the position and interpretation of the various structures identified as barracks for the firefighters and proposes a different interpretation for the term *excubitorium*. Even if his theory has some elements of interest, I will propose a different solution for the problem of the name and nature of the fourteen *excubitoria* remembered in the *Curiosum Urbis Romae* and in the *Notitia regionum*.

### **Out of the Magazine, Into the Cloud: Virtual Modeling of the Great Marble Map of Rome**

*Elizabeth Wolfram Thill, IUPUI, and Madeline Theaman, IUPUI*

Launched in 2018, the Great Marble Map of Rome Project uses cutting-edge technology to further research on and engagement with the Great Marble Map of Rome (known traditionally as the *Forma Urbis Romae* or the Severan Marble Plan). The project's goal is an innovative public website with digital access to all aspects of the map, in coordination with a new museum opening in Rome. This work is made possible through a partnership between the Ancient World Mapping Center (UNC-CH) and the Musei Capitolini (Sovrintendenza Capitolina ai Beni Culturali, Rome), in collaboration with the IUPUI Center for Digital Scholarship.

The project's latest undertaking is new 3D digital scans and models of all ca. 1,200 surviving map fragments. In Fall 2019 a team will use Creaform Go Scan 3D handheld structured light scanners to make on-site digital scans of 200 fragments. The resulting scans are scalable with an accuracy up to 0.01 mm, and capture color and texture resolution up to 16,000 x 16,000 pixels. The new scans, presented in this paper for the first time, represent a leap forward in the recording and dissemination of information on the Great Marble Map. New forms of digital presentation, in particular virtual reality, offer exciting possibilities for novel research

methodologies and questions. For example, a team of researchers wishing to test possible chronological differences in the execution of temple depictions will be able to access all fragments showing temples, view them at the same time in the same virtual space, and manipulate the modeled fragments like three-dimensional objects, to compare side-by-side details such as depiction styles, depth of carving, spacing of lines, and relationship to mounting clamps on the back. Such techniques and more promise a bright research future as we work closer with the new scans.

### **The Many Meanings of the Arch of Titus and the Mechanisms of Reinterpretation**

*Fredrik Tobin-Dodd, Swedish Institute in Rome*

The Arch of Titus in Rome was constructed as a Flavian commemorative monument but has since been interpreted in many other ways. In Renaissance and Baroque Rome, the arch appeared in papal ceremonies as a symbol of Christian supremacy over Judaism, and from the nineteenth century onwards it has often been seen as a symbol of the survival and resilience of the Jewish people. Within both Christian and Jewish thinking, however, there exist several different, sometimes contradicting, interpretations of the meaning of the arch.

This paper traces the historical development of Christian and Jewish understandings of the arch and argues that it has specific properties that makes it possible to read it in so many ways. The Jewish reversal of the message of the arch, from oppression to survival, is only made possible by the depiction of the menorah, an iconic Jewish symbol, which functions as an interpretational pivot around which the meaning can be turned around.

Christian understandings of the Arch of Titus have primarily fallen into two categories, either seeing the Arch as a symbol of Christian triumph or as proof of the historicity of the Christian faith. This paper argues that these two strains of thought reflect Catholic and Protestant views on the nature of the Christian church and its history.

The Arch of Titus is a good example of how differently an ancient monument can be interpreted. However, this does not mean that any monument can easily be assigned a new meaning. These processes of reinterpretation can only happen when a monument, like the Arch of Titus, offers specific opportunities to do so.

## **Session 6D: Open Session**

### **Current Archaeological Research in Northern Greece and the Western Shores of the Black Sea**

#### **Mapping 'Marginality': Results of the 2019 Central Achaia Phthiotis Survey**

*Margriet J. Haagsma, University of Alberta, Sophia Karapanou, Ephorate of Antiquities, Larissa, Lana Radloff, Bishop's University, Sandra Garvie-Lok, University of Alberta, and Vladimir Stissi, University of Amsterdam*

The Central Achaia Phthiotis Survey (CAPS) is a *synergasia* between the the Ephorate of Antiquities in Larissa, Greece, the University of Alberta, and Bishop's

University. CAPS explores the landscape around the site of the Kastro at Kallithea in the region of Achaia Phthiotis, lying on the western end of the plain of Almiros. This largely uncharted region sits at the crossroads between northern and southern Greece, between plains and mountains and between the sea and areas further inland. It is characterized by a dynamic landscape of fertile plains and rolling hills intersected by the Enipeus river and the Kotsiloremma. The goal of CAPS is to increase our understanding of the interplay between environmental, geopolitical, cultural, and social factors for the community/ies living in this region through time by mapping this “marginal” area to identify patterns of connectivity, continuity, and discontinuity.

The 2019 pilot year of CAPS focused on intensive survey of cultivated fields in the Kampos area, north of the Kastro, and the mapping and study of Early Iron Age *tholos* tombs. In spite of a dramatic alteration of the landscape since the 1960s, material collected from the survey demonstrates a robust archaeological record. Initial results indicate that although artifact densities diminish as distance increases from the Kastro, producing a halo around the base of the hill, recovered materials include a broad range of diagnostics. Within this context, we have located at least seventeen Early Iron Age *tholos* tombs in visually conspicuous locations. The excavation of one tomb reveals internment in possibly two phases and evidence for commemorative activity. These promising results form the basis of a five-year plan, which will supplement pedestrian survey with LiDAR data and geological studies to identify features obscured by heavy vegetation and environmental factors influencing patterns in the landscape.

### **The Long Lives of Attic Figured Vases from Ancient Methone**

*Trevor M. Van Damme, University of Victoria*

Since 2014, the Ephorate of Pieria and UCLA have collaborated on the excavation of the West Hill of ancient Methone. This project joins a growing number of well-documented sites in the north Aegean, including Pydna, Karabournaki, Sindos, Toumba-Thessaloniki, Akanthos, Olynthos, and Thasos, which show interconnections within the area and beyond during the Archaic and Classical periods. One of the most impressive features documented at Methone is an enigmatic rock cut shaft that was filled with refuse from the settlement in three discrete phases over the course of the sixth through fourth centuries B.C.E. Study of the fill stratigraphy, as defined through networks of ceramic joins, allows changing consumption patterns to be quantified at the site, prior to its destruction by Philip II in 354 B.C.E.

In this paper, I present the results of two years of intensive study of the Attic figured vases from the rock cut shaft. Among the inventoried finds presented for the first time are the earliest known Panathenaic amphora from the North Aegean, a pseudo-Panathenaic neck-amphora decorated with a musical *agōn*, a black figure eye-krater, and a Siana Cup attributed to the C Painter demonstrating that Methone quickly became a major consumer of Attic figured vases. One important finding from Methone is the stability of Attic imports from the sixth through fourth centuries B.C.E. as a percentage of the total quantity of decorated fine wares. Noteworthy, however, is the curation of antique figured vases in the fifth and fourth



centuries B.C.E. across the site, perhaps best exemplified by the recent publication of a Late Archaic cup found in fourth-century B.C.E. destruction levels on the East Hill by Maria Tolia-Christakou. This demonstrates the long lives of figured vases, in contrast to Attic black gloss wares and local products from the same contexts.

**The Olynthos Project: Field Work in 2018 and 2019**

*Lisa Nevett*, The University of Michigan, Ann Arbor, *E. Bettina Tsigarida*, Greek Archaeological Service, *Zosia Archibald*, University of Liverpool, *David Stone*, University of Michigan, Ann Arbor, and *Bradley A. Ault*, State University of New York, Buffalo

The Olynthos Project, begun in 2014, is a *synergasia* between the Greek Archaeological Service and the British School at Athens, by permission of the Greek Ministry of Culture. Since 2014 the team has been undertaking fieldwork at the Classical city of Olynthos (Chalkidiki, Greece). The objectives of the project are to understand the extent of the city and the organization of its different neighborhoods; to investigate the chronology and character of settlement on the South Hill; to explore in detail patterns of domestic organization on the North Hill; and to understand the role of the city and its households in local, regional, and long-distance economic networks.

This paper summarizes the results of the final two field seasons which took place in 2018 and 2019. During these seasons, sampling of the surface material surviving on the two hills was completed, as was field walking in the study area lying beyond the fenced site. On the South Hill excavation was completed in two stratigraphic trenches, revealing important new information about the history and early settlement of Olynthos. On the North Hill, excavation and scientific sampling within house B ix 6 were completed, facilitating conclusions regarding the use of space, and the effectiveness of different strands of evidence for reconstructing household organization. Finally, work also resumed at the northern end of the hill, beyond the boundary of the formal urban grid, offering a picture of a range of activities taking place in this area that contributes to our evaluation of the neighborhood and of urban organization.

**The Molyvoti, Thrace, Archaeological Project (MTAP): Ancient Stryme; 2019 Field Report**

*Nathan Arrington*, Princeton University, *George Makris*, The University of British Columbia, and *Eli Weaverdyck*, University of Freiburg

MTAP began a new five-year campaign in 2019, investigating the coastal settlement often identified as Ancient Stryme in its broader context. Excavation in 2019 uncovered the full extent of the House of Hermes, the second house completely revealed at the site. The House of Hermes was founded ca. 400 B.C.E., closer to ca. 375, and measures 17.6 x 17.6 m. A destruction deposit dates 350–340 B.C.E. The house contains a substantial pastas, at least one courtyard, and an andron with vestibule. Several of the rooms in the house received simple paving, and there is also some evidence for a tessellated floor. From the destruction deposit,

roof tiles with Thasian stamps provide support for the identification of the city as Stryme, a Thasian colony. Excavation also included, for the first time, the region of an extramural Ionic temple detected in 2015. The majority of the finds date to the Hellenistic period, after Stryme was abandoned. Thracian pottery was also found. Surface survey extended beyond the limits of the 2015 survey, which had focused on Stryme's immediate hinterland (up to 5.5 km beyond the city wall). It examined changing patterns of land use at greater distances from the city. Seven Places of Special Interest (PoSIs) were identified. For the Classical-Hellenistic period, one important PoSI 7.6 km from the city walls produced sixteen coins. In contrast, in the 2015 survey, only two coins were recovered, raising interesting questions about economic activity on the landscape. Other periods detected were Late Byzantine and Ottoman (fifteenth–sixteenth centuries). Surprisingly little to no Roman material was found. Recovery and analysis of bone and plant remains at the site continued. Particularly productive was the fill next to a wall in the ancient harbor. Bones included many varieties of fish. More than 5,000 plant specimens were identified, with remarkable levels of preservation.

### **Preparing and Cooking Foods at the Classical Site of Stryme, Northern Greece**

*Chantel E. White*, University of Pennsylvania, and *Nathan Arrington*, Princeton University

Remnants of foods recovered from a Greek neighborhood at a trading port along the north Aegean coast illustrate the dietary practices of its inhabitants during the fourth century B.C.E. The presence of crops regarded as standard Greek fare, such as free-threshing wheat, and specific dishes mentioned in Classical literature, such as bread topped with sesame seeds, suggest that food practices were an important means of maintaining a shared Greek identity among residents. Here archaeobotanical evidence is analyzed alongside artifacts such as cookware and hopper mills to showcase the preparation techniques used for making meals. Additional evidence for foods reserved for special occasions and communal drinking activities, such as the remains of wine (grape seeds) found inside an ornate bell krater, were likely part of social events that also reinforced connections to a shared Greek identity. While the physical location of Stryme is a meeting point between Greek trading routes along the coast and the inland rivers of the Thracian plain, a dearth of locally available wild plant foods in the archaeobotanical record suggests residents may have been conservative in adopting new ingredients and dishes.

### **The Mother of Gods on the Western Coast of the Ancient Black Sea**

*Dobrinka Chiekova*, The College of New Jersey

This paper focuses on the worship of the Mother Goddess in the Greek colonies on the western Black Sea Coast as an expression of regional identity in a complex area of cultural contacts. In the context of the Ancient Greek colonization religion plays a key role both as an essential part in the cultural identity of different communities and peoples, and as an effective way to build bridges and acknowledge commonalities. The paper contends that the Greek colonists and the Thracians

were able to recognize simultaneously the continuum and the distinction in the forms and characteristics of their respective Mother Goddess. On several reliefs with the Thracian deity known as the “Thracian Rider,” the goddess, depicted in front of the hero, appears as Cybele but must be interpreted as the Thracian Goddess whose representation adopts the iconographic type of Cybele. The discovery in 2007 of the temple of *Meter Theôn Pontia* (The Pontic Mother of Gods) in Dionysopolis, functioning from the first quarter of third century B.C.E. to fourth century C.E., reveals new and exciting evidence, including statues, reliefs, and more than thirty inscriptions.

In conclusion, the epigraphic and the archaeological evidence demonstrate that the political aspect of the Goddess’s personality is salient and reminds her Phrygian position. All evidence points to the *polis* elite actively promoting her worship. The paper seeks to make an original contribution by arguing that a Great Goddess very similar to the Phrygian Matar was worshiped in Thrace and on the western shores of the Black sea before the arrival of the Greeks in seventh century B.C.E. The Greek colonists brought with them a different form of the same cult, an already syncretized and Hellenized version of the Phrygian goddess. The Greeks and the Thracians were capable to recognize and cherish both the commonalities and the distinct traditions of this complex divinity.

## **Session 6E: Colloquium Archaeological Research at Gabii**

Organizers: *Marcello Mogetta*, University of Missouri, and *Nicola Terrenato*, University of Michigan

### **Colloquium Overview Statement**

Roman cities have been excavated, written about, depicted, and reconstructed repeatedly, and yet we know little about the early stages of Roman urbanism. None of the major central Italian sites that are part of the “first wave” of urbanism has ever been extensively excavated down to the Archaic and Early Iron Age levels. Recent fieldwork in central Italy has concentrated on sites that were founded as colonies in the Mid-Republican period like Cosa or on secondary settlements like Pompeii, producing a rich record on fortifications and temples, but leaving us in the dark as to the formation of the main building types for both civic and domestic space prior to their diffusion in the Italian peninsula in the course of the first century B.C.E.

The town of Gabii, located 12 miles east of Rome, offers the opportunity to shed new light on the crucial moments in which towns and cities in central Italy are just getting started, as well as on the development of the urban fabric and on the social dynamics of quotidian urban life. A top-tier primary urban center, for most of the first millennium B.C.E. Gabii evolved in parallel with peers like Rome, playing an important role at the regional and interregional level due to its strategic position. Because of the contraction of the site from the first century B.C.E. onward, its Mid-Republican and Archaic phases are not masked or damaged by later constructions.

The archaeology of Gabii presents itself as an ideal term of comparison for exploring contemporary social and cultural developments in Roman Italy. Several international projects have been launched in the last decade at the site, building on the momentum created by the Soprintendenza of Rome's excavations in the archaeological park, leading to a research environment of strong synergy and collaboration. The results of these initiatives have revealed important and exceptionally preserved contexts featuring EIA and Orientalizing hut compounds, sacred architecture and votive deposits from the period of city formation, Archaic elite residential buildings, fortifications and town planning, thus allowing us to observe in the long term the peaks and valleys of the urban trajectory of Gabii. The proposed colloquium brings together members of the different research teams working at the site with the goal to provide a forum for sharing the wealth of information generated so far, and to foster a broader reassessment of Gabii in the field of Roman archaeology.

Discussants: *Chiara Andreotti*, SSABAP Rome, Gabii Archaeological Park, and *Rocco Bochicchio*, SSABAP Rome, Gabii Archaeological Park

### **The Town Planning of Gabii between Archaeology and History**

*Andrew C. Johnston*, Yale University, and *Marcello Mogetta*, University of Missouri

Since 2007, geophysical survey and excavation have revealed that Gabii was laid out in a planned, quasi-orthogonal pattern. In view of the organic nature of its original growth as a primary nucleated settlement out of the hut clusters of the early Iron Age, the regular plan of the mature, early Republican city is indicative of an important transformational moment in its history, representing a break from previous patterns of occupation and an anomaly in the regional context. The data gathered by the Gabii Project now allows us to sketch a fuller picture of the circumstances surrounding the implantation of this extraordinary urban grid at the end of the fifth century B.C.E., which involved significant spatial and sociopolitical discontinuities with the previous settlement.

In this paper, we summarize the archaeological evidence for the creation of the quasi-orthogonal layout, situating it in its local and regional context. We suggest that the reorganization of the city represents a moment of refoundation after a period of abandonment, and that the urban trajectory of Gabii relates to specific local events. Through a reexamination of the literary record for sixth- and fifth-century Gabii, we offer a historical reassessment with a focus on two pivotal processes: the obscure *devotio* of the city by the Romans, a longstanding interpretive crux; and the dynamics of early colonization in Latium and the involvement of patrician *gentes* therein—specifically the *gens Postumia*, for Gabii. This new interpretation of the unbounding and refounding of Gabii not only has important implications for our understanding of the archaeology of the city and of early Republican urbanism, but also sheds interesting light on society, religion, and interstate interactions during one of the “darkest” ages in Roman history.

### **The Changing Landscape of Downtown Gabii: The Imperial Necropolis from Area B of the Gabii Project**

*Laura Banducci, Carleton University, and Anna Gallone, Gabii Project*

The developments documented by the Gabii Project shed new light on our understanding of Gabii's experiment with urban life: a story of growth, transformation, and decline. The distinction between the spaces of the living and the spaces of the dead were not clear-cut and areas considered "within the city" shifted in the minds of the locals as their social and economic needs changed.

We present the sequence of occupation of Areas A and B, where we can trace the process that led from sparse settlement to the creation of urban fabric. The establishment of a quasi-orthogonal urban grid in the late-fifth century B.C.E. expanded the previous hut habitation foci forcing a regularization of the inhabited site. The new elongated city blocks were progressively occupied by public infrastructure and private buildings.

At the beginning of the Empire, the houses occupying the Areas A and B block disappeared leaving the once built-up sectors vacant. The block was repurposed with the creation of a small burial ground and the installation of a quarry of the local bedrock. The dynamics that led to this transformation, the coexistence of industrial activities and tombs traditionally relegated to outside the perimeter of cities, give us the opportunity to explore perceptions of "urban" and "not urban." Much has been made about the location of cemeteries outside cities as "cities of the dead": the dead claimed and advertised identities through their monuments and the living interacted with them and with each other through the maintenance and visitation of tombs. Yet evidence from Gabii suggests that the importance of the spatial distinction between the living and the dead may have been overstated.

### **The Louvre Excavations at Gabii: Results of the 2013–2019 Seasons**

*Steve Glisoni, Louvre Museum*

In partnership with the Soprintendenza archeologica di Roma, a team from the Musée du Louvre has been excavating since 2013 in the town center of Gabii. The excavation takes place close to the monumental compound traditionally known as the Forum since the discovery the Scottish painter and antiquarian Gavin Hamilton made in 1792. From there come some fifty pieces of sculpture now housed in the Musée du Louvre.

The research led by the team from the Louvre focuses on the city block that lies between the so-called forum and the vast urban sanctuary of Juno Gabina. The aim is to understand the topography and the transformations of the town center of Gabii and how the two monumental complexes are linked together, through the study of the street organization. The purpose is also to enrich our knowledge on the vast urban sanctuary, thanks to the exaction of a part that is barely known: the theater section.

The excavation has indeed brought to light the remains of a *domus* with an atrium, dating to the Republican era, inhabited until the Imperial period and showing an elaborate layout as well as fine architectural adornments. To the North of the area, down to the upper terrace occupied by the *temenos* of the urban sanctuary

of Juno Gabina, in front of the semicircular shape still visible in the nowadays topography, remains of a theater are emerging step by step.

### **Early Latium: Evolution vs. Revolution? Tradition and Innovation in Ritual Banquets in the East Sanctuary of Gabii**

*Gabriel Zuchtriegel, Paestum Archaeological Park*

Against the legendary accounts of revolutionary innovations in the history of early Rome and Latium as told by ancient authors (starting from the foundation of the city), modern scholarship has put forward evolutionary models that tend to emphasize the *longue durée* of urban, political, and cultural developments south of the Tiber. Archaeologists have argued that Latin settlements remained on a “proto-urban” level for centuries, and that the culture of Latium continued to be a primitive reflex of Etruscan and Greek models way into the Republican period.

In my paper, I argue that evolutionism and primitivism are not the only alternative to ancient tales about Aeneas, Lavinia, and the seven kings. As the study of ritual banquets in the Santuario Orientale (East Sanctuary) of Gabii shows, archaeology can contribute to revealing the innovative character of seemingly traditional and primitive practices in religious contexts. In the period from the late-eighth to the early-fifth century B.C.E., three quite different types of ritual banquets are attested in the East Sanctuary. Each of them combines Greek and Etruscan features with local elements in an innovative and creative way.

Although we ignore the historical backdrop of the changing ritual practices in the East Sanctuary of Gabii, the data points to dynamic processes triggered by radical and complex social transformations rather than to slow and continuous evolutionary processes. Put shortly, the story about Romulus and Remus going to school in Gabii might be an invention, but that does not mean that Archaic Gabii was a primitive village that only slowly evolved into a complex urban society. In their own way, early Latin sanctuaries and settlements were extremely complex and dynamic.

### **The Archeological Researches in the Arx of Gabii (Excavation Campaigns 2007-2012).**

*Marco Fabbri, University of Rome Tor Vergata*

In 2007 the Soprintendenza Speciale per i Beni Archeologici di Roma and the University of Rome “Tor Vergata” forged a new research project aiming to resume the study of the Latin city of Gabii. As part of this program, between 2007 and 2012 excavation campaigns explored different areas of the city, concentrating in particular on the previously known extra-urban Eastern Sanctuary, the fortification walls, and a monumental tripartite building located in the city arx.

Firstly, the investigations undertaken in the area of the Eastern Sanctuary enable us to better understand space organization and configuration of the cultic facilities, as well as to propose a new attribution of the patron deities of the sacred place.

Secondly, the research conducted on the eastern and northern segments of the fortification reveals interesting new details about the earliest phases of the urban setting of Gabii.

Finally, the excavation in the arx sheds new light on the city of Gabii itself, which written sources report was conquered by the trickery of Sextius Tarquinius. A new tripartite building was built during the early-sixth century B.C.E., in the area which had been occupied since the proto-historical age by prestigious residential buildings. The remains of the walls were discovered underneath a rubble tumulus intentionally built to obliterate the structures. The building's layout, along with the discovery of some fragments of architectural decoration depicting a sequence of felines and bull-head figures, lead us to argue that the Gabine complex was a duplication of the Regia of Rome. The construction of the Gabine regia thus represents crucial evidence of hegemonic interest of the Tarquins towards Gabii, while the final destruction of the city coincides with the end of the Etruscan dynasty at Rome and the institutional shift from Monarchy to Republic.

### **Big Digs in the Twenty-first Century: The Gabii Project Model**

*Nicola Terrenato*, University of Michigan, and *Rachel Opitz*, University of Glasgow

Classical archaeology has long relied on "big digs," especially in Greece and the eastern Mediterranean. Centered in major ancient cities, they typically have conducted non-stop, large-scale excavations for many decades, often with the ongoing institutional support of foreign schools and multiple universities. While they have indisputably made a massive contribution to the discipline, in recent years they have come under sustained criticism. Methodological stagnation, unclear research questions, intellectual endogamy and slow publication are some of the issues that have been imputed to big digs by eminent voices in the field. It should also be noted that in peninsular Italy there have been virtually no comparable endeavors since the 1970s.

When, in the late 2000s, the Gabii Project was being designed as somewhat of a big dig, therefore, an honest reflection was needed. The conclusion was that there were still significant research benefits to be reaped from a multi-decade large urban excavation, thanks to the accumulation of knowledge and to the economies of scale. The proviso was, however, that some new strategies be deployed to streamline and open up the relevant archaeological discourse. The paper discusses the adaptations to the traditional model that were incorporated in the Gabii Project. Many of them revolve around conceptualizing the big dig as a logistical platform that makes it easier for a multiplicity of research agendas to be pursued. Methodological self-analysis and innovation are built into the field and recording practices. Digital, online publication is leveraged as a way to disseminate data rapidly and thoroughly. While the implementation of these new strategies is not always easy, the first ten years at Gabii suggest that a twenty-first-century version of the big dig is still intellectually and ethically viable.

**Session 6F: Colloquium**  
**The Impact of Economic Development on Cultural Heritage in Contemporary Turkey**

*Sponsored by the Near Eastern Interest Group*

Organizers: *Peri Johnson*, University of Illinois at Chicago, and *Elif Denel*, American Research Institute, Ankara

**Colloquium Overview Statement**

Archaeological excavations have long held a central role in Turkey's cultural heritage management policies. In the past few years, numerous projects with alternative methodologies and emphases have emerged that highlight changing approaches towards the country's heritage in parallel with a particularly dynamic period in economic and social policies. Survey projects record a rural environment rapidly changing under new legislation aimed at fostering economic development at the expense of heritage landscapes. Salvage projects in landscapes to be inundated, mined, or erased by infrastructure have held a significance, especially since the 1960s, in Turkey's policies on archaeology and cultural heritage. The rapid nature of contemporary economic growth and the relatively slow nature of salvage archaeology, however, present a challenge to the effective implementation of established policies. The result is a precarity of landscapes: projects must change in parallel with rising anxiety that invaluable information on past societies may be lost in perpetuum.

These dynamics have led to the work presented in this session. The first paper introduces the recent legislative changes designed to foster development but affect negatively the status of heritage in rural areas, with the aim to examine the legal context in which archaeological research is carried out in Turkey today. The following paper turns to how urban development and wide-scale salvage archaeology has altered the character of maritime archaeology to highlight how development itself impacts research questions. The third paper introduces the recent initiative of The Anatolian Archaeology and Cultural Heritage Institute designed to respond to these changes by empowering professional archaeologists in Turkey. The next two papers describe two projects generated under the guidance of the British Institute in Ankara: *Living Amid the Ruins* and *Safeguarding Archaeological Assets of Turkey*. The former project uses the *Pisidia Trekking Heritage Trail* to focus on awareness and capacity building through social and economic benefits for local communities in an attempt to develop ways to maintain the sustainability of heritage preservation along with economic development. The latter project looks to the future and includes a survey to study public perceptions of archaeology and an online course to foster knowledge about archaeological preservation. The goal of this session is to highlight how these efforts represent the changing nature of archaeological practice in Turkey, particularly in a highly dynamic atmosphere directly affected by the swiftly shifting nature of the country's economic and social policies.



**Administrative Centralization at the Expense of Rural Landscapes and Archaeological Heritage in Turkey after 2012**

*Peri Johnson*, University of Illinois at Chicago

In December of 2012 a new law on metropolitan municipalities was adopted in Turkey with the purpose of fostering “sustainable” development and the efficient provision of municipal services. The first article of the law abolished all villages and towns in provinces designated as metropolitan municipalities and extended the boundaries of these municipalities to the provincial boundaries. With the adoption of the law, villages and towns as decentralized self-governing communities and as custodians of their land and archaeological heritage lost their legal standing. As an archaeological survey project that works closely with villages as repositories of knowledge and the nexus of local negotiations over archaeological traces in their agricultural and pastoral lands, the Yalburt Yaylası Archaeological Landscape Research Project has documented the striking changes brought about by the 2012 law in rural landscapes. This paper will discuss these changes in the Yalburt Project area through a comparison of fieldwork conducted before 2012 and afterwards. Of primary significance is the implementation of national development policies based on a governmental logic of sustainability and with international financing. This paper unpacks sustainability as understood in governmental policies on acceptable custodianship of pastoral lands and heritage within them. As Tracey Heatherington has described for Sardinia, heritage conservation projects often derive from national and international policies, and exclude local use by regulations and fencing to protect heritage. Consequently, the projects are opposed by locals. Recent projects have sought to reverse the policies of exclusion. In the logic of metropolitan municipalities, rural landscapes are obsolete and villages and towns have no custodians. Neglected by a distant municipality and deprived of local administration, archaeological traces in areas outside of designated heritage landscapes have become disposable landscapes of extraction and dumping. The solution to the conservation of archaeological heritage lies in negotiating with, and empowering, local communities to become custodians of their places and lands.

**Tides of Change: New Time, New Needs, New Practices in Maritime Archaeology in Turkey**

*Matthew Harpster*, Koç University, and *Mustafa V. Koç* Maritime Archaeology Research Center

For decades, maritime archaeological practices in Turkish waters followed a particular pattern. Collaborations with the community and field surveys helped scholars collate information about assemblages on the seafloor, and one site became the focus of an excavation for the following years. The research on assemblages from Cape Gelidonya, Ulu Burun, Pabuç Burnu, Camaltı Burnu, and others, each proceeded in this general fashion. The excavation of the Theodosian harbor at Yenikapı that started in 2004, however, theoretically changed this pattern. Conducted as a salvage project in response to the expansion of Istanbul’s metro system—part of a larger effort revitalizing the city as a whole—the project

at Yenikapı could demonstrate that the academic imperative that drove previous maritime archaeological work was no longer as dominant. Instead, the increasing speed, scale, and scope of Turkey's development was now the factor prompting maritime field work.

Maritime archaeological work in Turkey has adapted in response. Excavations of shipwreck sites are no more common than in previous years, and survey work has expanded to incorporate the tidal zone and coast, built heritage, and management plans for potential threats. Coastal survey work at Boğsak has proceeded in the shadow of the construction of a nuclear reactor, for example, whereas surveys of the Karaburun peninsula coast parallel the growth of housing developments and a new four-lane highway. These proactive efforts are enhanced by the Türkiye Sualtı Sporları Federasyonu (Turkish Underwater Sports Federation), which adopted new SCUBA certification standards in 2018 that incorporate a module on Underwater Cultural Heritage. This paper will investigate these changes and how maritime archaeology may be adapting to the new economic dynamics pushing the country's development.

### **Living Amid the Ruins: Archaeological Sites as Hubs of Sustainable Development for Local Communities in Southwest Turkey**

*Işıl Gürsu*, British Institute at Ankara, and *Lutgarde Vandeput*, British Institute at Ankara

The project, supported by the British Academy Sustainable Development Programme, concentrated on a mountainous region in southwest Turkey. It builds on over thirty years of archaeological survey work directed by Stephen Mitchell and Lutgarde Vandeput, affiliated with the British institute at Ankara. Işıl Gürsu created a 350 km-long Pisidia Heritage Trail, linking twelve archaeological sites studied during the Pisidia Survey Project. Based on this research, Living Amid the Ruins concentrated on tackling the challenging issues of how to protect cultural heritage, on the one hand, and provide sustainability for present-day local communities, on the other, through multi-layered dialogues with local rural communities. Five months of anthropological and ethnographical fieldwork conducted by two experts, during which over one-hundred semi-structured interviews were conducted with members of local communities investigated the relationship that people living by archaeological sites have with the heritage. As such, the project researched the relationship of these communities with the heritage and incorporated their ideas and suggestions on how to offer a model for using cultural heritage as the engine to generate sustainable development for local communities, by fostering a sense of pride among them for hosting this heritage and empowering them in the interpretation of this heritage and in presenting it to visitors.

### **Safeguarding Archaeological Assets of Turkey (SARAT)**

*Gülşah Günata*, British Institute at Ankara, *Gül Pulhan*, British Institute at Ankara, *Işıl Gürsu*, British Institute at Ankara, and *Lutgarde Vandeput*, British Institute at Ankara

The “Safeguarding Archaeological Assets of Turkey (SARAT)” project focuses on different aspects of safeguarding archaeological heritage while working with different target groups to raise awareness and increase capacity to realize its aims.

For the first time, a nation-wide survey to map public perceptions of heritage and the value it holds took place, and 3,601 people were interviewed. The results provide a necessary base line and background information for heritage workers, academia, and authorities. They show that even if knowledge is low, interest and attributed values are much higher than generally assumed.

To raise awareness and capacity, a number of initiatives are foreseen. Firstly, an online course “Safeguarding and Rescuing Archaeological Assets” provides interested individuals the opportunity to be introduced to the general (international) framework dealing with the preservation of cultural and archaeological heritage, methods to face emergency and disaster situations in museums and archaeological sites and to deal with the aftermath of such events, for instance. The first round was launched mid-March 2019 and received over 2,200 registrations within five days, providing a clear indication of perceived need among the population. Workshops for antiquities collectors, journalists and the media to raise awareness of the cultural heritage and the long-term impact of looting and illicit trade provide further ways to raise awareness on the importance of archaeological assets.

## **Session 6G: Colloquium**

### **Sacred Space and the Archaeology of Landscapes from Antiquity to the Post-Medieval World**

*Sponsored by the Medieval and Post-Medieval Archaeology Interest Group*

Organizers: *Justin A. Mann*, University of Virginia, and *Darlene L. Brooks Hedstrom*, Wittenberg University

#### **Colloquium Overview Statement**

The proposed colloquium will examine how current archaeology has treated the creation and maintenance of sacred spaces and landscapes in the broadly defined Mediterranean region from antiquity to the post-medieval period. Our understanding of sacred spaces has too often been delimited to the identification and definition of religious architecture as the locus for sacrality. The ensuing analysis, therefore, disconnects these culturally important sites from their wider social and cultural contexts. As a result, less work has been done to understand how concepts of the sacred connect with and extend beyond the precincts of religious architecture or the environmental setting of the religious built environment.

This colloquium seeks to engender a wider analysis of the archaeological record of sacred spaces and landscapes. The selected papers assess how archaeological concepts of the sacred communicate with broader socioeconomic or environmental consequences. For example, topics range from the continuity or discontinuity of religious practice and place, the topography of the sacred as revealed through archaeological survey, the economy of sacred landscapes, and the ramifications of sacred space or landscapes on daily life and local authority. Since the concepts outlined above are not restricted to a specific period, the colloquium encourages a

diachronic focus, both within and between the selected papers. Geographically, our participants address the concepts of sacred space and sacred landscapes through the Mediterranean, including Italy, Greece, and Cyprus. In sum, as archaeologists continue to confront questions of the sacred in the material record, it is hoped that the wide-ranging evidence and methodologies presented in this colloquium bring about new ways of viewing sacrality and its relationship with the landscape.

### **The Early Christian Landscape as Taskscape**

*Kilian Patrick Mallon, Stanford University*

This paper argues that scholarship on sacred and religious landscapes has focused on sacred spaces and ritual without integrating those narratives with more mundane economic life. The work of builders, artisans, and administrators in churches are usually treated as separate to the religious landscape. This paper, based on completed dissertation research on the archaeology of labor in the Late Antique Church, aims to deconstruct the established binaries in scholarship between sacred and profane and between ritual and labor.

To do this is to see religious sites and landscapes not just as landscapes but as taskscapes. This concept, drawn from the work of anthropologist Tim Ingold (2002), allows us to describe an array of tasks in continual motion (taskscape) alongside an array of spaces (landscape) as integral components of a religion's history. This paper focuses on the landscape of Ravenna as a case study, a point of contact between Arian and Orthodox Christianities and between the Byzantine and post-Roman world. The city's rich evidence for tasks in continual motion makes it a perfect case study of a religious taskscape.

This paper provides new data on changes in the scale of labor mobilization, changes in the specialization of tasks, and changes in form and design according to broader socioeconomic trends. Religious and political rivalries in the city were expressed not just in ideological art, but in the scale and organization of building programs and renovations. The mobilization of workers and the tasks they carried out was an integral part of the religious landscape. At the same time, this paper highlights the contradiction that many religious spaces in Ravenna were reserved for the elite. The paper will finish with an analysis of textual accounts of the Church's ideology toward work in the *Liber Pontificalis Ecclesiae Ravennatis* and in the regulation of Church councils.

### **The Christianized Landscapes of Early Byzantine Corinth**

*David Pettegrew, Messiah College*

In the opening decades of the fifth century C.E., the Corinthian Isthmus underwent a dramatic and permanent transformation of its sacred sites and associations. Known since the Archaic period to be districtly sacred to Poseidon and his sea-dwelling cohorts, the later third and fourth centuries C.E. diminished the celebration of the games and cult in his name in the center of Greece. The monumental buildings sacred to traditional deities at Isthmia, Kenchreai, and Corinth failed to survive earthquakes, raids, and other disasters of the late fourth century,

while the architectural members of the Temple of Poseidon at Isthmia were even incorporated into a massive trans-Isthmus wall constructed in the early 400s. This widespread discontinuity occurred alongside major new programs of regional construction that produced the trans-Isthmus fortification wall, Corinth's Late Roman city wall, monumental Christian basilicas in town and countryside, and a dense network of urban and rural villas. In little more than a century, the Corinthia shed its former associations with Poseidon and became dotted with new religious architecture, shrines, and saints.

Most discussions of this period and process of Christianization have focused on individual sacred sites (especially temples and churches) to address specifically religious questions about the end of paganism (or vitality of late Hellenism), religious violence, and mass conversion. Yet the creation of new sacred landscapes necessarily affected an entire configuration of sites, routes, and boundaries within the region and had extensive political, economic, and social dimensions and consequences. In this paper, I consider how three different kinds of archaeological evidence—the churches of the region, the major fortification walls, and small rural settlements and artifact scatters—collectively reflect a substantial and comprehensive transformation of the region that disrupted and remade traditional landholding patterns, the network of agricultural sites, and patterns of daily movement across the territory. Building on an important recent article by W. Caraher (“The Ambivalent Landscape of Christian Corinth,” in *Corinth in Contrast*, 2014), I highlight how this transformation was neither entirely accidental nor wholly local but reflected the deep intervention of the Roman state in the Corinthia and province of Achaia. The emergence of this sacred landscape reflects the historically contingent redefinition of the relationship of local and global in the Early Byzantine period that had long-lasting social, economic, and environmental consequences.

### **The Garden as Sacred Space: Pompeii's Garden Dining Spaces**

*Janet S. Dunkelbarger, University of Virginia*

The Roman garden and Roman dining are well-studied fields in Classical Art and Archaeology, but dining in the Roman garden is conspicuously neglected. When dining in the garden or the dining spaces in gardens are mentioned in scholarship, the significance is explained within the dominant narratives of the individual fields (i.e., the Roman garden and Roman dining) as spaces for relaxation and leisure or as spaces for social performance, either by the social elite or those who emulated the practices of the social elite. However, few scholars have examined the evidence of these spaces comprehensively, and even fewer recognize these spaces as sacred.

This paper presents a portion of a study of the more than fifty-three open-air, Garden Dining Spaces (GDSs) of Pompeii. Found in domestic, commercial, and funerary contexts, GDSs are areas in a garden in which masonry or wooden couches were arranged, on which participants would recline to dine, often in the shade provided by a pergola or awning. Other masonry furniture might include tables, a masonry hearth, or bench. Water features, such as fountains or pools, and altars, including wall niches, aedicula niches, or free-standing features, are also common. In addition to the cultivation of the garden, statuary and frescoes of deities,

the hunt, or of garden scenes also contributed to the creation of GDSs. The study draws together archaeological, architectural, artistic, literary, and epigraphic evidence to reconstruct the ancient Roman dining experience in the garden and to understand its significance.

Preliminary analysis of the data reveals Pompeii's GDSs—nestled in the diminutive and expansive gardens of Pompeii's houses, vineyards, inns, and tombs—were not just spaces of leisure and social performance, but were sacred spaces integral to individual, family, and community worship of ancestors, family gods, and/or patron deities. The significance of these spaces is demonstrated by their construction across diverse contexts and their often permanent construction, which sacrificed valuable urban land and designated the garden as primarily a sacred space.

### **Sacredness Beyond the *Katholikon*: Middle Byzantine Monastic Landscapes of Central Greece**

*Justin A. Mann*, University of Virginia

The Middle Byzantine period (ca. 843–1204 C.E.) witnessed a precipitous rise in the foundation of monasteries. Many of the monasteries founded (or refounded) in this period came to play major roles on both local and regional levels. As a result, well-funded and well-connected Byzantine monasteries affected change far beyond the confines of the monastic enclosure. Attica and Boeotia saw the rise of many such monasteries during the Middle Byzantine period, including the foundation of major monastic centers such as Hosios Loukas, Hosios Meletios, and Daphni. The change engendered by these monastic foundations is best evidenced in the landscape, where their activity mixed with the interests of other communities. Monastic influence, however, is more complicated than geographical or sociopolitical boundaries would otherwise indicate. Borders overlapped, interests clashed, and often monasteries contended with a variety of rivals—secular, ecclesiastical, and monastic.

The present paper will focus specifically on the sacred landscapes constructed, maintained, and reified by Middle Byzantine monasteries in central Greece, and additionally how these landscapes overlapped with other civic or ecclesiastical communities. It must be acknowledged that evidence is not found equally across the region, with some monasteries providing more material than others. This situation is due to linked causes: the current state of preservation and (as a result) the amount of past research undertaken. Using specific monasteries across the region as case studies, some well-studied and others less so, a variety of archaeological evidence will be utilized to define their sacred landscapes, including outlying chapels, *metochia*, shrines, towers, paths, and phenomenological evidence related to the topography of the landscape. The spatial and material evidence will then highlight the importance these sacred landscapes had in the development of monastic institutions and their effects on other local communities.

**Evolution of the Ritual Landscape of the Athienou Region, Cyprus, from Antiquity to Modern Times**

*P. Nick Kardulias, College of Wooster*

Humans think about their surroundings in complex ways that reflect central values in their respective societies. Landscape archaeology has emerged as a means for comprehending the spatial component. In its ability to incorporate observations of both a local and regional nature, this notion facilitates a holistic interpretation of the archaeological record as we find it on and in the ground. Some scholars examine problems inherent in explaining how topography affects resource availability and social behavior. Others approach the landscape as a medium for expressing religious and political ideologies. The particular aspects of landscape that one chooses to emphasize may vary depending on the kinds of research questions one asks. Among the dimensions that one can discern are the following: the economic landscape, with subareas concerned with subsistence, the distribution of mineral resources, and transportation routes; the political landscape, in which nucleated or dispersed settlement may reflect complexity of societal organization, and where certain topographical features are used as territorial boundaries. There is also the ritual landscape, which has mortuary, ceremonial, and other dimensions that separate a region into distinct parts.

The Malloura Valley Survey of the Athienou Archaeological Project has investigated the distribution of cultural features that span the Late Geometric to Modern Periods in a project area at the southern edge of the Mesaoria Plain. An open-air sanctuary was the focus of religious activity from the late eighth century B.C.E. to the first century C.E. Votive statues and terracotta figurines reflect the admixture of sacred traditions from the Aegean, Levant, and Egypt. Recent excavation in the sanctuary revealed the presence of Christian lamps from the Late Roman to Early Byzantine period, well after the pagan facility was thought to have been abandoned. Following a hiatus of occupation and religious activity in the eighth to eleventh centuries C.E., the adjoining settlement featured a medieval cemetery adjoining walls of a proposed chapel in the Frankish and Venetian eras. Ethnographic and ethnoarchaeological work in the surrounding area has examined the establishment of burial zones in Athienou that have undergone significant alteration that emphasize political, economic, and social, as well as religious, trends, and thus provide a valuable analogy for understanding the archaeological remains. The study reveals that the location and dimensions of sacred spaces fluctuates in concert with other cultural trends. Religious traditions are integrated into a social fabric and are as subject to change as any other component of a culture.

**Philippi: The Transformation of the Sacred Landscapes from Antiquity to Modern Times**

*Michalis Lychounas, Ephoreia of Antiquities of Kavala*

The ancient city of Philippi (refounded under this name by Philip II in 356 B.C.E.), a melting pot for Greeks, Thracians, and Romans, was already a *colonia augusta* and a Romanized bustling center when St. Paul visited it in his first European journey (49/50 C.E.). The fact that it always carried the unofficial title of

the first Christian community in Europe, and a strong connection to Paul, seems to have generated a strong wave of architectural investment in the centuries of Christian triumph (fourth–sixth century).

The excavation of the site by the French School of Athens and Greek scientific institutions, originally carried out with the purpose of unearthing a Greco-Roman site, has brought to light the Christianized urban center of the mid-sixth century. The three basilicas and a central plan edifice (octagon) so far excavated within the walled city, along with a double basilica and a chapel in the eastern Christian cemetery, present a systematic effort to re-consecrate the city in the Christian faith.

The new urban arrangement can be very telling both of the greater picture of the exercise of authority and the transfer of power from the civic center of the forum to the religious centers of the huge Christian complexes. This process of Christianization of Philippi will be dealt with in the context of the fate of the sacred spaces of the other religions in the city, but also with the developments in the nearby centers of Amphipolis and the island of Thasos. The possible differences generated with Paul's heritage will be discussed and compared with other centers associated with saints (i.e., Sergiopolis/Resafa).

The paper will finally deal with the reestablishment of pilgrimage and its consequences in the modern, local ecclesiastical history and development. What started as an endeavor to shed light on aspects of the Greek and Roman world, has led to the re-creation/reestablishment of a sacred place of Early Christianity in the context of the twentieth century. The site has become again a *locus sanctus* where group baptisms take place and which pilgrimage tours include in their itineraries as is shown from the hordes of Protestant Christians from the Far East (mainly Koreans) who visit the site annually, despite the fact that nothing remains to be directly associated with Paul or Paul's presence in Philippi.

## **Session 6H: Colloquium**

### **Consumption, Ritual, and Society: Recent Finds and Interpretive Approaches to Food and Drink in Etruria**

*Sponsored by the Etruscan Interest Group*

Organizers: *Laurel Taylor*, University of North Carolina Asheville, and *Lisa Pieraccini*, University of California Berkeley

#### **Colloquium Overview Statement**

While food has historically been mined for its potential to illuminate patterns of consumption, production, and human interaction with the environment, it is also replete with social and cultural meaning. Recent archaeological approaches to food and drink have moved beyond discussions of diet and subsistence to using food as a lens to understand constructions of status, ethnicity, power, and ritual. Food is simultaneously a product of nature and culture, is often transformed by social contexts and is a transformative tool itself. This colloquium explores the intersections between food, consumption, and ritual within Etruscan society through a purposeful cross-disciplinary approach. While a single line of inquiry, such as one based exclusively on botanical or faunal evidence, can provide evidence of diet or



ritual praxis within a circumscribed setting or period, a synthetic approach to the study of food, by exploring its meaning within multiple contexts, is the scope of this panel. Etruria provides an exceptional opportunity to examine this subject as it offers invaluable source material.

The complex role of food is best mapped through diverse evidentiary categories and this panel uses multiple lines of inquiry and approaches to explore its subject. The papers consider food and drink within visual and material culture as well as within sanctuary contexts, urban contexts and funerary contexts. The first paper, "Fish and Rites in Ancient Etruria," examines how the seafaring Etruscans incorporated fish sacrifices into ritual practice through an examination of the archaeological evidence vis-à-vis literary and visual evidence. Next, "Beyond the Banquet: Typologies of feasting in Etruscan Visual and Material Culture" considers various models of feasting and how the visual and artifactual record of the Archaic period may reveal diacritical feasting in particular. Building on this, "Feasting in Etruscan Orvieto: Bio-archaeological Evidence and Socioeconomic Implications" addresses the relationship between redistributive feasting and elite control over the landscape. The final two papers "Visual Meals and Symbolic Consumption in Etruscan Tomb Painting" and "Death—By Consumption—Interrupted: The Iconography of Hesione on Etruscan Bronze Mirrors" consider how visual narratives communicate symbolic concepts about food, drink, and/or consumption. The colloquium aims to examine how consumption functions as an important agent specifically within Etruscan ritual and social contexts. While each paper addresses different areas of research, the topics overlap in productive and mutually informing ways and share a common methodological principle—placing food, its ritual consumption and use within the cultural framework of Etruria.

Discussant: *Ingrid Eldund-Berry*, The University of Texas at Austin

### **Fish and Rites: Religious Practices Involving Fishes in Ancient Etruria**

*Daniele Maras*, Soprintendenza Archeologia Belle Arti e Paesaggio per l'area metropolitana di Roma, la provincia di Viterbo e l'Etruria Meridionale

The Etruscans were famous as a seafaring people, with a special attitude towards piracy and, at times, even exercising a real thalassocracy on the seas surrounding the Italian peninsula. Therefore, it is reasonable to expect that marine fish were a crucial component of Etruscan alimentation and used as sacrificial victims and in ritual practices.

A recent contribution of A. Maggiani (*Kulte, Riten, religiöse Vorstellungen bei den Etruskern und ihr Verhältnis zu Politik und Gesellschaft* [2012] 223–234) has pointed out the relevance of offering fishes also in foundation rituals. My paper surveys the ritual contexts of fish-sacrifices in sanctuaries (Pyrgi and Gravisca) and in funerary contexts as well as the epigraphic evidence of inscribed fish-plates at Pyrgi and at Populonia. Few literary sources help to explain the function of these ritual contexts, such as the references to living *pisciculi* offered to Vulcanus in Rome according to Festus, and to the fishes with which Numa replaced human victims according to Ovid.

Additionally, I show the relevance of visual representations, including the Archaic period Tomb of the Hunting and Fishing at Tarquinia and red-figured

fish-plates, either imported or local, found in Etruria in the fifth and fourth centuries B.C.E. Notably, a wall painting of the Tomb of the Inscriptions at Tarquinia (ca. 520 B.C.E.) provides evidence for fish-offerings in funerary contexts. A young man is depicted as bowing towards a small altar and offering a fish to the pale image of an old man, naked and with a sceptre (perhaps an *eidolon*, a sort of spirit of an ancestor). Finally, a painted plaque from Portonaccio at Veii (late sixth to early-fifth century B.C.E.) represents a figure crouching near a water-basin where several sea-fishes are swimming. A recent proposal by M. Torelli (*Scritti di antichità etrusche e italiane in omaggio all'opera di Giovanni Colonna* [2011] 163–173) interprets this scene as relating to a ritual of divination through the observation of fishes (ichthyomancy), as is known for some sanctuaries of Anatolia.

### **Beyond the Banquet: Typologies of Feasting in Etruscan Visual and Material Culture**

*Laurel Taylor*, University of North Carolina, Asheville

From the Villanovan through the Late Etruscan period, banqueting imagery occurs across multiple categories of Etruscan artifacts (plaques, mirrors, tomb paintings, reliefs, and ceramics) and within both domestic and funerary contexts. The iconography of these scenes is fairly formulaic with figures reclining on dining couches, surrounded by the accoutrements of feasting—vessels, food, servants, and musicians—all factors that have contributed to the identification of such images as “banquets.” Yet, perhaps because of this standard visual formula, scholars have often tended to elide “banqueting” scenes from funerary contexts with those from non-funerary contexts, potentially obscuring significant differences in critical details and symbolic value. Using Dietler’s typologies of feasting and commensal modes (*Feasts: Archaeological and Ethnographic Perspectives on Food, Politics and Power* [2001]), this paper explores the social and ritual meaning of the “banquet” in Etruscan visual language of the Archaic period and presents a more nuanced reading of consumption iconography. While scholars have often noted that the banquet is an elite display of status and power, closer examination of scenes from domestic/non-funerary contexts versus those from funerary ones reveals significant differences in the representation of food items and associated vessels.

Banquet scenes from mortuary contexts (e.g., the tombs at Tarquinia), frequently present vessels for serving and consuming wine yet depict surprisingly few food items or food-associated vessels. Conversely, feasting scenes from non-funerary contexts (the terracotta plaques from Murlo and Aquarossa), depict distinct and diverse food items as well as drinking equipment. Legible vessel types, especially imports, have correlates in the archaeological record and, I argue, signal exclusionary feasting in these scenes. Such visual constructions may express a form of diacritical feasting, a performative behavior meant to display status through differentiated foods or vessels. The symbolic language of these scenes may also help us better understand ritual feasting within the specific architectural contexts of which the plaques were discovered.

**Feasting in Etruscan Orvieto: Bio-archaeological Evidence and Socioeconomic Implications**

*Angela Trentacoste, University of Oxford*

While the importance of banquets to the social fabric of ancient Etruria is widely attested by artistic representations and the remains of dining equipment, the identification of specific banqueting events in the archaeological record is more difficult. Small quantities of organic remains recovered from tombs and special deposits are typically more suggestive of food offerings, rather than large-scale communal consumption events. In contrast, feasts should produce a significant quantity of food debris in a short period, which may be treated differently than normal refuse. Recent excavation of Cavità 254, a disused quarry cut into the tuff plateau below Orvieto, has revealed such a deposit. Dumped in a short period of time (if not a single act), the deposit has produced diverse archaeological materials related to food consumption (ceramics) and the restructuring of the urban center (roof tiles, architectural pieces), including a significant number of exceptionally preserved animal bones. Analysis of the faunal assemblage suggests that it derives from a large scale food consumption and distribution event, held in conjunction with the filling of Cavità 254 during the fifth century B.C.E. Multiple areas of production contributed animals, as strontium isotope analyses demonstrate that sheep were obtained from several locations. Food consumption on this conspicuous scale illustrates a significant degree of resource mobilization, probably organized by the same group(s) that directed the quarrying and filling of Cavità 254 and associated refurbishment of the urban center of Orvieto. Using the zooarchaeological and isotopic data from Cavità 254, this paper examines evidence for feasting and food procurement in Etruscan Orvieto. Results highlight the relationship between symbolic consumption and the movement and redistribution of agricultural resources. In this context, ritual activities provided not only a means of symbolic expression, but a powerful socioeconomic tool that could be used to articulate solidarity or reinforce hierarchies.

**Visual Meals and Symbolic Consumption in Etruscan Tomb Painting**

*Lisa Pieraccini, University of California Berkeley*

Etruscan funerary archaeology continues to provide evidence of the complex rituals dedicated to the deceased while painted tombs depict numerous gatherings and rituals including those dedicated to the funerary “banquet” specifically. But what does it mean to engage in ritual consumption in a funerary context and have we fully explored the visual narratives of specific foods and drink in the tomb? Because food materials are difficult to trace in the archaeological record (or were discarded when found last century), it is often difficult to evaluate the degree to which the images in these painted tombs reflect products actually consumed at the funerary meal. This paper examines the visual culture of food and drink as painted on the walls of Etruscan tombs and looks at how wall painting mediated the activities of the living. While the “banquet” may be a convention in Etruscan art and culture, the food items depicted in these scenes reveal valuable information about visual meals and their symbolic consumption. Why do eggs appear

held out in the hands of banqueters? Do grapes, which appear in tomb painting, have the same symbolic import as wine? A careful selection of tomb paintings from the sixth to fourth centuries B.C.E. from Tarquinia, Chiusi, and Orvieto provides a template for a deeper comprehension of the visual communication of food in Etruscan tomb narratives. This paper demonstrates how select foods and drink were an essential part of the visual rhetoric of Etruscan tomb paintings and how they expressed a specific “food culture.” Finally, this paper addresses the intersection of these visual meals with the organic discoveries from tombs—an area of study that promises new data with future excavations. This study of visual meals depicted on tomb walls allows for a broader view of Etruscan food culture as a whole.

### **Death—By Consumption—Interrupted: The Iconography of Hesione on Etruscan Bronze Mirrors**

*Alexandra Carpino*, Northern Arizona University

Various concepts about food and drink appear in the narratives engraved on Etruscan bronze mirrors, artifacts that symbolized the status and prosperity of their owners and served as important forms of visual communication within the domestic sphere. These representations include both natural behaviors with symbolic overtones as well as abnormal acts such as anthropophagy. In the former category, mirrors showing an adolescent or mature Heracle suckling milk from Uni’s breast are not only the best known but also the most distinctively Etruscan. Despite what might be considered a jarring portrayal of a grown man nursing, positive concepts about food and drink are reinforced in a ritualistic manner, with the milk functioning as a transformative agent (signifying both reconciliation and apotheosis). In the second category, images that illustrate departures from accepted ideas about food and drink are stories that focus on the motif of the so-called “consumed human.” These include male figures such as Jason (swallowed by the dragon) or Aktaion (devoured by his dogs) but also, interestingly, Hesione, a Trojan princess rarely depicted in Greek art but who appears on at least three mirrors from the late Classical period.

This investigation focuses on the iconography of Hesione, the only female sacrificial victim that engravers included in their repertoire. Why was her story considered appropriate for mirror decoration when other types of human (e.g., blood) sacrifice were avoided? What does it reveal about family dynamics, power structures and the status of girls in Etruscan society? And what was the significance of Hesione’s escaped ingestion, surviving to become the bride of a hero? By analyzing the different aspects of the Trojan princess’s story included in these narratives, conclusions can be drawn with respect to how this tale of interrupted consumption reinforced cultural ideals about marriage, impiety and households in aristocratic Etruscan society.

## **Session 6I: Workshop**

### **The Digital Futures of Ancient Objects: Discussing Next Steps for Collaborative Digital Humanities Projects**

Moderator: *Rebecca Levitan*, University of California, Berkeley, and *Stephanie Grimes*, Ball State University

#### **Workshop Overview Statement**

The focus of the proposed workshop is on recent work which leverages digital tools in the study of classical antiquity and the itineraries of ancient objects. As participation in the Getty Institutes and other Digital Humanities oriented working groups has only been available to a small number of digital practitioners, we aim to share a general overview of the work conducted at the meetings of the Digital Institutes, as well as contributions from scholars presenting a relevant short case study of their own work or thinking-in-progress. We are particularly interested in projects which address the ways that digital tools can help scholars better understand the provenance of ancient objects, as well as how this can be visualized and spatially oriented.

Informal discussion of works in progress and discussions of problems of methodology are welcome, with the understanding that this is meant to be a constructive forum for thinking through problems, rather than a formal academic presentation of any complete academic project. In addition to surveying the most recent advances in digital research relating to mapping, modeling, and analysis of ancient objects and spaces, we hope to discuss questions such as “what should happen when a digital project is complete?” and “how can we plan for the future stewardship of digital projects, especially those with multiple authors?” Although we might look towards examples of text-based projects as examples for best (and less-than-stellar) practice, the scope of the panel would be limited to tools developed to solve the particular problems posed by material culture of classical antiquity and charting its past and future itineraries.

The ultimate goal of the workshop is to open the work of small groups of DH practitioners to the larger archaeological community in order prevent research replication, as well as facilitate possible collaborations and a larger conversation about key issues in Digital Humanities in relation to objects from the Ancient Mediterranean.

Panelists: *Danielle Bennett*, San Diego State University, *Renee Gondek*, University of Mary Washington, *Ethan Gruber*, American Numismatic Society, *Tyler Jo Smith*, University of Virginia, *Jon Frey*, Michigan State University, *Ryan Horne*, University of Pittsburgh, *Rachel Starry*, University of Buffalo, *Jacquelyn Clements*, Independent Scholar, *Adam Anderson*, University of California, Berkeley, and *Caroline T. Schroeder*, The University of Oklahoma

## **Session 6J: Open Session Undergraduate Paper Session**

### **Portrait of A Mummy: An Analysis of the Function of Mummy Portraits in Greco-Roman Egypt**

*Anna Tessa Rodriguez, University of California, Berkeley*

It is easy to assume mummy portraits were exclusively used by Greeks and Romans living in Egypt; however, evidence shows that this is not the case. Although typically seen as distinctly Greek/Roman, these objects are another logical transition the Egyptians adopted in order to strengthen their religious practices. I present a cross-cultural analysis of mummy portraits in Greco-Roman Egypt, demonstrating the efficacy of these material objects within an Egyptian religious and funerary context. In Egyptian art and archaeological material, we see form and functionality in sync. The purpose of the artistic form is literal; it is to be present in the afterworld, just as it is represented artistically and physically in the living world. Considering the importance of representation after death in Egyptian religion, whether that be verbal, written or artistic, it is clear that preserving the identity of a deceased individual through a variety of means held continual priority. In analyzing a diverse archaeological record of coffins, tomb walls, models, statues, inscriptions, portraits, and religious concepts like the *ka* and *ren*, a clear picture of the importance of the physical being tied to the spiritual is painted. Through mummification, religious texts, spells, names, tomb art, and eventually the mummy portrait, the ancient Egyptians were one step closer to truly preserving the essence of the individual and providing greater insurance for an individual's journey to and in the afterworld. This analysis demonstrates that mummy portraits were not simply pretty Greco-Roman pictures, but rather, liminal religious objects of the physical world that helped the deceased live on forever in the afterworld.

### **Human Behavioral Ecology and Site Selection Processes in Ancient Sardinia**

*Phoebe J. Thompson, Pomona College*

The Ideal Free Distribution model (IFD) of Human Behavioral Ecology has increasingly been applied to studies of prehistoric and ancient settlement across the world as a means of understanding broader patterns of human movement as well as ancient human-environmental interaction. The application of this model however has been very limited across studies of the ancient Mediterranean and has focused exclusively on the patterns of settlement distribution, rather than examining the initial factors that motivated patterns of colonization. This study investigates patterns of settlement and colonization during the Nuragic, Punic, and Roman periods of Sardinia, a traditionally understudied region of the Mediterranean, using the IFD model. This study seeks a new understanding of long-term settlement and cultural interaction in Sardinia by examining metrics such as watershed size, which is a proxy for fresh water availability; net primary productivity, or environmental productivity; and the distance to local administrative centers. Under the IFD model, patterns of settlement should move from habitats of high suitability, as determined by the aforementioned metrics, to those of lower suitability over time

(Sutherland 1996; Jazwa and Jazwa 2017). Instances of colonization, motivated by the desire for total control over a habitat and its resources, should therefore create a different pattern of settlement, known as Ideal Despotic Distribution (IDD) (Bell and Winterhalder 2014). I argue that based upon prior patterns of settlement during the Nuragic and Punic periods, settlement during the Roman period of Sardinia breaks from the IFD model and instead follows the IDD model, a product of the Romans' desire to disrupt Punic control and establish hegemony in the central Mediterranean. In conclusion, by closely examining patterns of human movement on ancient Sardinia using IFD, this project adds new, broader, and environmentally based evidence to ongoing discussions of ancient colonization in the Mediterranean.

### **Painted Invocations: The Presence of Roman Gods in Pompeian Garden Wall Paintings**

*Sarah E. Bulger*, Old Dominion University

Private gardens were central to elite Pompeian homes not only as places of escape from the city, but also for domestic worship. Cult activity occurred in the garden as evidenced by household altars, *lararia* in Latin, with statuettes of household gods. Wall paintings of flowers that also appear in the garden have remained unconnected to household religion. Although scholars, such as Kumbaric and Caneva (2014) or Rüpke (2011), have recognized the importance of gardens and cult activity to Pompeian domesticity separately, they have overlooked the reflexive relationship between these two institutions. Through a combination of Classical texts, modern floral morphologies, and a quantification of the depictions of specific flowers in Pompeian homes and gardens near or in *lararia*, I identify the flowers painted in Pompeian gardens and their significant relationship to certain gods and goddesses for domestic worship. The flowers painted on garden walls in Pompeii are not simply decorations, but invocations of gods and goddesses into the garden. My analysis of the floral iconography in Pompeii, albeit an esoteric data set, indicates that Venus, Adonis, Bacchus, and Iris were central to domestic worship in the city's elite homes.

### **Session 6K: Workshop New Approaches and Technologies in Pre-Roman and Etruscan Archaeology**

*Sponsored by the Etruscan Interest Group*

Moderator: *Maurizio Forte*, Duke University, and *Jacqueline K. Ortoleva*, University of Birmingham, UK

#### **Workshop Overview Statement**

This workshop critically evaluates new technologies and/or methods in Pre-Roman and Etruscan archaeology. The goal is to provide a forum for exchange regarding the possibilities, and boundaries, of new approaches. While utilized in

such fields as Paleolithic and New World archaeology, Pre-Roman archaeology has been slow to adopt more pioneering technologies and methods. However, the recent use of virtual reality, remote sensing, 3D repositories, geophysical methods, space syntax, geomorphology, and cognitive science to the archaeological record have generated new avenues of research. For example, the recent digital reconstruction of a late Archaic period inscribed stele from the Etruscan site of Poggio Colla has helped us better understand otherwise unclear, yet extremely crucial text. This application has the potential to shape how we read and publish lapidary inscriptions. When applied to the buried Roman town of Falerii Novi, Space Syntax has highlighted aspects of urban design not visible with more traditional interpretation methods. Recent analyses of settlement organization has allowed new data to emerge on varying geomorphological and vegetative impacts across Etruria. The application of cognitive science and neuroscience to the tomb space in Tarquinia is generating new questions regarding the experiential nature of Etruscan funerary ritual. Scale is a key consideration at sites such as Vulci 3000, where improved technologies in digital documentation are now able to precisely focus the interpretation to a range of microns. As one of the most significant sites in Etruscan archaeology, Vulci 3000 is transforming how we understand urban space in Etruria. These data jointly create new ontologies that deserve reflection, particularly regarding their capacity to enrich more traditional approaches to the Pre-Roman record.

Questions addressed during the workshop include: How can these new approaches enrich what we already know? Is there a risk of a neo-positivistic trend in the use of technologies and mediated tools? Are they able to generate a different hermeneutic outcome and if so, how? How can new comprehensive “big data” for the reconstruction of the past be most appropriately handled?

The workshop has two main outcomes: Firstly, to educate participants about emerging methodologies in Pre-Roman and Etruscan archaeology to access and analyze cultural data. Secondly, to examine critically the potentiality and concerns of such approaches in building upon and further contextualizing established scholarship.

Panelists: *Gregory Warden*, Franklin University Switzerland, *Alessandro Nocentini*, University of Florence, *Simon Stoddart*, University of Cambridge, UK, *Fabiana Battistin*, Università della Tuscia, *Nevio Danelon*, Duke University, *Immo Trinks*, Ludwig Boltzmann Institute for Archaeological Prospection and Virtual Archaeology, *Michael Klein*, Ludwig Boltzmann Institute for Archaeological Prospection and Virtual Archaeology, *Antonio LoPiano*, Duke University, and *Katherine McCuster*, Duke University