

**KMA** KELSEY MUSEUM OF  
ARCHAEOLOGY  
UNIVERSITY OF MICHIGAN

FALL 2014 NEWS

## STAFF

Christopher Ratté, *Director*  
Dawn Johnson, *Associate Director*

### Curators

Suzanne Davis, *Conservation*  
Elaine K. Gazda, *Hellenistic and Roman*  
Janet Richards, *Dynastic Egypt*  
Christopher Ratté, *Greek and Hellenistic*  
Margaret Cool Root, *Greek and Near Eastern*  
T. G. Wilfong, *Graeco-Roman Egypt*

### Research Scientists

Geoff Emberling Richard Redding

### Research Associates/Affiliates

Gary Beckman Lisa Nevett  
Christiane Gruber Ann van Roosevelt  
Brendan Haug Carola Stearns  
Sharon Herbert Lauren Talalay  
Stephanie Langin-Hooper Nicola Terrenato  
Artemis Leontis Arthur Verhoogt  
Despina Margomenou Robert Wenke  
Laura Motta

### Professional/Support Staff

Carl Abrego, *Administrative Specialist*  
Kathryn Carras, *Museum Entrance Monitor*  
Sebastián Encina, *Coordinator of Museum Collections*  
Michelle Fontenot, *Collections Manager*  
Kathryn Huss, *Security Officer*  
Margaret Lourie, *Editor*  
Sandra Malveaux, *Secretary*  
Scott Meier, *Museum Exhibition Coordinator*  
Catherine Person, *Educational and Academic Outreach Coordinator*  
Caroline Roberts, *Conservator*  
Lorene Sterner, *Graphic Artist, Gifts Manager*  
David Stone, *Digital Field Data Coordinator*  
John P. Williams, *Security Supervisor*  
Yong Xu, *Lead Security Officer*  
Alex Zwinak, *Graduate Program Coordinator*

## GALLERY HOURS

Tuesday–Friday 9 am–4 pm  
Saturday–Sunday 1 pm–4 pm

## INFORMATION

website: <http://www.lsa.umich.edu/kelsey/>  
phone: 734-764-9304  
email: [kelseymuse@umich.edu](mailto:kelseymuse@umich.edu)

### UNIVERSITY OF MICHIGAN REGENTS

Mark J. Bernstein Denise Ilitch  
Julia Donovan Darlow Andrea Fischer Newman  
Laurence B. Deitch Andrew C. Richner  
Shauna Ryder Diggs Katherine E. White  
Mark S. Schlissel, *ex officio*

The Kelsey Museum Newsletter is sponsored  
by the Members of the Kelsey Museum.

## NOTES FROM THE DIRECTOR

I grew up in a college town (Amherst, Massachusetts), and so I have always had an inverted view of the seasons. In the academic world, spring is the time of maturation (not to say fatigue), and fall is the season of renewal. This is an especially exciting time for the University of Michigan and the Kelsey Museum. There are, as always, new students in town, including three newcomers to the Interdepartmental Program in Classical Art and Archaeology, but also a new University president, Dr. Mark Schlissel, and a new dean of the college to which the Kelsey belongs (Literature, Science, and the Arts), Professor Andrew Martin. I had the pleasure of showing Dr. Schlissel around the Kelsey last week—and of course I did not lose the opportunity to remind him that at least one of his predecessors (Alexander Ruthven) also paid a visit to one of our overseas archaeological projects (Karanis in Egypt); we hope that he will follow that precedent! As Members of the Museum know, the Kelsey is currently sponsoring a total of eight archaeological expeditions, including two new digs, one at Olynthos in Greece and another at Notion in Turkey, both of which are featured in this newsletter (together with Gabii and Sant’Omobono in Italy, directed by Kelsey Research Associate Nicola Terrenato, and the work of Kelsey Research Scientist Richard Redding at Giza in Egypt).

To celebrate this time of new beginnings, we have recruited a group of undergraduate- and graduate-student volunteers to write short (100-word) essays on their favorite objects in the collections. Inspired by a similar project at the Smith College Museum of Art, we thought that this would be an appealing way to introduce newcomers—from freshmen to the University president—to the Kelsey Museum. Each of the nine objects featured will be identified by a special label, on which the relevant short essay is reproduced. A map showing the locations of the featured objects will be available at the entrances to the Museum, so that visitors can use this project to structure self-guided tours of the galleries. We hope that you will find this very personal approach to the objects in the Museum interesting and rewarding.

This season’s main event is of course our fall show, “Pearls of Wisdom: The Arts of Islam at the University of Michigan” (see essay by guest curator Professor Christiane Gruber below). Many of the objects featured in this exhibition were initially acquired by Peter Ruthven, a draftsman on the dig at Karanis. Peter was the son of University President Alexander Ruthven, who eventually donated the collection to the Kelsey. Thus the work of archaeologists interested in the ancient history of Egypt and the Near East was instrumental in making the Kelsey the University’s principal repository of Islamic art and artifacts. Visitors to this exhibition will learn about the dynamic visual culture of medieval and contemporary Islam, and since they will of necessity walk by the displays of objects from Karanis on their way to the special exhibitions gallery, they will also be confronted with the long-term history of the parts of the world in which Islam is a majority religion—and that historical perspective is a salutary one. Religion is often perceived as the root cause of many of the conflicts in the contemporary Middle East, but history suggests that the reality is more complicated—and if that is so, then historical understanding can play an important role in the resolution of these conflicts. The exhibition will be on view from October 15 to December 21, and we hope you will have the opportunity to see it!

*Christopher Ratté, Director*



## “READ AND LOOK” TARGETS PRESCHOOLERS

Here at the Kelsey Museum we offer tours for almost every age group—tours for university students, for adults, for seniors, for K–12 students, for families. I have noticed that many groups of home-school families also arrange tours and make use of resources like our “Civilizations in a Crate.” It struck me that this audience presented an exciting opportunity for more targeted programming that could combine different types of learning objectives, such as knowledge of ancient history and reading skills.

I also noticed that many of our tours for families and school groups include younger siblings, in the three- to six-year-old range, who come along because their big sister or brother is going to the Museum. Since they do not specifically belong to the target audience for these tours, these younger children tend to get unintentionally left out. The group moves either too fast or too slow, or explanations are too far over their heads to hold their attention, and they get bored quickly (especially while their big siblings are telling us everything they know about Herakles and mummies).

But on one such tour, it was the little brother who had some of the best responses I’ve heard to questions like “what do you think this is?” and “how do you think it was used?” It seemed to me that there was an opportunity here to engage the youngest of our visitors.

For many years now two of the Kelsey Museum’s docents, Jean Mervis and Mary Lou Gillard, have been offering an informal program for teachers and parents called “Archaeological Stories,”

combining a tour with storytime. Building on their work, this summer we began the Kelsey Museum “Read and Look” program as a resource for pre-kindergarten homeschool students and their parents.

This program met four times this summer, all on Thursday mornings, to read a short story about the ancient world or museums. After storytime, the children then explored the museum with one of our expert docents to find artifacts related to the story.

The tours focus on a few objects instead of the whole museum, and they are meant to engage the three- to six-year-old age group’s unique perspective on the world. The children are invited to make connections from their lives with the objects of the past. One young visitor, for example, mentioned that the handprint in the mudbrick looks like the turkey decorations one makes at Thanksgiving. The children have enjoyed telling their own stories about these objects as well as listening to books such as *In Egyptian Times* and *Roxaboxen*. And their parents have been enthusiastic about this combination of reading with museum-based learning.

We plan to continue this program into the fall on the third Thursday of every month. Please join us for our next meeting on October 16th, when we will read about and then look at objects related to a mummy theme. And follow us on Facebook to see what topics and titles will be featured in the future (<https://www.facebook.com/kelseymuseum?ref=mfj>).

*Cathy Person*



## NEW CONSERVATOR

Last month we welcomed a new conservator, Caroline Roberts, to the Museum. Regular Kelsey visitors and staff will remember Carrie from her year here as a Samuel H. Kress Conservation Fellow in 2011–2012. Following her time as a Kress Fellow, she held conservation fellowships at the J. Paul Getty Museum and the Metropolitan Museum of Art.

Carrie holds a B.A. degree from Smith College and an M.S. in Art Conservation from the University of Delaware. Her interests range from conservation treatment of stone objects and architecture to preventive conservation, and she specializes in the conservation of archaeological materials. Before joining the Kelsey, she worked as a consulting conservator for the NYU Institute of Fine Arts Excavations at Selinunte, Italy, where she supervised conservation graduate students and conducted multispectral imaging research.

Carrie is committed to education and service in the conservation field; she has lectured for the Getty’s VITA high school outreach program and for the University of Delaware’s conservation graduate program. She is a member of the American Institute for Conservation (AIC).

In her new job at the Kelsey, Carrie is especially interested in forging stronger relationships with University of Michigan research laboratories and scientists. She is also looking forward to developing the Kelsey’s in-house abilities to conduct technical research using a variety of low-tech means, such as multispectral imaging. We are very happy to welcome Carrie to the Kelsey!

*Suzanne Davis*





## “PEARLS OF WISDOM” ILLUMINATES ISLAMIC ART

The exhibition “Pearls of Wisdom: The Arts of Islam at the University of Michigan” (October 15 to December 21, 2014) showcases the rich collections of Islamic art at the University of Michigan. The selected objects highlight how patrons, artists, and other individuals have used the expressive arts in order to promote social order and spiritual harmony in both the secular and the religious spheres. They also reveal how the visual arts help envision and implement a harmonious order of living in various Islamic cultures from the seventh century until the present day.

The show is a result of numerous efforts and collaborations, beginning first with a graduate seminar offered by Christiane Gruber, Associate Professor of Islamic Art in the History of Art Department. During fall 2013, Professor Gruber and a dozen students worked through the holdings of Islamic art in the Kelsey Museum. The course combined primary and secondary source readings with hands-on work with objects, including ceramics, tiles, textiles, jewelry, amulets, coins, illustrated manuscripts, paintings, woodwork, glasswares, and metalwares (fig. 1). During and after the course, Ashley Dimmig, a Ph.D. student in Islamic art, joined forces with Professor Gruber to conceptualize, organize, and implement the show as co-curator.

Although permanent museum displays of Islamic art are often arranged chronologically and geographically, this exhibition is organized by themes integral to the conception and production of art in the Islamic world from the medieval period until the present day. Themes include the intersections between function and decoration; the aesthetic power of everyday objects; visual play, wit, and magic; connections across art forms; and light

symbolism and illumination. The objects also raise a number of questions about art and its intersections with allegorical and analogical expression.

The title of the show is inspired by a metaphorical statement penned by the medieval Arabic calligrapher Abu Hayyan al-Tawhidi (died after 1009–1010), who in his treatise on penmanship calls handwriting the necklace of wisdom, which serves to sort the *pearls of wisdom*. To no small extent, the objects included in the exhibition “Pearls of Wisdom” serve to concretize, elucidate, and expand upon his assertions. In addition, the exhibit explores a number of intertwining “strands”—from everyday beauty, play, and protection to media and light metaphors—all the while bringing together Islamic art objects “dispersed” across campus institutions, including the Kelsey Museum, the Special Collections of the Hatcher Graduate Library, the U-M Museum of Art, the U-M Museum of Anthropological Archaeology, and the Photographic Archives at the Visual Resources Collections in the History of Art Department.

To Abu Hayyan al-Tawhidi, both the calligrapher’s art of beautiful writing and a jeweler’s stringing of pearls order the universe in a wise and harmonious fashion. A calligrapher’s training begins with learning the proper proportions of beautiful writing. In the Arabic script, this proportional system of writing is based on the rhomboid—the shape the ink-soaked tip of the reed pen makes when impressed on a writing surface. Each letter of the alphabet is then formed proportionately by measuring its height and width with strands of rhomboids or circular “pearls” (fig. 2). These calligraphic measuring marks indeed appear as if strings of

pearls, thus revealing a continuously dynamic and creative engagement across art forms within Islamic traditions.

While calligraphy takes pride of place in Islamic artistic traditions, the art of beautiful writing is not the only art form that fulfills both utilitarian and aesthetic functions. Many objects produced in various media illustrate the harmony between utility and beauty in the arts of the Islamic world, and thus the exhibition’s first section takes up “Everyday Beauty.” Another way to look at the intersections of function and beauty is through objects that are used to beautify oneself. The old adage that cleanliness is next to godliness has an equivalent in the Islamic context, in which personal hygiene is praised as “half of faith.” The ritual cleansing of one’s body for prayer is of utmost importance to the daily practice of Islam. Thus, objects for cleansing the body are integral to Islamic life.

Beyond their aesthetic appeal, objects in the Islamic world also include images and patterns that dare viewers to decipher or solve a variety of visual challenges. While some of these art forms are lighthearted and playful, others cater to the more serious business of imparting wisdom and tending to ailments. For example, some drinking vessels known as



1. Exhibition curators Ashley Dimmig (left) and Christiane Gruber (second from right) examine an Islamic metal bowl at the Kelsey.
2. Examples of the letter kaf with pearl-shaped measures in red ink, Tacbezyade Mehmet bin Tacettin, Calligraphy Treatise (Risale-yi hat), penned by Kebevizade Mehmet Vasfi Efendi ca. 1772, Special Collections, Hatcher Graduate Library, Isl. Ms. 401.

magic or medicinal bowls were used for concocting potions to cure a variety of ills, from infertility to scorpion bites (fig. 3). Other apotropaic objects such as pendants bearing inscriptions, magic squares, and seal designs functioned as wearable amulets.

Whether for the sake of humor or healing, many objects highlight the perceived agency and power of objects in the Islamic world, and so form part of the exhibition’s second section, entitled “Play and Protection.” They also pay tribute to the wit and wisdom required of their makers, inviting their owners and viewers to stimulate their dormant powers through the interrelated practices of visual engagement and tactile interaction.

The exhibition’s third section explores the concept of “Media Metaphors.” In his treatise, al-Tawhidi draws a parallel between calligraphy and jewelry by using one art form as a metaphor for the other. This phenomenon, in which one medium mimics or refers to the qualities of another, is relatively common in Islamic art. Such is the case with ceramic bowls painted with luster that shimmers like gold, ceramic vessels encrusted with jewel-shaped bezels, and floral mosaics that recall the lush gardens of paradise.

At other times a particular medium could be so valued that other media were manipulated to emulate it, or sometimes a particular pattern was merely popularized within a particular medium and then spread to others, as can be seen in the recurring motif of lively rabbits galloping across a textile or a water filter (fig. 4). Yet again, some motifs and patterns transcend a particular material and appear in various objects, from glassworks to metalwares. Through the potential of metaphor, artists and craftsmen often experimented with new techniques, perfecting their craft while concurrently pushing the limits of their own media.

While al-Tawhidi likens beautiful handwriting to wisdom and order, another way to visually represent spiritual and intellectual enlightenment is through illumination—the embellishment of manuscripts with geometric and vegetal

3. Magic bowl with attached prayer tablets, probably 19th or 20th century. Historic Scientific Instrument Collection, Special Collections, Hatcher Graduate Library, GL7.
4. Textile fragment with rabbits, 11th century, KM 22645; and water filter with rabbit design, 10th–12th centuries, KM 1969.2.120.

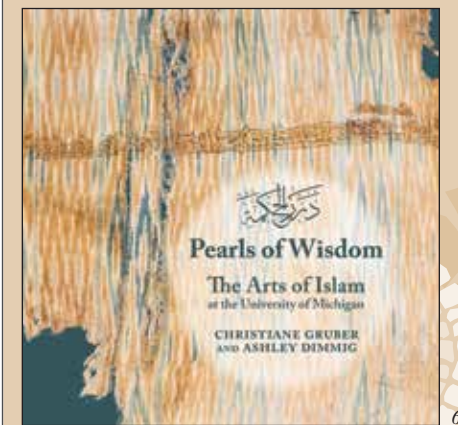
designs. Many Islamic manuscripts were illuminated with metallic and polychrome paints, including copies of the Qur’an and paintings of Muhammad and his family bearing gold aureoles (fig. 5). In Islamic thought, light represents God’s presence, and thus illumination is not mere ornament. Much more significantly, it serves to illuminate God’s sacred word and the radiant nature of his Prophet. Since it reflects light and emits a radiant glow, gold pigment plays a central role in illumination. Indeed, illuminating a codex not only increases its intrinsic material value; it also adds glory, confers dignity, amplifies the imaginative force, and clarifies technical details.

For both practical and spiritual reasons, there are many objects that literally emit light, chief among them lamps. While all lamps serve the same function, they come in a variety of forms and media, from blown enamel-painted hanging mosque lamps to smaller ceramic ones meant for domestic use and decorated with hand-executed or molded decorative patterns. Some oil lamps are also covered in monochrome glazes, some of which appear iridescent. Each type of lamp—whether of glass or ceramic—emitted light but also played with it. As it illuminated a space, light ricocheted off the lamp’s own glazed or reflective surfaces, once again placing function and beauty in aesthetic concert.

While exploring these many themes and the role of analogical thought put to artistic practice, the exhibition “Pearls of Wisdom” also aims to pay tribute to the strength of the collections of Islamic art at the University of Michigan. Thus, the curators decided that the show’s key image and the print catalogue’s cover (fig. 6) would be a textile whose hues recall the University’s own maize and blue colors. This color palette has been extended to the show’s permanent online catalogue (<http://lw.lsa.umich.edu/kelsey/pearls/index.html>), which includes all exhibition objects as well as further resources, photographs, and a program of all events and lectures that will take place in conjunction with the show during Fall 2014.

Christiane Gruber

5. The Prophet Muhammad’s death, Fuzuli, Hadiqat al-Su’ada (Garden of the Blessed), text dated AH 1006/1598 CE, Special Collections, Hatcher Graduate Library, Isl. Ms. 386, page 137.
6. Cover of the “Pearls of Wisdom” catalogue.







1. One of the barracks with workmen lying on floor. Note pillow shelves against walls (photo M. Lechner).



2. Royal Administration Building with six of several large silos (photo M. Lechner).

## HUMANIZING THE PYRAMIDS OF GIZA

Where are the humans at the pyramids of Giza? The apparent absence of human settlements around the pyramids has led to many popular myths about pyramids and pyramid construction. With the absence of evidence for a large workforce, pseudo-scientists are free to speculate on who built the pyramids and when they were built. In 1989 Ancient Egypt Research Associates (AERA) went to Giza to answer this simple question, “Where are the Humans?” We ran test excavations in two areas. The first was behind the second pyramid, where air photos showed surface evidence of a series of long rooms. We explored this area and found no evidence that it was residential. The rooms are probably a series of storerooms to maintain the cult of Khafre. The second area was about 300 meters south of the Sphinx, just south of the Wall of the Crow (Heit el-Ghurab). This large, flat area was slowly being covered by the garbage of the nearby village of Nazlet el-Zeman. It proved to be a large settlement that housed thousands of royal workers during the reign of Menkaure, the builder of the third pyramid at Giza.

I have worked with the AERA team since 1989 excavating at the Heit el-Ghurab site. My goal in this research has been to reconstruct the Old Kingdom economic infrastructure that supported, indeed, allowed the construction of these massive monuments. We now know the workers consumed, on average, 74 cattle and 257 sheep and goats, large amounts of fish, and over 100,000 pounds of wheat each week. Where did it all come from? How big was the workforce needed to produce these foodstuffs? How was it all managed? Answering these questions has

been the focus of several articles in the last five years and my current research.

Over twenty-five years of excavation we have slowly revealed a residential site that is about the size of six football fields. At the core of this settlement are four Galleries, each composed of a number of long, narrow rooms that were barracks (fig. 1). Around the Galleries were workshops, storage areas, bakeries, and breweries. A large wall surrounded all of these structures. To the southeast of the Galleries was a Royal Administration Building with large silos to hold grain to feed the workers (fig. 2). To the southwest were large houses of high-ranking individuals whose titles included: Scribe of the Royal Box, Scribe of the Royal School, and Overseer of Royal Works. Further to the south was a large corral—the OK (Old Kingdom) Corral—to hold the cattle, sheep, and goats imported from the Nile Delta to feed the workers. To the east was a more organic (less planned) settlement that housed individuals who, though not directly connected to the workforce, made a living servicing their needs.

Our research design has evolved over the years as we define new questions that guide each season’s work. Over the last five years we have moved to other areas of Giza to discover and compare other types of residential areas. We moved to an area south of the anomalous pyramid of Queen Khentkawes, which was built near the end of the 4th Dynasty (fig. 3). Queen Khentkawes, who may have been a ruler in the Old Kingdom, is the only woman in the Old Kingdom to have an independent pyramid. Her pyramid has its own mortuary temple on its east side, its own

causeway, and, as we found in 2010, its own valley temple.

In the process of exploring Khentkawes’s valley temple, we identified the first known harbor at Giza. Harbors have been expected in front of all the pyramids, but no harbor had been found or delineated at Giza. A German team working near the Pyramids at Dashur has found a mudbrick quay that fronted onto a harbor in front of the valley temple of the Red Pyramid. At Giza five years ago we encountered a depression in the sand in front of the valley temple of the pyramids of Menkaure and Queen Khentkawes. Excavating this depression, we found a mudbrick glacis. Coring in this depression revealed evidence of Nile mud at 11–12 meters above sea level. In the Old Kingdom at Giza the Nile flood plain was at 12.5 meters above sea level. So with an average flood of 2 meters, the water in the harbor would have been 2–3 meters (6.5–10 feet) deep during the flood.

Last winter we moved east of the harbor to investigate an elaborate mudbrick structure that we have named the Silo Building Complex (SBC) because of the presence of four large silos (fig. 4). We had uncovered this building in 2011 under about 5 meters (16.4 feet) of sand. The SBC lies just east of the harbor and less than 50 meters from the Valley Temple of Khafre. Our research was directed at asking several questions about the SBC, among which are:

- What are the character, phasing, and dating of the structure?
- How were the silos constructed, and what was the sequence of use and abandonment?
- Is there a structure that predates the SBC (what lies beneath)?



3. View from harbor area looking west to the Pyramid of Queen Khentkawes (photo R. Redding).

- What is the evidence for domestic, craft, administrative, and possibly cultic activities in this building?

Our excavations in the SBC yielded a number of fragments of seal impressions (fig. 5). Administrators in the Old Kingdom rolled their seals across specially prepared clay that was put on ropes/string to “seal” boxes, doors, and jars. When the sealings are broken, the fragments are discarded. These discarded fragments contain titles of individuals and the name of the pharaoh they served. The SBC sealings included the names of Menkaure, of the 4th Dynasty, and Userkaf, Raneferef, and Niuserre, of the 5th Dynasty. This securely dates the occupation of the SBC from the late 4th through the middle of the 5th Dynasty (2447–2374 BC).

SBC animal bone includes almost exclusively fragments of the front limbs of cattle. In tomb scenes it is always the forelimbs of cattle that are used as offerings (fig. 6). The priests making the

offering would have consumed them, suggesting that the individuals using the SBC were offering priests. Interestingly, in the large houses of high-ranking individuals at the Heit el-Ghurab we found almost exclusively fragments from the hind limbs of cattle. They were consuming the leftovers from the offerings.

We excavated under the silos at the SBC and found walls of an earlier structure. The pottery in these deposits was entirely from the 4th Dynasty, whereas the pottery associated with the upper walls is a mixture of 4th and 5th Dynasty. This suggests that the underlying building may have been used only in the 4th Dynasty.

The stone tools from SBC were almost all finished blades and knives. No evidence of local manufacture (cores, flakes) was found. This suggests that the occupants of SBC were receiving finished tools for their use.

Overall the architecture and material culture we found in the SBC suggest

that its residents were offering priests who were maintaining the cult of one or more of the 4th Dynasty pharaohs buried at Giza. Given the position of the site less than 50 meters from the Valley Temple of Khafre, the priests may have been maintaining the cult of Khafre. This coming season (January through March 2015), when we continue excavations at the SBC, the questions we will try to answer are the extent and use of the building underneath the SBC. Was the 4th Dynasty iteration of the SBC used in the same way as the SBC? We will excavate additional rooms in the SBC to increase our sample of the material culture and look for variation among rooms. Were some rooms associated with particular activities? We will attempt to connect the SBC to surrounding buildings by looking at access points (doors?) and their relationship to buildings like the Valley Temple of Khafre. How did people move around in the SBC, and where were they going?

Richard Redding



5. Sealing fragments from the Pottery Mound area of Heit el-Ghurab (photo J. Nolan).



4. The Silo Building Complex looking north toward the Valley Temple of Khafre and the Sphinx (photo R. Redding).



6. Offering Chapel of Sekhemankhptab at Saqqara. Note forelimbs being removed for offering and forelimb being carried into offering chapel at right (photo R. Redding).





Opposite page (left). Olynthos: View over the area excavated in the early twentieth century, toward the new excavations.

Opposite page (right). Gabii: Consolidation of an ashlar wall.

Left. Notion: Aerial view of part of Notion, showing outlines of buildings.

## BRIEFS ON FIELDWORK IN GREECE, ITALY, AND TURKEY

### NEW FIELD PROJECT AT OLYNTHOS

This year marks the start of a new field project in Greece, cosponsored by the University of Michigan along with the 16th Ephorate of Prehistoric and Classical Archaeology (Thessaloniki) and the University of Liverpool (U.K.), under the auspices of the British School at Athens. The project sees the return of U-M archaeologists to Greece after a break of nearly twenty years, in order to work at the city of Olynthos in northern Greece. In its heyday during the late fifth and early fourth centuries BC, Olynthos was a regional power, before it was (reputedly) destroyed by Philip II of Macedon in 348 BC. To archaeologists, the city is equally famous for the large numbers of houses excavated there in the 1920s and 1930s, which remain our single best source of information about ancient Greek households. The research design of our new project is a multidisciplinary one that focuses on the use of modern scientific techniques to extend and enhance our understanding of Olynthian households, while at the same time contextualizing them within a larger urban framework. The project is also intended to build opportunities for student volunteers to become involved, learning field methods and working as part of an international team.

Olynthos lies on two adjacent hilltops and spills onto the plain to the east below. Previous research suggests that these different areas had their own distinctive characters and settlement histories. Today, the two hills lie within the boundaries of the archaeological area that is preserved and protected by the Greek Ministry of Culture, while the remainder of the site is under cultivation. This year's work focused on the North Hill, the largest sec-

tor of the city, part of which was shown by earlier excavation to have been laid out on an orthogonal grid plan. Resistance and magnetic surveys conducted in the spring revealed a continuation of the grid beyond the area of the old excavations. Over the summer, a four week excavation season saw the opening up of six trial trenches within the geophysical survey grid, to investigate some of the magnetic anomalies and explore the standard of preservation of different houses indicated by the resistance. Among the studies that were initiated during the excavation season was a micromorphological investigation aimed at discerning house floors and investigating formation processes. At the same time, analysis was begun of micro-debris (small artifacts less than 5 mm long, recovered from heavy fraction during flotation) in order to evaluate the range of activities undertaken in different areas. Neither of these techniques has previously been used in Greece on a site of this date. Alongside the excavations, a field survey team also spent two weeks recording surface finds in the cultivated area east of the site, in order to establish the original boundary of the settlement. Excavation and survey work at Olynthos is planned to continue next year.

*Lisa Nevett*

### EXCAVATING MONUMENTAL ASHLAR ARCHITECTURE AT GABII

The Kelsey Museum has just completed its sixth consecutive season of excavations at the Latin city of Gabii, Italy. The Gabii Project, directed by Professor Nicola Terrenato, had as one of its main objectives in 2014 the investigation of a monumental building complex that was, until recently, known only very partially. The Soprintendenza Speciale per i Beni Archeologici

di Roma exposed tantalizing fragments of this complex in the 1990s, but its systematic excavation was first launched by the Gabii Project in 2012. In 2013 the discovery of a grandiose staircase belonging to the complex broke through important media outlets, including the leading Italian newspaper *La Repubblica*, *The New York Times*, and *Archaeology Magazine*.

Defining the limits of the building, revealing its complete plan, and recording extant features digitally were among the goals for 2014. A generous gift from Ann and Clayton Wilhite provided funding to tackle the many logistical challenges posed by the excavation, consolidation, and conservation of the monumental remains.

The results allowed us to clarify the relationship between the complex and the local topography and to reconstruct the construction phases. The complex, also known as “Area F Building,” occupies an entire city block, measuring some 60 × 35 m. It is prominently situated at one of the most central locations within the city, on the main urban thoroughfare at the important intersection of the ancient roads from Tibur, Praeneste, and Rome. The building is organized on three artificial terraces that regularized the slope of the volcanic terrain. The lower terrace was dominated by a monumental portico, the column bases of which survive and which opened onto a series of rooms paved in tufo slabs. The middle terrace develops around a large courtyard, paved in slabs, delimited to the east and west by a symmetrical arrangement of alae and small rooms, and to the north by three larger rooms. Most of these rooms were adorned with fine *cocciopesto* floors consisting of geometric patterns of limestone

tesserae in a field of crushed red ceramic, and with painted plaster walls reminiscent of the First Style. To the west is a smaller portico delimiting a courtyard with an impluvium at the center, one of several features that attest an elaborate subterranean hydrological engineering system. Access to the upper terrace—a large, open space with walls in semi-polygonal masonry—was gained by means of the now famous staircase, and the transition between elevations was further emphasized by a spectacular façade, a retaining wall built in ashlar blocks.

The complex has no parallel in the region of Rome, so its interpretation is difficult. The preliminary hypothesis is that it was a public building, with spaces designed for a variety of political and ritual functions. Stratigraphic evidence and construction techniques tentatively date the original phase of the building to middle of the third century BC, making it one of the few—and certainly the grandest—examples of mid-Republican public architecture other than temples and fortifications in central Italy. Study of the architecture in the coming seasons will shed important light on the development of Latin cities in the crucial and obscure period between the end of the Latin Revolt and the beginning of the Second Punic War.

*Marcello Mogetta*

*Managing Director, The Gabii Project*

### NEW FIELD PROJECT AT NOTION

A major concern of contemporary archaeology is how archaeological sites come to be the way they are when we find them.

How are settlement mounds formed? What causes buildings to fall down, and why do they decay the way they do? Why are archaeological sites buried? The technical name for this set of concerns—what a normal person might call “ruination”—is “taphonomy,” the law of burial.

As readers of this newsletter know, the Kelsey Museum began a new archaeological project at the site of Notion in western Turkey in June, together with the Joukowsky Institute of Archaeology at Brown University. Notion is a port town about 15 miles northwest of Ephesus, and it was occupied from the early first millennium BC through the Middle Ages. The first stage in our project is a thorough survey of the site, and so we are naturally concerned to understand the “taphonomic” processes that lie behind its current condition.

In the case of Notion, however, taphonomy is something of a misnomer because in fact the site is not at all deeply buried. It occupies a pair of isolated promontories projecting into the Aegean Sea, and apart from airborne sediment, and earth that erodes down from the upper parts of the site to the lower parts, there is really nowhere for earth to bury it to come from. One interesting index of this condition is the number of exposed thresholds visible throughout the site—we counted a total of forty-six—so in at least forty-six places, not even enough sediment to cover the entrances to buildings has collected.

The thresholds have survived because they are large and well-founded blocks of stone. The walls of the rooms and build-

ings associated with them were generally built out of rubble, and they have almost all crumbled to the ground. The remains of these walls are clearly visible, however, as lines of stones, and thus the ground plans of individual buildings—and indeed the layout of the entire city plan—are quite legible, especially when seen from the air. In this respect, the site is extremely well preserved.

That makes it all the more surprising that there are very few traces of columnar buildings. We know, for example, that the agora, the main public square, was enclosed on all sides by colonnaded porticos, but very few column drums or pieces of the entablatures (the monumental lintel courses) of these porticos remain. Where have all these large blocks gone? Examination of nearby villages suggests that they were not reused in medieval and modern buildings, nor do they seem to have been burnt into lime, for there are no traces of limekilns on the site. We considered the possibility that they had all rolled down the hillside and into the sea, but if that were the case, they would surely be visible in the clear waters along the rocky shoreline, and they are not. There is, however at least one other possible answer to this conundrum, in a word, Constantinople. The new Rome was built substantially out of reused materials, and port cities such as Notion were prime sources of readymade columns and other architectural blocks. In this way, the buildings of Notion may have continued to function long after the site had been largely abandoned.

*Christopher Ratté*



An example of the stratigraphy visible in opened cores.



Our team working to drill a new core.



A view of the deep trench from above as the pump (slender blue tube just right of ladder) is working to drain the water.



## SUMMER'S WORK IN ROME

Thanks to generous support from the John G. Pedley Award for Travel and Research, I was able to participate in the Sant'Omonono Project in Rome for eight weeks this summer. Located in the ancient Forum Boarium, this remarkable site preserves over a millennium of continuous activity, extending from the Archaic to the Imperial period. The site consists of two temples positioned at the foot of the Capitoline Hill on the bank of the Tiber River.

Under the direction of Professors Nicola Terrenato and Paolo Brocato, I had the opportunity to supervise a deep trench in the area of the western cella. By the end of the summer, the trench reached over 5 meters below the excavation level. That is more than 10 meters below the modern street level!

This experience included exposure to a unique method of digging inside a steel support structure, which was put in place to keep the trench walls from collapsing, and alongside pumps, which ran constantly to remove the groundwater. Without the pumps, the trench would have been flooded beneath 3 meters of standing water. Fortunately, these daunting excavation conditions did not prevent us from producing some amazing results.

First, our team had to excavate very thick layers associated with the ancient fill of the Forum Boarium valley. These levels included few artifacts but represent a massive endeavor in the city's early history to raise the ground level and protect the valley from floods. Beneath this immense fill, we accessed the Archaic occupation levels and the bottom of the massive *cappellaccio* wall, which serves as the podium of the early Republican twin temples.

After completing this deep trench, I embarked on a new phase in my research project, specifically a percussion coring survey of the entire Sant'Omobono excavation area. Using a drilling machine that most closely resembles a jackhammer, our team drilled a series of boreholes across the site. Each core was capable of revealing over 6 meters of stratigraphic data beneath the excavation level.

This strategic method of investigation is especially applicable in urban archaeology; sites such as Sant'Omobono are blanketed with countless generations of building activity, from the Archaic through the modern era. The presence of substantial architectural remains prevents excavation in many areas of the site. To put it simply, one cannot destroy an Imperial floor in order to dig down to Archaic levels. Thus, we used coring survey to complement and extrapolate from data from a few deep trenches. Capable of penetrating to levels of Archaic habitation, this relatively inexpensive and nondestructive method of archaeological investigation produces an abundance of data from across the site.

After drilling in the field, we opened each core to begin analysis, which included stratigraphic descriptions and sampling for a variety of laboratory tests. Although these cores only occasionally include artifacts, the sediment itself provides a wealth of information on the earliest levels of activity in the valley as well as underlying natural geology.

Now I have the opportunity to process the field data for my dissertation. My topic revolves around the Archaic Forum Boarium and how the valley transitioned from a natural to an urban landscape. With a range of research questions related to topography and environment, I will rely on a mix of excavation and coring data from Sant'Omobono to begin reconstructing the ancient landscape. In particular, I hope to better understand the natural environment in the river valley and the effects of flooding on a cult site like Sant'Omobono. It is through environmental research that I feel we have the most to gain in understanding the urbanization process in Rome. Before Rome became a world capital, its citizens had to contend with the immense challenges posed by their natural landscape and resources. Through deep excavation and coring survey, Sant'Omobono offers a rare opportunity to shed new light on the city's earliest history.

Andrea Brock, IPCAA Ph.D. Candidate



A Macedonian tomb in central Thessaloniki.

## SUMMER'S WORK IN GREECE

This past summer was very productive for me, thanks to the John G. Pedley Award for Travel and Research. I spent two months in Greece working on several projects, including the University of Michigan's new project at Olynthos.

I began my summer by returning to a project I have worked on for the last five years: research conducted on a Hellenistic city in Kastro Kallithea, Thessaly, by the University of Alberta and the 15th Ephorate of Prehistoric and Classical Antiquities. The project has involved excavating public buildings and a large house as well as surveying the area of the ancient city. The research aims to improve our understanding of domestic space in the Hellenistic period, local Thessalian practices, and how cities and settlement patterns in the area changed due to the ambitious resettlement plans of Hellenistic rulers.

After finishing up the excavations of a multi-period domestic building last summer, we are now working on studying all the finds and publishing them. I will publish the terracotta figurines, and thus I spent my time in Thessaly putting together the jigsaw puzzles that are our handful of more complete terracottas as well as identifying different fabrics, which indicate that the house originally had several more terracottas, now only preserved in very small fragments.

From Kallithea, I traveled to Athens to take advantage of the great libraries at the American and British Schools and read up on terracottas. Some of the terracotta heads from our site seem to represent local, poorly published types, and having access to publications not readily available in the U.S. was very helpful. For one of the statuettes, however, I was not able to find any satisfying comparanda for the complex head; a picture of the head is included with this report, and I welcome suggestions!

In addition to studying material already excavated, while in Athens I also prepared for a brand new project: the excavations at Olynthos in the Chalkidiki. As Professor Lisa Nevett notes in her contribution to this newsletter, the site was extensively excavated in the 1920s and 1930s by David Robinson of Johns Hopkins University. While his work has served as a foundation for domestic archaeology and a goldmine of data for those interested in Greek housing during the Classical period, the methods he used now seem outdated in places, and many questions about the site are difficult to answer using only the data preserved in his notebooks, publications, and artifact collections.

The new five-year project aims to use geophysical and field survey, excavation, and a range of scientific methods to gain a better understanding of Greek domestic space and the site of Olynthos, particularly in terms of the life span of the site (previously described as a "single-phase") and the use of different rooms and spaces.

During this first season, I worked as both a trench supervisor and the micro-debris specialist. (Many thanks are here owed to Lynn Rainville, who was my mentor on micro-debris as I prepared for the field.) Because the first weeks were spent excavating through topsoil and disturbed contexts, opportunities for applying micro-debris analysis were limited. We were successful, however, in instituting a systematic, rigorous sampling program, and the few samples I had time to fully process have already shed light on some issues, such as recognizing some of our decomposed mudbrick deposits with confidence, as well as confirming the curious lack of bone across our trenches. I was happy for this opportunity to iron out some kinks in our system before we reach floor levels that necessitate careful,

organized sampling and sample processing next year.

Finally, in between Thessaly and the Chalkidiki, I was able to begin the daunting and yet exciting task of compiling data for my dissertation on Macedonian barrel-vaulted tombs. To do this, I traveled to several tombs in the area of ancient Macedon to record their location and their relationship to the surrounding landscape. This was just the beginning of a long project that will take over my life in the coming years, but I am very grateful for the opportunity to get started on it with the support of the John G. Pedley Award for Travel and Research.

Elena Salminen, IPCAA Ph.D. Candidate



A terracotta head of a goddess from Kastro Kallithea.



Sorting through microdebris.



## SPECIAL EXHIBITION

*Pearls of Wisdom: The Arts of Islam  
at the University of Michigan*  
October 15–December 21, 2014

### RELATED EVENTS

*Islamic Art at the Met: New Galleries,  
New Challenges*, lecture by Sheila Canby,  
Curator of Islamic Art,  
Metropolitan Museum of Art, New York  
Wednesday, October 15, 6:00 pm  
Exhibition opening reception follows

*Drop-in Tours with Exhibition Curators*  
Sunday, November 9, 2:00 pm  
Sunday, December 7, 2:00 pm

*Family Day*  
Exhibition-related family activities  
Saturday, October 18, 1:00–3:00 pm

*Islamic Textiles as Political Tools: Conspic-  
uous Display of Wealth, Power, and Authority  
through Textile Displays and Gift-giving*  
lecture by Sumru Belger Krody, Senior  
Curator, Textile Museum, Washington, DC  
Wednesday, November 19, 6:00 pm

*Calligraphy Workshop*  
Josh Berer, founder, Society of Arabic  
Script Calligraphers of North America  
Saturday, December 6, 12:30–4:00 pm  
Preregistration required; materials fee:  
\$20 members, \$25 non-members

### OTHER ACTIVITIES

For a complete list of Kelsey events,  
see the “Events” column on the Kelsey  
homepage: [www.lsa.umich.edu/kelsey](http://www.lsa.umich.edu/kelsey)

|                       |              |
|-----------------------|--------------|
| Name _____            | Phone: _____ |
| Address _____         | Email: _____ |
| Address _____         |              |
| City, State ZIP _____ |              |

Yes! I would like to purchase a membership in the Kelsey Associates and support Museum Activities!

### CHOOSE YOUR MEMBERSHIP:

- |  |  |                                 |
|--|--|---------------------------------|
| <input type="checkbox"/> \$10 Student      | <input type="checkbox"/> \$250 Sponsor     | \$ _____ Members Gifts (303888) |
| <input type="checkbox"/> \$35 Individual   | <input type="checkbox"/> \$500 Patron      | \$ _____ Other _____            |
| <input type="checkbox"/> \$50 Dual/Family  | <input type="checkbox"/> \$1000 Benefactor |                                 |
| <input type="checkbox"/> \$100 Contributor | <input type="checkbox"/> \$ _____ Other    |                                 |

If no fund is selected, your gift will be used where it is needed most.



### CHOOSE YOUR PAYMENT METHOD

- ☐ Online at <http://www.lsa.umich.edu/kelsey>
- ☐ Credit Card: ☐ AMEX ☐ Discover ☐ MasterCard ☐ VISA
- Acct. # \_\_\_\_\_
- Exp. Date \_\_\_\_\_

Signature required \_\_\_\_\_

- ☐ Check (Payable to the University of Michigan)
- ☐ Phone (888-518-7888)

ID: \_\_\_\_\_

A: 5421