Archaeological Exploration of Sardis

SECOND NEWSLETTER FROM SARDIS, 2017 January 11, 2018

Dear Friends and Supporters,

The end of the season flew by as it always does, in a whirlwind of discoveries and excitement. The three archaeologists on Field 49, the high terrace in the city center which we believe to be part of the palace quarter of Lydian Sardis, made great progress in understanding the deeply buried Lydian and earlier phases. We have been working mostly along the western flank of the hill, which was retained by a great terrace wall, built and rebuilt over and over in almost every phase of Sardis' history: at least twice in the Lydian period, again in the Hellenistic and early Roman periods, and further developed in late antiquity. The terrace wall had been clearly identified in a trench to the south, and when we discovered a substantial masonry wall on exactly the same line in the central trench where we are working now, we naturally interpreted it as the continuation of the terrace. So our plan was that Julia Judge (Harvard University) would excavate outside this wall to expose the face of the wall, while Will Bruce (Gustavus Adolphus College) would work within the terrace to excavate more of the terrace fill that was producing unexpectedly early Lydian pottery, suggesting that this hill — and central Sardis in general — was developed much earlier than we had believed.

Just as your last newsletter was being written, Julia had started to uncover a beautifully worked Lydian masonry wall, built of "rusticated" limestone blocks with carefully carved edges and more roughly finished centers. Such precisely carved limestone walls are found only on the highest-status buildings at Sardis, and this is the first such wall that we have found on this hill. While we haven't yet uncovered the other side, it is at least 1.7 m (almost 6 feet), and perhaps about 4.6 m (15 feet) thick, certainly worthy of the palace of Croesus. The only problem was that this wall goes the wrong way, east-west rather than north-south, completely belying our expectations. Either the terrace takes an odd jog outwards, or this is some other kind of wall. In any case, as usual, the situation is more complicated than we had realized; but we have a place to start, and hope to follow up on this wall next summer.

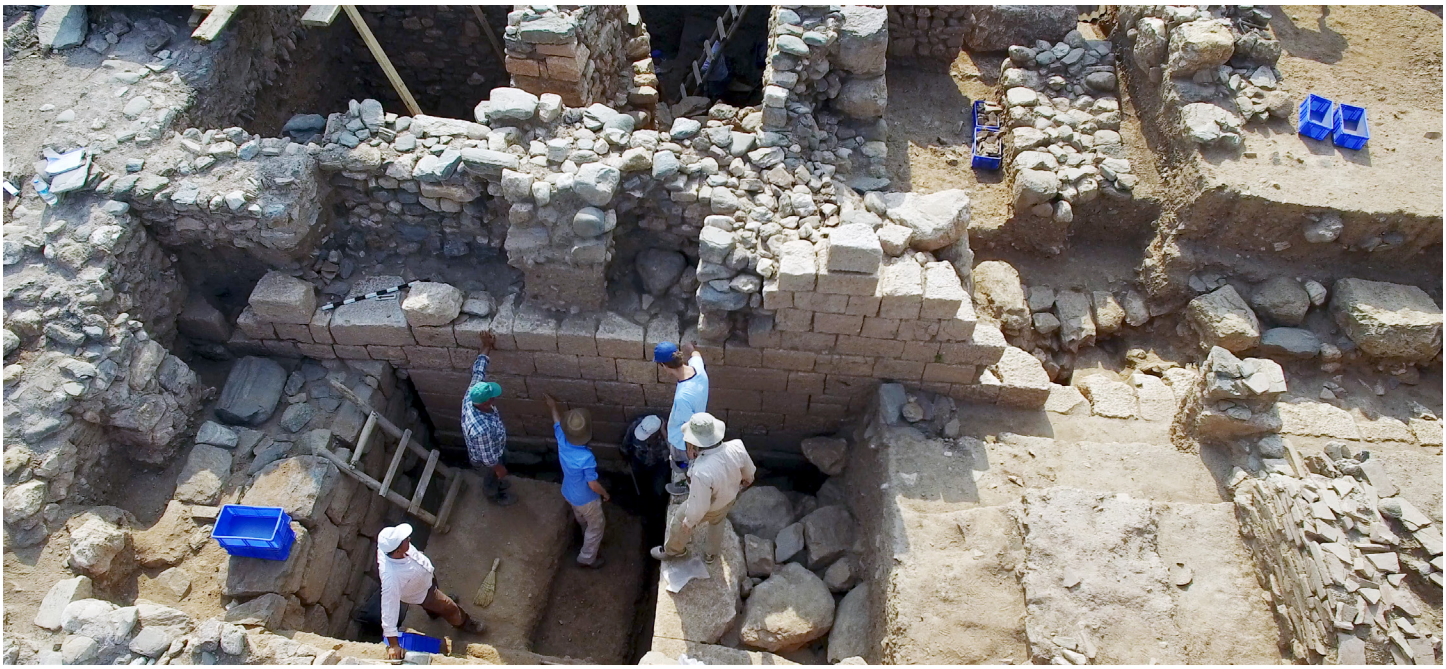


Fig. 1. Julia Judge discusses her trench with Will Bruce and Nicholas Wing, who stand on her newly exposed, gorgeous limestone wall. She points at the wall which we thought was a Hellenistic rebuilding of the Lydian terrace wall; but the Lydian walls in front of it showed that we were wrong. In the background is Will's deep sondage.

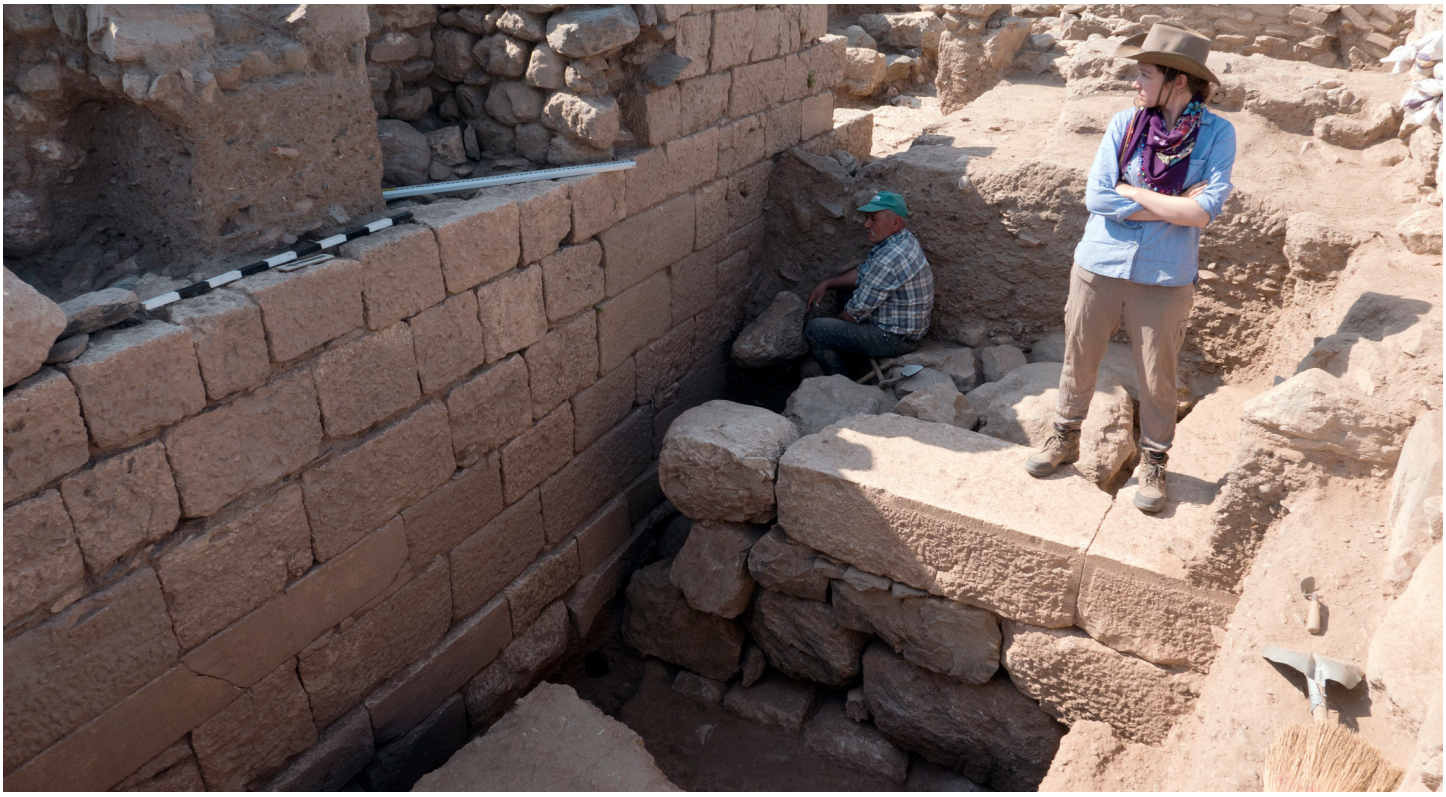


Fig. 2. Julia stands on the newly discovered limestone wall, the first piece of standing masonry belonging to Croesus' palace found on this hill. Notice the mason's mark on the block under her right foot. The Hellenistic wall on the left is built entirely of reused Lydian blocks.

Near this beautiful gleaming limestone wall is another, much cruder wall built of massive, roughly-cut schist blocks. One might be tempted to conclude that such different walls, one rough and sturdy, of dark local stone from the nearby Tmolus mountains, the other of carefully trimmed white limestone imported from the quarries at Bin Tepe across the Hermus valley, would belong to completely different eras; but Julia's careful excavation showed that they are in use together. She excavated a burned floor which connected the two walls, still visible as a dark line in the trench scarp. On this burned floor were three small bronze arrowheads, one noticed in the scarp by the keen eyes of photographer Ellie Jordan (Boston University alumna). A burned, final Lydian level with three Lydian arrowheads in this rather tiny space might well be the destruction level from the famous capture of Sardis by Cyrus the Great of Persia, which we have found elsewhere in the city; this would give us an important fixed point in understanding this maze of walls and periods.

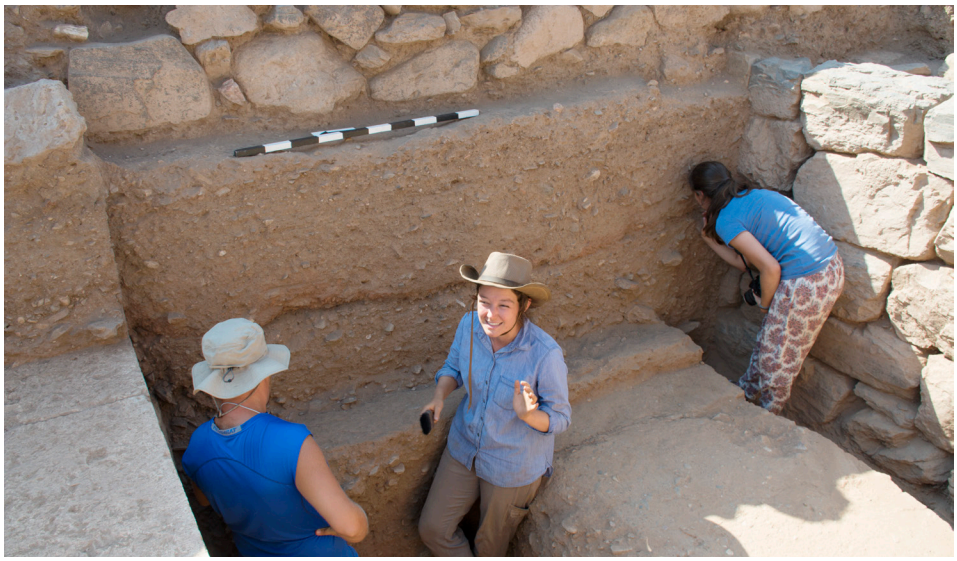
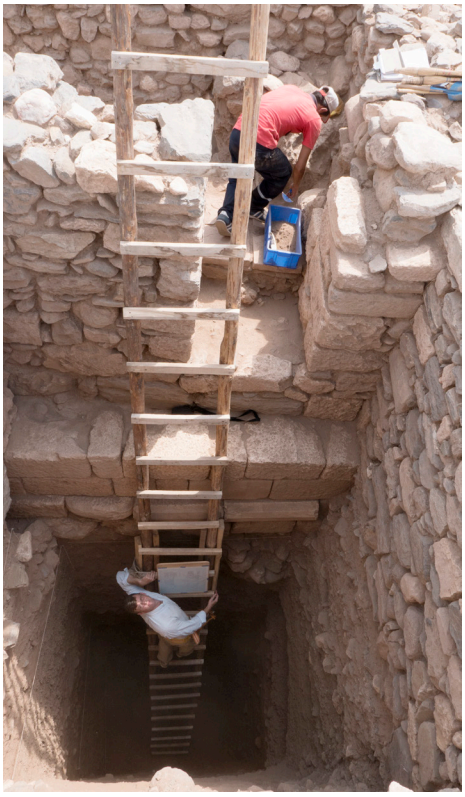


Fig. 3. These three arrowheads are among almost 50 arrowheads found on this hill; none, however, are from as good a context as these. They may well have been fired in the defense of the palace when Cyrus the Great attacked the city in about 547 BC.

Fig. 4. Architect Jordan Coslett (University of Kansas), Julia Judge, and photographer Ellie Jordan in Julia's trench. Behind Jordan is a block of the limestone wall; the schist wall is at right behind Ellie. In the scarp behind you can make out the dark line of a burned earth floor that connects these two walls, showing that although they are so differently constructed, they are contemporary. The photo was taken just as Ellie noticed a greenish object embedded in the scarp; this proved to be a third arrowhead from this tiny space.



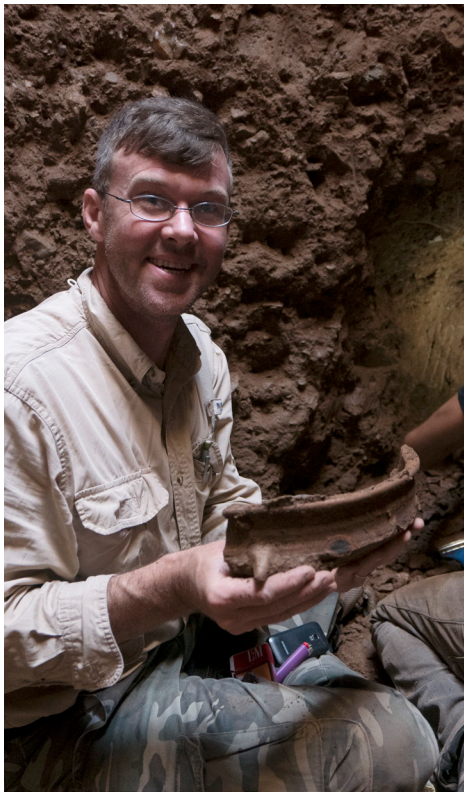
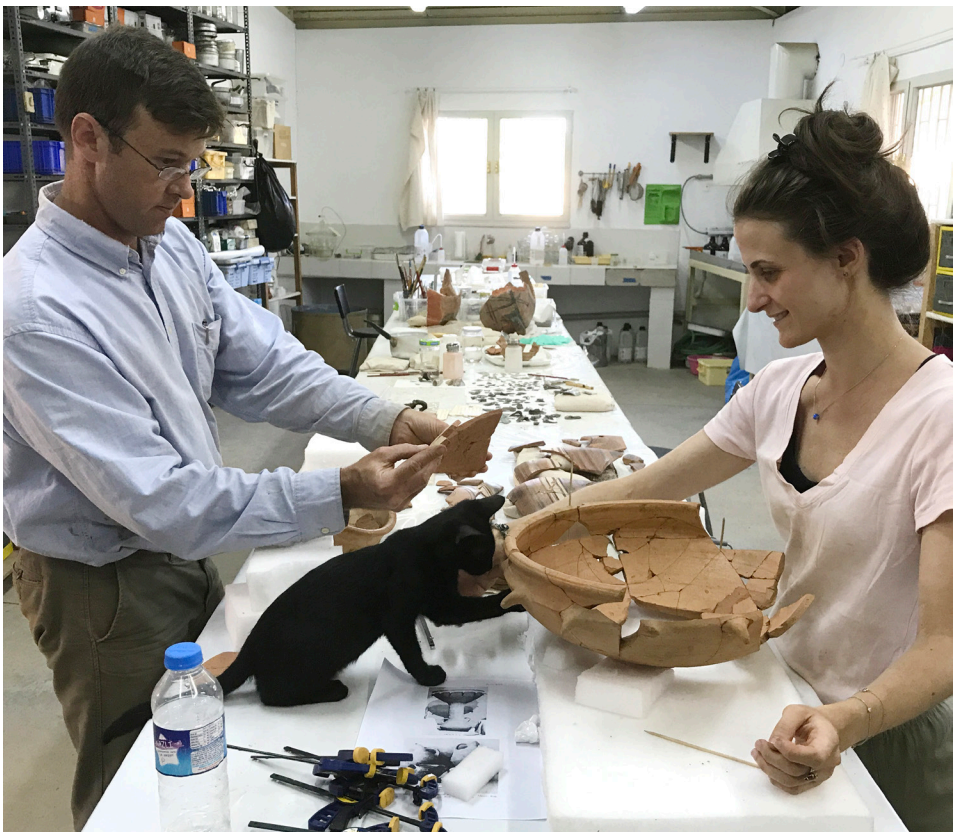


Fig. 5. Next to Julia's tangle of Lydian and later walls, Will Bruce and Nicholas Wing watch over the excavation of the deep fills of the Lydian terrace. The rough wall below them is the foundation of a wall joining Julia's beautiful limestone wall, but here the upper part is entirely robbed out. At the bottom of this trench Will is just hitting Bronze Age levels; the second winch behind them serves the deeper pit which produced so much Bronze Age pottery.

Fig. 6. Will Bruce drawing the scarps of his deep sondage; the ladder he stands on had to be specially constructed to reach the bottom.

Fig. 7. Deep in the Bronze Age levels Will uncovers fragments of a strange dish with horn-like projections. The large, joining sherds of this and other vessels from these levels shows that he is not digging an imported fill, brought here at a later date from somewhere else together with earlier pottery, but real occupation debris.



Meanwhile Will Bruce continued his explorations of the early Lydian and Bronze Age strata within the terrace. We kept expecting him to reach bedrock in his elevator shaft-like sondage, but at the end of the season he was more than 10 m (33 feet) deep with no end in sight. The last 3 m (10 feet) contained only Bronze Age pottery, with some rather spectacular pieces, such as a mysterious dish with conical protuberances like upside-down horns around the edge, sometimes described as a drum. We're not sure how deep these Bronze Age strata can go, and are surprised to find this much deposition on top of what we thought was essentially a natural hill.

Fig. 8. Our most skilled kitten mending the so-called "drum" in the lab, with help from conservator Chantal Stein (Conservation Center, Institute of Fine Arts, NYU) and Will Bruce.

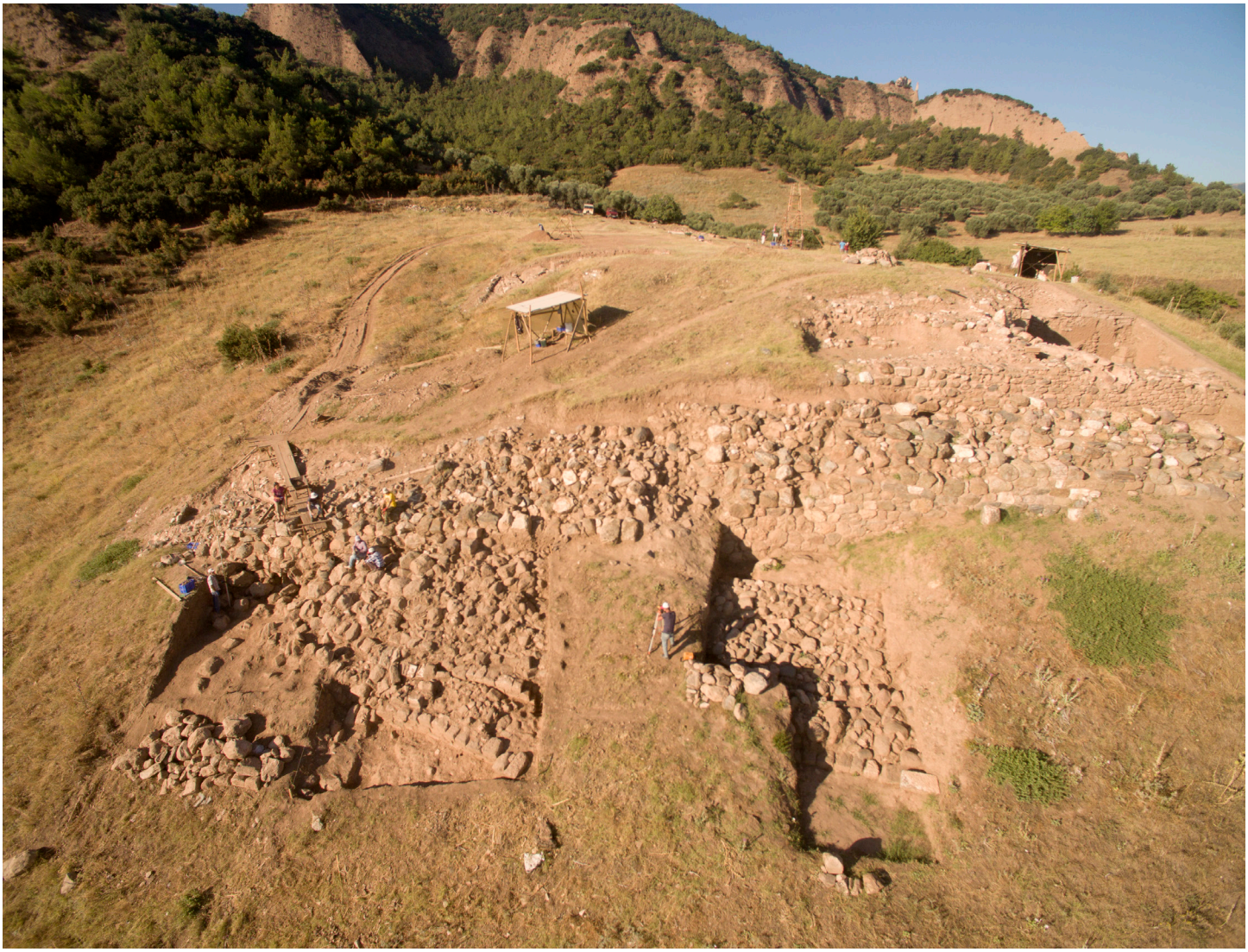


Fig. 9. Güzin and her six workmen are almost lost in the expanse of boulders she has uncovered, the remnants of many phases of Lydian terracing operations along the north side of the hill. Güzin's excavations also provide important new information for her own PhD dissertation at Boston University, on monumental architecture in Lydia and Western Asia Minor.

On the north slope of the hill, Güzin Eren (Boston University) revealed much more of the thicker but less well-preserved Lydian terrace wall, a bit of which was exposed in 1982. It now crosses most of the hill, and itself has at least two phases. Although only the lowest courses are preserved, it may have stood to a considerable height. Did the Lydians build this massive wall to extend the flat hilltop to the north and so gain more space for building? If so, it would be a massive project, adding more than 16 m (50 feet) to the hill. Or was this part of a stepped system that built up this end of the hill more gradually? In any case the scale of building and the aspirations of the Lydian kings continue to impress, and we have our work cut out for us next summer.

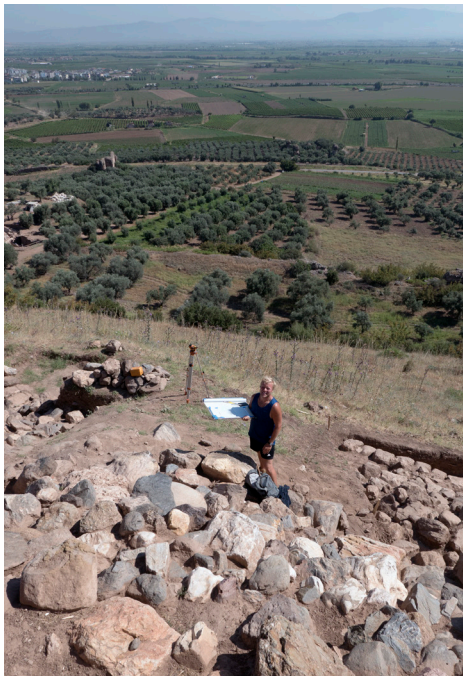


Fig. 10. Jordan Coslett draws Güzin's boulder walls. Five years ago, drawing such a huge area of irregular masonry on a steep slope, in both plan and elevation, would have been very time-consuming. Today, a drone takes a few hundred digital photos from various angles, the computer stitches them into a precise three-dimensional model, and produces geometrically correct vertical and horizontal photographs, which Jordan can use as the basis of his drawings. However, he still draws by hand in pencil in the field: there is no substitute for looking carefully at each stone and recording its textures, alignment, and other qualities, nor for bringing the trained eyes of the architect to bear on these complicated features.

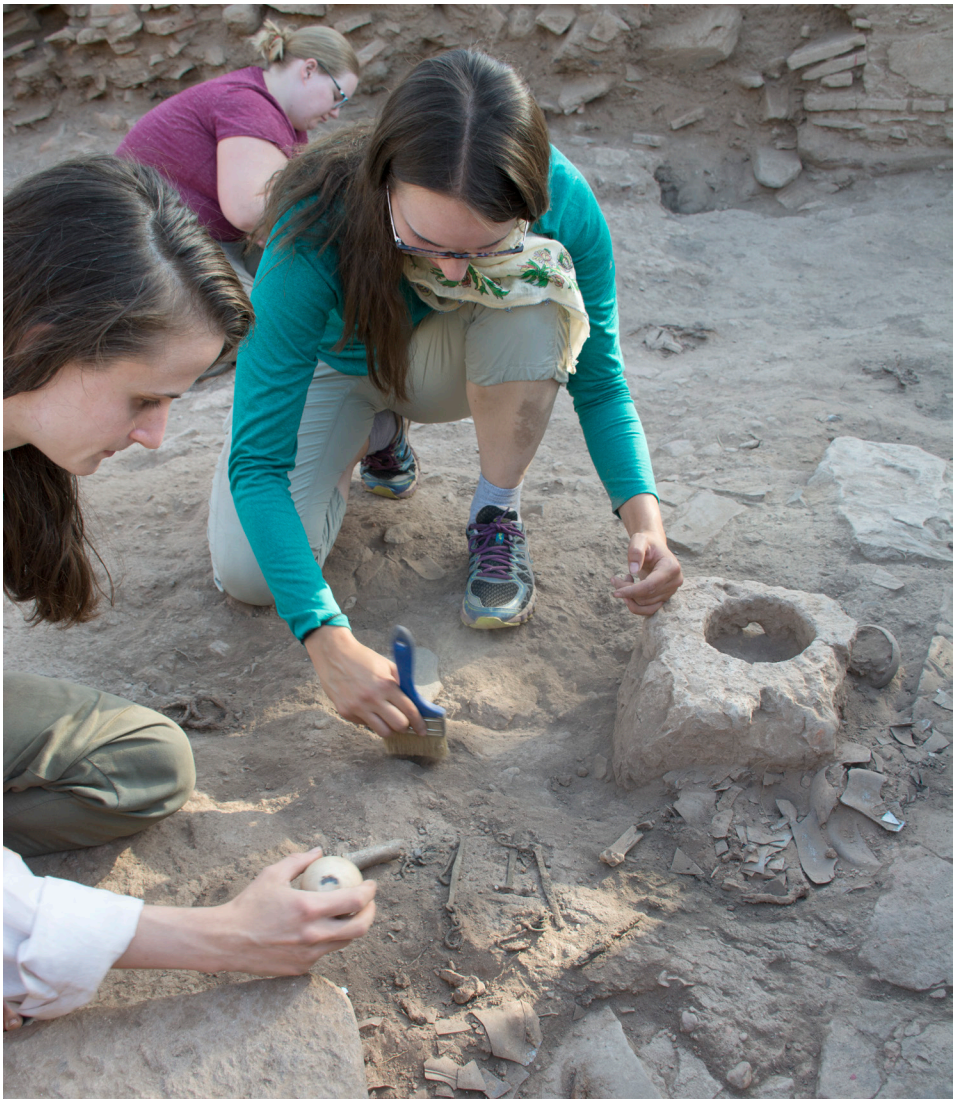
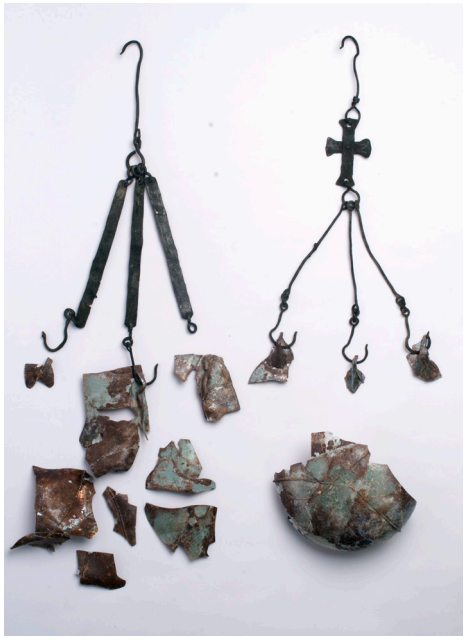
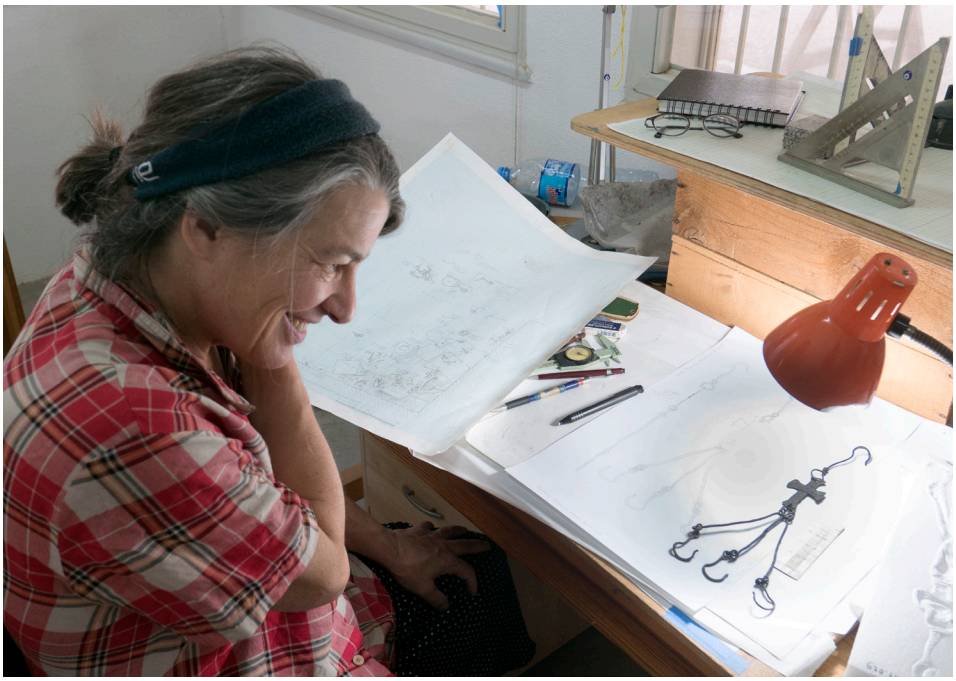


Fig. 11. Jessica Plant, Chantal Stein, and Lindsay Öcal cleaning one of three bronze and glass hanging lamps found shattered on the floor of Jessica's late Roman house in Field 55.

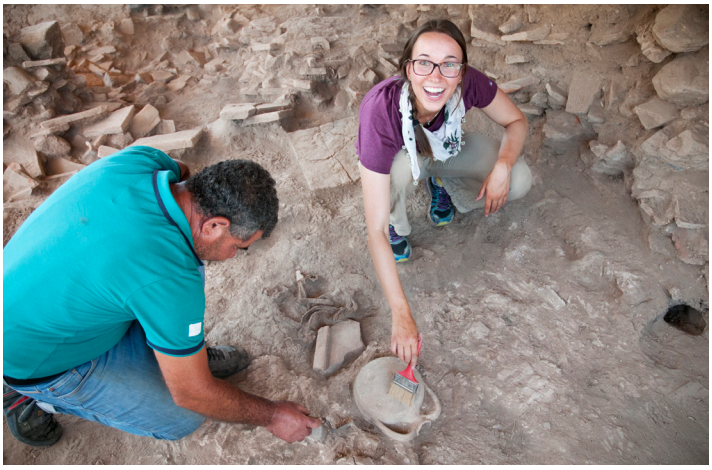


Figs. 12 & 13. Hanging lamps from Jessica's trench. At top, the bronze chains at right held three glass lamps, now just shattered fragments at right. Below, two of the lamps after conservation; the glass was so burned that it melted and could not be mended.



Below this high hill, Frances Gallart-Marqués (Cornell University alumna) and Jessica Plant (Cornell University) continued to explore the late Roman terrace we call Field 55, which occupies the space of an early Roman sanctuary. Jessica continued to excavate the destruction level mentioned in your last newsletter, which represents the end of urban settlement in this part of Sardis and, in a real sense, the end of Antiquity. She then excavated beneath the floors to learn about the earlier history of the house, and uncovered a bit of an oven

Fig. 14. Catherine Alexander draws one of the hanging lamps, with a central Christian cross, and compares it with the detailed plan she drew in the field.



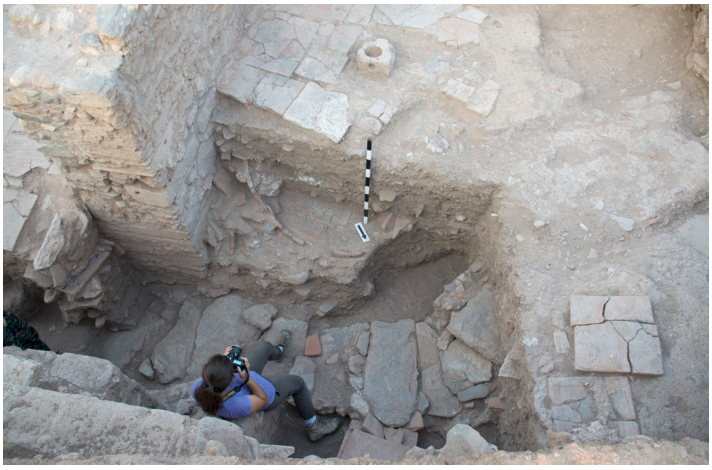


Fig. 15. Jessica Plant excavating an intact flask on the final floor of her house in Field 55.

Fig. 16. After excavating the debris from the earthquake that destroyed these Roman houses in the seventh century, Jessica probed beneath the floor to explore earlier levels. The meter stick rests on part of a round oven belonging to an earlier period of this house; this has been cut through by a later drain, on which Ellie Jordan stands.

belonging to an earlier phase of this room. But she also discovered a huge drain cutting through all this, and so explained a feature that has puzzled us for a while: a purposeful break in the terrace wall, apparently leading nowhere. We simply had not been able to dig deeply enough; the break is actually where this drain cut through the wall. Frances meanwhile explored where the drain emerges from the terrace, as well as earlier levels of the house.

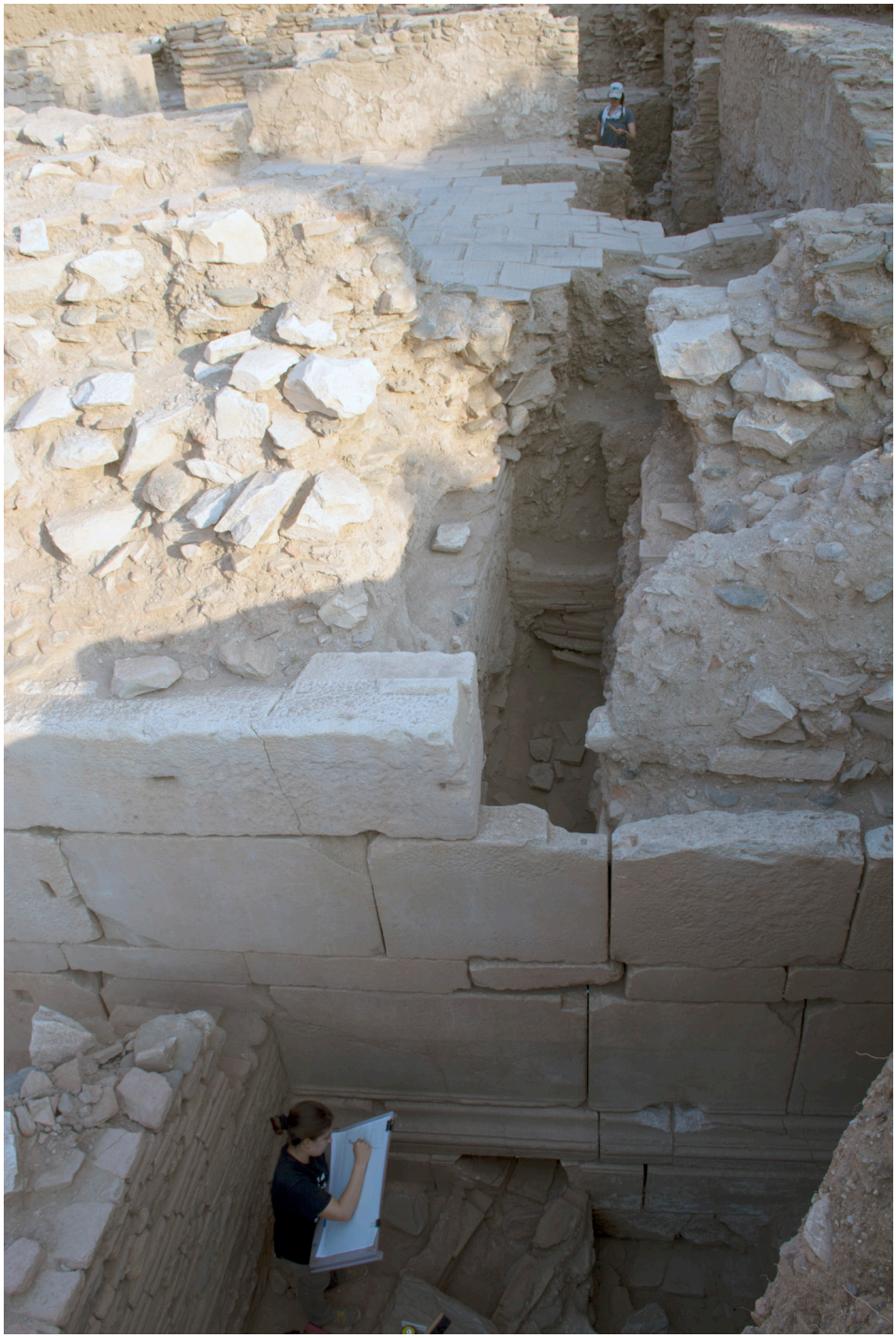


Fig. 17. Deep excavation finally answered a question that had been bothering us for three years: this mysterious "corridor" leading through the terrace wall is a great drain, cut through at some late date. Architect Kelly-Anna Louloudis (Harvard University) draws its outlet.

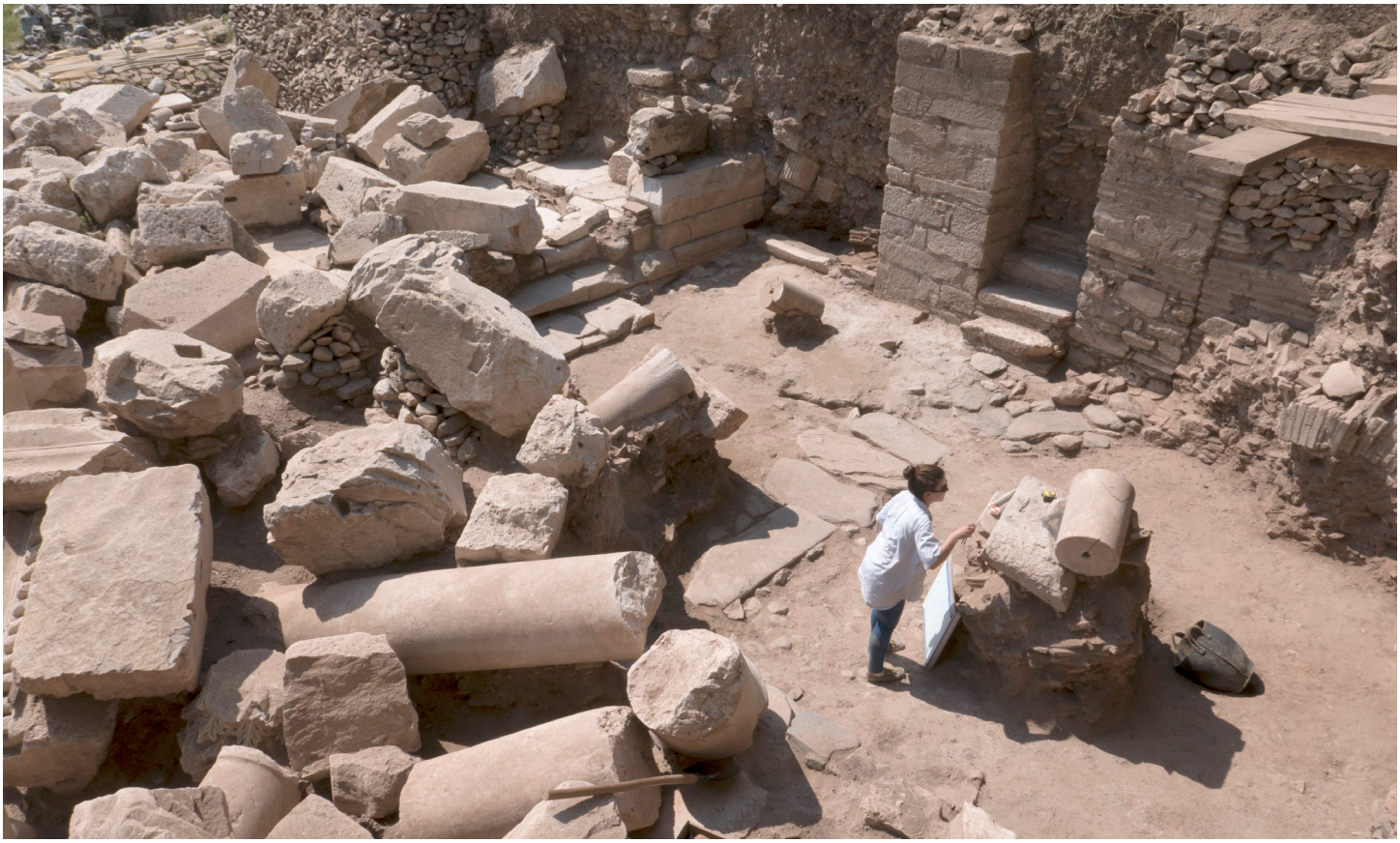


Fig. 18. Kelly-Anna draws the south portico of the Roman colonnaded avenue where it meets the arch. Behind her, doorways and stairs lead into unexcavated rooms under the modern highway, presumably the equivalent of the "Byzantine Shops" in front of the Synagogue. At the left are the remains of the monumental arch, one of whose chamfered piers peeks out from under the fallen blocks. One of John's most interesting discoveries is that this pier is partly unfinished where the wall of the portico was once built against it, showing that the colonnaded avenue and arch are contemporaneous. The original construction date of both, however, remains uncertain.

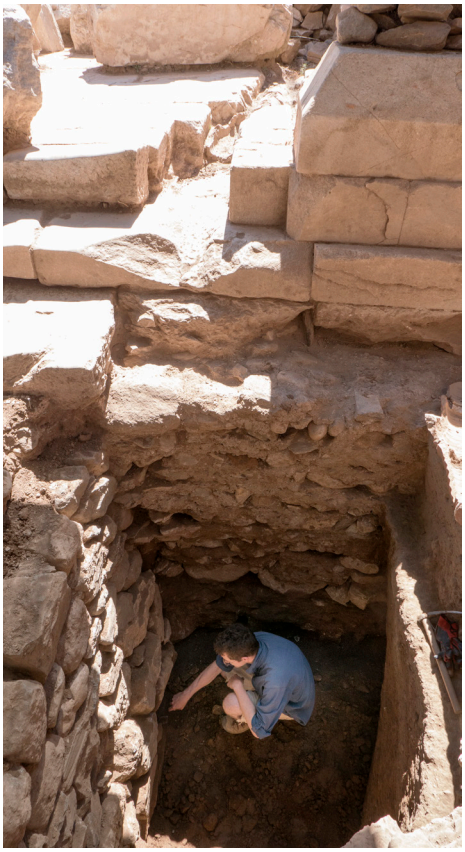


Fig. 19. Excavating beneath the floor of the portico in the previous picture, John Sigmier exposes the solid concrete foundation of the monumental arch, whose chamfered pier stands at the top of the image, in search of pottery that might help date this enigmatic building. But alas, he found none. Instead, he is here trowelling a wall belonging to the Lydian fortification under the arch, giving us an unexpected fix on this even-more-colossal structure.

Finally, John Sigmier (University of Pennsylvania) continued to explore the complex area of the monumental arch in front of the Synagogue. Everything intersects here at the main entrance to the city: two great colonnaded avenues, public plazas, private houses, sacred spaces, all dominated by the largest arch in the Roman world; and we find almost every period of the city's history, from Lydian to late Roman. While the conservators finished cleaning and stabilizing the inscribed mosaic mentioned in your first newsletter, John uncovered the corresponding portico on the other side of the street, buried under collapsed brick vaulting, fallen columns, and other debris. Almost predictably, the situation here was completely different from that on the north: John found evidence of industrial activity, layers of ash, and drains and pipes crossing the portico, almost completely destroying the mosaics. But no matter: this transformation of public sidewalk into an area of light industry is fascinating, too; and the contrast with the situation across the avenue is striking. The loss of the mosaic also allowed him to probe beneath the pavement to expose the foundations of the monumental arch. We are still not sure about the date of this new discovery, and hoped that pottery from the foundations would help narrow it down. Unfortunately it did not; his probe found no Roman pottery or fills at all, but rather, remains of the Lydian fortification that had crossed this area centuries earlier.

In the sanctuary of Artemis, Michael Morris (Metropolitan Museum of Art), Hiroko Kariya (private practice), and their team of now-expert women and men finished cleaning all but one of the standing columns of the temple (which will be cleaned next summer), a monumental task that involved working from multiple levels of scaffolding. The transformation is so complete, and the results so impressive that it's hard to remember what the temple looked like before it was cleaned. So they left the top of one of the columns to preserve the uncleaned state and remind us of how dirty it was. Teoman Yalçınkaya (retired, Yapıtek, Izmir) built a protective stoa over the four Hellenistic capitals which he so successfully moved earlier in the season.

Figs. 20 & 21. The temple of Artemis, during and after conservation this summer. The leftmost standing column is the only one remaining to be cleaned; the others will further lighten as the biocide continues to kill the bacteria and lichens over the winter.

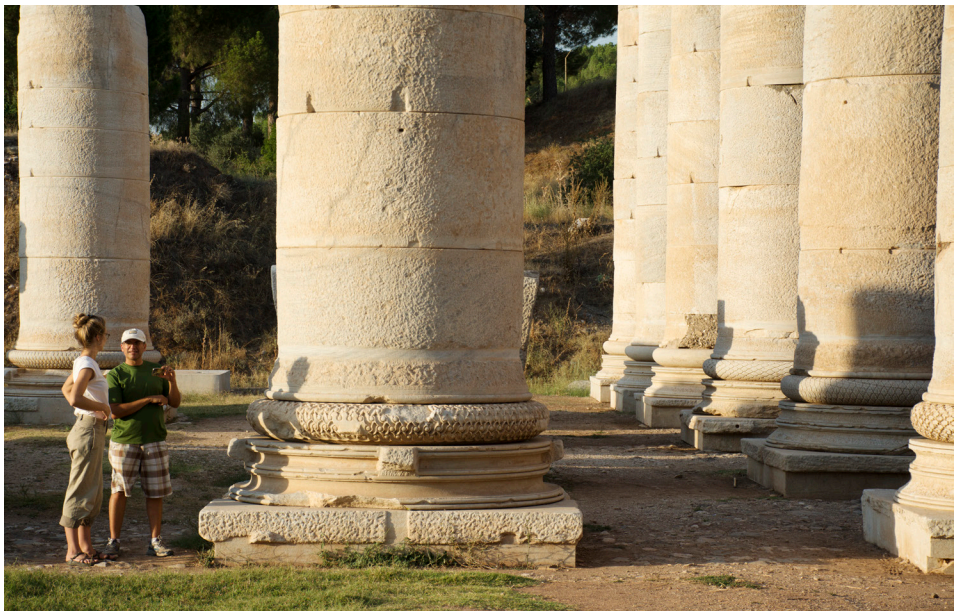
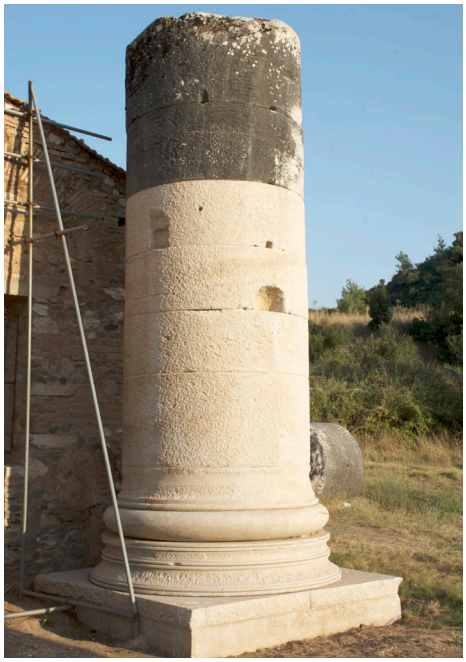


Fig. 22. Hiroko Kariya treating the huge door into the temple of Artemis. The door would have been high enough for the half-dozen statues of the Imperial family (including Commodus Fig. 32), each some 8.5 m (28 feet) tall, to pass through with ease. It now bears crosses and other Christian symbols, perhaps to purify this ancient spot of pagan worship.

Fig. 23. Baha Yıldırım and Brianna Bricker wander through the towering columns of the newly cleaned temple.



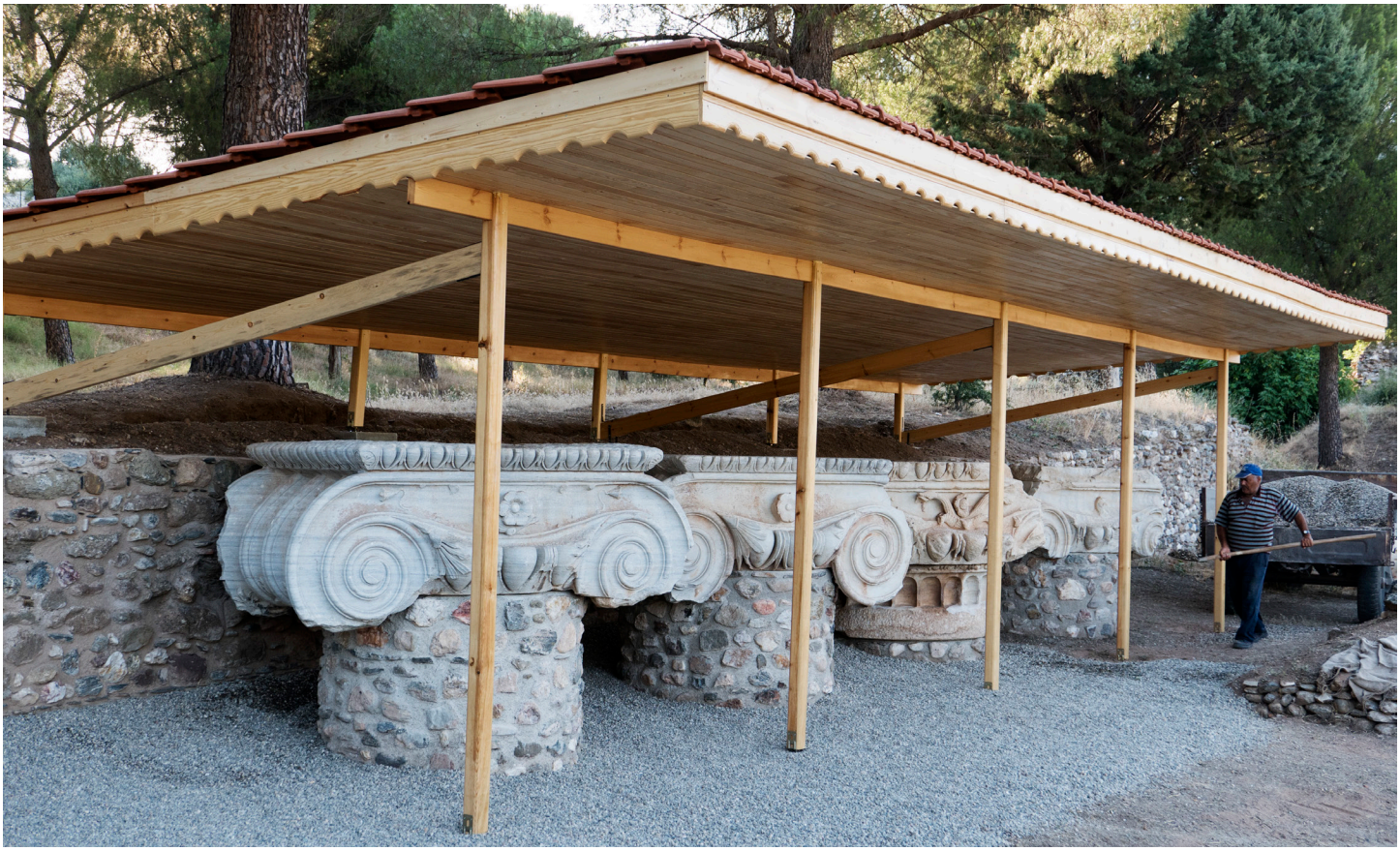


Fig. 24. The cleaning continues to clarify small but informative details, such as the way some of the leaves on this column base were left unfinished. Even in their unfinished state, the leaves are crisply and evenly carved.

Fig. 25. The team left the top of one column deliberately uncleaned to preserve its darkened state after a century of exposure.

Fig. 26. Ramazan Erişti finishes building the stoa in the sanctuary of Artemis, a shed-like building to protect and display the four column capitals from the Temple which we had moved to this spot earlier in the season.

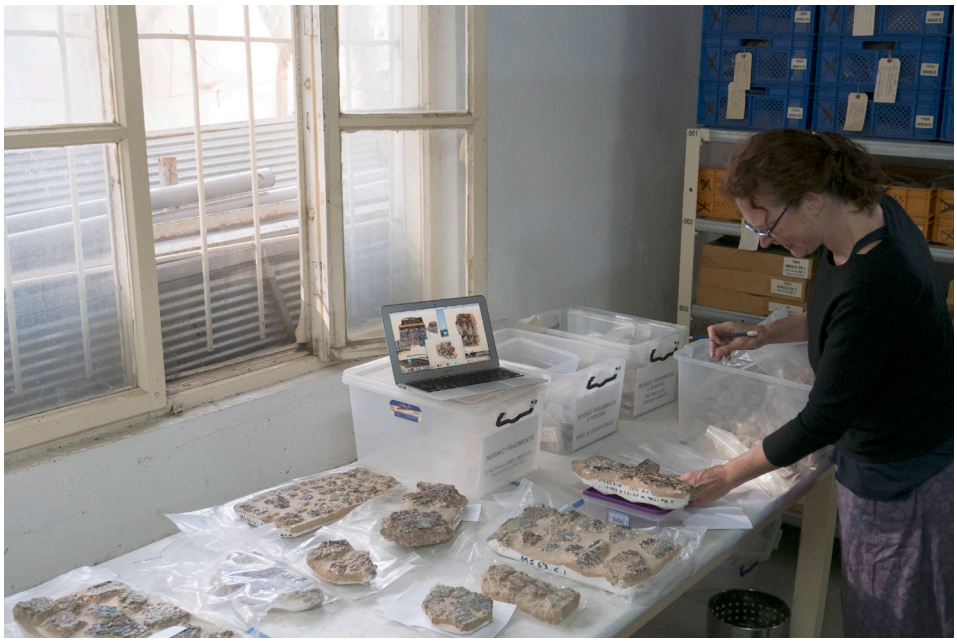
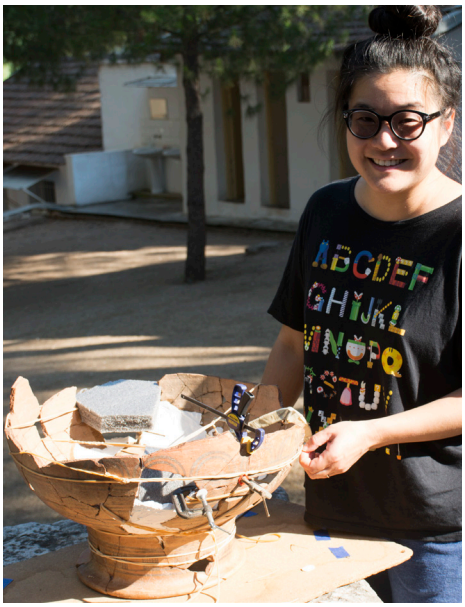
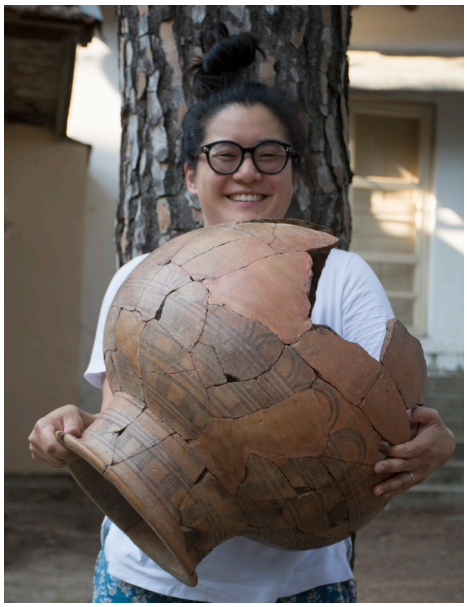
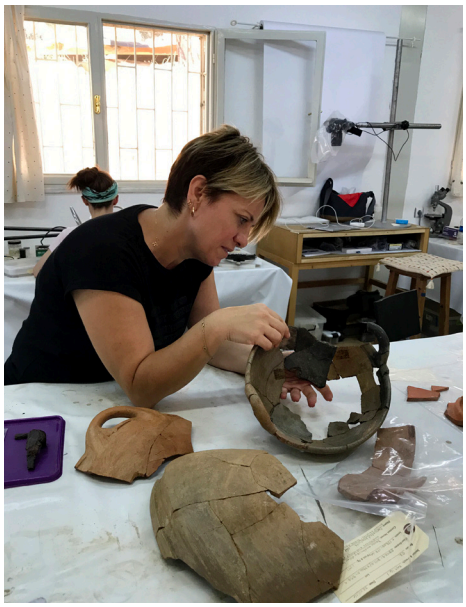


Fig. 27. Vanessa Rousseau compares the fragments of wall mosaic from the Synagogue to Larry Majewski's watercolors.

Back at the camp, a talented group of specialists conserves, records, and analyzes the finds from this and previous seasons, and prepares them for study and publication. Vanessa Rousseau (University of St. Thomas and Macalester College) is studying the wall decoration of the Synagogue, where vast amounts of colorful marble revetment were found in the 1960s, and also fragments of brilliantly-colored wall mosaics made of stone, glass, and gilded tesserae. The late Larry Majewski (New York University) did a preliminary study of these mosaics, but the fragments were never photographed or fully described. Vanessa located the fragments in the depot and is doing a full study of their design and materials. Conservator Jennifer Kim (Autry National Center) is also working through old finds: boxes of fragments of painted Lydian pottery from the excavations of ByzFort in the 1980s and 1990s, whose restoration was put off pending further excavation. Jen has again worked her magic, turning these rather unprepossessing sherds into a magnificent Early Iron Age jar. She also restored three unusual Lydian bowls with basket handles, a shape best known in Bronze Age pottery, suggesting a fascinating continuity between the Bronze and Iron Ages. Erica Rowan (Royal Holloway, University of London) continued to study carbonized plant remains. Anthropologist Yılmaz







Figs. 28 & 29. Jennifer Kim restores one of perhaps a dozen large painted jars from an early Lydian context on ByzFort, another part of what we believe was the Lydian palace complex. Sherds of somewhat similar vessels have been found in early levels at HoB, but nothing this complete.

Fig. 30. Gül Gürtekin-Demir (Aegean University) studies an Early Iron Age Lydian dish from that same context on ByzFort, also mended this summer, and its Bronze Age predecessors found by Will in his deep sondage.

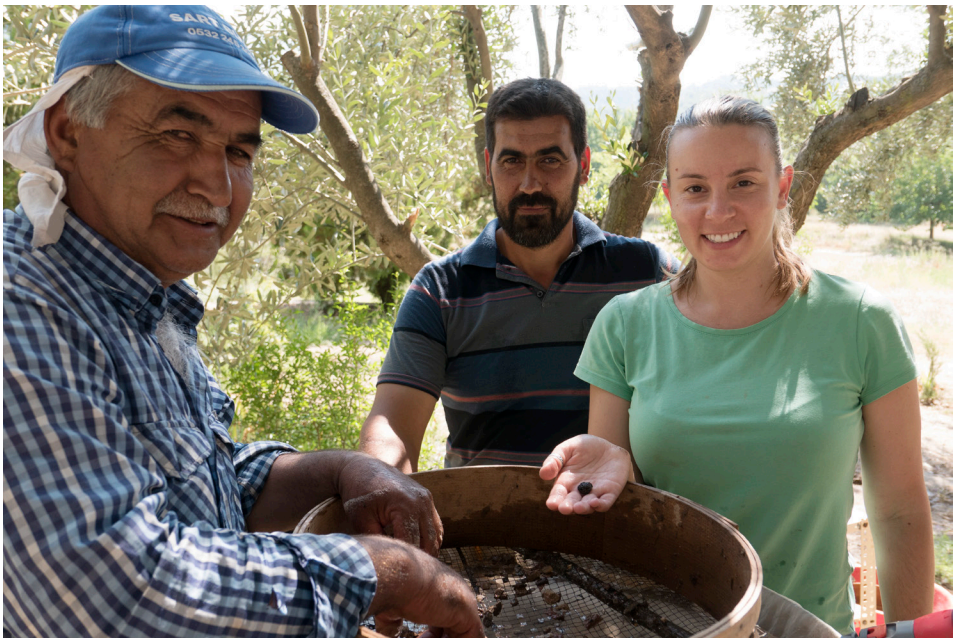


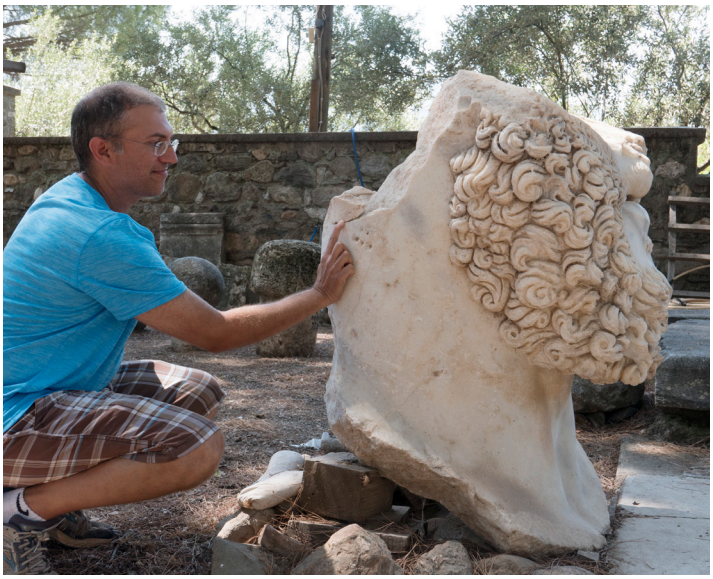
Fig. 31. Among the thousands of wheat, barley, and other common seeds from soil samples saved from excavations of the marble road in front of the Synagogue, Erica Rowan finds a peach pit; the sweet, juicy peaches of Sardis are still one of the delicious treats of the summer.

Erdal (Hacettepe University) couldn't come to study bones this summer, but we did select samples of early Byzantine skeletons for analysis of their DNA by David Reich (Reich Laboratory, Harvard University). The samples were successfully exported and we eagerly await Dr. Reich's results.

Conservators Carol Snow (Yale University Art Gallery), Emily Frank, Chantal Stein (both Conservation Center, Institute of Fine Arts, NYU), and Lindsay Öcal (University of California - Los Angeles), with the indispensable help of interns Alexandra Todorova and Nicholas Wing (both Harvard University), continued to treat and re-house unstable metal artifacts in Escal to create a dry, stable environment. With a great push they finished 1,819 of the 2,282 unstable metal artifacts in our depots, ensuring their safety for at least 10 years.

Bahadır Yıldırım's (Harvard University) sharp eyes continue to amaze us. Among his discoveries in the latter part of the season are a number of small fragments from the head of Commodus found in the temple of Artemis in 1996, and part of the leg of this or another colossal statue, originally discovered by Howard Crosby Butler in 1911.

The excavation season produces the most photogenic moments and immediately exciting discoveries, but much of the important work is done



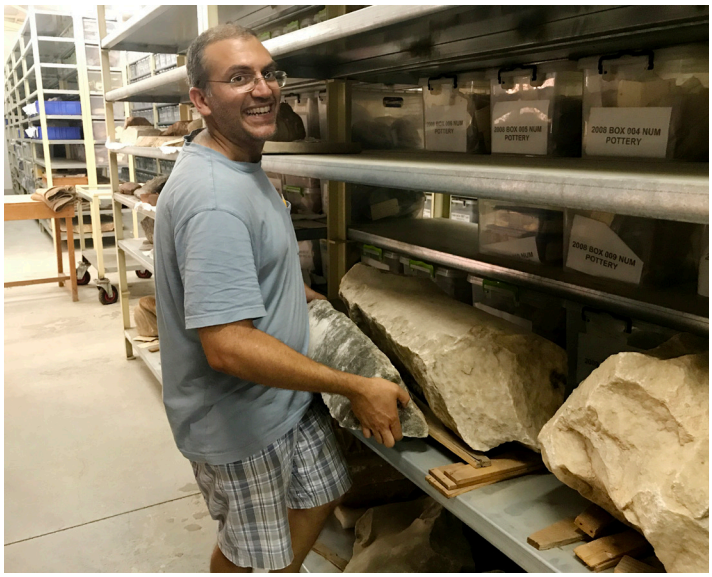


Fig. 32. Baha's eagle eye identified a tiny piece of marble in a box of fragments dug in 1996 as a fragment of the colossal head of Commodus from the temple of Artemis, and here shows how it joins. Below the join you can see a series of pick marks left when the statue was broken up in late antiquity and then deliberately buried in the east porch of the temple, presumably in a conversion of the sanctuary from paganism to Christianity.

Fig. 33. Baha also recognized this blackened sliver of marble as part of the leg of one of these colossal statues; it joined a fragment in the depot, and here too, you can see the scars left when it was broken up in late antiquity and discarded.

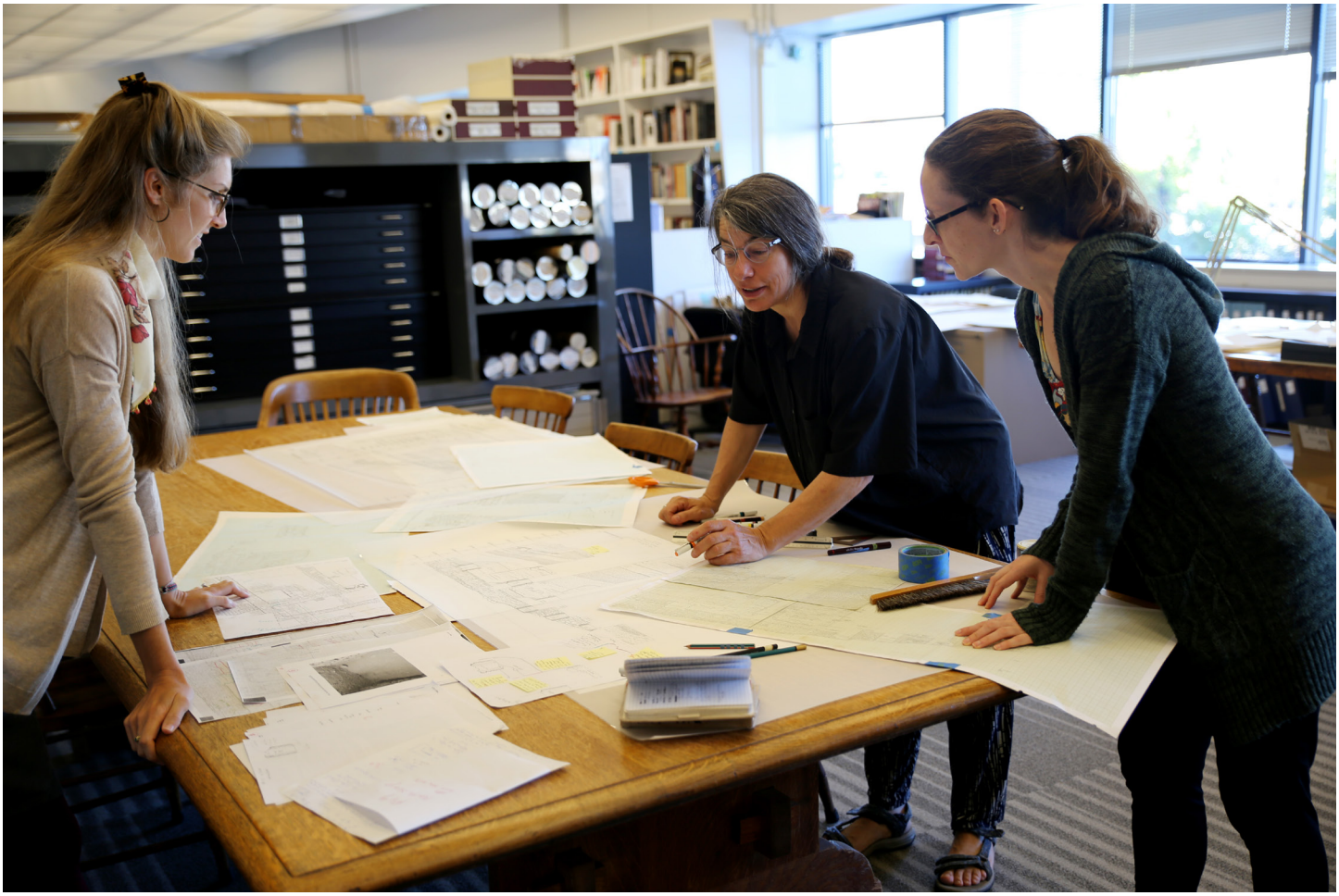


Fig. 34. Brianna Bricker, Theresa Huntsman, and Catherine Alexander consult on architectural plans in the Sardis Office at Harvard.

during the winter by the staff at the Sardis office at Harvard and other scholars. Under the direction of Publications Data Manager Theresa Huntsman and Publications Coordinator Brianna Bricker (both Harvard University), Jane Evans' monograph *Coins from the Excavations at Sardis: Their Archaeological and Economic Contexts* nears completion, and the searchable on-line database will follow shortly, while Georg Petzl's *Greek and Latin Inscriptions from Sardis. Part II: Finds Since 1958* will follow. Brianna and Theresa are also making great progress on Andrew and Nancy Ramage, and Gül Gürtekin-Demir's *Sector HoB—Lydian Trench and Pactolus Cliff*, Fikret Yegül's *Temple of Artemis*, and on Andrew Seager's *Synagogue at Sardis*. Kudos to all the authors; each of these volumes represents decades of research and hard work. Paul Kosmin (Harvard University) and Andrea Berlin (Boston University) are preparing the papers from last February's conference on Hellenistic Sardis for publication, under the title *Spear-Won Land: Sardis from the King's Peace to the Peace of Apamea*.

The biennial Sardis lectures at the Harvard Club in New York City and at the Harvard Art Museums in Cambridge have been a tradition for many decades. This fall, Osman Mardin (Sardis Capital, London) and his son Ilyas arranged another venue, at the London Stock Exchange, with the support of Robert Barnes (London Stock Exchange Group, London). What a privilege to speak about the site where coinage was invented, at one of the world's economic hubs; and we hope such London talks will become part of the biennial tradition. Then in November Jane Evans (Temple University) organized a special Sardis panel for the meetings of the American Schools of Oriental Research in Boston. Such talks are announced in the News section of our website, at http://sardisexpedition.org. Planning and preparation for the 2018 field season proceed apace, and despite political uncertainties on both sides of the water, we enjoy and deeply appreciate the support of the wonderful staff at the Ministry of Foreign Affairs, Ministry of Culture and Tourism, and the General Directorate of Cultural Heritage and Museums of the Republic of Turkey. Right now we see no impediment to another fruitful season of exciting discoveries, which seems like it's just around the corner.As always, however, this is possible only through your support and generosity, for which we are profoundly grateful.

Nick Cahill
Director, Sardis Expedition

Explore http://sardisexpedition.org or contact us at am_sardis@harvard.edu for more information about our activities and how to support our work.