



## SECOND NEWSLETTER FROM SARDIS, 2010

CONFIDENTIAL—NOT FOR PUBLICATION

Feb. 18, 2011

Dear Friends and Supporters,

July 15, 2010: This afternoon Will Bruce (University of Wisconsin-Madison) came back to the compound with a grin on his face and what looked like a pinkish rock in his hand. As he passed it around the tea table, jaws dropped as each person looked more closely at this unprepossessing lump. It was actually a fragment of mortar, to which clung a small patch of mosaic of stunningly high quality (**Figs. 1-2**). The tesserae are almost impossibly tiny; Greenie (Crawford H. Greenewalt, jr., University of California-Berkeley) calculated about 142 tesserae per square inch, each piece of stone smaller than half a grain of rice, and some seem no larger than pinheads. The stones fit one to another with perfect tight joints, and the colors are subtle and delicate. It's not clear what is represented—we suspect it's figural, but there just isn't enough. Nonetheless, this is by far the finest piece of mosaic found at Sardis in 50 years of excavation, and attests to the extraordinary level of artistic production at Hellenistic Sardis.

The fragment comes from Will's excavations at "Field 49," a hill near the center of downtown Sardis, where he and Randy Souza (University of California-Berkeley) have been excavating late Hellenistic and Early Roman levels rich with fragments of painted wall plaster, molded stucco, and other remains of very fancy buildings. These folks lived well: Will and Randy have found inscribed handles of Hellenistic wine amphoras, luxury glass, and fascinating lamps; the exquisite bronze patera handle found last year belongs to this same stratum. But the buildings survive only as shattered foundations—perhaps the result of the massive earthquake of 17 AD (**Fig. 3**).

These Hellenistic and Early Roman buildings were constructed on earlier ruins, including the Lydian terrace wall built of finely cut limestone blocks discovered last year. Digging through layers of Roman debris on the slope of the hill, Randy exposed more of this limestone wall, until he hit the top of a new structure, apparently an earlier terrace wall built of massive, roughly worked boulders (**Figs. 4-5**). This is similar to a terrace wall excavated almost 30 years ago along the north slope of this hill, suggesting that the whole spur—an area of a city block or so—was enclosed and raised by this terrace, probably in the seventh century BC. The limestone wall is built right on the stub of this earlier wall, and probably belongs to a renovation project, replacing the old-fashioned boulder terrace with gleaming white masonry.

The limestone wall is similar to the Lydian terrace wall on the spur just across from Field 49, known as the "Byzantine Fortress." Excavated in the 1980s and 1990s by Christopher Ratté (University of Michigan) and others, this plays an important part in Chris's book on Lydian masonry, just now going to the printer, thanks to his and Kathy Kiefer's (Sardis Office, Harvard Art Museums) hard work. Last winter, erosion and a particularly tenacious wild pear tree exposed a couple blocks of limestone masonry near the top of the ByzFort hill, belonging to one of the buildings on top of this terrace. Between his other projects, Randy cleaned a stretch of the new wall (**Fig. 6**), and found that it is exactly parallel to Chris's terrace wall, and was clamped with lead clamps, one of which was still in place. This is the first such lead clamp or clamp

cutting found in situ in any Lydian civic structure at Sardis (other clamps are all found on stray and reused blocks, or in tombs); and only the second building with a lead clamp in situ at Sardis (the other is in the Tumulus of Alyattes).

But what were these Lydian terraces? That is the \$64,000 question. This part of central Sardis, high above the plain, with its cool breezes and magnificent view, must have been one of the city's most desirable neighborhoods, and these massive limestone terraces are too grand to be anything but public constructions. Professor Hanfmann suggested long ago, before excavation had begun there, that the "Byzantine Fortress" might be the site of the Palace of Croesus, famed in antiquity and still surviving in the time of the Roman architect Vitruvius; and there is still much to recommend this theory. Randy's and Will's trenches are close enough to ByzFort that the terrace wall might have been continuous: could both these hills belong to a single complex, perhaps related to the palace of the Lydian kings? We won't know until we reveal more of the tops of these hills. But Randy's new boulder wall pushes the history of monumental Lydian occupation here further back in time, and the new wall on ByzFort is an unexpected discovery to pursue next summer

With nowhere left to dig in his all-stone trench, Randy started a new area adjoining Will's on top of Field 49. Almost immediately, he started finding burials similar to the infant Will had found earlier in the summer. By the end of the season, they had discovered that the hill became a cemetery after it was abandoned by the Romans, with at least eight graves in this small area, six of which were infants or children (**Figs. 7-8**). Other than a pair of silver earrings (**Fig. 9**), finds were meager, but the earrings suggest the burials date to the later Byzantine or Ottoman periods, which are very little known at Sardis.

Down in the theater, Tiziana D'Angelo (Harvard University) brought her excavation of the Lydian house to a successful conclusion (**Fig. 10**), figuring out the complex architecture, the various phases of the house, and studying the impressive collection of some 61 pottery vessels and dozens of other artifacts from this room, expertly mended by conservators Julia

Sybalsky, Cybele Tom (both New York University), and Jennifer Kim (Margaret Herrick Library, Academy of Motion Picture Arts and Sciences).

Alas, not so with Ferhat Can (Middle East Technical University), whose extensive excavation just above Tiziana's did not uncover the Lydian residential quarter we had hoped for, but only the scrappiest remains of Roman theater seat foundations. Everything else seems to have eroded away, until the afternoon of the very last day of excavation, when he started to uncover a pair of Lydian grindstones, apparently a grinding bench belonging to another Lydian house (**Fig. 11**). But there was not enough time to explore this further; and the total lack of walls and artifacts is perplexing.

But don't feel too sorry for Ferhat. Last spring a farmer plowing his vineyard in the Necropolis opposite the Temple of Artemis uncovered a plain limestone "bathtub" sarcophagus, of a type usually dating to the Persian period. The empty sarcophagus had been looted twice in antiquity, and this season Ferhat was put in charge of extracting the sarcophagus, which should have been a quick and easy project (**Fig. 12**). But in clearing around the sarcophagus, he began to notice an unusual number of Lydian potsherds, and the more he dug, the more pottery appeared. He soon revealed a great scatter of pottery and other artifacts, lying smashed on a floor next to a fieldstone wall (**Fig. 13-14**). Cooking pots, mixing bowls, drinking cups, a lydion, and other Lydian pottery lay broken in a thick destruction level, very similar to that in Tiziana's Lydian house. In among these household artifacts was a necklace consisting of nine silver crescent-shaped pendants, with traces of fabric or string still adhering (**Fig. 14**), and part of a skyphos imported from Corinth, with a fine panther drawn on it (**Fig. 15**), firmly datable to the first half of the sixth century BC. A destruction level at this time suggests that this house (if such it is), like Tiziana's, was destroyed in the capture of Sardis by Cyrus in 547 BC. Well outside the city walls, this house will offer a nice contrast to Tiziana's dwelling near the center of the city.

But perhaps the most surprising find here was a beautifully polished green stone celt or hand-axe (**Figs. 14-15**). This is almost certainly a Neolithic

or Early Bronze Age artifact, perhaps five thousand years older than the Lydian house in which it was found. How did it get here? Was it kept as a souvenir, an intrinsically beautiful object, deep rich green in color, its ground edges silky smooth? Or (as Greenie immediately suggested), could it have been a “thunder stone”? Such Neolithic celts were widely believed to be thunderbolts fallen from the sky, and to protect the owner against lightning-strikes and other misfortunes.

This short project therefore produced some of the most unexpected results of the summer. Who would have guessed that Ferhat would find just what he had been looking for, not in the theater but a mile away, far outside the city? And while it can be frustrating when important discoveries are made by chance rather than as part of a planned research program, archaeology always requires one to be flexible and take advantage of new information and discoveries.

Across the Pactolus, Güzin Eren (Middle East Technical University) continued her exploration of the Temple of Artemis. Her trench across the north aisle of the temple was intended to explore the stratigraphy between the Hellenistic building and the surrounding colonnade, which was not begun until some centuries later in the Roman period, and to look for traces of an earlier sanctuary of Artemis. Güzin’s careful excavation did indeed identify scatters of marble chips left by the Roman masons building the colonnade, and below, the trench in which the walls of the Hellenistic temple had been built. Pottery and coins from these construction deposits offer new evidence for the dates of the temple’s different phases.

Digging deeper, Güzin found that the Hellenistic temple had been built on horizontal layers of sand and gravel washed down from the Acropolis, showing that the landscape around the temple was fairly flat when the temple was built (**Fig. 17**). But the pottery from this gravel was of relatively late date, belonging to the Persian era, perhaps the fifth century BC or later, signaling she hadn’t yet dug as far as levels of the Lydian kingdom (**Fig. 18**). So she continued, down and down and down. Twelve feet below ground level, she was still finding pottery that couldn’t be as early as the time of Croesus. She kept digging until finally, 20 feet below the floor of the temple, she hit solid,

natural clay bedrock (**Fig. 19**).

This is the deepest trench ever dug in the Temple of Artemis, and it shows that here, at least, there is no trace of anything earlier than the Persian era; no remains of an Archaic sanctuary, not even cultural deposits of the Lydian period. However, this 20-foot thick bed of water-laid gravel seems to date to a relatively short period—an instant in geological time—sometime during the Persian era. What could wash so much gravel here so quickly? Under the right circumstances (an earthquake, for instance, or a dramatic change in agricultural practices), could erosion fill this low-lying area with gravel and completely transform the landscape? And can we conclude that there was nothing here before this event? Again, questions for a future season, but knowing what questions to ask is the most important thing.

After a delay waiting for permission, we were finally able to restore the Lydian Altar (LA1), whose displaced blocks architect Brianna Bricker (University of California-Santa Barbara) had mapped out so carefully in the early part of the season. The crane arrived at 8:30 on July 24, and at 8:40 conservator Hiroko Kariya (Oriental Institute, University of Chicago), Brianna, Teoman Yalçınkaya (Çimentoş, Izmir, retired), a crew of workmen, and a crowd of gawkers followed it into the temple. The plan was to do only the first course of stones that day, and see how that went; Hiroko wasn’t sure how much adjustment would be necessary to get the blocks in exactly the right position. But Hiroko’s careful preparation of the bedding surface paid off, and by tea, the first course was in place and perfectly leveled (**Figs. 20-23**). From there it was clear sailing: nearly every block slipped neatly into its spot, just as Brianna had arranged them. After two days of work the altar was restored to its state before it had been dismantled in the 1920s, and is now much more intelligible. Next season we will turn to the later phase of this building, LA2.

Hiroko continued the restoration of the Synagogue as well. In contrast to the satisfying transformation of the Lydian Altar, here the repairs are almost invisible. Continuing to fill cracks and gaps in the mosaics, she and her team are working to undo

subtle but insidious damage caused by decades of exposure. But these repairs can only go so far. The underlying problem is that the Synagogue was built as a roofed building, and in the long run, the only way to preserve the mosaics is to protect them from the elements. Architects Troy Thompson (SmithGroup) and Phil Stinson (University of Kansas) and conservator Michael Morris (Metropolitan Museum of Art) are therefore expanding the “Touristic Enhancement Project,” described in previous newsletters, to include a protective shelter for the Synagogue, and stabilizing the Lydian gate and other remains in the adjacent sector MMS/N. In addition to protecting these monuments, this will completely change the way visitors tour the site. After enjoying the welcome shade in the Synagogue (which, as many of you know, is a blinding inferno on a hot summer’s day), visitors will stroll out to the Roman colonnaded avenue and enter sector MMS/N, where the Roman marble road was built directly over a gate in the Lydian fortification. This intersection of Lydian and Late Roman will act as a sort of time machine, carrying you back a millennium or so, and you will enter the Lydian city through one of its main gates. From there, crossing the modern street, visitors will arrive at the mudbrick fortification and houses. It is an ambitious program, but Phil, Troy, and Michael are full of excitement and good ideas, and by this summer we hope to have plans drawn up.

In addition to all their other jobs, architects Nate Schlundt, Brianna Bricker, and Clare Ros found time to design six more signs for visitors. Three are in the temple, explaining the design of the building, its construction methods, and the many inscriptions on the building. Two more signs introduce the Synagogue and describe its forecourt, and a final sign explains Butler’s crane, restored earlier in the season. When İsmet Yılmaz, the permanent undersecretary of the Turkish Ministry of Culture, visited the site in July, he proclaimed the signs the best he had seen.

In the second half of the season we were joined by conservator Jill Hari (Strauss Center for Conservation, Harvard University), a specialist in metal conservation. Among the bronze artifacts and coins in the depots are some that suffer from “bronze

disease,” a corrosion process that, once started, can cause artifacts to disintegrate into green dust. Jill’s expertise and experience saved many well-known Sardis artifacts from further deterioration (**Fig. 24**).

Preserving order among all these sometimes unruly finds was the Depot Move crew, Sheila Nightingale (City University of New York) and Alexia Margaritis (Cornell University). As they sorted through boxes of earth, bones, and other scientific samples, this Herculean task occasionally reminded one of cleaning the Augean Stables rather than one of the hero’s more dignified labors; but in August, they brought the six-year project to a successful conclusion, a terrific achievement. Once all the other artifacts were neatly stored in new plastic boxes, though, the old coin cabinets, bulging with decades of coins from the excavations, looked particularly disreputable. With Sheila and Alexia’s help, numismatist Jane Evans (Temple University), Elizabeth Gombosi (Sardis Office, Harvard Art Museums, retired) and Teoman designed a custom-built metal coin cabinet, whose eighty drawers will safely house the 22,000 coins from the last half century of excavation, with enough room for another half century or so (!) (**Fig. 25**).

Unlike so many archaeological digs whose excavation terms are limited to a few years, Sardis is so very fortunate in being able to plan for longer projects, to make investments in infrastructure like coin cabinets, to watch over and conserve artifacts and buildings excavated long ago, and to follow up on new and old ideas about the city and its monuments. This is due to the generous support given by you, the Supporters of Sardis, and we are profoundly grateful for your help, guidance, and interest. I hope to see some of you next month at the biennial Sardis lectures, to be held on Monday, March 28 at 6:30 PM, at the Harvard Club, 27 West 44th St., New York, NY; and on Wednesday, March 30, at 6:00 PM, at the Harvard Art Museum / Arthur M. Sackler Museum, 485 Broadway, Cambridge, MA. Receptions will follow both lectures.

Nick Cahill



Fig. 1. Will Bruce and Greenie at tea, examining a fragment of mosaic just brought in from the field.

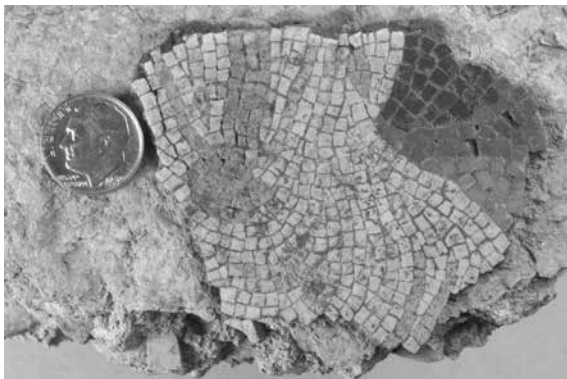


Fig. 2. The fragment of Hellenistic *opus vermiculatum* mosaic—“worm work,” referring to the technique of laying tiny cubes and chips of colored stone to create intricate and delicately colored figures, fitted and following the contours of the image like the brushstrokes of a fine painting. The dime gives a sense of scale, but the photograph gives no indication of the subtlety of its colors.

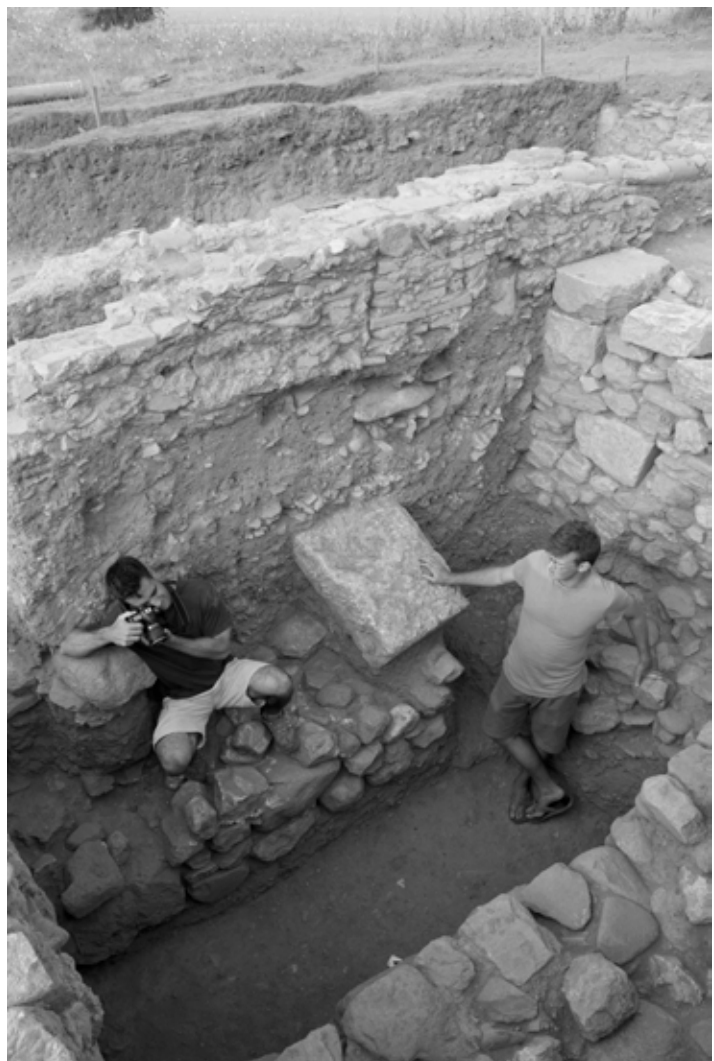


Fig. 3. Will Bruce’s trench on Field 49 was a maze of Hellenistic and Roman walls and foundations of many different phases. The mosaic fragment came from a layer of debris near the discarded Lydian limestone block between Will (right) and photographer Ricky Taylor (Harvard University, left).



Fig. 4. Randy Souza points to the top of an earlier Lydian terrace wall, its face at right under the bucket. The ladder leans against the terrace wall of squared limestone blocks discovered last year. The other walls that make up Randy's "room" are all of different periods: Early Roman at the back, Late Roman on the right.



Fig. 5. Architects Nathan Schlundt (University of Pennsylvania) and Clare Ros (Ball State University) surveying the new Lydian terrace wall. The Marble Court is visible far below on the plain—these terraces had a spectacular view over the lower city and across the Hermus valley to Bin Tepe and the Gygaean Lake.



Fig. 6. On the "Byzantine Fortress," Randy, Greenie, and Ricky Taylor inspect a limestone wall uncovered by erosion last winter. Could this be part of the Lydian palace? Further excavation was not possible last summer but is planned for 2011: stay tuned!



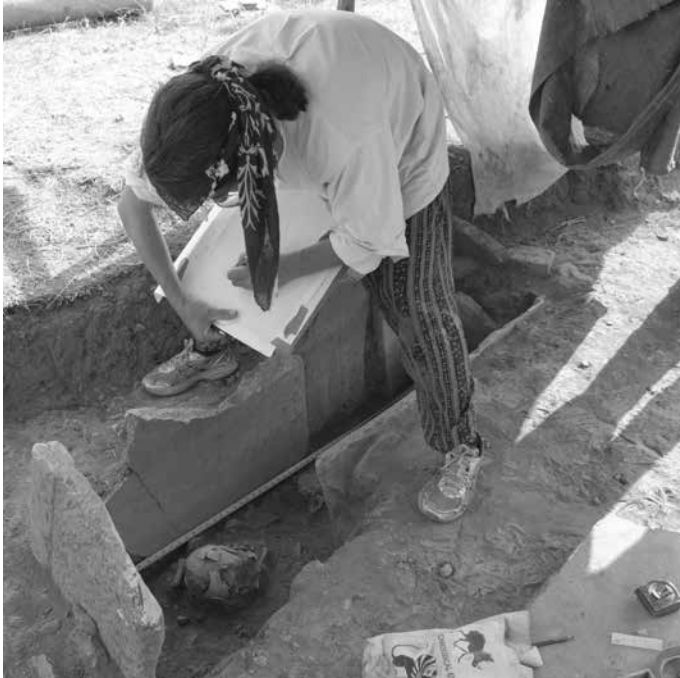


Fig. 7. Cathy Alexander (freelance artist) drawing one of the late skeletons from Field 49. At the foot of the skeleton is a fragment of brick with a lightly incised cross, indicating a Christian burial.



Fig. 8. The number of child skeletons, such as this infant tucked between two stones of an earlier Roman wall, suggests a population with a high infant mortality rate in this late period of Sardis's history.



Fig. 9. A pair of Byzantine or Ottoman silver earrings decorated with granulation, found with one of the skeletons from Field 49.



Fig. 10. Tiziana d'Angelo in her Lydian house. Two rooms were fully excavated: a partly paved space with a limestone column base to support a roof (at top), and an adjoining room with two long mudbrick platforms (Tiziana is sitting on one of these platforms). Both rooms were chock full of artifacts, providing a detailed snapshot of life in Sardis at the end Lydian independence.



Fig. 11. Not far from Tiziana's well-preserved Lydian house, Ferhat Can inspects the few stones of a grinding bench in his otherwise almost empty trench.



Fig. 12. A "bathtub" sarcophagus discovered last spring in the Necropolis, not far from the Temple of Artemis and well outside the city walls. The lid is a second-hand sarcophagus turned upside down.



Fig. 13. Ferhat soon discovered that the sarcophagus had been dug into an earlier, Lydian building, burned and destroyed in the middle of the sixth century BC. Even the tiny area he was able to excavate between grape vines produced a thick scatter of pottery and other artifacts very similar to destruction levels in Lydian houses elsewhere at Sardis.





Fig. 14. The destruction level contained a wealth of artifacts, both mundane and extraordinary, such as a necklace (?) of silver crescents and a Neolithic celt or hand-axe. The round stone beneath the dental pick might be a slingstone, examples of which were found in Tiziana's house as well.



Fig. 15. A Middle Corinthian skyphos dating to 600-550 BC, and a prehistoric celt, of perhaps 6,000-4,000 BC, found together in the destruction level.

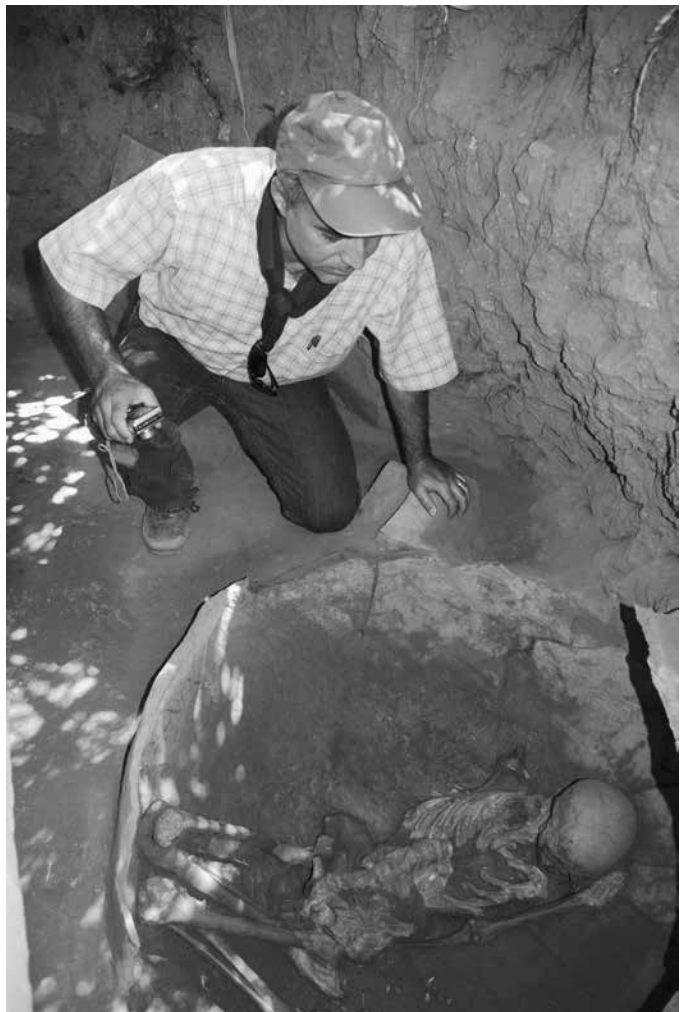


Fig. 16. Near the sarcophagus and Lydian house was a pithos burial with an adult male skeleton, being examined by Government representative Metin İmren (Izmir Archaeological Museum).

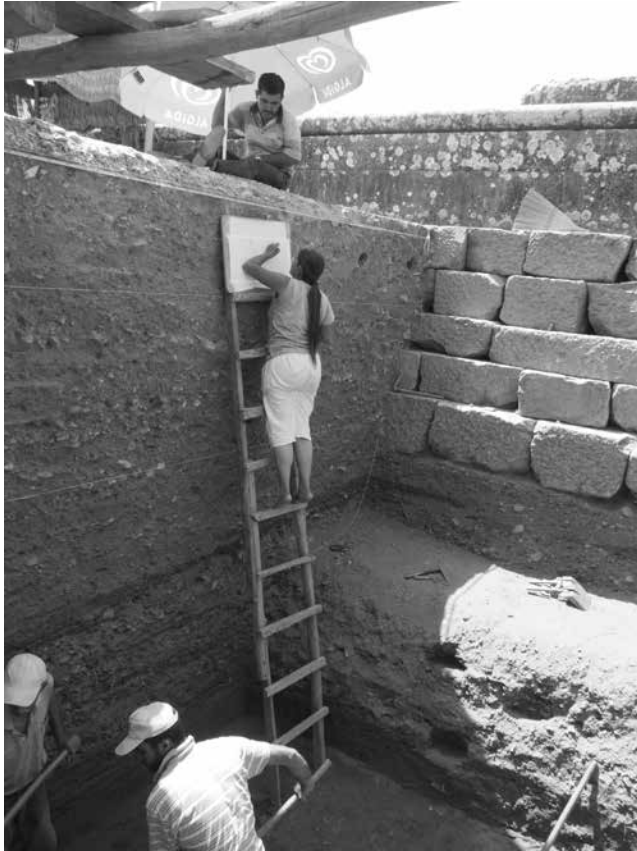


Fig. 17. The deep trench on the north side of the Temple of Artemis revealed the relatively shallow foundations of the temple, bedded in layers of sand and gravel. Güzin records the stratification before she gets so deep that she needs a taller ladder.



Fig. 18. An unassuming-looking but exciting artifact from the temple excavation is the base of a cup inscribed to Hera, apparently a dedication to the goddess. The cup base was found in a Hellenistic level predating the temple, and is the earliest evidence for the worship of this goddess at Sardis.

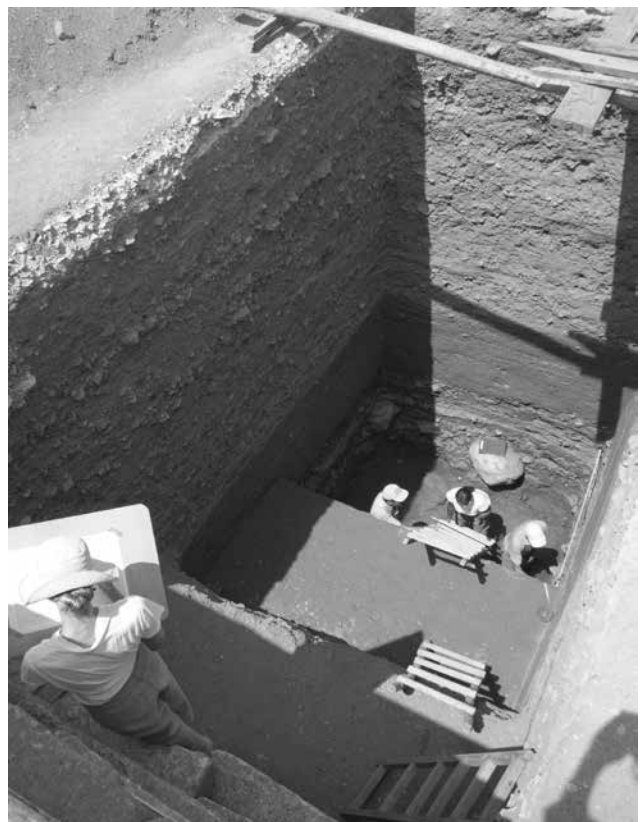


Fig. 19. Looking almost straight down from the wall of the temple into Güzin's deep sondage, Brianna Bricker perches on the foundations of the temple to draw them, while three long ladders (more than 20 feet) below her, Güzin and her workmen stand on natural clay.



Fig. 20. Standing in the gap in the Lydian Altar, where persons unknown removed more than 50 blocks in order to dig underneath the building, Hiroko Kariya (lower left), Brianna Bricker (standing with clipboard) and Teoman Yalçinkaya (surrounded by workmen) use a crane to replace the displaced blocks in their proper positions.



Fig. 21. Hiroko helps foreman Necmi Erdoğan slip a fragmentary block of the Lydian Altar into place.



Fig. 22. Gül Gürtekin (Ege University, specialist in Lydian pottery), Greenie, Baha Yıldırım (Sardis Office, Harvard Art Museums), Brianna Bricker, and Colin Wright (Sir Alexander Gibb and Partners, retired) inspect the tight joins of the reconstructed second course of the Lydian Altar.

Fig. 23. Teoman, Hiroko, and Brianna on the Lydian Altar after restoration.



Fig. 24. Conservator Jill Hari treats a Late Roman water heater (like a samovar) for bronze disease, which had caused it to deteriorate since its discovery in 1967.

Fig. 25. Jane Evans and Alexia Margaritis show off the new coin cabinet, half-filled with the coins from fifty years of excavation.

