Archaeological Exploration of Sardis

FIRST NEWSLETTER FROM SARDIS, 2019 July 3, 2019

Dear Friends and Supporters,

As the lunar and solar calendars intersect differently each year, Ramadan, the month of fasting, and the two Bayrams [holidays] following—the Ramazan Bayramı at the end of Ramadan, and the Kurban Bayramı two months later—precess earlier and earlier. The Sardis team arrived just after the Ramazan Bayramı, on June 8, and we will dig until the Kurban Bayramı in August, a slightly short season this year. But we're busier than ever. Much of the old team is back, and new members arrived ready for action: recorder Salpi Bocchieriyan and excavator Tyler Wolford (both Cornell University), architects Nicolás Delgado Álcega (Harvard University - GSD) and Ginevra D'Agostino (MIT), photographer Jivan Güner (private practice), undergraduate interns Hui Su, Zhiye Yang, and Midge Scheftel (Harvard University) and many others. Everyone dived immediately into our program as if the months since last season had not taken place.

We are back working on Field 49 high above Sardis, with its magnificent views over the lower city, Bin Tepe, and the Gygaean Lake; the crisp weather has made each day a joy. This is the region we believe to be the palace quarter of Lydian Sardis, and an elite region of the city in Hellenistic and Roman times.

Perhaps the most surprising and significant discovery of last season was also the least photogenic: 13 feet of dirt, at the bottom of a narrow, dark sondage 46 feet beneath the surface. But it's not just any dirt: Will Bruce (University of Kansas) dug through these sloping strata of almost sterile sand and gravel, down to a grade of bedrock so steep that he couldn't stand up on it, showing this area must have been artificially leveled before anybody could inhabit it. That deep fill was so similar to the terrace fills which the later Lydians used to level and regularize the steep slopes of their city, that we believe Will's deposit must have served a similar function, as a massive artificial fill brought in to make this hill in central Sardis habitable. But the pottery dates to the Early Bronze Age, about 2000 BC, more than a millennium before the earliest Lydian terraces, and indeed much earlier than any occupation previously discovered

Fig. 1. Ece Alper, Will Bruce, and others continue our investigation of the western flank of Field 49, a microcosm of the long history of Sardis. At #1 are the ladders descending into the early levels—probably Early Bronze Age—discovered last year, which added almost a millennium to Sardis' long history. At #2 is the Lydian limestone wall discovered by Julia Judge (Harvard University) two years ago, which is probably part of the palace; Will Bruce's team is digging to the right of that, to uncover more of the wall. In the foreground (#3) is Ece Alper's trench, with last year's Medieval walls on the left and this year's much more substantial, mortared walls on the right, partly buried under earthquake destruction debris. In the background Mahmut Drahor and his team measure the electrical resistance of the earth to create a model of deeply buried structures and bedrock.

Fig. 2. Geophysicist Buğra Oğuz Kaya, intern Midge Scheftel, and archaeologist Hakan Aycan model the complex stratigraphy of Field 49 by measuring the electrical resistance between electrodes strung along a cable leading north towards the Tumulus of Alyattes and the Gygaean Lake in the far distance. A bit like a CT scan, this technology can produce virtual slices through the hill, revealing anomalies which, we hope, correspond to ancient features and the natural bedrock.

at Sardis. Understanding this earliest known period of Sardis' history, and the long history of these terraces through the Bronze Age and into the Lydian and later periods, is a high priority here. But how to do so, when our goal is buried impossibly deeply?

Geophysicists Mahmut Drahor, Caner Öztürk, and Buğra Oğuz Kaya (9. September University, Izmir), and Hakan Aycan (Ege University) are using a variety of techniques, such as electrical resistance tomography and seismic survey, to create a 3d map of the deep structures of the hill, hoping to identify buried features and to trace the bedrock. They are also continuing last year's successful ground-penetrating radar survey onto the neighboring hill of ByzFort.

Meanwhile, to try to get firmer dates on the early strata found last year and in previous seasons, Ökmen Sümer and Mustafa Softa (9. September University) are sampling the sediments for Optically Stimulated Luminescence dating. This technique can determine how long it has been since a sediment, or even a single grain of sand, saw the light of the sun. The samples therefore have to be kept in the dark, so Mustafa and Ökmen clambered around Will's and Güzin Eren's (Boston University) trenches in the dead of night, hammering coring tubes into the scarps, one of our more unusual excavation experiences of the past few years. We are looking forward to confirmation (or at least explication) of last year's dates based on the pottery from these fills, and to filling out our picture of how Sardians transformed the dramatic hill-slopes and first created their city.

Excavation again focuses on the city center from its origin to its last occupation, and we're learning more about all these eras. In Field 49 Ece Alper (Bilkent University) is expanding her work of last year, where she found walls of the Medieval era, a period about which we know less than we do even about the Lydian period. Last year's building was flimsy, its walls made from small fieldstones and bits of salvaged Roman brick barely held together with mud mortar. But as she enlarges her trench she is coming across much more substantial remains: thick, well-built mortared walls with crisp edges and, in one corner, the beginning of wall paintings. If this is really a Medieval building, it is much better built than anything we expected. However, we won't know its date until she digs through the toppled fragments of wall and spills of masonry that now bury the building and dramatically illustrate its catastrophic collapse in an earthquake. More, we hope, by the end of the season.

Just adjacent to Ece, Will has finally finished excavating the pit dating to the Persian period in the fifth century BC, another period we know relatively

Fig. 3. Hard at work in the middle of the night in their hard hats and headlamps and strapped in with safety lines, Ökmen Sümer, Mustafa Softa, and Will Bruce take samples for OSL dating from Will's deep sondage by driving sections of steel pipe into the scarp and so removing samples without exposing them to light. Each time I climb down the ladder into the 5-story-deep pit I am struck that I am descending a temporal elevator from the present through the Roman, Hellenistic, and Lydian periods into the Bronze Age, each "floor" marked by different fills in the walls of the sondage.

Fig. 4. In typical Sardis fashion, Ece has found material of different periods all together in the upper levels she has excavated so far, a reminder of how careful one has to be in drawing conclusions from a few isolated finds. In her hand, two coins found within a few days and a few meters of one another: a Byzantine skyphate coin [right] and, dating to more than a millennium earlier, a Hellenistic silver coin [left].

little about. Chock full of animal bones and broken pitchers, it seems like the remains of a wonderful meal; but there are no traces of buildings to go with it. It remains mysterious why the inhabitants of Sardis during this period, when the city was the satrapal capital of the western Persian empire, did not occupy what had been the city center; rather they were digging a huge pit into the Lydian palace, robbing its walls and leaving this prime real estate abandoned. Will is also excavating and dismantling a labyrinth of Hellenistic walls and floors in order to understand the history of this hill in the period after Alexander the Great, and to expose the relatively well-preserved architecture of the Lydian palace beneath. The excavation of this finely–stratified area has contributed greatly to our understanding of Hellenistic Sardis, the topic of Paul Kosmin (Harvard University) and Andrea Berlin's (Boston University) Hellenistic Working Group of a couple years ago. Their publication, *Spear-Won Land: Sardis, from the King's Peace to the Peace of Apamea*, appeared just a couple weeks ago, and we anxiously await the copy Andrea and Paul are shipping here (now stuck in customs in Istanbul).

Güzin Eren (Boston University) returns to her familiar haunts on the north slope of the hill, in the huge trench that has occupied her efforts since 2012. In her second year of excavation she uncovered an impressive Lydian mudbrick wall, with postholes for wooden supports on either side of the wall. The date of this wall seemed very early, perhaps dating to the ninth or eighth century BC—a period for which we have almost no other buildings at Sardis, only scattered sherds from sector HoB—when life in neighboring Greek cities was simple and unpretentious, before the rise of the polis. This deeply buried building has therefore been one focus of her attention. The depth of Güzin's understanding and intuition about the complex area was driven home to me last week when she dug in the narrow, deep space between a Hellenistic wall and the Lydian terrace, down to the level of the early mudbrick wall. In past years she had restored the corner of her mudbrick building here, but I didn't see the evidence for such a restoration and so was (quietly, I hope) skeptical. But Güzin was exactly right, and discovered the corner just where she had predicted. And after teasing out the wall faces and postholes, now filled with collapsed mudbrick, in a eureka moment just this evening she reconstructed the symmetry of the building and found that a stray, apparently asymmetrical posthole discovered that first year is

Fig. 5. Will Bruce and workman Ali Koçak excavating a crushed Hellenistic oven and cooking pot in one of his Hellenistic floors.

Fig. 6. Dug every year since 2012, Güzin Eren's trench now occupies most of the northern slope of the Field 49 hill. The men on the western slope of the hill are clearing brush in preparation for Hakan's trench looking for the corner of the terrace.

actually the center post of her building. It's extremely satisfying, and gives us an early Lydian building that is about 5.25 m wide and at least 5.25 m long; a substantial structure for that era. However, it has only very plain pottery, mostly grayware and pithoi, which are challenging to date. Ökmen and Mustafa therefore took a series of samples from this building for OSL dating as well.

In an effort to locate the northwest corner of the terrace, Hakan Aycan has opened a large trench, clearing down the steep slope where Güzin's and Will's terrace walls should intersect. Again in typical Sardian fashion, the dust from Hakan's workmen taking down topsoil with big picks blends in the wind with the dust raised by Will's careful sweeping of Hellenistic floor, and with Güzin's dust as she sweeps her Early Iron Age mudbrick structures. Where else could you find such a span of history in so close a space?

Down below in Field 55, Frances Gallart Marqués (Harvard University Art Museums) and Tyler Wolford are opening more of the fascinating late Roman house built in the abandoned precinct of the Imperial Cult. Last year

Fig. 7. The corner of Güzin's early Lydian mudbrick building. This satisfyingly completes the plan of the structure first discovered in 2013, probably the earliest known building in the area of the Lydian palace, and one of the earliest buildings known at Sardis, perhaps of the ninth century BC. The corner itself has been sliced away by the great boulder terrace wall whose interior face is visible at the right, which itself is the earliest terrace known from this hill, perhaps of the eighth century BC.

Fig. 8. An aerial view of Güzin's trench showing the outline of the early mudbrick building, its walls framed with double postholes perhaps to support a second story. We await dating evidence from the OSL samples, since the pottery is rather undistinguished: grayware and pithoi, with a tiny number of simply painted sherds. That lack of distinction in itself, though, is telling, since the pottery of later Lydian periods is beautifully painted and quite easily recognized.

Fig. 9. Interdisciplinary visiting hour at Field 55. As archaeologists Tyler Wolford (white shirt, at left) and Frances Gallart Marqués (purple shirt, right) direct their excavation of this late antique house, architects Ginevra D'Agostino and Nicolás Delgado Álcega survey with the total station, Ökmen Sümer and Mustafa Softa come to study the earthquake damage to the house; conservators Sarah Montonchaikul and Rio Lopez consolidate the wall painting in Frances' trench and, fortuitously, Jessica Plant visits on her way to excavate at Sagalassos. Also present (in part for Frances' birthday, celebrated with pide for staff and workmen during tea break) were Marcus Rautman (University of Missouri) and Midge Scheftel.

Jessica Plant (Cornell) found a wall with three arched windows, lying almost perfectly preserved, comfortably on its side, where it fell in an earthquake that destroyed the building. We hoped and expected that Tyler would find more of this collapse, but typically he encountered something quite different—a somewhat flimsy later structure built into the wreckage of the house. This late phase is of particular interest to us, though, as we try to understand the last days of urban Sardis. Which inhabitants returned to the site after the devastating earthquake, and for how long? Once these houses were abandoned, we have no further signs of occupation here until the present day. Frances, meantime, has reached the pavement of what must have been a magnificent courtyard paved with marble, with a fountain or basin on one side drained into a carefully wrought rosette drain. The pavement is inscribed with large letters, from some previous use of the stones; the houses are built with many recycled blocks from the sanctuary. As last year, there has not been much in the way of spectacular finds from under the earthquake debris, in contrast to the rooms excavated in previous seasons; this area seems to have been abandoned before the quakes hit. They are now combining these trenches into one, which will give us a far clearer view (we hope) of how these spaces were used in their last moments.

Down in front of the Synagogue, the conservators have finished cleaning the mosaic sidewalk dedicated and inscribed by Flavius Maionios, "magnificent count and governor" (*hypatikos*) of Lydia. The next stage of this project, funded by a generous grant from the U.S. Embassy in Ankara, was to build the glass floor to protect and display the mosaic. Thanks to careful planning last season by architects Nate Schlundt (Scott Henson Architect) and Troy Thompson (SmithGroup LLC), and conservators Carol Snow (Yale University Art Gallery), Hiroko Kariya (private practice), Sarah Montonchaikul, Emily Frank, Chantal Stein (all NYU), Lindsay Ocal (UCLA), Nuriye Arslaner (Ankara University), Jen Kim (Autry Museum of the American West), Rio Lopez (SUNY Buffalo), and engineers Taner Kurtuluş (Artabel) and Teoman Yalçınkaya (retired, Sardis Expedition representative), the floor was manufactured in Izmir, brought to Sardis, and lowered into position just last week. It looks grand and impressive, and just the way we imagined it. They are now doing finishing touches, and

Fig. 10. Hiroko Kariya, Sarah Montonchaikul, Rio Lopez, and Nuriye Arslaner do final cleaning and documentation of the mosaic next to the monumental arch, before we build the glass floor; Teoman Yalçınkaya watches from the door to the Synagogue.

Fig. 11. The glass floor was assembled on site and then lowered into place in one piece, each leg individually fitted to the irregular ancient buildings beneath.

Fig. 12. Teoman Yalçınkaya (at right in jeans and hat) oversees the cleaning and adjustment of the glass floor that will protect and display the mosaic.

visitors are already exploring the slightly disconcerting sensation of seeming to float above this ancient pavement. Also under this grant, the conservators are treating the limestone blocks of the Lydian gate that marked the road's entrance into the city centuries earlier, which have cracked and spalled in the years since they were excavated. Archaeologist Gencay Öztürk (Ege University) continues to consolidate the complex features of this sector and make them both stable for the future and intelligible to visitors now, transforming the area from a weedy mess to a neatly organized site.

New research projects include a study of the Byzantine walls of the Acropolis by Ben Anderson (Cornell University) and Jordan Pickett (University of Georgia at Athens). The Acropolis walls are, after the temple of Artemis, perhaps the most distinctive monument of Sardis, yet they have never received a systematic study—maybe because the cliffs are so sheer that to examine them closely would entail rappelling from above or some other death-defying climb. Jordan and Ben have used the drone to photograph and study these inaccessible walls, and written up detailed descriptions, lists, inventories, and analyses. The builders constructed these remarkable walls almost entirely of second-hand materials, column drums, capitals and bases, wall blocks, theater seats, and other remains of older buildings, carefully mortared to form powerful defenses.

Şule Pfeiffer-Taş (Atalım University) is undertaking a study of another long-dormant group of artifacts, the Byzantine and Islamic pottery from excavations in the 1960s. Although Sardis was hardly the metropolis that it had been in the Lydian through Roman periods, it was an important place, one of the larger settlements in this region and boasting, among other things, a local pottery industry; Şule's project this year is to understand this local industry.

In the lower city, Ursula Quatember (University of Graz) and Andrew Leung (University of Vienna) have begun a study of the remains of the monumental Roman arch that spanned the main road

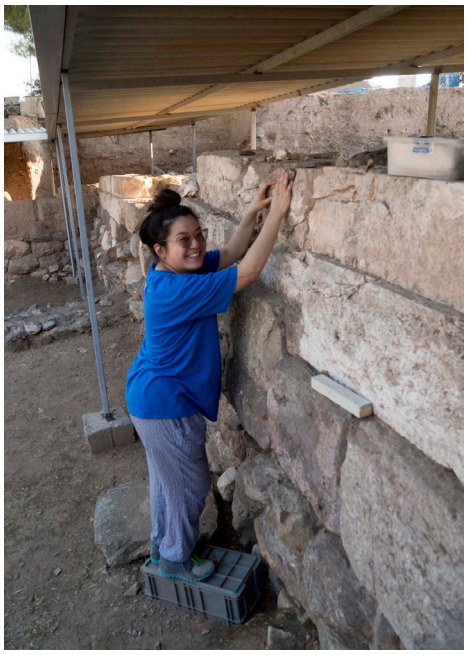

Fig. 13. Jennifer Kim consolidates the damaged blocks of the Lydian gate. This was discovered back in the 1970s, and the soft limestone has cracked and spalled. Jen, Hiroko, and the other conservators are painstakingly piecing it back together. The blocks are particularly interesting, as they are among the earliest known examples of Lydian ashlar masonry (perhaps about 590-580 BC, or about when Croesus came to power), but are already second-hand, reused from some earlier building. We think of spolia as a late Roman phenomenon, like on the Acropolis, but the Lydians were already recycling.

Fig. 14. Benjamin Anderson and Jordan Pickett have recorded the major walls of the Acropolis this season, and the spolia from which they were built, including column drums, seats from the stadium or theater (here, the long block between them with the profile on the left), and this badly battered head to which Ben is pointing; it was once the voussoir of an arch.

Fig. 15. Ursula Quatember, Andy Leung, and Baha are dwarfed by the fallen blocks of the Roman arch they are studying. The pile of blocks, however, amounts to only a small percent of the blocks that must have choked the road after the collapse in an earthquake of the largest arch in the Roman world, standing maybe 80 feet tall.

Fig. 16. Yılmaz Erdal shows the divot in the skull of a woman from a double burial excavated last summer on Field 49, one of two head wounds this poor person suffered.

leading into Sardis, discovered only in 2014. Although more accessible than the Acropolis, this study entails its own problems. We are reluctant to move the blocks from their fallen position, where they demonstrate so dramatically the collapse in the earthquake that destroyed the arch and the city in the early seventh century. However, how will they record and study the blocks without lifting them? Ursi and Andy have experience with hand-held scanners which can produce a 3d computer representation of the blocks, and may use those as the basis of the hand-drawn renderings based on autopsy that are fundamental to this type of architectural history.

Anthropologists Yılmaz Erdal and Merve Göker (Hacettepe University), with the assistance of Tuana Zara Eren (Ege University), continue to explore the sometimes-gruesome fates of ancient Sardians. This year they are concentrating on skeletons from the Lydian period, including those from the excavation in sector HoB in the 1960s and 1970s, and on burials uncovered last summer on Field 49. Each day, though, it seems they have some new horror to report. They have analyzed some of the casualties from the so-called "Cimmerian Destruction Level" at HoB, which Prof. Hanfmann had connected with the raids of the nomadic horsemen from central Asia in the seventh century BC. Andrew Ramage (Cornell University) and Judith Schaeffer showed, however, that the destruction actually resulted from some unknown, earlier catastrophe in the late eighth century BC. One of their skeletons bears postmortem tooth marks, indicating that these poor casualties lay outdoors, prey to dogs and jackals, before being buried. An even more gruesome story is told by two skeletons excavated last summer on Field 49. These are a man and a woman, Medieval in date, and both bodies bore terrible wounds: the man's leg was practically severed from his hip, while the woman took two blows to the head from an axe, and then a piercing wound in the shoulder from a knife or some other weapon that scarred the inside of her collarbone. Both bore other wounds on their arms and ribs, and were then buried together. What kind of *Game of Thrones*-like violence led to this double burial?

This has been a banner year for publications. Brianna Bricker and Theresa Huntsman continued to oversee the publication process while we

Fig. 17. Cathy Alexander gives an informal seminar on how to draw a pot for Harvard interns Hui Su, Zhiye Yang, and Midge Scheftel.

Fig. 18. Kerri Sullivan, in her first visit to Sardis as Research Editor, studies Georg Petzl's newly-arrived *Greek and Latin Inscriptions*, and other books by the same publisher, as she considers our next volumes.

Fig. 19. As Fikret Yegül brings his 30-year study of the Temple of Artemis to a close, the wonderfully complex building never fails to surprise. Last year Phil Stinson (University of Kansas) tentatively concluded from his study of a photogrammetric computer model that the columns of the temple are not vertical, but lean ever so slightly, almost indistinguishable to the naked eye—only a few inches over their 57 foot height. Such refinements are hallmarks of prestigious buildings, most famously the Parthenon, but his results are so subtle that they need to be checked and confirmed carefully. In order to corroborate the photogrammetric results, Fikret, Phil, and Phil's son Niko resurvey the columns with the total station.

Fig. 20. Discoveries in the depot. A small sherd of pottery with a feathered wing on it, found in 1965 in sector HoB and included in Andrew and Nancy Ramage's publication of this sector, resembled a fragmentary dish, reconstructed by Prof. Crawford H. Greenewalt, jr. as showing the Mistress of the Animals (Potnia Theron), a winged woman holding two lions or other beasts by their tails. This motif recurs frequently in Anatolian art, but this is one of the only examples of Lydian painted pottery with human (or at least human-like) figures; otherwise the Lydians prefer animals and organic designs. Andrew and Nancy, recorder Salpi Bocchieriyan, and Midge Scheffel laid out the fragments on a gorgeous full-scale watercolor of the plate by Greenie, and in a moment of exciting revelation, Midge found a join between fragments. Naturally it became more complicated when Cathy and Salpi realized that the newly-joined fragments don't belong to the original plate, but to another very similar one – apparently we have a pair of these unusual plates here in HoB.

searched for a new editor during the winter, and we are delighted to welcome Kerri Sullivan as our new Publications Research Editor. Kerri brings long experience as Editor in Chief for the American School of Classical Studies at Athens, and together with Brianna and Theresa, has dived into the many manuscripts now being brought to press. Georg Petzl's monograph *Sardis: Greek and Latin Inscriptions, Part II: Finds from 1958 to 2017* was printed in May by Ege Yayınları in Istanbul, our first book with this excellent press. Brianna and Kerri are now hard at work on Fikret Yegül's two-volume report on the Temple of Artemis, and on Andrew and Nancy Ramage's and Gül Gürtekin-Demir's (Ege University) report, also to be two volumes, on the Lydian levels of sectors HoB and PC. Andrew and Nancy spent most of June on final checking and studies of the pottery. Fikret has been checking his photographs and measurements of the temple, preparing this complicated and rich manuscript for publication this winter, we hope.

As always, the opportunity to make exciting discoveries, to answer old questions and frame new ones, and to explore and protect this magnificent site is made possible by the generosity of you who support our work. It is a joy to share the results of this research with you who share our interest in and love for this unique site, and our thanks go out to each of you, without whom this work would not be possible.

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.

Figs. 21 & 22. Each year brings new wildlife. A family of barn owls is growing up in one of the upper chambers of the Marble Court. In a few short weeks they have metamorphosed from fuzz-covered babies to teenagers testing their new sleek feathers, but still with a bit of baby fuzz remaining. Their watchful mother brings them dead mice in the mornings, and they are surprisingly undisturbed by the workmen climbing to the top of the Marble Court to waterproof the roof, or the women cleaning the columns and architraves using the system developed for the temple. I feel a totally unjustified pride in the successful maturing of these extraordinary creatures.