



ARCHAEOLOGICAL EXPLORATION OF SARDIS

FIRST NEWSLETTER FROM SARDIS, 2017

July 16, 2017

Dear Friends and Supporters,

We arrived at Sardis to find a number of exciting developments since your last newsletter. Perhaps the most significant is the decision of the II. Izmir Kurul, the commission that oversees the protection of ancient sites in this region, to extend the protected area of the ancient city

to include the many necropoleis that surround Sardis, its aqueducts, a Roman dam, and other ancient monuments, an increase of nearly four times the previous area. This decision has been a long time in the making, and was a truly heartening start to the summer.

Excavation within this protected zone is following up on projects of recent years, mostly in the same trenches as last season. One sector is Field 49, a high natural spur in the center of Sardis, which we have argued is the site of the palace of the Lydian kings. We know



Fig. 1. Central Sardis and the Acropolis from the air. In the center is Field 49, with a boulder terrace wall crossing the front of the hill. This is one of a number of natural spurs which were enclosed and regularized by the Lydians to support elite buildings, probably the palace of the Lydian kings. Past excavations have looked at the extent and shape of these terraces, and the buildings that they supported; this year we are trying to determine (among other things) when the Lydians began the project of converting an irregular, sloping hill into a flat-topped, regular-sided platform. In the foreground, the vaults of the stadium lead from the theater at left toward the excavations at Field 55, at lower right. In the background is Mt. Tmolus, birthplace of Dionysos, which still had snow when we arrived. The lovely green landscape is thanks to torrential rains during much of June, which stopped excavation on a number of days and left us shivering at night.



Fig. 2. Will Bruce excavating the fill that the Lydians brought to the top of this hill to create an artificial terrace. The pottery from this earth should give us a date for the terrace. Will is squatting on a strip of earth he had left unexcavated beneath a Hellenistic foundation, which he removed a week or so ago to excavate deeper levels. On the right a fence keeps people from falling into last year's deep sondage. He sits on reddish terrace fill, but just in front of him (more or less invisible in the photo) is a strip of slightly grayer, rockier earth, which the workman is pointing to in the scarp of last year's trench: this might be a robber's trench where a Lydian wall has been entirely robbed out. Another wall or foundation is appearing below the workman. So Will cannot simply dig all the dirt away; he is always on the lookout for these kinds of subtle variations that reveal the history of the terrace.

some of those kings by name, mostly those of the Mermnad dynasty, the famous kings from Gyges to Croesus whose fortunes are so entertainingly related by Herodotus, Plato, and others. They lived and ruled in the seventh and sixth centuries BC, and made Sardis the capital of a great empire; we naturally associated this palace (if that's what it is) with those familiar kings.

But at the end of last summer Will Bruce (Gustavus Adolphus College) dug a tiny, deep sondage into the gravelly fill with which the Lydians raised and

leveled the natural hill. This fill is retained by massive terrace walls, one of which is visible in figs. 1 and 5; the pottery from the fill should suggest a date for the creation of this terrace. We expected this date to be in the seventh century, but Will found only earlier Lydian pottery, perhaps of the tenth to eighth century BC, and also real Bronze Age (1600-1200 BC?) pottery, centuries earlier than we had expected. So at the end of last summer we sent samples of charcoal from Will's sondage for C14 analysis, and the results, which arrived in the fall, seem to confirm what the

pottery already indicated: one sample dated to the early Iron Age, in the eleventh or tenth century BC, and the other dated to the Bronze Age, some 700 years earlier. It's still confusing to find material of such divergent dates together, but since the gravel Will was digging was not an occupation level, but a huge fill that was probably gathered from a wide area, perhaps that explains the mixture. In any event, the material from Will's tiny sondage looked much earlier than the Mermnad dynasty, and suggested that we are (again) being misled by later, Greek historians, and



Fig. 3. Conservator Chantal Stein (Conservation Center, Institute of Fine Arts, NYU) and Will Bruce at the bottom of his 26-foot-deep sondage within a Hellenistic room. He may have finally reached the natural soil under the imported fill of the terrace, and so we are particularly interested in the pottery here; Chantal is consulting about lifting fragments of a pot broken in the earth. At the top of the photo is the limestone wall visible in your first newsletter of last summer (fig. 5). When that picture was taken, the wall was already at the bottom of a deep sondage; now it is marooned high up in the scarp.

Fig. 4. Julia Judge (Harvard University) examines a wall built out of limestone blocks, which we have interpreted as the terrace wall enclosing the hill. The section above her hand is built out of smaller limestone blocks, padded with narrow stone shims until they fit. The courses below her hand are more closely fitted and the blocks are larger, showing that they belong to a different phase. We tentatively identified the phases as Hellenistic above and Lydian below, but she has not yet found secure dating evidence for either, and good workmanship is found throughout Sardis' history. Notice the extra-long, smoothly worked block in the third course, which is reused from some earlier building; but the Lydians too reused blocks from their older buildings. It is vital to keep an open mind in reconstructing the complicated history of this hill, when every culture built using older ruins.

that the creation of this terrace began well before the familiar Mermnads. Such an undertaking must have required centralized, and presumably royal power, but here the Greek historians fail us, leaving only mythological stories such as that of the Lydian queen Omphale, who beguiled Herakles into exchanging costumes, so she wore the lion skin and carried the club, and he wore women's

clothing; or king Kambles, who was such a glutton that he carved up his own wife and ate her, and then committed suicide in remorse.

This was also the first time we have found significant material of the Bronze Age here in central Sardis. The Greek historians Herodotus and Strabo imply that the city was not founded until about

the time of the Trojan War; but the latter was writing a thousand years later, and he may have deduced his conclusion simply from the fact that Homer (writing about 700 BC) never mentions the Lydians, only the Maionians, a confusing name that may refer to a place, a separate people, or perhaps to the Lydians themselves in an earlier era.

Only archaeology can elucidate this early period, and one goal of our work here this season is to test last season's surprising results, and generally to learn more about this earliest settlement in the heart of Sardis. So Will is working to excavate more of this massive terrace fill which, although it is just dirt and gravel with very little pottery or other finds in it, bears witness to the enormous building project undertaken to flatten and enclose this hill. A back-of-the-envelope estimate suggests that the project required something on the order of 700,000 cubic feet (20,000 m³) of earth—a far cry from the 27,785,862 cubic feet (786,808 m³) of earth that Teoman Yalçinkaya (retired, Yapitek, Izmir) calculated were needed to construct the Tumulus of Alyattes, but

still not insignificant. The great depths of the trench demand careful supervision and security; in one spot Will is presently about 26 feet (8 m) deep, and may have found the end of the terrace fill here.

Meanwhile, Julia Judge is excavating outside the terrace wall, in order to expose its face, and to correlate its many architectural phases, which are not always easily datable on their own, with the fills, pottery, and C14 samples that Will is excavating inside. She has uncovered an unexpected plethora of walls, including two separate phases of the limestone terrace wall, a wall made of huge schist blocks, and, just today, two blocks from a wall of beautifully cut limestone, among the finest masonry discovered at the city site. As so often at Sardis, the contrast

in excavation methods is striking: on one side of the wall Will is removing whole meters of fill without finding more than a handful of sherds, while on the other side, Julia has more walls than we quite know what to do with, each of different materials, workmanship, and period, bound into a complicated four-dimensional stratigraphic web by layers of earth—red burned strata, layers of chips, evidence of walls being removed or explored, and so forth, which she expertly dissects and records.

On the north end of the hill Güzin Eren (Boston University) is also jumping between exposing more of the monumental architecture of this hill, and the delicate remains that give it life. Way back in 1982 when this terrace was first



Fig. 5. Güzin Eren clearing one end of the early Lydian terrace wall on Field 49. This end has hardly been excavated, and the blocks that have toppled forward from the wall are still in place, obscuring the line of the wall. Should we remove them, restore them to their original spots as best we can, or simply not excavate here? The question of restoration in archaeology is always knotty. In the lower right is the wall first uncovered in 1982 and re-exposed this year.

explored, Christopher Simon (University of California-Berkeley) had uncovered part of the boulder terrace wall that now dominates the hill face, but also a short stretch of another, even more substantial terrace wall, fully 16 feet (5 m) thick. Güzin has re-excavated the thicker wall, which has been covered with earth for

35 years, so we can evaluate it again in light of our recent discoveries. Her other objective is to continue in her deep trench of last year, moving from the monumental to the domestic. She had left last summer with tantalizing hints of a burned destruction level inside a very early mudbrick wall. Upon opening a

slightly larger area, she found the leftovers of perhaps a great meal: two legs of a cow or horse, still articulated in the remains of a pithos. But that's all there was; our hope for a wonderful destruction level with datable pottery and other finds seems to be unfulfilled, for now.

The later, Hellenistic and Roman phases of this hill remain of great interest, too. Will and Julia are learning much more about the return of occupation to central Sardis in the Hellenistic period after a gap of some centuries. While Sardis was a Persian satrapal capital, after the fall of the city to Cyrus of Persia (in 547 BC), the core of the city seems to have been mostly abandoned. After Alexander the Great, the Hellenistic kings seem to have returned Sardis to its status as a city rather than a fortress, and rebuilt on the site of the old Lydian palace. These Hellenistic constructions are often extraordinarily substantial, for instance a huge but mysterious foundation of roughly-cut limestone blocks that Will has been slowly exposing.



Fig. 6. Güzin at perhaps the earliest level yet excavated on this hill, a fairly substantial mudbrick wall she found a few years ago, and has been gradually reaching in a larger area. Behind the wall are two legs of a cow or horse in a broken pithos.



Fig. 7. Architects Brianna Bricker (Sardis Office, Harvard University) and Jordan Coslett (University of Kansas) examine a Hellenistic foundation made of huge rough limestone blocks in Will's trench, which started large, and got larger and larger as Will exposed more of it. We're not yet sure what this is, but it bears witness to the immense scale of Hellenistic construction on this hill.



Fig. 8 Jessica Plant and Bahadır Yıldırım (Sardis Office, Harvard) examining the late Roman destruction debris in her trench. The little pillows are bags of earth to protect fragile metal artifacts on the floor from exposure while she excavates.



Fig. 9. Draftcreature Cathy Alexander drawing one of the well-preserved iron finds lying on the floor of Jessica's room: perhaps a horse trapping.

Below Field 49 lies the sanctuary of the Roman Imperial Cult, called Field 55. Jessica Plant (Cornell University) and Frances Gallart-Marqués (Cornell University alumna) are continuing to expose a late Roman house here, which was built over the sanctuary after it was destroyed, and which Frances worked on last season. Jess is in a rather simple room with whitewashed walls and a toilet in the corner. These Romans had both indoor and outdoor plumbing, and Frances found a toilet last year in the courtyard just adjacent to this one. Jess is just coming down on the final destruction level here when the house collapsed in one or more earthquakes in the seventh century AD, which leveled not only this house but also the rest of Sardis. She is finding metal, glass, and pottery littering the floor; more on this,

I hope, in your next newsletter.

Frances, meanwhile, is pursuing a whole series of unresolved questions and unexcavated corners in areas of this late Roman house dug in previous seasons, the sort of delicate work that demands a great deal of attention and care. One question of primary importance that we hope to approach: when (and how and why) did this area cease to be a Roman sanctuary and become residential? The temple in the exact center of Sardis must have been one of the city's jewels; what happened to it?

Fig. 10. Frances was delighted to find an intact and distinctive late Roman lamp (like a hockey puck, points out Marcus Rautman) in her destruction debris, which helps us date the earthquake that destroyed this house and much of the rest of Sardis.



Finally, in the Road Trench next to the Synagogue, John Sigmier (University of Pennsylvania) is investigating the remains of the colossal three-bayed Roman arch that spanned the marble-paved colonnaded avenue here at the entrance to the city. The arch collapsed in that same seventh-century earthquake, its massive blocks leaving the street choked and impassible. Most of the blocks were freed last summer, but excavation did not reach pavement everywhere. Much of John's work, therefore, is focusing on understanding the collapsed masonry of the south portico, and various odd features of the street.

However, wishing to put the arch in a wider context, John began to clear

the sidewalk of the north colonnade of the Marble Avenue, which had been excavated between 1964 and 1970. This sidewalk is paved with mosaic, but unlike the mosaics in the Synagogue, which were lifted and reset in modern concrete and so can be safely exposed to the weather, this has never been lifted, and so was left buried for protection. Our plan was to open the mosaic for photographs of the arch and road, and then cover it up again at the end of the season. Imagine our surprise, then, when John uncovered an inscription in the mosaic, recording that it was laid under Flavius Maionios, "the most magnificent count of consular rank." Maionios is probably a local boy made good, named after those Maionians (or

that place, Maionios) mentioned above as a predecessor or neighbor of Lydia. Apparently, the excavations of 1964-1970 did not expose this inscription, or they surely would have noted it. And in a further confluence, an inscription found in 1970, reused in the drain just a few feet away, mentions this same Maionios, who "obeyed and executed skillfully [- -] a mighty foundation, which is stronger [than - -]." In removing part of the drain in which this stone was discovered, John is finding that the foundations of the arch have indeed settled and split, while at the back of the arch they have been heavily reinforced with layer upon layer of monolithic column drums, further evidence of the long and complex history of this enormous arch.



Fig. 11. At the corner of the Synagogue, near the Bath-Gymnasium complex, conservators Lindsay Öcal (University of California–Los Angeles) and Carol Snow (Yale University Art Gallery) clean the newly-discovered mosaic inscription, which had been hidden under just a few inches of earth since 1964. Lending moral support are Andrea Berlin (Boston University) and Phil Stinson (University of Kansas) who have been out in the early morning discussing the city plan and photographing for Andrea's upcoming book on Hellenistic Sardis.



Fig. 12. Nicholas Wing (Harvard University) and Lindsay Öcal clean the mosaic in the north portico of the Marble Avenue, painstakingly scrubbing it tessera by tessera. Behind them are the enormous blocks of the collapsed arch, lying on the street pavement being drawn by architect Kelly-Anna Louloudis (Harvard Graduate School of Design) and archaeologist John Sigmier.

Fig. 13. Excavations of 1970: a young Andrew Ramage (Cornell University) cleans and records a broken inscription reused as a drain cover (just behind Kelly-Anna in the photo opposite), which records that a certain Maionios had "obeyed and executed skillfully [- - -] a mighty foundation..." Under the pile of earth to his left lies the mosaic inscription of this same Maionios, and on his right lies the north wing of the monumental arch, both of them unsuspected at the time.

The Hellenistic Temple of Artemis continues to be a focus of research, conservation, and publication. Fikret Yegül's (University of California–Santa Barbara) complete documentation of the building in beautiful large-scale drawings and reconstruction studies, begun thirty years ago, is being prepared for publication, and will be another milestone in the study of Hellenistic Sardis.

Conservation and cleaning of the temple continues to be one of our most satisfying projects. Michael Morris (Metropolitan Museum of Art) and the

team of local women have been removing the damaging and unsightly biological growth from the marble, and are now tackling the toughest parts: the columns standing six stories high. And using both direct measurements from the scaffolding and high-precision photogrammetric computer models produced from aerial drone photographs, Phil Stinson is studying the refinements of the two standing columns. Like the columns of other prestigious ancient buildings, these are not perfectly vertical and cylindrical, but swell and lean, very slightly but deliberately, hardly perceptible to the naked eye.

At the request of the Ministry of Culture of the Republic of Turkey, engineer Teoman Yalçinkaya, Michael Morris, and Carol Snow have moved four of the temple's beautiful fallen capitals from the spots where they were found and set up by Butler to a new stoa to be completed on the north side of the sanctuary. This allowed us to see bottom and top surfaces not visible for more than a century, revealing cuttings and wear that attest to their long and varied histories. These capitals are all Hellenistic, and must be from the interior of the building, since the exterior columns were not built until later. Two of them were later reused in



Fig. 14. Michael Morris and the temple-cleaning crew treating the capital on one of the two standing columns, working from scaffolding 58 feet tall. The capital has been shifted for as long as we have modern records. What began as a joke about cleaning the temple with a toothbrush has now become a normal state of affairs, as we regularly buy out entire stocks of toothbrushes in Salihli markets, to carefully clean the intricate ornament of each stone. The result is worth it, though: not only have they restored the original shine and color of the marble, but also the biogrowth has not begun to grow back, even on the test blocks Michael first experimented on five years ago. Other techniques we have used to clean marble last only a few years, and then the bacteria grow back. We hope that with regular simple maintenance, we can preserve the temple's original hue for many years.

Fig. 15. After treating the column capital with Preventol, a mild biocide, Michael and the ladies wrap it in wet burlap and plastic, and let the biocide do its work in the sun over five days. The contrast between the fluted columns treated last year, and the untreated columns behind is striking, and will be lost when we finish the project and the whole temple is white; it is already hard to remember how dark and discolored the marble had become.



Fig. 16. Michael Morris, driver Mustafa Akça, and Teoman Yalçinkaya (red cap) setting one of the Hellenistic capitals from the temple onto a new base. Later in the season we will build a protective roof over them.

the Roman porch, and bear the scars of centuries of continuous use, repair, and exposure, while the other two are much less damaged, and conspicuously lack the cuttings that would have allowed them to be re-set by the Romans. Were these two undamaged capitals, and also the most beautiful of all the capitals, now in the Metropolitan Museum of Art, set up by the Roman builders around the temple as individual monuments of their Hellenistic past, sculptures whose precision and crispness must have impressed the Romans as much as they impress us today? The Roman temple precinct became a sort of museum of Sardis' long history, and the capitals would have joined Lydian inscriptions, archaic sculptures of lions, horses, and eagles, inscribed dedications by long-dead Lydians and Persians, and other relics of former times set up around the sanctuary.

The camp, as always, is busy with publication, research, and conservation projects. Last season's too-productive excavations left us with a backlog of 374 coins, which I thought might take months to clean and process thoroughly. However, we had not counted on Zeynep

Arslan (Gazi University, Ankara), whose extraordinary talent and focus cleaned the coins beautifully; she somehow finished the whole backlog in less than a month with grace and ease.

Emily Frank (Conservation Center, Institute of Fine Arts, NYU) is the first Sardis Conservation Fellow, a new position for student conservators engaged in their own research projects at the site. She is using the unique collection of bronze and iron artifacts excavated at Sardis over the past 60 years for her research on the conservation of ancient metals. These finds were treated differently according to the changing conservation standards of the times, by conservators with many different backgrounds and goals. The number and variety of artifacts, the long history of conservation at the site, and the meticulous note-taking of generations of conservators offer Emily a unique opportunity to study the relationships between past treatments and current stability, and make scientific contributions to future conservation efforts. Along the way, she continues to re-house unstable metal artifacts in Escal to preserve them, a project begun by Brian Castriota a couple years ago. The conservation laboratory hums along under the direction of Carol Snow, who not only oversees conservators Chantal, Zeynep, and Lindsay at the microscopes



Fig. 17. When we lifted the capital which H.C. Butler, excavator of the temple of Artemis (1910-1914) referred to as capital D, from the column drum on which Butler had set it, we found a miraculously preserved note in blue chalk reading "Under D" and, scribbled out, "or E." This must be a note from Butler or one of his archaeologists, telling the stone movers where to put the drum—Butler's voice carrying over a century.



Fig. 18. Zeynep Arslan cleans one of the hundreds of leftover coins from excavations of last summer. Individually they are hardly more than tiny, often illegible dits of bronze; en masse (and we have masses of them) they document changes in the late Roman economy, and provide secure dates for the buildings in Field 55 excavated by Frances and others.

Fig. 19. Emily Frank studying bronze artifacts from previous seasons stored in the Manisa Museum, with museum director Harun Güllü and guard. In the next few years we hope to inspect all the metal finds that have gone to Manisa, and repackage the unstable ones to prevent further deterioration.



Fig. 20. Nicholas Wing, Ellie Jordan, Alexandra Todorova, Cathy Alexander (hidden), and Theresa Huntsman assembling a huge late Roman basin found in Field 55 two years ago.

and sherd table, but also is introducing Sardis Interns Alexandra Todorova and Nicholas Wing (both Harvard University; the internships are another new development) to archaeological conservation. Nicholas and Alexandra also assist recorder Sarah Porter (Harvard University) and others in tracking down inscriptions, pottery, and other finds, cleaning and mending where necessary, and generally making work at the compound possible and productive.

One result of all this research and excavation is the series of purple Sardis Reports and Monographs. We now have no fewer than four publications in process: the volume on the House of Bronzes—Lydian Trench and Pactolus Cliff, by Andrew and Nancy Ramage (Cornell University and Ithaca College) and Gül Gürtekin-Demir (Aegean University), Jane Evans' (Temple

University) volume of coins found since 1973, Georg Petzl's (University of Cologne) volume of inscriptions, and Fikret Yegül's publication of the Temple of Artemis—and there is a huge push for new photographs, drawings, last-minute checks of dimensions and coordinates and other information. Publications Data Manager Theresa Huntsman (Sardis Office, Harvard University) is coordinating much of that work both from Sardis and from Cambridge. Photographer Ellie Jordan (Boston University alumna) is keeping up with the onslaught with remarkable aplomb, and her skills as conservator and archaeologist bring her into all walks of the project; artist Cathy Alexander is checking and revising old drawings with her practiced eye, and turning out new ones. And finally, coordinating photography and publication processing, veteran photographer and Associate Director Elizabeth Gombosi celebrated her fiftieth year with Sardis this summer.

Last August Kathy Kiefer, Editor of the Sardis Reports and Monographs series for twenty years, retired from Sardis. With her meticulous eye for detail and attention to every aspect of publication both large and small, Kathy raised the quality of each of our volumes and set a standard of quality that will be hard to maintain. She is greatly missed; but we are delighted and relieved to welcome an old Sardis hand, Brianna Bricker, to a new position as Publications Coordinator. Brianna works with Theresa to look after all these publications, and with authors and outside editors to ease these volumes through the process of publication. She donned her old hat as Senior Architect for the first few weeks of the season, however, to set up architects Jordan Coslett and Kelly-Anna Louloudis, and has now returned to Cambridge. This continuity of staffing, with old-timers like Teoman and Elizabeth representing almost a century of experience between the two of them, is one of our greatest assets; their institutional memory and experience cut through problems that would otherwise stump us.

In February Paul Kosmin (Harvard University) and Andrea Berlin (Boston University) arranged a two-day conference on “City and Empire in Seleucid Asia Minor: Sardis from the King's Peace to the Peace of Apamea” at Harvard's Weatherhead Center for International Affairs, capping the three productive meetings and discussions at Sardis among the Hellenistic Working Group to explore this fascinating period. They are pushing ahead now with a publication of the results, which will be a milestone in the study of Hellenistic Asia Minor, bringing together historians, archaeologists, numismatists, architectural historians, and other specialists, from Sardis and other sites in the region.

The Representative of the Ministry of Culture this summer is Veysel Dağ, of the Ephesus Museum. In addition to being an outstanding archaeologist and a really nice guy, Veysel Bey is a talented dance choreographer, and closely involved with the music and dance community here. He was able to get us tickets to the sold-out concert by Fazıl Say, the famous Turkish pianist, and the Vienna Chamber Orchestra, in the ancient theater in Ephesus. Greenie (former and much-missed field director Crawford H. Greenewalt, jr.) started a tradition

of attending these special concerts, and we have tried to keep it up. The concert was one of the high points of the season so far, made especially memorable by a musically-minded stray dog who padded across the stage as if he owned it (which, in a sense, he did), lay down at the feet of the first violinist, and closed his eyes to enjoy the remainder of the Mendelssohn. Videos of the concert went viral in the USA a week or so later, and we feel privileged to have been present at the event.

Finally, another first at Sardis is our youngest team member, Osman Stanley Bruce, born to Will and Evren Bruce last February. It is a delight to have such a well-behaved and adorable baby among us, and to share a bit in his upbringing.

Babies always make us look to the future, and with such a talented staff of old members and young, with the support of the Kurul in Izmir, the Ministry in Ankara, our sponsoring universities and institutions, and particularly with your interest and generous support, we look forward to exciting discoveries and productive research in years to come.

Nick Cahill
Director, Sardis Expedition
Harvard University



Fig. 21. The oldest and youngest members of the Sardis team this year, Teoman Yalçinkaya and Osman Stanley Bruce.