Dear Friends and Supporters,

The mixture of old and new technologies at Sardis is often a bit disconcerting. In many respects, the excavation compound has hardly changed since it was built 60 years ago. Its hand-built, thick stone-walled buildings need no air conditioning in the heat, laundry is still done by hand, we have no microwave or dishwasher, and we still use pencils and paper and pens with India ink for drawing objects and plans in the field (although the architects use drones to create 3d models and orthophotos as guides to drawing, and do final “inking” on the computer).

And we still drive to the excavations each morning in the vintage 1957 and 1964 Land Rovers brought to the site by Prof. Hanfmann in the early years of the expedition. Maintaining these antiques might seem like more trouble than it’s worth, but they are more appropriate for our uses than modern vehicles, and they are by now part of the Sardis team.

So, it was a blow when the brakes of the 1958 Willys Jeep (which arrived here new in the first year of the dig, called “Burunszu,” “Noseless” by the staff) deteriorated to where they could no longer be fixed. But nothing is impossible at Sardis: Crown Automotive generously sold us brake parts at a discount; the mechanic in Salihli rebuilt what could not be renewed, and with its new coat of paint, the gray Jeep runs well and looks great. It has served us every summer for 60 years now, something no modern vehicle could hope to achieve.

Fig. 1. The Sardis fleet outside the compound in 1961, with Prof. Hanfmann, Kemal Ziya Palatkan, director of the Manisa Museum and commissioner at Sardis during the early years of the expedition, and Kemal Bey’s family. The Willys Jeep FC-150 is on the right; the temple is visible in the background.

Fig. 2. The same Sardis fleet 57 years later, still running strong. The pine trees have matured, obscuring the acropolis but bringing welcome shade to the compound. From left to right, driver Mustafa Akça, Guzin Eren, myself with cook Ferhat’s dog, photographer Jessica Salley (NYU), Maria Boyle, Sarah Porter, Sarah Montonchaikul, Julia Judge, Evren Bruce, Will Bruce with son Osman Stanley Bruce, Jessica Plant, Yunus and Bahadir Yıldırım, accountant Celal Şentürk, architect Kelly-Anna Louloudis with guard dog Gümüş, Gencay Oztürk, Ümit Güngör, and Lindsay Ocal.
At the other end of the technological spectrum are new high-tech instruments and tools for field and lab. In the spring of 2017 Ed Teppo, founder of Big Sky Laser Technologies, generously donated a Lynton Phoenix conservation laser to the Expedition. Such powerful and controllable lasers can clean even fragile artifacts precisely without damaging them. They are cutting-edge technology in large museums—used, for instance, to clean the famous caryatids from the Erechtheion in the Acropolis Museum in Athens—but very rarely found on archaeological sites. Tedious bureaucracy, however, delayed receiving the gift, and it took Teoman Yalçınkaya (retired, Çimentaş) and Bahadır Yıldırım (Harvard University) many months to arrange the customs permissions and forms necessary to import the laser into Turkey. With the aid of the helpful staff of the Ministry of Culture and Tourism, though, they managed to clear it through customs, and now it is used in both the lab and the field. It is miraculous, to my untutored eye, to see color and shape emerge from under the intense fire of the beam.

We started the high-tech part of the season with a geophysical survey by Mahmut Drahor, Caner Öztürk, Buğra Oğuz Kaya, and Buket Ortan (9. September University, Izmir, and GeoIm Ltd.), assisted by Hakan Aycan (Ege University, Izmir), using a ground-penetrating radar to map the buried features in the area of the Lydian palace. We’ve done such geophysical surveys before, first in 1962 when David Greenewalt, Greenie’s brother, surveyed on the acropolis and at Bin Tepe in a pioneering use of geophysics in archaeology. But despite trying various methods—electrical resistivity, magnetic, radar, seismic, electrical resistivity tomography, sub-sonic, etc.—we have met with limited success. Sardis is a difficult site for geophysics: it preserves layer upon layer of different cultures, from Lydian to Hellenistic to Roman to Byzantine, in a mare’s nest of walls and other features, often on steep slopes in a complex dance between natural terrain and ambitious human intervention. It is hard enough for archaeologists looking at the remains in person to figure out what’s going on; how can a machine make sense of them while they’re still buried?

Nonetheless Mahmut Bey and his team have taken on this challenge, and the indefatigable team has dragged their heavy ground-penetrating radar up and down the steep slopes around Field 49,
where we now think the Lydian palace was situated. This region, between ByzFort, the theater, and the acropolis, is terra incognita; we know little about the urban plan here in any period. The team’s preliminary results are the most successful survey at Sardis. They ended their survey using a special antenna that could reach 40-50 feet deep to map the bedrock of the hill; more on this later.

Next to the geophysical survey covering more than 6 acres (2.5 ha), our excavation trenches seem hopelessly minuscule; but even in tiny areas, the team has pushed the chronological span of this part of Sardis both forwards and backwards. Generally we find remains dating from the Lydian period, the eighth–sixth centuries BC, to the Late Roman era of the fifth–seventeenth centuries AD, a long millennium during which Sardis was one of the great cities of Asia Minor. But when Ece Alper (Bilkent University) opened a new trench along the west slope of this hill, she encountered Medieval buildings dating to the 14th or 15th century AD, dated by pottery identified by Şule Pfeiffer-Taş (Atılım University). This is a relatively little-known period of Sardis’s long history, when Byzantines and Turks were vying for control of this part of Anatolia. Even Ece’s humble and roughly-built rooms, therefore, are a rare and valuable new discovery. Two skeletons found nearby, a man and a woman, might date to the Medieval period as well; the only artifact found with them is an iron arrowhead found under the woman’s torso: a grave gift or a cause of death? Uncertain for now.

Just next to Ece’s Medieval buildings, Will Bruce (Gustavus Adolphus College) continued his plunge into Bronze Age levels described last year, exploring the very beginning of Sardis’ history. He started in last year’s tiny (6 x 8 foot) sondage within a Hellenistic room, hoping to reach bedrock rather quickly and then expand excavations in a larger area. Not everyone is comfortable working 40 feet below surface, with only a distant square of brilliant sky to light the way, but Mustafa Sezer, one of Will’s workmen, achieved rather heroic status as he descended into the dark each morning, sending up more and more interesting sherds and other evidence of the earliest settlement at Sardis. In June, Fulya Dedeoğlu (Ege University), an archaeologist at Beycesultan, the largest Bronze Age site in this region, consulted to give her thoughts on this local pottery, and dated it to the Late Bronze Age, in the fourteenth to twelfth centuries BC, long before the historical Lydians of Candaules, Gyges, and Croesus.

These Bronze Age levels, however, proved unexpectedly deep and rich, and the fills continued down and down until finally, near the end of the season, Will reached bedrock (with a sigh of relief), fully 46 feet (14 m) below modern ground level, the depth of a five-story building. The natural bedrock isn’t flat here, but slopes down so steeply that nobody could have settled here without terracing and leveling the ground. And the fills that Will had been digging for the past 4 meters were, indeed, almost sterile gravel laid in steep sloping strata, apparently dumped here, like the Lydian terrace fills above, to raise artificially the level of the hill and create a flat area for occupation. So, this characteristically Lydian practice of transforming the natural landscape through large-scale terraces and massive earthworks seems to go back far before the period of the historical Lydians, into prehistory. But how far back?
At that point Peter Pavúk (Charles University, Prague) examined Will’s pottery, and realized that there were not one but two major Bronze Age periods here: an upper phase of the Late Bronze Age, which Fulya had identified, and a lower stratum of terrace fill, whose pottery is quite different, but which Fulya hadn’t seen because it had not yet been excavated. Peter suspected the pottery from this lower stratum was Early Bronze Age 3B, about 2,000 BC. A quick day trip to visit Fulya, then working at Beycesultan, and her colleagues there confirmed his identification.

How much we have learned from this tiny area! Nobody had ever suspected that Sardis was occupied as far back as the Early Bronze Age. In the 1960s Gus Swift found Late Bronze Age sherds in his deep excavations at the House of Bronzes (HoB), which Andrew and Nancy Ramage (Cornell University and Ithaca College) are now publishing; and we thought that this was the earliest material at Sardis. Gus’s discoveries at HoB fit the accounts of Greek historians such as Herodorus and Strabo, who give the impression that Sardis was founded after the Trojan War (says Strabo) in the 12th century BC. We have found a few artifacts such as stone celts, flint tools, and a mace-head which date to earlier periods, but we find them in later levels, in the houses of Lydians and Romans, who seem to have collected or traded these lovely objects as curiosities. Here, though, we have not only evidence for occupation, but suggestions also that these early Sardians radically modified the landscape with large-scale earthworks at this early period as did later Lydians.
Obviously we want to learn more about this brand-new discovery, but the extreme depth is daunting. We can hardly expect to excavate to five stories deep over a large area, especially since it would involve removing the many layers of later civilizations. One hope is that Mahmut Drahor and his team can at least map the bedrock using their sophisticated ground-penetrating radar, and give us some sense of how humans have changed the landscape over the last four thousand years. They therefore experimented with a special antenna that might penetrate this deep, and we await their analysis.

It is typical of Sardis that the earliest and latest remains ever discovered in the city site are found only a few meters from one another. In another area of his trench, Will uncovered a large garbage pit full of animal bones, sherds, and other waste, but which also contained surprising finds. By the end of the season he had found 28 arrowheads; fragments of iron scale armor like those found by Güzin a couple years ago; beautifully worked ivory inlays, probably the decoration from some luxurious wooden object—a chair, a couch, a box?—whose wooden parts have disintegrated; and the tiny silver coin that Brian was cleaning. The date of this pit seems to be in the fifth century BC, a period so far under-represented on this hill; but many of the objects in it may be rather earlier, of the Lydian period.

In the narrow space between Will and Ece, Julia Judge (Harvard University) continued her excavations of last summer. One goal was to see more of the Lydian limestone wall discovered last year (at the bottom of the photo); but also, on the way, to learn more about the complicated Hellenistic occupation of the hill by excavating a series of earth floors (visible as horizontal strata in the scarp below the workmen). Among her finds are beautiful molded bowls perhaps from Pergamon, and a very high quality “West Slope Ware” vessel of unusual shape.

Güzin Eren (Boston University) meantime continued her explorations of the northern slopes of the hill. Last year she found new, massive terrace walls of the Lydian period. To learn more about them she started a new trench down the front of the hill. Typically, though, Sardis pulled a fast one on her, and in the short
unexcavated space between last year’s trench and this year’s the wall almost entirely disappeared—robbed out, it seems, in the Persian era—leaving only cuts in the bedrock to mark its passing. However, her excavation down the slope recovered more remains of early Iron Age occupation here, continuing to help bridge the gap between the Bronze Age and the historic Lydians.

Below this Lydian terrace is a lower, Roman terrace, now unromantically referred to as Field 55, but in the Julio-Claudian era an opulent sanctuary of the Roman imperial cult, and in late Roman times, remarkably well-preserved elite housing with beautifully painted walls and rich assemblages of finds. Here Frances Gallart-Marqués (Cornell University alumna, now Harvard Art Museums) and Jessica Plant (Cornell University) began a new pair of trenches aimed at better understanding the later houses which document the vibrant urban society of the late sixth century AD, and the earthquake that brought these buildings, and Sardis in general, to ruin shortly thereafter.

But once again adjacent areas are entirely unlike one another. The earthquake toppled the wall between their two areas into Jessica’s trench, its bricks and three arched windows still perfectly articulated. But while we hoped (somewhat ghoulishly) to find underneath this wall the contents of an occupied house (and maybe its inhabitants), as we have in previous summers, Jessica found just a bare earth floor, with no artifacts, no trace of the lively habitation that we discovered in previous excavations just a few meters away. It appears people moved out of this area before the collapse. Among the finds are the feet of a beautiful draped statue; this was probably not among the furnishings of this room, but (less exciting but more probable) had been reused as spolia from the earlier sanctuary. Next door, Frances found a fine paved courtyard or platform of some kind, but mostly robbed out to reuse the marble pavement slabs.
This was the fifth and final year of the project to clean the temple of Artemis, generously supported by the Kaplan Fund of New York, by removing the sooty black cyanobacteria and fungoid lichens that had disfigured the marble for the past century. Michael Morris (Metropolitan Museum of Art) and his team of trained women and men tackled the final standing column, working fearlessly at the top of the almost 60-foot-high shaft. As we have seen in previous years, under the blotchy biofilm the marble revealed itself a glowing pale amber, with a rich natural texture of crystals and grayish veins. Delicate moldings carved by master stonemasons, almost invisible lines incised with incredible precision at key points to guide their work, and countless other details are now revealed. With the entire temple finally cleaned we can look back at photos taken just a few years ago, and marvel at the transformation. Fikret Yegül’s (University of California–Santa Barbara) colossal publication of this building, now nearing production as a two-volume monograph after thirty years of work, will be an impressive presentation of this magnificent building.

You remember the mosaic exposed last year in front of the Synagogue by John Sigmier (University of Pennsylvania). This mosaic paves the late Roman sidewalk leading to the collapsed remains of the monumental arch that has been a focus of excavation here since its discovery in 2014. At this terminus, the mosaic is inscribed with the name of its patron, Flavius Maionios, “the most magnificent count of consular rank.”
An unexpected and generous grant from the American Embassy in Ankara is sponsoring a glass floor to protect and display this mosaic in situ without lifting and resetting it in concrete as was done for the Synagogue mosaics in the 1960s. Conservators Carol Snow, Lindsay Öcal (UCLA), Sarah Montonchaikul (NYU), Nuriye Arslaner (Ankara University), a team of local women, and Sardis interns Emma Humphrey and Maria Boyle (Harvard University) spent the summer cleaning and consolidating the mosaic, preparing it for display. This proved unexpectedly challenging: the mosaic tesserae were not only loose and wobbly, but also covered in some areas with dense concretion that completely obscured the original colored stones. Careful scraping with dental tools and brushes could clean it up to a point, but for the really difficult areas, the laser proved miraculous, vaporizing the concretion while leaving the stone untouched.

Flavius Maionios, living probably in the sixth century of our era, chose a plum spot to endow his city with a new mosaic. This main gate to Sardis, where the Izmir-Ankara road entered the city, must have been impressive throughout its long history. The arch through which his sidewalk led was the largest in the Roman world, and was already ancient by Maionios’ time; it may be the very building that Maionios restored with “a mighty foundation, stronger than...”
as written in an inscription found in 1970. But did Maionios know that a thousand years earlier, the road led through an even larger gate in the Lydian fortification? If not, he can be forgiven, since the Lydian gate had been sliced off and paved over when the Romans built their new road through the sector. Excavation under the Roman road in the 1970s, 1980s, and 1990s brought to light the few surviving courses of the gate, built of crisp limestone and sandstone masonry. But entropy, our old enemy, too quickly turns our carefully cleaned trenches into overgrown jungles, and the beautiful masonry of the Lydian gate had become unrecognizable, hiding behind weeds and grass. With the support of that grant from the American Embassy in Ankara, Gencay Öztürk (Ege University, Izmir) took on the challenge of cleaning this area up, stabilizing the scars, filling old sondages that had become undercut, and restoring collapsed walls, pavements, and scarp in order to protect them and make them intelligible to visitors. By studying the old fieldbooks and photographs, he was able to restore each feature to the state in which it was found, and more importantly stabilize the sector for the future.

John, meanwhile, explored one of the two rather mysterious, symmetrical buildings that were constructed on the road pavement just near the arch. With stairs leading up to marble-paved floors (now mostly robbed out), these twin buildings must have served important functions here at the entrance to the city, although these still remain uncertain. John’s probes under the Roman road pavement have produced important new insights into the long history of this road between the Lydian and the late Roman periods.
Excavations over the decades have produced thousands of coins and an impressive corpus of inscriptions, and we are delighted to see the publications of these finds completed or on their way to press. Jane Evans’s (Temple University) monograph Coins from the Excavations at Sardis: Their Archaeological and Economic Contexts. Coins from the 1973 to 2013 Excavations was published in March, and is also available for download (http://sardisexpedition.org). We’re in the final stages of including these coins in the web site’s searchable database, so scholars can ask, for instance, what coins were found together in the same context, key information for Jane’s analyses for the ancient economy of Sardis. And we are about to send Georg Petzl’s Sardis: Greek and Latin Inscriptions, Part II: Finds from 1958 to 2013 to the printer, the results of his own years at the site, and also the work of some of the world’s great epigraphers who have worked at Sardis: Louis Robert, Peter Herrmann, and Philippe Gauthier. We are very sorry, however, to lose Theresa Huntsman as Publications Data Manager, and wish her the best at her new job at the Yale University Art Gallery.

Back at camp, anthropologists Yılmaz Erdal, Merve Göker, and Fulya Uzuner (Hacettepe University) focus their research on a single tomb: Duman Tepe, a tumulus in Bin Tepe. Its excavation in 1966 recovered the remains of an extraordinary number of individuals (they estimated 150), in a late Roman reuse of an older Lydian tumulus. The nature of this burial remained unclear at the time of excavation; could they be victims of one of the plagues that swept the late Roman empire, or of some violent catastrophe? Yılmaz Bey’s preliminary analysis of the bones (returned from Ankara University in 2015) does not support either of these conclusions: the range of ages is not consistent with a plague, and the bones do not bear signs of trauma. He suggests instead that this was the burial ground for a group of people living nearby, used over an extended period of time; and concludes that the deceased were relatively well-off, more similar to us delicate scholars unused to heavy labor, he jokes, than to robust field workers. We hope for permission to follow up these hypotheses with DNA and isotope analyses of the bones.

We were fortunate in having a particularly talented team of undergraduate student interns this season, in a program begun last year to bring Harvard undergraduates to Sardis each year in a hands-on educational experience. Maria Boyle and Emma Humphrey...
Fig. 28. Maria Boyle and Emma Humphrey restoring one of the marble sigma tables from Field 55.

contributed to every part of the project, from working with recorder Sarah Porter (Harvard University) in analyzing and recording the artifacts coming in from the field, to photographing inscriptions for Georg Petzl's publication, to taking part in field and laboratory work. One of their projects was a marble jigsaw puzzle: a sigma table, discovered in 2015 shattered in the destruction debris of the late Roman "taverna" on Field 55 (the sort of thing we so conspicuously did not find this year). These beautifully worked dining tables are marks of late Roman luxury, and Sardis has produced an impressive number of them, which are being studied by Marcus Rautman. Assembly of this one revealed that it had been damaged by vigorous abrasions, as if someone had used its finely finished marble surface as a chopping board. Is this normal wear and tear, or was it reused for some other purpose after its life as a dining table was over? Such traces of the ancient use, and misuse, of artifacts bring them to life, reminding us of the humans behind the antiquities.

Fig. 29. Emma noticed a previously unremarked monogram on the back of one fragment of the sigma table: perhaps the signature of the mason who carved it?

Other projects in camp included the restoration of the sarcophagus of Aurelia Thalia and her husband Claudius Antoninus Hermon, found under a village house in 2007. This year Annetta Alexandridis (Cornell University) and Michael Morris began the process of assembly. Their work is frustrated by the loss of most of the figures to the illicit art market, but in their reconstruction they reveal more of the complex details that give these works so much texture. And Jennifer Kim (Autry Museum of the American West) has taken on another of her Lydian pot assemblies, a lovely Orientalizing Myrina amphora from the Lydian house under the theater.

Fig. 30. Annetta and Michael carefully fit each tiny chip of marble into the proper place in the sarcophagus. Michael is able to do this without using pins or drilling into the marble, thanks to his long experience conserving sculpture at the Metropolitan Museum.

Fig. 31. Jen Kim restores a Lydian Myrina amphora with Orientalizing animals on the shoulder.
Teoman Yalçınkaya arrived at Sardis as a student in 1968, and fifty years later he is more essential than ever. His long experience, light-hearted humor, extraordinary optimism, and calm prudence make all things possible, from persuading three Ministries to allow us to import the laser, to engineering the glass floor for the mosaic, to fixing the 1958 Jeep, solving countless problems that would stump most mere mortals. The staff marked his half-century anniversary with a surprise party, complete with custom T-shirts for all designed by architect Kelly-Anna Louloudis, a brilliant mock documentary video directed by Brian Castriota, with dance choreography by Julia Judge and narration by George Hanfmann, courtesy of a 1966 documentary directed by Charlie Lyman. Each summer brings together a creative team composed of teen-agers to old-timers, each with many unexpected talents, working together to contribute to the ongoing process of discovery, study, preservation, and publication of this site which has inspired so much loyalty in so many people for so many years. This work is possible due to your own loyalty and good will, for which we give continual and heartfelt thanks.

Nick Cahill
Director, Sardis Expedition

Upcoming Sardis Biennial Lectures:
April 23, 2019
Harvard Art Museums, Menschel Hall
32 Quincy St., Cambridge, MA
April 25, 2019
Harvard Club of New York City
35 W. 44th St., New York, NY

For further information about these events and to RSVP, please contact the Sardis office at the Harvard Art Museums: am_sardis@harvard.edu or (617) 495-3940.

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