



FRIENDS OF GORDION

NEWSLETTER



Figure 1: The restored East Citadel Gate (9th century B.C.), at the end of the 2019 season, looking northwest. Photo by Braden Cordivari.

The 2019 season at Gordion was even more active and rewarding than last year, in that we completed the conservation of the East Citadel Gate and acquired an enormous amount of new information regarding the South Citadel Gate and the adjacent Mosaic Building. The fieldwork in both areas provided us with a new understanding of the development of the citadel between the ninth and sixth centuries B.C., and yielded evidence for a monumental building program during the Late Roman period as well.

Our work on the Citadel Mound

was complemented by the excavation of a tumulus that lies just over 1 km to the southeast of the citadel, on the South Ridge. The astonishing discoveries in the tomb chamber were the result of a fruitful partnership with the Ankara Museum of Anatolian Civilizations, which continues to offer us constant support. We also managed to expand our Cultural Heritage Program, which provides archaeological and cultural training for teachers, students and residents in the surrounding area, and we developed a strategic plan to ensure that Gordion will be designated as a

UNESCO World Heritage site on the permanent list.

This year nearly forty scholars and scientists worked in six different sectors of the site and its environs during June, July, and the first twenty days of August, which we conducted under the auspices of the Penn Museum.

Architectural Conservation and Restoration

For the sixth consecutive season, the South Bastion of the East Citadel Gate was the focus of architectural

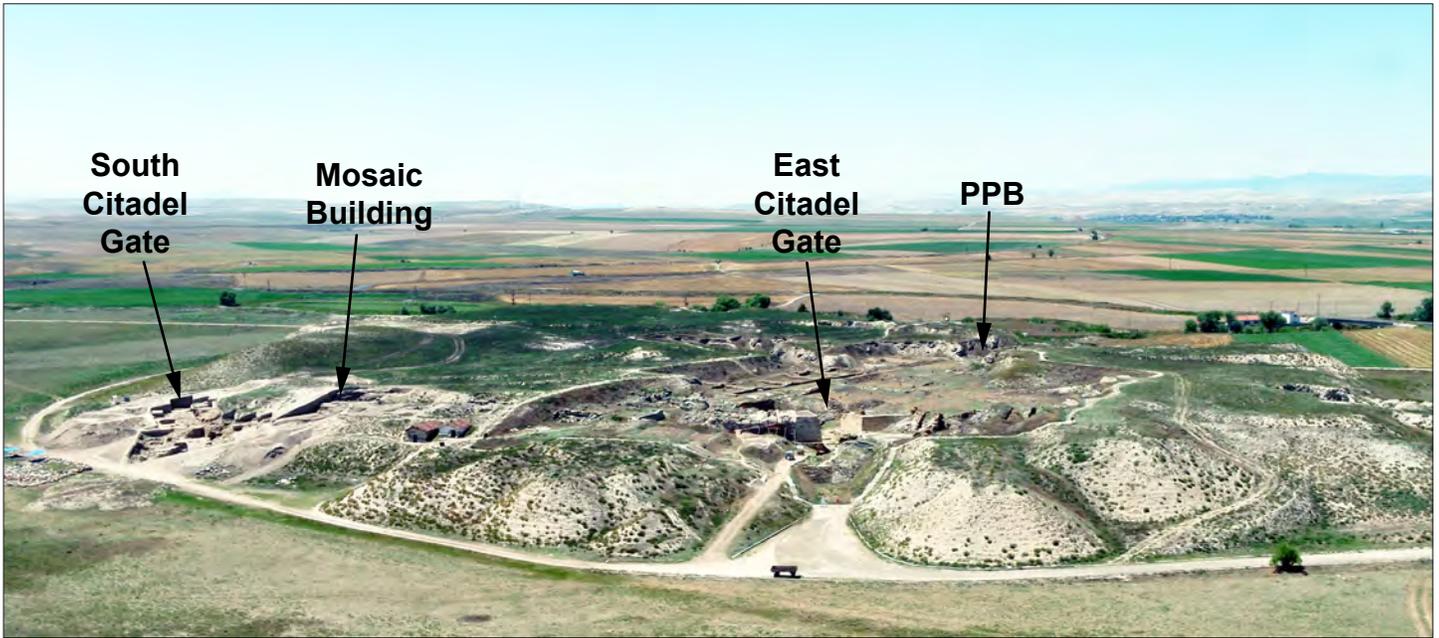


Figure 2: The Citadel Mound of Gordion, looking northwest, showing the East Citadel Gate, the South Citadel Gate (Area 1), and the PPB (Persian-Phrygian Building). Photo by Braden Cordivari.

conservation, and we're delighted to report that the project was successfully completed this summer (figs. 1-6). The gate serves as the primary attraction for visitors who come to the site, and it is also the first monument that one sees upon approaching the citadel. This conservation project has been one of the longest and most important of those we've undertaken, and we could never have accomplished it without the dedication and expertise supplied by project directors Elisa Del Bono and Angelo Lanza, working in tandem with Giuseppe Bomba and Renzo Durante.

It is remarkable that the gate still survives to a height of 10 m (nearly 33 ft), given that it was constructed ca. 850 B.C. and was used as the foundation for an even larger citadel gate in the 8th century B.C. After the gate's South Bastion was damaged by an earthquake in 1999, we made plans to remove the 112 stones that were most severely cracked, and reinsert them in their original positions once they had been

consolidated. New stainless-steel straps 2.5 m in length anchored the conserved facing stones to the core of the wall, and by the end of the 2018 season, all of the stones had been set back in place.

The 2019 season marked the final phase of the gate's conservation. On the northeast and northwest sides of the South Bastion there had been additional damage, in that water draining from the top of the monument had caused the highest stones to shift and disintegrate. This required partial dismantling of the unstable veneer blocks from the upper rows, and the repair of fractured blocks with micro-injections or epoxy (fig. 5). We consolidated unstable sections of the core with lime mortar and stone rubble, filling voids with gravity-injected grout, and reconstructed the face with the original blocks once they had been stabilized.

At the top of the gate, the pre-existing concrete conservation capping was removed and a lime-based hard-cap was installed on top of the reconstructed area along the northeast wall. We also created

a system of terraces and "French drains" along the northwest wall. A mudbrick frame was placed on the north and east borders of the bastion's upper surface, above those areas of the rampart that had been conserved, and within the frame we placed a protective soft-cap system of geofabric, clayey soil, and shallow-rooted plants (poa) (figs. 1, 4). The same techniques have been used for the wall tops of several of the units in Gordion's Terrace Building Complex, and the majority of the work was carried out by a group of women from Yassihöyük village, who were trained in this soft-capping technique by Naomi Miller.

The final component of the gate conservation program involved stabilizing the fractured blocks on the north side of the bastion with micro-grout injections, and filling the open joints with small chinking stones to replicate the Early Phrygian construction technique (figs. 4, 5). All of this work was completed in early August, after which we removed the metal scaffolding and

its wooden railroad-tie foundations. The techniques that we employed to conserve the East Citadel Gate have required six seasons of work, but they should ensure its stability into the next century, even if earthquakes should occur.

A second conservation project focused on the Mosaic Building, a large multi-room structure on the southern edge of the citadel, where two months of excavation took place this season as described below (figs. 2, 7). Most of the rooms had 6th century B.C. pebble mosaic floors, which had been unearthed by Rodney Young in the early 1950s (fig. 8) but subsequently left vulnerable to erosion and occasional damage by wandering flocks of sheep and goats.

We therefore formulated a three-year plan to ensure long-term stabilization of the Mosaic Building, beginning with the placement of geotextile over the entire area, with seedless soil from the recent excavations placed above and below it. Small stone retaining walls were erected to hold the earth and geotextile in place, especially along the eroding slopes. Mosaic pebbles that had been loosened by erosion were also collected for future reconstruction. All of the work in this area was carefully executed by Ben Abbott and Julia Commander, with the assistance of Elisa Del Bono and Angelo Lanza.

Tumulus MM (Midas Mound)

Each year we systematically search for new tools and techniques to safeguard the stability of the tomb chamber in Tumulus MM, built ca. 740 B.C. and excavated in 1957. This was probably the tomb of King Midas's father, and it remains the oldest standing wooden building in the world, as far as we know. Although the tomb chamber has been carefully documented with photos and drawings since its excavation, we are

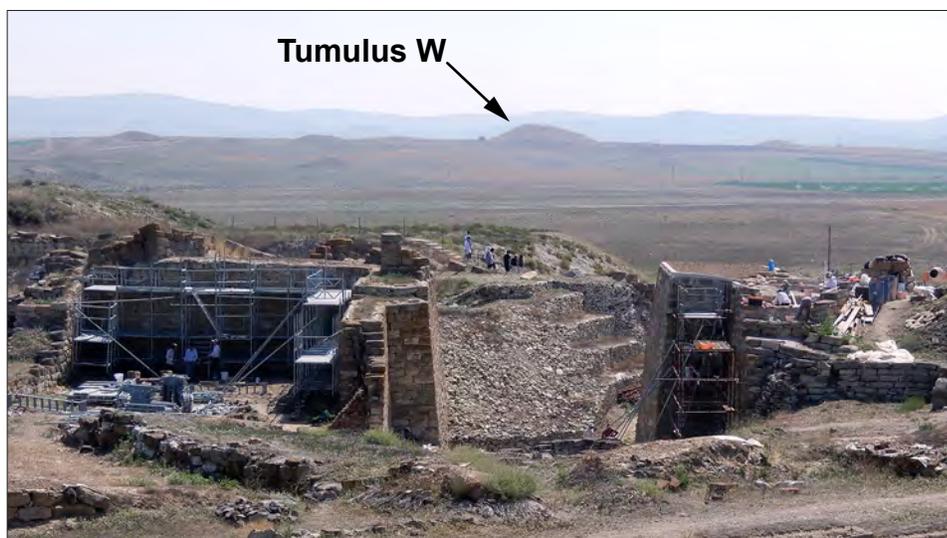


Figure 3: The East Citadel Gate, looking east, with Tumulus W (ca. 850 B.C.) in the distance. Photo by Brian Rose.

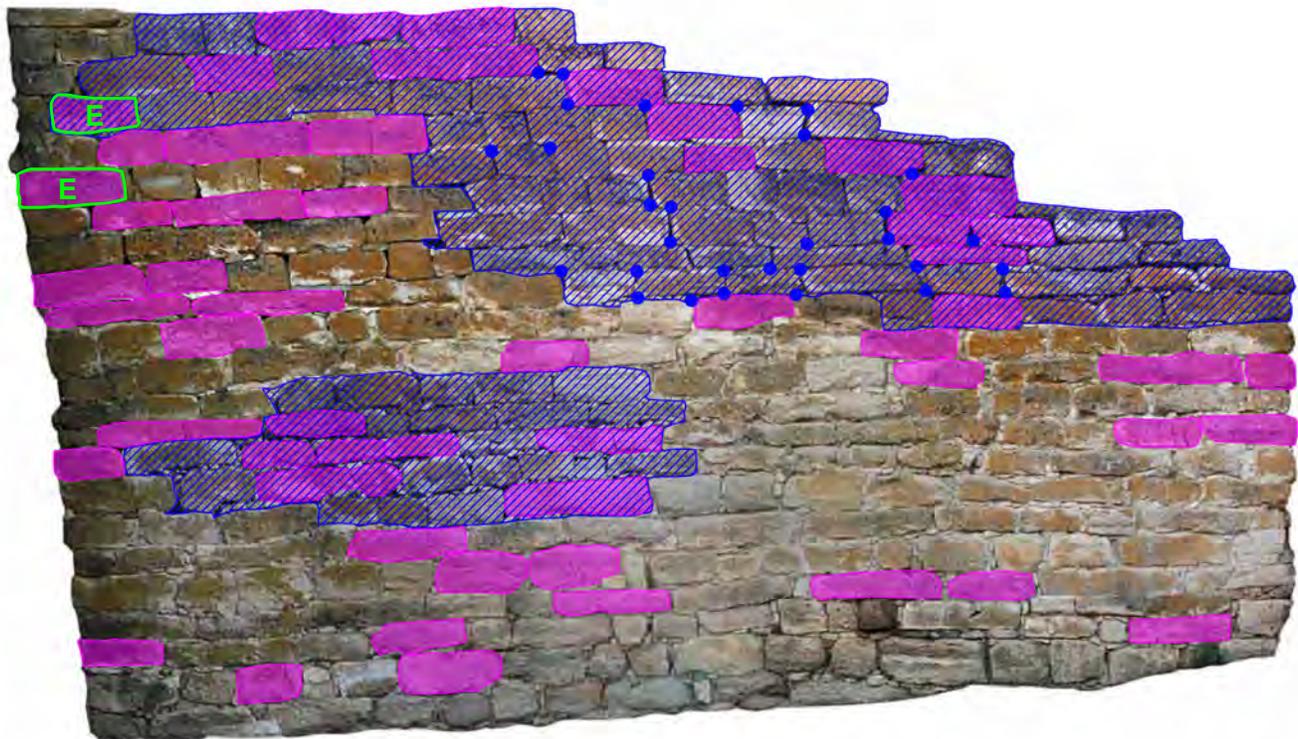


Figure 4: East Citadel Gate: north face of the South Bastion following the installation of the soft-cap. Photo by Brian Rose.

now in a position to increase the power and precision of our documentation by using digital recording techniques and 3D digital reconstructions. This will provide us with the capability to analyze and present the monument in a way

that builds on the earlier photographs and videos, while creating a heightened visual experience for visitors, who currently have only restricted access to the chamber. The goals for this new imaging project include recording the

EARLY PHRYGIAN GATE - SOUTH BASTION NORTHWEST ELEVATION (SCe-3)



MASONRY INTERVENTIONS DURING 2019

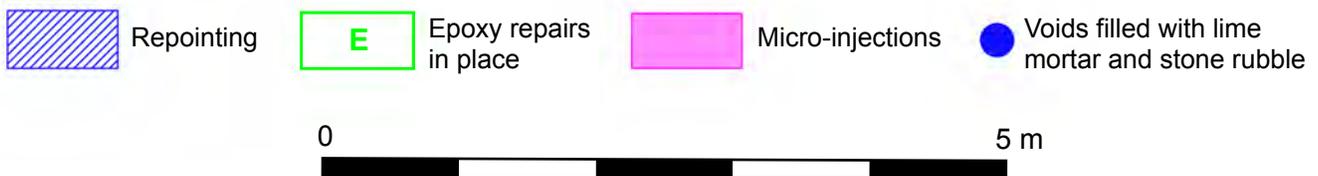


Figure 5: East Citadel Gate: diagram of conservation treatments on the northwest side of the South Bastion. Photo by Elisa Del Bono.

entire interior (ceiling, floor and four sides) and exterior (juniper logs and limestone barrier wall) of the tomb chamber complex.

As a first step in the 3D recording project, we arranged for a brief site-visit at the end of June by E. Keats Webb, Digital Imaging Specialist at the Smithsonian’s Museum Conservation Institute (fig. 9). Imaging tests were conducted on three distinct areas of the tomb (juniper logs, limestone wall, and tomb interior) to see if any challenges

would arise in the data acquisition and processing, and we look forward to the project continuing next year. Such an approach has the potential to highlight areas of structural instability, and to clarify many critically important research issues, such as carpentry techniques, architectural details, and the original layout of the grave gifts that once hung on the walls, the evidence for which now survives only as metal corrosion stains on the wooden beams.

Excavation: The South Citadel Gate in Area 1

Our excavations in Area 1 at the southern end of the citadel have been ongoing since 2013, and over the course of the last seven years a previously unsuspected but well-preserved citadel gateway has been gradually emerging (figs. 2, 10-13). This new structure, which functioned as the citadel’s South Gate, was first built in the 9th century B.C., at the same time as the East Citadel Gate,

but there were at least two subsequent construction phases dating to the 8th and 6th centuries B.C. When we began excavations here, we never envisaged that the trench would eventually become as large as 80 x 40 m, nor that even a trench as sizable as this one would need to be expanded still further to uncover all of the components of the gate.

During the 2018 season we had unearthed an E-W pebbled approach road over 50 m in length that was flanked by walls of well-cut stones, some of which were still standing to a height of over 4 m (fig. 10). By the end of the season, we had reached a point in our western extension trench where we expected the approach road to turn north into the citadel, yet what we found instead was a trapezoidal structure composed of rubble fill that we initially interpreted as a bastion. Why this feature had been situated so that it effectively blocked the approach road was mystifying, and we assumed that the road must have zigzagged around the bastion before entering the citadel.

In an attempt to clarify these topographical problems, we opened a large trench this year that linked the main trench with the western extension dug at the end of 2018. Following the removal of various overlying layers of rubble (collapse from the roadside walls), we discovered the true function of the mysterious stone “bastion” and also unearthed a large and well-preserved stone-paved ramp that clearly demonstrated the continued use of the gate into the Late Roman period (4th-6th centuries A.D.; figs. 10-12).

Excavations along the southern side of the road revealed that the rubble feature was not a discrete bastion after all, but rather a fill intended to raise the road level at the beginning of the Middle Phrygian period, shortly after

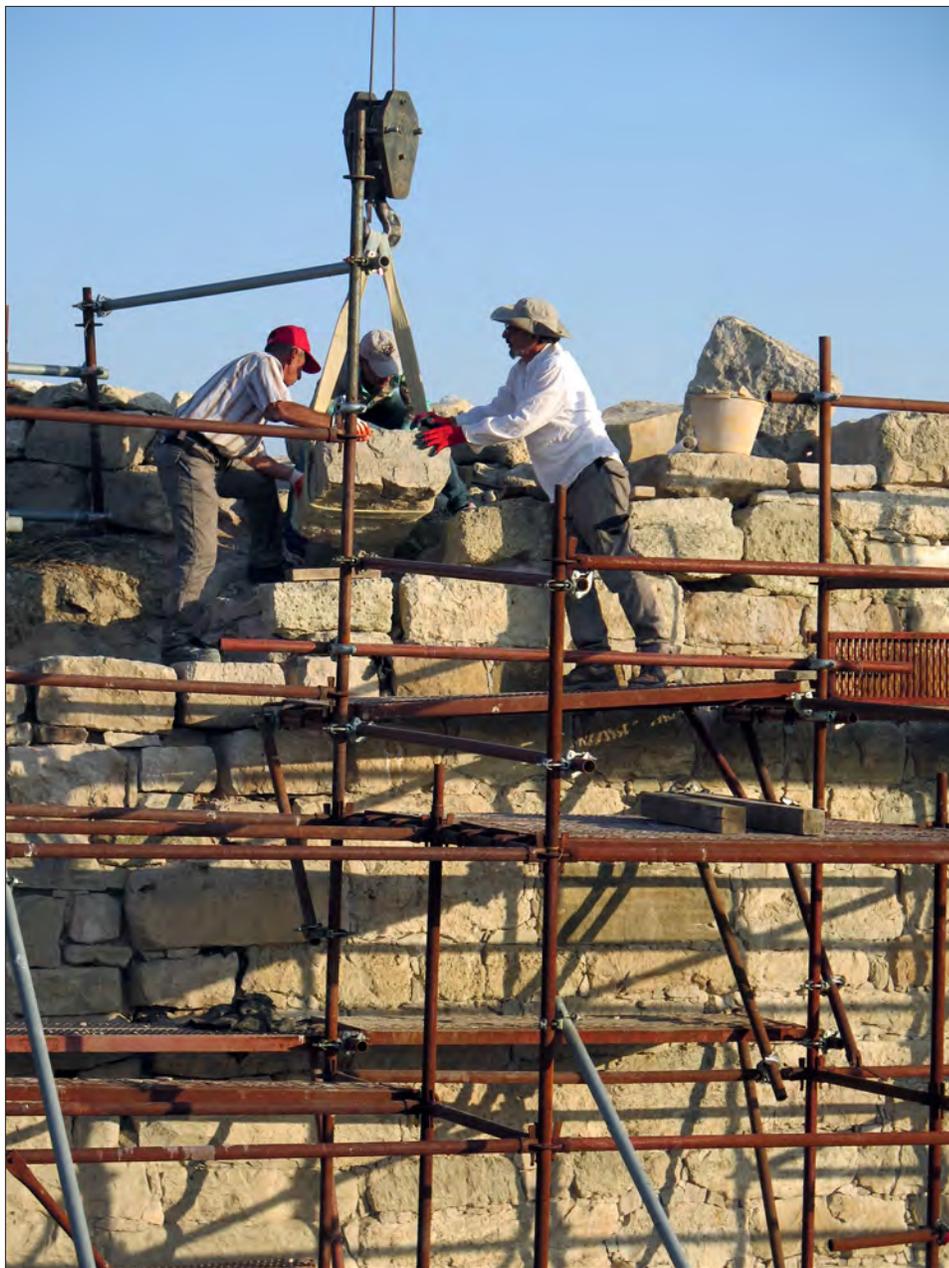


Figure 6: Moving a conserved stone back into its original position on the east face of the South Bastion. Photo by Brian Rose.

800 B.C. (fig. 12). At the western end of our trench, this stone packing would have lifted the Middle Phrygian level more than 3 m higher than that of Early Phrygian date. The same type of rubble fill was deposited in front of the Early Phrygian glacis in Area 1 when the citadel was expanded to the south, and in front of the East Citadel Gate when the higher Middle Phrygian

citadel was constructed. In all of these cases, the rubble fill was stabilized with wooden beams but contained no reused architectural elements.

Moreover, the western end of the Early Phrygian wall on the northern side of the approach road appears to turn a corner at its junction with the rubble fill, as though there was an Early Phrygian road here leading northwest into the citadel. The



Figure 7: The Mosaic Building after the pebble mosaic floors had been covered. The green color indicates the 2019 trenches. Photo by Emily McGowan.

same kind of obtuse angle at a turning point is also found at the East Citadel Gate (figs. 10, 12, 13). Consequently, it seems likely that the Middle Phrygian rubble in Area 1 underlay a Middle Phrygian road that likewise turned to the northwest at this point.

The only way to prove this hypothesis is to excavate further to the north next year, which will hopefully yield the complex's gatehouse. In any

event, the length of the approach road is now known to be over 65 m; this is the longest known approach road of any citadel gate in Asia Minor, and it was clearly designed to increase the effectiveness of the inner fortifications.

During the Middle Phrygian phase (8th century B.C.), the gateway was made even more impregnable by the construction of two monumental bastions at the road's lower end, augmented by

stone sculpture that included at least one and probably two free-standing lions. In the Late Phrygian period (6th century B.C.), two more bastions were built to the southeast of their Middle Phrygian predecessors, largely by reusing blocks and architectural terracottas from the demolished Mosaic Building that had stood directly to the northeast (fig. 12).

We had suspected that the rebuilt South Citadel Gate continued in use

through the Late Phrygian period, at least until the arrival of Alexander the Great in the late fourth century B.C., but its fate thereafter had remained uncertain. Our discoveries this season have now demonstrated that the Gate in fact remained in use through the Late Roman period; in other words, it was in operation for at least 1300 years—an astonishing life-span for a building at Gordion.

The evidence we discovered was a stone-paved ramp 5.5 m wide, which extended for a length of 11.35 m and rose slightly over 2.5 m from east to west (figs. 10-12). The lower end of the ramp was surfaced with large rectangular slabs that extended for a distance of ca. 4.30 m. To the west of this sector the surface was more uneven, composed of smaller, irregular stones, tightly packed together and bonded with lime mortar. Some of these stones came in a variety of colors; evidently they had been taken from earlier buildings for reuse in a second phase of construction. Extending for just over 7 m, this part of the ramp ended in a line of large sandstone blocks that formed a sill, after which there was an even pebbled surface that extended for 7.25 m. The base of the ramp was also marked by a pebbled surface that extended 8.55 m from the western limit reached in the 2018 season.

The surface of the ramp was well worn through use; at least four wheel ruts from carts could be seen, with the distance between the rut pairs being ca. 1.50 m. The pottery recovered from clay layers under the upper pebbled surface indicates that this surface, and with it the entire road pavement, was laid in the early 4th century A.D. Such a late date for such a relatively elaborate installation was unexpected, but as we came to grips with the data, it made a lot of sense.

We know that a major earthquake struck Gordion in the fourth century



Figure 8: The pebble mosaic floor in the Mosaic Building as uncovered by Rodney Young in 1952, looking northwest. Photo: Gordion Archive.

B.C. and caused significant damage to the East Citadel Gate, including the collapse of part of its South Bastion. The East Gate may not have gone out of use completely at that time, but it could no longer have served as the primary entrance to the citadel, and the collapsing foundations would have further highlighted its instability. Another gate had to take its place, and it looks as if the South Citadel Gate was the one selected. Unlike other structures at Gordion, there is no evidence for stone robbing at the South Citadel Gate until the Seljuk period (ca. 13th century A.D.), so it appears to have been maintained continually from the Early Phrygian through the Late Roman period.

Although the western half of the approach road was modified by raising its level in the early 8th century B.C., and again in the early 4th century

A.D., the lower eastern half, near the entrance bastions, appears to have been maintained unaltered throughout most of its history. Its pebbled surface was in use as late as the 4th century A.D., and yet a sondage that we dug directly beneath it produced pottery indicating an original construction date in the late 6th century B.C. Rodney Young had encountered the same situation while exploring the Roman Road to the east of the site; it too had a Persian-period predecessor that was not far below the Roman surface.

Gordion's Roman occupation will be the subject of a monograph by Andrew Goldman, who has argued that the settlement served as a Roman military base called *Vinda* or *Vindia*. This was a reoccupation that occurred in the first century A.D., following an occupation hiatus of nearly 250 years. The base



Figure 9: E. Keats Webb planning for a 3D recording of the interior of the Tumulus MM tomb chamber (ca. 740 B.C.). Photo by Gebhard Bieg.

became much larger and more prosperous at the time of the emperor Trajan's Parthian War in the early second century A.D, and the military character of the settlement was still intact in the early third century, when two marble altars were dedicated to the Emperor Caracalla and his brother Geta (fig. 14) by a Roman auxiliary cavalry unit (the *Cohors I Augusta Cyrenaica*) stationed at or near Gordion.

There is little evidence for a functioning settlement during most of the third century, but a new building campaign in the early fourth century included the installation of wide stone-paved streets flanked by colonnades, and multi-room buildings with open courtyards and tiled roofs. The stone-paved ramp in the South Citadel Gate should be viewed as yet another component of this Late Roman revival on the Citadel Mound, and serves as a reminder of the continued importance of the site long after the Phrygian kingdom had ended. How long the Roman occupation continued is more difficult to determine, although pottery dating as late as the 6th and possibly the



Figure 10: Aerial view of the of the South Citadel Gate in Area 1, looking north. EP=Early Phrygian, MP=Middle Phrygian, LR=Late Roman. Photo by Emily McGowan.

7th century A.D. has been found on and around the Citadel Mound.

We can only speculate as to whether the splendor attached to the old Phrygian kingdom would have played a defining role in the daily lives of Gordion's Late Roman inhabitants. But the walls of the South Citadel Gate were still those that had been built by Midas' predecessors, and beyond them everyone would have seen the "Midas Tumulus" and the other, adjacent royal tombs. In other words, Gordion's residents would have been surrounded by and continually aware of the ancient symbols of Phrygian power, which would surely have fostered a sense of community identity by focusing on a past far more glorious than the present.

Needless to say, the process of pulling together and interpreting such a vast body of evidence from seven seasons of excavation has been enormously challenging, and without the tenacity and analytical skills of area supervisor Simon Greenslade, it would not have been possible.

Area 1: The Mosaic Building

We received equally significant results from a new trench along the western side of the Mosaic Building, a large and elaborately decorated complex that lies directly to the northeast of the South Citadel Gate (figs. 2, 7, 8, 15-21). Much of the complex had been excavated in the early 1950s by Rodney Young, who dated it to the Late Phrygian period (5th–4th centuries B.C.) and interpreted it as the office of Gordion's Persian governor. The structure encompassed an area measuring 40 m by 18 m, and its idiosyncratic plan resembles no other complex on the Citadel Mound: an enclosed vestibule with a decorated pebble mosaic floor opened onto a paved courtyard, which, in turn, led to



Figure 11: Aerial view of the Late Roman stone pavement in the South Citadel Gate (Area 1), looking northwest. Photo by Emily McGowan.

another vestibule and "throne room," both of which were decorated with blue and white pebble mosaic floors featuring a network of meander designs (figs. 7, 8). At the southwest was a square room (the "South Room") framed by a colonnade of half columns on two sides, with the floors again decorated with the same type of mosaics (fig. 15).

Remote sensing in 2018 had revealed a large anomaly to the west of the complex that we thought could be connected to an adjacent fortification wall, so we planned a large L-shaped trench around the colonnade. The results were sensational, and none of them would have been possible without the diligence and insights of Sarah Leppard, who carefully tackled a series of very puzzling stratigraphic problems. Her discoveries, in fact, forced us to reconsider the chronology and function of this building as well as the history of Gordion's citadel during the early sixth century B.C., when the Lydians controlled the area.

At the beginning of the excavation,

we reviewed the ceramics and small finds that Young had discovered during his excavations here, and were surprised to see that none of them fit with the proposed chronology of the building. The closest parallels for the ceramics came from the "Küçük Höyük," a sixth century fort that was destroyed in the Persian attack of ca. 540 B.C.; from Building M, a megaron within the Middle Phrygian citadel, destroyed at the same time; and from Tumulus A, dated shortly thereafter, ca. 530-525 B.C.

This led to a re-examination of the other discoveries from the building, none of which needs to extend beyond ca. 540 B.C. Moreover, none of the associated pottery can be dated to the fifth and early fourth century, the period when the building was supposed to be in operation. It quickly became clear that all of the evidence pointed to a construction date in the first half of the sixth century and a destruction date at the time of the Persian attack, like the nearby fort of Küçük Höyük. This

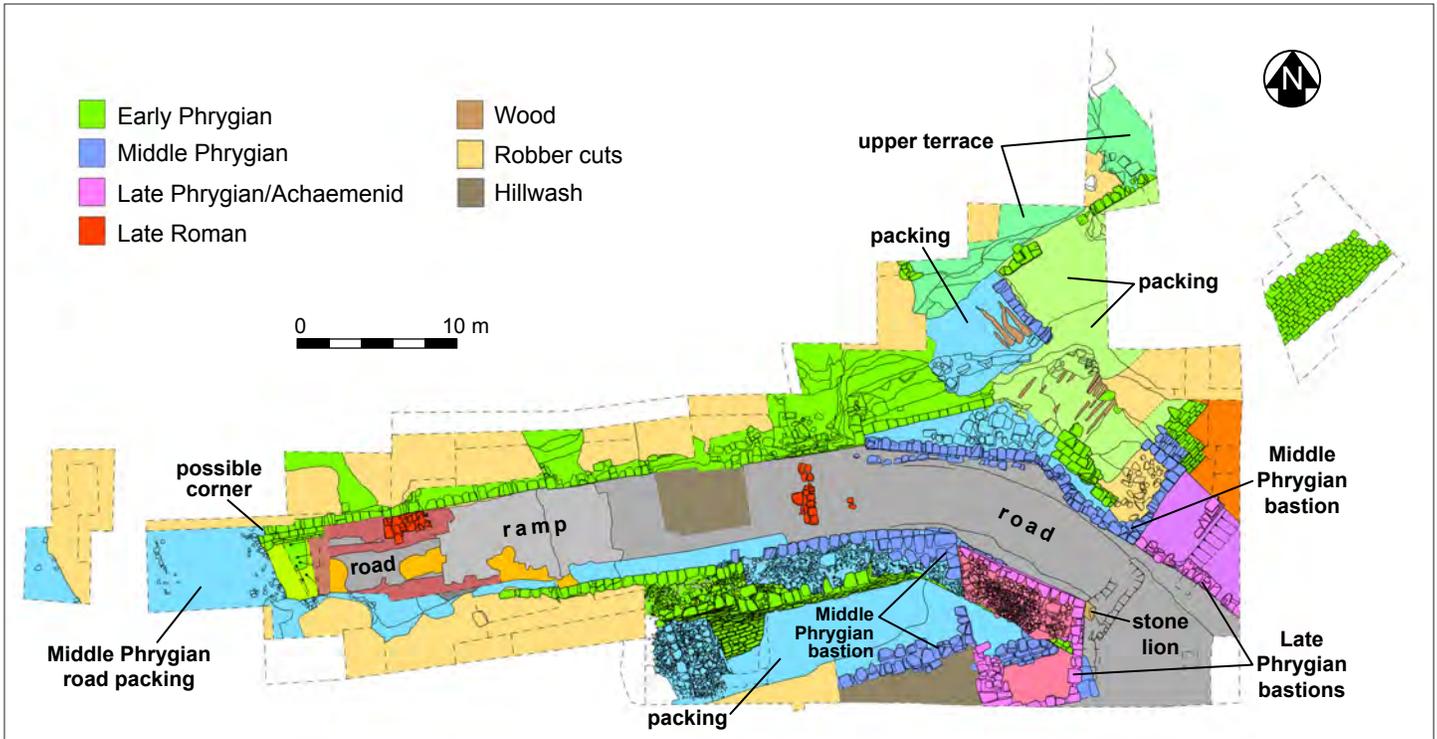


Figure 12: Color phase plan of the Phrygian and Roman components of the South Citadel Gate complex in Area 1 (9th century B.C.–4th century A.D.). Plan by Simon Greenslade.

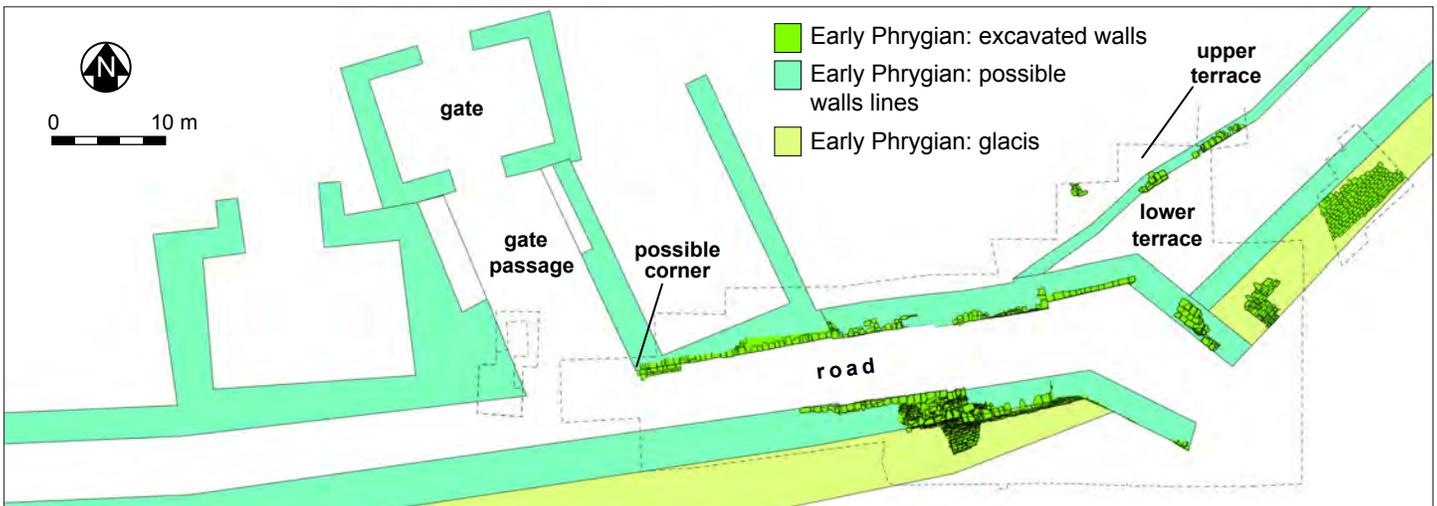


Figure 13: Hypothetical reconstruction of the Early Phrygian gatehouse of the South Citadel Gate, using the East Citadel Gate as a template. Plan by Simon Greenslade.

is also consonant with the condition of the pebble mosaics, which look as if they had been in use for several decades at most, not 150 years.

This new research indicates that the building could not have served as the residence of the Persian governor, because

it had been destroyed by that point and never rebuilt. Indeed, the half columns of the South Room were reused in the later Persian reconstruction of the adjacent South Citadel Gate in the late 6th century B.C. What, then, was its function?

In light of the revised chronology,

it seems highly likely that the Mosaic Building was built shortly after Gordion had become part of the Lydian kingdom, ca. 600 B.C., when there is evidence for renewed prosperity and reconstruction in the citadel, and that it served as the residence of Gordion's



Figure 14: Marble altar from Gordion with the personification of victory. The name of Geta, brother of the emperor Caracalla, originally appeared beneath the “Victoriae” inscription but was subsequently erased. Early 3rd century A.D.
Photo by Gebhard Bieg.



Figure 15: The Mosaic Building in Area 1, looking southeast, with Tumulus MM in the distance.
Photo by Brian Rose.

rulers during the early sixth century B.C. It had always seemed remarkable that a palace of the Phrygian kings had never been discovered at Gordion, and equally remarkable that no building on Gordion’s citadel was as elaborately decorated as the Mosaic Building. Palaces in Anatolia and the eastern Mediterranean were often situated at the edge of citadels, near one of the main gates, and in close proximity to the principal water source. All of these features apply to the Mosaic Building, which was adjacent to both the South Citadel Gate and the Sakarya River.

These conclusions need to be kept in mind as we examine the new discoveries from this area. The 2019 excavations uncovered a new entrance to the South Room via a set of three limestone steps at the southwest corner (figs. 7, 20, 21). There was also a stone pavement

leading away from the steps, which means that our building continued further west, beyond the confines of the trench. Above the steps we discovered approximately 1,100 kilograms (2,500 pounds) of architectural terracottas that clearly had fallen from the roof when it caught fire during the Persian attack (fig. 16). This assemblage included pan and cover tiles, raking simas, pendent friezes decorated with red lozenges against a cream background, and antefixes with griffins. All of these types first appeared at Gordion in the first half of the sixth century, probably due to Lydian influence, and similar types of polychromatic tiles covered the other parts of the building as well.

In the trench to the north of the colonnade we made one of our most exciting discoveries of the season: sizable parts of an armor corselet fashioned of

iron and bronze scales, dating to the sixth century B.C. (figs. 17-19). The two pieces found thus far are almost certainly part of the same suit of armor, but further conservation is necessary before we can conclusively determine this. The bronze scales form a running meander very close to the motif in the Mosaic Building’s mosaic floors, and identical to the decoration used for the armor of the Homeric hero Patroclus in the cup by the Sosias Painter (ca. 500 B.C.; fig. 19). A similar suit of iron and bronze scale armor, also fabricated in the sixth century, has been found at the site of Idalion on Cyprus, and the 2016 excavations at the Lydian capital of Sardis yielded a mass of iron scales from an armor corselet of related type.

In light of the parallels for the armor and the new chronology of the building, we should probably assume that the



Figure 16: Architectural terracottas from the Mosaic Building in Area 1, early 6th century B.C.
Photo by Gebhard Bieg.

armor belonged to a Lydian defender of the city who would have worn it during the Persian attack, after which it was discarded. A well-preserved iron arrowhead found nearby was no doubt used during the same conflict, and more pieces of the armor may be found next year when we extend our trench toward the north.

If the Mosaic Building did serve as a palace during the latter part of the Middle Phrygian period (ca. 600-540 B.C.), then it would make sense that an Early Phrygian predecessor lies at a lower level, and indeed we may have found it. Below the colonnaded South Room was an extensive clay and plaster floor measuring more than 10 by 6 m, with a series of post-pads across it that were intended to bed columns

supporting a wooden balcony (figs. 20, 21). This building had at least one more room to the northeast, and an even earlier building with monumental walls lay beneath it. Other than a small amount of Early Phrygian pottery, there were no discoveries to indicate its function; but column post-pads were used only for large-scale megarons in the Early Phrygian citadel, as far as we know, so clearly this was a building of considerable importance that was rebuilt several times on the same spot. Again, further excavation in the surrounding area next year should clarify the situation.

In conclusion, it now looks as if construction began here in the ninth century, with occupation continuing until the Persian attack around 540

B.C. After that point, some of the Mosaic Building's column shafts were reused in the South Citadel Gate, but otherwise there was no activity until the Early Hellenistic period (later 4th–first half of the 3rd century B.C.), when the walls were robbed. Some of the stones were used to build an Early Hellenistic occupation complex of which two possible rooms survive, one of which featured two ovens. Several decades later, in the Middle Hellenistic period (second half of the 3rd century B.C.), an extensive occupation complex here included a central stone-paved courtyard surrounded by at least five rooms. There is no evidence for continued occupation following the Roman attack on the Celtic residents of the city in the early second century B.C.

Area 7: the “Persian-Phrygian Building”, or PPB

This year we also reopened excavations at the northeast corner of the Citadel Mound, where Rodney Young had uncovered evidence for at least two large warehouse-like complexes. He excavated only one of these, which he called the “PPB” or “Persian-Phrygian Building” (fig. 2), consisting of four rows of four cellars, each of which was 6 m square. These appear not to have been interconnected: each would have been independently roofed, and they would have been accessed from above via ladders. Although Young excavated only a few walls further to the west, it looks as if a similar complex was constructed there too, and remote sensing (ERT) in 2017 uncovered evidence for yet another large warehouse-like complex at the northeast corner of the mound, so a series of enormous storage buildings appears to have lined the citadel's north side.

Nevertheless, a number of important

questions about the chronology of the buildings have remained unanswered. All of the evidence uncovered by Young, who dug here sixty years ago, indicates that the buildings were constructed in the Middle Phrygian period (8th/7th century B.C.), and yet the Early Phrygian (9th century B.C.) industrial zone or “Terrace Building” complex is connected directly to this area, which suggests the existence there of Early Phrygian buildings preceding those found by Young.

With this goal in mind, Ben Abbott, Mehmetcan Soyloğlu, and Deniz Doğan launched an investigation of the layers beneath the visible walls of the Persian-Phrygian Building in a trench measuring 12 x 4 m (fig. 22). This yielded a large wall running N-S for a length of 6.5 m, at which point it turns at a right angle to the east and continues for at least 2 m. The wall has an average width of 1 m, as do the later PPB walls, and it runs parallel to but does not coincide with the higher PPB walls unearthed by Young. The wall was built with a mixture of stone types that are common in most of Gordion’s Middle Phrygian buildings, including red, yellowish, and white stones. The newly discovered wall was only one course deep and two courses wide, so it probably served as the foundation for a largely mudbrick wall.

This season’s excavation thus revealed that there was indeed some sort of earlier structure of fairly substantial size above which the later PPB structure was built, one that featured walling of the same size and orientation as its successor. Based on the type of stones and the elevation of the wall, it was probably constructed in the eighth century, during the earlier phase of the Middle Phrygian period. This means that an Early Phrygian predecessor, assuming it existed, has

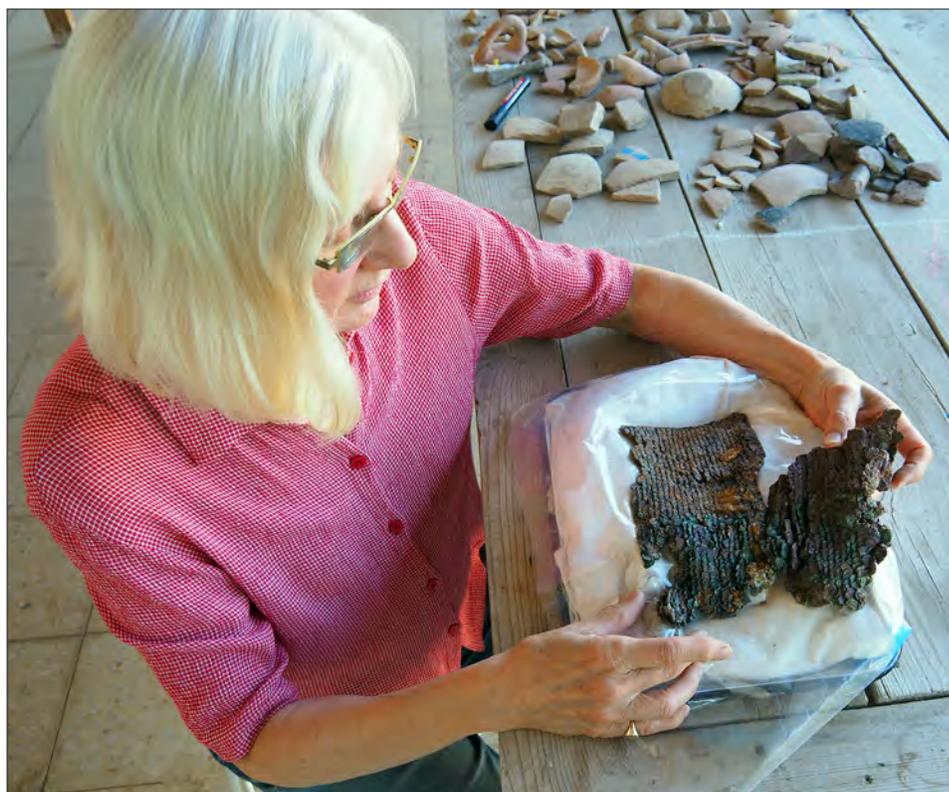


Figure 17: Donna Strahan conserving the scale armor from the Mosaic Building.
Photo by Gebhard Bieg.



Figure 18: Detail of the scale armor from the Mosaic Building, with bronze meander decoration.
Photo by Gebhard Bieg.



Figure 19: Red-figure cup by the Sosias Painter (ca. 500 B.C.) in the Antikensammlung, Berlin. Achilles (right) bandages the wounds of Patroclus (left), who wears armor with the same kind of meander decoration as the scale armor from the Mosaic Building.
Photo: Wikimedia Commons.

still not been reached, and will probably not be reachable in the foreseeable future. Our digging is unfortunately constrained by the existing walls of the PPB, which meant that this year's trench had to be unusually narrow, and we were able to dig to a depth of only 2.5 m.

Even within the limited space of our sondage, we made some striking discoveries. The entire area was filled with pits, most of which appear to have been cut at the end of the Middle Phrygian period, in the early 6th century B.C., when the PPB structure went out of use. Within them we discovered eleven bronze fibulae of 8th century B.C. date,

five spindle whorls, six loomweights, two iron knives, and a bronze handle and pin. The most important discovery was a black polished handle with an incised Phrygian inscription:]*mastaeia* (fig. 23). For assistance in interpreting this we turned to our colleague Rostislav Oreshko, who spent a week at Gordion this summer working on Phrygian graffiti. He suggested a restoration of *dumas ta(v)eia*, and noted that a similar word is found in three other graffiti from Gordion. The first word, *Dumas*, appears in the *Iliad* as the proper name of a Phrygian king who fathered Hecuba, queen of Troy, and Asios,

an ally of Hector. Whether the new graffito refers to an actual king or only a member of the elite, it is clearly a mark of ownership and a welcome addition to the corpus of Gordion inscriptions.

Our discoveries in this sondage are not unlike those found by Young in the PPB, which included bronze vessels and fibulae, sipping and omphalos bowls, two ivory inlay plaques that must have belonged to furniture, and a number of vessels with Phrygian inscriptions. As Keith DeVries commented in his 1990 excavation report, the PPB material would be appropriate for a treasury maintained over generations, rather than a supply house for the adjacent industrial district.

Tumulus 52 (T52)

Perhaps our most exciting project during the 2019 season involved a collaboration with the Museum of Anatolian Civilizations on the excavation of the northernmost tumulus on the South Ridge (figs. 24, 25). At 14 m in height and over 105 m in diameter, Tumulus 52 (based on the Ankara Museum numbering system) ranks among the largest of the burial mounds at Gordion, comparable to the early 8th century B.C. tumuli P and K-III on the Northeast Ridge.

T52 is located about 1 km from the Citadel Mound and lies directly on the axis of the Middle Phrygian East Citadel Gate. In other words, the tumulus and the gate may have been planned as a single project in the 8th century B.C., so that those who were leaving the citadel would have had their attention directed to the center of the tumulus. A similar kind of alignment had existed in the 9th century B.C., when the Early Phrygian East Citadel Gate was oriented toward the contemporaneous Tumulus W, the

oldest known burial mound at Gordion and in Anatolia (fig. 3).

Based on its size and location, we expected T52 to contain a wooden chamber with an inhumation burial, which we attempted to pinpoint prior to excavation by using remote sensing (Electric Resistivity Tomography, or ERT). Just below the surface, vestiges of more modern history were apparent in the form of a military trench and numerous shell casings from the 1921 Battle of the Sakarya River, which involved armed conflict between Greek and Turkish soldiers (fig. 26). T52 was clearly used as an observation point during the fighting, as the mound of Troy had been during the Gallipoli campaign of 1915.

The tumulus was constructed with over 45,000 m³ of clay and earth, making it one of the largest tumuli at Gordion (fig. 27). A shallow mound of stone packing surrounded the rectangular wooden chamber, which was fashioned of pine beams and measured 3.53 by 4.27 m (fig. 28). The chamber's walls appear to have been approximately 1.50 m in height, but since the funeral and deposition of the artifacts in the tomb would have taken place before the addition of the roof, no one, except perhaps the deceased in an afterlife, would have needed room to stand.

The roof of T52 had collapsed under the enormous weight of the burial mound, just as in all the other excavated tumuli with the single exception of Tumulus MM. The contents of the chamber were consequently crushed under a mass of broken timbers, stone packing, and clay. A series of robbing tunnels further disturbed the chamber after its collapse, one of which can be dated to the 12th or 13th century A.D., the Seljuk period, thanks to the broken green- and yellow-



Figure 20: Excavating the Early Phrygian (9th century B.C.) structure beneath the Mosaic Building, looking southeast. One of the post-pads is visible in the foreground, and the newly discovered stone steps and pavement appear near the top. Photo by Gebhard Bieg.

glazed bowls and jugs left by the robbers. At the time of this robbing, the tumulus was already almost 2000 years old, and it was presumably the economic instability of medieval life at Gordion that made the prospect of looting the tomb's metalwork worth all the effort and risk of tunneling.

The robbers dug through the collapse

inside the chamber, destroying most of the remains of the roof and further damaging the grave gifts in the process. They did not take everything with them, however. Inside one of the tunnels were the remains of a leather belt with metal studs set around a copper alloy disc, as found in Tumulus MM and Tumulus W; it was



Figure 21: Reconstruction of the Early Phrygian (9th century B.C.) structure beneath the Mosaic Building. The Middle Phrygian steps are at lower left. Photo by Braden Cordivari; plan by Sarah Leppard.

likely dropped by the robbers on their way out of the chamber. The belt may have originally been hung from the wall, as in MM, or placed around a decedent's waist, as in Tumulus W. Conservator Donna Strahan studied the T52 belt and found that the intricate designs formed by the smallest studs, less than 1 mm in diameter, are in fact created from a thin sheet of metal foil with punched dots,

not from studs. Furthermore, based on the type of corrosion, she suggests that the foil is actually silver rather than bronze, a revolutionary addition to our understanding of Middle Phrygian metalworking, the evidence for which has included extremely little silver to date.

The finds from the chamber include 20 bronze fibulae (clothing pins), one of which is still attached to a textile, several

bronze omphalos drinking bowls and a bowl with lifting handles, a bronze ladle, a small bronze cauldron, an iron tripod, several ceramic storage jars for foodstuffs, a bronze bird finial, an iron weight, and hundreds of amber objects (figs. 29, 30). There is no evidence of wooden furniture, as found in several of the other royal tumuli; but given the collapse and robbing of the chamber,



Figure 22: The Area 7 trench (within the PPB complex), looking northeast. Ben Abbott (right) is standing on the newly discovered wall.
Photo by Brian Rose.

such pieces would have had little chance of survival in intact or recognizable form. The dedication of feasting equipment (bowls, cauldron, ladle) and items of elite display (belts and fibulae) fits the known pattern typical of 8th century Phrygian inhumation burials.

T52's amber is an extraordinary deposit, and is in fact the largest and earliest known assemblage of such material discovered at Gordion. The material includes over 600 beads, variously shaped pendants, appliquéés, and even a bird. The elaborate wealth and trade connections necessary to import amber, perhaps from the Baltic, would have been an extraordinary status symbol for the decedents.

The human remains uncovered within T52 establish that there were two inhumations in the chamber. One was

a female approximately 25 years old, while the other was an 8 or 9 year old child. This is an astonishing discovery: the evidence uncovered by Young indicated that the burial of women in tumuli did not occur at Gordion earlier than ca. 580 B.C., and T52 is only the second double inhumation found in a Phrygian tumulus so far. The inclusion of such wealth in a young person's tomb calls to mind the burial of the child in Tumulus P, ca. 760 B.C., but the pairing of an adult and child in a burial is unparalleled in Phrygia at this time.

Altogether, the finds suggest a date in the 8th century B.C., in either the second or third quarter of that century, although they still require further examination after they have been conserved. In any event, the excavations in T52 have supplied yet another fine

example of elite display during the period of Gordion's greatest wealth and power.

This project was possible due to our partnership with the Museum of Anatolian Civilizations in Ankara, and we would like to highlight in particular the vision of Enver Sağır, who has just retired as museum director (fig. 25). We also enthusiastically acknowledge the hard work and collaboration of our colleagues and friends at the Museum: Mustafa Metin, Tolga Çelik, and Şerafettin Koçoğlu, as well as Gordion excavation staff members Braden Cordivari, Ali Can Kırcaali, Emily McGowan, and Deniz Doğan. The excavation of the tomb chamber was completed shortly after Yusuf Kırac assumed his position as director of the Museum of Anatolian Civilizations,



Figure 23: Black-polished handle with Phrygian inscription from Area 7.
Photo by Gebhard Bieg.

and we are enormously grateful to him for his continued support.

Reconstructing the Middle Phrygian Citadel

One of this year’s research projects has involved a detailed reconstruction of Gordion’s citadel during the Middle Phrygian period (8th century B.C.), when Midas occupied the throne. Invaluable evidence for the original appearance of the citadel’s megaron buildings is provided by a number of broadly contemporary rock-cut façades in the so-called Phrygian Highlands, ca. 150 km west of Gordion

(fig. 31). The most striking of these is the “Midas Monument” at Yazılıkaya/Midas City, so-called because of the mention of Midas in the inscriptions on the façade, which was likely carved during his reign in the late 8th century B.C. The façade consists of a rock-cut relief reproduction of the front end of a building with a double-pitched roof surmounted by a volute acroterion, or decorative element, at the gable’s apex. The entire façade is covered by geometric designs that were originally painted, so the geometric framework would have been far clearer in antiquity.

The width and height of the façade each measure nearly 17 m, which is

virtually identical to the dimensions of some of the megarons on Gordion’s citadel. It looks, in fact, as if the Midas Monument, as well as other similar façades, are reproductions of the kind of megarons that were actually in operation in Phrygia at the time in which the façades were carved. This assumption is fortified by the careful and detailed reproduction of architectural elements on the façades, such as cross-beams, rafters, acroteria, doors, windows, and even nails and bolts. These depictions have therefore served as one of the main research tools for our new reconstruction of the Middle Phrygian buildings on Gordion’s citadel, beautifully executed by Gareth Darbyshire and Ardeth Anderson (fig. 32).

Gordion Cultural Heritage Education Program (CHEP)

For the last five years, the Gordion Project has conducted a cultural heritage educational program under the supervision of Gordion’s deputy director, Ayşe Gürsan-Salzmänn, in partnership with Halil Demirdelen, Deputy Director of the Ethnographic Museum in Ankara. Our goal is to ensure that archaeology is fully integrated into local high school curricula, and to transform the local residents into stakeholders dedicated to the protection of the

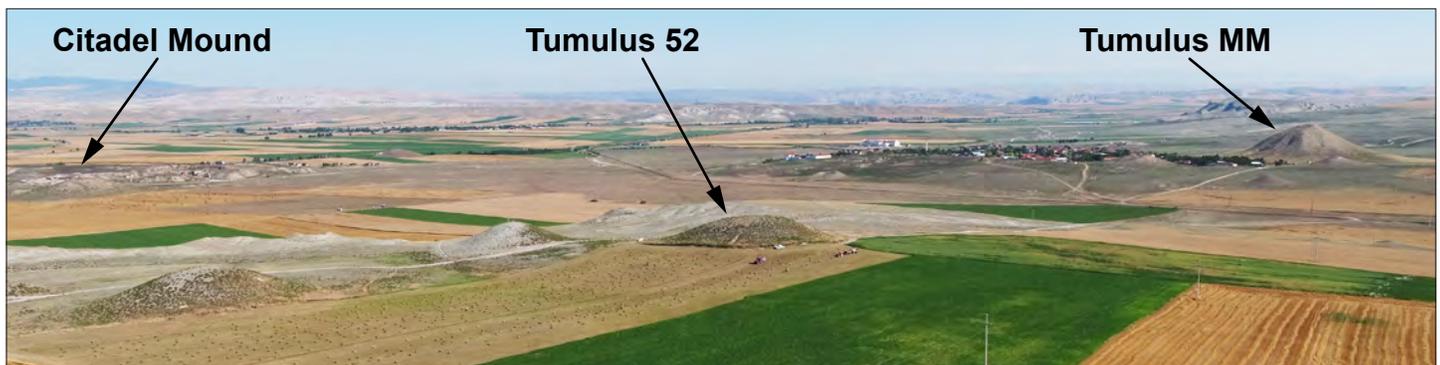


Figure 24: Aerial view of Tumulus 52, with the Citadel Mound at the left and Tumulus MM at the right. Photo by Braden Cordivari.



Figure 25: The Tumulus 52 excavation. From left to right: Emre Köse, Tolga Çelik, Mehmet Akalın, Enver Sağır, Brian Rose, Braden Cordivari, Mustafa Metin, İbrahim Dural, and Şerafettin Koçoğlu. Photo by Gebhard Bieg.

historical landscape that surrounds Gordion.

Once again, this season's program began with an all-day orientation in the courtyard of the excavation house, with 30 participants representing a diverse group of local teachers, high school students, farmers, and district officials. One of the highlights of the meeting was the discussion of the strategic action taken by the Turkish UNESCO committee regarding Gordion's permanent membership status as a World Heritage Site. Kadim Koç, Director of the Center for Promotion of Historic Sites in the Gordion region, and M. Ekremoğlu, retired teacher and volunteer, continually emphasized the importance of the continuation of the CHEP program in such an initiative.

The 6-week CHEP program, conducted between June 24 and August 2, offered participants ten hands-on activities at Gordion, and five day-

long archaeological bus trips outside Gordion, guided by Naomi Miller (paleobotanist), Prof. Mecit Vural (botanist, Gazi University in Ankara), Halil Demirdelen (museum educator) and Ayşe G. Salzmann (archaeologist, CHEP program supervisor).

This year the program encompassed a broader variety of cultural landscapes than ever before, including sites associated with the Turkish War of Independence (1919–1923), and cultic areas in the Phrygian Highlands such as Midas City and Arslantaş, some of which have rock-cut altars dedicated to the Phrygian mother goddess, Matar (fig. 33). The preservation of the historic quarter in the modern city of Eskişehir was presented as a model of urban archaeology, and a visit to the national forest in Kızılcahamam (Ankara) highlighted the importance of the bio-diversity of tree species and endemic plants in storing carbon and



Figure 26: Julia Commander conserving the Greek and Turkish shell casings discovered near the top of Tumulus 52. Photo by Gebhard Bieg.



Figure 27: The Tumulus 52 excavation in progress. Photo by Gebhard Bieg.



Figure 28: Excavating inside the wooden tomb chamber in Tumulus 52.
Photo by Braden Cordivari.

regenerating forests.

There were also workshops by Gordion team members on ceramic identification, object and architectural conservation, and the reconstruction of ancient animal

skeletons from individual bones (fig. 34). These were followed by hands-on training in the excavation house compound and on the Citadel Mound.

Overall, the program was well

attended with energetic students, teachers, and community leaders. All were in agreement that CHEP should be officially incorporated into the high school curriculum, and should be more prominently featured in social media, especially by the participants in the program. Several teachers indicated that there are already “Gordion Clubs” in schools associated with CHEP participants, and they have set up an internet site to introduce the merits of the CHEP program. Others remarked that the museum visits taught them how to evaluate archaeological material and to comprehend their meaning as cultural artifacts within a social, political, and economic context.

During one of the workshops, a local shepherd named Metin Öncel inadvertently but effectively summarized the goals of the CHEP program: “just as the Gordion team works very hard to show us how important it is to preserve the site, the least we can do [as farmers, herdsman, local villagers] is to preserve the historic landscape. After all, this earth provides us with our ‘bread’ now, as it did for the people who came before us. It is only fair that we should leave it to those who come after us.”

We intend to make an official proposal in 2020 to the Turkish Ministry of Education in Ankara, in partnership with the Polath municipal government, to integrate the program into the secondary school curriculum. Such an addition should play a significant role in our attempt to have Gordion designated as a World Heritage site on the permanent list.

Publication, Staffing, and Notable Visitors

Our work during the 2019 season was made easier due to the energetic support of our representative, Mr.

Mustafa Metin of the Museum of Anatolian Civilizations in Ankara. We also benefited tremendously this year from the periodic visits of Mr. Enver Sağır and Mr. Mehmet Akalın, the former Director and Deputy Director, respectively, of the Museum of Anatolian Civilizations in Ankara, as well as Mr. Halil Demirdelen, Deputy Director of the Ethnographic Museum in Ankara. We extend warm thanks to the General Directorate for Cultural Heritage and Museums, especially Mr. Gökhan Yazgı, General Director, Mr. Ali Rıza Altunel, Mr. Melik Ayaz, Mr. Köksal Özköklü, Mr. Umut Görgülü, and Ms. Nihal Metin.

Equally generous in their assistance were the Kaymakam and Belediye Başkanı of Polatlı, Mr. Mahmut Nedim Tunçer and Mr. Mürsel Yıldızkaya, respectively. Mr. Kadım Koç, Polatlı Belediye Başkanı Yardımcısı, visited the site several times to discuss educational programming in and about Gordion, and he was a constant source of support for us. The ERT on Tumulus 52 was carried out by the Ministry of Energy and Natural Resources, to which we are extremely grateful. We were honored by the visits of Mr. Vasip Şahin, the Vali of Ankara, the new U.S. Ambassador to Turkey, Mr. David Satterfield, and Mr. Jeffrey Hovenier, U.S. Embassy Chargé d'Affaires. Finally, we very much look forward to the opportunity of working with Mr. Yusuf Kırac, the new director of the Museum of Anatolian Civilizations.

The excavation house was filled with researchers working on a wide variety of manuscripts that spanned a period from the Bronze Age through the Roman period (fig. 35). These included Gareth Darbyshire (iron objects, especially those from the cremation burials); Beth Dusinberre (the Iron Age and Persian-period cremation burials; the South



Figure 29: The discovery of amber beads and bronze fibulae in Tumulus 52.
Photo by Mustafa Metin.

Cellar; Early Phrygian megarons); Brigitte Keslinke (Hellenistic ceramics and Late Phrygian architectural terracottas); Richard Liebhart (architecture of Tumulus MM and Beyceğiz Tumulus); Braden Cordivari (Beyceğiz Tumulus and Tumulus 52); Tuğba Gençer, Eylem Yediay, Turan Pestamalcı, and Füsün Özer (human skeletal material); Canan Çakırlar and Francesca Slim (zooarchaeological analysis); Billur Tekkök Karaöz, Asil Yaman, and Merve Yeşil (Roman ceramics); Gül Gürtekin Demir (Lydian pottery); Yusuf Kadioğlu (Gordion's geology), Gebhard Bieg (Küçük Höyük); Günsel Güngör (lamps); Janet Jones (glass); and Rostislav Oreshko (Phrygian graffiti).

The pace of publication is steadily increasing. Five monographs have been completed this year: Phoebe Sheftel's *Bone and Ivory Objects from Gordion*; Gül Gürtekin Demir's study of the Lydian pottery from Gordion, *Lydian Painted Pottery Abroad; The Hellenistic Settlement at Gordion* by Shannan Stewart and Martin Wells; Janet Jones' volume on the glass of Gordion; and the *Gordion Cremation Tumuli* by Ellen Kohler and Beth Dusinberre, with contributions



Figure 30: Bronze bowl from Tumulus 52.
Photo by Mustafa Metin.

by Gareth Darbyshire and Jane Hickman. The latest issue of *Hesperia* includes an article on the textiles of Gordion by Sam Holzman, who received his PhD last year from Penn.

We want to single out several members of the staff without whom this summer's work could not have functioned as well as it did: Iris Fernandez (ISAW/NYU) and Clare Rasmussen (Bryn Mawr), registrars, assisted by Brigitte Keslinke (Penn), and Deniz Doğan (Ege University); Gebhard Bieg, photographer;



Figure 31: The Midas Monument at Midas City. Photo by Brian Rose.

Günsel Özbilen Güngör, illustrator, assisted by Ali Can Kırcaali (Samsun University); Joseph Nigro, Brian Norris, Emily McGowan, Braden Cordivari, and Ben Abbott (Penn), surveying, mapping, and drone photography; Canan Çakırlar and Francesca Slim (Groeningen University), and Ramazan Parmaksız (Istanbul University), zooarchaeological analysis; Naomi Miller (Penn), archaeobotany; Billur Tekkök Karaöz (Başkent University), Asil Yaman (Penn), Brigitte Keslinke (Penn), Beth Dusinberre (Colorado), and Serkan Pamuk (Akdeniz University), ceramic analysis; and Gareth Darbyshire (Penn Museum), archivist, who also supervised the depot re-organization work carried out by Ali Can Kırcaali and Deniz Doğan.

The architectural conservation was overseen by Elisa Del Bono, Angelo Lanza, and Giuseppe Bomba, assisted by Mehmetcan Soyluoğlu (Cyprus Institute) and Ben Abbott (Penn). The object conservation work was expertly overseen by Jessica Johnson

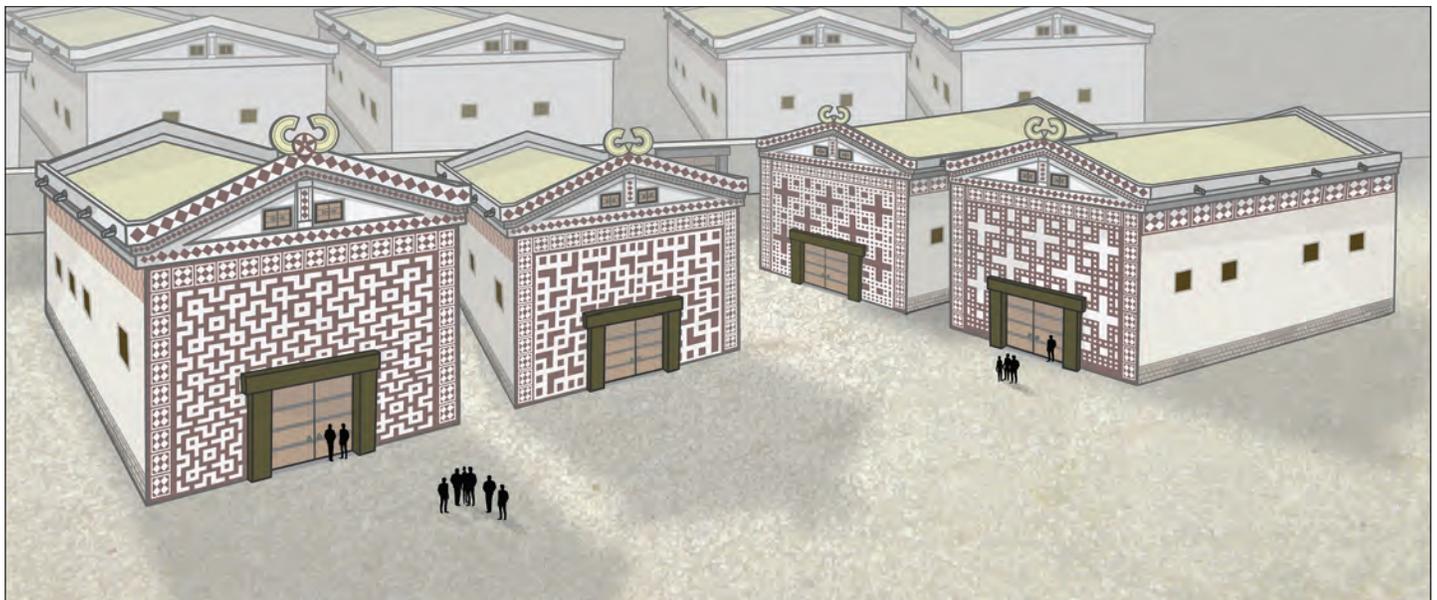


Figure 32: Reconstruction of the Middle Phrygian citadel's Inner Court in the 8th century B.C., by Gareth Darbyshire and Ardeth Anderson. Illustration: Gordion Archive.

(Smithsonian Institution), Donna Strahan (Smithsonian Institution), and Julia Commander (Penn), assisted by H. İbrahim Dural (Gazi University) and Emre Uzundağ (Akdeniz University). E. Keats Webb (Smithsonian Institution) investigated the possibility of digital imaging of the Tumulus MM tomb chamber, which will play a significant role in future conservation of the tomb.

The excavation of the Phrygian fortification walls (Area 1) was directed by Simon Greenslade, while the trench in and around the Mosaic Building (also part of Area 1) was supervised by Sarah Leppard, assisted by Ben Abbott (Penn). The sondage beneath the Persian-Phrygian Building (PPB) was directed by Ben Abbott (Penn) and Mehmetcan Soyluoğlu (Cyprus Institute). Braden Cordivari (Penn) and Ali Can Kırcaali (Samsun University) assisted Mustafa Metin, Tolga Çelik, and Şerafettin Koçoğlu of the Ankara Museum of Anatolian Civilizations in the rescue excavations at Tumulus 52. Zekeriya Utğu, our house manager and guard, kept everything running efficiently within the excavation compound and on the Citadel Mound. Although she was not a member of the Gordion staff in Turkey, Ardeth Anderson of the Penn Museum is responsible for the design and layout of each Gordion newsletter, and she also deserves our heartfelt thanks. As you will see from the staff photo in fig. 35, we were successful in repairing Rodney Young's 1961 jeep through the assistance of İbrahim Dural, although Brian Rose's first and only attempt to drive it resulted in a dented fender.

Within the U.S., we continually rely on the counsel, guidance, and support of Charles K. Williams, II, as well as Julian Siggers, the Williams Director of the Penn Museum, Amanda Mitchell-Boyask, executive director of



Figure 33: The participants in the Cultural Heritage Education Program in front of the so-called “Tomb of Solon” at Kümbet, in the Phrygian Highlands. Photo by Gebhard Bieg.



Figure 34: Ramazan Parmaksız explains faunal analysis to the participants in the Cultural Heritage Education Program. Photo by Gebhard Bieg.

development at the Penn Museum, and the Museum's Board of Overseers.

We would like to close by noting again that none of our accomplishments this summer would have been possible without your encouragement and generous support. It is a pleasure to acknowledge, in particular, the assistance offered to us by the Penn Museum of Archaeology and Anthropology, the C.K. Williams II Foundation, the Merops Foundation, the Selz Foundation, the Areté Foundation, and Matthew J. Storm, C94, WG00, and Natalia Arias Storm. At this particular time, when

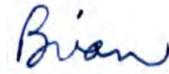
the cultural heritage of so much of the Middle East has disappeared so rapidly, we're grateful for the investment that you've made in the preservation of the past.

We hope to be able to share our results with more of you during this year, at lectures in the U.S. or at Gordion itself. You'll find the latest information about the project on our website:

<https://www.penn.museum/sites/gordion/>

We look forward to welcoming you to the site!

With best wishes,



C. Brian Rose

James B. Pritchard Professor of Archaeology, Penn Museum
Director, Gordion Archaeological Project



Ayşe Gürsan-Salzmänn
Penn Museum

Assistant Director, Gordion Archaeological Project



Figure 35: The 2019 Gordion team with Charles K. Williams II in the center. Photo by Gebhard Bieg.

The Friends of Gordion support the ongoing activities of the Gordion Excavation Project, which include site conservation, fieldwork, and publications of the latest discoveries. All Friends of Gordion receive the annual newsletter that provides information about the results of the season's work. Friends are especially welcome at Gordion and are given guided tours of the site, the excavation, and the museum. Every contribution, no matter how small, enables us to further the cause of protecting and publicizing the site. You can support Gordion by making your tax deductible donation at

<https://www.penn.museum/sites/gordion/friends-of-gordion/>

