



FRIENDS OF GORDION

NEWSLETTER



Fig. 1: The citadel of Gordion looking toward the mudbrick fortifications that were destroyed by the Persians. The tumuli or burial mounds are visible in the distance.

The 2011 season at Gordion has just ended, and we wanted to share with you the high points of our fieldwork and research during the course of the summer. As in past years, we devoted more attention to the study of previously excavated material than to new excavations, although fieldwork in and around the citadel continued to occur, as did geophysical prospection (fig. 1). In the course of the summer we worked in over 10 different sectors of the site, and altogether there were over 30 scholars and scientists who were members of the team.

Remote sensing

The 2011 season witnessed a continuation of the intensified remote sensing program that we began last year, which included two geophysical teams: four from the National Aeronautics and Space Administration (NASA) in Washington DC (Compton Tucker, Joseph Nigro, Dan Slayback, Jennie Sturm), and two from GGH Geophysics Company in Freiburg, Germany (Stefan Giese and Christian Huebner). Both teams used magnetometry, which involves walk-

ing over fields with a machine that measures variations in the magnetic fields of buried structures (fig. 2). In this way, they can prepare a map of buildings and streets that are still unexcavated.

Last year, at the southern end of the large Phrygian street that cut through the mound, we uncovered evidence for a monumental gate, the upper section of which was built of mudbrick, while in the Lower Town, south of the citadel mound, we found traces of several streets: one runs from the gateway mentioned above

toward the south side of the mudbrick fort of Küçük Höyük; the other runs east and north toward the monumental Phrygian Gate on the east side of the Citadel Mound. There is evidence for several very large buildings along the sides of this street, one of which measures approximately 28 × 15 meters.

During 2011 we focused on the region between the mudbrick fort of Kuştepe and the northern end of the Citadel Mound, which again showed traces of streets flanked by large structures, many of which were at least 20 m long (fig. 3). These buildings appear to extend all the way from Kuştepe to the northern edge of the Citadel Mound—a distance of over 330 meters. These results are in harmony with the abundant sherds that are still found on the



Fig. 2: Magnetic Prospection in progress near the citadel mound.



July 2011, Stefan Giese, Christian Hübner

Fig. 3: Results of magnetic prospection in the area north of the Citadel Mound. The red and black lines are fortification walls; the red lines are buildings; the yellow lines are streets.

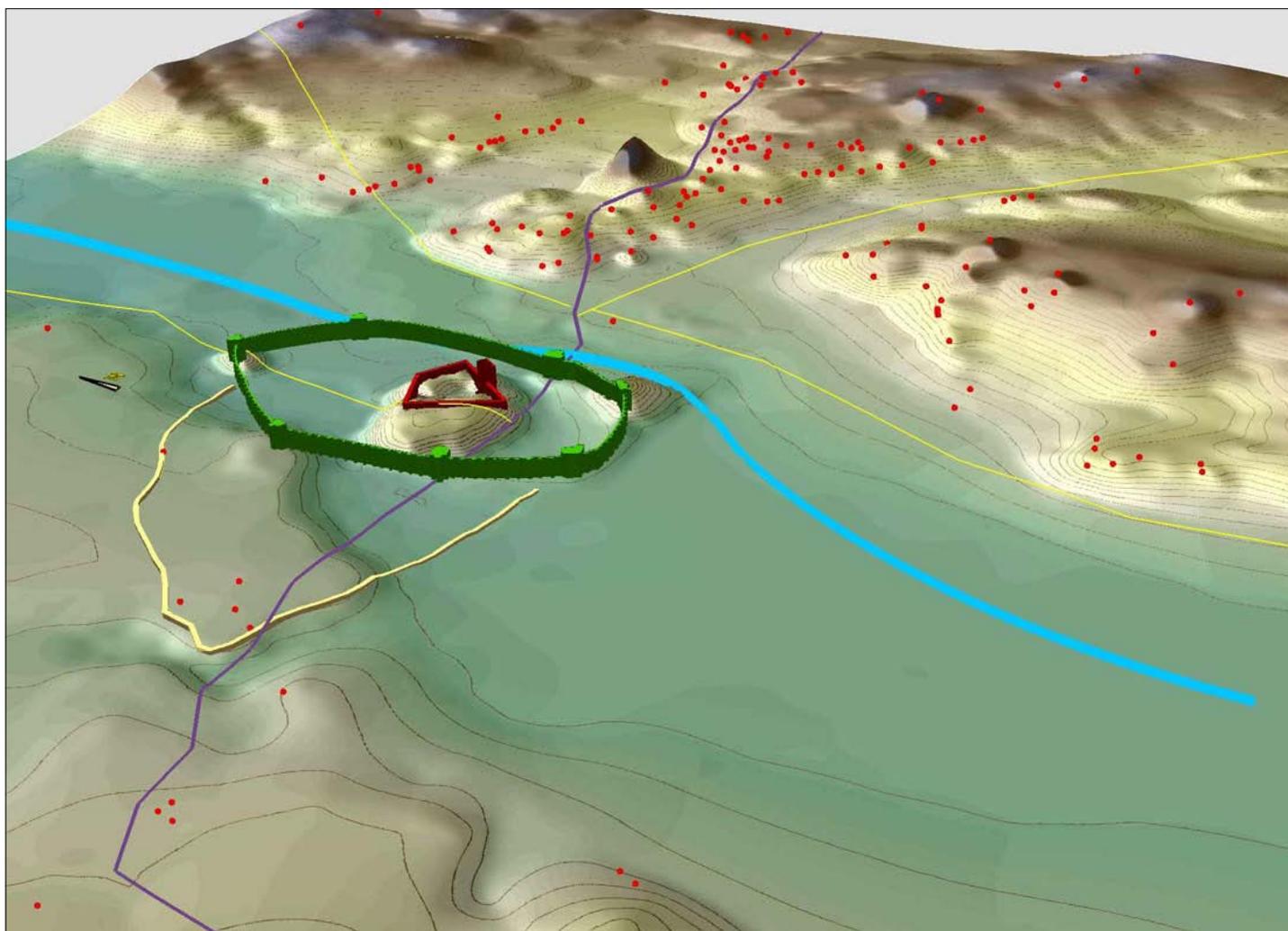


Fig. 4: Reconstruction by Ben Marsh of the fortification system of Gordion during the Middle Phrygian period (8th-6th c. BC). The blue line is the Sakarya River; the green lines are the Lower Town fortifications, and the yellow line (at the left) is the Outer Town fortification.

surface in this area, and demonstrate that the northern part of the Lower Town was just as densely occupied as the southern district.

Part of the “Outer Town” (to the west of the Lower Town) was also fortified: when we began magnetic prospection in the northwestern sector of our target area, we detected an additional fortification wall as well as magnetic traces of substantial buildings within that fortified area, one of which was still standing. An unpublished reconstruction by Bucknell University Prof. Ben Marsh shows the likely situation (fig. 4: yellow wall). Magnetic prospection has proven particularly effective in iden-

tifying the tomb chambers within burial mounds or tumuli, including ancient robbing tunnels, and we should eventually be able to compile a full list of which mounds would be most potentially productive for excavation.

Tumulus MM

There are almost a hundred burial mounds dominating the gently rolling landscape, most of which date between 900 and 500 BC (fig. 1). The largest of these, nearly 53 m in height, has been identified as the tomb of Gordias (*ca.* 740 BC), the father of the legendary king Midas, who actually lived in the eighth century BC. The tomb cham-

ber is the earliest known intact wooden structure in the world (figs. 5–7).

In continuing his study of the tomb



Fig. 5: Penn graduate students Peter and Elvan Cobb measuring within the Tumulus MM tomb chamber.

chamber, Richard Liebhart of the University of North Carolina, Chapel Hill, discovered four Phrygian inscriptions on one of the wooden roof beams, which no one had seen before (fig. 6). Subsequent investigations indicated more graffiti just beyond the fourth name in the narrow space between the inscribed beam and the adjacent, non-structural beam. Another set of poorly preserved Phrygian letters was found at the other end of the beam. The first name found—Sitsidos—is previously attested at Gordion: it had been inscribed in wax pressed into the rim of a large bronze bowl that was used at the funeral banquet *ca.* 740 BC. The portion of the inscribed beam still hidden from view by the adjacent beam measured 8 meters—room enough for the names of all the members of the funeral party—an exciting possibility for sure.



Fig. 6: Phrygian names on one of the beams in Tumulus MM.



Fig. 7: Removing the roof beam in Tumulus MM.

After the 2010 season, we were granted permission to lift, document, and replace in turn 3 separate sections of the beam adjacent to the inscribed beam. Richard Liebhart again supervised the operation. No new inscriptions were discovered after the beam was removed, leaving us to wonder about the purpose of the names. Nothing like this has ever been found before in an Anatolian tomb. The names must have been inscribed while the beam rested on the floor, at the end of the funeral service, to which one of the signers, Sitsidos, was invited. It is not inconceivable that they played some role in the construction of the tomb, although this is a mystery that remains in search of an answer since we have no evidence for any other tombs that were “signed.”

Site Conservation

Stabilizing and conserving the citadel of Gordion is one of our highest priorities, and it has always been one of our most dif-

difficult projects. Many of the buildings are constructed of mudbrick, which decays quickly, and the winter rains consistently undermine the buildings' foundations. Moreover, the Middle Phrygian Gate was constructed directly above its predecessor, and its massive weight has caused cracks in the earlier gate's walls. In 2007 we devised several strategies for combating these problems and launched a Five-Year Site Conservation Plan, which has been supported by the George B. Storer Foundation, the Penn Museum/1984 Foundation, the Selz Family Foundation, the Global Heritage Fund, and the J. M. Kaplan Fund. The conservation master plan is overseen by Frank Matero, Penn Professor of Historic Preservation, with Elisa del Bono serving as field conservation director.

Within the walls of the Terrace Build-



Fig. 8: Installing steel cables for stability in the Early Phrygian Terrace Building walls.



Fig. 9: Installing “soft-capping” on the Early Phrygian Gate at Gordion.

ing we incorporated a new network of steel cables that maintain the walls' stability (fig. 8). Additional durability is provided by "micro-grouting" of cracks in the original blocks of the buildings. The grout in question is composed of lime, sieved brick dust, and sand, and is applied by means of injection to seal cracks and re-adhere detached portions of the masonry. The newly conserved walls have also been topped by a "soft cap" of vegetation, entailing the installation of a mud-brick frame above the walls, within which are placed the soil/sods of a shallow rooted perennial vegetation (*Poa*) collected near the mound (fig. 9). This technique prevents the accumulation of water within the wall and provides greater flexibility for the stones during different climatic conditions. The walls of the Early Phrygian Gate are now constantly subjected to structural and environmental monitoring in order to detect any change in the stability of the stones.

Clearing the Area of the Early Phrygian Gate

The most significant change to the appearance of the mound occurred in front of the monumental gate complex on the eastern



Fig. 10: The Early Phrygian Gate and Glacis before the start of work.

side of the mound. During the course of several days we removed a large dump of earth that had been deposited during the 1950s on the southeast side of the Citadel Mound, in front of the Middle Phrygian glacis (figs. 10–12). The glacis is a stepped retaining wall constructed of colored stones, above which the Middle Phrygian gate rose. Only the area immediately in front of the glacis had been excavated, which meant that visitors approaching the mound could not see it unless they were standing next to it, and even then, its re-

lationship to the other buildings on the mound was not clear.

We realized that by removing the dump we could highlight the monumentality of the glacis to visitors approaching the site. This would also mean that the visitor's first view of the site would consist of the glacis as well as the Early and Middle Phrygian Gates above it. Altogether, we removed 37 truckloads of earth from the dump, all of which were carefully monitored for cultural material such as pottery and bones. One block had clearly fallen from the glacis,



Fig. 11: Repositioning a stone on the stepped glacis.



Fig. 12: The Early Phrygian Gate and Glacis after removal of the dump.

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ERKEN FRİG KAPISI EARLY PHRYGIAN GATE

YASSIHÖYÜK / GORDION



Şu anda, M.Ö. 9. yüzyılın sonlarına tarihlenen Erken Frig sitadelinin girişinin önünde durmaktasınız. Kesme taştan yapılmış olan duvarlar, olağan üstü bir şekilde halen 10 metre yüksekliğe kadar ayakta durmaktadır. Sitadelin kapı planı basit ve geleneksel olup, düz bir koridorun sonunda iç kapıya bağlanır. Sur kapısı, depo amacıyla da kullanılmış olan iki kale burcu ile korunmaktadır. M.Ö. 800'lerde sitadel yeniden yapıldığı sırada, Erken Frig kapısı tamamen gömülmüştür. Bunun sonucu olarak, Anadolu'da Demir Çağı'na ait en iyi korunmuş sur kapısıdır. Yeniden yapılanan sitadel, eskisinden dört, beş metre daha yüksekte kurulmuştur. Yeni sur kapısı da eski kapının üzerine ve biraz önüne denk gelecek şekilde inşa edilmiştir. Erken sur kapısından daha görkemli olmasına rağmen, bu yeni sur kapısı iyi korunmamıştır. Kapının moloz temelleri, basamaklı ve 20 metre yüksekliğe ulaşabilen, renkli taşlardan yapılmış bir istinat duvarı ile yerinde tutulmuştur.

You are now standing in front of the entrance to the Early Phrygian citadel of the later 9th century BCE. Remarkably, the stone walls still stand to a height of about 10 meters. The gate has a fairly simple, traditional plan, with a straight corridor leading to a portal at the inner end. It is protected by two flanking bastions that were also used for storage. This is the best-preserved gate complex known from Iron Age Anatolia because it was deliberately buried, virtually intact, when the citadel was rebuilt ca. 800 BCE. The rebuilt citadel was constructed four to five meters higher than the earlier level. The new gate was built on top of and forward of the old one. It was grander than its predecessor but it is far less well preserved. Its massive rubble underpinning was kept in place by a stepped retaining wall of multi-colored worked blocks that may have risen as high as 20 meters above the outside ground level.

M.Ö. 9. yüzyılda Erken Frig sur kompleksinin, citadelin doğrudan doğruya yaklaşılan bir ziyaretçinin görmüş olduğu şekildedir yeniden inşası. Rekonstrüksiyon Gabriel Pizzano and Gareth Darbyshire tarafından hazırlanmıştır.

Conceptual reconstruction of the Early Phrygian Gate Complex as it would have appeared to a visitor approaching the citadel from the east in the 9th century B.C.



TUMULUS MM



Erken Frig sur kapısı kompleksinin 1950'lerde yapılan kazılar sırasında görünümü. Tumulus MM'e ve yanındaki mezar tepelerine bakıyordunuz.

The Early Phrygian Gate Complex during excavation in the 1950s, looking west toward Tumulus MM and the adjacent burial mounds.

Erken Frig sur kapısının balondan çekilmiş fotoğrafı.

Balloon photo of the Early Phrygian Gate Complex.



Fig. 13: One of the new signs for the Visitors' Circuit.

and it was repositioned (fig. 11). Gordion now looks as if it had been the capital of a kingdom, whereas before it did not, at least from the entrance (compare figs. 10 and 12).

Visitors' Circuit

The other major change to the appearance of the mound involves the new visitors' circuit. Nine pavilions designed by Penn Architecture Professor Lindsey Falck have been installed in predefined lookout points

of interest around the Citadel Mound. The pavilions are composed of a woven canvas roof anchored by galvanized steel posts, and have been designed to provide shade to visitors at each viewing station. New multi-colored signs in Turkish and English will provide clear and concise overviews of the history and archaeology of the site (fig. 13). We've also completed a new set of stone masonry stairs along the tourist path to make the circuit easier to navigate, while the existing barbed wire fencing is being

replaced by galvanized wire.

Publication

The publication of research, excavation, and conservation at Gordion reached a new high this year in that six volumes either appeared or were in press. These include Elizabeth Simpson's *The Furniture from Tumulus MM*, Naomi Miller's *Botanical Aspects of Environment and Economy at Gordion*, Lynn Roller's *Incised Drawings*

from *Early Phrygian Gordion*, *The Archaeology of Phrygian Gordion* (the proceedings of the conference that was held at Penn in 2007), *The New Chronology of Iron Age Gordion*, and *Gordion Awakened*, which details the conservation activities at the site during the last four years. The new Gordion website will have been translated into Turkish by the end of the year, as will a small bilingual guidebook to the site. All of these initiatives are part of an increased outreach program intended to make the site more accessible to scholars, the public, and the local community.

Our work during the 2011 season was

made easier due to the energetic support of our representative, Mr. Halil Demirdelen of the Museum of Anatolian Civilizations in Ankara, and Mr. Melih Arslan, the Museum's director. We also extend warm thanks to the General Directorate for Cultural Properties and Museums, especially Mr. Murat Süslü and Mr. Melik Ayaz, for their assistance and guidance.

We would like to close by noting that our work and our discoveries are directly dependant on the generous support of people like you, and we take pleasure in acknowledging the help that you've given us so far. During the summer we were for-

tunate in that several Friends of Gordion visited the site and offered their advice, encouragement, and help. We hope to be able to share our results with even more of you during this year— both in lectures in the U.S. and at Gordion itself. For those of you with access to the internet, you will find the latest information about the project on our website:

<http://sites.museum.upenn.edu/gordion>

Thanks again, and we look forward to welcoming you to the site!

With best wishes,



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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 <http://sites.museum.upenn.edu/gordion/about/friends>

