## EXCAVATIONS AT SARDIS IN 1964

Prof. Dr. George M. A. HANFMANN

and
Prof. A. Henry DETWEILER

The seventh campaign at Sardıs began early in june and ended in mid-September. Excavations were carried on from june 20 through September 4. The Har-vard-Cornell expedition was sponsored again by the American Schools of Oriental Research and supported by grants from the U. S. government made through the Department of State, from the Bollingen Foundation and the Corning Museum of Glass, and funds provided by the two universities.

Under the grant made by the Department of State, the following served as trainees: Fikret Yeğü (Middle East Technical University, Ankara), architect and draftsman; Recep Meriç (University of Ankara), archaeologist-conservator; and Metin Kunt (Robert College, Istanbul), archaeologist-translator.

Docent Dr. Enver Bostancl (University of Ankara) continued research work on anthropological material under the same grant. He published an article on «An Examination of Some Human Skeletal Remains from the Sardis Excavations", Antropolaji I: 1, Ankara Üniversitesi, Dil ve Tarih - Coğrafya Fakültesi 1963, 121-131.

Dean Prof. Dr. Sabri Doğuer (Veterinarian Faculty, University of Ankara) prepared a report on skeletal remains of animals under the «Fauna of Ancient Sardis" project.

Professor Louis and Mme. Jeanne Robert continued work on the inscriptions
from Sardis. Professor Robert has published the first monograph of a series designed to make known rapidly the more significant epigraphic finds. Published by the Archaeological Exploration of Sardis, Nouvelles Inscriptions de Sardes, Ier Fascicule, A. Maisonneuve, Paris, 1964, contains studies on Décret héllenistique de Sardes; Dédicaces aux dieux indigènes; Inscriptions de la synagogue.

In July, Mr. Paul Perrot, Director, and Dr. R. H. Brill, Administrator of Scientific Research, Corning Museum of Glass, studied our glass finds.

Experiments with a new method of archaeological recording by means of stereo-photography were made by Mr. Julian Whittlesey.

Professor James W. Yarnell (Cornell Univesity) initiated preliminary studies and began the work on restoration of the monumental gate in the west wall of the «Marble Court» of the Roman gymnasium (Figs. 6, «Marble Court»; Figs. 16, 17, 20). In this combined operation Prof. Yarnell was assisted by Mr. M. T. Ergene (Robert College), Mr. Ralph Iler (Cornell), and Mr. Yeğul for architecture and construction. Prof. D. G. Mitten, Mr. J. H. Kroll (Harvard), and Mr. Steven Lattimore (Princeton) supervised the archaeological work; and Mr. Lattimore, Mr. J. G. Pedley (Harvard) and Prof. Robert collaborated in the restoration of the great Imperial dedicatory inscription which has provided basic data for the dimensions of the
entablatures of the ornamental structures within the court.

Excavations within the city area brought promising rseults in the sector «Pactolus North» (Fig. 1, No. 10; Fig. 2). Here Prof. Noel D. Robertson (Cornell) was able to distinguish five periods ranging from the early sixth century to ca. 200 B. C. The first three periods feature Lydian residential units, the best preserved found by our expedition so far. Thus Unit I has walls preserved up to the height of ca. 1 m . as well as a clearly recognizable door. Units of the first period were destroyed by fire, possibly in 547 B. A. when the Persians took Sardis. A second conflagration destroyed units of the second period, possibly when Sardis was burned down by the Ionians in 499 B. C. Thereafter the western part of the excavated area was flooded; thus an important datum is gained for distinguishing the earlier Lydian and the later PersianHellenistic phases. A. carefully built well was found in the eastern part of the excavation; it belongs to the Persian era. A floor of pebbles and a tile kiln are apparently Hellenistic. They may be associated with the destruction and subsequent rebuilding of Sardis during and after the siege undertaken by Antiochus III between 215 and 213 B . C.

The Lydian dwellings shov a dense pattern of habitation. They stand on shallow terracing walls. Traces of such terracing arrangements have been found to the very edge of the eastern bank of the Pactolus.

Among the considerable finds of pottery are fragments of Eastern Greek pottery (Figs. 3-4) and Attic black-figure (Little Master cup, late archaic olpe). Fragments of rock - crystal found in context of the second Lydian level (547-499 B. C.?) indicate that luxury crafts were practised nearby. A fine pendant in the shape of a lion (Fig. 5) was found in unstratified fill, but is probably Lydian.

The unencumbered area to the north of the present excavation offers the exciting prospect of approaching the agora, which, according to Herodotus, lay astride the Pactolus.

In the Lydian Trench (Fig. 6, «Lyd. Tr.») Dr. G. F. Swift, Jr. and Mr. Lattimore dug a sounding in depth in the southwest corner. Archaic Lydian buildings lay around *99. level. The burned clay floor which we associate with the destruction of Sardis by the Cimmerians lay around *97 (Fig. 8). Several circular pits had been dug down from it in ancient times (Fig. 7). The deepest well-defined level, reached in the eastern part of the trench at ca. *96, is shown by Greek Geometric and Protogeometric sherds to be not later than the ninth century B. C. A type of native pottery not hitherto recorded is represented by fragments of a large vase painted in three colors (Fig. 9). The most important find from the archaic level, from a findspot of the second half of the sixth century B. C. is the first Lydian dipinto inscription (Fig. 10). It ran in two lines around the shoulder of a black - on-red jug. Mr. Pedley and Dr. R. Gusmani (by letter) read the incomplete upper line : $k a \lambda$; lab $\lambda$ : Frit; and the lower tâka. Dr. Gusmani points out that lab入 is possibly the oblique case of leb, lef, the name of the Lydian Zeus. The text, then, was presumably a dedication to that divinity.

Two large trenches were dug from the flat - topped hillock above the Lydian Trench and «House of Bronzes» area. Named «Middle Terrace East» (Fig. 6, «Middle Terrace E., ) the eastern trench started from a trench dug in 1959 (UT, cf. Dergi X : 1, 1960, 27, fig. 4, trench II) and descended from a level of *117 (at E 75/S. 175) to *101 (at E $40 / \mathrm{S} 120$ ). It was enlarged in east - west direction to expose part of the colonnaded Late Roman street which has also been found farther to the west. As may be seen in the plan (Fig. 11) and photograph (Fig. 12) only the sout-
hern colonnade was found in the expected position. Instead of the northern colonnade an open area extended from S . 124 to S. 120. It was bounded on the north by walls of a substantial Roman building. The upper part of the trench cut through an enormous dump some 12 meters high (ca. *117-105). The alternating layers of animal bones and fill yielded much pottery, lamps, and terracottas (Fig. 13) such as the late Roman actor's mask.

The character of the newly discovered colonnaded Roman street was more clearly discernible in the trench known as «Middle Terrace West» (Fig. 6, «Middle Terrace W.»). The actual road is ca. 7 meters wide. Colonnades with small columns line both sides. Roman marble slabs from monuments of the second and third century are used in the stylobate. This street whose course is followed very precisely by a modern dirt road appears to be a major thoroughfare and may be the continuation of the Roman-Early Byzantine street found in sector «Pactolus North" (Dergi XII : 1, 1962, 28, fig. 6 ). Alang the slope south and above the road are several terraced units of Roman and Early Byzantine structures. During the last part of the campaign the trench was extended northward from S. 165-135 (not yet entered in plan Fig. 6). After crossing some Early Byzantine walls the trench reached an open area. Here, at a level of ca. *100. 5 a stratum with Lydian archaic Greek pottery was encountered and the stub of a Lydian or Persian wall emerged. An interesting herm showing a youthful, cloaked figure was found in the area of the street (Fig. 14). Its style suggests a date not later than the first century A. D.; it may even be Late Helenistic. An unusual fragment of pottery from the northern part of the trench ( W $21 / \mathrm{S} 148$ ) is decorated with the figure of a warrior in relief (Fig. 15, height 0.095 m ). It recalls Late Roman historical reliefs.

North of the Salihli highway, Professor D. G. Mitten tried to clear the eastern
end of the synagogue (Fig. 6, «Synagoguen). He found evidence that the eastern end of the synagogue was rebuilt in the sixth century A. D. to serve as fortification. Further excavation is needed before the complicated history of this part of the structure and of the area to the east of it can be clearly understood. Prof. Mitten completed the excavation of the «Latin inscription» shop on the south side of the Synagogue and found the upper part of the statue of a Dionysos trapezophoros of which the lower part had been discovered in 1963. Another shop along the southside of the Synagogue yielded evidence of a staircase; a considerable amount of glass was found.

Just east of the main hall «B» of the Roman gymnasium and in line with the southern part of the synagogue Mr. J. H. Kroll excavated parts of two units. Preserved on the eastern wall of one of these were fragments of wall painting in purple on white ground showing architectural motifs (arcades?) and parts of an inscription euloge (itos ho theos), «Praised be the Lord.» Through the efforts of Prof. L. Majewski, Mr. R. Stone, and Mr. Meriç this fragment has been consolidated and detached. The inscription seem to indicate that these rooms belong to the synagogue complex.

To facilitate examination of soil and foundations by Prof. Yarnell, the rear wall of the «Marble Court» was excavated along its western face turned toward the main hall of the gymnasium (Fig. 6; Fig. 16, E. 5-15), the room south of the court (Fig. 16, E17-34/N. 23-40) was cleared entirely, and a narrow room which adjoins it on the west was cleared in part (Fig. 16, E. 11-15.5/N. 06-38). A secondary brick construction in the northeast corner may be a furnace. A remarkable head (Figs. $17-$ 18) was apparently originally a long-curled Apollo; it was re-carved into a portrait in the fifth century A. D. Mr. Lattimore in charge of the work in this area; also cleared the south wall of the room
to the north of the Marble Court (Fig. 16, E. $16-34 / \mathrm{N} .83$ ) and dug test pits in front of the eastern screening colonnade (Fig. 16, ca. E 34? N). They disclosed that the foundation of the screen colonnade descends to below the astonishing depth of six meters. Subterranean rubble vaults orientated east-west run up against this foundation from the east (Fig. 19). They may have formed part of a gigantic terracing system which supports the palaestra.

Excavation along the west wall of the «Marble Court» exposed a sequence of semicircular and rectangular niches (Fig. 16, E13-14; Fig. 20) with water installations. They may have served as fountains which emptied into a long drain running north-south under the floor (along grid line E 16 in Fig. 16). The base of a statue of the emperor Caracalla (212217 A. D.) was found at E10/N. 66 (Fig. 21). According to Prof. Robert, this unit, of which only a small part is yet known, was probably the aleipterion (oiling room) mentioned in the dedicatory inscription found in the Marble Court. After the last piece of this inscription was excavated in the northern apse of the Marble Court, it became possible to reconstruct the entire text. It reveals, among other things, that the aleipterion was built from foundations up with «the entire decoration of stone» and that «the work was gilded at the expense of the city and of Claudia Sabina and Flavia Politte, consular women.» Claudia Sabina is presumably the same Claudia Antonia Sabina, whose maussoleum and luxurious sarcophagus was found in 1913 by the Frist Sardis Expedition (C. R. Morey, Sardis V: 1).

The scaffold visible in Fig. 20 was constructed under supervision of Prof. Yarnell to enable us to lift in place the parts of the monumental gate in the western wall of the Marble Court. Work has been carried forward with the reconstitution of parts of the spiral columns of the gate; and a missing base has been
replaced by a replica of concrete and Portland cement.

On the north slope of the acropolis, C. H. Greenewalt, Jr. excavated during the first three weeks of the season an additional stretch of the tunnels which descends through the bastion-like cliff in the center of this side of the citadel (Fig. 1, No. 15); for previous work cf. Dergi XII : 1, 1962, 31, fig. 22. A secondary entrance was found but the tunnel still continues. The secondary entrance was blocked up with a rubble wall in Byzantine times. Sgraffiato pottery and a coin of the twelfth century A. D. prove use of the tunnel in the Middle Byzantine period; it is still uncertain when the tunnel was made.

At the Royal Cemetery of Bin Tepe, through the energetic efforts of the Commissioner Mr. Kemal Ziya Polatkan, Director of the Manisa Museum, a camp was established and the necessary materials for building, lighting, and ventilation of tunnels secured. Mr. Haydar Gezik, mining engineer, G. L. I. Soma, acted as mining consultant, and professional miners supervised the work. Mr. Muharrem Tağtekin was subsequently resident Commissioner. Most of the archaeological work was supervised by Mr. Grawford H . Greenewalt, Jr. (University of Pennsylvania) with Mr. Steven Lattimore, Prof. Hanfmann, and other staff members also taking part. Surveying and architectural work was entrusted to Messrs. A. Seager, Ralph Iler (Cornell) and M. T. Ergene. Between June 28 August 15 a main tunnel was driven from the south to the point under the highest point of the mound known as Karnıyarık Tepe, or «BT 63.1». (Figs. 22, view from south; 23, plan, «mkr A»). No evidence of a burial chamber appeared.

A considerable system of ancient tunnels in the southern part of the mound was partially explored (Fig. 23, tunnels « $B$ », « E », «F», «G», «I», «L», «M», «O», « $P$ », « $Q$ »). Tunnels « $O$ » and « $P$ » were
short trial holes. Tunnels «L», «G», «Q» have been traced to their northern ends; tunnel «I» has been traced to its northeastern end, but is blocked by a wall at its western end. Tunnels «B», «E», and the southern end of «G» have not been explored. These «robbers' tunnels»are Competently made, by one miner working at a time. They are ca. 2 feet wide and up to 6 feet high (Fig. 24). As found, they are usually filled with loose earth to within about a foot of the ceiling. Whereas our own tunnels were shored up in intervals of ca. 1 meter, the ancient tunnels show no traces of shoring. The only clue to their date is given by a vase (Fig. 25) found on the bottom of niche «N» (Fig. 23). Tentatively, we consider this vase to be Roman.

On July 15, Mr. Lattimore reported that a large stone wall was appearing ca. 45 m . from the center of the mound. Named subsequently «Lydian wall» (Fig. 23), this wall consists of monumental limestone masonry of two courses surmounted by a nearcircular crown (Figs. 26,27 ). The total height is about 1.70 m . The height of the lower course varies from 0.59 to 0.67 m ., that of the upper course is around 0.56 m ., that of the crown varies from 0.52 to 0.56 m . Where finished, the masonry (which reaches lengths of 1.77 m . for wall, 1.91 for crown) shows drafted edges and very careful bevelling (Fig. 27). Within the first 35 meters (from ca. 6.6 to ca. 34 m .) east of our main tunnel, a deeply carved monogram, $0.09-0.20 \mathrm{~m}$. high, is repeated ten times on the upper masonry course (Fig. 28). We decipher it tentatively as Gu-Gu, the name of king Gyges (ca. 680-648 B. C.), founder of the mermnad dynasty. Twice there are two swasticas, lightly incised, one above the other (Fig. 29). An Alpha upside down and the Lydian sign lying on its side occur once each. The wall was pursued eastward following a grave robbers' tunnel. This tunnel stopped after 53 meters; after but one meter more we, too, were compelled by lack of time
to stop, although the wall continues northward (Fig. 23). To the west, the wall breaks off about two meters west of our main tunnel. Whether or not it continues westward after this interruption is not yet known.

This wall displays various stages of completion. Our theory is that it was intended as a crepis for an earlier smaller mound with a diameter of ca. 90 meters, which was begun by Gyges during his lifetime. After Gyges fell in battle against the Cimmerians, the area of the mound was enlarged to a diameter of ca. 210 meters, probably by the son and successor of Gyges, who wished to do honor to the memory of his father. Whether this was done before the first mound was poured and the burial made or some time after Gyges' death, when the burial had already taken place and the smaller mound was complete, we cannot yet tell.

After a sufficiently long stretch of the wall had been excavated, Messrs. Iler, Seager, Ergene, and Whittlesey attempted to calculate the theoretical center of the circle presumably formed by the wall. Because of displacement of individual stones and imperfect setting, these calculations produced not one but several possible «centers». They are indicated as «group of centers of crepis wall» on the plan Fig. 23. During the last days of the excavation we attempted to turn our tunnel toward this area, but time was too short, and the excavation ended on September 4.

To safeguard the tunnels and the mound against illegitimate intruders, a large stone portal with an iron gate was installed at the tunnel entrance. A guard house was built and two guards engaged to protect this extraordinary munument during our absence.

## ILLUSTRATIONS

Fig. 1. Sardis Excavations 1964.
Fig. 2. Lydian units in Sector «Pactolus North». Foreground left : Unit I.

Fig. 3. Fragments of Eastern Greek pottery.

Fig. 4. Fragment of Eastern Greek pottery. Goose and hedgehog.
Fig. 5. Rock crystal pendant in shape of a lion.

Fig. 6. Plan of excavations in «Lydian Trench», «Middle Terrace» and Gymnasium sectors, 1964.
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Fig. 8. Sectional elevation of sounding in the «Lydian Trench».

Fig. 9. Fragments of Lydian Geometric Vase.

Fig. 10. Fragment of black-on-red jug with painted Lydian inscription.

Fig. 11. Plan of Trench «Middle Terrace East» (HOB).

Fig. 12. Late Roman Street and adjacent area, from the north, sector «Middle Terrace East» (HOB).
Fig. 13. Roman terracotta mask from «Middle Terrace East».

Fig. 14. Marble herm from «Middle Terrace West».

Fig. 15. Late Roman Fragment of terracotta relief from «Middle Terrace West».

Fig. 16. «Marble Court» plan 1964.

Fig. 17. Marble head of Apollo (?) recut as portrait; front view.

Fig. 18. Marble head of Apollo (?) recut as portrait; profile.
Fig. 19. Section of a vault east of the screen Colonnade, «Marble Court\%.

Fig. 20. Trench along west wall of «Marble Court» (right).
Fig. 21. Base inscribed to Emperor Caracalla.

Fig. 22. Karnyarık Tepe (BT63.1) ${ }^{\text {© }}$ from South, 1964.

Fig. 23. Plan of ancient and modern tunnels in the southern part of Karnıyarık Tepe, 1964.
Fig. 24. View of «robbers' tunel» «L», 60 meters inside the mound from tunnel entrance.

Fig. 25. Roman (?) Vase found in niche of «robbers' tunnel».

Fig 26. «Lydian Wall» found within Karnıyark Tepe.
Looking east.
Fig. 27. Detail of «Lydian Wall». Part of crowning member and upper masonry course.
Fig. 28. Incised monogram (GuGu?) on «Lydian Wall».
Fig. 29. Swasticas (one on upper, one on lower course), «Lydian Wall».

## SARDIS EXCAVATIONS



Fig. 1.


Fig. 2.



Fig. 4.


Fig. 5.


Fig. 6.


Fig. 7.


HOB $\cdot 47$
H.O.B.

LYDIAN TRENCH
SECTION-LOOKING SOUTH

AUGUST - 1964


Fig. 8

$6^{-5!4}$



Fig. 11 .


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10
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Fig. 16.

Fig. 17.


Fig. 18.


Fig. 19.



Fig. 21.




Fig. 24.

Fig. 25.



Fig. 26.

Fig. 27.



Fig. 28.

Fig. 29.


