

Figure 1. Plan of the city mound at Gordion after the 1951 campaign, showing trenches and buildings of the sixth-century level.

PROGRESS AT GORDION, 1951-1952

A comparison of the plan of the city mound at Gordion as it was left at the end of the 1951 season (Fig. 1) with that published in the BULLETIN, Vol. 16, No. 1, Pl. II, at the end of the first campaign will show at a glance not only the progress made, but also how the work has been concentrated on the southeast part of the mound. Our main trench is now nearly two hundred meters in overall length, and in places as much as fifty meters wide. The deep sounding to the north of it has been considerably enlarged to expose the full extent of the archaic building contained in it, and expended southward until it nearly meets the main trench. In addition to the work done on the city mound, eight more grave tumuli have been dug, and a sounding made on the mound to the southeast of the city.

This very considerable amount of digging entailed the services of a large staff over a considerable period. Work was started on April second and continued until early July, then suspended during the wheat harvest to be resumed in August and continued through October. During the spring and early summer the writer was in charge; for the late summer and fall Dr. Edwards took over. Miss Dorothy H. Cox was our architect, and Miss Ellen Kohler in charge of records, cleaning, and mending. Mr. Raci Temizer was again the representative of the Turkish Archaeological Service and did much to facilitate the smooth running of the work. Miss Machteld Mellink and Miss Mabel Lang of Bryn Mawr again spent their summer vacations excavating at Gordion. E. R. Gallagher, a veteran of the first campaign, returned for the second, and two students from the American School at Athens, Miss Jeanny Vorys of Bryn Mawr and Charles Fleischmann of Yale, helped with the digging. Two students from European universities, Friederich Lapp of Bonn and Cornelius Hillen of Rotterdam, who was traveling and study-



Figure 2. Gordion: "King Midas Palace Hotel."

ing in the Middle East on a grant from the Netherlands Government, also took part. During the fall Miss Rebecca Wood of the Metropolitan Museum assisted Miss Kohler with the records, and Miss Marian Welker did drawings, profiles, and watercolors of some of the finds.

With such a large staff, and with numerous and distinguished visitors continually turning up, we felt somewhat cramped in our two village houses, so that it was decided to build our own expedition headquarters which would not only be more commodious but also would include such facilities as a shower bath and a photographic darkroom. The house (Fig. 2), which cost about \$5000.00, was planned by the staff and built of sun-dried bricks by local labor. There are now accommodations for fourteen persons as well as space for recording, mending, and storing finds, facilities for photographic work, etc. The house, which has been nicknamed "King Midas Palace Hotel," was ready for occupancy in the fall, and in 1952, though not filled to its capacity, proved to be very comfortable and satisfactory.

The building of the house was instructive, since many of the methods employed have evidently changed very little from Phrygian or even Hittite times. Especially in the making of bricks the same method must always have been used. Two wooden forms were made, open at top and bottom and divided internally by wooden cross-pieces. These forms were then laid on the ground and the mud, mixed with straw and water to the proper stiff consistency, was dumped into them from

wheelbarrows. After the top had been smoothed the forms were lifted, each leaving two full and two half bricks, which were then cured in the sun for several days before being turned over to dry on the other side. The output of five men was about 1200 bricks a day; probably the only modern touch was the use of wheelbarrows. Sun-dried brick is a building material which will last a long time if properly protected from the weather; the speed and ease with which it can be turned out in quantity is impressive and goes far to make understandable the accumulation of the huge ancient habitation mounds which are in great part the debris of houses and buildings once constructed of such bricks. "King Midas Palace Hotel" is, however, undoubtedly inferior in construction to some of the ancient buildings of sun-dried brick, as will be seen below; its walls, only sixty centimeters thick, are built entirely of brick, whereas our building of the sixth century B.C. has walls 1.50 m. thick, strengthened on their inner and outer faces by a heavy wooden framework.

In 1952 work at Gordion was on a very limited scale. In accordance with the general principle adopted by the Museum of interspersing years of excavation with years to be devoted to research and publication, that year was to be a period for study of the material already unearthed. An examination of the material showed, moreover, that in three fields we were sufficiently advanced to allow the undertaking of publication. The hoard of silver coins found in 1951, a unit in itself, had come to Philadelphia on a one-year loan for study and Miss Cox, an experienced numismatist as well as architect and archaeologist, has already completed and published her study of this hoard as a University Museum monograph entitled *A Third Century Hoard of Tetradrachms from Gordion*, the first of the Gordion series to appear. Two further studies are in progress: one on the graves of Hittite times found in 1951, by Miss Mellink, and one on the grave tumuli of Phrygian and archaic times dug in 1950 and 1951, by the present writer. In both cases, however, some further work and observation were necessary before publication could be undertaken. The cemetery had been dug in 1951 by Miss Vorys, and Miss Mellink felt the need for further digging, in order to augment the material already discovered, and to have an opportunity to observe at first hand the stratification, lay-out, and extent of the cemetery. In the case of the grave tumuli three had been left unfinished at the end of the 1951 season, and an effort had to be made to

find and dig the graves in these. It was therefore necessary for Miss Mellink and the writer to go again to Gordion in the spring of 1952, when work on a limited scale was done not only on the tumuli and in the cemetery, but also on the city mound where the cleaning and observation of the archaic level was completed preparatory to cutting deeper in the following campaign. This sixth-century or archaic level, the second from the top of the mound and probably to be assigned to the early years of the Persian Empire, has now been cleared over a very considerable area; in the 1953 campaign it will be possible to complete the study of the archaic buildings and to dig into the third or Phrygian layer of the city.

It has already been noted that work on the city mound has been confined to the southeastern part and concentrated there. The 1950 season had shown that at least one large building lay in this part of the town, and the numerous trenches made by the peasants all along the eastern and southeastern slope in order to obtain building stones were a further indication of the presence of buildings on a large scale. Before reaching this level, which lies between four and five meters below the surface, the thick deposit of later times had to be removed. Again the uppermost layer of Hellenistic times was observed to consist of four minor levels. The houses were built of sun-dried brick and stone rubble which had in great part been plundered from the earlier buildings beneath, much to their damage. These houses were neither substantial nor closely spaced. Most of them contained grinding stones for making flour, large storage jars or pithoi buried below floor level, and in many cases iron agricultural tools, particularly curved knives and sickles. The community seems to have been a farming one; no doubt the town with its market lay on the mound and its inhabitants tilled the fields around about. That these inhabitants had been under strong Greek influence since the visit of Alexander in 333 B.C. was attested not only by a fair number of potsherds bearing graffiti written in Greek, but also by a very considerable quantity of Hellenistic Greek pottery which had been imported, probably from the cities of the west coast. Locally-made imitations of the imported wares were fairly common, again illustrating the prevalent influence of the time. The stamped handles of wine-jars, mostly of Thasos and Rhodes, were fairly numerous and prove the consumption of imported wine at the tables of Gordion during the fourth and third centuries. A large terracotta figurine, 0.52 m.



Figure 3. Terracotta figure of Cybele.

in height (Fig. 3), may be identified as the goddess Cybele, crowned and seated on a throne with tympanum and patera in her hands. Though the goddess herself was Asiatic and traditionally Phrygian, her representation here is thoroughly Greek. The figure seems in part to have been moulded, in part modeled; it is on too large a scale to have been made completely in the mould. The head and the little winged sphinxes



Figure 4. Terracotta bust of Hellenistic times. An elderly man with equine ears, wearing a turban.

which support the ends of the arms of the throne were probably moulded, while the body and especially the drapery with its shallow incision-like folds seems to have been modeled and grooved free-hand. The whole was once gaily painted and traces of the color remain, especially a bright blue on the wings of the sphinxes. It seems unlikely that a figurine on such an ambitious scale was an original work; perhaps it reflects the type of some well-known cult statue of Cybele made by a Greek sculptor, which stood in one of the temples of the goddess. The terracotta was apparently highly valued by its owners, for it had been broken and carefully mended in ancient times. Another terracotta of the Hellenistic period is particularly interesting; it is a bust (Fig. 4) which portrays rather realistically a plump elderly man wearing a turban-like headdress which does not suffice to hide his long pointed equine ears. The figure might be interpreted as a silen, but a beardless silen would be rare, a turbaned silen even more rare, and a bust of a silen would seem to miss the point entirely. We prefer to see in the figure a portrayal of King Midas with his ass's ears and turban headdress—a figure appropriate enough at Gordion.

The pottery, amphora handles, and other small finds from the Hellenistic levels at Gordion attest a period of solid prosperity if not of grandeur during the fourth and third centuries. No evidence has so far been found for a violent destruction or sack of the city at the coming of the Gauls around the middle of the third century; apparently they settled down peaceably beside the Greco-Phrygian people who were already there. This is likely enough, since we are told that the country, which was under the loose control of the King of Bithynia, was given by him to the Gauls, in the hope that they would build up a strong buffer state on his eastern frontier. The hope was vain, for the Galatians indulged in plundering raids on their neighbors, which in the end involved the intervention of the Roman general Cn. Manlius Volso in 189 B.C. His punitive expedition upon its approach found the city abandoned, and apparently the greater part of it was never resettled. In any case, none of the small finds from this part of the mound need be dated much later than 200 B.C. and the coins found in the house levels stop at about the same date. The hoard of 114 silver tetradrachms was found in a coarse jug tucked into the foundation wall of a house; a gold earring ornamented with a lion's head, also of Hellenistic date, was found nearby and probably came from the same hiding place. According to Miss Cox the latest of the coins from the hoard can be dated in 217 B.C., and its fresh condition suggests that it had been in circulation only a very few years before it found its way into the hoard, the burying of which she dates around 210 B.C.—twenty years or so before the abandonment of the site. The coins came from all over Asia Minor, Syria, and Babylonia, and suggest interesting theories concerning the trade routes of the time. Four coins are barbarous imitations of coins of Alexander the Great. Such imitations have previously been ascribed to the Celtic tribes of the Danubian region; now it seems more probable that these were produced by the Celts of Asia Minor, the Galatians (Fig. 5, taken from Cox, Pl. IV). In general, the hoard bears out our previous notions with regard to the abandonment of Gordion at the beginning of the second century.

Beneath these layers of Hellenistic times lay two large buildings of the sixth century. One of these, the gate through the city wall, had apparently been damaged and repaired at some time in the latter part of the fifth century. The second, which lay to the south of it, was destroyed by fire at the same time, and never rebuilt. It was replaced



Figure 5. Coins from the third-century hoard: Nos. 47-50. Barbarous imitations of Alexander coins. Actual size.

instead by an extensive structure embellished with pebble mosaic floors. The full extent of this Mosaic Building, which must date from the end of the fifth or the beginning of the fourth century, has not yet been uncovered; as it lies at the edge of the mound one side of it has disappeared down the slope, but in the other three directions it continues beyond the limits of our present trenches. The walls and foundations were very thoroughly pillaged of their stones by the later settlers, so that now it is mostly the floors which remain. By comparison with its predecessor the building is flimsy; the walls, about .60 m. thick, are of stone rubble which served as a socle for sun-dried brick above. The Mosaic Building immediately overlies the sixth-century structure and in general follows the same orientation. In some places it is likely that walls of the earlier building which were still standing were reused, but elsewhere new walls were laid on a slightly different orientation so that the building, as far as it has been uncovered, appears to have been slightly wedge-shaped and wider at the north than at the south. At the north lay a large open court measuring 17 m. in length and on the average about 11 m. in width from east to west. This court was paved with slabs of a granular dark red stone which gives the impression of being an artificial composite; near the center lay a circular curb of white stone which resembles a well-head. At the south the court was bordered by a colonnaded porch which lay at a slightly higher level; a few blocks of the step-course which led up from the pavement of the court to the stylobate of the porch are still in place (Fig. 6), as is one of the heavy rounded stone bases for a column, presumably of wood. The base lies at approximately one third of the distance from the west to the east end of the porch; we may therefore surmise a porch with three openings between two columns and the end walls, a *distyle-in-antis* arrangement. The wide spacing of the columns, about 3.50 m., in relation to their diameters of about .38 m. presupposes a superstructure of wood; and, indeed, no traces were found of blocks belonging to a stone entablature. The column base which is still in place is of hard dark gray stone which was painted a bright vermilion. When it was first uncovered we thought it to be of a red stone which occasionally appears in blocks reused in the later walls, but a subsequent rain storm washed off much of the color and revealed it to be paint. The red of the column base afforded a gay contrast to the mosaic floor of the porch inside which was laid in a geometric pattern



Figure 6. Mosaic Building, showing the paved court, left, and the porch, right, with stylobate, step course, and one column base still in place.

of pale blue, white, and yellow natural pebbles. The floor, which lay at the level of the stylobate, covered the whole of the porch, an area approximately 12 m. long by 4.25 m. wide (Fig. 7). A door near the middle of the back wall of the porch opened into a long narrow room paved with a mosaic of the same design as that of the porch and measuring about 5.90 by 4.75 m. Centered against the back wall of this room was a rectangular area without mosaic, which suggested that an altar, statue base, or throne had once stood in front of the wall. Digging below floor level in this area, however, yielded no clue as to what had been there, and no stone foundation existed to support any heavy object.

The building was covered by a roof of tiles and decorated with friezes of relief-moulded terracotta slabs gaily painted in black, red, and white. Masses of such tiles and fragments overlay the floors, in some places as they had fallen in the destruction of the building, in others left as they had been after a picking-over by third-century or modern pillagers. Roof tiles imply a sloping roof, and particularly interesting in this connection is a series of tiles bearing a flat vertical *sima* decorated with red and white checkerboard pattern, but made in one piece with a half-round cover tile behind the *sima* and running parallel to it. Such tiles could be used to decorate only the raking cornice at the gable-end of a building. Another series of *sima* tiles is pierced by holes for leading to spouts to carry off the rain water from the roof; the faces of these are decorated with tongue-pattern in relief above painted lotus flowers. The walls bore friezes of relief tiles decorated with double spirals and lozenge chains (as *BULLETIN* Vol. 16, 1, page 6, Fig. 2), plain checkerboard, and star and spiral (Fig. 8) similar to that

Figure 7. The Mosaic Building from the south. In the foreground the inner room, with its rectangular gap in the mosaic floor; above, the porch, and beyond, part of the paved court.



of tiles found at Sardis. The hardware of the building, too, was decorated in somewhat similar style. A pair of door handles (implying double doors) found together in the building consists of iron staples, their length presumably the thickness of the door, carrying at their outer ends rings of iron (Fig. 9) which served as pulls to draw open the doors. The circular bronze plates which were fastened by nails to the door surface behind the rings were engraved with a star design, the spaces between the four points being filled by palmettes (or quarter rosettes) with alternating plain and stippled petals.

The extent of the Mosaic Building and the elaborateness of its decoration in mosaic and tile prove that it was no common house. It was the successor, moreover, of an even larger and extremely massively built structure which cannot have been other than a public building. Built on the same site, the Mosaic Building undoubtedly took over the function which its predecessor had served. What that function was we cannot be certain, though the finding of a beautifully and precisely carved cylinder seal of carnelian in the pillaged debris of its foundations may be significant. The seal (Fig. 10) represents two bearded crowned figures, kings or high officials, each standing on a crouching sphinx, and offering gifts and making libation at either side of a Persian divine symbol. The upper and lower edges of the seal are bordered with chains of lotus buds and flowers. The style is Achaemenian of the late fifth century. The inscription, cut in Aramaic characters between the backs of the two figures, gives the name of the owner of the seal, probably an official of the Persian Empire. Thus it seems quite possible that the Mosaic Building may have been the official residence of the representative of the Great King at Gordion.

The earlier building beneath (Building A) was partly opened up in 1950. Work in 1951 and 1952 enabled us to estimate its approximate dimensions: the north-south length was about 78 m., the east-west width about 40 m. Only the western margin of the building has been preserved, and it has been thoroughly pillaged. The eastern part was supported on a great bastion projecting from the city wall, which has now fallen, carrying with it all traces of the building which stood on it. Excavation far down the slope of the mound ultimately brought to light some of the lower courses of the great retaining wall which supported the bastion at the east. Behind the retaining wall lay a filling

Figure 8. Tile decorated with star and spiral design, similar to tiles found at Sardis. H 19.2 cm.

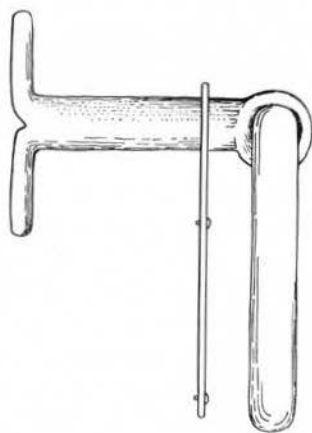
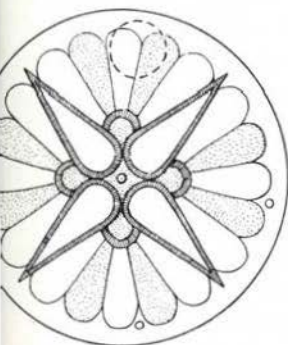


Figure 9. (left) Door pull of iron and bronze: at right, in profile, at left, the decorated bronze plate. D. of plate 8.8 cm. Drawing by Marian Welker.

Figure 10. (below) Achaemenian cylinder seal of carnelian; photograph of its impression. H. seal 2.4 cm.



of trimmed stones, rubble, and heavy wooden beams laid through the mass as binders to relieve some of the pressure against the back of the terrace wall. This terrace filling must have been carried up to the level of the floor of Building A—a height at its outer edge of about six meters. Since the total length of the bastion was close to eighty meters, one hesitates to think of the amount of labor involved in filling it, but operations on this scale seem to have been common at Gordion. The junction of the south wall of the terrace and the circuit wall of the city was found and cleared, and here, significantly enough, the city wall changes its direction.

The building itself consisted at the west of six rooms each 10 m. in width, lying side by side from north to south. The outer walls at north and south were of the same thickness and construction as were the partition walls between the rooms. These walls consisted of two parallel faces of squared stone blocks, with rubble packing between, to a total thickness of 2.50 m. On the analogy of the Gate Building to the north (see below) these walls of stone probably stood to a height of about 3 m. above floor level and supported a superstructure of crude brick. In front of each room lay a shallow porch or portico; the somewhat thinner (1.80 m.) screen wall between the portico and the room behind it being pierced in each case by a wide doorway. Stone blocks with shallow rectangular cuttings in their upper faces lay to each side of the wall ends between the porticos, where they probably served as beddings for wooden posts—again giving to each portico a *distyle-in-antis* façade, though the posts stood close against the wall ends. As in the Mosaic Building the superstructure must have been entirely of wood and tile, since no stone members were found.

The two southernmost rooms are covered by the Mosaic Building so that it was only in the third room from the south that it was possible to make exploration for further partition walls or interior supports. Since the rooms are 10 m. in width from north to south, and appear to have been about 11 m. in length, some sort of interior support for the roofs seemed desirable, but no trace of any was found. In one place fallen debris suggested the roof or ceiling construction: a layer of yellow clay underlay at least four layers of reeds which had been laid alternately cross-wise to the layer below; over these again lay light beams parallel to each other and rather closely spaced; and over these

and perpendicular to them a very heavy beam. Wood and reeds had been heavily burned and though the beams consisted mostly of char their shape could be made out quite clearly. This debris must have fallen at the time of the destruction of the building and somehow in falling turned over so that the uppermost layers lay at the bottom. In any case, it suggests a flat roof of heavy beams, lighter cross-beams, layers of reeds, and a topping of clay which could be renewed at need. This technique is still used in this part of Turkey. It may be, on the other hand, that this building had two stories and that in this debris we see only the ceiling beams and clay flooring which lay between them.

Throughout the building are traces of destruction by fire. The wooden sills and jambs of the doors between the rooms and the porticoes are everywhere burned, and the inner face of the north wall of the building is scorched by fire. There is very little evidence as to the cause of the fire or the date at which it took place. The Gate Building which lies to the north suffered at the same time damage which necessitated extensive repairs and in some places rebuilding, and there some evidence was forthcoming that the repairs had been made at some time after the middle of the fifth century. Evidence in that area also suggested that the damage had been caused by an earthquake and a settling of the mound rather than by a sack; and indeed it is hard to think of an occasion for a sack at this relatively peaceful era in the history of the Persian Empire. It seems wholly likely that Building A was destroyed by a fire which followed on an earthquake, and was subsequently replaced by the Mosaic Building. As the floor level of the later building lies only a few centimeters higher than that of its predecessors there must have been a great clearing away of the destruction debris before the Mosaic Building could be constructed. Clear evidence for the date of the destruction of the earlier building or for that of the construction of the later was conspicuously lacking, and the foundations of both had been pillaged indiscriminately by the settlers of the third century.

The Gate Building (Plan, Fig. 11) lies some 20 m. to the north of Building A. The space between the two structures is occupied by a street with stone paving, under which runs a drain. The street probably led to a postern gate beside the main gate at the south. The latter must have been one of the most important public entrances to the city; the former may have been a more private entrance to the area occupied

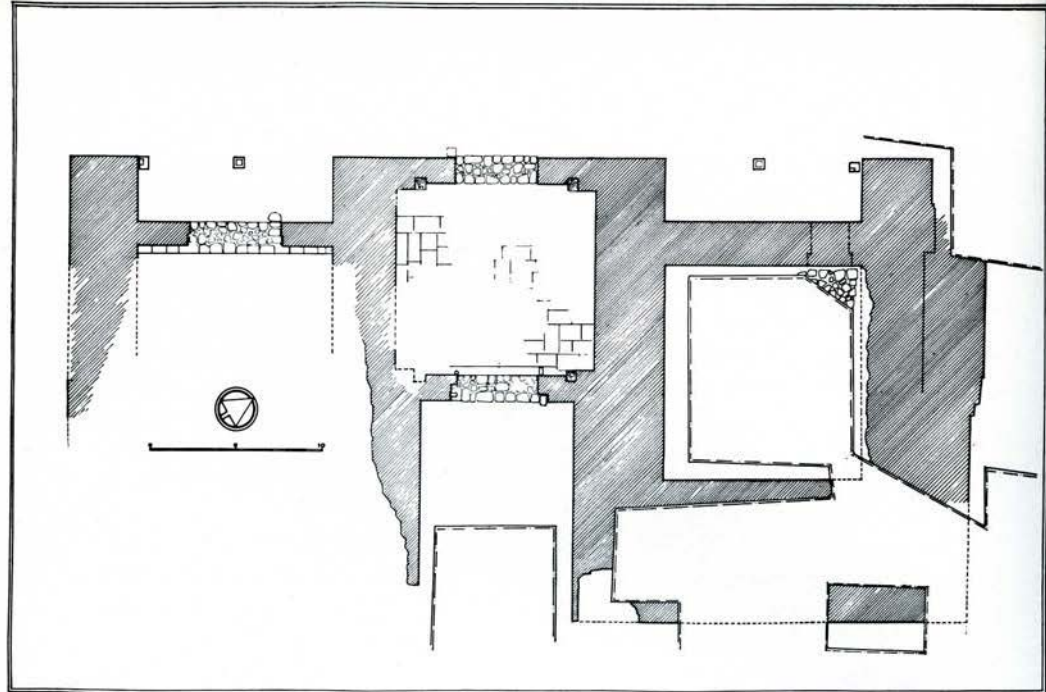


Figure 11. Plan of the Gate Building; the city wall may be seen at the lower right, where both faces have been in part exposed.

by Building A and possibly other public buildings which were cut off from the rest of the town by a screen wall. The main gate pierced the city wall at the southeast, opposite the smaller habitation mound which rises across a shallow depression and was probably a suburb of the city. The gateway proper consists of an inner and outer court. The outer court, flanked by walls 5.50 m. thick at either side, was connected with the inner by a wide doorway, but on its outer side it seems to have been open, forming a deep pocket, easily defensible from three sides, which had to be penetrated before the gate in its inner recess could be approached. The second court had a large inner doorway opposite the outer, leading into the city. It seems to have been open to the sky in the first period, though it was partly roofed at the time of the later repair. It served as a second trap, assailable from the tops of the walls on all sides, which had to be penetrated before the city could be entered. The inner court was paved with the same kind of dark red composite found in the court of the Mosaic Building.

This paving in the Gate Building is also a part of the late repair, and doubtless contemporary with that of the Mosaic Building. To each side of the gateway proper lay a second court backed against the inner face of the city wall and approachable only from the city side. These side courts were entered through shallow porticoes similar to those in front of the rooms of Building A. Four stone beddings for wooden posts were found in place, with square sockets, measuring .32 m. on a side, cut in their upper faces into which the ends of the posts could be fitted. One is probably safe in restoring two more, one beside each corner of the central complex, giving to each portico a *tristyle-in-antis* arrangement. The superstructure seems again to have been of wood.

The width of each court is 11.50 m., and the thickness of each wall 4 m., giving the building a length on its inner side of approximately 50.50 m. The inner façade toward the city, of that length, thus consisted of a central block pierced by a wide doorway and flanked at either side by a portico, each *tristyle-in-antis*, through which the side courts could be entered from the town. The city wall itself, against which these courts backed, was here of tremendously heavy construction, its thickness being about 7.50 m., or about twenty-five feet. As in Building A the walls were built of parallel masonry faces filled between with rubble which had been tied by wooden cross-beams laid through its thickness (Fig. 12).

The walls of the Gate Building are in places very well preserved, and afford many details of construction. The outside wall of the south wing was found preserved to its full height of three meters, or eight courses (Fig. 13). Its thickness was 4 m., the construction being of the usual masonry faces with rubble core. It was bedded on a mass of rubble strengthened by wooden tie-beams, and the two lowest courses of masonry were not visible as they lay below ground level. The visible part of the wall, six courses high, was bonded at half its height by a line of wooden beams set into the wall face, which appears in the photograph as a slot now filled with small stones jammed in by the excavators to prevent the upper part of the wall from tilting outward. The masonry above rested partly on the upper face of the beam-course, partly on the rubble packing behind it. The beams appear to have been about 0.25 m. thick. In the course of time they have rotted away and disappeared, but scraps of wood could still be found in the



Figure 12. Corner of the north wall of the Gate Building and the inner face of the city wall (upper right), looking west. Note the wooden beams in the rubble core of the wall.

Figure 13. The south wall of the Gate Building; note the slot which once held wooden beams, between the third and fourth courses from the top.





Figure 14. Wooden beams on top of the west end of the south wall of the Gate Building.

depths of the slot where they had lain. The beam-course was repeated higher in the wall, on top of the sixth visible course of masonry, where at the west end of the wall, the actual wooden beams could be clearly made out (Fig. 14). This seems to have been the top of the masonry construction, which was then a heavy socle 3 m. in height on which was laid an upper wall of crude brick. The setting of wooden beams into the wall faces would seem to be a carry-over from crude brick construction in which a framing of wood was used to bind together and strengthen the walls. In the archaic fortifications of Larisa on the Hermos a narrow string-course of stone runs horizontally through the fine polygonal masonry and is probably a reminiscence of the wooden framing used in crude brick construction. Here at Gordion we seem to have an intermediate stage in which the actual wooden framing appropriate to crude brick construction has been carried over into stone construction, but not yet been converted into a purely decorative string-course of stone. Further, the wooden beam-courses at Gordion probably served another decorative function, namely, to support painted terracotta tiles applied in horizontal friezes to the face of the wall.

Most of the tiles found at Gordion are L-shaped in profile, with a decorated face to be set vertically and a flange projecting at a right-angle to it. Both face and flange are pierced by holes through which nails could be driven to hold the tiles in place; and usually the flange comes at the top rather than at the bottom of the tile (Fig. 15). In consequence of this the tiles would be upside-down if used as ordinary sima decoration along the edge of a roof, and, in any case, the nail-holes through the decorated face would be useless. The beams set into the wall faces probably carried friezes of such tiles, which could be laid over the beams, the flange over the top of the beam, the decorated face hanging down over the outer beam face, and secured from above and in front by iron nails driven into the wood. Thus the wooden course afforded a firm frame to which the decorated tile friezes could be fastened, and at the same time the tiles served to sheathe the wood and to protect it from the weather.

The Gate Building was apparently adorned by a series of tiles ornamented with large red or orange lozenges on a white ground. Of these there exist frieze tiles (with the flange at the top and nail holes through the decorated face), sima tiles (without nail holes and with the flange at the bottom) and half-round antefix or end cover tiles for a roof. Since, however, all of the four courts of the building were almost certainly open to the sky a problem arises as to how these roof tiles were used. The walls were 4 m. in thickness and in their upper part of crude brick construction which had to be protected above from the weather, and it is quite possible that these tiles are from a roof or sheathing laid over the tops of the walls to protect the crude brick from the weather.

An interesting fragment of a tile belonging to the same series (Fig. 16) preserves part of the top and one side. This tile was not rectangular like the others, but made with one sloping side. Tiles of this shape were probably used to sheathe and decorate the wooden jambs of the doorways. One should restore, then, doorways with sharply battered sides, considerably narrower at top than at bottom; and analogies can be found for these in central Anatolia in the curved gateways at Boghaz-Köy and in the doorways of the rock-hewn cisterns or chambers, apparently of Phrygian date, at Midas City.



Figure 15. Terracotta frieze tile, photographed upside-down, showing three iron nails through its face, and one (a second has probably been broken off) through its flange.

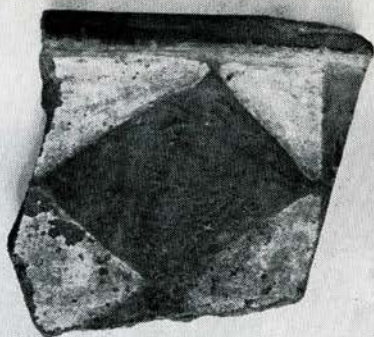


Figure 16. Fragment of an oblique-sided tile, probably from the decoration of the door jamb of the Gate Building.

The wooden beams from the jambs or door-posts at the south side of the inner doorway of the Gate Building were found as they had fallen (Fig. 17) and were sufficiently well preserved for their full length of about 3 m. to be measured. Beside them lay blocks fallen from the west wall of the gate. These lay in even rows, course by course as they had fallen inward toward the west. The order in which they lay strongly indicates that this wall of the building had fallen in consequence of an earthquake or a subsidence of its foundations. The south wall of the building, too, now slopes slightly downward toward the west at its inner end (Fig. 13), as though the filling of the mound had settled under its weight. The blocks of the six fallen courses could be measured as they lay, and the sum-total of their thicknesses added up to about 2.70 m., somewhat short of the height of the south wall as it stands and also of the length of the beams of the door jamb. There was a wider gap, however, between the third and fourth fallen wall courses as they lay on the ground than between the others and this gap would seem to indicate that at this level, as in the south wall of the building, the masonry was interrupted by a course of wooden beams. Thus by inserting a beam-course in the west wall of the central complex we attain uniformity in height and construction with the better preserved south wall. That part of the Gate Building which lay inside the circuit wall of the city would seem to have been of stone masonry to a height of 3 m., decorated with two hori-



Figure 17. Fallen blocks of the west wall of the Gate Building lying as they fell, course by course. At the extreme lower left, fallen wooden jambs of its inner doorway.

zontal friezes of tiles, and supporting a superstructure of crude brick. Four small rectangular niches or recesses in the walls of the inner court, one near each corner (Plan, Fig. 11), held heavy wooden beams or posts set vertically, which were probably tied in to the wooden framework which strengthened the brick walls above. No doubt the stone construction of the outer part of the Gate Building and of the city wall itself was carried to a height greater than 3 m. before the upper crude brick wall began; but the eastern part of the building is less well preserved and evidence is lacking.

The building partly uncovered in the deep sondage to the north in 1950 was entirely cleared (Plan, Fig. 1). Its plan is like that of a small

Greek temple, with cella and porch or vestibule. It has been so badly plundered, however, that the lowest course above its ground level is preserved only at one corner, while in other places the foundations themselves have been pillaged to great depth. The building was bedded in a heavy deposit of clay which goes to a depth of nearly five meters. The indications are that clay filling and building are contemporary. The same layer of clay underlies the Gate Building and Building A, which follow the same orientation and must again be contemporaneous. This clay layer was reached also in various trenches sunk at the northeast corner of the city mound, and in the south trench dug in 1950. In the same area the German excavators in 1900 found the clay layer, which they took to be virgin soil; and they mention clay in their diggings at the north end of the city. It now begins to seem likely that the entire mound, or at least large areas of its surface, was overlaid purposely by this thick clay layer at the time of the building of the large sixth-century edifices. One assumes that the purpose of this enormous undertaking was to afford a firm bedding for the new structures of monumental size and weight; since the mound is entirely an artificial accumulation of debris from various habitation levels there must have been many soft spots likely to settle and incapable of affording firm bedding for the foundations of such buildings. Very few potsherds are found in this clay layer, and such as are found are mostly coarse and difficult to date. All the indications suggest, however, that this layer was laid not much later than the middle of the sixth century.

At one point we were able to obtain a glimpse of what lies below this second layer from the top of the mound. Over a distance of more than 40 m. a heavy wall can be traced which underlies the sixth-century Gate Building. This wall is 4 m. in thickness, built in the local manner with masonry faces and rubble core. The masonry of the faces is, however, more primitive in style than that of the overlying Gate Building; the blocks are more roughly cut, the coursing is more uneven, and the joints less tightly fitted. In Fig. 18 part of the face of this early wall may be seen during the course of its excavation. Outlined against the sky may be seen the south wall of the Gate Building, which passed right over the earlier wall; the mass of stone (at the lower left of the picture) is the rubble of its foundation, piled as may be seen over and against the face of the earlier wall. In our small cut we were able



Figure 18. The outer face of the early wall beneath the Gate Building; at left, rubble foundation for the south wall of the Gate Building.

to establish more clearly the relation between earlier and later walls, and also to observe that the early wall is still standing to a height of at least 6 m., with a slight inward batter as it rises. A wall of this thickness, built of stone masonry to such a height, and running unbroken for a distance of 40 m. can hardly be other than a section of the circuit wall of the city, belonging to the third major layer from the top, and to be dated in the seventh century or earlier. At the time when the Gate Building was put up it was still standing, and it served as a kind of dam: the clay filling packed against its inner

face brought the level up to that desired for the floor level of the gate, while against its outer face stone rubble was packed in, probably behind a retaining wall as in the Building A bastion, to bring the downward-sloping area outside up to the same level. In the next campaign we are ready to dig the area inside this wall, where the massive layer of clay is intact and gives assurance that there has been no deep disturbance of later times.

The smaller mound to the southeast of the city afforded another taste of clay filling. This mound consists of a central rounded cone higher than the city mound itself, and long low ridges which extend northward and westward from the central cone, following roughly the contours of the eastern slope of the city mound. The flat depression between may be an early bed of the river; the lesser mound gives the appearance of being a tumulus which crowns the center of a long low habitation deposit, perhaps a suburb of the city on the opposite bank of the river. After digging a trench in the summit of the core the German excavators in 1900 came to the conclusion that this mound was

probably a natural hill since they found nothing but clay. A shaft sunk from the top to a depth of nearly five meters in 1951 confirms this; but there were indications that this was not a natural clay deposit but rather an artificially heaped one. Another cut was therefore made some distance down the southern slope, and in this were found the remains of a large building of crude brick which had been destroyed by fire and then buried under a mass of clay, evidently a tumulus, which was heaped immediately over its ruins. The building had been made on sloping ground, for it lies much deeper at its inner (north) end, where it had two stories, than at its outer, where there was probably only one. This building has been uncovered only in part, but that part suffices to show the manner of its construction and to give an indication of its history. The walls were of crude brick, on the average 1.50

Figure 19. Plan of the burned building on the lesser mound, showing slots for wooden posts.

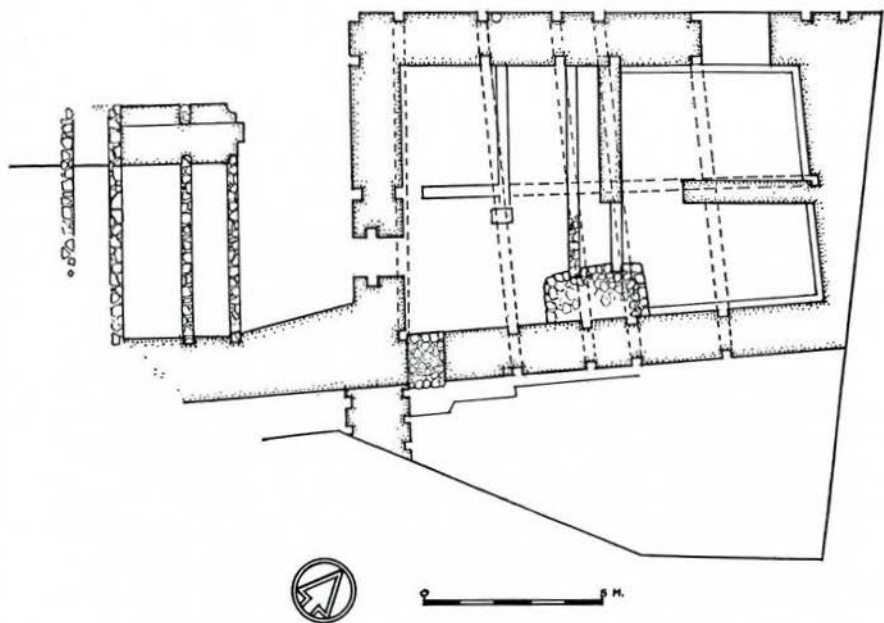




Figure 20. Southwest corner of the burned building, showing slots for wooden posts in the face of the wall, and charred beams set into the floor.



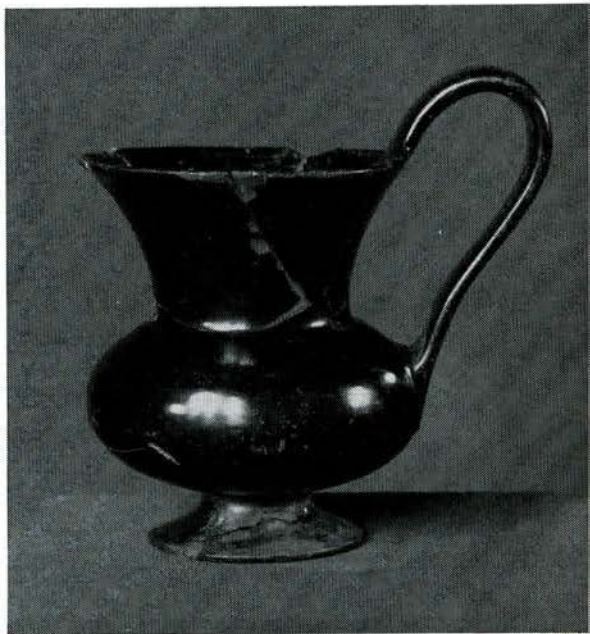
Figure 21. The scarp at the north side of the burned building, showing charred and broken roof beams immediately underlying the clay tumulus filling.

m. in thickness, built without stone socles beneath. They were reinforced, however, by an elaborate framework of wooden beams and posts set into both faces of the brickwork and no doubt joined by cross-pieces running through its thickness (Plan, Fig. 19; also Figs. 20-21). Beams were laid horizontally in the brickwork at the levels of the lower and upper floors; vertical wooden posts, probably tied to the beams by iron nails or mortises, stood in slots in the faces of the walls. At the level of the upper floor the brick walls were thinned, leaving a projecting ledge on which the ends of the floor-beams could be supported. Both brick and wood were concealed beneath a coating of mud stucco which is in some places still preserved. The roof was supported on beams which spanned the width of the upper room, about 7 m.; as no tiles were found in this trench it is likely that the building was covered by a flat roof of reeds and clay. The roof beams apparently burned through and broke in the middle; in Fig. 21 their charred ends may be seen in the scarp at the north end of the room, sloping inward toward the break at the middle. In the same picture may be seen the way in which the clay tumulus filling, showing in various striations of brown, green, and gray, was heaped immediately over the debris of the burned building. There seems to have been very little if any lapse of time between the destruction of the building and the heaping of the tumulus, and the two events may well have been related. The destruction of the building was preceded by a battle, as was shown by the finding of many bronze and iron arrow points in its ruins. Some of these had their ends turned over, as by striking a hard surface while in flight. Buried under the debris on the floor near the south door were found two human skeletons, evidently those of persons who had been trapped and crushed under the collapsing building. The defenders of the building evidently lost the battle, else its destruction might have been averted. The making of a tumulus over its ruins suggests that some prominent person may have lost his life in the battle, and been buried on the spot, with a tumulus to cover his grave. The pottery found in the debris of the building is to be dated around the middle of the sixth century, and it is tempting to see in this battle an unrecorded episode of the war between Croesus of Lydia and Cyrus the Persian in 547 B.C. Possibly our brick building was the barracks of the Lydian garrison which held the town for Croesus, and which was overwhelmed by the army of Cyrus on its march to Sardis.

Of the eight grave tumuli dug in 1951, six lay on the same ridge to the south of the modern village as those dug in 1950. The other two belong to another group on a higher ridge still farther to the south, and separated from the first by a valley and a brook. Work was also done on two of the tumuli which had been started in 1950, but in which no major grave had been found. In one of these (Tumulus D) a number of minor burials was found, all at pre-tumulus levels, and they strengthen our impression that this tumulus may well have been heaped not over a single burial, but over a group of pre-existing graves, perhaps a family plot. In the second (Tumulus E) work both in 1951 and in 1952 failed to disclose any major burial, but here, as under the tumulus on the lesser settlement mound, interesting remains were found of a house which had been buried under the tumulus filling when it was heaped. The house would seem to have been a farmhouse, and the part uncovered included the storeroom and the kitchen or bakery. The building was of crude brick, and the storeroom was conveniently placed beside the kitchen. In it were found some large storage-jars or pithoi, a heavy iron trowel-like implement, and a number of vases of fine fabric, perhaps part of the best dinner service of the household. One jug of gray ware with spreading foot and handle rising above the rim (Fig. 22) is a particularly fine example of the best local fabric of the sixth century. Its highly polished black surface compares favorably with the best black glaze produced contemporaneously by the Greeks. The kitchen (Fig. 23) contained all the conveniences of the time; two oval ovens of mud in which the bread had been baked; beside them a square bin made of crude bricks, in which grain could be kept at hand ready for use; and a low raised platform, hollowed on top and covered with fine yellow clay, which was without doubt used as a trough for kneading bread. A quantity of stone grinders for making the flour was found in and near the kitchen. These consisted of five rectangular lower stones, and six boat-shaped upper ones. All show the effects of hard usage; in the picture they stand aligned on the stump of the west wall of the kitchen, the upper grinders facing, the lowers at the left.

Three of the tumuli opened in 1951 covered cremations, four contained wooden chamber-graves, and the eighth produced no major grave of any sort. The cremations were much like that found in 1950, though less elaborate and somewhat less rich. Two of them contained a quantity of gold jewelry, and the condition of this suggested, as it had in

Figure 22. (right) Jug of black-polished ware from the house burial under Tumulus E; sixth century.



Photograph by Reuben Goldberg

Figure 23. (below) The kitchen or "bakery" of the building under Tumulus E, with kneading trough, bin for grain, and two oval ovens. The grinding stones rest on the stump of the brick wall.



1950, that the gold had not been on the corpse when it was buried, but had been thrown on the pyre afterward, since most of it was in good condition and only a few pieces had been damaged or melted by the heat. Many small rosettes of thin sheet gold were found in two of the cremations (Fig. 24). These had been pressed or hammered over a mould to make the rosette stand out in relief; small holes near the edge indicate that they had been sewn to cloth garments as decoration. A pair of gold earrings (Fig. 25) differs from those found in 1950 in that the leech-shaped arcs are overlaid with thin bands of gold ornamented with loops, instead of with wire filigree and granulation. One of the cremations contained a large fragment of a Corinthian alabastron, to be dated around the middle of the sixth century and confirming the dating of the cremation found in 1950. The four cremations dug up to the present, together with two of those found by the Brothers Koerte in 1900, are all approximately contemporary and can be dated around 550, which seems to have been a time at which cremation had replaced inhumation in wooden chambers as a means of disposing of the dead.

One of the four chamber-graves dug in 1951 could also be dated by an imported vase found in it, and is to be placed around 650, about a century earlier than the cremations. Of the four vases found in the chamber (Fig. 26) three are of local fabric: a shallow saucer and a high-handled jug of black-polished ware, and a squat jug with trefoil mouth of red-polished. The black-polished jug, though of fine fabric and finish, is less developed in shape than the example from Tumulus E (Fig. 22), and clearly earlier. The red- and black-polished wares appear to be essentially the same, having very similar clay and surface finish and differing only in color. A third variation, again similar in clay and finish, is buff. Vases of the same shape are found in all three shades. All are essentially the same, the difference in color being perhaps the result of different conditions of firing in the kiln. The fourth vase from our tomb is an East Greek bird-bowl decorated on each side with a large schematically drawn bird between panels filled with geometric ornament. In the fabric and in the use of glaze for painting this differs essentially from the local wares. The vase is of Greek origin, though it cannot yet be said with assurance whether it was made in Miletos or elsewhere along the west coast, or in Rhodes or one of the



Figure 24. (left) Gold rosettes for sewing to a garment, from a tumulus of the sixth century.

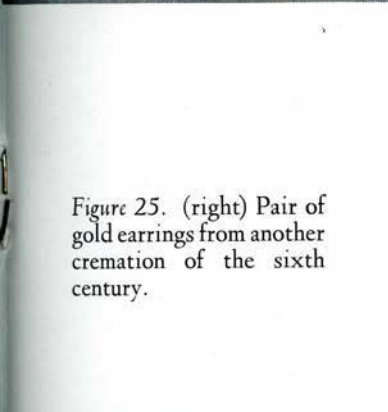


Figure 25. (right) Pair of gold earrings from another cremation of the sixth century.



Photograph by Reuben Goldberg

Figure 26. Vases from a wooden chamber-grave of the mid-seventh century; three of local fabric, and an imported East Greek bird bowl.

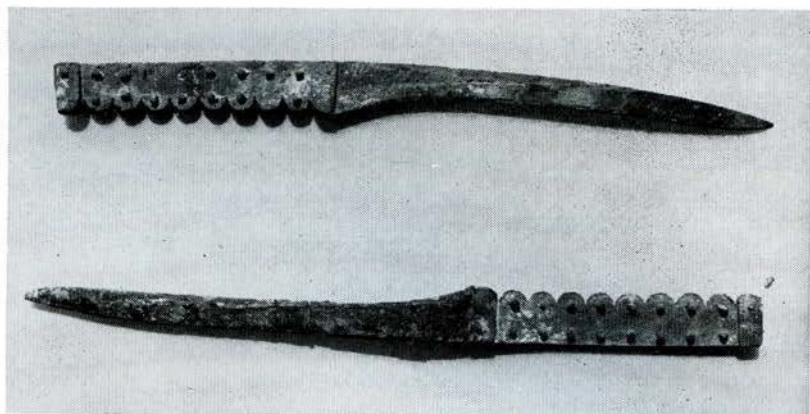


Figure 27. Pair of bronze knives from a warrior's grave; seventh century. L. 29 cm.

other islands. In any case, it must date from just before the middle of the seventh century.

A second chamber-grave was apparently that of a warrior. The skeleton was badly decomposed so that it could not be examined, but the grave offerings inside the wooden chamber included an iron spear point, an iron battle-axe, arrowheads, and a pair of bronze knives (Fig. 27). The long pointed blades are made in one piece with the handles which are scalloped at the inner edge and transfixed by double rows of bronze pegs projecting at both sides; these must have held handle-plates of bone or wood, now lost. Also appropriate in a man's grave was a pair of bronze mesomphalic phiales or bowls, decorated in relief with a lotus-petal pattern; similar bowls have been found in Italy and at Perachora as well as many other sites in Greece. The pottery from the grave was very fragmentary, but it included pieces of red-, black-, and buff-polished wares, similar to those found with the East Greek bird-bowl. The most interesting fragments, however, came from the packing of stones which had been heaped over the cover of the wooden chamber. These were fragments of a very large mixing bowl with decoration in both painting and relief. In place of handles the bowl had three lizard-like animals with long pointed tails, crawling up the

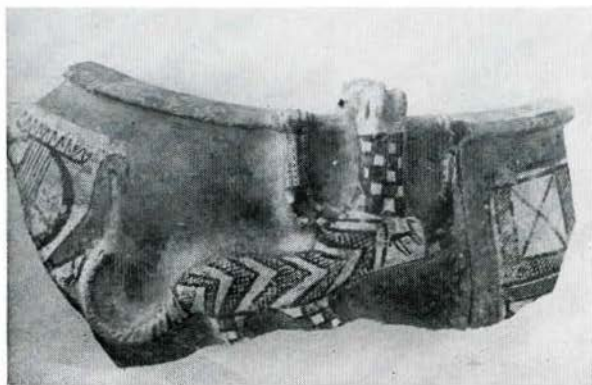


Figure 28. Fragment of a large painted bowl with lizard-like animals crawling up the edge and peeking over the rim. Estim. diam. mouth 28 cm.

shoulder and peering over the edge, their chins resting on the rim (Fig. 28). The animals are decorated with geometric patterns painted in black on a white slip, or reserved in polished red. At one side a wide zone was decorated with a frieze of figures dancing with joined hands, headed by a figure playing an enormous eight-stringed lyre which stands on the ground. The top of the lyre is visible in our picture, with its eight strings; beside it at the right, part of a large bird.

The third of the wooden chamber tombs, again of about the same date or slightly earlier, poses some intriguing problems. It lay under one of the tumuli of the south group. The wooden chamber had evidently been carefully constructed, with neat mortises at the corners, and the grave-offerings had been placed within it; then it had been burned. There was no indication as to whether the fire had been accidental or purposely set, though it is hard to see why a tomb chamber carefully made of wood should have been purposely burned at a time when inhumation seems to have been the prevalent custom. The chamber was never roofed, and with the burning of the side beams much of the stone rubble packed behind them collapsed and filled the room. The grave-offerings, which were poor, were therefore also in very bad condition. Fragments of bronze lotus bowls like those from the warrior's grave were found, as also pieces of bronze belt-buckles similar

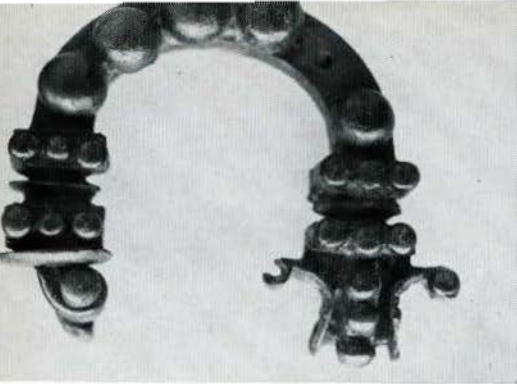


Figure 29. (upper left) Bronze fibula decorated with round-headed studs; seventh century. W. 4 cm.

Figure 30. (upper right) Grave of Roman times, of crude bricks with gable cover. Above the right end of the grave part of an earlier burial disturbed and partly covered by the later.

Figure 31. (left) Gold ring set with carnelian seal, from a grave of Roman times. The anchor was the symbol of Ankara (ancient Ancyra). L. bezel 9 mm.

to ones found in the grave tumuli at Ankara. About 170 bronze fibulae or safety-pins were found in various parts of the tomb. These were of various types, mostly of those already attributed to Anatolia; but the numbers in which they were found, together with some indications on the city mound of a local bronze-working industry, suggest that they were made at Gordion. One of the most elaborate (Fig. 29) consists of a flat bow pierced by small holes into which were set pins carrying rounded bosses of varying size—large on the bow proper, smaller on the blocks at its ends. The pin of our example is missing, as also one of the bosses, where it is possible to see the small hole into which its stem was set.

Exploration proved the whole southern slope of the ridge on which the modern village stands to be occupied by a large cemetery. Graves of almost all periods, from Hittite times to Roman, were found, often laid one on top of another, and in many cases the later had destroyed the earlier. Fig. 30 shows a grave of Roman times built of sun-dried bricks and covered with a gable roof of bricks leaned

against each other. Just above one end appears part of the circle of another, earlier, grave which had been disturbed in the making of the later. Some of the graves of Roman times would appear to be those of soldiers; by the feet of several of the skeletons were found masses of iron hobnails, sometimes as many as thirty to a foot. Evidently the bodies had been buried with their hobnailed boots on the feet. Other graves contained minor jewelry. Particularly interesting was a gold ring set with a seal of carnelian (Fig. 31). On the seal were carved the initials A C N (the C probably a *sigma*, for this was a Greek-speaking part of the Roman Empire) and an anchor. The anchor was the symbol of Ankara, of which the ancient name, Ancyra, means just that. There are various legends to explain how a town which lies so far inland obtained its name and symbol.

Graves were found of the sixth century and of earlier Phrygian times; in these the offerings were poor (sometimes there were none), as they must have been the burials of humble folk who could not afford a tumulus. The Phrygian graves seem to have been about equally cremations and inhumations.

A number of graves of Hittite times was also found. When the Germans dug grave tumuli in 1900 they were constantly surprised at finding human bones in the filling of the mounds. They rejected the explanation that these were probably from the skeletons which had been in earlier graves disturbed when the tumulus builders were digging earth to make their grave-mounds, but this explanation now seems to be correct, for we now know that a large cemetery of earlier times lay nearby. Significantly enough, the Germans found these "superfluous" bones only in the tumuli which lay near the cemetery; the others, at a greater distance, were free of human bones in the filling of the mounds themselves. Many of the graves of Hittite times were thus badly damaged and disturbed since they lay in an area which was later used over a long period as a cemetery, and which was also evidently dug as a source of earth when the Phrygian tumuli were built, from the eighth to the sixth century.

The Hittite graves were rather poor in offerings. Some of them contained jewelry of bronze, lead, silver, or gold wire, or necklaces of beads and shells. A few contained simple vases, either unglazed or red-polished. The best of these was a spouted teapot of plain buff



Photograph by Reuben Goldberg

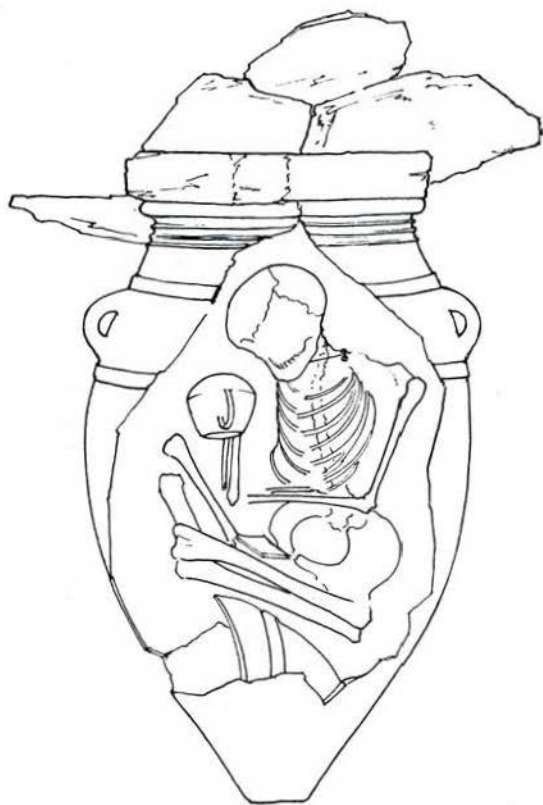
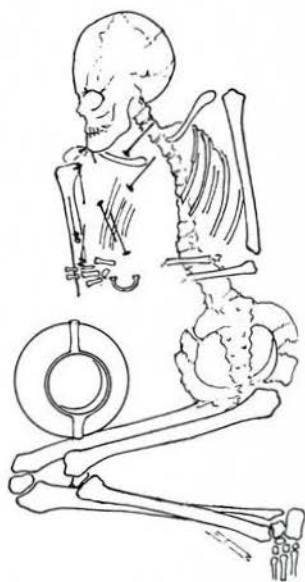


Figure 32. (upper left) "Teapot" of buff ware, undecorated; from a grave of Hittite times. H. incl. spout 14.9 cms

Figure 33. (upper right) A Hittite pithos burial before opening; the mouth of the jar sealed with stones.

Figure 34. (left) A Hittite pithos burial, showing the skeleton folded up within the jar. Drawing by D. H. Cox.

Figure 35. (below) A Hittite burial in an open grave. The positions of the bronze pins suggest the arrangement of the garment. Drawing by D. H. Cox.



ware of a type found at Kültepe and to be dated in the fifteenth century or earlier (Fig. 32). The skeletons were almost invariably buried in a doubled-up position, usually crammed into large storage-jars, sometimes in open graves. The jars were laid on their sides, the mouth slightly higher than the foot and the opening covered by a couple of flat slabs of stone or crude bricks, quite often stones were laid over the grave made for the burial after it had been filled with earth (Fig. 33). The cramped position of a skeleton within one of these large jars may be seen in Fig. 34, drawn after part of the side of the jar, which was badly cracked, had been removed to allow the workmen more easily to clean the skeleton within. The drawing (Fig. 35) shows a burial in an open grave; but in both cases the skeleton lies in a very cramped position. In the open grave the skeleton lay on its right side. The seven bronze pins lay two near the collarbone, two at the right side of the chest, and three along the right arm. The presence of the pins suggests that they had served to fasten the garment in which the body was buried; their position indicates that the garment had been a piece of cloth doubled around the body and fastened down the right side. In the pithos grave (Fig. 34) a single pin seems to have sufficed to fasten the garment near the neck.

In our second campaign at Gordion we have learned much about the second level of the city mound, and uncovered two large public buildings of the sixth century. We have also opened up a building of the same date on the lesser mound, and established that this part of the city was abandoned around 550 B.C. when it was covered with what is evidently a grave tumulus. On the slopes opposite, on the farther side of the valley, lay not only the tumuli of the powerful, but also a cemetery of the more humble, in which were found graves as early as the fifteenth century, and one of them Early Bronze Age, to be dated in the first half of the third millennium. This area was apparently always used for the burial of their dead by the people who lived in the town; and for each series of graves in this cemetery we should find a contemporary habitation level on the mound. Our 1950 campaign showed an Early Bronze Age level at the bottom of the deep sondage, 16 m. below the modern surface of the mound; so that it may easily be seen that much remains to be done at Gordion.

RODNEY S. YOUNG.