MUSEUM MONOGRAPHS

A HITTITE CEMETERY AT GORDION

By
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LIST OF ABBREVIATIONS

AA=Archäologischer Anzeiger.

AJA=American Journal of Archaeology.

Alaca, *Fouilles 1935*=Remzi Oğuz Arik, *Les Fouilles d'Alaca Höyük entreprises par la Société d'Histoire turque. Rapport préliminaire sur les travaux en 1935.* Ankara 1937.

Alaca, *Ausgrabungen 1936*=Hamit Zübeyr Koşay, *Ausgrabungen von Alaca Höyük. Ein Vorbericht über die im Auftrage der türkischen Geschichtskommission im Sommer 1936 durchgeführten Forschungen und Entdeckungen.* Ankara 1944.

Alaca, *Rapport 1937-39*=Hamit Zübeyr Koşay, *Les Fouilles d'Alaca Höyük entreprises par la Société d'Histoire turque. Rapport préliminaire sur les travaux en 1937-39.* Ankara 1951.

AOF=Archiv für Orientforschung.

APAW 1935=K. Bittel and H. G. Güterbock, *Boğazköy. Neue Untersuchungen in der hethitischen Hauptstadt.* Berlin 1935. (Abhandlungen der preussischen Akademie der Wissenschaften 1935, Phil.-Hist. Klasse Nr. 1.)

BMMA=Bulletin of The Metropolitan Museum of Art.

Goetze, *Kleinasien*=Albrecht Goetze, *Kulturgeschichte des alten Orients, Kleinasien.* Munich 1933. (Handbuch der Altertumswissenschaft.)

ILN=The Illustrated London News

Kültepe 1948=Tahsin Özgüç, *Ausgrabungen in Kültepe. Bericht über die im Auftrage der türkischen historischen Gesellschaft, 1948 durchgeführten Ausgrabungen.* Ankara 1950.

Kültepe 1949=Tahsin Özgüç and Nimet Özgüç, *Ausgrabungen in Kültepe. Bericht über die im Auftrage der türkischen historischen Gesellschaft, 1949 durchgeführten Ausgrabungen.* Ankara 1953.

LAAA=University of Liverpool, Annals of Archaeology and Anthropology.

MDOG=Mitteilungen der deutschen Orientgesellschaft zu Berlin.

OIP=Oriental Institute Publications.

Özgüç, *Bestattungsbräuche*=Tahsin Özgüç. *Die Bestattungsbräuche im vorgeschichtlichen Anatolien.* Ankara 1948.

PZ=Prähistorische Zeitschrift.

QDAP=Quarterly of the Department of Antiquities in Palestine.

RHA=Revue hittite et asianique.

WVDOG=Wissenschaftliche Veröffentlichungen der deutschen Orient-Gesellschaft.

WVDOG 60=K. Bittel, *Boğazköy. Die Kleinfunde der Grabungen 1906-1912. I. Funde hethitischer Zeit.* Leipzig 1937.

WVDOG 63=K. Bittel and R. Naumann, *Boğazköy-Hattuša. Ergebnisse der Ausgrabungen des deutschen archäologischen Instituts . . . 1931-1939.* I. *Architektur, Topographie, Landeskunde und Siedlungsgeschichte.* Stuttgart 1952.

Z Assyr=Zeitschrift für Assyriologie.

PREFACE

The cemetery discussed here was discovered during the second season of the University Museum excavations at Gordion. Miss J. E. Vorys, when cleaning the area of Phrygian Tumulus H, came across several earlier burials under the artificial accumulation of the tumulus. In the adjoining Tumulus I a double pithos-burial was found by Mr. Charles Fleischmann. It was decided to devote a special investigation to the early cemetery, which was carried out by Miss Vorys from May 4-22 and Sept. 16 – November 16, 1951 and by the author from May 31 – June 18, 1952, and, in cooperation with Miss Vorys, again from August 8-28, 1953. A total of 43 reasonably preserved burials was found, and indications of many more disturbed graves could be recorded.

This publication is based upon the field notes of the excavators (tombs H 2-10, 12, 14-33, 36-38 by Miss Vorys; tomb H 1 by Mr. Fleischmann; tombs H 11, 13, 34, 35, 39-48 by the author). I especially want to thank Miss Vorys for her cooperation and discussions of the material. Much patient labor was devoted by her to the extrication of the early graves from their disturbed and difficult context.

A few general explanations may precede the text. The term "Hittite" is freely used in this monograph without quotation marks. An analysis and a tentative justification of this debatable nomenclature is postponed to the final chapter.

In the description of tombs, the orientation is always described as the direction from head to feet of the skeleton. It will be noticed that burial H 9 has been omitted from the publication, having belatedly been identified as post-Hittite.

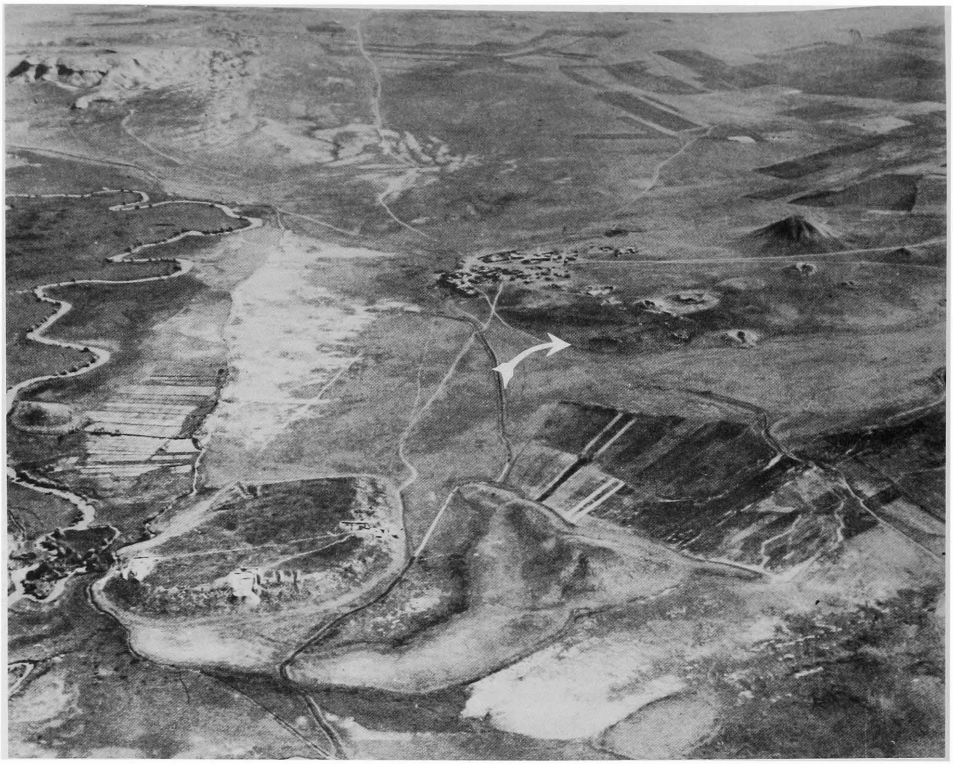
The pottery descriptions are more detailed on fabric than on shape. Only summary descriptions of shape are given where the illustrations seem to suffice.

The MS of this monograph was completed in 1953. Some notes have been added since in order to refer to more recent publications.

I want to thank the Director of the Gordion Excavations, Dr. R. S. Young, for his encouraging interest in this pre-Phrygian chapter of Gordion archaeology. I also owe much to the stimulating discussions and guided tours offered by many excavators in Turkey, and I should especially like to record my gratitude to the representative of the Turkish Department of Antiquities at Gordion, Bay Raci Temizer.

Miss Ellen Kohler has offered much appreciated assistance and advice in her double role as recorder of the Gordion excavations and editor of publications of the University Museum. Miss Dorothy H. Cox made the plans and drawings of the cemetery with her accustomed skill and experience. The same praise cannot be bestowed upon the field photographs which were taken by several staff members under often adverse conditions. Improvements, where possible, were made by Reuben Goldberg of the University Museum. Miss Marian Welker drew the profiles of the pottery.

Mr. A. Eric Parkinson, chemist and keeper of the collections of the University Museum, devoted much of his time and experience to an analysis of some of the materials found in the graves. His results will be found in the Appendices. This technical chapter is of outstanding importance in a study of early development and trade in Anatolia; and Mr. Parkinson's chapter is an initial contribution to what is hoped can be expanded into a more elaborate study of early metals and glazed objects from Gordion.



View of Gordion from air looking northeast. City mounds, at left below. Cemetery ridge, before excavations, appears just right of center, between modern village of Yassı Hüyük and the large tumulus.

LOCATION AND STRATIFICATION OF THE CEMETERY

The city-mounds of Gordion lie in the broad plain of the Sakarya river, the ancient Sangarios. Across the plain to the northeast, east and southeast from the city the foothills are dotted with numerous Phrygian tumuli, imposing a fascinating pattern on the contours of the scenery. The number of tumuli, which add up to about a hundred, and the size of the large ones, rising to the conspicuous height of fifty meters, must have changed the geological make-up of the original area as well as its aspect. Large amounts of earth have been scooped out of slopes and valleys to be shaped into mounds over prominent burials.

The northeast ridge is at present the best investigated part of the foothills. Where soundings below the artificial accumulations are made, it appears that the geological stratification is simple and fairly consistent. Under the humus and surface soil one comes across a layer of gravel and sand resting on bedrock. The gravel is deepest to the west, where an ancient river bed can be suspected, but in the main area it forms an average stratum of about 0.40 m. Still farther east, in TT 6 and 8 (Pl. 1) no gravel is encountered at all above bedrock, which is at a considerably higher level here. The original thickness of the ancient deposit above the gravel and sand is hard to estimate because of evidences of interference but it can be taken to have varied from slightly less than one to several meters.

It is possible that the original choice of this ridge as a location for the city cemetery was made in the third millennium B.C. One tomb of early appearance, presumably of Early Anatolian I date and antedating the so-called Copper Age period of central Anatolia, was found under the Phrygian tumulus F.* Another tomb (H 28) which seems to be pre-Hittite is listed in this monograph, as it occurs in the general area of the Hittite cemetery.

The discovery of the Hittite graves here discussed disclosed the fact that in the course of the second millennium a regular cemetery was situated on the edge of the northeast ridge. The subsequent use of the area unfortunately interfered with the original necropolis. It seems to have been left in peace for a considerable time, until Phrygian settlers selected the ridge for fairly intensive habitation. In many trenches evidence of domestic occupation levels was found, belonging to medium-sized houses. Some of the houses had been burnt or suddenly abandoned (presumably during the Cimmerian invasions) by their inhabitants who were thus forced to leave plentiful ceramic dating evidence in situ. They were Phrygians of the eighth or early seventh century. In building their houses they must have become painfully aware of the proximity of their dead predecessors at Gordion. This building invariably meant destruction and dispersal of some of the earlier burials. But since the Phrygian houses often had floor- or basement-levels below the surface of the surrounding ground, the amount of havoc caused among the Hittites is very uneven. Also it does not seem to have been the intention of Phrygian builders to clean out more of the Hittite cemetery than strictly necessary. Many graves were seen by Phrygians but left in situ, although often a quick look at the meagre contents of a pithos preceded the pious intention to leave it alone, or to cover it up among the foundations of the new house. Occasionally, when the new builders had little solid ground to use and decided to clear the area down to bedrock for a living floor, parts of the cemetery were swept away. This explains some of the blank spots in our cemetery plan, which coincide with areas where bedrock is artificially leveled (Pls. 1-2).

*The term Early Anatolian is used here in preference to the more general one of Early Bronze. See p. 51 *infra*. For the tomb cf. *ILN* January 3, 1953, p. 21, fig. 6, where, for the given date, "early third millennium" should be read.

The Phrygian habitation is not the only disturbing factor. The outlying district of the city was again taken over for its original funerary purpose. Perhaps some scattered habitation persisted with the dead encroaching upon the ground of the living. In the area discussed here, Phrygian simple inhumations, Phrygian tumuli, Lydo-Phrygian burials and cremations crowd the terrain in quick succession. They reconvert this part of the ridge into a cemetery. More damage was done to the Hittite tombs, as occasional interference with earlier burials was unavoidable in the crowded conditions of the necropolis. The surface soil was thoroughly stirred up by repeated tomb-cutting, and by this period the original stratigraphy must have been blurred considerably. The final interference is the most serious, as it consists of a large number of Roman burials which were dug to a much deeper level than the average tomb of the Phrygian or Lydian period. These Roman tombs are long pits or cists for extended burials, and cases occur where a Roman skeleton stretches its legs right through a Hittite pithos burial.

These circumstances will explain the mutilated condition of many of the Hittite tombs described below. They also explain why the soil above the gravel, and sometimes the gravel itself, is mixed and contains ceramic and other material dating freely from Hittite to Roman times. A few third-millennium sherds of "Copper Age" type were also found. The habitation of this area did not start until Phrygian times, and there is no doubt that the Hittite pottery and metal objects found in the fill all come from disturbed burials. Some of the Hittite tomb-gifts were found scattered but relatively intact. Large pithos-sherds were favorite household aids among Phrygians, who used them to reinforce their hearths, or even to make floors for infant burials.

We shall not again refer to the disturbed condition and history of the cemetery area in this monograph, except insofar as necessary to explain the condition of particular tombs. For the Hittites the area was a cemetery and nothing but that. It is an interesting task to analyze and reconstruct the data of the original cemetery, which at present is unique in Hittite archaeology, and which through the irony of fate was discovered as a by-product of primarily Phrygian investigations.

CATALOGUE OF BURIALS

The Hittite burials were invariably laid in gravel or on bedrock, at a level following the natural slopes of these geological layers (Pl. 5). Three main types of inhumation were found: plain inhumations, cist-graves, and pithos-graves, the latter by far the most numerous category. No cremations of the Hittite period were encountered, and the extent of the excavated area precludes the possibility of their occurrence in this particular part of the necropolis. It is conceivable that the number of plain inhumations is larger than the group included here, because identification of the period of bare skeletons is impossible in cases where stratification offers no clues. Perhaps the anthropological analysis of the skeletal material will lend some support to tentative chronological assignments.

As will be seen from the catalogue, all the skeletons in cist-graves and all those in pithoi were buried in contracted position. Among the inhumations, too, this is the rule, although a special type of burial under a pile of stones shows some occurrences of a semi-contracted skeletal position, in which the torso lies in dorsal position, while the legs are folded. One wonders whether the superposition of the stone pile caused this anomaly.

There is a striking consistency in the orientation of the pithos-graves (Pls. 1 and 6a). The preferred orientation for the direction from head to feet (rim to base of pithos) is SE-NW, which occurs in 18 out of 34 cases. Most of the other pithoi show only minor deviations from this position and the direction of their rims remains within the SE quadrant of the compass. Only two burials (H 16 and H 33) are facing as far away as NE or SW, deviating 45° from the preferred range of orientations.

The story is different as regards the cist-graves and plain inhumations. Here the orientation is inconsistent and no preference for the SE direction can be discerned (Pl. 6a). This criterion clearly separates the burials represented in our cemetery into two broad groups. It is noticeable, however, that an orientation to the north does not occur anywhere, and that only two out of all the burials have their heads pointed to a direction in the northern half of the compass (H 16: NE, but this pithos is disturbed; and inhumation H 29: only slightly over to NW). This rule still seems to establish some general kind of homogeneity throughout the cemetery.

The question of differentiation in burial types brings up the matter of chronology. The consistent orientation of the pithos-burials may belong to a more advanced and planned stage of the cemetery and therefore be an indication of later date. If we inspect the location of the tombs as excavated so far, there is a topographical distinction between the plain inhumations and the other types of burial. A group of inhumations is found close together in the southern part of the exposed cemetery area (tombs H 21-23, 25-30). The cist-graves are rare and scattered. The pithoi are found throughout the area investigated and in fact are the only type of burial which guided us in establishing the extension of the cemetery to the northeast and east.

The topographical situation suggests that the inhumations in the southern area form the old core of this cemetery. We shall see that on ceramic grounds H 28 is the earliest burial of all. But pithos-burials are placed among the inhumations and do not noticeably interfere with them. This indicates a slow and orderly growth of the necropolis, with an original period of plain inhumations, an intermediate phase of mixed burial types, and a final predominance of pithos-burials.

Since the tombs stay well clear of one another, one wonders how this spacing was effected. It could hardly have been as consistent as it is without surface markers. There is only one case of superimposed successive burials (H 29 over H 30 which was a pit-burial). No surface markers in the form of tombstones or stelae were found, but it seems likely that small individual mounds were heaped up on the graves, in the case of inhumations often formed of stone piles and in that of the

pithoi made of stacked mud bricks. In some cases the presence of a small earth pile covered by mud bricks could still be observed in the section of earth over the pithos and its cover (H 15, Pl. 8f). The original appearance of the surface of the Hittite cemetery has to be reconstructed from such indications and deductions, since the disturbed conditions of the fill have done away with most of the stratigraphical evidence.

As time progressed, the necropolis must have become an organized and controlled burial ground. The increased coordination in the case of the pithos-burials and their consistent orientation to the east and southeast suggest that the cemetery spread in this direction.

The size of the cemetery was determined by an investigation of its main area (which happens to coincide with that covered by the later Phrygian tumuli I and H) and by the cutting of a large number of trial trenches to the north, east and southeast of this densely exploited center (Pl. 1, lower left). Although strict certainty cannot be obtained by this method, results were fairly clear in indicating an approximate east-west dimension of 100 meters, and a minimum north-south range of about 60 meters. Unfortunately the presence of a dump heaped up during the initial excavation of tumulus H impedes an inspection of the ground immediately to the south of the old core of the cemetery. However, the type of these inhumations is clear without further excavation and we can assume a continuation of moderate extent toward the south.

Actual burials were encountered in the main trench (Pl. 1) and in the trenches labeled Field Trench, TT 4 and TT 13 (Pl. 4). Hittite pottery as a sign of the former presence of disturbed Hittite burials was found as an admixture in the fill of TT 3, 7 and 12 (Pl. 1, left corner). No certified Hittite plain inhumations or cist-graves were found outside the main area, as also stated in the discussion of chronology given above.

Only relatively well preserved burials have been catalogued and are designated here by the symbols H 1-48.* Several more disturbed burials were identified. Some substantial fragments of Hittite pithos-burials are marked by a plain letter H to show their location on the plan (Pl. 1).

CIST-GRAVES (3)

All three cist-graves were found in disturbed condition. H 3 is still relatively intact, and shows that it originally was of box shape and constructed of single orthostats at the sides. H 40 must have been of similar type.

As remarked above, these few cists are widely scattered in the burial ground. This indicates that the cist type of burial was exceptional and did not reach the stage of conformity to be observed in the pithos-graves. It is interesting to notice the double burial in H 31, where the find circumstances suggest that the tomb was reopened for a second burial.

There is no consistency here or in the other categories in the position of the contracted skeleton on the right or left side. The orientation also shows considerable variety (Pl. 6a). One can make no definite statements about the tomb-gifts, in view of the disturbed condition of the burials, but it is probable that their original equipment was just as scant as in the other types of grave.

H 3 (Pl. 7a) Cist-grave in gravel on bedrock, oriented E-W. The cist was made of monoliths. The west side was open and disturbed, the east side covered with three large slabs, *c.* 0.80 m. long, 0.30-0.40 m. wide. Maximum N-S dimension of cist and cover was 1.30 m., E-W 1.15 m. Inner length of cist *c.* 0.80 m. E-W, width *c.* 0.50 m. N-S. The floor was made of stones. The skeleton was lying in the cist in contracted position on its left side, with the head at the east. Inside the cist Hittite and Phrygian potsherds were found due to the disturbance.

*Burial H 9 has had to be omitted from the list of Hittite burials and this number is therefore canceled.

Inventory:

... Three lead rings at neck.
B 427 Copper wire ring in fill of cist.

H 31 (Pl. 6b) Cist-grave covered by a large pile of stones, 1.10 m. high, 1.80 m. long N-S, and 1.20 m. wide E-W. Some of the stones measured *c.* 0.70 x 0.30 m. The north side of the cist-grave was missing. The other sides were made of large stones but not monoliths. The inner dimensions of the cist were 1.20 m. N-S, 0.60 m. E-W, depth *c.* 0.40 m. The base of the grave was on bedrock at the north and *c.* 0.20 m. above it at the south.

In the grave two skeletons were found superimposed, both oriented S-N.

The upper skeleton was contracted on its right side, with head facing E. Right upper arm had been broken and knitted, the lower arm was missing.

The lower skeleton was found in disturbed condition, contracted on its right side as could be made out from the legs. Of the body the upper part of the pelvis was found, the right upper leg, one hand, some scattered arm bones and crushed skull fragments. This indicates that the lower burial was disintegrated before the upper burial was put in the grave.

Inventory:

P 378 Incomplete plain-ware jug, at the back of the upper skeleton (Pls. 13h; 26c).

H 40 Cist-grave, fragmentary, on gravel. The cist as found consisted of two slabs forming the N and W sides of the tomb, the other sides having been cut away in antiquity. An irregular slab still lay behind the skull at the S side. Preserved width of the cist 0.57 m.

The body was contracted on its left side. Orientation SW-NE, face turned W. The head was in bad condition; hands and lower legs were missing. The bones were too fragile to be saved.

Inventory:

B 449 One copper pin near left shoulder (Pl. 18g).

INHUMATIONS (10)

Plain contracted inhumations (7)

All of these are simple inhumations lying on bedrock, or in gravel just over bedrock, and in one case in a pit cut into bedrock. The skeletons were in contracted position, on left or right side (indifferently) and in a liberal variety of orientations.

This whole group of burials occurs in the presumably early part of the cemetery where it rather predominates the pattern of burials. Two are burials of children (H 23 and H 26). Two of the adult burials are marked by rather elaborate funeral gifts (H 22 and H 25). One adult burial (H 29) is superimposed in chronological succession on pit burial H 30, which was disturbed, perhaps by its successor. This is the only case of overlapping Bronze Age burials. The situation indicates considerable chronological priority for burial H 30. Since an early-looking stone spindle whorl was the only tomb-gift of burial H 30, this tomb may be of an earlier period than the bulk of the Hittite cemetery.

Another early burial is H 28. It was found among the group of Hittite inhumations, but this incomplete and disturbed burial was accompanied by a handmade red-ware bowl of primitive fabric, suggesting third-millennium manufacture. The case of the Gordion handmade bowl may actually prove the sporadic existence of third-millennium burials in this part of the cemetery. There certainly is no group of such prehistoric burials in the excavated part of the ridge. As mentioned above, another

isolated third-millennium burial of earlier aspect than H 28 was found under tumulus F (p. 1 *supra*, cf. *ILN* January 3, 1953, p. 21, fig. 6).

H 22 (Pls. 7c,d; 9d) Inhumation on about 0.10 m. of gravel above bedrock. Skeleton lying in contracted position, oriented SW-NE, on right side. The left arm was crossed over the stomach, holding the right arm above the elbow. The right arm came up under the left arm across the chest.

Inventory:

P 299	Two-handled buff bowl, found at knees (Pl. 15a).
P 354	Buff bowl, found in sherds over P 299.(Pl. 15f).
J 50	Gold wire earring, found at right ear (Pl. 20a).
ILS 50	Silver ring at neck (Pl. 20f).
B 163-168	Series of copper toggle-pins: (Pls. 17b,c,h,i; 19c,d), three found along right upper arm, two diagonally over right ribs, one near back of neck, four clustered around throat, others of uncertain location, found when body was lifted.
B 169	Copper bracelet, uncertain location (Pl. 21b).
...	Copper bracelet on right arm.
...	Gypsum spindle whorl on wrist of right arm.
G 43	Small paste bead found at neck (Pl. 21t).
St 82	Small stone bead near throat (Pl. 21v).
MC 55	Small clay bead near throat (Pl. 21o).

H 23 Fragmentary inhumation: head and topmost ribs of a child, lying E-W, with face to N, on right side.

Inventory:

BI 103	Small shells, part of a necklace (Pl. 22c).
MC 57	Five paste beads, part of same necklace (Pl. 21e-i).
...	String of copper rings, part of same necklace.

H 25 (Pl. 7b) Contracted inhumation on bedrock. Body oriented W-E, head facing N, on left side. Right arm bent across waist, left arm extended along side. Bones very fragile and covered with lime deposit.

Inventory:

P 319	Plain-ware jug, behind the head (Pl. 13e; 27a).
P 511	Red slipped pitcher, in front of head (Pl. 13f; 27b).
B 289	Copper toggle pin (Pl. 17i; 19f).
B 215a	Copper pin with loop head (Pl. 17n).
B 215b	Copper pin with pyramidal head (Pl. 18o; 19p). (Pins found along right upper arm and left collar bone).
...	Copper ring at ear.
...	Some more corroded fragments of copper rings.
MC 59	Tiny paste beads at neck (Pl. 21n).

H 26 Open burial of child lying in contracted position on bedrock. Orientation W-E, on left side, head turned N. Bones quite crumbly, position of arms uncertain, but at least one arm was folded across the chest.

Inventory:

P 326	Biconical buff jug, at back of skeleton (Pl. 14c; 28b).
...	Thin ring of copper wire at neck.

H 28 (Pl. 7e) Skeleton lying in gravel, contracted on right side. Orientation W-E. Head and feet missing. Right arm extended, left arm bent.

Inventory:

P 1023 Two-handled red jar, handmade of brick-red clay. Fragmentary, found in disturbed spot behind the shoulders (Pl. 16h).

H 29 (Pl. 7f) Contracted burial on level of bedrock, partly overlying the pit in which burial H 30 was found. Orientation NW-SE, body rather strongly contracted on right side, head facing SW. Arms bent.

Inventory:

P 373 Buff beak-spouted pitcher, slightly to W of head (Pls. 13a; 26e).
... Buff bowl in disintegrated state NW of head.
P 322 Buff bowl to N of head (Pls. 15e; 30c).

H 30 Burial in pit cut into bedrock, marked by half a circle of stones. Partially covered by burial H 29. Size of pit 1.20 m. E-W, 0.54 m. N-S, depth 0.40 m. Body in contracted position, orientation E-W, on left side. Position of arms uncertain. Bones disturbed.

Inventory:

... Spindle whorl, white limestone. (Pl. 24o, p. 43 *infra*).

Semi-contracted (2) inhumations

This group is of a special nature. Burials H 21 and H 27 belong with the group just discussed as far as their location is concerned. Burial H 21 is a pit-burial, in this detail comparable to H 30 listed above. The position of the body is not perfectly contracted. Only the legs are folded whereas the torso is rather in dorsal position. H 27 is lying under a large pile of stones in a comparable position. These two burials may be considered as variations within the group of simple inhumations.

H 21 (Pl. 8a) Burial in pit cut into bedrock. Size of pit SE-NW 1.40 m., width SW-NE 0.90 m., depth 0.70 m.; covered with stone pile, individual stones measuring as much as 1.10 x 0.50 x 0.30 m.

Body semi-contracted, oriented SE-NW. Torso on back, right arm bent over chest, left arm bent over abdomen. Head facing NE. Legs contracted. Skeleton large, measuring 1.15 m. from head to toes. The bones were in crushed condition.

Inventory:

P 346 Quatrefoil-mouth buff cup over left shoulder (Pls. 14d; 28c,d).

H 27 (Pl. 8b) A pile of stones of irregular shapes and sizes (overall dimensions 1.00 x 0.80 x 0.70 m.), lying on a packed floor, had been put over the skeleton. The body was semi-contracted, oriented SW-NE, with head turned east. The arms were folded across the chest, the right hand holding the left upper arm.

Inventory:

P 385 Fragmentary dark buff pitcher found under stones to SW (Pl. 13g).
B 423 Small copper ring at neck (Pl. 20n).

PITHOS-BURIALS (34)

Plain brick-red pithoi (11)

The pithoi which serve as coffins for these contracted burials are of simple brick-red, smooth fabric. Often traces of a red slip are preserved on the vessels, and signs of an original polished finish also survive. The pithoi have small handles of typical Anatolian shape: the section of this handle is triangular with a sharp, arris-like outer edge. In spite of their small appearance these handles are adequate for lifting the pithoi, as was experienced by us in the case of intact specimens. Most of the pithoi, however, require two persons for lifting and moving operations.

The burials using this type of ceramic coffin were embedded in gravel, sometimes rested on bedrock, and in two cases (H 15 and H 24) were partly set in a pit cut in bedrock. The pithoi leaned obliquely and were closed with stones, with optional use of mud bricks as supports and extra covers, and mud as a general insulating agent. H 15 is a good example of the method by which the tombs may have been marked in antiquity: a small mound made of mud brick and gravel was found piled over its top part (Pl. 8f).

The orientation of pithos and skeleton in this group, where undisturbed, is primarily SE-NW.

The distribution of the plain brick-red type of pithos in the cemetery is fairly general. Since the ribbed pithoi seem to occur with greater frequency in more eastern parts of the cemetery, they may be of a somewhat later general type than the plain pithoi. In the area marked off by burials H 16, H 21 and H 27, however, several types of pithoi and inhumations are found in close conjunction, which presumably also means chronological proximity, as indicated above.

Although most of these pithoi had been disturbed in antiquity, it seems from the scantiness of tomb gifts, even in well-sealed pithoi, that no great effort was made in general to provide the dead with more than a token of personal equipment.

Of the two cases of double burial in one pithos, H 1 is simple and can be explained as a mother-and-child burial, due to simultaneous decease. H 7 which contains two adult skeletons is so disturbed that no statement can be made as to the possibility of contemporary or successive nature of the burials. Though the pithoi are often capacious enough to contain two adult contracted bodies, the case of H 7 is exceptional.

H 1 (Pl. 8c,d) Brick-red pithos lying in gravel at a slight angle. Orientation S-N. Blocking consisting of several large, flat stones, intact. Double burial of adult and infant. The adult was lying contracted on the right side, the infant was jammed into a small space near the mouth of the pithos.

Inventory:

P 268	Red polished one-handled cup (Pls. 14b; 28a).
ILS 17	Two lead rings and fragments of four others (Pl. 20h).
B 133	Round-headed copper pin (Pls. 18f; 19*l*).
B 134	Copper pin with flattened pierced head (Pls. 17m; 19g).

H 2 Plain pithos lying obliquely about 0.40 m. above hardpan, propped up by a pile of gravel and stones. Orientation E-W. Over the mouth one flat stone as a cover, *c.* 0.48 m. wide, with additional stone blocking.

The pithos was cut off at the base by a Phrygian mud brick wall. Preserved in it a small skeleton in contracted position on its left side.

Inventory:

P 788 Pithos (Pl. 11e).
... Thirty knucklebones on chest.

H 5 Plain red pithos lying on a bed of gravel. Orientation SE-NW. Pithos disturbed and broken up in Phrygian times. The skeleton was entirely lost; the fill consisted of intrusive Phrygian and some Hittite sherds.

H 7 Large plain pithos lying in gravel in disturbed condition, broken. Orientation as found S-N.

Double burial. In view of the disturbed condition it was impossible to make out for certain whether this was a case of reopening of the pithos for a later burial, but the evidence seems to point to it.

The skeletons of two rather large persons were found. The lower body seems to have been contracted on its right side, the upper body on its left side, to judge by the remnants of the contracted legs. The feet of one of the skeletons appeared at the mouth of the pithos, but this again seems to be due to disturbance.

Phrygian sherds were found among the disturbed bones.

Inventory:

B 419 Copper toggle pin (Pl. 17d).
... Seventeen knucklebones.

H 10 (Pl. 8e) Plain red pithos lying at a slight angle from horizontal just over hardpan on gravel. Orientation S-N. Blocking of several medium-sized stones found in disturbed condition. Rim not intact.

The skeleton was lying contracted on its right side, its head protruded slightly beyond the mouth of the pithos. Both arms were bent up. Bones in poor condition.

No tomb-gifts left.

Inventory:

P 980 Pithos (Pl. 11f).

H 12 Fragmentary plain red pithos, on bedrock. Orientation SE-NW. Only a few fragments of the skeleton left.

Inventory:

ILS 49 Two lead rings (Pl. 20k,l).

H 14 Part of a plain red pithos lying in gravel over bedrock. Orientation E-W. Preserved length of pithos 0.76 m. Part of skeleton preserved, although disturbed.

Inventory:

P 637 Buff bowl (Pls. 16d; 30f).
P 638 Buff bowl. These bowls were found stacked (Pls. 16e; 30h).
... Four knucklebones.

H 15 (Pl. 8f) Plain red pithos lying at a slight angle with its base in a pit cut 0.30 m. into bedrock. Orientation SE-NW. The pithos, which is about 0.95 m. high, was found cracked but not visibly disturbed. Its cover consisted of one large stone slab over which several

whitish mud bricks had been put. Similar bricks, varying in measurements, were also found stacked over the tomb but separated from the blocking of the pithos by about 0.30-0.40 m. of gravel fill (Pl. 8f). These upper mud bricks had curved contours in most cases. This situation seems good evidence for the original presence of a small burial-mound stacked up with gravel and mud bricks.

The skeleton was lying in the pithos contracted on its right side. The bones had collapsed and were very fragile, as often the case even in intact burials.

No tomb-gifts.

Inventory:
P 787 Pithos (Pl. 11d).

H 16 Pithos of plain red type lying in gravel at a slight angle from horizontal. Orientation NE-SW. Blocking make of large stone and several smaller stones found underneath, anciently disturbed. Body also found in disturbed condition. Originally contracted on its left side, with right arm bent across the stomach. The head had fallen down to the bottom of the pithos.

Inventory:
P 609 Pithos (Pls. 11b; 25a).
P 313 Buff bowl, found in crook of right arm (Pls. 15d; 30a).

H 24 Plain red pithos lying obliquely in pit cut in bedrock. Orientation SE-NW. Blocking originally made of stones and supporting mud brick. On either side of the mouth one mud brick preserved. Pithos found disturbed and broken up. Skeleton contracted on left side, left arm bent.

Inventory:
P 608 Pithos (Pl. 11a).
P 353 Buff bowl found broken among stones (Pls. 16f; 30j).
... Copper pin with curled end from under fallen head.
MC 61 Spindle whorl (Pl. 24b,m).
BI 119 Pierced shell (Pl. 21w).
... Five knucklebones.

H 34 (Pl. 9a, b) Pithos of ovoid type, leaning about 30° from vertical, with its base resting on hardpan and its body embedded in gravel. Orientation SE-NW. Originally closed with stone slabs and mud brick and sealed with clay. Total width of the mud brick covering 1.05 m., individual mud bricks of size 0.34 x 0.26 x 0.10 m.

The burial had been broken into from the top, although much of the original coping remained, including a stone slab to the SW. Part of the rim of the pithos had fallen into the pot, and the skull was pushed over the edge by tomb-robbers. The bones were in a chaotic state.

Inventory:
P 784 Pithos (Pl. 11c).
P 755 Buff bowl, found in broken condition (Pl. 15*l*).
B 447 Copper ring.

Ribbed pithoi (9)

The general remarks made about the plain pithos-burials apply to this type as well. A preference for the ribbed type of pithos in the later part of the cemetery has been suggested.

Noteworthy are two fairly rich burials in this group: H 17 and H 41. They do not obscure the fact that the average number of tomb-gifts is small also in this group. In two cases (H 17 and H 47) indications were found that some vase offerings were placed outside the pithos.

H 11 A large three-ribbed pithos lying SE-NW with two fragmentary white bricks supporting the mouth. The upper part of the pithos had been disturbed and only half of the rim was preserved. Some stones had fallen into the pithos, and some arm- and leg-bones were found on top of the mixed earth at the mouth of the pithos. The bones in the pithos were in chaotic condition.

Inventory:

...	Copper pin fragment.
MC 94	Four small paste beads (Pl. 21p-s).
...	Seven knucklebones, two with pared faces.

H 13 Pithos burial of which one half had been sliced away lengthwise. Orientation SE-NW. Pithos propped up on bedrock in gravel at a 45° angle.

Inventory:

...	Pithos decorated with one rib at *c.* one third of the height above the base. Preserved height 0.90 m., max. diam. 0.65 m.
P 989	Buff bowl found near the mouth of the pithos (Pl. 16a).
P 990	Buff bowl, same location (Pl. 16g).
MC 95	Two spindle whorls (Pl. 24e-h,k,l,n).

H 17 (Pl. 9c) Brick-red pithos of ribbed type, lying at 45° angle with its base on bedrock and body inclined in gravel. Orientation E-W.

The mouth was blocked with a pile of about six rough stones, none of them large. The skeleton was found in contracted position on its right side, the bones in chaotic state.

Inventory:

P 366	Buff pitcher, fragmentary (Pls. 13i; 26a).
P 368	Red polished cup with strainer-spout (Pls. 14e; 28g).
P 311	Buff jug (Pls. 14a; 27d). These three pots were found among the stones which formed the blocking of the pithos.

Contents of pithos:

P 320	Buff one-handled bowl, lying at the back of the skeleton (Pls. 15c; 29c).
J 52	Gold wire earring (Pl. 20b).
ILS 44	Three silver rings (Pl. 20c-e).
B 155	Copper pin with mace-shaped head, with a tiny piece of cloth or string attached, found near throat (Pls. 18r; 19r).
B 150	Copper pin with spherical head, fallen to bottom of pithos (Pl. 18l).
B 151 to 154	Copper toggle-pins, fallen (Pls. 17a,f,j,k; 19a,b,e).
B 149	Copper bracelet (Pl. 21a).
G 45	Four paste beads (Pl. 21j-m).

H 18 Red pithos of three-ribbed type, lying with its base on bedrock and it mouth raised on *c.* 0.30 m. of gravel. Orientation SE-NW.

Found disturbed, blocking missing, top half of pithos caved in. The rim of the pithos had fallen inside, where parts of a small Hittite pithos of cooking-pot type were also found, probably as evidence of another disturbed burial stirred up with H 18.

The skeleton was also affected, the head having fallen off and the jaw lying upside down. The body was in contracted position on its right side, with right arm along side, and the left arm across

the chest.

Inventory:
MC 58 Clay spindle whorl (Pl. 24a).

H 20 (Pl. 9d,e) Pithos of ribbed type, lying almost horizontally in gravel. Orientation SE-NW. Closed with one large stone slab of 0.70 m. diam. and three or four smaller stones.

The skeleton was in contracted position on its right side.

Inventory:
P 517 Pithos (Pls. 11g; 25b).
P 298 Buff teapot, near the head in front of the chest (Pls. 14f; 28f).
ILS 45 Five lead rings, found around neck (Pl. 20i,j).
B 213 Two spiral-headed copper pins, one on each shoulder (Pls. 18b,c; 19j).

H 41 (Field Trench) Pithos of gritty red type with three plastic ribs, lying in gravel at a slight angle from horizontal. Orientation SSE-NNW. A mud brick covering extended all along the sides of this pithos. Stone slab over mouth as usual. Length of mud bricks 0.42 m. A piece of the stone cover slab and of the rim had been broken off and the pithos must have been interfered with by later tomb-diggers. The damage was superficial, however, as is apparent from the inventory.

The skeleton was in bad shape under fallen gravel and stone fragments.

Inventory:
P 917 Pithos (Pl. 12b).
B 465 Six copper pins, simple types (Pls. 18i-k; 19m).

Parts of necklace:
ILS 150 Five beads, each in the shape of a pair of Hittite shoes, special alloy of copper (Pl. 23a-d).
B 463 Three copper pendants, medallions (Pl. 23h-j).
B 464 Copper stamp seal (Pl. 23k-l).
G 118 Paste and metal beads, many of round, biconical and elongated shapes (Pl. 22b).

Found on skull:
BI 181 Wooden comb, to which attached (through a hole) one copper pin (Pl. 23f-g).

H 42 (Field Trench) (Pl. 9f) Pithos with five plastic ribs as decoration, leaning about 30° from horizontal. Orientation ENE-WSW. Around the mouth a framework of mud brick and mud laid as a blocking around the stone cover slab.

Found undisturbed but affected by moisture. Skeleton very decayed.

Inventory:
P 786 Pithos (Pl. 12a).
B 450 Copper ring (Pl. 20p).
... Unidentifiable fragment of copper.

H 47 (TT 4) Pithos of ribbed type, leaning in clean sand which in this part of the cemetery is found on bedrock. Orientation SE-NW.

Cover consisting of one big and several smaller stone slabs, mud bricks and mud. Found disturbed, perhaps merely by the builders of the Roman mud brick sarcophagus A 128 which was built

partly over the Hittite pithos-burial. The later tomb-builders made a hole in the side of the pithos without disturbing the blocking of the mouth. Total width of the blocking: 1.13 m.

Among the blocking stones were found in scattered state the fragments of a Hittite red jar with flaring neck. This vessel was obviously used by the makers of the pithos-burial and not included in the pithos, but buried in smashed condition among the cover stones of the tomb, perhaps after having been used in a funerary ritual.

The skeleton had partly fallen to the bottom of the unusually large pithos. One could still make out the contracted position of the body, but the skull was found in many fragments and not in situ.

Inventory:

P 783	Pithos (Pl. 11i).
P 768	Two-handled jar with flaring neck (Pls. 14g,h; 29a).
...	Fragments of a buff bowl from the disturbed contents of the pithos.

H 48 (TT 4) Pithos of ribbed type, leaning in sandy gravel, at an angle of about 45°. Orientation SE-NW. Blocking consisting of stone and large pieces of mud brick, not carefully built up as in most other cases. Undisturbed, but the bones had tumbled to the bottom of the pithos and were in powdery condition.

No tomb-gifts.

Inventory:

P 782	Pithos (Pl. 11h).

Pithoi of cooking-pot fabric, large (9, and several incomplete)

The pithoi in this category are of inferior fabric which can only be described as soft, gritty, and poorly fired, identical to the ubiquitous kitchen fabric of many periods. They are of a cheaper variety than the clinky and well-fired brick-red pithoi discussed before, but also represent a different category of shapes.

This type of pithos is frequent in the NE part of the cemetery as excavated. Several disturbed and almost obliterated burials were found in this area, often consisting of merely a sherd of crumbly fabric with some decayed bits of bone on and around it. Since these pithoi are very fragile and crumbly, Hittite burials of this type could more easily be destroyed than those in the hard brick-red pithoi.

H 6 (Pl. 10c) Large coarse-ware pithos, lying in gravel at a very slight angle. Orientation E-W. Some small stones served to prop up the pithos, and a large slab was used as a cover over the mouth.

Skeleton contracted on right side, facing N. Arms probably bent up and hands perhaps clasped under the chin. Measurements head to toes 0.80 m.

Inventory:

P 916	Pithos (Pl. 12f).
P 618	Buff bowl between knees and chin (Pls. 15g; 30g).
...	Forty-seven knucklebones over chest.

H 8 Large pithos of cooking-pot fabric, very fragmentarily preserved. Lying on bedrock, propped up in gravel, but the upper part cut away by a Phrygian wall. Orientation E-W. One stone slab over mouth, width 0.60 m. Some fragments of the skeleton preserved.

No tomb-gifts.

H 35 (Pls. 9a,b; 10a,b) Large coarse pithos of pointed, piriform type, embedded in gravel with base resting on bedrock, leaning *c.* 45° from vertical. Orientation SE-NW.

Closed with flaky limestone slabs of irregular size, the largest 0.90 m. wide, 0.05 m. thick, over and to the sides of which mud bricks were laid as a cover, the top being formed by a square of four mud bricks. Mud was applied around the bricks and in the interstices. Around the mouth of the pithos a hard floor existed, on which an impression of a piece of wood was left. Found undisturbed, but on opening the contents of the pithos proved to have been badly affected by moisture, so that the skeleton was in very crumbly state. The interior surface of the pithos was also in flaky condition.

Little could be made out of the original position of the skeleton.

Inventory:

P 791	Pithos (Pl. 12c).
B 451	Copper pin (Pl. 18n; 19n).

H 36 Large pithos of cooking-pot fabric, found sliced horizontally by the builders of a Phrygian house-wall. Pithos lying almost horizontally in gravel, embedded in a white clay layer which is presumably ancient and natural (cf. burial H 39). Orientation SE-NW. The blocking originally consisted of stone slabs and mud bricks built up to a considerable mass.

The skeleton was mostly preserved, contracted on its right side with arms bent up under the chin.

Inventory:

...	Pithos height 1.14 m., diam. mouth 0.41 m. Plain rim with vertical round handles from rim to body. Pointed ovoid shape. Signs of burning at the base.
B 487	Copper pin (Pl. 18a; 19h).
B 460	Two copper pins near shoulders (Pls. 18p,q; 19q).
B 459	Two small copper pins at waist (Pls. 17o,p; 19i).
ILS 149	Silver ring at neck.
ILS 163	Fragments of lead rings (Pl. 20m).
MC 86	Spindle whorl at back (Pl. 24d,i).
...	Eleven knucklebones over chest.

H 37 Fragmentary large pithos of coarse type, found under the wall of a Phrygian house, perhaps in shifted position. Orientation as found SSE-NNW. The stones of the Phrygian wall had partly crushed the burial, although it still could be inferred that the body must have lain in contracted position on its right side. Fallen fragments of mud brick indicate that there was an original blocking of mud brick.

Inventory:

P 858	Pithos (Pl. 12e).
ILS 153	Fragments of two silver rings.
B 504	One copper toggle pin (Pl. 17e).
MC 84	Spindle whorl (Pl. 24c,p).

H 38 Large pithos of cooking-pot type lying obliquely in gravel on bedrock, intact. Orientation SE-NW. Blocking at the mouth consisting of one large thin stone slab as a cover, over which mud bricks were laid to the sides. Another mud brick was laid at an angle over the base of the pithos. Size of bricks 0.30 x 0.36 x 0.09 m. The mud brick structure over the top of the pithos was insulated with brown mud.

Skeleton contracted on left side.

Inventory:

P 714	Pithos (Pl. 25c).
P 728	Buff bowl above knees (Pl. 15j).
B 432	Copper ring at right ear (Pl. 20o).
...	Twenty-four knucklebones on chest.

H 39 (Pl. 10d) Tall pithos of cooking-pot fabric. Originally leaning with its lower part in gravel and embedded in a white clay floor, like burial H 36. Orientation SE-NW. Only part of the original mud brick blocking was preserved. The burial and skeleton were badly disturbed and partly removed by Phrygian interference.

The hard clay floor, covered with fine sand, runs over the gravel deposit in this area. The floor seems to be a natural silt deposit in which the pithos was neatly embedded. The clay floor was cut away by a Phrygian house built to the south. On the same clay level burnt beams were found which were part of a later intrusive cremation. This cremation disturbed another Hittite pithos of which only a small slice was left east of H 39.

Inventory:

B 749	Buff bowl (Pl. 15k).

H 43 (Field Trench) (Pl. 10e) Elongated pithos of cooking-pot fabric. Leaning at about a 40° angle from horizontal, with its base embedded in a slight cut made into bedrock, and the body inclined in gravel. Orientation SE-NW. Closed with rough limestone chunks and mud as a substantial blocking. No mud brick. As with H 41 a hole had been made near the mouth of the pithos, which was found broken. The damage was superficial but how much had been taken away cannot be estimated.

Skeleton in bad condition, the head fallen to the bottom of the pithos.

Inventory:

P 857	Pithos (Pl. 12d).
B 452	Copper pin with toothed flat head (Pls. 18e; 19k).
B 453	Copper wire ring with thickened ends.
...	Some tiny bits of copper curved pins or needles.

H 46 (TT 13) Fragmentary burial in large pithos of cooking-pot fabric. Partly cut away by a Roman burial (A 201) which descended to the level of the pithos and removed the mouth and upper part of it. The original orientation was preserved at the base, which was lying on virgin soil consisting of yellow clay in direction SSE-NNW.

A few bones were left in the base part.

No tomb-gifts preserved.

Inventory:

...	Preserved height of pithos 0.70 m., pres. width 0.43 m.

Special round type of small cooking-pot (5)

This type was in use for child burials and is merely an economical version of the larger vessels of the same coarse fabric, just described.

Orientation and burial-types are as in the general category of pithos-burials.

H 4 Small pithos of cooking-pot type lying on bedrock, almost horizontally. Orientation S-N.

Blocking around the mouth made of three mud bricks.

Skeleton of a child contracted on its left side.

Inventory:

P 646	Pithos (Pls. 12g; 25d).
P 621	Buff bowl, lying at back of child (Pls. 15h; 30i).
ILS 111	Two silver rings (Pl. 20g).
ILS 125	Lead ring fragments.
B 415	Copper bracelet on wrist (Pl. 21c).
B 416	Copper bracelet (Pl. 21d).
B 327	Copper pin with grooved head (Pls. 18m; 19o).
...	Small copper pin.
...	Two small copper wire earrings.
B 329	Small copper spiral band, presumably part of necklace (Pl. 21u).
J 69	Necklace of small black and white round paste beads (Pl. 22a).
SS 70	Pendant stamp seal, paste (Pl. 23m,n).

H 19 Small pithos of cooking-pot type lying at a 45° angle in gravel, about 0.10 m. above bedrock, on a bed of packed earth. Orientation SE-NW. Closed with a rough stone slab.

Child's bones in fragile state.

Inventory:

P 392	Pithos.

H 32 Small cooking-pot pithos lying in gravel. Orientation S-N. Blocking at mouth (partly disturbed) consisting of one mud brick (0.32 x 0.215 x 0.09 m.).

Skeleton of a child contracted on its left side.

Inventory:

P 688	Pithos (Pl. 12h).
P 650	Buff bowl, at back of skeleton (Pl. 15i).

H 33 Fragmentary small cooking-pot burial in gravel. Orientation SW-NE. Blocking around mouth consisted of two mud bricks. Found in disturbed condition.

Part of the skeleton was preserved, contracted on left side.

Inventory:

...	Pithos, max. diam. 0.50 m., mouth diam. 0.35 m.
...	Some shell beads.

H 45 (Field Trench) (Pl. 10f) Pithos of small cooking-pot type, leaning in gravel at an angle of *c.* 30° from vertical. Orientation SE-NW. Cover of mud brick and brown mud (size of mud brick *c.* 0.42 x 0.42 x 0.10 m.). The pithos was also propped up on a horizontal mud brick.

Found undisturbed, but with skeletal remains badly affected by moisture. Only fragments of skull and bones could be recovered.

Inventory:

P 785	Pithos (Pl. 12i).
B 454	Copper pin (Pl. 18h).

... Several small snail shells from a necklace.
... Four knucklebones.

Fragmentary and Lost Burials

H 44 (Field Trench) The nature of this burial cannot be determined, but a group of tomb-gifts which must have formed its inventory were all found together under Roman Burial A 114. Fragments of a red jar of unidentifiable shape were cut through in order to make way for the feet of the Roman burial.

Inventory:

P 764 Two-handled bowl (Pls. 15b; 29b).
B 448 Three copper toggle pins.
P 1139 Buff jar (Pl. 28e).

Other lost burials account for the presence of a great number of Hittite objects in the fill of the cemetery. Catalogued items of such provenance are:

P 262 Squat pitcher (Pls. 13d; 26b).
P 296 Beaked pitcher (Pls. 13c; 26d).
P 300 Buff bowl (Pls. 16b; 30b).
P 301 Buff bowl (Pls. 16c; 30d).
P 711 Buff round-based pitcher (Pls. 13b; 27c).
B 202 Two copper pins.
B 461 Copper toggle pin (Pl. 17g).
ILS 51 Two lead rings.

CATALOGUE OF OBJECTS FROM THE TOMBS

POTTERY*

PITHOI

The subdivisions of this category have been discussed above for a classification of pithos burials. Only a selected number of pithoi has been mended and preserved.

Brick-red, plain pithoi

P 608 (burial H 24) Pl. 11a

H. 1.00, max. D. 0.60, D. rim 0.45, D. base 0.14. Mended. Rather slender profile, although bag-shaped. Rim everted with rounded inner edge. Handles of arris-section, total H. 0.175. Small flat base. Brick-red clay, slightly gritty, well-fired. Red wash on two-thirds of the pot (upper), low burnished.

P 609 (burial H 16) Pls. 11b; 25a

H. 0.97, max. D. 0.61, D. rim 0.48, D. base 0.14. Mended. Spacious ovoid body on small base. Rolled everted rim. Handles arrised, total H. 0.30, rather large and thick. Brick-red fabric with dull slipped plain outer surface. Encrusted.

P 784 (burial H 34) Pl. 11c

H. 0.78, max. D. 0.58, D. rim 0.41, D. base 0.11. Mended. Small type of plain pithos, roundish body. Rim thickened, everted. Sharply arrised handles. Clay brick-red, low burnished, somewhat mottled. Encrusted.

P 787 (burial H 15) Pl. 11d

H. 0.95, max. D. 0.62, D. rim 0.44, D. base 0.16. Mended. Plain fairly slender pithos on flat base, flaring to capacious body with widest diameter about at mid-height. Neck with slightly everted rim. Handles high, arrised type, total H. 0.17. Clay brick-red, encrusted. Base and area around base blackened by fire on outside.

P 788 (burial H 2) Pl. 11e

Preserved H. 0.67, max. D. 0.47, D. rim 0.45. Only upper part preserved. Straight-rimmed pithos with two vertical handles of flattened oval section (inner edge concave). Clay brick-red, untreated.

P 980 (burial H 10) Pl. 11f

H. 0.95, max. D. 0.68, D. rim 0.50, D. base 0.13. Mended. Plain bulging pithos. Thick rolled out rim, round on top, flattened underneath. Handles slightly arrised. Sandy brick-red clay. Finish worn off, perhaps originally plain.

Ribbed pithoi

P 517 (burial H 20) Pls. 11g; 25b

H. 1.15, max. D. 0.68, D. rim 0.57, D. base 0.14. Mended, with gap in one side. Body of pointed ovoid shape. Rim everted,

*With the exception of P 1023, p. 29 *infra*, all the pottery to be discussed here is wheelmade.

rolled. Below rim three finger ridges. On body three raised bands of c. 0.04 width: one above handles, one just under handles, one just below middle of pithos. Handles flattened oval in section without arris, total H. 0.14. Clay brick-red, red slipped and lightly burnished on shoulder zone to rim.

P 782 (burial H 48) Pl. 11h

H. 1.18, max. D. 0.70, D. rim 0.55, D. base 0.14. Mended. Large bulging type of pithos. Base small and flat, body ovoid rising to small shoulder and flaring flat rim. Three flat ribbon-like plastic ribs as decoration: one in base zone, one in middle, one in handle zone. Two handles with sharp triangular section, total H. 0.15. Clay brick-red, well-fired. Surface smoothed, traces of self-slip. No burnish visible but incrustation prevents observation.

P 783 (burial H 47) Pl. 11i

H. 1.09, max. D. 0.75, D. rim 0.55, D. base 0.12. Mended, small fragments missing. Ribbed, bulging type of pithos. Body very capacious and less pointed than P 782. Rim flaring with sharp outward turn. Three ribbon-like ribs about 0.03 wide, near base, middle and handle zone respectively. Two handles of angular section with sharp arrises. Total H. 0.16. Good brick-red clay, well-fired with clean grey core. Outer surface red slipped, originally low-burnished as still visible near handles.

P 786 (burial H 42) Pl. 12a

H. 1.06, max. D. 0.67, D. rim 0.47, D. base 0.11. Mended. High pithos of same general type as P 783 but more slender. Pointed ovoid body rising from small flat base. Neck everted with rounded rim. Five ribs around body, average width 0.05. Spaced evenly, one running through the handles, one above handles. Handles sharp, with arrised section, total H. 0.19. Handle attachment lower than on P 782 and P 783. Contours generally firm. Clay brick-red, partly encrusted but originally red burnished.

P 917 (burial H 41) Pl. 12b

H. 1.08, max. D. 0.62, D. rim 0.44, D. base 0.15. Mended, with a few gaps. Bulging pithos with rather pointed base part, almost carinated at one-third of height. Wide mouth with short flaring plain rim. Three approximately equidistant irregular raised ridges. Just below the middle ridge (0.37 from top) two triangular handles, about round in section. Brick-red fabric, surface worn off and encrusted, probably once red slipped.

Large cooking-pot type pithoi

P 714 (burial H 38) Pl. 25c

H. 0.99, max. D. 0.50, D. rim 0.48. Mended and subsequently collapsed. Gaps. Pithos of conical profile in lower part of body and cylindrical in upper part. A flat plastic band marks the transition in profile. Rim hole-mouth, wide. Edge squared. Two small vertical handles attached just below the rim. Two small lugs were spaced opposite each other between the handles. Clay coarse, mottled orange, brown, grey to dark brown.

P 791 (burial H 35) Pl. 12c

H. 1.05, max. D. 0.55, D. rim 0.55, D. base 0.14. Mended and plastered. Body standing on narrow base spreading to cylindrical upper part. Plain straight rim. One plastic ridge at one third of height from base. Two handles just below rim with sharp section. Total H. 0.14. Clay coarse brown, not thoroughly fired. This pithos has an old crack running vertically from the base to a height of about 0.50. At either side of this crack there are ancient mending-holes, drilled from the outside in, three pairs in total, one just above the ridge.

P 857 (burial H 43) Pl. 12d

H. 0.73, max. D. 0.52, D. rim 0.42?, D. base 0.13. Mended, missing most of upper body and rim including handles. Base narrow,

body ovoid except for sharpening towards base. Hole-mouth with flattened and slightly pared rim. Fabric poorly fired, made of coarse clay with gritty admixture, which has very rough breaks. The crackled surface is roughly burnished and of a dark red to brown mottled appearance. Interior mostly black, hardly any traces of wheel.

P 858 (burial H 37) Pl. 12e

H. preserved 0.93, max. D. 0.57, D. base 0.15. Missing: rim and most of upper part of body. No handles preserved. Tall type of pithos similar to P 916. Rounded shoulder. Clay very coarse, fired grey-brown. Encrusted.

P 916 (burial H 6) Pl. 12f

H. 0.99, max. D. 0.54, D. rim 0.46, D. base 0.14. Mended and plastered, one-third missing. Tall pithos on small base, with conical lower and cylindrical upper part of the body curving into hole-mouth with plain thickened rim. Handle (one missing) triangular, arrised section. Coarse dark brown clay, mottled grey to dark red-brown.

Small cooking-pot type pithoi

P 392 (burial H 19)

H. 0.365, max. D. 0.38, D. rim 0.265. Mended and plastered, base restored. Ovoid body with high shoulder and hole-mouth with plain rim. Handles attached to rim, with slightly sharpened section. Total H. 0.10. Clay coarse, gritty. Surface blackened, smoothed to low burnished.

P 646 (burial H 4) Pls. 12g; 25d

H. 0.39, max. D. 0.395, D. rim 0.275. Complete, mended. Ovoid body, truncated at hole-mouth rim. Base slightly flattened, D. 0.07. Two small handles, round, attached just below rim. Fire-blackened exterior.

P 688 (burial H 32) Pl. 12h

H. 0.44, max. D. 0.395, D. rim 0.26. Mended, large gap in rim and upper wall. Body ovoid, on slightly flattened base (D. 0.08), cut off to hole-mouth rim. Handles attached very slightly below rim, vaguely arrised. Total H. 0.10. Exterior surface brown-red, interior dark. Fire-blackening on exterior. Rim clearly wheelturned.

P 785 (burial H 45) Pl. 12i

H. 0.53, max. D. 0.58, D. rim 0.40. Mended. Small round-bodied pithos with hole-mouth rim. Base slightly flattened. Two vertical loop-handles attached on shoulder, section elliptic. Crumbly and gritty fabric, unevenly fired, mottled black to grey-brown.

Among Hittite storage jars from other sites similarities to the Gordion specimens are easily found, although few striking resemblances occur. The fabric, the partial, red polished slip, and the arrised handles (cf. Boğazköy *WVDOG* 60, Pl. 24: 10, p. 42, which must be from a pitcher, but provides a characteristic sample of Hittite craftsmanship) of the brick-red jars from Gordion are unmistakably Hittite in appearance. The storage jars of Boğazköy (*MDOG* 77 [1939], 29, fig. 35), Alaca (*Rapport 1937-39*, Pl. LIV, 1; LV, 3, other specimens in the Alaca Museum) and Alişar (*OIP* 29, 158, e 1503) are less slender in shape and have more pronounced tapering of contour. Hittite storage jars from Kusura (*Archaeologia* 86, 22, period C) show less relationship to the Gordion pithoi.

It may be suggested that the brick-red Gordion pithoi found in the cemetery are of an exclusively funerary fabric. The capacious, often cylindrical bulge of their bodies is eminently suitable for their purpose. No signs of previous domestic use or repairs were observed on these pithoi, which were in as-new condition. Slight traces of burning around the base of P 787 may have been incurred in the potter's kiln, just as much of the mottling on cooking-pot pithoi seems to have been caused by initial

uneven firing. If the brick-red pithoi are funerary types, it is more easily explained why no exact parallels in profile are to be observed among the domestic storage jars of other Hittite sites. However, investigations of the Hittite settlement levels at Gordion will have to decide the matter.

Pithoi of cooking-pot fabric are common at Hittite sites. The Gordion funerary pithoi of this fabric must have been taken from domestic supplies. Pithos P 791 (H 35) has mending-holes in one side. The tall cooking-pot shape represented by this pithos is to be found among storage jars in houses of the Assyrian colony period in Boğazköy (*MDOG* 77 [1939], 29, fig. 37; *WVDOG* 63, 107, fig. 29, 5) and in level I houses of the Karum at Kanesh (to be seen in situ in 1953). The early dating of this type is to be noticed. The globular cooking-pots used for the burials of children again seem to be a regular domestic ware, related, e.g., to items from Alişar (*OIP* 29, 162, fig. 203, e 2459; 189, Pl. VI) and Alaca (Alaca Museum *MS* 392, 395, 336). The Gordion pithoi of this type are mostly made with a hole-mouth profile. This distinguishes them from the Alişar specimen quoted, and from a funerary pithos found at Kültepe, again in colony context (*Kültepe 1948*, 187, fig. 577; cf. the profiles of the storage-jars on Pl. LXXV).

PITCHERS

Beaked pitchers (*Schnabelkannen*) on ring-base

P 262 (fill) Pls. 13d; 26b

H. 0.22, max. D. 0.163, D. base 0.05. Missing: most of original rim and lip, except for a small edge near the handle which is cut away for the beginning of the spout. Hole in shoulder; otherwise intact. Squat spherical body, narrow neck splaying into rising spout, perhaps slightly trefoil. Small ring-base. Handle smoothly attached, shoulder to neck, oval in section. Wheelmade. Clay pinkish-buff, sandy. Exterior slipped. The slip has fired red-pink in most parts but light pink to white near the handle. Vertical burnishing strokes. Interior of neck has a dull, light-coloured surface.

P 296 (gravel fill) Pls. 13c; 26d

H. 0.268; max. D. 0.17, base D. 0.05. Mended near spout only, tip of spout abraded. Pitcher with low carination. Small ring-base. Rising spout, slightly pulled up and pinched together for pouring. Handle angular in section, highest point with ridge along top. One plastic knob below spout on the upper part of body (abraded, originally triangular?). One dent in lower part of body. Wheelmade. Clay buff gritty-sandy. Exterior has a dark reddish-buff slip over top part to just below carination. This slip is smoothed, and ends unevenly. Lowest part of body dull, untreated sand color.

P 373 (burial H 29) Pls. 13a; 26e

H. 0.34, max. D. 0.202, D. base 0.058. Mended, missing tip of spout. Base-ring crumbly. Slightly bag-shaped pitcher with low carination. Wide neck, rising spout. Base-ring thin. Handle slightly angular. Wheelmade. Pink to brick-red clay, fairly heavy fabric. Buff slip, light vertical burnish on upper part of body. Interior reddish, dull finished.

P 385 (burial H 27) Pl. 13g

Preserved H. 0.17, max. D. 0.17. Missing handle and upper neck. Base-ring abraded. Body with low carination. Slight neck-ridge. Base convex inside base-ring. Scar of heavy vertical handle on middle of upper half of body. Three applied clay warts as decoration on upper body, handle opposite middle wart. One little piece of rim is preserved intact and indicates a low neck. Heavy dark buff clay, burnished vertically in upper part, horizontally below carination. Burnt badly, blackened lower and left half of vessel. Wheelmade although burnish on exterior has obliterated wheelmarks.

All these pitchers have a characteristic low-placed and blunt carination and in this respect differ from generally similar types such as are represented at Kültepe in colony levels (*Kültepe 1948*, Pl. 36, figs. 150-152; lower but much sharper carinations fig. 154-155; cf. also the ring-base types fig. 301-302), at Boğazköy in later Hittite context (*MDOG* 77, 15, fig. 12b) or at Alişar (*OIP* 29, 187, fig. 185, e 684). Although closely related in shape to the general Hittite production, the Gordion pitchers seem to represent a local variant of the ubiquitous Anatolian *Schnabelkanne*. Such details of decoration as plastic warts, occurring on our P 385, are commonplace elsewhere too (e.g. at Alaca, *Ausgrabungen 1936*, 42 and 47, Al/A 195.1/5). This Gordion specimen has a low neck near the handle and is somewhat comparable to a pitcher from Polatli (*Anatolian Studies* I, 1951, 50, fig. 12, 1, handmade?, Pl. IV, b) which however has no base-ring and looks earlier.

An unusual handle attachment and cut-away neck set P 262 apart from the general group of Gordion pitchers. This type is a variant of a shape occurring at Kültepe (*Kültepe 1948*, fig. 158 and *Kültepe 1949*, fig. 124) and Alişar (*OIP* 29, variants on Pl. V).

The general appearance of the Gordion pitchers is rather early. They are not brilliantly slipped and polished as is the best "Cappadocian" period pottery, but they have a brownish slip and low burnish. The bag-shaped profile, little affected by the indubitable use of the wheel, would seem to make the Gordion shape a compromise between local third-millennium tradition and new sophisticated shapes as developed in "Cappadocian" sites.

Beaked (?) pitchers without ring-base

P 366 (burial H 17) Pls. 13i; 26a

Preserved H. 0.185, max. D. 0.148. Fragmentary, preserving about two-thirds of body. Pointed base, body slightly carinated. Probably pitcher with rising spout. Buff to brick-red fabric covered with thick buff slip.

P 378 (burial H 31) Pls. 13h; 26c

Preserved H. 0.273, max. D. 0.217, D. base 0.053. Cracked, missing mouth and handle. Pitcher of surprisingly bag-shaped profile for a wheelmade pot. Base flat, small and irregular. Handle attachment straight and firm, on shoulder. Thin-walled, neck walls *c.* 0.005. Reddish clay, well-fired. Unslipped, unburnished, but smoothed. Surface pink.

These pitchers are probably variants of the first group, though less articulated in profile. They may however have had straight rims and thus belonged to the next group.

Straight-necked jugs with round base

P 319 (burial H 25) Pls. 13e; 27a

H. 0.255, max. D. 0.145, D. rim (outer) 0.064. Mended on one side, crack at base of neck. Rather thick-bodied pitcher with very slight carination in lower profile. Straight everted rim, small ridge just below rim. Handle oval in section. Clay brick-red to buff. Originally perhaps a reddish slip on upper part of body, now mainly buff-pink mottled.

P 511 (burial H 25) Pls. 13f; 27b

H. 0.265, max. D. 0.166, D. rim (outer) 0.07. Mended, gaps in body. Base lost. Ovoid body, flaring neck, rolled rim. Base must have been a blunt point. Handle flattened oval in section. Clay reddish buff. Partial red slip on interior rim, on exterior handle and body to just below the faint carination. Low vertical burnish over slip.

This type of flask-like pitcher is of common occurrence at Hittite sites. It was found in a level II cist-grave and in Ib context at Karum Kanesh (*Kültepe 1948*, fig. 159, pp. 174 f, *Kültepe 1949*,

figs. 117-121, all red-polished), and is well represented at Alaca (*Ausgrabungen 1936*, 43, top row with rims less well profiled than at Gordion; *Rapport 1937-39*, Pl. 45, 3; Pl. 50, 3-4). Bogazköy has some red-polished variants (*WVDOG* 60, Pl. 26, 3-5, p. 41; *WVDOG* 63, 108, fig. 30: 10, 14), Alişar an occasional occurrence (*OIP* 29, Pl. 5, b 1678). Similar flasks were found at Tezköyü Hüyük near Emirdağ, with shapes not unlike the Gordion specimens although the surface finish is different (Afyon Museum 1882). Fragmentary specimens occur in level I at Beycesultan (*Anatolian Studies* 5 [1955] p. 87, fig. 20: 3-4).

Tall pointed pitchers

P 711 (gravel fill) Pls. 13b; 27c

H. preserved 0.46, max. D. 0.26, D. at broken neck *c.* 0.11, D. base *c.* 0.06. Mended, missing: neck, upper part of handle, and fragments of body. Body long pointed ovoid, base just flattened, stub of vertical handle from high on shoulder, straight, firm attachment. Clay buff, slightly gritty. Exterior has a light cream slip.

Another more Syrian than Anatolian shape which became popular among the Hittites. To be restored to resemble Alaca *Rapport 1937-39*, Pl. 50, 1-2; or Alisar *OIP* 29, 368, fig. 417 a (wrongly classified as Phrygian).

Pitcher or jar on ring-base

P 1139 (lost burial H 44) Pl. 28e

H. preserved 0.25, max. D. 0.23, base D. 0.08. Upper part missing, no trace of handle attachment. Pitcher or jar with slightly carinated body. Ring-base with convex central part. Thin fabric, buff to pink, with gritty temper and lime specks. Interior flaky. Originally red slipped above the carination.

ONE-HANDLED JARS

Large, bag-shaped

P 311 (burial H 17) Pls. 14a; 27d

H. 0.24, max. D. 0.223, D. rim (outer) 0.12. Mended. Missing handle and about one-third of body. Somewhat carelessly made ovoid jug. Rim beveled and worn. Base rounded. Handle probably from rim (where attachment is preserved) to lower part of body, but possibly a loop-handle set on the rim vertically. Clay light buff, fired pink to cream-grey. Interior very worn. Exterior somewhat gritty and pitted, unslipped, smoothed.

This simply profiled jug is similar in type to Alişar specimens from Old Hittite levels (*OIP* 29, 134, d 2958, c 2194). The bag-shape of its body is again a good Gordion characteristic and related to the pitcher profiles listed *supra*.

Carinated jars with pointed base

P 268 (burial H 1) Pls. 14b; 28a

H. including handle 0.102; max. D. 0.129, D. rim 0.10. Mended. Missing chips from lip, wall and handle. Abraded in spots. Black pock marks. Wide-mouthed biconical jar, thin-walled, with thin, slightly everted lip. In zone of widest diameter eight low swellings with corresponding dents on interior. Low ridge in center of upper part. Clay buff to brick-red, rather gritty. Red slip all over exterior and on interior rim-zone. Originally had a low burnish.

P 326 (burial H 26) Pls. 14c; 28b

H. without handle 0.125, max. D. 0.164, D. rim (outer) 0.11, D. base 0.027. Intact except for hole and abrasion in lower body and some nicks in rim. Heavy jar of biconical shape with slightly convex simple base. Rim everted. Handle well-attached and merging into rim and body, oval in section. Fabric pinkish buff, sandy, micaceous. Fairly thick-walled. Originally self-slipped, now worn and pock-marked in spots.

An extremely familiar shape which starts early in the second millennium (cf. *Kültepe 1948*, figs. 443-444), is found in many variants at Alişar (*OIP* 29, 131 ff) and Boğazköy (*WVDOG* 60, Pl. 28, 9; Pl. 29, 4; p. 50, assigned to 15th-13th cent.). A close parallel for P 326 comes from Hacilar near Ankara (now in study collection of Bedesten at Ankara), different in fabric from the Gordion specimen but showing a relationship in shape, with a low-placed carination, due to geographical proximity.

Gordion P 268 has a special knoblike decoration which must be an imitation of metallic detail. Such treatment is usually reserved for pottery rims, but cf. *Kültepe 1949*, fig. 223, a jar from Karum level I.

Small jar with quatrefoil rim

P 346 (burial H 21) Pls. 14d; 28c,d

H. 0.123, max. D. 0.131, D. base *c.* 0.039. Mended, a few chips missing. Small regular jar on faint ring-base. Body squat, neck slightly flaring. Mouth a regular quatrefoil. Handle thin, from rim to level of greatest width, continuing profile of the lower body. Slightly gritty buff clay, originally red-slipped except around the base. Parts of red slip well visible on upper body and handle. Probably unpolished.

Quatrefoil cups like this one are hard to point out at other sites, but the general affinity of the Gordion cup to such trefoil jugs as found at Alişar (*OIP* 29, 137, d 2457, d 2660; p. 139, d 2662, etc.) is clear. Again the Old Hittite levels at Alişar prove the most congenial milieu for Gordion ceramics. In a general way one can also refer to the quatrefoil treatment of early Hittite "kantharos" rims (*Kültepe ILN* Jan. 14, 1950, p. 68, fig. 2; at Alaca *Ausgrabungen 1936*, 42 a, etc.) and its variants now appearing in the second level at Beycesultan (*Anatolian Studies* 5 [1955] p. 68, fig. 12: 1-5, Pl. V b).

SPOUTED JARS

With strainer-spout and two handles

P 368 (burial H 17) Pls. 14e; 28g

H. 0.124, max. D. 0.12, D. rim 0.092, D. base 0.047. Mended, gaps in body, rim and strainer. Carinated body on small solid disc-base. Rim slightly profiled. Wide trough-spout with strainer. One handle at right angles to strainer-spout, vertical loop with triangular sharp section. Opposite spout thickened rim and attachment of basket-handle, which is missing, together with the opposite edge of the rim. Clay reddish buff, gritty. Red slip and polish on exterior, on interior rim and interior spout.

This type is paralleled at Alaca. A cup in the Hittite Museum at Ankara (Al. D. 142, 8639, H. 0.115, D. mouth 0.103) seems to have been of the same basket-handled shape. It stands on a slight ring-base (D. 0.055). There are some comparable published examples (Alaca, *Rapport 1937-39*, Pl. 58, 2 (?), p. 125; and Pl. 64, 1, which seems to lack a side-handle). Beycesultan level II has related variants (*Anatolian Studies* 5 [1955], p. 74 type 15).

Teapot

P 298 (burial H 20) Pls. 14f; 28f

H. with spout 0.149, without 0.132; max. D. 0.142, D. rim (outer) 0.099, D. base 0.0456. Complete, mended. Chipped on one side. Biconical body on small disc-base which is slightly concave with round depression in center. Rim profiled by grooving on beveled edge, strong plastic ridge c. 0.01 below rim. Spout pared with sharp facets, polygonal in section. Cut to convex beak profile. Handle rectangular in section, stuck onto body and not through wall of body. Lightweight fabric, relatively thin, buff with smoothed outer surface, lightly burnished, vertically on lower part, horizontally above carination. Interior untreated. Exterior finish originally excellent and compact, now mostly worn off, but spout is still smooth.

Among the large family of teapots so well known as a leading ceramic shape in Anatolia, our specimen stands out by its precision of form and sharp contour. The general relationship to such Kültepe teapots as illustrated in *Kültepe 1948*, figs. 170 ff, 177 ff, is clear, but the Karum examples are less goblet-like in profile than our pot. Alişar again provides similar, but locally differentiated shapes (cf. *OIP* 29, fig. 177 for non-spouted jars).

The elegant modification of the teapot-shape at Gordion seems chronologically not too far removed from the colony period, in general terms Middle Bronze rather than Late Bronze. It is perhaps the most convincing proof of a good, local style of Hittite ceramics in the Sakarya valley.

TWO-HANDLED JARS

Tall narrow-necked jar

P 768 (burial H 47) Pls. 14g,h; 29a

H. 0.45, max. D. 0.36, D. base 0.123, D. rim (outer) 0.173. Mended, large fragments of body and neck missing. Large jar with mild carination in lower part of body. Ring-base. Rim flaring and curved out. Two vertical handles, angular in section, on middle of upper part of body. Two warts spaced between handles. One plastic groove around shoulder, four grooves above handles. Brick-red light fabric. Surface lightly burnished, with tiny pits due to grits. Neck burnished on interior, otherwise interior dull untreated.

This is a local variant on the Hittite two- or four-handled type of jar with flaring neck. As often, the second pair of handles has shrunk to ornamental knobs. The general proportions and low carination of this vessel put it in the same class as the Gordion pitchers described *supra* on p. 22. The generic type is found at Kültepe (*Kültepe 1948*, Pl. 51, still far removed from the Gordion modification; closer are *Kültepe 1949*, figs. 217-222), Alaca (*Ausgrabungen 1936*, 41, bottom row left), and somewhat more directly related at Boğazköy (*WVDOG* 60, Pls. 20-21). The Boğazköy vessels quoted all seem to come from the cemetery dug by Makridi in 1911 (*l.c.* 39). This type of jar may be of particular significance in funeral use. In Gordion only one example has been found so far; as explained above, the jar seems to have been put on top of pithos-burial H 47 which it accompanied. Later variants of this shape were found in level II at Beycesultan (*Anatolian Studies* 5 [1955], p. 73, fig. 15: 5-6).

Krater

P 299 (burial H 22) Pl. 15a

H. 0.14, max. D. 0.20, D. rim 0.147, D. base 0.08. Complete, one vertical crack in wall. Wide open bowl on sharp sturdy ring-base. Rim offset, rolled. Two vertical loop-handles continuing profile of lower body. Clay gritty, orange to reddish buff. Surface matt.

A krater-shape which once more illustrates the independence of the Gordion Hittite repertoire within a general Anatolian context. Two-handled, round-based jars are made at Alişar in cooking-pot ware (*OIP* 29, 190, d 2408, fig. 202; cf. p. 189, c 723, in better ware and on a ring-base, but still of kitchen size) and at Alaca (*Fouilles 1935*, p. XXVIII f, Al. 76, baseless, but comparable in size and profile). But the special form of P 299 is not familiar to other Hittite sites. A small sized version of this Western shape is also found in the Emirdağ region (reddish buff, gritty specimen from Tezköyü Hüyük, in the Afyon Museum, No. 289); and Beycesultan shows related types in level II (*Anatolian Studies* 5 [1955], p. 63, fig. 10: 18).

BOWLS

Two-handled

P 764 (lost burial H 44) Pls. 15b; 29b

H. 0.08, H. with handles 0.11, max. D. 0.20, D. rim 0.18, D. base 0.058. Mended, small fragments of body and most of one handle missing. Bowl of slightly carinated profile. Base a not quite flattened disc. Rim concave with thickened edge. Two handles rising from rim in angular fashion, horizontal loop-handles of oval section. Buff gritty ware. Low burnished red slip on exterior rim, handles and shoulder to just below carination, also on interior solid from center upward to about one-third distance from the rim.

A fairly orthodox product, closely comparable to shapes at Alişar (*OIP* 29, 183, c 302, fig. 169) and Boğazköy (*MDOG* 75, fig. 21 level III a). Kültepe has much more angular handles and sharper body profiles (*Kültepe 1948*, Pl. 47 and *Kültepe 1949*, fig. 163). Karaoğlan seems close, as it should be (*AA* 1939, 217-218 bottom left); so does Polatlı (*Anatolian Studies* I [1951], p. 40 fig. 8b, 5 and 8, level 24).

One-handled

P 320 (burial H 17) Pls. 15c; 29c

H. 0.06, D. rim 0.174. Intact except for outer part of handle. Slightly carinated bowl on base which is vague and convex, c. 0.05 in diameter. Rim rolled out. One handle, horizontal, attached to rim and continuing profile of lower body. Buff ware with large particles of grit and shell. Self slip, strongly wheelmarked.

This is a not too frequent Hittite type. Kültepe has one-handled bowls in levels II-III of the Karum (*Kültepe 1948*, Pl. 45, 197-201 and *Kültepe 1949*, figs. 159-160) which lack the rim profile of the Gordion type. At Tarsus a variant occurs in Middle Bronze levels (*AJA* 42 [1938], 37, fig. 17). The type certainly seems to belong to Middle Bronze rather than Late Bronze.

Handleless

Simple:

P 313 (burial H 16) Pls. 15d; 30a

H. 0.045, D. 0.14. Intact, but rim chipped. Conical bowl with thin rim and of generally thin fabric. Buff ware, pink smoothed surface, flaking in spots, interior surface worn.

P 322 (burial H 29) Pls. 15e; 30c

H. 0.063, D. 0.17. Mended in one spot. Simple bowl on round base. Profile plain, inner rim slightly thickened. Buff clay, slipped with light cream slip on exterior with some drops spilled on interior.

P 354 (burial H 22) Pls. 15f; 30e

H. 0.06, D. 0.177. Mended, with a few gaps in body and rim. Warped bowl with flattened base (D. c. 0.045) and pronounced rim. Interior

is rounded and shows no flattening of base. Heavy buff ware with grey core. Buff-slipped with pockmarks and scratches made by grits during turning.

P 618 (burial H 6) Pls. 15g; 30g

H. 0.045, D. 0.118. Mended. Rim abraded. Simple bowl with faint dent in profile. Inner rim slightly thickened. Base round. Buff ware, originally red-washed. Now few traces of red on interior and exterior. Inner surface very worn.

P 621 (burial H 4) Pls. 15h; 30i

H. 0.056, D. 0.132. Complete, except for chips. Round-based bowl of warped contour. Rim slightly inverted. Light-buff yellowish clay, self-slipped. Surface pock-marked.

P 650 (burial H 32) Pl. 15i

H. 0.046, D. 0.127. Complete. Round-based bowl with inverted rim and well-turned rim-zone. Fabric of medium thickness. Reddish buff clay. Exterior scraped and smoothed. Interior surface badly flaked.

P 728 (burial H 38) Pl. 15j

H. 0.045, D. 0.146. Rim chipped, otherwise complete. Round-based shallow bowl with plain rim. Interior has depressed center. Thin fabric of buff clay, surface buff-orange, rather dark. Weathered and flaking.

P 749 (burial H 39) Pl. 15k

H. 0.065, D. 0.17. Intact. Large type simple bowl, round-based, with incurved profile at rim. Buff clay with light buff slip which is flaking off.

P 755 (burial H 34) Pl. 15*l*

H. 0.035, D. 0.117. Mended, fragments missing. Round-based bowl with slightly pointed base and somewhat inverted rim. Buff ware, slipped and smoothed, but now very worn and chipped. Parts of interior show original slipped surface.

P 989 (burial H 13) Pl. 16a

H. 0.065, D. 0.17, D. base 0.05. Missing one rim fragment. Mended. Plain bowl with not quite flattened base and inverted rim. Interior rounded, not showing base-profile. Clay buff, burnt to pink-orange on part of exterior. Temper gritty, not clean. Exterior somewhat pitted and scraped, rim wheel-smoothed. Buff-creamy slip on interior, now mostly flaked off.

With pointed base:

P 300 (in Phrygian stone pile) Pls. 16b; 30b

H. 0.057, D. 0.131. Mended, gaps in body and rim. Small conical bowl with bluntly pointed base. Plain erect rim. Clay orange-pink-buff, hard and not worn. Surface compact, self-slipped.

P 301 (gravel fill) Pls. 16c; 30d

H. 0.065, D. 0.195. Mended, gap on one side. Slightly warped bowl. Base a blunt point, rim simple inverted. Buff-pink clay with coarse grits, showing as scratches and pockets in wheelmarks. Interior incrusted.

P 637 (burial H 14) Pls. 16d; 30f

H. 0.046, D. 0.113. Mended, gaps in rim and body. Small bowl with pointed base, thin and erect rim. Buff gritty ware. Surface worn, pitted. Interior abraded.

With offset rim:

P 638 (burial H 14) Pls. 16e; 30h

H. 0.045, D. 0.131. Mended, gap in rim. Round-based bowl with some carination below rim, which is inverted and plain. Thin pinkish buff ware, very thin light fabric. Self-slip. Surface somewhat pared on exterior. Wheelmarks near rim.

With rolled rim:

P 353 (burial H 24) Pls. 16f; 30j

H. 0.075, D. 0.218. Large round-based bowl with profiled rim. Thick ware, buff gritty clay with grey core. Buff slip, slight pockmarks.

P 990 (burial H 13) Pl. 16g

H. 0.065, D. 0.20, D. base 0.06. Missing about two-thirds of walls. Simple bowl on flattened, but irregular and bumpy base. Rim inverted, rolled and slightly thickened. Fabric gritty with white marks and pocks. Buff, partly fired orange, homogeneous. Interior well-smoothed, exterior scraped and pock-marked. Rim wheel-smoothed.

The simple buff bowl is a stock item of household and burial inventories. Of a practical shape, it is made without much variation through the Hittite period. One seems to notice some variety and refinement towards the end of the Empire, when profiled rims and ring-burnished slips enliven the repertoire. (cf. *MDOG* 75, fig. 21, and *MDOG* 74, 14, fig. 4c).

The majority of the Gordion bowls is of a type represented by such wide-ranging items as to be found at Kültepe (*Kültepe 1948*, Pl. 45, 206-207), Alişar (*OIP* 29, 125 f), Alaca (*Fouilles 1935*, p. LXIX 74, 90), Karaoğlan (*AA* 1939, 217-8, bottom right), Boğazköy (*MDOG* 74, 47, 55: *MDOG* 75, fig. 21) and Kusura (*Archaeologia* 86 [1936], 25, fig. 9:2, 4).

Minor variations such as more or less pointed bases, or a slight carination at the shoulder are of no chronological importance. The only thick-rimmed bowl from Gordion (P 353) is almost indistinguishable from an example found as far away as Alaca (A1. B 26, depth 3.80-4.00, Ankara Hittite Museum 5696), of Empire date.

The find spot of P 300, being the rock pile over a Phrygian burial, is not impossible for a Hittite object. The bowl may have been thrown in with stones that had been gathered from demolished Hittite tombs, several of which must have been in the way of the Phrygian grave. The clay of P 300 is rather hard for Hittite standards, but the shape is normal Hittite and so far unknown in Phrygian context.

HANDMADE RED JAR

P 1023 (burial H 28) Pl. 16h

Estimated H. 0.15. Thickness of walls 0.008-0.01. Fragmentary, most of rim missing. Two-handled basin on thickened round base. Body globular. Rim slightly inverted but resembling hole-mouth. Two band handles, oval in section, slightly below rim to middle of body, H. 0.05-0.06. Handmade. Fabric gritty red, heavy ware; full of limestone and other inclusions. Breaks rough and crumbly. Interior light brick-red, slightly scraped and smoothed. Exterior self-slipped and smoothed.

The presence of a handmade pot in the Hittite cemetery seems somewhat surprising, in spite of suggestions by Bittel (*MDOG* 75, 36; *APAW* 1935, 35) and S. Lloyd (*Anatolian Studies* I [1951], 34) that handmade pottery of "Copper Age" type continued to be produced in the second millennium. The proof that sherds of this nature, found in Hittite levels, are more than extrusive old bits, has

to be furnished by the presence of complete handmade pots in stratified, datable context. Gordion tomb H 28 is not such proof. The tomb may very well be an isolated burial, comparable to the early third millennium burial under tumulus F. In the domestic strata of the Hittite period, excavated in a sounding on the Gordion mound in 1950, no indications were found that handmade pottery existed even in minor quantities with wheelmade second millennium ware and the very few sherds of "Copper Age" dipper-like bowls in later strata were considered as strays. The question has to be left for future decision. An added interest is roused by the presence of one or two handmade red ware sherds in the fill of the Tumulus H and Hittite cemetery area. Their infinitesimal proportion to the bulk of broken ceramics in this area, always including a liberal amount of scattered Hittite burial material, does not encourage one to classify the pot P 1023 as a conservative oddity in the second millennium.

PINS

1. TOGGLE-PINS

A large number of copper garment-pins was recovered from the burials, and among them the most striking type is the knobbed pin pierced at a short distance from the top. The term toggle-pin, though incorrect, is in general archaeological use (cf. E. Henschel-Simon, *QDAP* 6, 1936-38, 169 ff).

1a. Simple knob head, separated from the piercing by one or two swellings of the shaft.

Two swellings, three grooves:

B 152 (burial H 17) Pls. 17a; 19a

L. 0.073, D. head 0.0065. Intact. Small round head only slightly thicker than shaft, set off from shaft by three shallow grooves, below which diametrically pierced hole.

B 165a (burial H 22) Pl. 17b

L. 0.079. Small head, three regular grooves.

B 165b (burial H 22)

L. 0.077. Spherical small head, similar to B 165a.

B 166a (burial H 22) Pl. 17c

L. 0.085. Sturdy pin with large hole. Flattened spherical head, small. Blunt point.

B 166b (burial H 22)

L. 0.083. Similar

B 419 (burial H 7) Pl. 17d

L. preserved 0.037. Broken off at approximately half length. Spherical head. Shaft thickened where pierced.

B 448a, b, c (burial H 44)

L. (a) 0.086, (b) 0.089, (c) 0.07. Rounded-knobbed pins with profiled tops.

B 504 (burial H 37) Pl. 17e

L. 0.078, D. head 0.005. Complete. Strong pin capped with round knob.

One swelling, two grooves:

B 151 (burial H 17) Pls. 17f; 19b

L. 0.073, D. head 0.005. Small head below which two grooves.

B 164 a, b, c (burial H 22)

L. (a) 0.077, (b) 0.075, (c) 0.065 (broken). These three pins have small spherical heads, and blunt points. The holes too are relatively small.

Uncertain type:

B 461 (in gravel fill) Pl. 17g

L. 0.076, D. head 0.007. Simple pin with cap-shaped top and toggle-hole 0.005 below head, worn. Perhaps originally simple and not grooved.

1b. Large knob-head, but otherwise similar to 1a

B 163a (burial H 22) Pls. 17h; 19c

L. 0.087, D. head 0.009. Large oval knob set off from toggle-hole by two shallow grooves.

B 163b (burial H 22) Pls. 17i; 19d

L. 0.079, D. head 0.0085. Head slightly biconical, separated from toggle-hole by one groove. Wide piercing.

1c. Toggle-pins with studded knobs, separated from toggle-hole by grooves and ribs

B 153 (burial H 17) Pl. 17j

L. 0.072, D. head 0.0085. Head spherical, slightly larger than shaft and set off from it by three shallow grooves. To the head are attached five bronze droplets, four arranged around circumference horizontally, and one on top. Small toggle-hole below grooves.

B 154 (burial H 17) Pls. 17k; 19e

L. 0.079, D. head 0.006. Head of pin pinched out into one vertical and three horizontal spikes, irregularly spaced. Between head and toggle-hole, two shallow grooves.

B 167a, b (burial H 22)

L. (a) 0.09, (b) 0.082. Heads small but again provided with four spiky protrusions. Two shallow grooves above toggle-hole.

B 168 (burial H 22)

L. 0.078. Similar pin with mace-head like top. Three grooves above toggle-hole.

B 289 (burial H 25) Pls. 17*l*; 19f

L. preserved 0.04. Shaft broken, incomplete. Five-knobbed top, separated from toggle-hole by five swellings and six grooves.

1d. Flattened loop-head, scalloped

B 134 (burial H 1) Pls. 17m; 19g

L. 0.094, D. head 0.0085. Damaged. Long straight shaft. Head flattened and of quatrefoil contour, pierced in center.

2. LOOP-HEADED PINS, WITH SIMPLE BENT TOP

B 202b (gravel fill)

L. 0.111, D. head 0.007. Straight sharp shaft, head made by flattening shaft to a band and rolling it back once to meet the shaft.

B 215a (burial H 25) Pls. 17n

L. 0.097. Mended. Plain long sharp shaft, round in section, with

head formed by bending shaft back to form a long flat eye.

B 459a,b (burial H 36) Pls. 17o,p; 19i

L. (a) 0.038, (b) 0.032. Small pins that have loop-heads by turning the wire around once.

B 487 (burial H 36) Pls. 18a; 19h

L. 0.051, W. head 0.008. Fragile, uncleaned. Short length of copper wire sharpened at one end, cut off bluntly at other end where wire is bent in circle to form head.

3. DOUBLE SPIRAL-HEADED PINS

B 213a,b (burial H 20) Pls. 18b,c; 19j

L. (a) 0.083, (b) 0.062. Both too fragile to clean. Long thin shafts, sharp, with double coils of flat band at top, turning one and a half times round on each side.

B 214 (in pit of disturbed burial) Pl. 18d

L. 0.065. Fragile. Long thin shaft, same type of head as B 213.

4. FLAT-HEADED SIMPLE PIN

B 452 (burial H 43) Pls. 18e; 19k

L. 0.071. Straight sharp shaft. Head flattened and of flower (lotus?)-like profile.

5. SIMPLE PINS WITH KNOB-HEADS

5a. Globular heads

B 133 (burial H 1) Pls. 18f; 19*l*

L. 0.075, D. head 0.0085. Mended. Shaft long and thin, head slightly biconical in profile and squarish in top view, with rounded angles.

B 449 (burial H 40) Pl. 18g

L. 0.087, D. head 0.008. Broken. Round-knobbed (faceted?) pin.

B 454 (burial H 45) Pl. 18h

L. preserved 0.074. Point missing. Round-headed thin pin. Traces of spiral groove below head.

B 465a-f (burial H 41) Pls. 18i-k; 19m

L. (a) 0.065, (b) 0.07, (c) 0.082, (d) - (f) broken. Round-headed pins, D. head varying from 0.005 to 0.006, with thin screw groove winding several times around shaft below head.

5b. Melon-headed types

B 150 (burial H 17) Pl. 18*l*

L. 0.066, D. head 0.009. Intact. Sharp pin with spherical large head which has faint vertical ribbing. A shallow running spiral groove goes down shaft below head for a distance of 0.01.

B 327 (burial H 4) Pls. 18m; 19o

L. 0.075, D. head 0.0105. Head a flattened sphere profiled into six vertical lobes.

B 451 (burial H 35) Pl. 18n; 19n

L. 0.073, crooked. Head spherical with vertical lobes. Spiral groove below head.

5c. Pyramidal head

B 215b (burial H 25) Pls. 18o; 19p

L. preserved 0.02. The head is carinated, top part pyramidal, lower part rectangular. Spiral groove on shaft just below head.

5d. Biconical heads

B 460a (burial H 36) Pl. 18p

L. 0.095, D. head 0.01. Complete. Simple long pointed shaft with two ribs below biconical head.

B 460b (burial H 36) Pl. 18q; 19q

L. 0.09, D. head 0.01. Complete. Same as 460a, but with six ribs below flattened biconical head. These ribs are separated from two more ribs below by a shaft-piece with incised zigzags.

5e. Mace-headed type

B 155 (burial H 17) Pls. 18r; 19r

L. 0.075, D. head 0.008. Complete. Head a flattened spheroid with four plastic warts around its widest circumference.

It seems, from the richer burials (H 17, 22, 41), that pins formed a regular part of the Hittite costume at Gordion. They are often found near the shoulder and seem to be garment fasteners, especially the toggle-pins which are known as such from elsewhere (*QDAP* 6, 1938, 171 f; cf. Schaeffer, *Ugaritica* II, 54; E. and J. Stewart, *Vounous 1937-38*, Pl. CVI, tomb 84). The complete absence of metal pins in some tombs is in accordance with the scarcity of tomb-gifts in general, and may point to the relatively precious nature of metal at the time of the cemetery, but need not imply that the dead were buried without at least a funeral shroud.

The types of pins occurring at Gordion are surprisingly varied for the limited context of the cemetery. Toggle-pins are known from Anatolia. They begin to appear towards the middle and end of the Early Bronze Age. e.g. at Tarsus (*AJA* 44 [1940], 72, fig. 21) or at Troy (Blegen *et al.*, *Troy* II, 84, type 10, 34-507, fig. 47, length *c.* 0.077, level III a; H. Schmidt, *Schliemann's Sammlung* 6414-6422), with simple knobbed heads, perhaps also at Alişar (*OIP* 19, 60, fig. 69, b 512, but see *OIP* 33, 169). None of these pins have elaborately ornamented heads, and in their simplicity they are good counterparts to the earliest toggle-pins of Palestine (cf. P. L. O. Guy, *Megiddo Tombs* [*OIP* 33], 169, fig. 174, 1-3; E. Henschel-Simon, *QDAP* 6 [1938], Pl. 67, 1-5, pre-Hyksos types) and Syria (Schaeffer, *Ugaritica* II, 49 ff, tending towards a club-headed type, cf. Schaeffer, *Stratigraphie comparée*, 271; Carchemish area: Woolley, *LAAA* 6 [1913-14], Pls. 20-21, 24-25, mostly Early Bronze III – Middle Bronze I). It is clear that all these areas are fairly late in receiving the general type of the toggle-pin from regions further East. (The Cypriote examples, E. and J. Stewart, *Vounous 1937-38*, Pl. 106, Tomb 84, cf. *Antiquity* 14 [1940], 204-209, do not affect the situation, even if they may be slightly earlier than the first Anatolian toggle-pins.)

In Syria, elaboration starts in the second millennium, as attested by a variety of toggle-pin shapes from Byblos (Schaeffer, *Stratigraphie comparée*, Pl. 17, figs. 66-67; Dunand, *Fouilles de Byblos*, Pls. 102-105).

Surprisingly enough, little evidence exists for a continued and more sophisticated Anatolian-Hittite use of the toggle-pin (cf. Przeworski, *Die Metallindustrie Anatoliens*, 169). Recently two developed toggle-pins were found in graves of level Ib in the Karum Kanesh, a bronze and a gold pin in a pithos-grave (*Kültepe 1949*, fig. 620, p. 199) and a silver pin in a cist-grave (*ibid.* fig. 619). Alişar has produced rather a meager supply among a variety of other types of pins (*OIP* 29, 258, fig. 283 lower row to left) and no improvement over the third millennium type (cf. Dündartepe, *Belleten* 35, Pl. 71, 5). Boğazköy so far seems to boast only one specimen (*MDOG* 76, 19, fig. 6: 9; *APAW*

1935, 1, Pl. 11: 5) of the early second millennium, with some ribbing above the toggle-hole. Alaca has none, although simple pins are well represented in a variety of knob-shapes. The only type for which other Hittite sites seem to show interest is the flat-headed pierced pin like our type 1d, B 134. It has some similarity to metal pins from Alişar (*OIP* 29, 258, fig. 283 upper row to right especially) and to bone pins from Alişar (*OIP* 29, 241 passim) and Dündartepe near Samsun (*Belleten* 35, Pl. 71, 9-10).

The conclusion seems to be that Gordion is better supplied with this commodity than Hittite sites farther east, a surprising situation in view of the presumably oriental origin of improved metal work. A cemetery has a statistical distribution of finds different from that at settlements, but in the prolific Alişar material one would expect more corresponding pin shapes (the remark in *OIP* 33, 169 f that toggle-pins were common in the Hittite level is not backed up by the Alişar publication). As for the special types represented at Gordion, the regular variety has a small dome-shaped head set off from the toggle-hole by several ribs. The average length of such pins is 0.07-0.08. They seem a slightly more elaborate version of the third millennium West Asiatic toggle-pin. Interesting is the variant described under 1c, which has a knob-head studded with small or large dots of bronze. The same mace-head type occurs with non-toggle-pins (5e, B 155) in a refined version. It is easy to see that this studded copper knob imitates more precious metal pins which have gems inlaid in the top. Such inlaid pins occur in the royal tombs at Alaca (*Rapport 1937-39*, Pl. 187, Tomb K) which of course represent a third millennium context. In Transcaucasia similar pins are still in use in Middle Bronze (Kourgan XVII at Trialeti, Kuftin, *Trialeti*, Pl. 97; Schaeffer, *Stratigraphie comparée* fig. 292). The Gordion specimens probably belong in this lineage.

Less surprising or unusual are the other pin types (Bittel, *Prähistorische Forschung in Kleinasien*, 79). The loop-headed pin (type 2) is common in Anatolia and occurs in third millennium as well as Hittite context (Polatlı, third millennium, *Anatolian Studies* I [1951], 61, fig. 14, 4; Hittite: Alaca, *Rapport 1937-39*, Pl. 86 middle; Kusura, *Archaeologia* 87 [1937], 259, fig. 21, 17, period C; Alişar, *OIP* 29, 259 lower right; Karahüyük, T. and N. Özgüç, *Ausgrabungen in Karahöyük 1947*, Pl. 37, 15, p. 94). The pins with double spiral head are notoriously common in the Near East (Childe, *LAAA* 23, 1936, 118f). Their survival in Hittite context is also attested at Kusura (*Archaeologia* 86, [1936], 40, fig. 17, 14-17), and in somewhat freakish variants at Alişar (*OIP* 29, 258 lower right). With the mace-head pins they continue the repertoire inaugurated in the Royal Tombs at Alaca. Again in the category of knob-headed pins the main types had been established in the third millennium (Alaca, *Rapport 1937-39*, Pl. 112, 134). In Hittite times round, conical, biconical, pyramidal, lentoid and lobed heads are represented in a variety which needs no comment, and allows little chronological precision (Boğazköy, *APAW* 1935, 31 f, Pl. 11, 1-3; *MDOG* 76, fig. 6; Alaca, *Fouilles 1935*, Pls. 61-63; *Ausgrabungen 1936*, Pl. 50; *Rapport 1937-39*, Pl. 86 f; Alişar, *OIP* 29, 254 ff, etc.). An unusual shape is type 4, B 452. One wonders whether this again is a simplified and impoverished version of third millennium comb-pins such as those found in the Ur tombs (Woolley, *Royal Cemetery*, Pls. 136, 137).

The Gordion pins show a consistent repertoire and they are technically well made. We assume that most of the "bronze" objects of the cemetery are of copper rather than true bronze, but a sample analysis proved that at least one of the pins (B449) was of bronze (See Appendix I). Much more extensive analysis will be needed to determine the proportion of true bronze represented among the metal objects from the cemetery.

The pins are cast, inclusive of ribbing and piercing, and we may presume locally so. The sampling from the tombs would be good enough for this conclusion, which is supported by the knowledge that we are dealing with a cemetery belonging to one of the most sizable prehistoric mounds in the Sakarya Valley.

RINGS, BRACELETS

Among the humble paraphernalia of the dead are a considerable number of metal rings, sometimes clearly recognizable by shape and find spot as earrings, in other instances rather to be considered

as parts of necklaces.

Gold earrings

J 50 (burial H 22) Pl. 20a

D. 0.02, Th. 0.001, ends overlapping 0.008, Weight 1.320 grams. Complete. Single oval loop of plain thin gold wire with overlapping ends.

J 52 (burial H 17) Pl. 20b

D. 0.023, Th. 0.001, ends overlapping 0.009, Weight 1.50 grams. Complete plain circlet of gold wire with overlapping ends, open.

These plain gold earrings occur only in the more elaborate tomb groups H 17 and H 22. In both cases only one earring was worn, a common example of economy in jewelry. The rings are thin enough to be worn directly in the pierced lobe. Somewhat thicker seem the gold earrings found as a pair in a cist-grave at Kültepe, Karum level II (*Kültepe 1948*, 201, fig. 395-396).

Silver rings

ILS 44 (burial H 17) Pl. 20c-e

Three rings of D. 0.026, 0.018, 0.012 respectively. All plain loops with overlapping thin ends. (Found in conjunction with four paste beads G 45, and in addition to one gold earring J 52.)

ILS 50 (burial H 22) Pl. 20f

D. 0.021, Th. 0.0015. Mended. Simple loop, with blunt points. (Found at neck of skeleton in conjunction with G 43 paste bead, St 82 stone bead, and MC 55 paste bead, all presumably part of a necklace worn by the person also adorned with one gold earring J 50.)

ILS 111 (burial H 4) Pl. 20g

D. 0.0196, Th. 0.002. Mended. Plain loop with overlapping blunt ends. (The child in this burial probably wore tiny bronze earrings. The two silver rings may have belonged to the elaborate necklace of paste, shell, carnelian beads J 69 from which a stamp-seal also was suspended: SS 70.)

Silver rings are fairly common adornments of the dead. At Kültepe, in the cist-grave mentioned above for the presence of a pair of gold earrings, a second skeleton was equipped with a silver earring (*Kültepe 1948*, 201, fig. 387). A Hittite burial at Alişar also produced one silver and three hollow gold rings (*OIP* 29, 88, c X 26-27, p. 92, fig. 127). The silver rings at Gordion are limited to fairly rich burials. They seem to be part of necklaces.

Lead rings

ILS 17 (burial H 1) Pl. 20h

Max. D. 0.032-0.05. Originally six or more rings, one intact, others fragmentary. Plain rings, round in section, with ends finished off squarely to leave opening at one point. (Found among the bones of a child buried with mother in a pithos.)

ILS 45 (burial H 20) Pl. 20i,j

D. 0.028 to 0.026. Originally five or more rings. Plain rings open at the ends, one with ends just touching, another overlapping.

ILS 49 (burial H 12) Pl. 20k,l

D. 0.034 and 0.03, Th. 0.005. One intact, one mended. Two rings with slightly overlapping ends. Ends cut off squarely.

ILS 51 (gravel fill)

D. 0.026 and 0.027, Th. 0.0035. Two flattened loops with overlapping ends.

ILS 125 (burial H 4)

Max. D. 0.021. Three fragments of loop-rings, like ILS 51. (Found in conjunction with necklace J 69, silver rings ILS 111, stamp-seal SS 70.)

ILS 149 (burial H 36)

Max. D. 0.022, max. Th. 0.002. Fragments of several rings, preserved simple loop with overlapping ends. (Found at neck of skeleton.)

ILS 152 (gravel fill)

D. 0.026, Th. 0.005. Incomplete ring, irregular loop.

ILS 153 (burial H 37)

D. 0.025, Th. 0.005. Originally several rings. Simple loop with ends touching.

ILS 163 (burial H 36) Pl. 20m

D. 0.021. Incomplete.

These lead rings apparently are worn separately on a string or in conjunction with beads of a necklace. They seem to occur in groups of about half a dozen as a cheaper variant of similar silver rings. Several comparable instances occur among Karum burials at Kültepe (*Kültepe 1948*, 165 and 202, pithos burial with four lead rings, cist-grave containing one lead ring, fig. 372), where also a chain of four lead rings turned up in level III (fig. 371, cf. *Kültepe 1949*, p. 197). Alişar II has a prolific display of lead rings, some from tombs, some in chains, similar to Gordion in the frequent appearance of this commodity (*OIP* 29, 264, fig. 297).

Copper rings

B 423 (burial H 27) Pl. 20n

D. 0.016, Th. 0.002. Fragile. Plain ring, round in section, open at ends. (Found at neck of skeleton.)

B 427 (burial H 3)

D. 0.023. Fragile. Thin ring bent into oval, ends not meeting. (From fill in cist-grave which also contained three lead rings found at neck.)

B 432 (burial H 38) Pl. 20o

D. 0.028, Th. 0.003. Fragile. Loop-ring with overlapping ends. One end pointed. (Found at right ear of skeleton in pithos-burial.)

B 447 (burial H 34)

D. 0.022, Th. 0.003. Overlapping loop-ring of rather thick wire.

B 450 (burial H 42) Pl. 20p

D. 0.012. Small loop-ring with one knobbed end.

B 453 (burial H 43)

D. 0.013. Thin wire loop-ring with knobbed ends.

... Not catalogued (burial H 4)

Two small copper earrings (found in addition to elaborate necklace etc.).

All these rings are small, open at one end, sometimes knobbed at the ends, and seem to have been worn as earrings, more often singly than in pairs. Similar earrings are known from Alişar II, both from habitation areas and from tombs (*OIP* 29, 264, figs. 294-295; pp. 85 ff, tombs b X 18, 23, 31, 41, d X 33; fig. 134, d 2421), from Kültepe (Karum level II pithos-grave, one bronze earring, *Kültepe 1948*, 162) and from a child's grave in old Hittite levels at Boğazköy (*MDOG* 74, 9; *WVDOG* 63, 116): one bronze earring. Simple and poor adornment, these earrings often occur in otherwise undistinguished burials.

Copper bracelets

B 149 (burial H 17) Pl. 21a

D. 0.057, Th. 0.0025. Sturdy copper wire circlet with overlapping ends.

B 169 (burial H 22) Pl. 21b

Chord 0.041. Broken at one end. A rod of copper bent into an arc and flattened out to a thin plate at one end. This presumably is a broken fragment of a bracelet.

B 415 (burial H 4) Pl. 21c

D. 0.039, Th. 0.0035. Rod of copper, round in section, coiled a little less than twice around. Ends plain and flat.

B 416 (burial H 4) Pl. 21d

D. 0.043, Th. 0.004. Rather heavy bracelet of coiled wire with flattened section (lentoid), bent once and a half around. Ends flattened and finished off roundly.

These Gordion bracelets occur in the three comparatively lavish burials of the cemetery. Simple bent bracelets also occur in Alişar II graves and habitation levels (*OIP* 29, 264, tombs c X 26-27, seven bracelets, cf. p. 92; also with d X 36 and d X 51, pp. 99 and 104); with burials at Kültepe (*Kültepe 1948*, 201, fig. 370) and at Boğazköy in the child's grave mentioned above (*MDOG* 74, 9; *WVDOG* 63, 116).

BEADS

PASTE BEADS (FRIT)

Segmental

MC 57e (burial H 23) Pl. 21i

D. 0.005, Th. 0.002. Tiny flat ring.

G 45b-d (burial H 17) Pl. 21k-m

D. 0.005-0.006, Th. 0.0012. Three beads.

J 69a (burial H 4) Pl. 22a

D. 0.003. About 200 tiny segmental beads, ranging in color from white to green and brown.

For this type of bead cf. Alaca, *Rapport 1937-39*, Pl. 94, c 266, Hittite.

Cylindrical

G 45a (burial H 17) Pl. 21j
L. 0.03, D. 0.006. One long tubular bead, slightly irregular, with glasslike crystals on one face.

Tubular with reel-like grooves

MC 57d (burial H 23) Pl. 21h
L. 0.0065, D. 0.004. Tubular bead with two grooves around the circumference. Green-grey.

MC 59 (burial H 25) Pl. 21n
L. 0.005, D. 0.004. Double reel-shaped bead, like MC 57, light green.

Barrel-shaped

G 118b (burial H 41) Pl. 22b
L. from 0.005-0.012, D. to 0.0035. Eleven elongated barrel-shaped beads, light green to blue.

Biconical

MC 57b (burial H 23) Pl. 21f
L. 0.0175, D. 0.006. Green-grey, long bead.

G 118a (burial H 41) Pl. 22b
L. 0.0012, D. 0.006. Thirteen light green to blue beads.

Beads of this shape occur in bronze in Syria in the early second millennium, e.g. at Ras Shamra (Schaeffer, *Ugaritica* II, 49, fig. 19, 9-10, fig. 20, 4, 5, 12-27, Pl. 13) and Byblos, where molds used for their manufacture were found (Dunand, *Fouilles de Byblos* I, Pl. 106).

Tapering

G 118c (burial H 41) Pl. 22b
L. average 0.012. Thirteen beads of tapering tubular type. Light green to blue.

Similar faïence beads were found at Megiddo in level IX (G. Loud, *Megiddo* II, *OIP* 62, Pl. 212, 55).

Spherical

MC 55 (burial H 22) Pl. 21o
D. 008. Tiny bead, white.

MC 57c (burial H 23) Pl. 21g
D. 0.007, H. 0.006. Green-grey.

J 69b (burial H 4) Pl. 22a
D. 0.0075. Green to brown. Twenty-two beads.

G 118d (burial H 41) Pl. 22b
D. 0.005. Two beads, green-blue.

MC 94 (burial H 11) Pl. 21p-s

D. 0.005 to 0.007, H. 0.003 to 0.0065. Four spherical beads, irregular, two with rather large stringholes, one perhaps collared but affected by corrosion.

Cf. Hittite beads from Alişar, *OIP* 29, 284, fig. 309, d 806; from tomb: p. 97, fig. 134, d 2425.

Spherical with tubular extensions (collar)

G 118e (burial H 41) Pl. 22b

D. 0.007, L. 0.01. Spherical bead with small tubular ends.

This type is found in conjunction with spherical and tapering faïence beads at Megiddo in level IX (G. Loud, *Megiddo* II, *OIP* 62, Pl. 212.55).

Lobed, melon-shaped

G 43 (burial H 22) Pl. 21t

H. 0.006, D. 0.008. Small spherical bead of beige paste into which six parallel grooves have been cut, resulting in a cross-section of floral shape.

MC 57a (burial H 23) Pl. 21e

H. 0.0115, D. 0.014. Vertical section depressed biconical, deep vertical grooves. Green-grey.

J 69c (burial H 4) Pl. 22a

H. 0.0075. Six melon-shaped beads.

Lobed and melon-shaped beads are found in Hittite levels at Alişar (*OIP* 29, 284, fig. 309 top row left; cf. *OIP* 30, 346, fig. 268, e 1105). The same shape often occurs for pin-heads in bronze. A Hittite specimen from Alaca, *Rapport 1937-39*, Pl. 94, 34. Cf. also Eisen, *AJA* 34, 1930, 29 ff, for XVIIIth Dynasty occurrences, and Loud, *Megiddo* II (*OIP* 62) Pl. 212, 53, level IX.

The types of beads used at Gordion follow Syrian and Egyptian models. The manufacture of frit beads may well be local Anatolian by this time, but with the knowledge of the techniques of making paste some originally foreign forms must have wandered to Anatolia. Alişar furnished good parallels for a frequent use of frit in Hittite and earlier times (*OIP* 30, 345). For an analysis of the Gordion beads G 118, see Appendix II.

METAL BEADS

B 329 (burial H 4) Pl. 21u

L. 0.012, W. 0.007. Diseased. Thin band of copper bent into double spiral (spectacle) shape.

This bead belonged to the necklace of burial H 4 and may have been the equivalent of a lock or clasp for the ends of the string.

G 118 (burial H 41)

Among the paste beads of this necklace there were corroded blobs of metal which presumably have to be interpreted as metal beads originally alternating with the faïence ones. The metal beads seem to have had a core of lead (with arsenic and antimony) sheathed with copper. See Appendix II.

Stone beads

ST 82 (burial H 22) Pl. 21v

D. 0.011. Tiny doughnut-shaped bead cut from hard olive-brown stone veined with black. Polished.

J 69d (burial H 4) Pl. 22a

D. 0.007. Spherical bead of carnelian.

ST 82 is a durable variant of a shape more common in paste. Cf. *OIP* 30, fig. 268.

The carnelian bead J 69d is part of the necklace of burial H 4 and so far the only bead of semi-precious stone found in the Hittite graves at Gordion.

Shells

BI 103 (burial H 23) Pl. 22c

Average L. 0.0175, average W. 0.009. Eighteen small white shells, six very small shells, all of them with string-holes (some with more than one perforation). Necklace.

BI 119 (burial H 24) Pl. 21w

L. 0.013, W. 0.01. White snail shell with brown markings, pierced for suspension.

J 69e (burial H 4) Pl. 22a

L. 0.008 to 0.025. Several shells, one of cowry type. Part of necklace.

Similar snail shells were found with burials H 33 and H 45. They seem to be comparable to shells from Alişar identified as *nassa* (*OIP* 30, 324 f, d 1994 and d 2095).

Some shells from burial H 45 were examined by Dr. R. T. Abbot of the U.S. National Museum and found to be marine snails, *Nassarius gibbosulus* Linné. "They are found in shallow muddy areas of the Eastern Mediterranean, and are a bright glossy cream color when alive." (Quoted from a letter to Dr. Lincoln Dryden, through whose kind offices I received the report.)

As imports from the South coast of Anatolia these shells are an interesting proof of early trade and contacts.

PENDANTS

Copper, special alloy

ILS 150 (burial H 41) Pl. 23a-d

Preserved H. 0.013, L. 0.015. Five specimens, several now broken. Pendant made of a pair of Hittite shoes in miniature reproduction. The shoes have upturned toes and ribbed soles. The top is thickened and pierced for suspension. Casting edges visible on the sides of the shoes. The metal of these beads was originally thought to be silver because of its pale shining surface, but analysis proved it to be arsenical copper (see Appendix I).

This new type of pendant is a welcome addition to the Hittite repertoire. Feet, legs, and boots are old emblems in the world of Anatolian amulets and pottery. The ritual significance of pottery libation vessels, found especially at Kültepe in colony levels (*ILN* Jan. 14, 1950, 71, fig. 20; cf. Bossert, *Altanatolien* 400, 407-8; *Kültepe 1949*, p. 224 f) is beginning to be understood. But preced-

ing them is the series of foot-amulets, paralleled by Egyptian and Aegaean phenomena (Matz, *Die frühkretischen Siegel*, 53 f). Closest to our silver pendants come Hittite stamp seals from Alişar in the form of a shoe (*OIP* 29, 221, d 871 and a 430, fig. 248; cf. Hogarth, *Hittite Seals*, 17, fig. 6). Boğazköy has small terracotta shoes in Hittite context (*MDOG* 73, 23 f, fig. 14-15, not pierced for suspension). The Gordion pendants are more detailed and refined, and also vary from the parallels quoted in the representation of a *pair* of Anatolian boots.

The amuletic character of the foot or shoe is unmistakable in Anatolia, and is no monopoly of the Hittites. There is no indication that the symbol alludes to a specific deity. An interesting Gordion parallel is a seal-impression found on a pithos handle in the Hittite level of the city mound (SS 117, Pl. 23e). The stamp-seal design is the impression of a human foot, this time clearly without the protection of a sturdy Anatolian *Schnabelschuh*.

Copper

B 463 (burial H 41) Pl. 23h-j

D. 0.02, Th. 0.0015, handle loop D. 0.005. Three medallions: round flat pendants with ribbed edges, smooth reverse, design on obverse.
(a) seven-rayed star with central circle and dot. Seven dots between rays of star.
(b) eight-petaled rosette, somewhat irregular, with four dots evenly spaced between petals.
(c) similar, diseased.
Simple loop attached to disc for stringing.

These three medallions are variations on an Asiatic type of pendant which has a wide range in space and time. They are particularly popular in Syria and a standard attribute of Syrian natives as represented in Egyptian XVIIIth Dynasty art (P. Montet, *Les Reliques de l'art syrien dans l'Egypte du Nouvel Empire*, 1937, 45 ff; R. Dussaud, *L'Art phénicien du IIe millénaire*, 1949, 42 ff). The Syrian pendants display a variety of rosette and astral patterns.

A simple gold pendant is known as early as the royal tombs at Alaca (*Rapport 1937-39*, Pl. 169, 2, tomb F), here as usual only a meager version of refined gold and inlaid pendants belonging to the royal paraphernalia at Ur (Woolley, *Ur Excavations* II, *The Royal Cemetery*, Pls. 133, 134). A plain silver medallion comes from Kültepe (*Kültepe 1949*, p. 200, fig. 591). The Syrian parallels are closer in time and ornamentation. They are worn singly on a string, and seem to be simplified modifications of the Asiatic prototype. A gold necklace from the vicinity of Babylon (*BMMA*, March 1949, 195) shows the original Mesopotamian fashion of wearing a variety of pendants strung among beads (cf. a faïence necklace from Megiddo, stratum IX, Loud, *Megiddo* II, *OIP* 62, Pl. 212, 55).

The Gordion pendants conform to the Asiatic type of necklace as exemplified by the Babylonian specimen in New York. Their decoration is close to, although not identical with, the so-called Hittite "signe royal" (cf. Bittel, *APAW* 1935, 41 f; *MDOG* 74, 62 f), an emblem belonging to the early second millennium culture of Anatolia and spreading from there into the rest of Asia and Egypt (cf. a good sampling of pottery stamps *OIP* 29, 220). It stands for the sun-disc, as sufficiently attested (*Carchemish* I, Pl. A 4) and in its best versions has flames inserted between the ray-shaped parts. This occurs on the central pendant of the Babylonian necklace in New York, but the Gordion medallions are simpler and resemble the rosette-and-dot motives on Syrian variants (Montet, *op. cit.*, fig. 36; Dussaud, *op. cit.*, fig. 10; cf. the medallions listed in the Qatna inventories, *Revue d'Assyriologie* 43 [1949], 15). As in the case of the Syrian motives, the symbolism seems to be well-worn and hardly intentionally displayed in such jewelry.

SEALS

Faïence stamp-seal

SS 70 (burial H 4) Pl. 23m,n

L. 0.012, W. 0.01, H. 0.008. Intact. Oval stamp with convex back on which a small knob set off by a groove. Pierced across smaller diameter at height of groove. On seal-face in relief in frame against sunk background: curled loop, and tripartite exergue.

A simple faience stamp seal of the button-seal type, the class called "studs" by Hogarth (*Hittite Seals*, 21). The shape corresponds to a class familiar in the First Intermediate period in Egypt, although there the shape is more often round or square than oval (G. Brunton, *Qau and Badari* I, Pl. 32).

The seal belonged to a child and therefore hardly served as an identification mark. The signs look rather like proto-hieroglyphs and might have had amulet-value. Such a more general meaning of the seal is also suggested by the occurrence of a practically identical stamp seal at Alişar, unfortunately found in a refuse pit and unstratified (*OIP* 29, 419, fig. 479, c 600). The size of this seal, now preserved at the Hittite Museum at Ankara, is almost exactly that of the Gordion specimen. Whereas the Alişar seal is a twin of the Gordion specimen, another very similar piece comes from Acemhüyük near Aksaray (Hittite Museum, Ankara, No. 11541, L. 0.012, W. 0.001, H. 0.008). This seal has traces of blue inlay around the design, which is a little more explicit in the exergue part.

The close similarity of these seals shows them to have been made in and exported from a common manufacturing center and presumably the same workshop. The production of frit or faience is likely to have been concentrated in some of the major early Hittite towns with direct Oriental contacts. Gordion derives its seal from there.

Copper stamp seal

B 464 (burial H 41) Pl. 23k,l

H. 0.0017, D. 0.014, Th. seal-disc 0.0015. Flat disc for stamp, attached to vertical handle with pierced loop. Design on stamp: raised central knob with three raised rings around it. Outer ring has spoke design.

Slender and tall type of metal stamp seal as known in Anatolia of the early second millennium B.C. Alişar has several stamps of this general shape and with geometric design (*OIP* 29, 213, d 747; cf. also p. 417, fig. 478, lower row 1-4). The concentric ring design is popular in the early Hittite period as also attested by its use on clay stamps (Alişar, *OIP* 29, 222; cf. fig. 251, d 2271; Kusura, *Archaeologia* 86 [1936], 30, fig. 12: 16).

COMB

BI 181 (burial H 41) Pl. 23f,g

H. preserved 0.018, max. W. 0.033, max. Th. 0.008. Fragment of wooden comb, upper part with just traces of the teeth preserved. Rectangular piece profiled concave in center and convex at corners. Pierced in middle for attachment with copper pin (thus found). Stained green with copper. Faint traces of circle design in upper corners, probably rosettes.

This comb, badly affected by corroded copper with which it was found, seems to have had polychrome ornamentation. That a large part of this comb should have survived at all, is unusual at Gordion and probably due to special and accidentally favorable air conditions in this pithos.

Large numbers of wooden combs, in better preservation than the Gordion specimen, were recently found in a Middle Bronze age cemetery at Jericho (*ILN* October 3, 1953, 520, 522 fig. 11). Some of these combs were also found in situ on the skulls of the skeletons.

SPINDLE WHORLS

MC 58 (burial H 18) Pl. 24a,j

H. 0.021, D. 0.039. Abraded on surface. Terracotta. Conical whorl beveled around bottom and depressed at base for piercing. Buff clay.

MC 61 (burial H 24) Pl. 24b,m

H. 0.017, D. 0.032. Mended, partly broken away. Terracotta. Biconical whorl truncated at both ends, where deep conical depressions lead to narrow central piercing. Coarse grey clay, smooth on outside.

MC 84 (burial H 37) Pl. 24c,p

H. 0.018, D. 0.03. Terracotta. Plain conical whorl, rounded around base and with concave depression for spindle-hole. Piercing not central. Buff micaceous clay.

MC 86 (burial H 36) Pl. 24d,i

H. 0.015, D. 0.033. Terracotta. Plain flattened conical whorl, with concave depression in base. Buff clay.

MC 95a,b (burial H 13) Pl. 24e-h,k-l,ıı

(a) H. 0.021, D. 0.034.
(b) H. 0.017, D. 0.034.
Terracotta. (a) undecorated, truncated biconical. Clay buff-greyish.
(b) similar but lower, with incised design on base consisting of three concentric circles around hole, and four groups of concentric semicircles or triangles, alternating. Fine incisions.

All these whorls have a profile in common which is characterized by a concave cutting at the base of the perforation. This type of profile is described as typical for 18th- to 15th-century whorls at Boğazköy (*WVDOG* 60, 25). It also appears as characteristically Hittite at Alaca (*Ausgrabungen 1936*, Pl. 52; *Rapport 1937-39*, Pl. 90-93), Polatlı (*Anatolian Studies* I [1951], 62, fig. 15: 11, 13) and Kusura (*Archaeologia* 86 [1936], 32, fig. 13: 25, 26, 29; cf. *Archaeologia* 87 [1937], 254).

Not catalogued (Burial H 30) Pl. 24o

H. 0.014, D. 0.025-0.027. Limestone. Irregular, undecorated. Biconical whorl with flattened top and base. Pierced with a hole of 0.005 diameter.

This whorl is clearly of an earlier type than the whorls listed above. Whether it belongs to the third millennium is an open question.

KNUCKLEBONES

Found with burials H 2 (30 on chest)
H 6 (47 on chest)
H 7 (17)
H 11 (7)
H 14 (4)
H 24 (5)
H 36 (11 on chest)
H 38 (24 on chest)
H 45 (4)

A common grave offering throughout antiquity, and apparently continuing in use as a funeral present of children in modern villages (*LAAA* 26 [1939-40], 20). Alişar (*OIP* 29, 85, b X 22) and Kültepe (*Kültepe 1948*, 207; *Kültepe 1949*, p. 148 f, hardly of magic significance) furnish good evidence for the popularity of knucklebones as toys in Hittite and colony levels.

GORDION'S CONTRIBUTIONS TO THE EVIDENCE FOR ANATOLIAN BURIAL CUSTOMS

The discovery of the extramural Hittite cemetery at Gordion was incidental and to this extent unexpected. On the other hand, the nature of the cemetery is not surprising in Western Anatolian context. The burial customs in ancient Anatolia, imperfectly known though they are, show a prevalence of a few conservative types and distinctions, to which the Gordion tombs adhere.

A preference for the arrangement of extramural burial-grounds for adults is noticeable in western Asia Minor as early as the third millennium. The intramural child or infant burials found during the same periods in sites with otherwise extramural burial practices can be left out of discussion, as being of a special religious or psychological nature and clearly exceptional. On the adult level, sites like Troy, Yortan and Babaköy (*AOF* 13 [1939-41], 1-28), Kusura (*Archaeologia* 86 [1936], 54 ff) and apparently also Çukurkent in Pisidia (Bittel, *PZ* 34-35 [1949-50] 138 note 6) know a clear separation of the ground of the living and the dead. The eastern part of Anatolia is less outspoken in its preference, but several of the central Anatolian sites have made it clear that intramural burial of adults was a common practice there in the third and second millennia B.C. (Alişar, Kültepe, cf. T. Özgüç, *Die Bestattungsbräuche im vorgeschichtlichen Anatolien* [Ankara 1948] chapter I). The north coast (sites near Samsun, *Belleten* 35, 361 ff) and Cilicia (Chalcolithic cemetery at Tarsus, *AJA* 42 [1938] 41 ff) seem to belong to the extramural school of thought, at least during certain periods of their development.

Burial rites are apt to be directly inspired by the religious beliefs of the community in question. Variation and change may reflect mixture and migration of tribes. It is a testimony to the persistence of the old west Anatolian element, if extramural cemeteries continue to be the preferred accommodation of burials in the second millennium at such sites as Gordion. The conservatism is not only of a general nature, but it is specifically demonstrated by a number of detailed similarities in the practices of burial. In all of western Anatolia during the third millennium people are buried in a contracted attitude, whether this amounts to a complete doubling up of the body or merely to a contraction of the knees (Özgüç, *Bestattungsbräuche*, 82 ff). Gordion continues to give this practice exclusive preference. In third millennium west Anatolian cemeteries three types of burial occur somewhat indifferently: simple inhumations, cist-graves and pithos-graves. The same three tomb forms are the constituent elements of the second millennium necropolis at Gordion. So far as their plans can be reconstructed, the cemeteries at Yortan, Babaköy and Kusura show a regular orientation and lay-out, proving that habit and some form of practical tomb-marking had regularized the appearance and growth of the burial-ground. This same characteristic applies to the Gordion cemetery with allowance for a few, minor, deviations from the strictest regularity.

It might therefore hardly be necessary to discuss the nature of the Gordion cemetery at length where we can refer to its known third millennium predecessors for the establishment of its character. The rather unique position of Gordion is not brought into relief by a comparison with earlier West Anatolian cemeteries, but by an examination of its Western conservatism as it appears in the light of the second millennium and the Hittite phase of Anatolian civilization.

There are several data about Hittite burials of the period in question. Western Anatolia is not represented, but Gordion may stand as a new type-site for this part of the peninsula. Troy, being non-Hittite, separates itself drastically from the previous west Anatolian pattern by introducing cremation in the course of the second millennium. In central Anatolia, Alişar is the most prolific source of information. Just as conservative in its own way, the settlement continues to harbor the dead in pithos-, cist-, and inhumation-graves under the floors of the family residences (*OIP* 29, 84 ff). Cist-

graves are rare, pithoi and plain inhumations are about balanced in number. No special orientation is preferred. But for the first time in the history of Alişar bodies are now buried in dorsal extended as well as in the old lateral flexed position.

This innovation in burial methods is anticipated only once in late third millennium context and in the somewhat outlying district of Samsun, where in the cemetery of Tekeköy four out of sixteen burials are laid out in dorsal extended position (Özgüç, *Bestattungsbräuche*, 17ff). The implications of this early appearance of extended burials on the north coast cannot be gauged at present, but one is certainly tempted to interpret their exceptional character as an early symptom of ethnic changes due to come about in force in the second millennium.

The introduction of the extended burial in central Anatolia leads to a variation in the type of pithos-burials, as two or three pithoi are often needed to accommodate the full length of the extended body. At Kusura in third millennium context was found a "pseudo-pithos burial in which the body is covered by the two sections of a pithos longitudinally bisected, placed mouth to mouth" (J. R. Stewart, *Archaeologia* 86 [1936], 55). This variant and "sherd burials" are just imperfect ways of covering up a contracted body. Double-pithos burials are systematically introduced only in Hittite times for extended burials, in the form of complete pithoi placed mouth to mouth. A minor variant at Alişar is the inverted pithos-burial, in which presumably the pithos is put like a bell-shaped cover over the contracted body. This inversion can occasionally be found elsewhere in Anatolia, e.g. at Kusura (grave No. 6). It is the preferred system in Crete at Sphoungaras and Pachyammos (Edith H. Hall, *Excavations in Eastern Crete, Sphoungaras* [University Museum, Philadelphia, 1912] 58ff; Richard B. Seager, *The Cemetery of Pachyammos, Crete* [University Museum, Philadelphia, 1916] 11ff). Gordion is too orthodox to allow such minor variations, and apparently feels that a second millennium burial is entitled to a complete and unbroken pithos, in which the body is carefully inserted, feet downward. The cheaper sherd burials do not make their appearance at Gordion until the Phrygian period, along with double pot burials for extended bodies.

The other most important second millennium source of comparisons for Gordion is Kültepe. In levels I-III of the Karum, burials of mixed types (inhumations, cists, pithos-graves) were encountered under the house-floors. What is again immediately noticeable in contrast to Gordion but in accordance with Alişar is the indifference of orientation and the coexistence of dorsal extended and lateral flexed burials (Özgüç, *Kültepe 1948*, 160-169; *Kültepe 1949*, 147-152). There is a thorough variety and mixture of types. Cist-graves, made with partial wood-construction, contain contracted, extended and partially cremated bodies. The pithos-graves have a tendency to be orthodox, although an inverted burial occurs (*Kültepe 1948*, 164, fig. 101, in Adad-Şululi's house; *Kültepe 1949*, 148f, several), and sherd-burials are common. At Kültepe we do not yet have a knowledge of previous burial customs such as allows us an estimate of innovations at Alişar. The elaborate furniture of the cist-graves in the Karum and the occurrence of cremation practices in them points to this category as the most likely candidate for a change in beliefs.

The innovations at Kültepe are of a complex character. The tombs of the Karum are found in Assyrian colonists' houses, many of them in the house of the merchant Adad-Şululi. The people buried here, then, are foreigners or semi-assimilated foreigners in Anatolia. This is also borne out by the anthropological analysis of the skeletal material (Şenyürek, *Belleten* 63 [1952], 323-343). The burial customs of the Karum are partly identical with good traditional Anatolian practices, such as known from Alişar. In this important respect, as in other fashions, the colonists seem to have adopted some of the customs of their second homeland, such as were compatible with their own funeral beliefs. At Assur intramural burials seem to have been the rule (W. Andrae, *Das wiedererstandene Assur* [Leipzig 1938] 126f; *WVDOG* 65, 3). But so long as we have no detailed evidence for the third and second millennium burial practices of the city of Kanesh itself, we cannot differentiate between innovations due to the Assyrians and to newcomers in second millennium Anatolia.

The major Hittite site of Boğazköy has a complicated burial record. Intramural burials have been found in early Hittite houses on Büyükkale (*MDOC* 74, 9ff, level IV) and in later Hittite houses in

K 20 (*MDOG* 77, 11 f; *WVDOG* 63, 116 ff). These include adults and children, buried contracted in the earth in the earlier level, and under two pithoi, somewhat like Alişar's double-pithos burials, in the later case (cf. Bittel, *MDOG* 78, 12 ff; *WVDOG* 63, 118, Pl. 50b). It could not be ascertained whether the double-pithos burial was extended or contracted. These intramural graves point to a belief similar to that at Alişar and Kültepe. On the other hand, the existence of a cremation cemetery across the gorge, on the road to Yazılıkaya, had been discovered in 1911 (*WVDOG* 60, Pls. 21-22) and now has been spectacularly confirmed and investigated by the 1952 campaign at Boğazköy (H. G. Güterbock, *Archaeology* 6 [1953], 211 ff; K. Bittel, *MDOG* 86, 37-47). The dual character of the funeral beliefs at Boğazköy confirms the existence of cross-currents which also cause divergences elsewhere. The co-occurrence of intramural and extramural burial-practices, however, is an extreme case of local discrepancies, mitigated only by the practical need of extramural territory for cremations.

The Hittite burials excavated at Karaoğlan, Alaca Hüyük and Hashüyük have not yet been published and are not available for comparisons. Karaoğlan, being nearest Gordion and midway between the Sangarios and Halys rivers, is an especially interesting site for the closer determination of regional differences in Anatolia. Alaca is said to have yielded pithos-graves of children but no adults in the Hittite level (Özgüç, *Kültepe 1948*, 169, note 113). Maşat, 20 km. SW of Zile, considerably east of Boğazköy, has been tested in a sounding which encountered a Hittite child burial in two pithoi, intramurally (*Belleten* 37, 221; *AOF* 15 [1945-51], 154). These isolated or incomplete data do not allow any further conclusions as to the distribution of burial types in Hittite sites. Nor can one attach importance to the single fragmentary Hittite burial found in the settlement at Polatlı (*Anatolian Studies* 1 [1951], 31).

Summarizing the results of a comparison of the types of grave at Gordion with the relatively well-known Hittite burials at Alişar, Kültepe and Boğazköy, we can distinguish resemblances and differences, and in both categories we can separate characteristics of the second millennium from those of the third. Basically, the tomb-types of the third millennium are similar all over Anatolia. Inhumations, cist- and pithos-graves in their combined appearance are an heirloom of this early period, and resemblances between Gordion and the central Anatolian sites in this category belong to this common substratum. Some detailed similarities, such as the manner of closing funeral pithoi with stone slabs and mud brick, observed in "Copper Age" Alişar (*OIP* 28, 135 ff) and Hittite Alişar (*OIP* 29, 84) as well as at Gordion, are simply old Anatolian traditions. So are the contracted attitude of the dead and their indifferent position on the right or left side.

A negative similarity may be added here as it again indicates consistency between the third millennium Anatolian background and later practices at Gordion. Özgüç has commented on the absence of collective burials or ossuaries in early Anatolia (*Bestattungsbräuche*, 79 ff). Occasional occurrences of double burials in one tomb are to be explained as exceptional secondary burials or as simultaneous burial due to simultaneous decease such as of mother and newborn child. Özgüç lists two "chalcolithic" examples from Kusura and Alaca which are both cist-graves. In the "Copper Age" several more instances can be quoted but none of them are more than incidental occurrences. At Gordion too, double or multiple burials are exceptional. We have three cases, which may all be secondary burials. In cist-grave H 31 the original skeleton seems to have disintegrated before the upper skeleton was put in. We may have a case here of intentional reopening of the grave. More of a technical problem are the double pithos-burials in view of the limited capacity of the containers. Pithos H 7, which produced the remnants of two skeletons, was disturbed in Phrygian times and can only be conjectured to be of the same category as cist-grave H 31. The adult and infant buried in a common pithos in H 1 could have been put in as a simultaneous burial, although the position of the infant shows that it may have been inserted afterwards. In any case Gordion is consistent in the exceptional character of such double burials and in the general absence of family-graves or ossuaries.

The differences between Gordion and central Anatolia are again partly inherited from the pre-Hittite period, when such habits as intramural versus extramural burial were established and with them the preference for indifferent or regular orientation of the tombs.

In the second millennium category we encounter very essential differences between Gordion and the other sites. In central Anatolia, extended burials are introduced on a large scale, and with them a new type of double-pithos grave. At Boğazköy, and apparently also at the Karum Kanesh, cremation is practised. As the same innovation is introduced at Troy, Gordion is literally between two fires. None of these revolutionary practices enter the Gordion cemetery discussed here.

On the other hand, new and overwhelming resemblances between the two groups of sites are to be found in the parallelism of the tomb-gifts, such as they are, and as quoted in detail in the catalogue. Although we do not know the third millennium necropolis at Gordion, we can confidently assume that the city changes its external fashions in pottery, jewelry and other arts and crafts in the second millennium without modifying its time-honored beliefs about care and destination of the dead.

A few general remarks may be added on the distribution of tomb-gifts at Gordion in comparison with other sites. It is clear that a simple buff bowl is one of the commonest desiderata in the hereafter. We have eight cases of pithos-burial (H 4, 6, 16, 24, 32, 34, 38, 39), of adults and children indifferently, in which a plain bowl is the only piece of pottery given the dead. The bowl is a typical eating and drinking implement and is mostly placed in front of the chest of the body. It is to be compared with the simple cups given the dead in many areas where a belief in the necessity of sustenance for the deceased is held. In two pithos-burials (H 13, 14) the luxury of a pair of such bowls is indulged in.

Occasionally a more fanciful container is put in place of the plain bowl. Such are the quatrefoil cup of inhumation H 21, the one-handled red-polished cup of pithos-burial H 1, the teapot in pithos H 20, and the jar of inhumation H 26. Inhumation H 22 has a covered krater-dish at its knees. Some of these vessels, like the teapot, are vessels for pouring rather than for drinking, but their position still seems to indicate that they are supposed to serve the dead as his personal tableware. The same interpretation still holds good, on a somewhat more prosperous level, for the pitchers placed around the head of inhumation H 25, or the one pitcher grouped with two bowls around the head of inhumation H 29.

There are, however, cases where one's attention is drawn from the dead to the survivors who arrange the burial. Pithos-grave H 17, which is relatively well-equipped and boasts a one-handled bowl as tableware for its occupant, produced three more vessels which were found broken up among the stones covering the mouth of the burial: a two-handled cup with strainer-spout (P 368), and two round-based jars (P 311, P 366). The pitcher accompanying inhumation H 27 (P 385) was similarly found under the covering stones and above the burial proper. An incomplete large jug lying at the back of the upper skeleton in cist H 31 (P 378) may have served some other purpose rather than the immediate need of the dead. Again, with pithos-burial H 47, we find the normal arrangement of a buff bowl accompanying the skeleton, but crushed among the stones of the blocking emerged a large two-handled jar, at present unique in our ceramic inventory.

We cannot assume that these vessels found outside the tomb proper were too large to be accommodated with the skeleton. This technical argument would only apply to the last-mentioned case. On the other hand, bowls are never found outside the pithoi or away from the dead, whereas the external vessels, if we may give them this group-name, tend to be of the jug or jar type. No other tomb-gifts are put outside the tomb, and one is forced to the assumption that both jugs and jars served the purpose, real or symbolic, of libations to the dead performed at the closing of the tomb. This would account for their broken and often incomplete condition, and this would be in accordance with similar customs observed elsewhere. Wace and Blegen list several cases of Middle Helladic burials which have had vases placed over the tomb after the burial (*Symbolae Osloenses* 9 [1930], 28 ff). A similar custom may have prevailed at Phylakopi on Melos, where Middle Cycladic pithos-burials of infants were accompanied by pottery offerings outside of the pithoi (*BSA* 17 [1910-11], 6). Analogies in Anatolia are not numerous. Alişar has a doubtful parallel (*OIP* 29, 87, double pithos-burial b X 31) and conditions at Yortan and Babaköy are too disturbed to allow observations of the original disposition of tomb-gifts. In Kusura the placing of a one-handled cup outside the base of a burial-pithos does

not seem to have any ritual implications, as the cup is of the same type as others closely accompanying head and feet of inhumed skeletons (*Archaeologia* 86 [1936], Pl. IX, 10, grave 6, inverted pithos-burial).

The lack of more substantial backing for any theory of a libation-ritual performed at the burial ceremony need not diminish the possibility of its having existed at Gordion. The indications listed here make it desirable to investigate more burial contexts to elucidate the point. At Gordion also disturbances in too many of the burials make it impossible to determine the original lay-out of burial-offerings.

The second category of tomb-gifts consists of personal ornaments of the dead: metal pins, earrings, finger rings, bracelets, and necklaces of miscellaneous composition. The pins are garment-fasteners, found as a rule on one or both of the shoulders of the dead. In many cases the pins had tumbled to the base of the pithos, and in one case only could a remnant of cloth be observed to adhere to the pins. But their position and available parallels make their functional character clear beyond doubt. Toggle pins as well as unpierced pins of various types serve this purpose. Numerous burials were provided with one pin only (H 7, H 37: one toggle pin; H 24, 35, 40, 43, 45: one unpierced pin each). If two pins are found, they may have served to fasten the garment on one side, but two spiral-headed pins were found distributed to the left and right shoulder (H 20). Miscellaneous pins are found in pairs (H 1, 4) for children and adults. Inhumation H 25 has three different pins just below the shoulder zone, still presumably of the same function as the others listed so far. On the other hand, in the more richly adorned burial H 36 two additional pins of small looped type are found at the waist, perhaps as fasteners of a belt. In pithos burial H 41 one pin was observed to have been used as a hairpin to hold a wooden comb in place in the coiffure. The same burial had at least five other pins arranged around its garment. Inhumation H 22 and pithos-burial H 17, finally, prove that larger numbers of toggle pins can be given to the dead than strictly necessary from a practical point of view. Both have two simple pins in addition to four and thirteen toggle pins, respectively. The pins found in situ in H 22 were all in the shoulder and upper arm area. This profusion of toggle pins is to be compared with the luxury of some Phrygian burials which are equipped with dozens of fibulae instead of the required one or two fasteners. Burials H 17 and H 22 both belong to the relatively wealthier type of grave at Gordion.

The other objects of personal adornment do not require any special comment, since their destination is obvious and has been listed in the catalogue. The category of spindle whorls and knucklebones is the only sign of confidence on the part of the survivors that some activity can take place in the hereafter; a woman occasionally being given her spindle (the wood of which must have decayed) as her inseparable attibute and tool, some children (and parents too, evidently) being supplied with their favorite toys to indulge in a posthumous knucklebone game. On the other hand, weapons are conspicuous by their absence.

Although signs of a definite belief in some kind of survival after death are not wanting, no material stress is laid on this aspect of the burials. Some pottery, perhaps some food, a garment with pins, a few pieces of simple adornment, and an occasional tool or toy are all that goes with the dead. The two stamp seals are hardly of a different nature from the rest of the necklaces to which they belong, and would not seem to be signs of individual need of identification, especially as one of the seals was found with a child's burial, as indicated above (H 4). The richest burials do not show any desire to go beyond the usual repertoire. They just are more complete in their traditional inventory (H 4, 17, 22, 24, 25, 41). None of them contains any religious object such as idols or other symbolic items. On the other hand, some burials, although found intact, were completely devoid of tomb-gifts (e.g. H 15, 19, 48). The general picture is one of frugality, apparently rather due to a lack of enthusiasm for a lavish display of funeral regalia than to a lack of religiosity or extreme material poverty. The tombs are well-arranged and the large funeral pithoi must represent considerable investments.

Again the Gordion cemetery is in good Anatolian company with its modest harvest of tomb-gifts. With the glaring exception of the royal tombs found at Alaca Hüyük, neither third nor second

millennium tombs in Asia Minor boast a rich or elaborate funeral equipment. The Alaca tombs are completely apart from the general pattern in their structure, ritual character and contents. On the other hand, the more restricted Gordion repertoire is akin to the general frugality of tomb-gifts in the regular Anatolian burials. It is true weapons are not lacking in early contexts at such sites as Yortan, Ahlatlıbel and Samsun (Özgüç, *Bestattungsbräuche*, 93 ff). Idols are generally rare, Yortan and Babaköy being the only places of provenance (Özgüç, *o.c.*, 101 ff). It is worth mentioning that the funeral repertoire of Gordion is very similar to that of the Copper Age burials at Alişar, which apart from their intramural position share a good common background with the Gordion tombs. Some pottery, a few odd copper pins, rings, bracelets, beads, and whorls make up the list and they are thinly distributed (*OIP* 28, 137 ff). A naturally even closer resemblance exists between the mortuary gifts at Gordion and at Hittite Alişar. The range of objects is about identical, with the exception of the toggle pins on the Gordion side and a few small tools at Alişar (*OIP* 29, 85 ff). A pithos burial with two skeletons at Alişar, c X 26, rouses its cataloguer to enthusiasm: "the very rich mortuary gifts consisted of three gold rings, one silver ring, one lead ring, seven bronze or copper bracelets" and three vessels (*OIP* 29, 88). This is about the level of local pride reached at Gordion in its moments of relative riches.

Kültepe follows a pattern of funeral inventory such as is known at Alişar and Gordion, but only in its simple inhumations and pithos-graves, even though they contain non-Anatolian residents. The cist-graves of the Karum, marked by other innovations, are also wealthier in funeral equipment. But the contracted burials of levels II and III contain no more than an occasional pin, earring, lead ring, pottery bowl, and often not even that (*Kültepe 1948*, 162, 165). However, in the case of the burials in the house of Adad-Şululi, signs of a funeral cult exist in the form of a presumably ritual vessel in the burial room (*Kültepe 1948*, 165; *Kültepe 1949*, 147 ff, richer are inhumation 14, and sherd-burial II). The duality of purposes of pottery in connection with burials, viz., its destination as personal tableware of the deceased versus the use of libation or ritual vessels by the survivors, seems analogous to indications observed at Gordion. But in the Karum we find the burials arranged in a room set aside for funeral and ritual purposes, and the arrangement is made by Assyrian inhabitants. Thus, if a cautious parallel may be drawn, it is one with foreign material.

The basic consistency in the distribution of tomb-gifts in Gordion and Alişar, and partly with Kültepe, is to be added to the list of general similarities which connect Gordion with other second and third millennium Anatolian sites. Unfortunately for the archaeologist, it was an old and tenacious Anatolian custom to observe frugality in the equipment of the dead, however respectfully they may have been interred.

THE HITTITE CHARACTER OF THE GORDION CEMETERY AND CHRONOLOGICAL CONSIDERATIONS

It remains for us to consider the more exact chronological position of the cemetery at Gordion and its claim to be classified as Hittite, a label which we have attached to it in the previous discussion without any further clarification.

The relative position of our material is clear in a general way. As most aptly demonstrated by the pottery, the phase in which the Gordion necropolis takes its place is that of the wheelmade Anatolian ceramics of the second millennium. This phase usually seems to be initiated by a radical departure from previous archaeological fashions, and several sites bear the marks of this transition in heavily burnt destruction levels.

The pre-destruction phase should perhaps receive the name of Early Anatolian (E.A.) to form a counterpart in nomenclature to such designations as Early Helladic, Cycladic and Minoan. A neutral system of comparative classification is then available in the terms of Middle and Late Anatolian to correspond to Middle and Late Helladic, etc. The term "Early Metal Age" (W. Lamb, *Iraq* 11 [1949] 191) has no convenient abbreviation and lacks topographical definition.

The destruction levels which mark the end of the Early Anatolian phase (cf. Bittel, *Historia* 1 [1950] 283) are presumably of the same general nature as those marking off Early Helladic from Middle Helladic strata. They are signs of war and invasion and must be the scars of a series of coherent attacks. In the wake of these attacks comes a change of material culture such as is most clearly observable in the change from rather uninspired, handmade red-burnished pottery to a repertoire of sophisticated, often metallic-looking, wheelmade vessels, including extravagant and entirely new shapes of the *Schnabelkanne*, finished with an excellent glazelike red-polished surface treatment.

The two signs of change, destruction levels and ceramic revolution, can be traced through Anatolia, although in the western part of the peninsula (Troy) events take a local and different course.

In the city-mound of Gordion the destruction level has been observed in the deepest section of a trial trench cut in 1950, which subsequently descended into the phase of handmade, Early Anatolian ceramics. Close correlation of the burnt level at Gordion with that encountered in level XV at Polatlı, its nearest excavated neighbor, is indicated (*Anatolian Studies* 1 [1951], 24 ff). Polatlı levels I-XV are Early Anatolian, levels XVI-XXXI Middle Anatolian. The case of the more central Anatolian sites is not always as clear. The mound at Alaca Hüyük shows unmistakable signs of having gone through the process of devastation and fire (between levels III-5 and II-4). Alişar has different vicissitudes affecting its citadel and terrace, with presumably a complication in the appearance of two subsequent intrusions on the citadel, one at the end of Early Anatolian (level 6 M, characterized by Cappadocian and "intermediate" ceramics), the other in a period ceramically to be classified as Middle Anatolian (level 5 M, the Cappadocian ware now coexisting with monochrome, wheelmade "Hittite" ware). Indications of a "violent and thorough destruction" of 6 M are evident (*OIP* 28, 210). The terrace settlement seems to have escaped destruction and may have been intimidated in the period of general danger to lead but a meager and reduced existence (level 12 T, *OIP* 28, 209). In any case, the following settlement levels, 11 T and 10 T, are both clearly of Middle Anatolian character.

At Kültepe the relevant strata of the large city-mound are just beginning to be systematically explored (summer 1953). It is clear that the four levels of the Karum, on ceramic grounds, all belong to the Middle Anatolian phase. Although Cappadocian pottery occurs as an admixture in levels IV-II of the colony site, the leading ceramic ware is of wheelmade monochrome character (*Kültepe 1948*, 195 ff, 219).

The problem of where in this sequence to affix the label of "Hittite," and especially whether to coordinate the beginning of a Hittite phase with the break between Early and Middle Anatolian, is mostly one of a clarification of terms. If Hittite is taken as a linguistic notion and the modern name for the language anciently indicated as "našili" we cannot use it as an indiscriminate label for Middle Anatolian levels and especially not for the Alişar burials of levels 10 T and 11 T or for the period of the Karum graves. Tablets from the colony archives seem to contain names of people belonging to this specific linguistic stratum (cf. most recently S. Alp, *Ankara Üniversitesi Dil ve Tarih-Coğrafya Fakültesi Dergisi* 10, [1952], 252 f; A. Goetze, *Language* 29 [1953], 263-277 and 30 [1954], 349-535 defines the stratum as "Kanishite"). There is, however, no demonstrable correspondence in bulk and importance between the appearance of the linguistic group associated with the city of Neša and the general archaeological volte-face of the Middle Anatolian period. We have as yet no detailed information on the numerical strength and the distribution of several other Indo-European speaking elements in the Middle Anatolian period. Goetze recently has restated the case of the Kanishites as (proto-) Indo-Europeans (*Language* 29 [1953], 263-277). Additional analysis will prove whether we shall be able to use the linguistic term of "Hittite" in a broader sense (comprising a number of Indo-European languages and dialects) for certain areas in Anatolia as early as the beginnings of Middle Anatolian, and to attribute the archaeological changes to the bringers of these new languages. A universal validity of the linguistic category, however, cannot be obtained even for the periods of the Hittite Old and New Kingdoms.

On the other hand, "Hittite" may be used as a political classification, comprising people of different although partly related linguistic backgrounds, who as conquerors establish an expanding kingdom with a dynastic tradition in central Asia Minor and become increasingly familiar to us as they rise to the level of political partnership with the other Near Eastern powers. If such a definition of "Hittite" is accepted, the justification for the use of the term at the beginning of the Middle Anatolian period depends upon the credentials of such kings as Pithana and Anitta, living in the colony period (J. Lewy, *RHA* 3 [1934], 1-8; Güterbock, *Z Assyr* 44 [1938], 139 ff; Bittel, *Historia* 1 [1950], 270), as the true dynastic predecessors of the Hittite Old Kingdom. A dynastic, ideological, relationship is probable, especially in view of the preservation of the Anitta text in Hittite Empire archives. This does not exclude the possibility of repeated changes in the family line of the ruling dynasties, in fact a lack of such straight descent is more common than its opposite in the ancient Near East. Also a change in the specific linguistic stratum of the rulers has to be admitted as feasible. A considerable reinforcement of the ruling classes seems to have taken place in the somewhat dark period between Anitta and Labarna. This reinforcement may have taken the form of additional immigration of Hittite (Nešite) speaking elements, which now apart from their linguistic specialty also can boast considerable military excellence, such as is evidenced by the raid on Babylon by Muršil at the end of the Middle Anatolian period, in an indubitable Hittite, politically and linguistically certified, setting.

The status of the Old Hittite Kingdom under Muršil and his predecessors Hattušil I and Labarna must have been such that large parts of Anatolia were under Hittite political control, the area of Gordion included. This is implied in the claims of Labarna that he made the seas his frontiers (Gurney, *The Hittites*, 21; Goetze, *Kleinasien*, 78). Politically speaking, then, a site like Gordion must have moved into the Hittite category as early as the Hittite Old Kingdom. Before this, the territory governed by the Anitta dynasty may be called politically Hittite – as an ideological prelude to the Old Kingdom – but we cannot make any claims for regions West of the Halys to have been included in this dynastic expansion. Gordion therefore would not be Hittite in the political sense of the word in the early stages of the Middle Anatolian period.

Again, one can liberalize the political notion as well as the linguistic one, so long as this is clearly stated in a terminological justification. The beginnings of the Middle Anatolian phase were presumably characterized by the rise of many local dynasties who had established themselves as intruders in the more homogeneous world of the third millennium. It is likely, but so far unproved, that many of them belonged to Indo-European speaking tribes. These new dynasties could be considered as

belonging to a common type, and as the background out of which one, the historical Hittite Kingdom, rose to predominance. In this sense the others are the general precursors of the Hittite rulers, and could – with some justification, but by definition rather than by implication – be called Hittite, or proto-Hittite. This extension of the political Hittite notion is dangerous, however, since there is little reason to exclude such a dynasty as the third millennium kings buried with pomp at Alaca from the newly defined category (this is, in fact, what must have led Sir Leonard Woolley to apply the name "Hittite" to their graves, *Carchemish* III, 225). Such liberalism would generalize the character of the political "Hittites" to an unprofitable degree.

The last method of giving the term "Hittite" a definite, although artificial, meaning, is to examine the archaeological material of the second millennium in Anatolia and to classify certain coherent styles of building, ceramics, metalwork and a complex of iconographical data, such as are typical of both the Middle and Late Anatolian periods, as Hittite. In this way a label which was naturally applied to archaeological material contemporary with the period of Hittite political predominance is extended to earlier, Middle Anatolian, material because of its similarity to Late Anatolian styles. This practice started in the ceramic field because the second millennium continuity in this categroy is obvious and so strong that chronological differentiations are often hard to make. Architectural styles show a similar coherence, e.g. in the appearance of the box-system of fortification walls in Boğazköy and Mersin as a Late Anatolian feature, but in Alişar level 11 T in Middle Anatolian context. Iconographically the seals from Kültepe will become valuable evidence in the discussion of the Hittite question (cf. *Belleten* 65 [1953], 123-127 and the forthcoming publication by Nimet Özgüç).

It is justifiable to maintain a practical label that is forced upon archaeologists by their observation of archaeological continuity in second millennium Anatolia, and to continue a current nomenclature. In this sense we have freely used the term "Hittite" in the preceding chapters, assuming that a theoretical justification would not immediately be asked for when discussing the material facts of the archaeological picture at Gordion. But one has to admit that the archaeological usage and the continuity on which it is based do not provide sufficient ground to transfer the validity of the archaeological term "Hittite" to the political and linguistic field. An identical material culture may be widespread among people of different languages and varying political allegiance. The archaeological situation in second millennium Anatolia suggests that changes do occur, some coming in with a sudden and violent disturbance of the third millennium pattern, other innovations being slower to penetrate, and the whole superposition taking place on a substratum which clings tenaciously to some of its original traditions (such as, evidently, burial practices). The main agents in bringing about the archaeological change in Asia Minor between Early and Middle Anatolian have not yet been identified politically, linguistically or numerically. The case of Troy is a reminder that caution has to be exercised in order not to oversimplify the situation. The complicated nature of ethnic and political stratification is rather obscured than illuminated by the introduction of a general and magic catchword "Hittite."

One cannot help but be reminded of the situation on the other side of the Aegaean. The Anatolian and Helladic students are in similar plights, trying to explain second millennium evolutions that are in marked contrast to the preceding phases. In Greece, we are more confident about the final outcome of the linguistic situation. With negligible exceptions, the Greek language is universally established in the main part of the Aegaean world at the end of the second millennium. It shows an interesting stratification of dialects, but its final conquering power is in striking contrast with the multiplicity of languages in Asia Minor during and after Hittite rule. The use of the linguistic label "Greek" is therefore easier than that of "Hittite."

Archaeologically, one looks for evidence of continuity in the material culture of Greece, moving back in time from the linguistically known to prehistoric stages, encountering a diversity of styles and traditions, but still deciding that the violent break at the beginning of Middle Helladic is the most likely moment for the entry of the first masses of Greek-speaking conquerors (cf. most recently A.J. B. Wace, *Historia* 2 [1953], 82ff). Again the hypothesis gains strength from the knowledge that the linguistic Hellenization of the peninsula took place in successive and overlapping stages. A similar

consistent backing by independent linguistic research cannot be offered in the vast expanse of Anatolia. Actually, an almost greater archaeological complexity is found in second millennium Greece than in Anatolia, but this is mainly due to the encounter between Helladic and Minoan which is clearer in its implications than the various factors at play in contemporary Anatolia.

In the political field the lack of historical data for the earliest Greeks is a serious handicap. Hardly anybody would assume that a Greek dynasty of Middle Helladic I date could have had more than very limited power. It is not until the shaft-grave period at Mycenae that one finds kings of more than local importance. Again the parallel with Anatolia may be useful. The Mycenaean shaft-grave kings live in the days of the Hittite Old Kingdom. Several centuries have passed since the unrest of migrations and conquest, before local dynasties succeed in extending their power beyond the strictest regional importance. When the first Greek conquerors put an end to the prosperous evolution of Early Helladic, they still share the country with a large residue of the pre-Greek population. In the early centuries of Middle Helladic, the archaeological, linguistic and political pattern of the mainland can be called "Greek" only in a liberal sense. It is owing to the later dynamic action of well-established local kings that a real unity and sense is given to the term Greek (or: Mycenaean) in all fields of research.

There are many differences in the aspects of the Greek and the Hittite question, the most important ones due to the respective sizes of the territory involved, and to the final reinforcement the Greek language must have received in the Dorian invasion, which blotted out more of the original survivals. But the beginnings of Middle Helladic and Middle Anatolian are similar, and in each of these countries we shall have to understand the prominent status of the first strong dynasties by untangling their Middle Anatolian and Middle Helladic background, and endeavoring to find the seeds of Hittite and Greek importance in the prelude to their historical appearance.

The preceding lengthy examination of the applicability of the term "Hittite" in Middle Anatolian context had to be of general nature because this Hittite problem is a general one, not to be solved at or for Gordion specifically. In one respect Gordion may prove especially valuable for comparative studies. We have not yet mentioned the anthropological side of the Hittite question. An investigation of the range and sequence of skeletal types in Early, Middle and Late Anatolian levels will lead to independent information on ethnic changes and the periods of their occurrences. Fortunately, a large number of more or less complete skeletons is now available from the Gordion cemetery. They are being studied and will be published separately by Dr. Muzaffer S. Şenyürek, Professor of Anthropology at the University of Ankara, who is also analyzing the human skeletons from Kültepe (cf. *Belleten* 63 [1952], 323-343). The final integration of the four classes of data: linguistic, political, archaeological and anthropological, will bring the verdict on the desirability of a further use of the term "Hittite" as applied in this monograph, which is concerned with the archaeological aspect only.

In the meantime, an attempt has to be made to articulate the disputed periods as much as possible on the basis of archaeological evidence, and to fit the material from the Gordion necropolis in its appropriate chronological context.

For practical purposes we may use the magic system of tripartition to subdivide the Middle Anatolian period. One may tentatively distinguish Middle Anatolian I as the level immediately overlying the destruction debris. Its ceramics are monochrome wheelmade, with an initial admixture of "Cappadocian" ware at Kültepe (Karum IV-III) and Alişar (5M). This stage may well antedate the Assyrian colonies (witness Karum IV-III, cf. K. Balkan, *Orientalia* 22 [1953], 430). Middle Anatolian II is the level of the Assyrian colonies, Karum level II, Alişar level 10 T, in which an intensive cultural and commercial interchange with Assur is taking place. Some traces of Cappadocian pottery are at present associated with this level (*Belleten* 65 [1953], 124). Thanks to the introduction of Assyrian cuneiform in this period, Middle Anatolian II natives are known to us and emerge in the light of history. At the end of Middle Anatolian II, the Assyrian colonies are destroyed (this is what the stratification at the Karum Kanesh suggests) and the Assyrians expelled. In the ensuing chaotic interlude, some of the

achievements of Middle Anatolian II seem to be lost, such as Assyrian writing, but this is still open to debate. Kültepe Karum I may stand for the beginning of Middle Anatolian III. The abandonment of the Karum area may be due to unsettled conditions and new immigration in the course of this period. But what emerges from the disturbances and most clearly at Boğazköy is the phase of the Hittite Old Kingdom, Büyükkale IV c (cf. Güterbock, *Archaeology* 6 [1953], 215; Naumann and Bittel *MDOG* 86, 21).

The outline of the periods is relatively clear. An absolute chronology cannot be given within narrow margins so long as Babylonian and Assyrian chronology have not been correlated properly with each other and with Egypt. The neutral estimate for Middle Anatolian would be 2000-1600 B.C., but correlative references to Assyria are more valuable.

It is clear that the subdivisions of Middle Anatolian have to be based on stratification and tablets. They will become recognizable in other sites, however ill-stratified and tabletless they may be, if we can furnish the material characteristics of each phase in detail. A minute classification of pottery is one of the first desiderata. Unfortunately, no detailed material sequence is available for the periods of Middle and Late Anatolian. Alişar is incomplete, since it does not last through all phases, and is presumably telescoped. Boğazköy is promising, but especially on the citadel too denuded for a rich archaeological record to be preserved. Other sites, though excavated, have not been fully published. Alaca Hüyük is of great comparative value, and so is, potentially, Karaoğlan. What is available from the Karum Kaneš is the best stratification at present. The accumulations of the city mound of Kaneš, the excavation of which has been in progress for three seasons, will it is hoped bring the badly needed full documentation.

A typological differentiation of "Hittite" pottery will eventually be established. At present the general impression of continuity is almost misleading. Some features seem to stand out in the superficial uniformity. Middle Anatolian I pottery is of the most pronounced, if not extravagant, "Anatolian" appearance, at least in central Anatolian sites. Sharp sections and contours, metallic features, strong beaks on pitchers, triangular handles, plastic ornament and medallion decoration are outstanding features together with the excellent smooth and dense red-polished surface finish, whether complete or reserved (*Kültepe 1948*, passim). Few shapes of the opening phase of Middle Anatolian remind one of Syro-Palestinian ceramics. This changes gradually. Some more imports appear, but also native pottery borrows the subdued morphology of the Syrian repertoire. Pitchers with straight rolled rims become common, strangers if compared with their sharp-beaked Anatolian counterparts. Trefoil and quatrefoil mouths begin to be popular and plain buff pottery is frequently used. The Anatolian repertoire is by no means superseded by the foreign forms, but a Syrian element is definitely added to it. The change is observable in Karum level I (as kindly emphasized to me by Dr. Tahsin Özgüç in 1953; cf. *Belleten* 65 [1953], 115 ff; *Kültepe 1949*, 158). The Middle Anatolian III phase is the proper setting in which such syrianisms would intrude, due partly to increased trade, partly to campaigns in the area of Aleppo and Northern Mesopotamia.

The increasing proportion of plain buff wares in the Late Anatolian period can also be observed. Functional forms of wheelmade ware are mass-produced. During the Empire, certain sites produce pitchers and plates with incised pottery marks that seem a simplification of Hieroglyphic Hittite signs signs (Alaca Museum, many samples; Tarsus, *AJA* 39 [1935], 534 f; *AJA* 51 [1947], 386). A new type of partial red-polished or ring-burnished decoration is introduced on finer pottery.

These rough distinctions in the Hittite ceramic repertoire are helpful in assigning the Gordion material a range in the course of Middle and Late Anatolian. As a preview and a promise of a more complete testing scale, we also have the trial-pit excavated to below groundwater-level on the city-mound at Gordion in 1950. There we have evidence that the later Hittite levels, presumably the Late Anatolian phase, are marked by a production of plain buff wares with little use of red-polished decoration, and made in rather gritty fabrics. An occasional incised sherd has also turned up. The characteristic finish of this pottery is not found in the cemetery material. On the other hand, the phases right above the destruction level at Gordion, Middle Anatolian I and perhaps II, include some of the

genuine excellent red-polished Anatolian ware that compares well with corresponding Kültepe and Alişar levels, but which is not at present encountered in the cemetery. This indicates an intermediate position for the cemetery material around Middle Anatolian II-III, which suits the local repertoire from old-fashioned beaked pitcher shapes to newer looking Syrian jugs and a quatrefoil cup.

It is difficult to determine the more accurate chronological parallels for the small finds at Gordion. This is partly due to the local character of some of the Gordion products, e.g. pottery and toggle pins, and partly to the indefinite range of comparable material from such sites as Alaca and Alişar. But if we try to recapitulate the more detailed resemblances to be found between Gordion and other sites, and the local chronological indications, the following data are available. The earliest tomb in the Gordion cemetery is H 28, the inhumation accompanied by a crude handmade bowl to be assigned to the Early Anatolian period. All the other ceramic tomb-gifts are of Middle Anatolian and wheelmade type. Among the pithoi the tall cooking-pot shapes are paralleled at Boğazköy in colony levels and at Karum Kanesh level I (cf. p. 22 *supra*), which means close similarities are to be found in M.A. II and III, rather than in M.A. I. The beaked pitchers from Gordion look old-fashioned and local, but the straight-rimmed jugs are of the "Syrian" category slowly intruding in M.A. II (cf. an import in Karum level II as one of the earliest occurrences of the type, *Belleten* 65 [1953], 114 and fig. 12). Alişar has very few instances of this shape, which indicates that its real popularity did not come about until after Alişar ceased to be inhabited, in the course of M.A. III. The tall pointed pitcher P 711 from Gordion is paralleled by specimens which were apparently found in the uppermost strata of the M.A. III deposits at Alişar, and could there erroneously be classified as post-Hittite (*OIP* 29, 368, fig. 417 a). Our quatrefoil cup P 346 is close to quatrefoil kantharos types of M.A. III range (p. 25 *supra*).

Among the finds of other categories the most striking resemblance is that between the faïence stamp seal SS 70 and its counterparts from Alişar and Acemhüyük (p. 42 *supra*). Apart from the trade connections implied, the chronological aspect is important. The period of increased Syrian trade is the most likely setting for such local imitations of foreign techniques. Unfortunately, the parallels for the Gordion seal are unstratified, and ultimately the Gordion context and stylistic analysis of the stamp seal-type will have to confirm its date as M.A. III. In the field of faïence, the presence of beads and necklaces of Syrian and Mesopotamian types again points to a period of increased contact with the Southeast. Specific parallels were cited among the jewelry of Megiddo level IX, which is presumed to date from 1550-1479 B.C. (G. Loud, *Megiddo* II [*OIP* 62], Pls. 208 ff). The East Mediterranean sea shells could have been brought along in this traffic.

Beyond these few specific indications we cannot go at present. Only general considerations can answer the question whether the Gordion cemetery lasted into the Late Anatolian period, i.e. after Muršil's reign and until the days of the Hittite Empire. This seems unlikely although for the period of 1600-1400 specifically we lack possibilities of archaeological discrimination. The buff bowls found with the Gordion burials seem of early rather than advanced types, and the one specimen with a firm rolled rim (P 353) is not enough to make its context Late Anatolian.

At this point we may return to a question brought up before in the discussion of tomb-types represented in the Gordion cemetery (p. 3 *supra*). If the original core of the cemetery seems to lie in the group of inhumations H 21-23, H 25-30, can we observe any chronological differences among the tomb-gifts associated with these inhumations and the presumably following pithos burials? It is obvious that most of the "Syrianizing" types of Middle Anatolian pottery are found with inhumations (the pitchers P 319 and P 511 with H 25, the quatrefoil cup P 346 with H 21; the advanced-looking krater P 299 with H 22). On the other hand, the old-fashioned beaked pitcher P 373 belongs to inhumation H 29, and P 385 of inhumation H 27 looks equally archaic; whereas P 1023, the handmade jar, also came from a simple inhumation. We seem to have a considerable variety of Middle Anatolian shapes associated with these inhumations. In view of the relatively small number of tombs examined at Gordion, a statistical analysis of their contents may be deceptive. With the group of the ribbed-pithos burials we find three vessels of well-articulated shapes: the teapot P 298 (H 20), the strainer-spouted jug P 368 (H 17), both of these standing on defined ring-bases; and the jar P 768 (H 47). These

three vessels show a sharper profiling of body and handle than is found in the "Syrian" group, and they seem to be advanced specimens of typical Middle Anatolian ware. A chronological limit cannot be assigned to them on available evidence. They look much more developed than such pitcher-shapes as represented by P 373 and P 385, but there is no possibility of determining their chronological relationship to the "Syrian" items.

The subdivision of the tombs in early and late groups will have to wait for further evidence. A generally homogeneous character of the cemetery is also suggested by the distribution of pin-types, and by the occurrence of identical biconical paste beads with inhumation H 23 and ribbed-pithos burial H 41. So if the local distinctions within the cemetery may have meaning as to the priority of burials, they are not likely to widen its chronological extent much. Tomb H 28 with its singularly primitive tomb-gift seems an isolated Early Anatolian burial, engulfed in a cemetery of mostly M.A. II-III date. If an absolute estimate is wanted for preliminary purposes, one may suggest the 19th to 16th centuries as a provisional guess, representing the period of the Assyrian colonies and the beginnings of the Hittite Old Kingdom.

Greater precision is to be expected from the site of Gordion itself. Continued excavation on the city-mound will produce the best local scale of archaeological material ranging through the entire second millennium, and the graves will be assigned their definite place in this sequence. On the other hand, more investigation of the cemetery ridges is indicated in order to find the graves belonging to the predecessors and descendants of our present "Hittites." A discovery of a Late Anatolian cremation cemetery is within the range of theoretical possibility and worth trying for.

In the meantime, the unsought but available cemetery will it is hoped serve as an outpost in the further exploration of Western Anatolia and the Hittite question.

APPENDIX I

COMPOSITION OF THREE CORRODED METALLIC SPECIMENS

Both qualitative and quantitative analyses for the metallic constituents of three Hittite specimens were made. No analyses were made for non-metallic elements, such as oxygen, combined with the metal mainly if not entirely as a result of corrosion.

Constituents	Pin B 449	Pin B 451	Shoe-pendants ILS 150
Copper	77.9%	92.7%	67.2%
Tin	9.8		
Lead	0.2	0.2	0.5
Iron	0.2	1.0	0.4
Arsenic			13.8
Antimony			1.2
Non-metallic constituents (by difference)	11.9	6.1	16.9

Caution should be used in drawing conclusions from these results. Corrosion frequently is not uniform, so that results from different parts of the same specimen, even if adjacent, may differ from each other. Also, corrosion may be selective, in relation to the several metals of an alloy, and some corrosion products are more resistant to subsequent change and possible loss than are others. For example, the end-product of the corrosion of tin is usually tin dioxide, a very insoluble substance resistant to further change, while the copper oxides and some other copper corrosion products are more easily altered and lost. Hence results such as those given here show only the composition of that particular part of the corroded specimen taken for analysis; in particular they are not necessarily a measure of the composition of the original, uncorroded metal.

It is possible that the iron was not part of the original metal, but was a contaminant derived from contact with the soil.

The results do indicate that specimen B 449 (H 40) was bronze, specimen B 451 (H 35) was copper, and specimen ILS 150 (H 41) was arsenical copper. This last was probably smelted from arsenical copper ore such as tetrahedrite or enargite, each of which may also contain antimony. Arsenic and antimony in sufficient amounts would impart a silvery lustre to the metal, and probably make it harder than a purer copper or bronze.

A. Eric Parkinson

APPENDIX II

ANALYSIS OF BEAD NECKLACE

G 118, Tomb H 41,
pp. 128-133 above.

As received, the necklace consisted of about twenty beads shaped like elongated barrels, not uniform in size; about six or eight cylindrical beads of different lengths; and about twenty-two blobs of badly corroded material of a green color. The color suggested the presence of copper. Some of the barrel-shaped beads were joined together by the corroded masses, others had a blob of corroded material at each end, while some of the cylindrical beads had a blob of corroded material attached to one end.

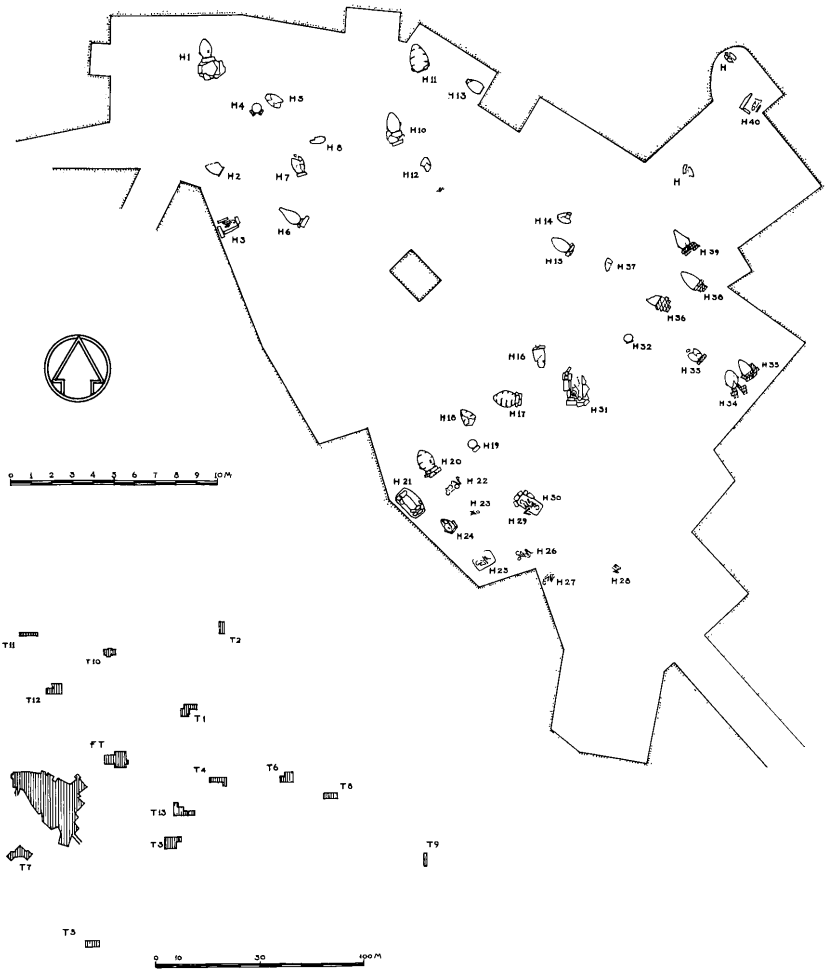
Qualitative analyses of the corroded material showed the presence of copper, lead, arsenic and antimony in considerable amounts, and iron, calcium and magnesium in much smaller quantities, the amount of iron being very small. Subsequent physical examination of some of the corroded masses showed that with one exception they consisted of a roughly spherical core of hard grey metal with a hole through the center, covered with rough green corrosion. Evidently the lead, arsenic and antimony composed the metallic core, while probably at least most of the copper was in the corroded shell. The arsenic and antimony would impart hardness to the relatively soft lead, but whether these metals were used deliberately for this reason is problematical. The sulphides of arsenic and antimony, if not the metals themselves, were known from very early times; on the other hand, both arsenic and antimony occur frequently in lead ores. The relation of the copper to the other metals is questionable. It may have been alloyed with them, but from the position of the corroded material it appears that possibly the metal beads were covered with a sheath of copper or some kind of ornamentation in copper. The small quantities of iron, calcium and magnesium were probably simply impurities without particular significance.

Microscopic examination of some of the beads showed a structure consisting of many coarse, colorless crystals in a white matrix. Most of the beads were colored dark brown to black on the outside, the surface in some cases being partly smooth and almost polished. This dark-colored surface could be scraped off easily, revealing the structure described above. Analyses of some of the barrel-shaped beads showed a very large amount of silica and very small quantities of copper, iron, aluminum, calcium, magnesium and sodium. Quantitative determinations showed that as much as 91 per cent was silica, while there was about 2.3 per cent of sodium oxide. The very high silica content and the surface appearance of the beads suggest that they are faience, which is an artificial, highly siliceous body covered with a glaze. The iron may have been used to color the glaze, as may the copper, though the latter could easily be from contamination from the corroded metal.

The facts that in some cases two barrel-shaped beads are connected by a corroded metal bead, and that some of the cylindrical beads have a corroded metal bead attached to one end, suggest that the necklace may have been formed in part at least of alternate barrel-shaped and metal beads, with cylindrical beads pendent from the metal beads. The number of cylindrical beads, however, was only about a third that of either of the other two types. Also, one metal bead, rather than being roughly spherical, was shaped more like a loop with the suggestion of a broken-off end, which might indicate some other type of pendent ornament which had broken off.

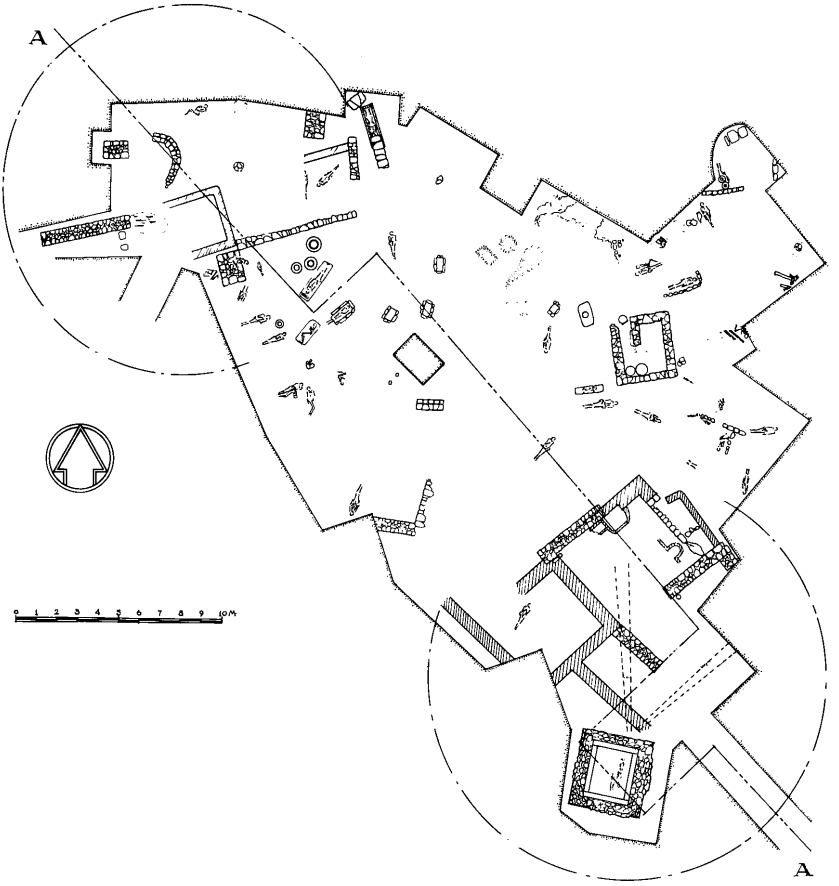
A. Eric Parkinson

PLATES



PLAN OF CEMETERY, MAIN TRENCH, SHOWING HITTITE BURIALS.
Scale ca. $\frac{3}{800}$.

IN LEFT CORNER: REDUCED PLAN OF CEMETERY, SHOWING MAIN TRENCH IN RELATION TO TRIAL TRENCHES. *Scale ca.* $\frac{3}{8000}$.



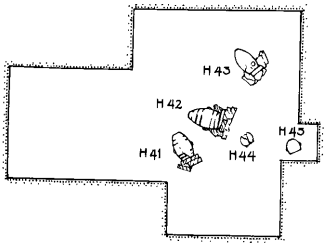
PLAN OF CEMETERY, MAIN TRENCH, SHOWING POST-HITTITE STRUCTURES AND BURIALS.

Scale ca. $\frac{3}{800}$.

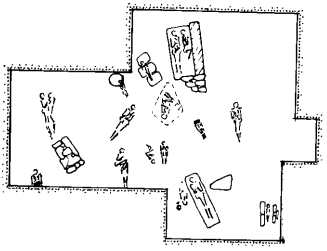
DETAIL FROM GENERAL PLAN OF GORDION SITE

Drawn by Mahmut Akok, 1950

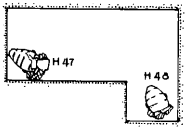
The Hittite Cemetery s located under Tumuli H and I near center. Cf. frontispiece and Plates 1 and 2.



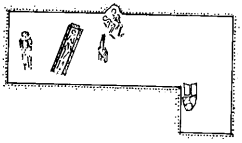
a. Field T, Hittite burials



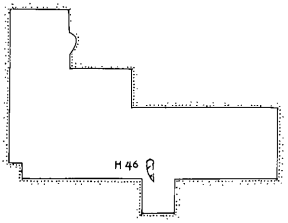
b. Field T, post-Hittite burials



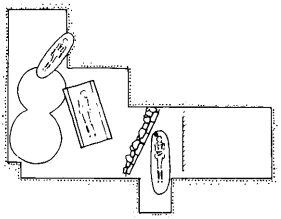
c. TT 4, Hittite burials



d. TT 4, post-Hittite burials

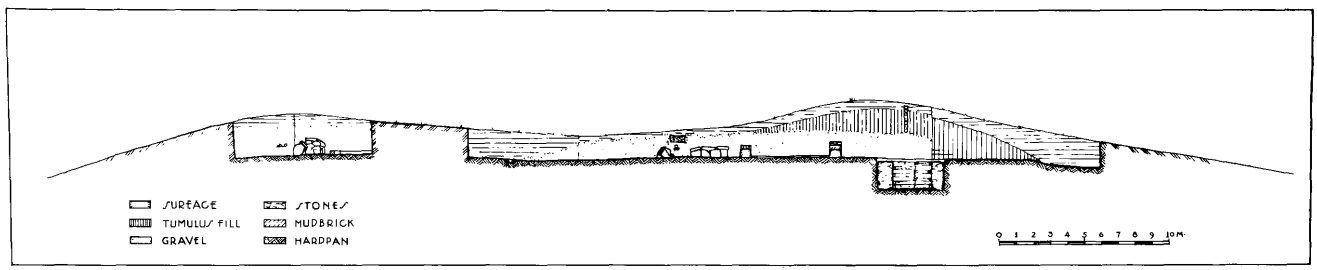


e. TT 13, Hittite burial



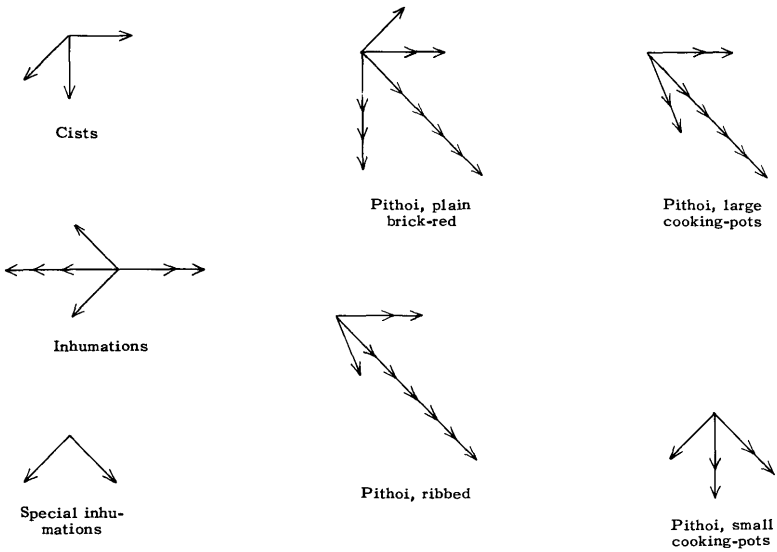
f. TT 13, post-Hittite burials

PLANS OF HITTITE AND POST-HITTITE BURIALS IN TRIAL TRENCHES.

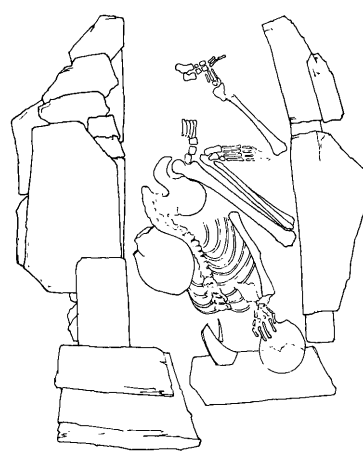


SCHEMATIC SECTION THROUGH CEMETERY, MAIN TRENCH, SHOWING HITTITE BURIALS H 1, H 16 AND H 31, PHRYGIAN BURIAL IN TUMULUS H, AND LATER BURIALS.

Looking NE, along line AA indicated on Plate 2.



a. Diagrams of Orientation



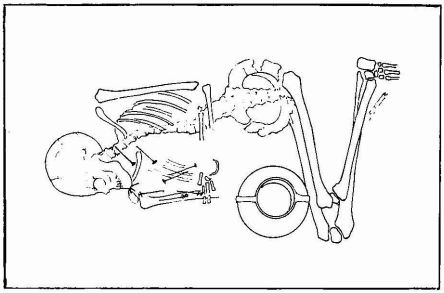
b. Cist Grave H 31. (Drawing by D. H. Cox)

PLATE 7

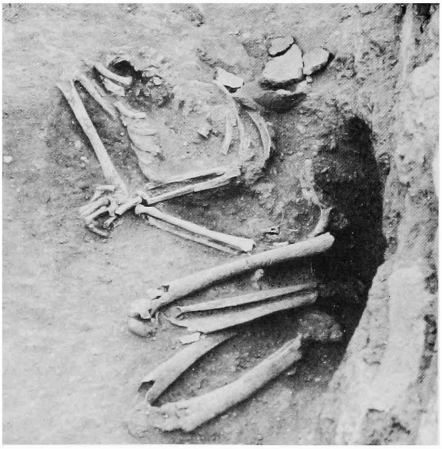
a. H 3, Cist-grave, p. 4.

b. H 25, Inhumation, p. 6.

c. H 22, Inhumation, p. 6.



d. H 22, Inhumation, p. 6.
(Drawing by D. H. Cox.)



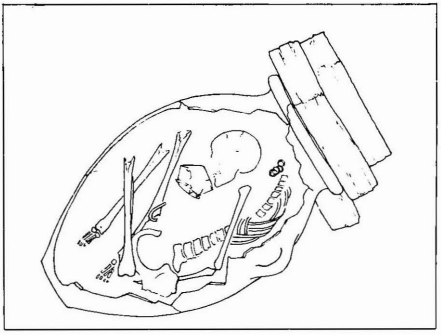
e. H 28, Inhumation, pp. 6-7.

f. H 29, Inhumation, p. 7.

a. H 21, Inhumation, p. 7.

b. H 27, Inhumation, p. 7.

c. H 1, Pithos-burial, p. 8.



d. H 1, Pithos-burial, p. 8.
(Drawing by D. H. Cox.)

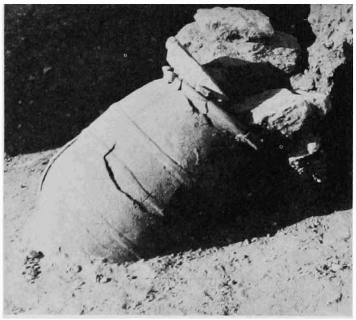
e. H 10, Pithos-burial, p. 9.

f. H 15, Pithos-burial, pp. 9-10.

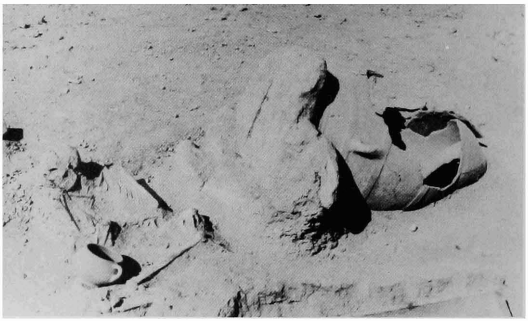
PLATE 9

a. H 34 (right) and H 35 (left) Pithos-burials with mud-brick covering, pp. 10, 14.

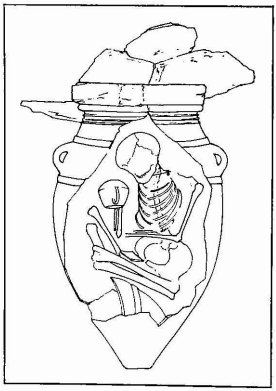
b. H 34 (left) and H 35 (right) Pithos-burials. Mud-brick cover intact on H35, pp. 10, 14.



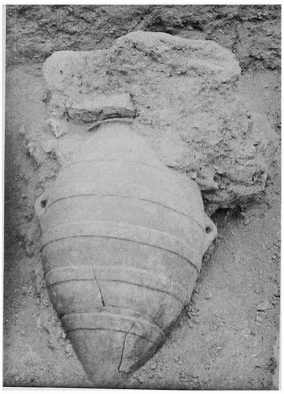
c. H 17, Pithos-burial, p. 11.



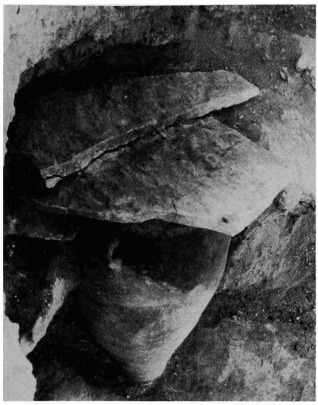
d. H 22, Inhumation, p. 6, H 20, Pithos-burial, p. 12.



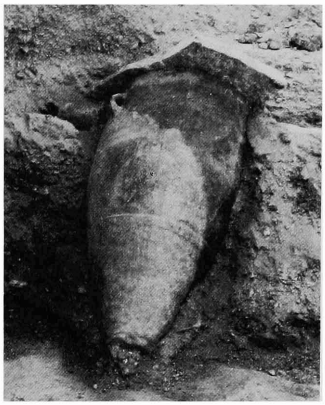
e. H 20, Pithos-burial, p. 12. (Drawing by D. H. Cox.)



f. H 42, Pithos-burial, p. 12.

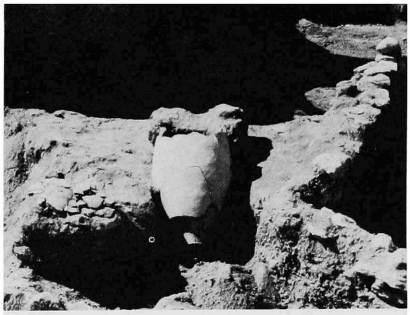


a. H 35, Pithos-burial with cover-slabs, p. 14.



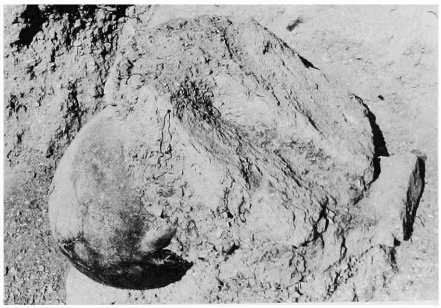
b. H 35, Pithos-burial, view of cover-slabs, p. 14.

c. H 6, Pithos-burial, p. 13.



d. H 39, Pithos-burial, p. 15.

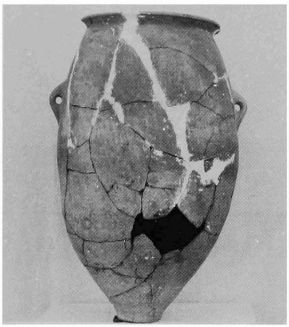
e. H 43, Pithos-burial, p. 15.



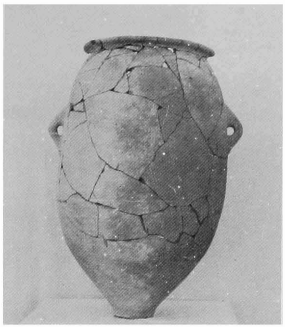
f. H 45, Pithos-burial, p. 16.

PLATE 11. PITHOI

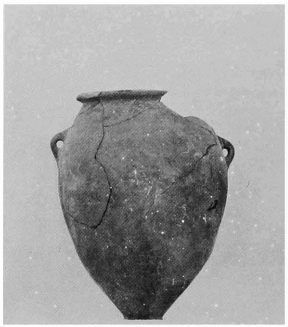
Description	*Cat. No.*	*Bur. No.*	*Page Refs.* *Catalogue, burial, profile.*
a. Brick-red, plain	P 608	H 24	19, 10
b. " " "	P 609	H 16	19, 10, pl. 25a
c. " " "	P 784	H 34	19, 10
d. " " "	P 787	H 15	19, 10
e. " " "	P 788	H 2	19, 9
f. " " "	P 980	H 10	19, 9
g. Ribbed	P 517	H 20	19, 12, pl. 25b
h. "	P 782	H 48	20, 13
i. "	P 783	H 47	20, 13



a.



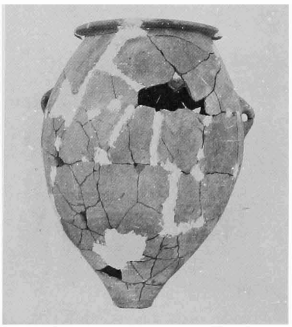
b.



c.

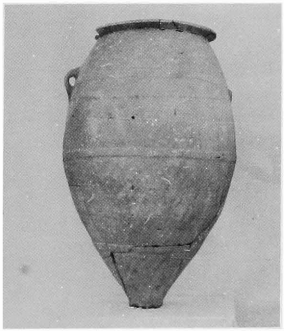
d.

e.

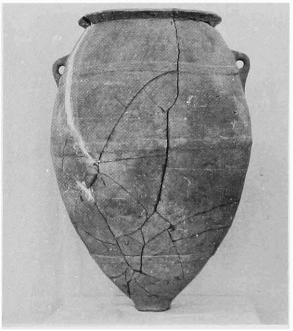


f.

g.



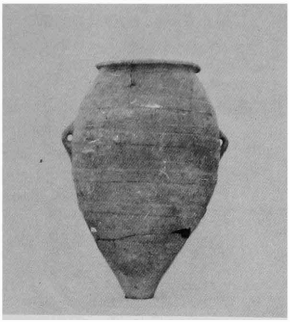
h.



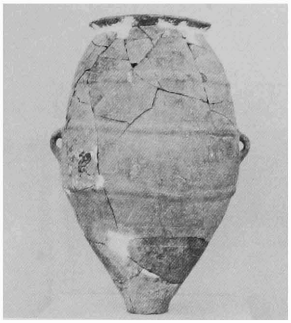
i.

PLATE 12. PITHOI

Description	*Cat. No.*	*Bur. No.*	*Page Refs.* *Catalogue, burial, profile.*
a. Ribbed	P 786	H 42	20, 12
b. "	P 917	H 41	20, 12
c. Large cooking-pot type	P 791	H 35	20, 14
d. " " " "	P 857	H 43	20, 15
e. " " " "	P 858	H 37	21, 14
f. " " " "	P 916	H 6	21, 13
g. Small cooking-pot type	P 646	H 4	21, 16, pl. 25d
h. " " " "	P 688	H 32	21, 16
i. " " " "	P 785	H 45	21, 16

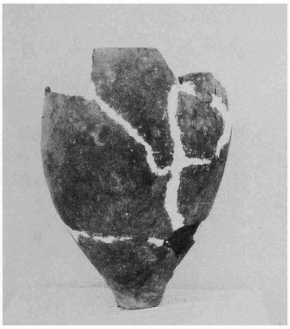


a.

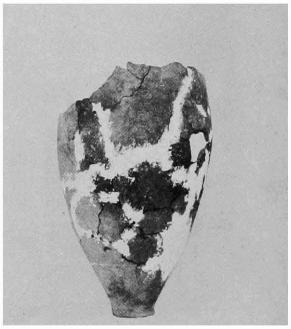


b.

c.



d.



e.

f.

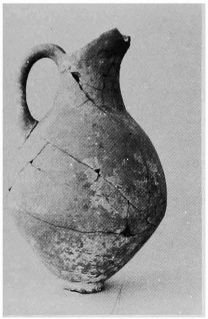
g.

h.

i.

PLATE 13. PITCHERS AND JUGS

Description	*Cat. No.*	*Bur. No.*	*Page Refs.* *Catalogue, burial, profile.*
a. Beaked pitcher on ring-base	P 373	H 29	22, 7, pl. 26e
b. Tall pointed pitcher	P 711	gravel fill	24, 17, pl. 27c
c. Beaked pitcher on ring-base	P 296	gravel fill	22, 17, pl. 26d
d. " " " "	P 262	fill	22, 17, pl. 26b
e. Straight-necked jug with round base	P 319	H 25	23, 6, pl. 27a
f. " " " " " "	P 511	H 25	23, 6, pl. 27b
g. Beaked pitcher on ring-base	P 385	H 27	22, 7
h. " "	P 378	H 31	23, 5, pl. 26c
i. " "	P 366	H 17	23, 11, pl. 26a



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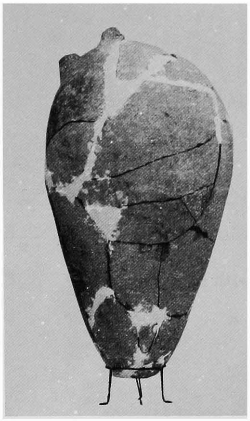
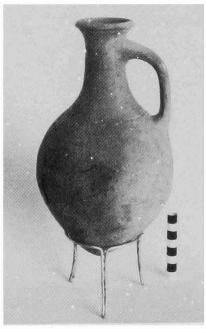


b.

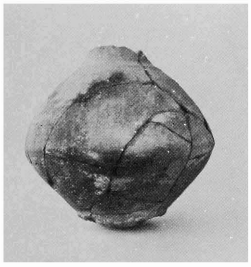
c.

d.



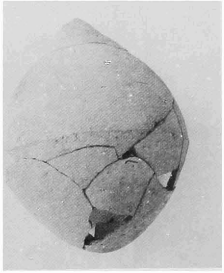
e.

f.



g.

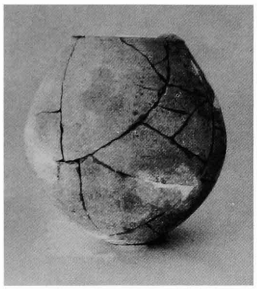
h.



i.

PLATE 14. MISCELLANEOUS JARS AND TEAPOT

Description	*Cat. No.*	*Bur. No.*	*Page Refs.* *Catalogue, burial, profile.*
a. One-handled jar, large, bag-shaped	P 311	H 17	24, 11, pl. 27d
b. " " ", carinated with pointed base	P 268	H 1	24, 8, pl. 28a
c. " " " " " " "	P 326	H 26	25, 6, pl. 28b
d. Small jar with quatrefoil rim	P 346	H 21	25, 7, pl. 28c,d
e. Two-handled jar with strainer-spout	P 368	H 17	25, 11, pl. 28g
f. Teapot	P 298	H 20	26, 12, pl. 28f
g. Two-handled jar, tall, narrow-necked	P 768	H 47	26, 14, pl. 29a
h. " " " " " "	P 768	H 47	26, 14, pl. 29a



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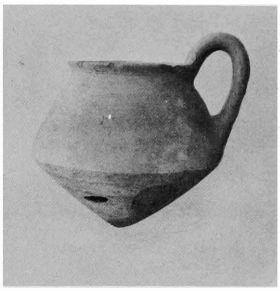
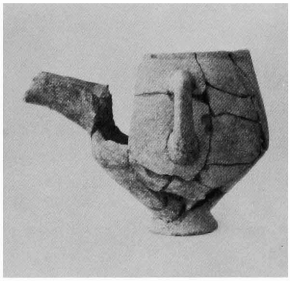
b.



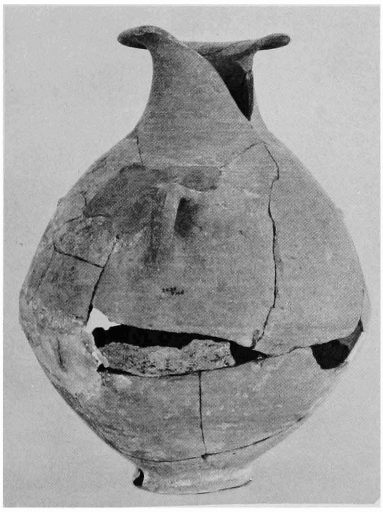
c.

d.

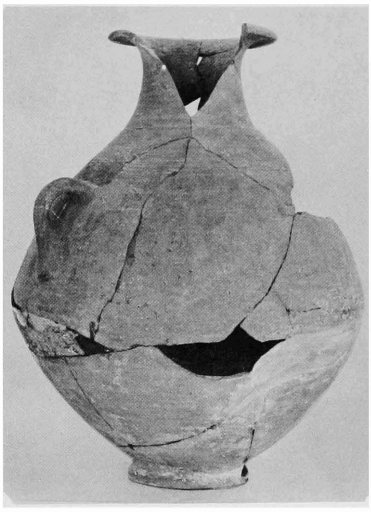


e.

f.



g.



h.

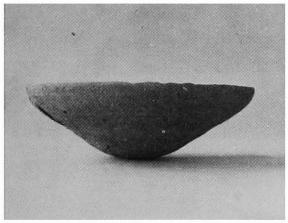
PLATE 15. MISCELLANEOUS BOWLS

Description	*Cat. No.*	*Bur. No.*	*Page Refs.* *Catalogue, burial, profile.*
a. Two-handled krater	P 299	H 22	26, 6
b. Two-handled bowl	P 764	H 44	27, 17, pl. 29b
c. One-handled bowl	P 320	H 17	27, 11, pl. 29c
d. Handleless bowl	P 313	H 16	27, 10, pl. 30a
e. " "	P 322	H 29	27, 7, pl. 30c
f. " "	P 354	H 22	27, 6, pl. 30e
g. " "	P 618	H 6	28, 13, pl. 30g
h. " "	P 621	H 4	28, 16, pl. 30i
i. " "	P 650	H 32	28, 16
j. " "	P 728	H 38	28, 15
k. " "	P 749	H 39	28, 15
l. " "	P 755	H 34	28, 10

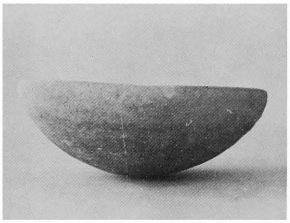
a.

b.

c.



d.



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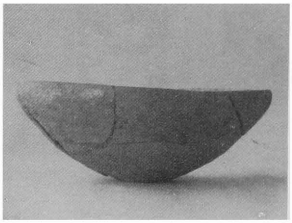
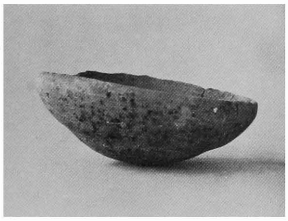


f.



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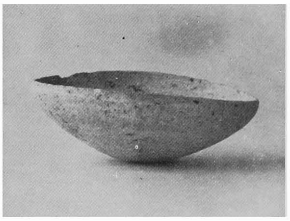
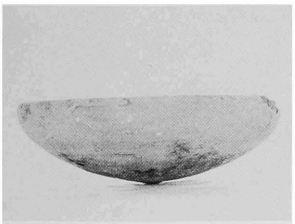


h.

i.



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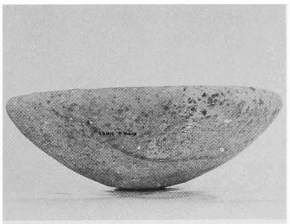
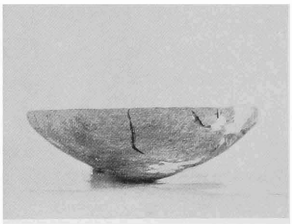


k.

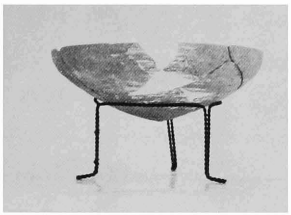


l.

PLATE 16. BOWLS AND HANDMADE JAR

Description	*Cat. No.*	*Bur. No.*	*Page Refs.* *Catalogue, burial, profile.*
a. Handleless bowl	P 989	H 13	28, 11
b. " " with pointed base	P 300	Phrygian stone pile	28, 17, pl. 30b
c. " " " " "	P 301	gravel fill	28, 17, pl. 30d
d. " " " " "	P 637	H 14	28, 9, pl. 30f
e. " " with offset rim	P 638	H 14	29, 9, pl. 30h
f. " " with rolled rim	P 353	H 24	29, 10, pl. 30j
g. " " " " "	P 990	H 13	29, 11
h. Handmade red jar	P 1023	H 28	29, 7

a.



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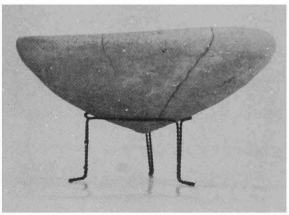

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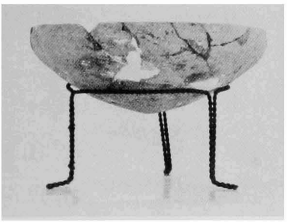
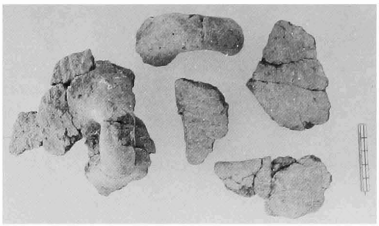


d.

e.

f.

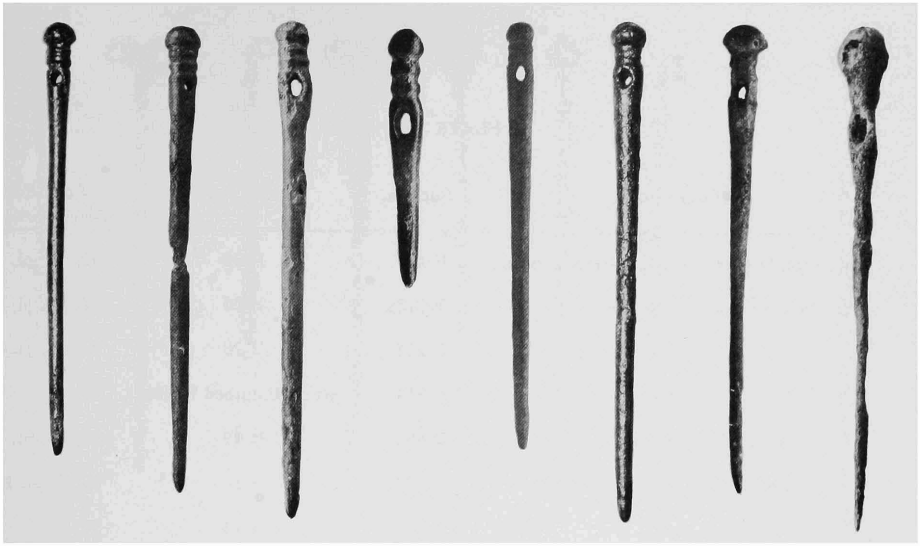
g.



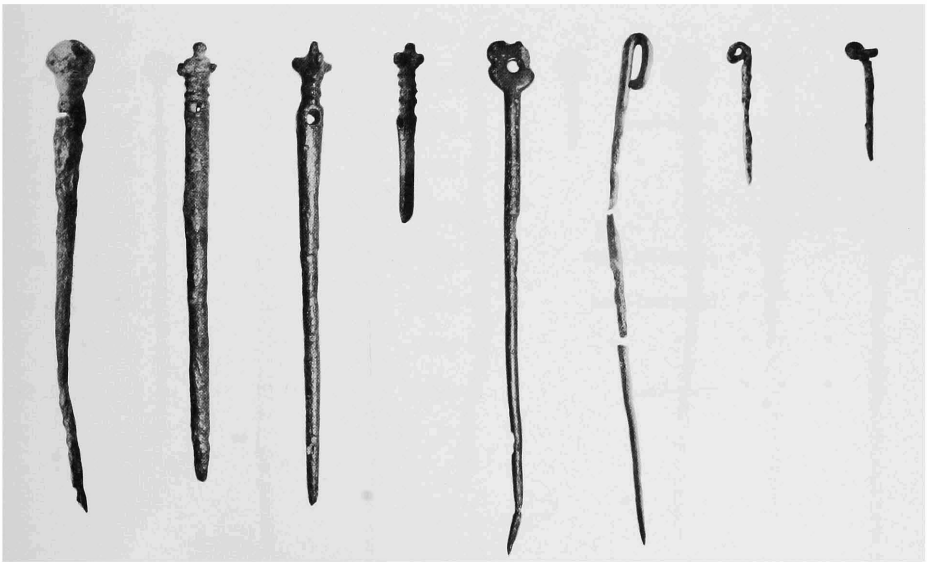
h.

PLATE 17. PINS

	Description	*Cat. No.*	*Bur. No.*	*Page Refs.* *Catalogue, burial, profile,*
a.	Toggle-pin, knob-headed	B 152	H 17	30, 11, pl. 19a
b.	" " " "	B 165a	H 22	30, 6
c.	" " " "	B 166a	H 22	30, 6
d.	" " " "	B 419	H 7	30, 9
e.	" " " "	B 504	H 37	30, 14
f.	" " " "	B 151	H 17	30, 11, pl. 19b
g.	" " " "	B 461	gravel fill	31, 17
h.	" " , large knob-headed	B 163a	H 22	31, 6, pl. 19c
i.	" " " " "	B 163b	H 22	31, 6, pl. 19d
j.	" " " studded knobs	B 153	H 17	31, 11
k.	" " " " "	B 154	H 17	31, 11, pl. 19e
l.	" " " " "	B 289	H 25	31, 6, pl. 19f
m.	" " " flattened loop-head	B 134	H 1	31, 8, pl. 19g
n.	Loop-headed pins, simple bent top	B 215a	H 25	31, 6, pl. 19o
o.	" " " " " "	B 459a	H 36	32, 14, pl. 19i
p.	" " " " " "	B 459b	H 36	32, 14, pl. 19h



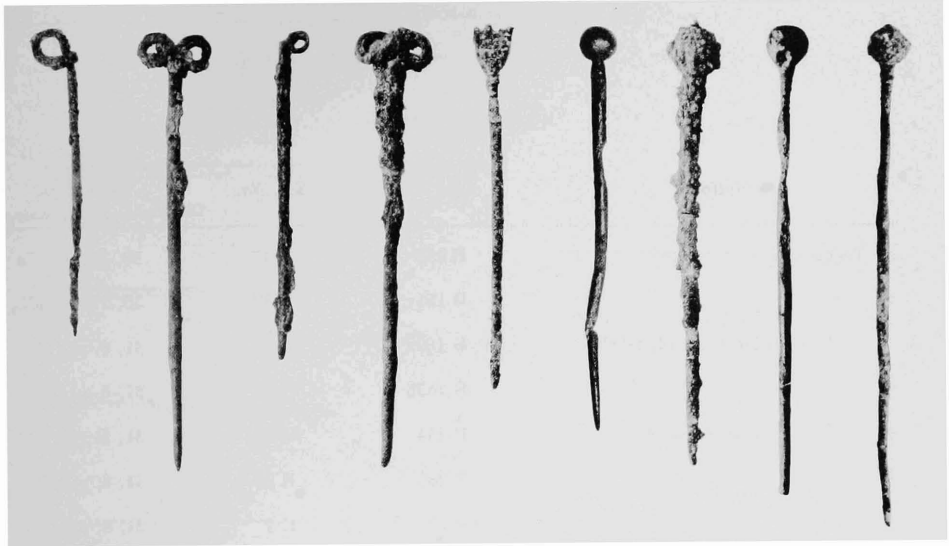
a. b. c. d. e. f. g. h.



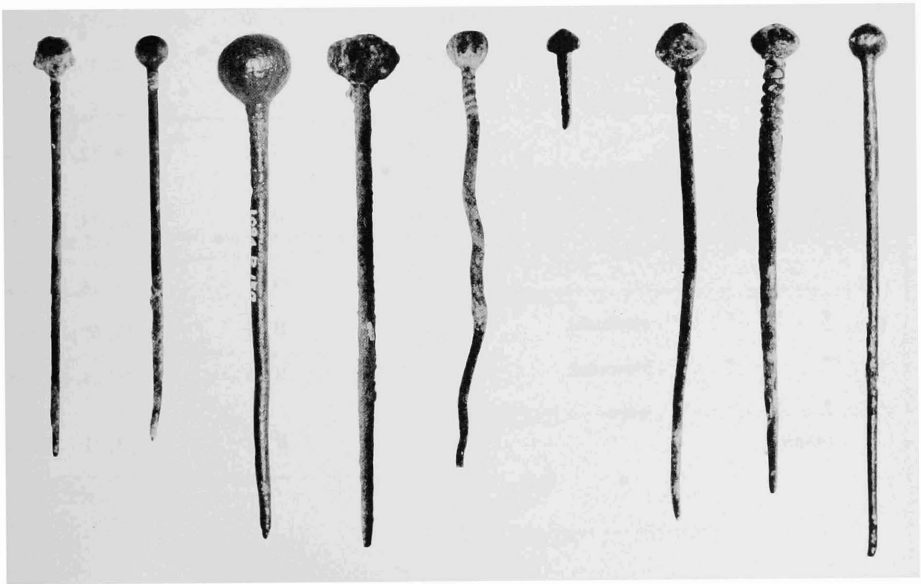
i. j. k. l. m. n. o. p.

PLATE 18. PINS

	Description	*Cat. No.*	*Bur. No.*	*Page Refs.* *Catalogue, burial, profile.*
a.	Loop-headed pin with simple, bent top	B 487	H 36	32, 14, pl. 19h
b.	Double spiral-headed pin	B 213a	H 20	32, 12, pl. 19j
c.	" " " "	B 213b	H 20	32, 12, pl. 19j
d.	" " " "	B 214	pit of disturbed burial	32
e.	Flat-headed, simple pin	B 452	H 43	32, 15, pl. 19k
f.	Simple pin with knob-head, globular	B 133	H 1	32, 8, pl. 19*l*
g.	" " " " " "	B 449	H 40	32, 5
h.	" " " " " "	B 454	H 45	32, 16
i.	" " " " " "	B 465a	H 41	32, 12, pl. 19m
j.	" " " " " "	B 465b	H 41	32, 12
k.	" " " " " "	B 465d	H 41	32, 12
l.	" " " melon-head	B 150	H 17	32, 11
m.	" " " " "	B 327	H 4	32, 16
n.	" " " " "	B 451	H 35	32, 14
o.	" " " pyramidal head	B 215b	H 25	33, 6, pl. 19o
p.	" " " biconical-head	B 460a	H 36	33, 14, pl. 19p
q.	" " " " "	B 460b	H 36	33, 14
r.	" " " mace-head	B 155	H 17	33, 11, pl. 19g



a. b. c. d. e. f. g. h. i.



j. k. l. m. n. o. p. q. r.

PLATE 19. PINS

Description	*Cat. No.*	*Bur. No.*	*Page Refs.* *Catalogue, burial, photograph.*
a. Toggle-pin, knob-headed	B 152	H 17	30, 11, pl. 17a
b. " " " "	B 151	H 17	30, 11, pl. 17f
c. " ", large knob-headed	B 163a	H 22	31, 6, pl. 17h
d. " " " " "	B 163b	H 22	31, 6, pl. 17i
e. " ", studded knob	B 154	H 17	31, 11, pl. 17k
f. " " " "	B 289	H 25	31, 6, pl. 17*l*
g. " ", flattened loop-head	B 134	H 1	31, 8, pl. 17m
h. Loop-headed with simple bent top	B 487	H 36	32, 14, pl. 18a
i. " " " " " "	B 459	H 36	32, 14, pl. 18p
j. Double spiral-headed	B 213	H 20	32, 12, pl. 18c
k. Flat-headed, simple	B 452	H 43	32, 15, pl. 18e
l. Simple with knob-head, globular	B 133	H 1	32, 8, pl. 18f
m. " " " " "	B 465	H 41	32, 12, pl. 18i-k
n. " " " ", melon-shaped	B 451	H 35	32, 14, pl. 18n
o. " " " " " "	B 327	H 4	32, 16, pl. 18m
p. " " " ", pyramidal	B 215	H 25	33, 6, pl. 18o
q. " " " ", biconical	B 460b	H 36	33, 14, pl. 18q
r. " " " ", mace-shaped	B 155	H 17	33, 11

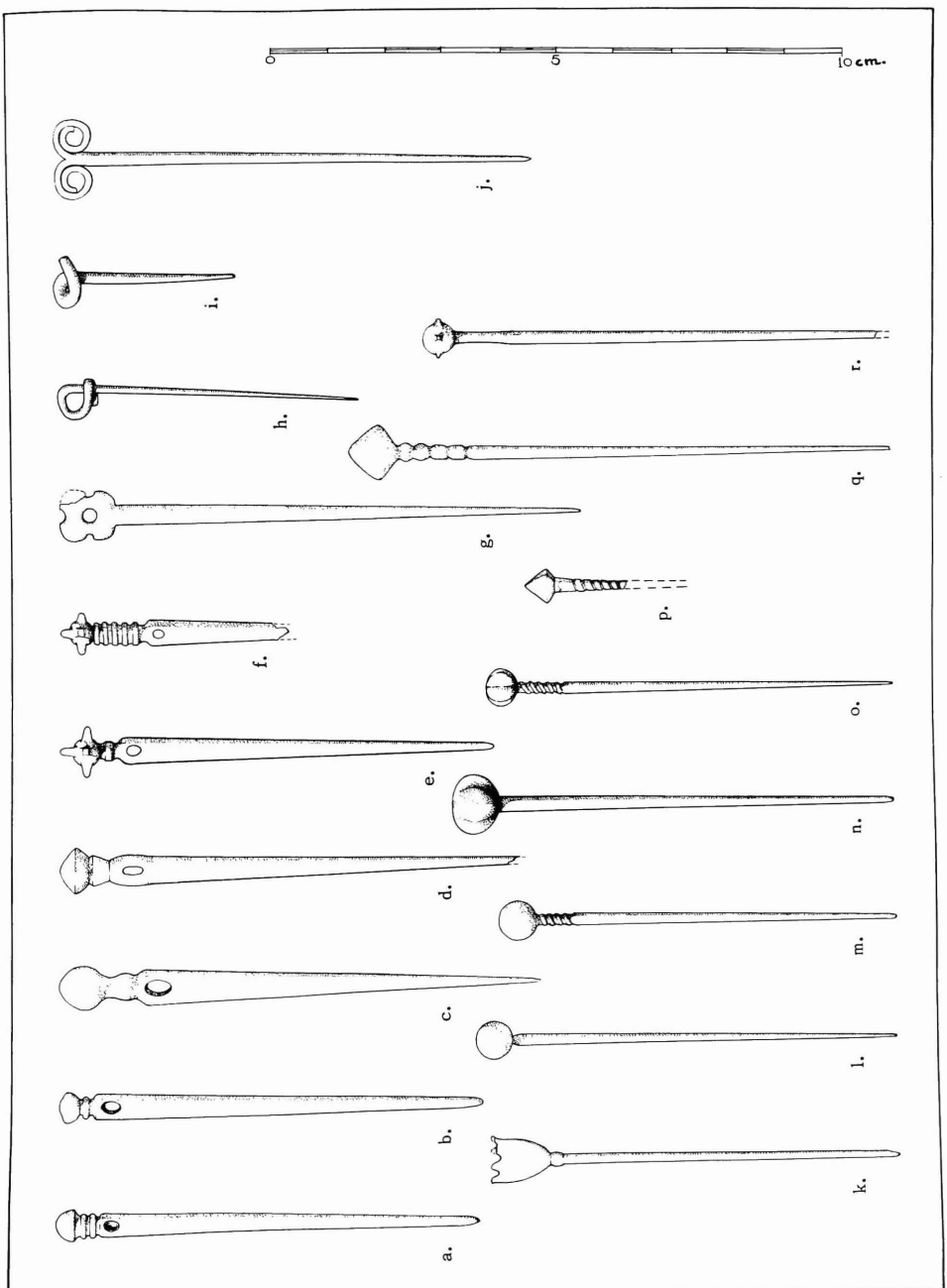
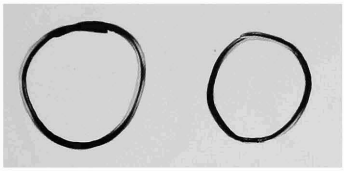
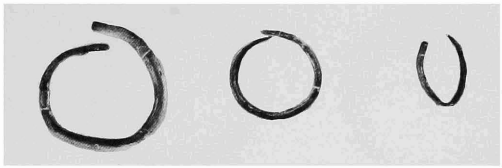

0
5
10 cm.
a.
b.
c.
d.
e.
f.
g.
h.
i.
j.
k.
l.
m.
n.
o.
p.
q.
r.

PLATE 20. RINGS

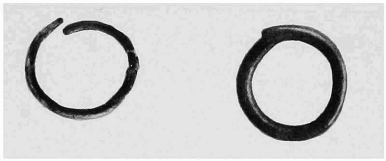
Description	*Cat. No.*	*Bur. No.*	*Page Refs.* *Catalogue, burial.*
a. Gold earring	J 50	H 22	35, 6
b. " "	J 52	H 17	35, 11
c. Silver ring	ILS 44	H 17	35, 11
d. " "	ILS 44	H 17	35, 11
e. " "	ILS 44	H 17	35, 11
f. " "	ILS 50	H 22	35, 6
g. " "	ILS 111	H 4	35, 16
h. Lead ring	ILS 17	H 1	35, 8
i. " "	ILS 45	H 20	35, 12
j. " "	ILS 45	H 20	35, 12
k. " "	ILS 49	H 12	36, 9
l. " "	ILS 49	H 12	36, 9
m. " "	ILS 163	H 36	36, 14
n. Copper ring	B 423	H 27	36, 7
o. " "	B 432	H 38	36, 15
p. " "	B 450	H 42	36, 12



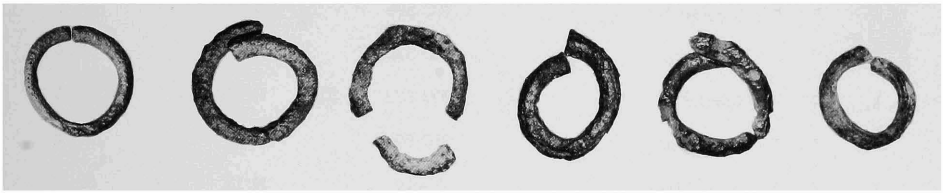
a. b.



c. d. e.



f. g.



h. i. j. k. l. m.

n. o. p.

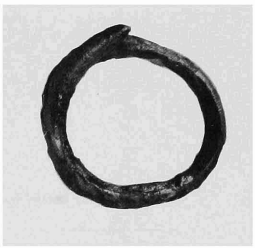
PLATE 21. JEWELRY

Description	*Cat. No.*	*Bur. No.*	*Page Refs. Catalogue, burial.*
a. Copper bracelet	B 149	H 17	37, 11
b. " "	B 169	H 22	37, 6
c. " "	B 415	H 4	37, 16
d. " "	B 416	H 4	37, 16
e. Paste bead, lobed, melon-shaped	MC 57a	H 23	39, 6
f. " " , biconical	MC 57b	H 23	38, 6
g. " " , spherical	MC 57c	H 23	38, 6
h. " " , tubular	MC 57d	H 23	38, 6
i. " " , segmental	MC 57e	H 23	37, 6
j. " " , cylindrical	G 45a	H 17	38, 11
k. " " , segmental	G 45b	H 17	37, 11
l. " " "	G 45c	H 17	37, 11
m. " " "	G 45d	H 17	37, 11
n. " " , tubular	MC 59	H 25	38, 6
o. " " , spherical	MC 55	H 22	38, 6
p. " " "	MC 94a	H 11	39, 11
q. " " "	MC 94b	H 11	39, 11
r. " " "	MC 94c	H 11	39, 11
s. " " "	MC 94d	H 11	39, 11
t. " " "	G 43	H 22	39, 6
u. Metal bead	B 329	H 4	39, 16
v. Stone bead	St 82	H 22	40, 6
w. Shell bead	BI 119	H 24	40, 10

a.

b.

c.

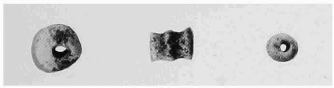


d.

e. f.

j.

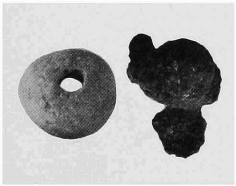
n.



g. h. i.

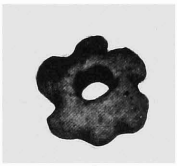
k. l. m.

o.



p. q.

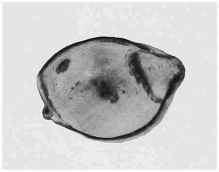
r. s.



t.

u.

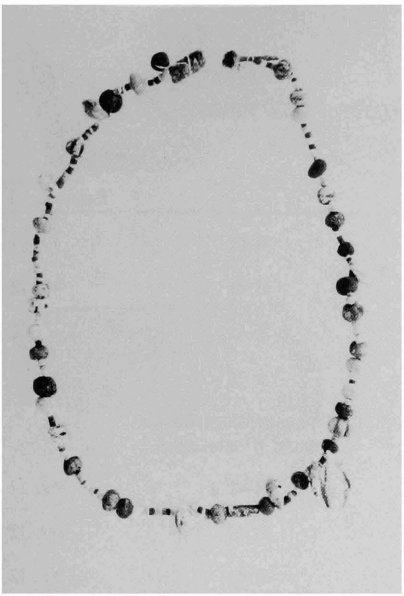
v.



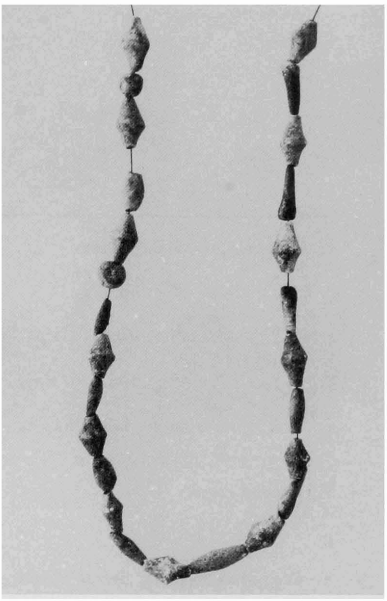
w.

PLATE 22. JEWELRY

Description	*Cat. No.*	*Bur. No.*	*Page Refs.* *Catalogue, burial.*
a. Necklace of mixed beads	J 69	H 4	37, 16
b. Necklace of paste beads	G 118	H 41	38, 12
c. Shell Necklace	BI 103	H 23	40, 6



a.

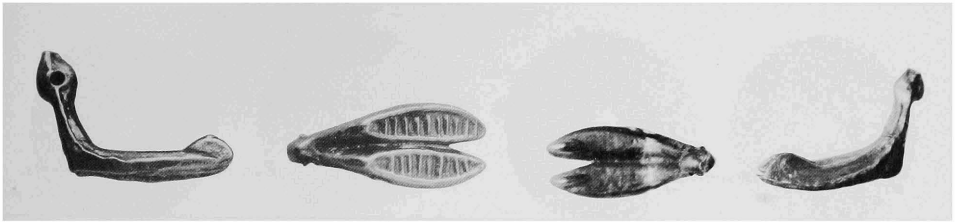


b.

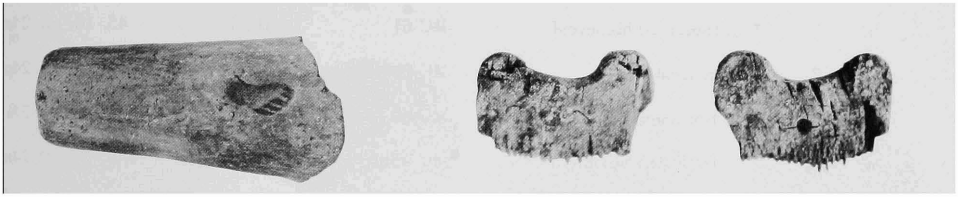
c.

PLATE 23. MISCELLANEOUS SMALL FINDS

Description	*Cat. No.*	*Bur. No.*	*Page Refs. Catalogue, burial.*
a. Copper shoe-bead, profile	ILS 150	H 41	40, 12
b. " " " , bottom	ILS 150	H 41	40, 12
c. " " " , top	ILS 150	H 41	40, 12
d. " " " , 3-qtr. view	ILS 150	H 41	40, 12
e. Seal impression on pithos handle	SS 117	City Mound, North Central Trench, Hittite level	41
f. Wooden comb	BI 181	H 41	42, 12
g. " "	BI 181	H 41	42, 12
h. Copper medallions, before cleaning	B 463	H 41	41, 12
i. " "	B 463a	H 41	41, 12
j. " "	B 463b	H 41	41, 12
k. Copper stamp-seal, profile	B 464	H 41	42, 12
l. " " " , view of stamp	B 464	H 41	42, 12
m. Faïence stamp-seal, profile	SS 70	H 4	42, 16
n. " " " , seal face	SS 70	H 4	42, 16

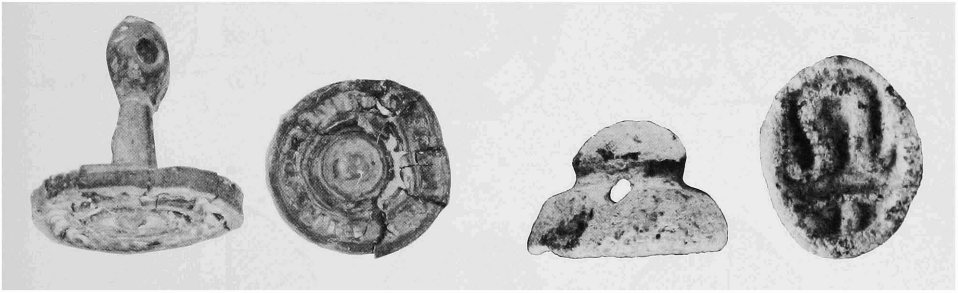


a. b. c. d.



e. f. g.

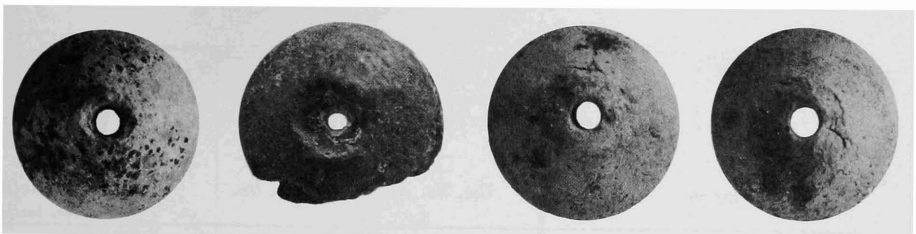
h. i. j.



k. l. m. n.

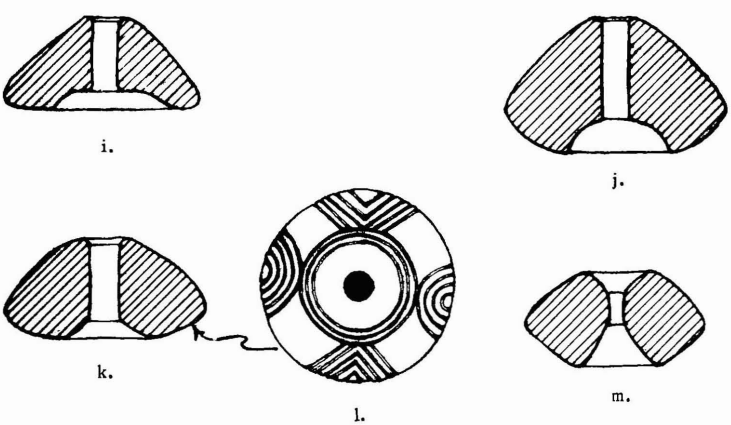
PLATE 24. SPINDLE WHORLS

	Description	*Cat. No.*	*Bur. No.*	*Page Refs.* *Catalogue, burial, profile.*
a.	Spindle whorl, conical	MC 58	H 18	43, 12, pl. 24j
b.	" " , truncated biconical	MC 61	H 24	43, 10, pl. 24m
c.	" " , conical	MC 84	H 37	43, 14, pl. 24p
d.	" " , flattened conical	MC 86	H 36	43, 14, pl. 24i
e.	" " , truncated biconical	MC 95a	H 13	43, 11, pl. 24n
f.	" " " "	MC 95b	H 13	43, 11, pl. 24k,l
g.	" " " "	MC 95a	H 13	43, 11, pl. 24n
h.	" " " "	MC 95b	H 13	43, 11, pl. 24k,l
				Catalogue, burial, photo.
i.	Spindle whorl, flattened conical	MC 86	H 36	43, 14, pl. 24d
j.	" " , conical	MC 58	H 18	43, 12, pl. 24a
k.	" " , truncated conical	MC 95b	H 13	43, 11, pl. 24f
l.	" " " "	MC 95b	H 13	43, 11, pl. 24f
m.	" " " "	MC 61	H 24	43, 10, pl. 24b
n.	" " , biconical	MC 95b	H 13	43, 11, pl. 24e
o.	" " , stone	not cat.	H 30	43, 7
p.	" " , conical	MC 84	H 37	43, 14, pl. 24c



a. b. c. d.

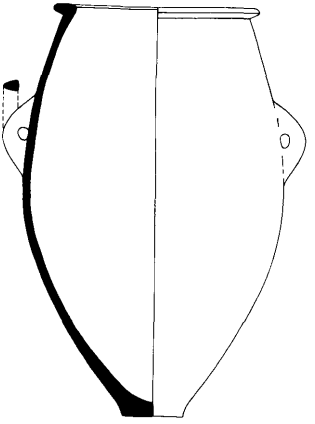
e. f. g. h.



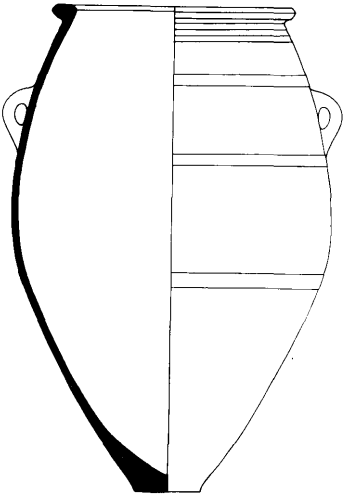
i. j. k. l. m. n. o. p.

PLATE 25. PROFILES OF PITHOI

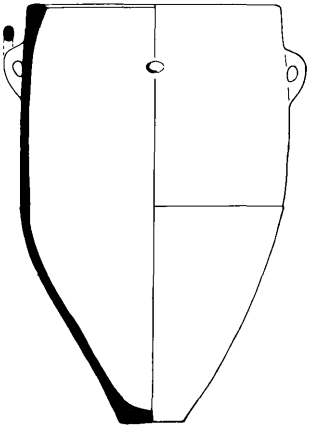
Description	*Cat. No.*	*Bur. No.*	*Page Refs.* *Catalogue, burial, photo.*
a. Brick-red, plain	P 609	H 16	19, 10, pl. 11b
b. Ribbed	P 517	H 20	19, 12, pl. 11g
c. Large cooking-pot type	P 714	H 38	20, 14-15
d. Small cooking-pot type	P 646	H 4	21, 15, pl. 12g



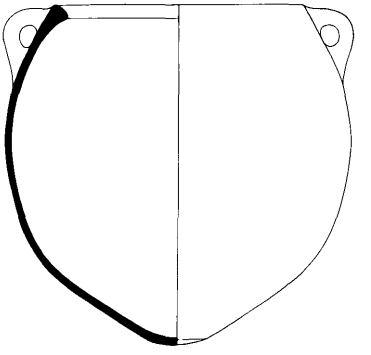
a.



b.



c.

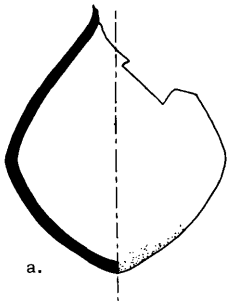


d.

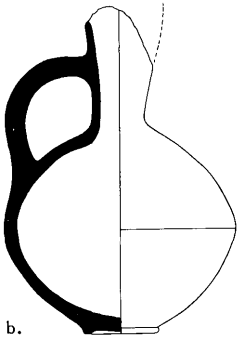
Scale. a,b,c 1:15; d 1:8.

PLATE 26. PROFILES OF PITCHERS

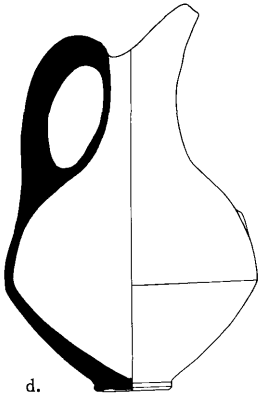
Description	*Cat. No.*	*Bur. No.*	*Page Refs.* *Catalogue, burial, photo.*
a. Beaked pitcher	P 366	H 17	23, 11, pl. 13i
b. " " on ring-base	P 262	fill	22, 17, pl. 13d
c. " "	P 378	H 31	23, 5, pl. 13h
d. " " on ring-base	P 296	gravel fill	22, 17, pl. 13c
e. " " " " "	P 373	H 29	22, 7, pl. 13a



a.



b.



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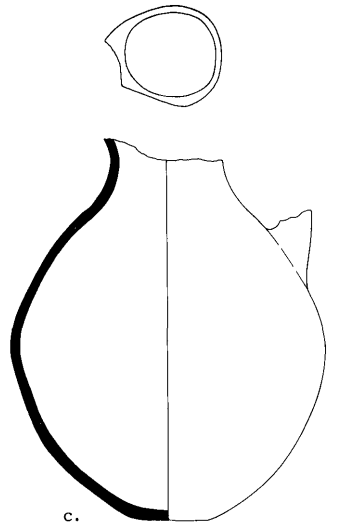

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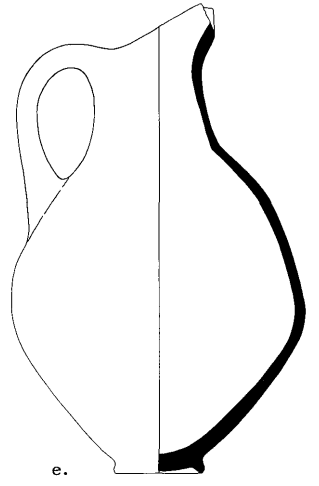
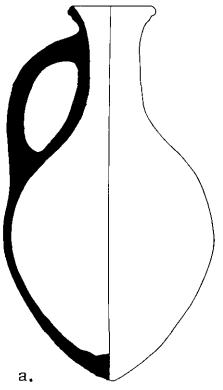


e.

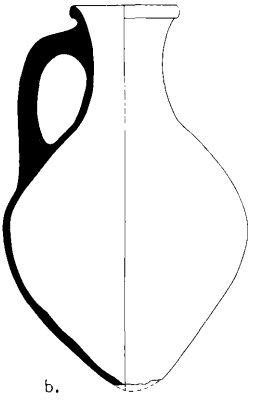
Scale. 1:4.

PLATE 27. PROFILES OF PITCHERS (a-c) AND JAR (d)

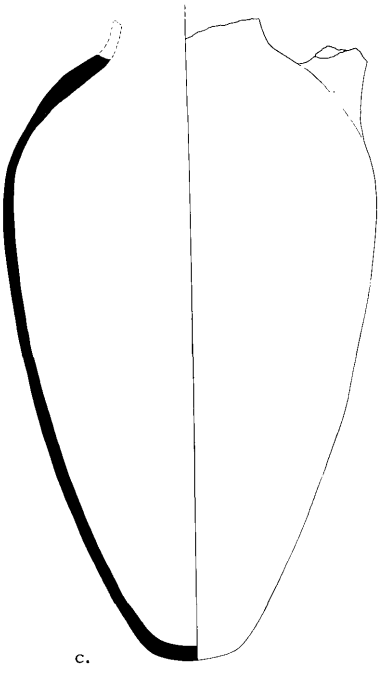
Description	*Cat. No.*	*Bur. No.*	*Page Refs.* *Catalogue, burial, photo.*
a. Straight-necked jug with round base	P 319	H 25	23, 6, pl. 13e
b. " " " " " "	P 511	H 25	33, 6, pl. 13f
c. Tall pointed pitcher	P 711	gravel fill	24, 17, pl. 13b
d. One-handled jar, large, bag-shaped	P 311	H 17	24, 11, pl. 14a



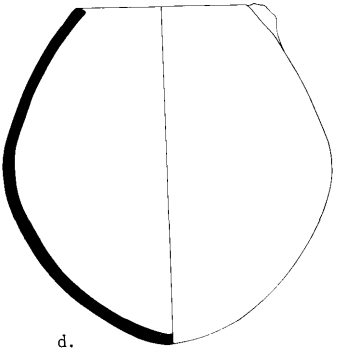
a.



b.



c.

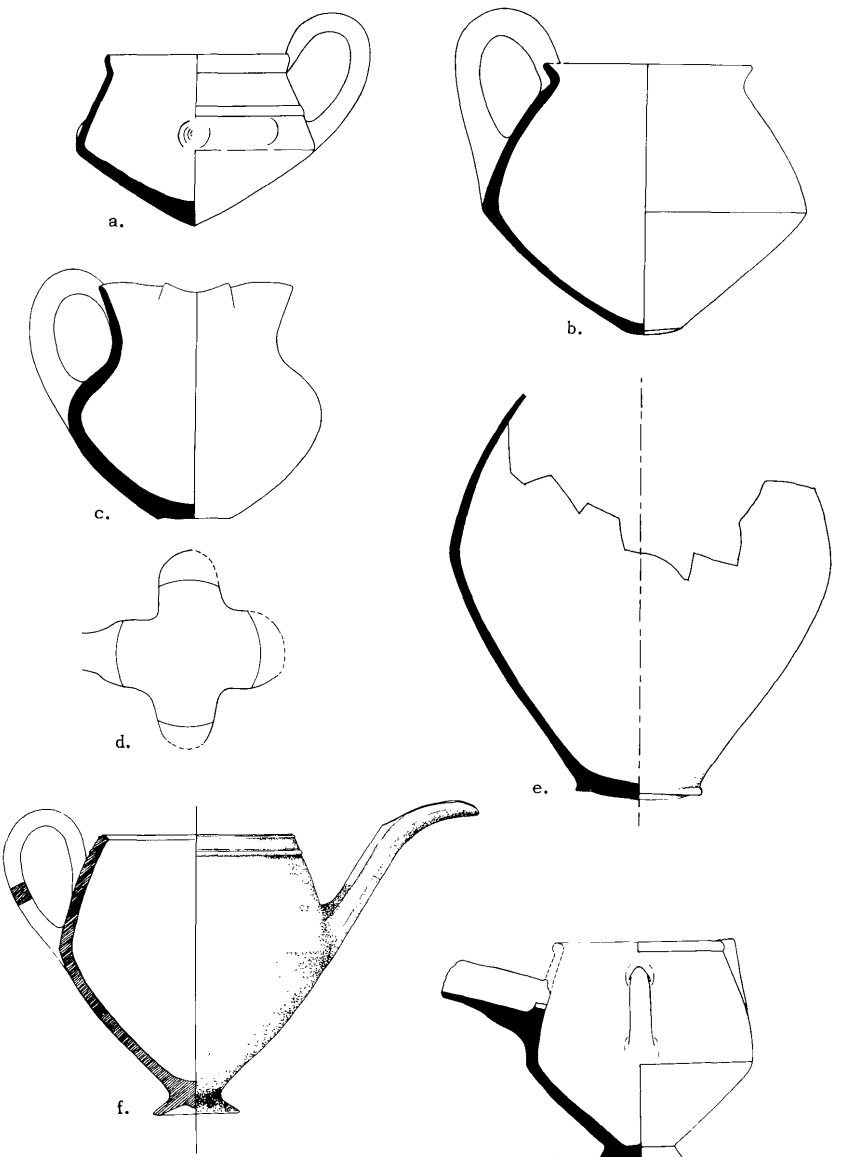


d.

Scale. 1:4.

PLATE 28. PROFILES OF MISCELLANEOUS POTTERY

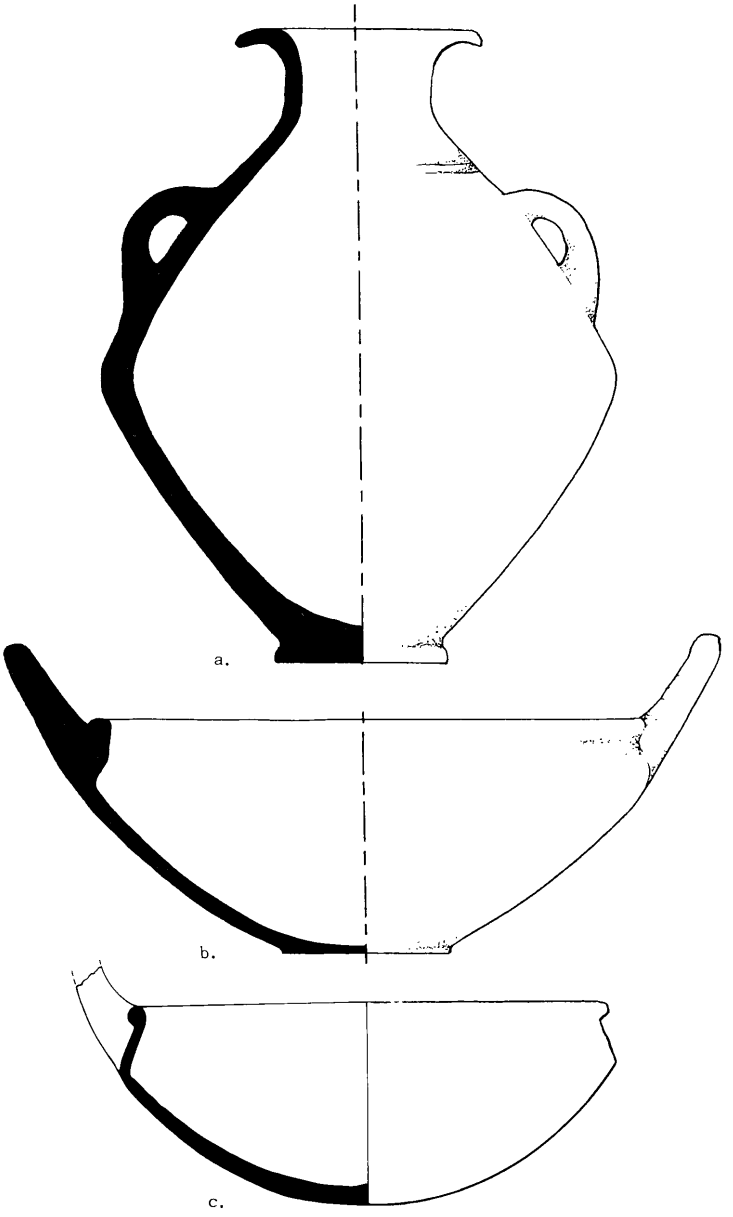
Description	*Cat. No.*	*Bur. No.*	*Page Refs.* *Catalogue, burial, photo.*
a. One-handled carinated jar with pointed base	P 268	H 1	24, 8, pl. 14b
b. " " " " " " "	P 326	H 26	25, 6, pl. 14c
c. Small jar with quatrefoil rim	P 346	H 21	25, 7, pl. 14d
d. " " " " " , rim	P 346	H 21	25, 7, pl. 14d
e. Pitcher or jar on ring-base	P 1139	H 44 (lost)	24, 17
f. Teapot	P 298	H 20	26, 12, pl. 14f
g. Two-handled jar with strainer spout	P 368	H 17	25, 11, pl. 14e



Scale. a-d,f,g 1:3; e 1:4.

PLATE 29. PROFILES OF JAR AND BOWLS

Description	*Cat. No.*	*Bur. No.*	*Page Refs.* *Catalogue, burial, photo.*
a. Two-handled jar, tall, narrow-necked	P 768	H 47	26, 14, pl. 14g,h
b. Two-handled bowl	P 764	H 44	27, 17, pl. 15b
c. One-handled bowl	P 320	H 17	27, 11, pl. 15c

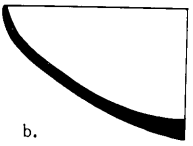


Scale. a,c 1:4; b 1:2.

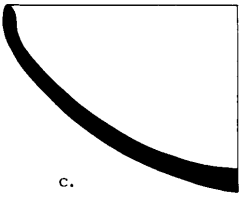
PLATE 30. PROFILES OF PLAIN BOWLS

	Description	*Cat. No.*	*Bur. No.*	*Page Refs.* *Catalogue, burial, photo.*
a.	Handleless bowl	P 313	H 16	27, 10, pl. 15d
b.	" " with pointed base	P 300	Phrygian stone pile	28, 17, pl. 16b
c.	" "	P 322	H 29	27, 7, pl. 15e
d.	" " with pointed base	P 301	gravel fill	28, 17, pl. 16c
e.	" "	P 354	H 22	27, 6, pl. 15f
f.	" " with pointed base	P 637	H 14	28, 9, pl. 16d
g.	" "	P 618	H 6	28, 13, pl. 15g
h.	" " with offset rim	P 638	H 14	29, 9, pl. 16e
i.	" "	P 621	H 4	28, 16, pl. 15h
j.	" " with rolled rim	P 353	H 24	29, 10, pl. 16f

a.



b.



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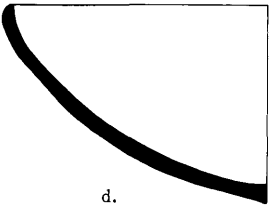
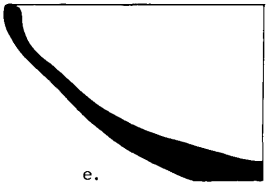
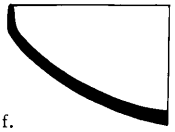


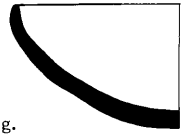
d.



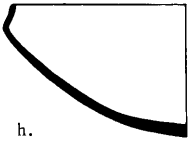
e.



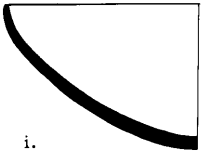
f.



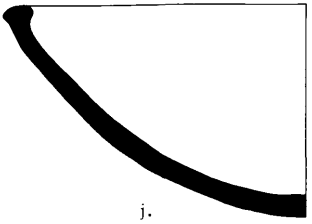
g.



h.



i.



j.

Scale. 1:4.