

KUM TEPE IN THE TROAD

TRIAL EXCAVATION, 1934

(PLATES 69-81)

TO THE MEMORY OF CARL W. BLEGEN

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Abbreviations used for books: *Beycesultan I* = S. Lloyd and J. Mellaart, *Beycesultan, I, The Chalcolithic and Early Bronze Age Levels*, London, 1962; *Emergence* = C. Renfrew, *The Emergence of Civilization, The Cyclades and the Aegean in the Third Millennium B.C.*, London, 1972; *Poliochni I* = L. Bernabò-Brea, *Poliochni, I, Città preistorica nell'Isola di Lemnos*, Rome, 1964; *Saliagos* = J. D. Evans and C. Renfrew, *Excavations at Saliagos near Antiparos*, Oxford, 1968; *Troy* = C. W. Blegen *et al.*, *Troy I-IV*, Princeton, 1950-1958.

Other abbreviations: Schl. Coll. = Schliemann Collection (see footnote 8). D. = diameter, H. = height, L. = length, Th. = thickness; est. = estimated, pres. = preserved. The abbreviation m. = meter is ordinarily omitted in giving dimensions of objects in the catalogues.

INTRODUCTION

KUM TEPE is a small mound at the western limit of the Trojan plain, about five kilometers north-northwest of Troy and two kilometers from the Hellespont (Figs. 1, 2, Pl. 69, a). The mound is about 7 or 8 m. high, and has a nearly flat top, less than 100 m. long from north to south. It owes its contour and elevation to a stratified accumulation of remains of ancient habitation upon what seems originally to have been only a low rocky knoll. The western arm of the Scamander River lies 50 m. to the east. The nearest landmark, called Baba Fingo on some maps, is a small rocky hill 200 m. to the south.

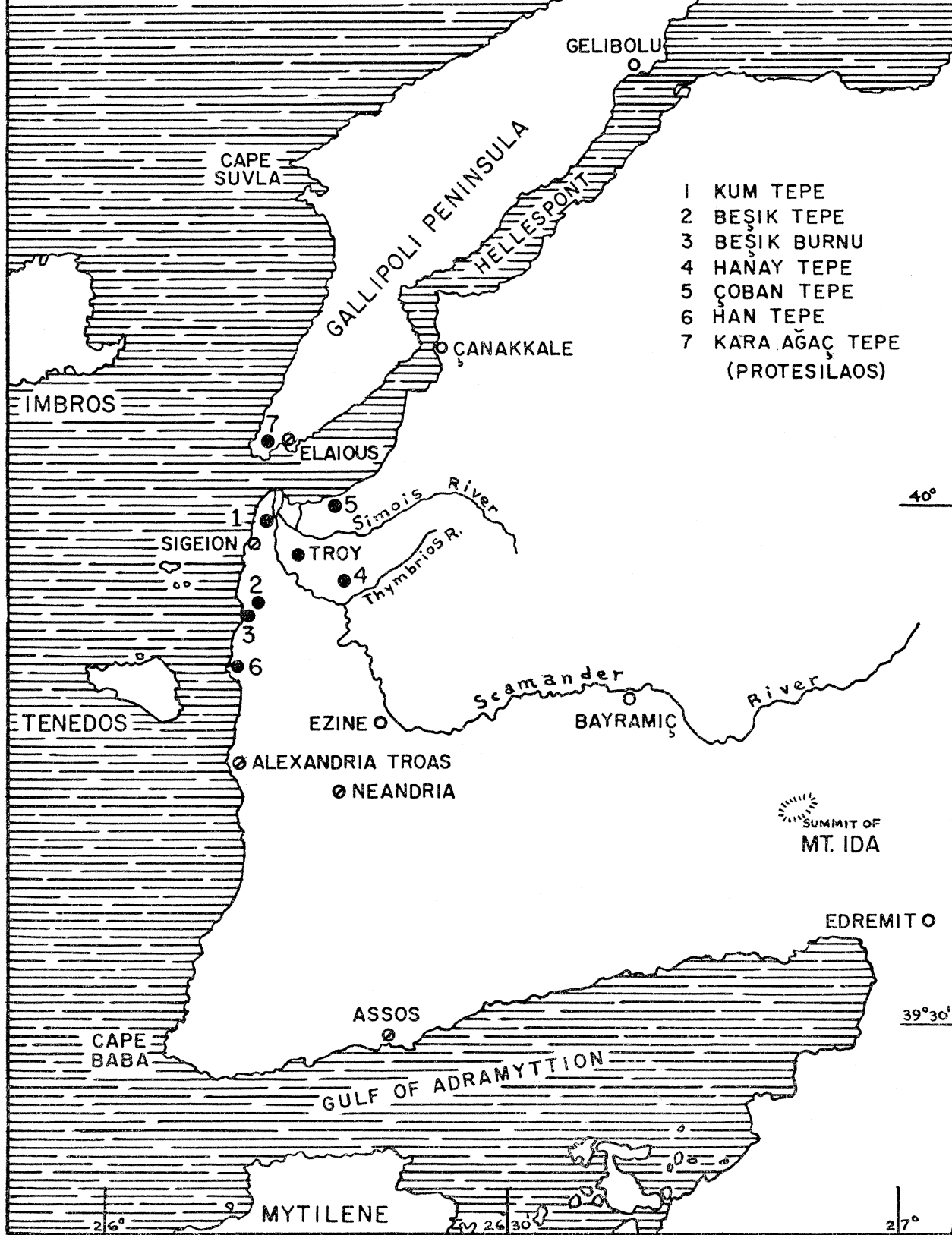
There is no mention of Kum Tepe before March 1934, when members of the archaeological expedition of the University of Cincinnati,¹ attracted by the characteristic contour of the mound, closely examined the surface and discovered potsherds similar to those of Early Troy I.

The late C. W. Blegen, field director of the Cincinnati expedition, immediately proposed a project of trial excavation,² in collaboration with the Turkish Archaeological Service, and the

¹ J. L. Caskey and J. W. Sperling, during a series of exploratory walks in the Trojan plain.

² The project also included brief soundings at Ballı Dağ, Eski Hışarlık, and Kara Tepe, sites of later times, not relevant to the present report.

Hesperia, 45, 4



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SCALE 1 : 600,000

FIG. 1. Map of the Troad.

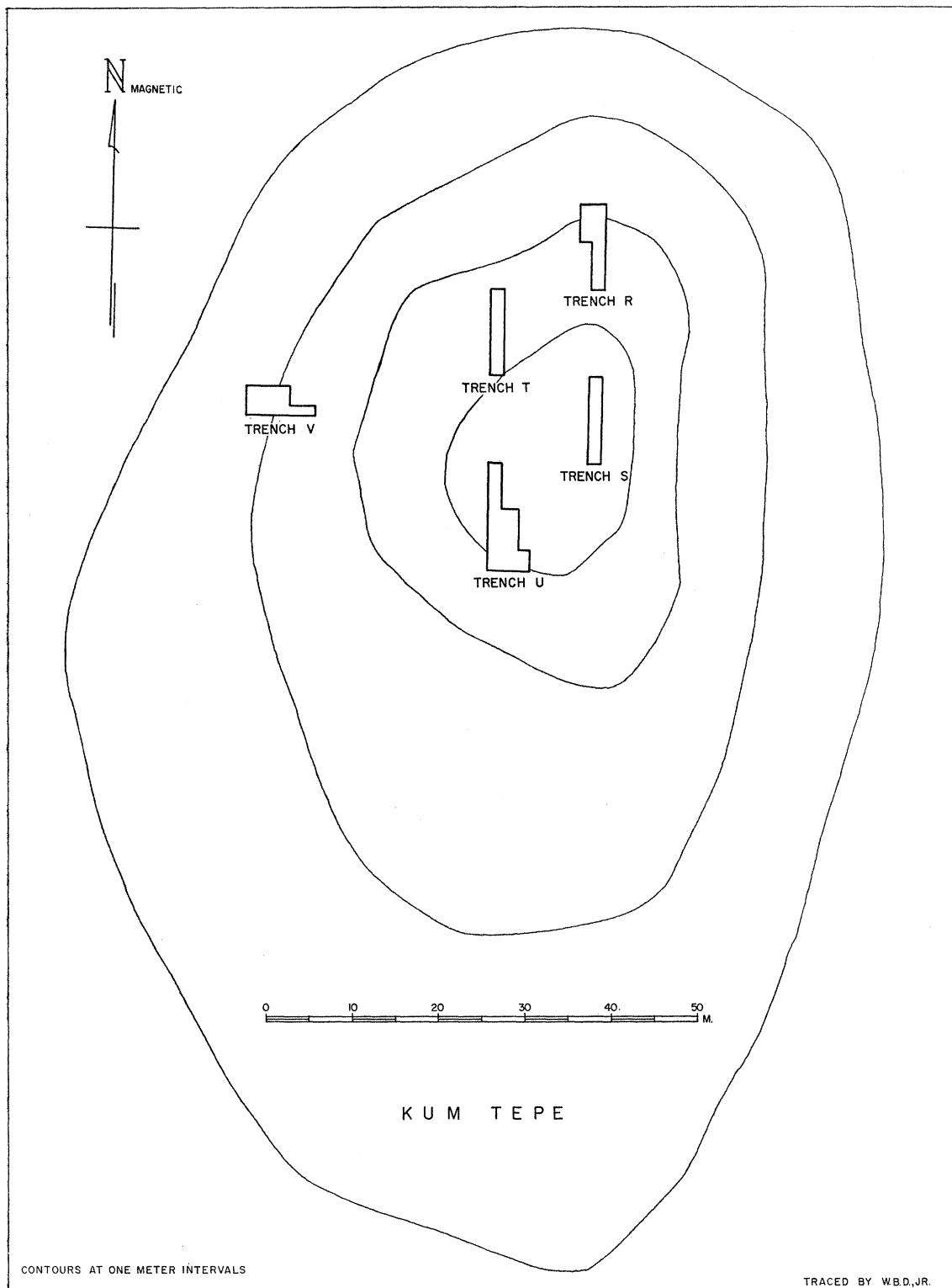


FIG. 2. Contour plan of the site, showing location of trenches.

necessary special permit was granted by the Turkish Ministry of Education. To support the project, an allotment was made from funds generously provided for the expedition by the late Professor and Mrs. W. T. Semple.

The excavation at Kum Tepe was carried out in a period of 10 days in May 1934. Dr. Hâmit Z. Koşay, Director of the Turkish Archaeological Service, graciously shared with me the supervision of the field work. To gain a representative cross section of the mound, four trial trenches were dug in the central and northern sector, and a fifth was opened on the northwest slope (Fig. 3). Dr. Koşay's area included Trenches T, U, and V, and mine consisted of R and S. We were ably assisted by a force of 10 experienced diggers selected from the roster at Troy. For the most part, the digging was done in layers averaging 0.10 m. in depth, with due attention to the inclination of the ancient strata. For convenience at the time of excavation, sectional drawings of the stratification (Figs. 4-7, showing Trenches R-U) were made diagrammatic. Measurements of depth in each trench were taken from the level of the modern surface alongside; the depths are expressed in numbers (representing meters) prefixed by a minus sign. The remains of buildings, partially uncovered at various levels, were left in place for possible future excavation.³ The pottery and other finds were temporarily retained at Troy for inventory and study, and subsequently delivered to the Archaeological Museum at Istanbul. Meanwhile Dr. Koşay arranged the publication of a preliminary report.⁴

The present report, long delayed by unforeseen circumstances, was drafted in January-February 1964 at Cincinnati under a Louise Semple research grant, and completed in 1975-1976 at the American School of Classical Studies at Athens. The report begins with a stratigraphical account of Kum Tepe I. The three subperiods, IA, IB, and IC, are divided into a total of eight phases (IA1-IA2, IB1-IB4, IC1-IC2) on the basis of the stratification in Trench R, where the whole series of layers was tested. For each phase, the description of the strata and any architectural remains is followed by a catalogue of objects found, with occasional comments on chronology and external relations. The section entitled Discussion, concluding the account of Kum Tepe I, is intended as a selective summary of the life of this settlement, with broader comments on chronology and external relations. The final section is a short account of Kum Tepe II, proportionate to the amount of material found. To facilitate use of the text along with the illustrations, the objects are numbered in boldface type and described in serial order. For each phase of Kum Tepe I, there is a separate series of numbers, beginning with **101** for Phase IA1, **201** for IA2, **301** for IB1, etc. For Kum Tepe II, the opening number is **901**.

My debt to the late Professor Blegen for guidance at Kum Tepe and Troy is immeasurable. I wish also to acknowledge most gratefully Dr. Koşay's thoughtfulness and friendly cooperation. To all my colleagues of the Troy expedition, I would express hearty thanks, especially to Marion Rawson for much help and many suggestions regarding illustrations and the initial draft, to John L. Caskey for constant encouragement and helpful advice towards the completion of the present report, and to Lewey T. Lands for sketches and charcoal drawings. I am very grateful to William B. Dinsmoor, Jr. of the Agora Excavations for his fine contribution of topographical plans and stratification drawings, to Sarah H. Rutter for her able rendering of pottery forms, to Dr. Nils-Gustaf Gejvall for the identification of shells and animal bones, and to Dr. Nezih Fıratlı of the Archaeological Museum at Istanbul for his many acts of kindness in facilitating my review of the material.

³ Further excavation was to be carried out in 1935, and the project was renewed in 1945, but on both occasions unforeseen circumstances interfered.

⁴ H. Koşay and J. Sperling, *Troad-da Dört Yerleşme Yeri*, Devlet Basimevi, Istanbul, 1936.

KUM TEPE I

The life of the settlement we call Kum Tepe I has been traced through a stratified series of deposits reaching an elevation of nearly five meters above the native rock. In two trenches, T and V, remains of a late stage of the settlement lay just below the modern grassy surface of the mound; in the other three trenches, there was only a thin stratum of Kum Tepe II above the uppermost layers of Period I. The remains of the closing stages of Kum Tepe I are typologically indistinguishable from those of the initial phases of Troy I; at that time the two sites clearly enjoyed a common culture. Four of the Kum Tepe trenches were excavated deeply enough to reveal antecedent stages of this culture. In Trench R, the layers antedating the time of Troy I had a total thickness of more than three meters.

The stratigraphical series in the deepest sounding (Trench R), as has been mentioned in the Introduction, is the basis for the division of Period I at Kum Tepe into three subperiods, which are subdivided in turn into a total of eight phases, IA1-IA2, IB1-IB4, and IC1-IC2. As a rule, each phase is represented by a principal layer of habitation deposits, sometimes but not always accompanied by architectural remains within the limits of the soundings, and often covered by layers of debris seemingly marking the end of a phase. A general parallelism to the stratification in Trench R was observed at the levels tested in other trenches, but absolute contemporaneity of any particular layer in one trench with a layer in another can ordinarily not be expected, and should not be postulated without further excavation. In the descriptive sections that follow, the finds in Trench R for most phases of Kum Tepe I have therefore been treated separately from those in the other trenches.

SUBPERIOD IA

Strata of this subperiod were tested in an area of five square meters in Trench R (Figs. 3, 4), where they had a maximum total thickness of 1.10 m. and represented two successive phases of occupation. The deposits at the lowest levels reached in Trench U (Figs. 3, 7) were roughly contemporaneous with those of the second phase in Trench R.

PHASE IA1

TRENCH R

The dark and well-defined stratum of this phase in Trench R (Fig. 4), comprising the earliest habitation deposits found during the trial excavation, rested upon the yellowish clayey surface of the native limestone. The rock in this area slopes down to the north. In the deepest part of the trench, the deposits of this phase lay between -5.00 and -4.60. They contained a great deal of carbonized

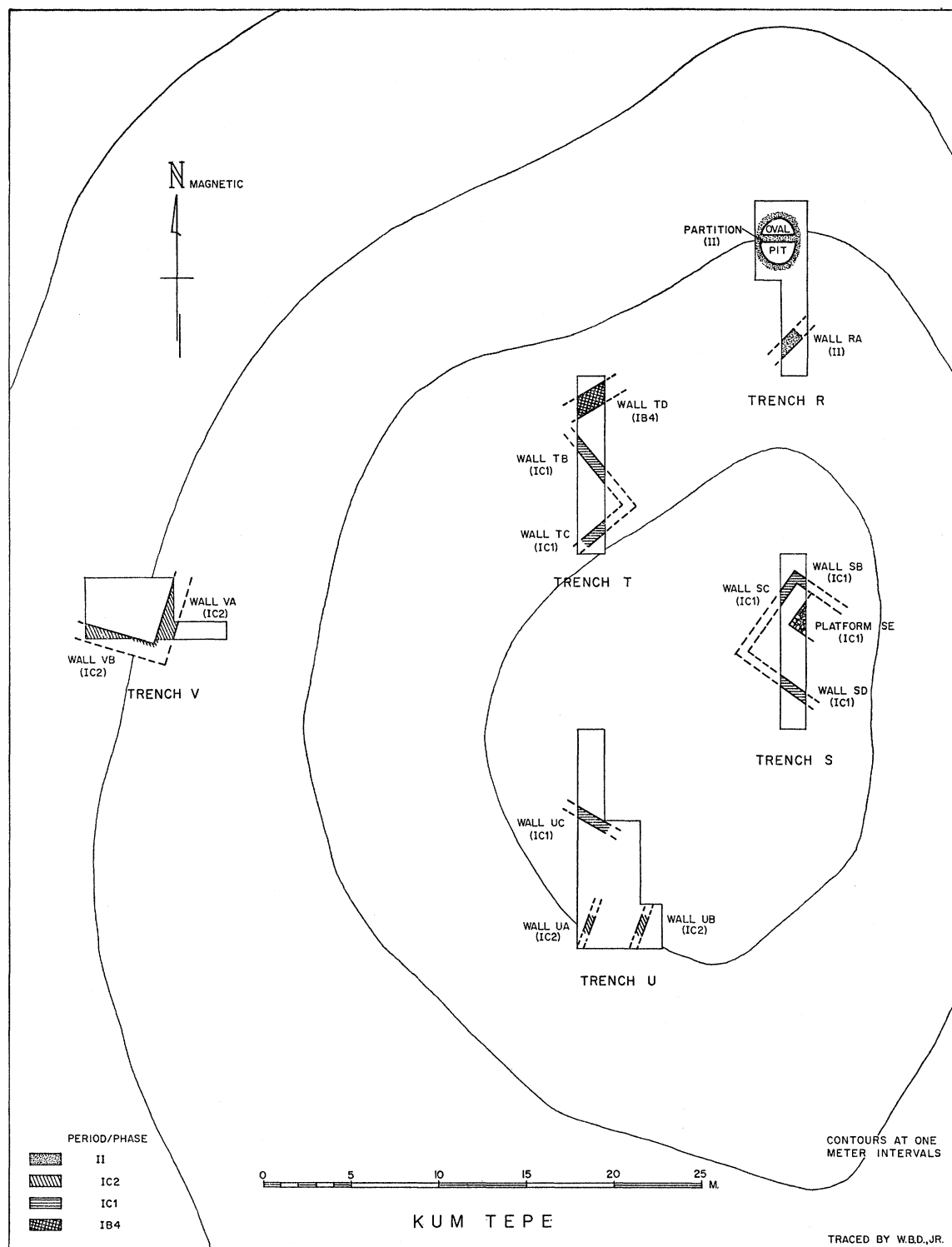


FIG. 3. Plan of the site, showing some remains of construction.

matter, many potsherds, numerous shells, a few animal bones,⁵ and scattered small lumps of yellow clay such as may have come from the facing of a wall. No corresponding masonry was found within the narrow sounding. The area may have been just outside a dwelling.

The skeletons of two women,⁶ in separate burials a little less than one meter apart, were found below -4.70. The graves were evidently shallow. A continuation of deposits of the kind described in the foregoing paragraph lay only a few centimeters above each skeleton.

Burial R1, Fig. 4 and Pl. 69, e. Skeleton of a woman buried in contracted position in a shallow oval pit cut in the rock. Dimensions of pit: L. (north-south) 0.80 m., W. 0.60 m., Depth 0.16 m. The skeleton lay turned slightly to the right, the head resting against the southeast edge of the rock cutting. Under the chin was a fragmentary marble cup (139), obviously intended as a burial gift.

Burial R2, Fig. 4 and Pl. 69, e. Skeleton of a woman buried in contracted position in earth about 0.10 m. above bedrock, less than one meter northeast of Burial R1. The skeleton lay turned slightly to the right, and the pelvis rested on a flat stone. Several of the bones lying uppermost had been disturbed in antiquity; a piece of one femur lay more than one meter away.

At a slightly lower level and a little behind the skeleton of Burial R2, but not necessarily belonging to the burial, was a yellow chert implement (140), possibly a relic of Upper Palaeolithic times; a few small shapeless fragments of the same kind of stone were found close to bedrock elsewhere in the trench, suggesting that a flaking industry had once used this area.

POTTERY

More than six hundred sherds were recovered from the stratum of Phase IA1. There was no indication that any pottery was directly associated with the burials described above.

The pottery is handmade. Pieces of coarse fabric outnumber the fine approximately 3 to 1. There is considerable variety in the quality of the clay, the surfacing, and the effects of firing. The most common shape in all wares in Phase IA1 is that of plain-rimmed bowls.

FINE BURNISHED WARE

The pottery of fine fabric is virtually all in this category. Even at the very beginning of the settlement, certain characteristics of the fine burnished ("polished") ware of Early Troy I (Troy I, pp. 51-53) and the corresponding late phases of Kum Tepe I are already present, but a few differences must be noted. So, for example, there are in Phase IA1 numerous instances of the use of fine vegetable fibers, possibly chaff or chopped straw, in addition to grit for tem-

⁵ The shells and animal bones of both phases of Subperiod IA are described under Phase IA2, Trench R.

⁶ For the anthropological data on skeletons (four) found at Kum Tepe, see J. L. Angel, *Troy Supplementary Monograph 1, The Human Remains*, Princeton, 1951, pp. 5-6; S. A. Kansu, *Belleten* 1, 1937, pp. 557-582, figs. 1-23; and M. S. Şenyürek, *Ankara üniversitesi Dil ve tarih-coğrafya Fakültesi Dergisi* 7, 1949, pp. 395-304, figs. 1-5.

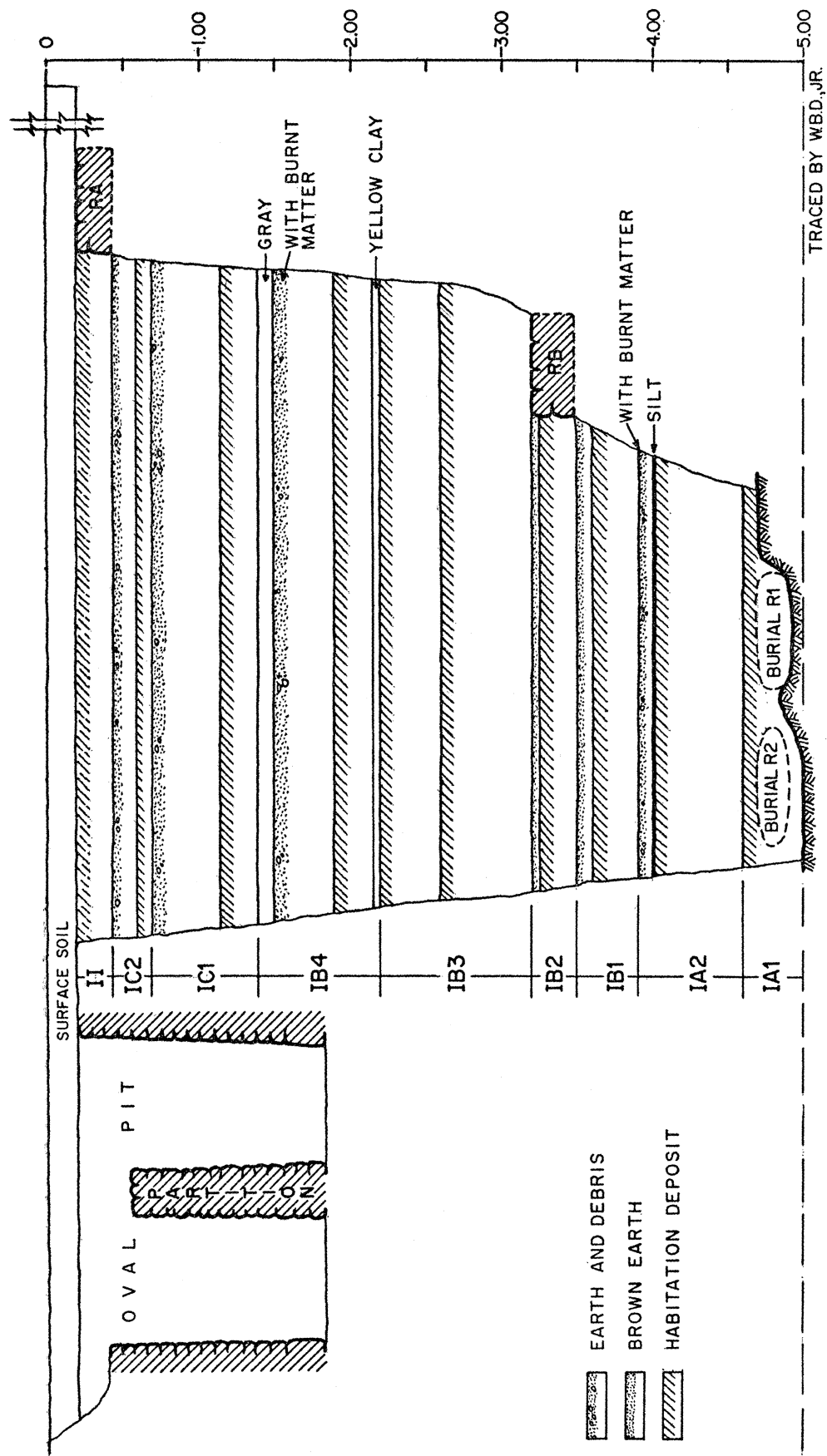


FIG. 4. Diagrammatic north-south section of Trench R.

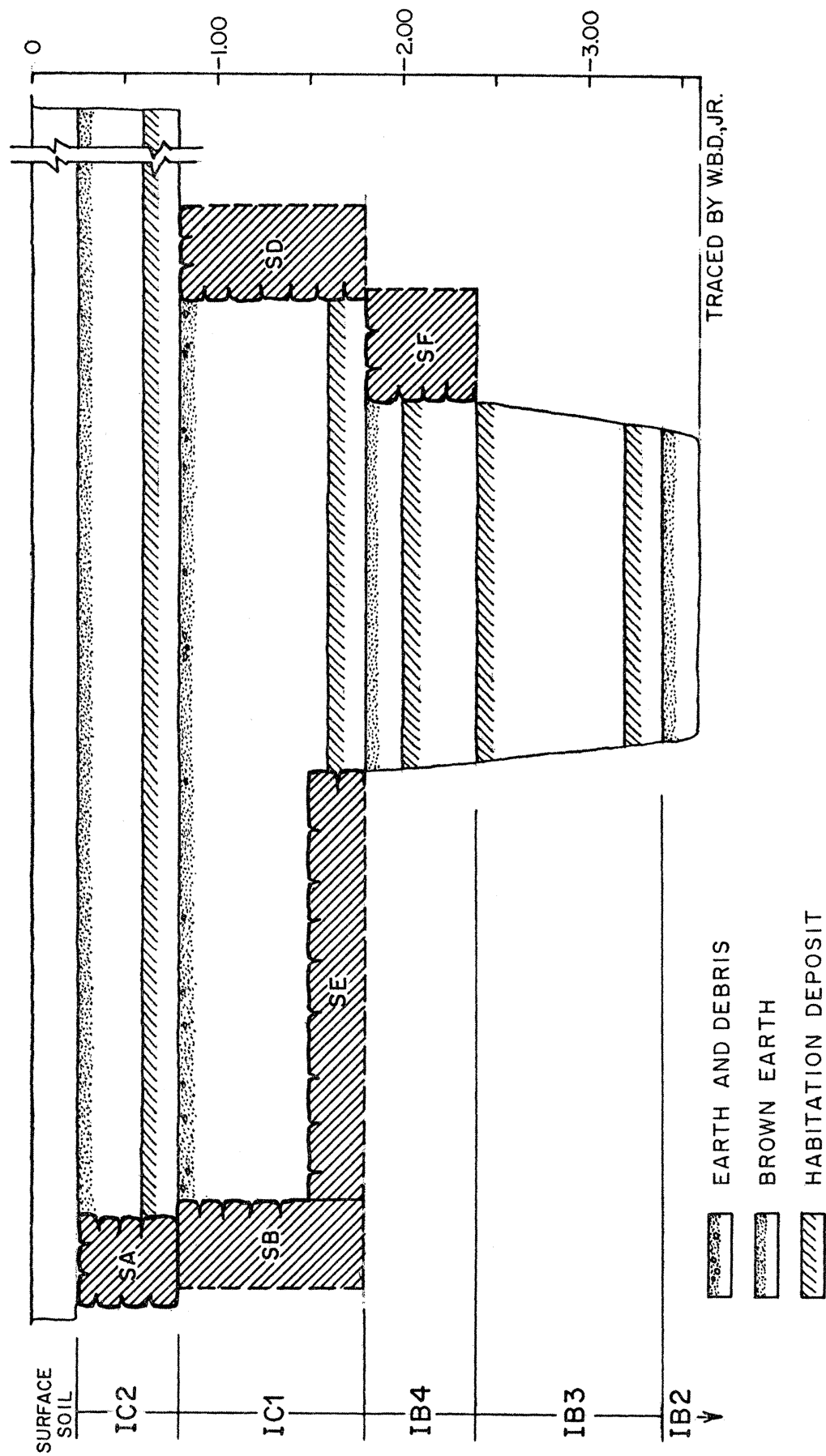


FIG. 5. Diagrammatic north-south section of Trench S.

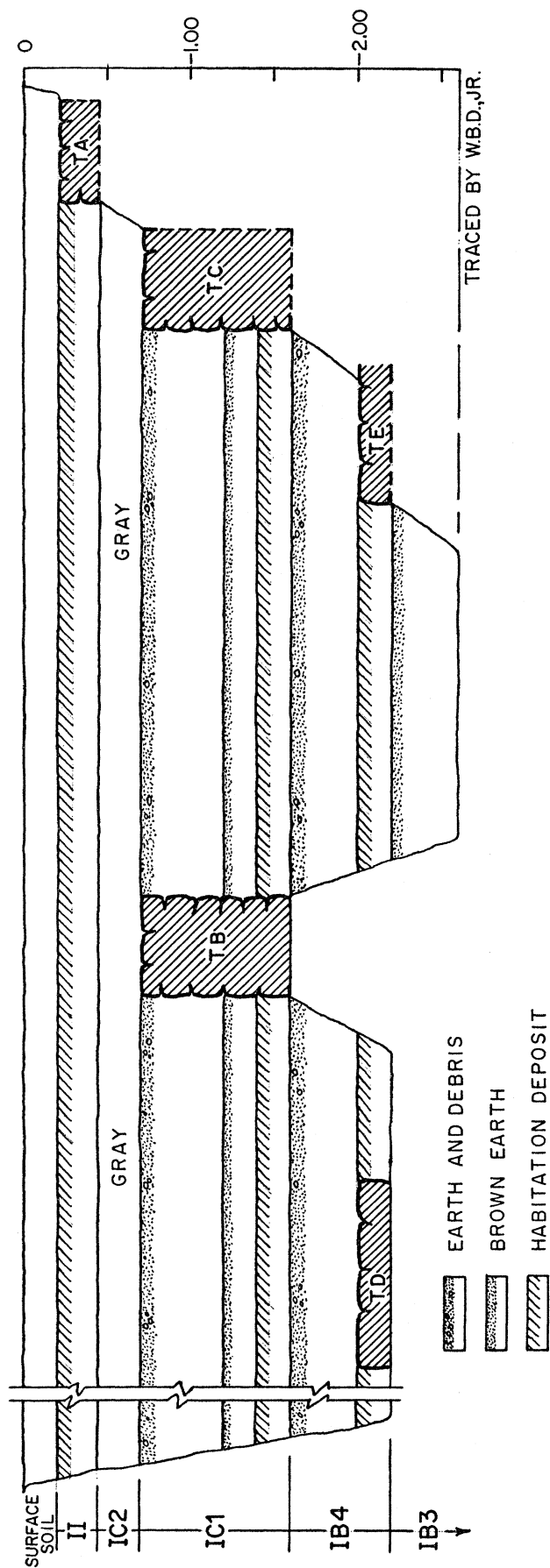


FIG. 6. Diagrammatic north-south section of Trench T.

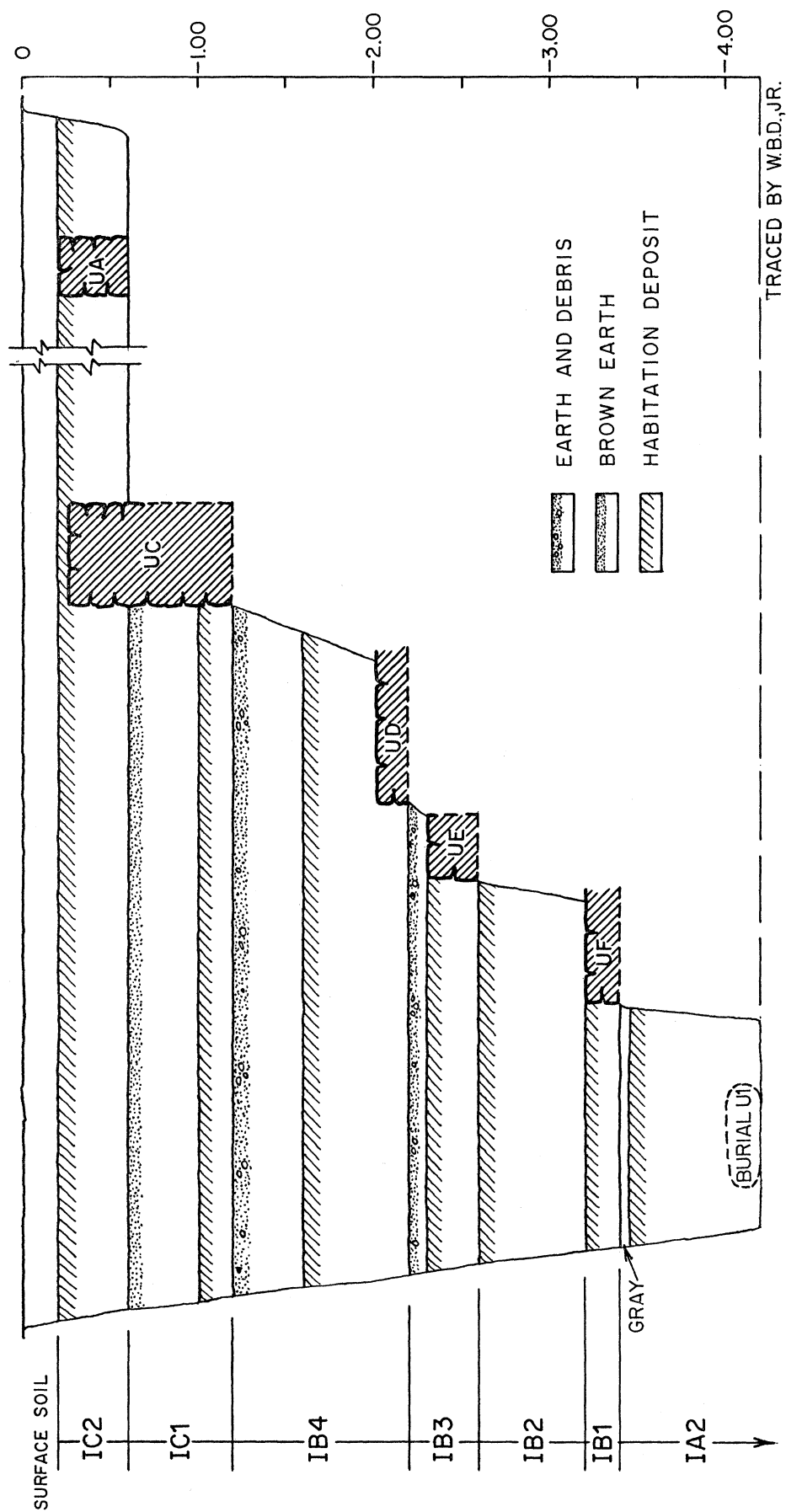


FIG. 7. Diagrammatic north-south section of Trench U.

pering; this may be seen in a frequent and peculiar form of pitting of the biscuit.

The surface of the vessels is smoothed, usually coated with a slip, and burnished before firing. The slip has a certain sheen even without burnishing. Though sometimes excellent, the burnishing tends to be more irregular in Phase IA1 than later; it was done apparently by rubbing a blunt-tipped implement back and forth somewhat irregularly over the surface. Traces of the implement appear as a succession of shiny lines, a little darker than the unburnished areas.

The ware is essentially monochrome, but there are considerable variations in color. Throughout Phase IA1, the colors are often moderately light. Various shades of tan are most common, ranging from buff to orange tan and reddish, often tinged or mottled with light gray. Gray sherds are next in order of frequency; they also tend to be moderately light in color, and are often tinged with yellow or mottled with tan. The less common colors, in descending order, are olive gray, dark brown, light and dark red tinged with orange, and brown black. In general, the variations in color seem due to the method of firing. A trend towards darker shades becomes perceptible by the end of the phase.

Few shapes were identified, the principal one

being that of the bowls discussed below. There are single fragmentary examples of two special types of handles, one horned (114), the other arched (115).

Of the five examples of pattern burnishing⁷ found during the trial excavation, three (101, 112, 113a, b) are of phase IA1.

Bowls: Fragments of several dozen with plain rounded or thinned rim; side usually steep, slightly convex or sometimes virtually straight; no restorable example, but at least one bowl had conical legs (109), and there are pedestal bases (117, 118) and flat bottoms (119, 120) belonging probably to bowls; a marble cup (139) of this phase also illustrates the shape. Nine rim fragments are discussed in the following two paragraphs.

101, Fig. 8 and Pl. 72; from a small bowl; D. est. 0.12; exterior grayish tan mottled with reddish buff, inner surface tannish gray. The inner surface bears a burnished pattern of closely spaced latticework and, at the right (as seen in the charcoal drawing, Pl. 72), two broad bands (not solid burnishing as in *Emergence*, fig. 5.3: 3) where two of the nearly vertical rows of interstices have been filled by burnishing. For another example of a latticework pattern, see 223. Two sherds from Schliemann's 1879 excavation at Beşik Tepe⁸

⁷ *General comment on pattern burnishing.* Five pieces of pattern-burnished pottery were found in stratified deposits at Kum Tepe, three (101, 112, 113a, b) being of the initial phase and one (223) of the second phase of Subperiod IA; the fifth and latest piece (306) is of the first phase of Subperiod IB. The patterns are of three types: latticework (101, 223), parallel lines abutting obliquely on a broad border (112, 306), and intercepting groups of slightly curving lines (113a, b). The use of moderately wide, closely spaced lines is fairly consistent. At Beşik Tepe, where patterns of the second type mentioned above are popular, the lines tend to be heavier, more widely spaced, and less well executed. At Tigani, the lines are generally thinner, and sometimes more widely spaced. The two pattern-burnished pieces from strata of Late Chalcolithic 2 at Beycesultan (*Beycesultan I*, fig. P.6:6 and 10, p. 91) are again of a different style, closer perhaps to Tigani (*ibid.*, p. 107) than to Beşik Tepe or Kum Tepe. Somewhat similar burnished patterns are seen also at other sites, but styles vary appreciably from one locality to another. Cf. Furness, *Proc. Preh. Soc.* 22, 1956, pp. 205-206. There was evidently one general period of pattern burnishing (cf. Fischer, *Ist. Mitt.* 17, 1967, pp. 22-33), whose dates and duration may also have varied considerably from place to place and have not in many instances been closely determined.

⁸ Unless otherwise specified, the occasional comments on Beşik Tepe pottery in the present

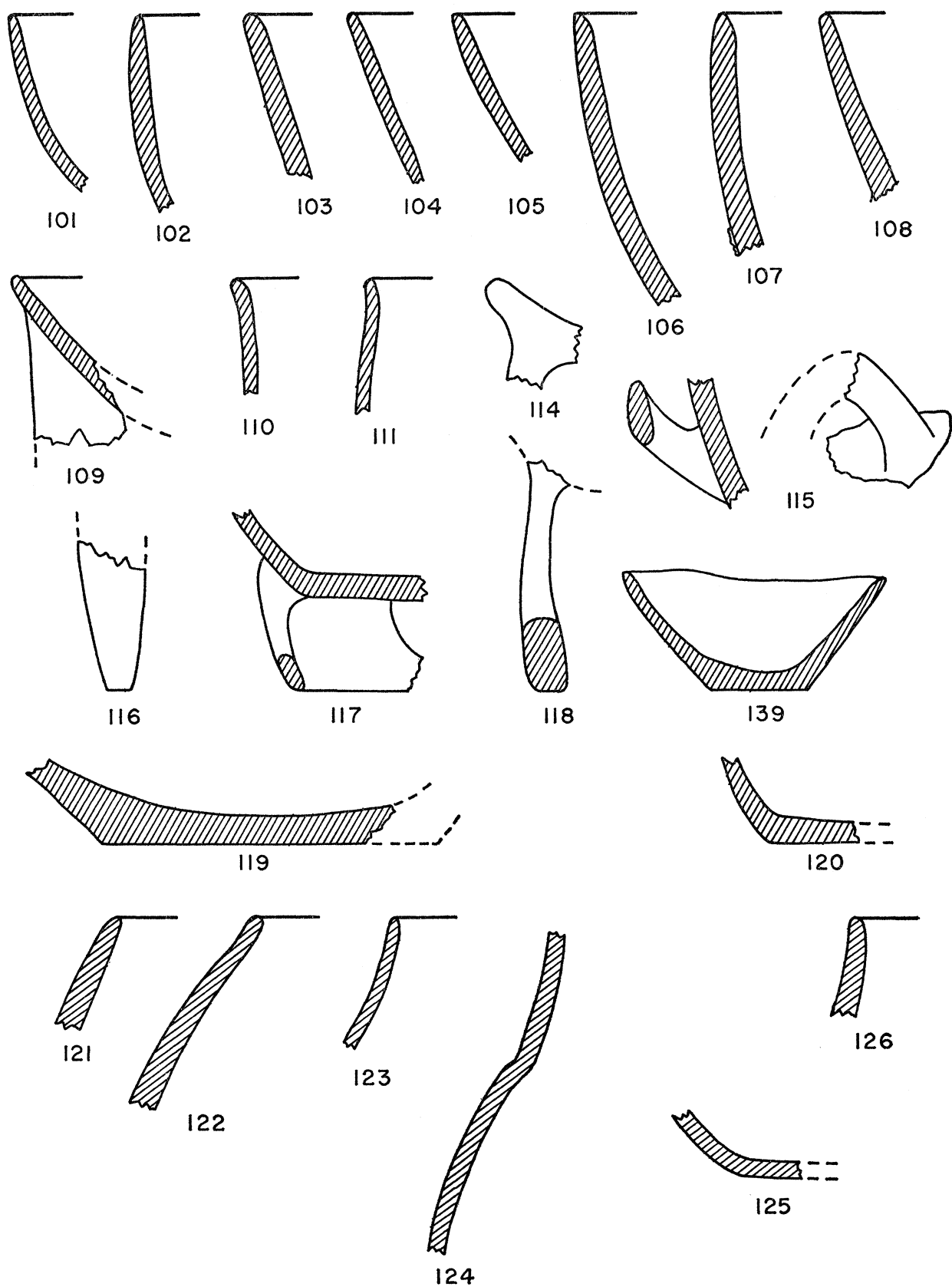


FIG. 8. Pottery (fine) and marble cup (139) of Phase IA1. Scale 1:2.

are comparable to **101** in certain particulars: (1) Berlin Schl. Coll. 10091, a rim fragment, has a similar profile, and also has burnished decoration on the inside (*Praeh. Zeit.* 23, 1932, p. 126, fig. 13: 5), but the motif—a reserved triangle in a burnished area—does not occur among the sherds found at Kum Tepe; (2) on the inner surface of Berlin Schl. Coll. 10074, a fragment of the lower sidewall of an open vessel, there is a burnished latticework pattern with broader and more widely spaced lines than those on **101**.

102-109, Fig. 8, tan to gray, partly mottled. are of the same general shape as **101**, but **107** and **108** each have vestiges apparently of a lug or handle at the fracture, and **109** (also on Pl. 72) has the stump of a round tapering leg (cf. **116**). The profile of rim and side is generally like that of **139**, a marble cup of this phase, possibly imported. For comparable rim forms in pottery of the next phase, see **201-210**. Two rim fragments from Emborio levels X and IX (*Emergence*, fig. 5.2: 3 and 4) seem to be of the same general type. Similar bowl rims are to be found among the sherds from Beşik Tepe, e. g. Berlin Schl. Coll. 10083, 10085, and 10088. The shape is not new in the Aegean region; cf. *Saliagos*, fig. 35: 1-9, 13 and 14, and fig. 36: 12-14.

Bowls or cups: Fragments, **110**, **111**, Fig. 8; nearly upright sides, turning out slightly towards rounded rim; walls thinner than in most of the plain-rimmed bowls; a bowl fragment of coarse fabric, of the earliest period at Ayia Irini (Caskey, *Hesperia* 41, 1972, fig. 2, A11), has a similar profile.

Open vessels, probably bowls, with burnished decoration are represented by a few fragments

whose rims are not preserved: **112**, Pl. 72 (charcoal drawing and photograph); olive black; the pattern is on the inside (cf. **101**), and consists of roughly parallel lines abutting obliquely on a border; for a pattern of this type on a jar fragment of a later phase, see **306**; cf. the heavier and more widely spaced lines from Beşik Tepe (*Praeh. Zeit.* 23, 1932, p. 126, fig. 13). **113a, b**, Pl. 72 (charcoal drawings and photographs); two non-joining pieces, probably from a single vessel; biscuit crumbly; black; interior completely burnished; the burnished pattern is on the outside, and consists of groups of slightly curving lines, one group intercepting another; on **113a** three such groups are visible, and on **113b** two are discernible upon close inspection; an apparently similar pattern, in burnished red-painted lines on a white slip, is found on the exterior of a fragment of a closed vessel, from a Late Neolithic well in Athens (S. A. Immerwahr, *The Athenian Agora*, XIII, *The Neolithic and Bronze Ages*, Princeton, 1971, pp. 32-33, frontispiece, and pl. 7, no. 85); slightly different in style are the burnished patterns on two sherds from Kephala in Keos (*Hesperia* 33, 1964, pp. 317-318, pl. 47, h, i).

Handles: **114**, Fig. 8; gray; upper part of a horned handle; cf. certain horned handles found at Saliagos (*Saliagos*, pl. XXXII, 7-8), Beşik Tepe (*Praeh. Zeit.* 23, 1932, p. 127, fig. 14: 3), Hanay Tepe (*ibid.*, p. 115, fig. 2: 17), Agio Gala (*Proc. Preh. Soc.* 22, 1956, p. 199, fig. 14: 10), and Tigani (*Ath. Mitt.* 60-61, 1935-1936, pp. 157 and 164-165, no. F74, pl. 48, no. 6); handles of this general category appear in considerable variety over a long period of time at numerous sites, and can not easily be closely dated;⁹ for a handle possibly of related

report are based on observations I was able to make during a visit to the Schliemann Collection in the Museum für Vor- und Frühgeschichte at Berlin in 1935. The sherds are referred to by inventory number; the numbering system is explained by H. Schmidt, *Heinrich Schliemann's Sammlung Trojanischer Altertümer*, Berlin, 1902, p. XVIII.

⁹ For further remarks on horned handles, see Weinberg, *A.J.A.* 51, 1947, pp. 178-179; Furness, *Proc. Preh. Soc.* 22, 1956, p. 204; Evans and Renfrew, *Saliagos*, pp. 39-40 and 83.

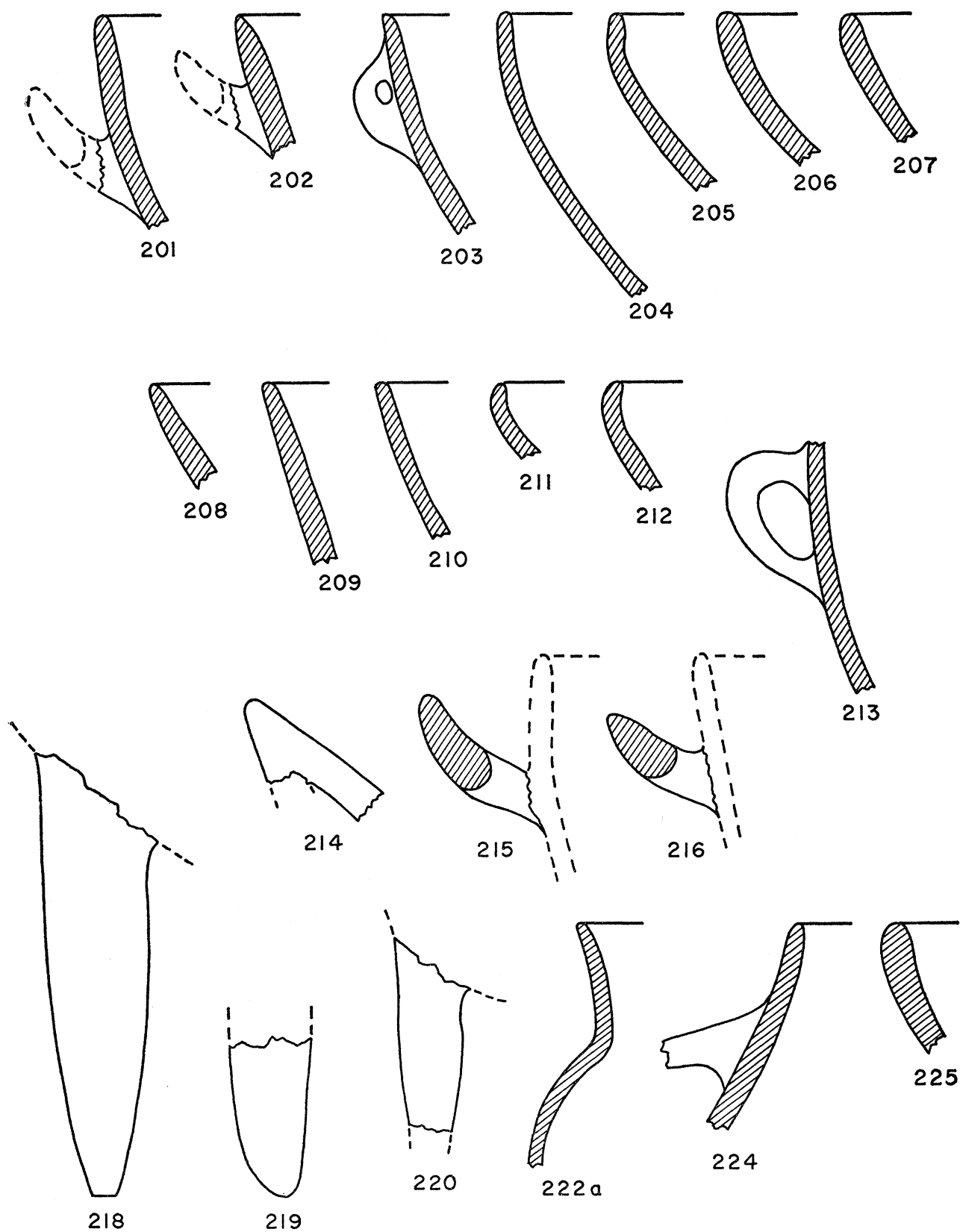


FIG. 9. Pottery (fine) of Phase IA2. Scale 1:2.

type, of Phase IA2, see **214**, **115**, Fig. 8 and Pl. 72; fragmentary arched handle with portion of sidewall of an open vessel; gray mottled with tan; the handle was set horizontally, and curved upward, its apex apparently almost angular; for further illustrations of the form, and for references to parallels, see **201**, **202** and especially **215-217**. Other: One broad flat loop handle.

Round tapering leg: Fragment, **116**, Fig. 8 and Pl. 72; H. pres. 0.053; dark gray slightly mottled with tan; probably from a bowl (cf. **109**).

Pedestal bases (Fig. 8 and Pl. 72): Fragment, **117**; exterior tan mottled with gray; inner surface gray; both surfaces coated with slip, well burnished, worn; from an open vessel, probably a bowl; the preserved portion includes part of flat bottom and convex sidewall of vessel; the base was decorated with tongue-shaped perforations, probably four in number; the profile of the base, with its offset convex side, the relatively high swelling, and the contraction of the diameter towards the lower edge, recalls that of the leg of a bowl of Late Neolithic gray ware found at Corinth (Weinberg, *Hesperia* 6, 1937, p. 507, fig. 28). **118**, fragment of broad pedestal base, D. est. 0.13; orange red mottled with gray; coated with slip, streakily burnished; side convex; originally decorated with large oval perforations.

Comment: Pedestal bases have been recovered from almost every phase of Kum Tepe I. The above-mentioned two examples represent distinctive early forms. The later style begins to appear in the second phase (see **230**).

Like their descendants in Troy I, Kum Tepe pedestals are generally neither high nor very large. High-stemmed bases such as distinguish Alishar fruitstands (H. H. von der Osten, *The Alishar Hüyük I*, Chicago, 1937, pp. 67-71, figs. 75-77) have not been found at Kum Tepe; reports of their occurrence at this site appear to have arisen from potsherds of uncertain provenance.¹⁰

Flat bottoms: **119**, **120**, Fig. 8; burnished inside and out; probably from bowls.

Jars (Fig. 8): Fragment of four. **121**; gray. **122**; D. of mouth est. 0.12; interior black; exterior brown mottled with dark gray; low on shoulder, trace of handle or lug. **123**; narrow mouthed, with slightly concave neck. **124** (also in Pl. 72); fragment of shoulder and adjoining part of slightly offset neck; tan, strikingly mottled with buff, pale red, light and dark gray, and blue black; cf. a sherd from Ayia Irini (Caskey, *Hesperia* 41, 1972, p. 362 and pl. 76, A73).

RED SLIPPED WARE

Less than a dozen sherds, two of which have distinctive profiles (Fig. 8): **125**; from an open flat-bottomed vessel, probably a bowl; biscuit moderately fine; gray at core, becoming tan towards exterior; fine red slip. **126**; fragment of rim and slightly concave neck of wide-mouthed jar (or bowl?).

COARSE WARES

Most potsherds in this class represent the ordinary household ware. The biscuit is grit

¹⁰ The reports in question, referring to pottery said to be in a storeroom in the museum at Ankara, include the following: Bittel, *Arch. Anz.* 1939, cols. 99-100; Lloyd, *Early Anatolia*, London, 1956, pp. 60-61, 88, and 90; and Mellaart, *Anat. St.* 7, 1957, pp. 72-73. It is true that several dozen potsherds from Kum Tepe were selected in 1934 by Dr. Koşay and me, at his suggestion, for donation to the museum at Ankara as a sample collection. We took care not to include sherds unrepresentative of the many hundreds retained for stratigraphic study and storage in the museum at Istanbul. Subsequently something untoward seems to have happened to the sample collection in Ankara. Mellaart's enumeration (*loc. cit.*) of pottery types "certainly not of local origin" is striking. At some point, probably before 1939, sherds from some other site must have become attached to a Kum Tepe label.

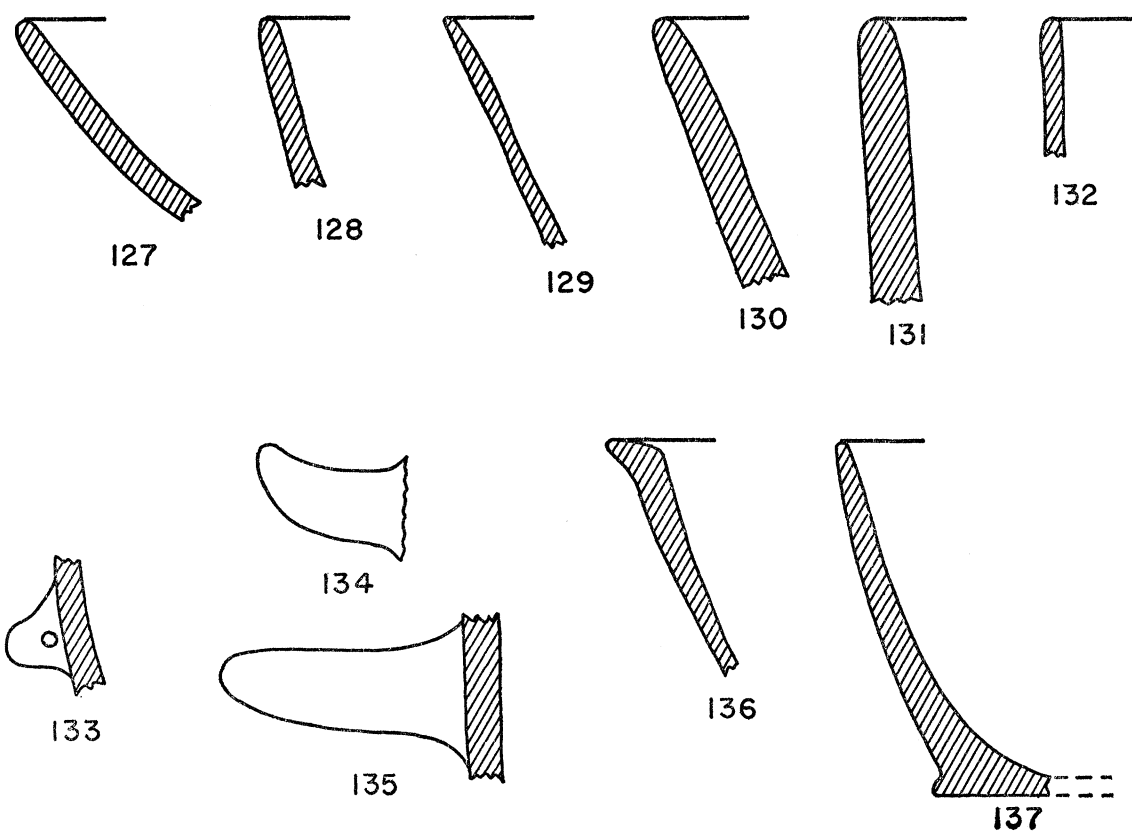


FIG. 10. Pottery (coarse) of Phase IA1. Scale 1:2.

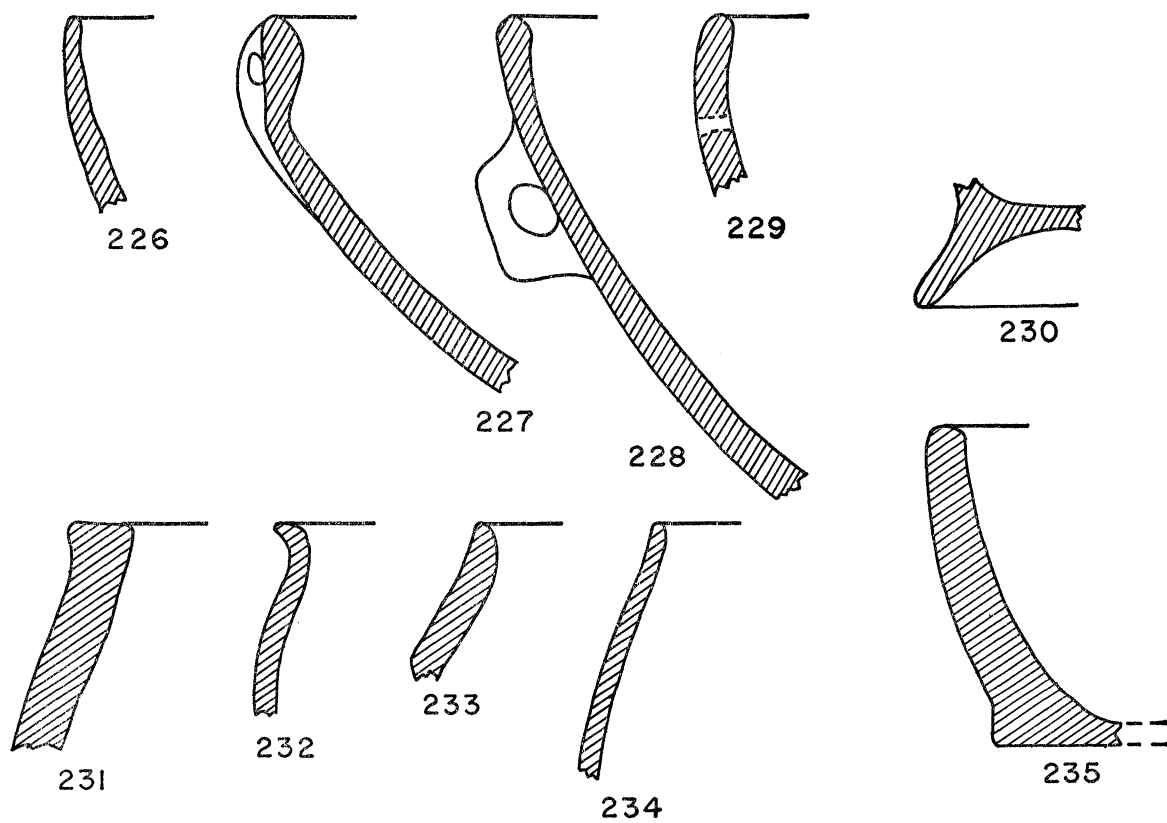


FIG. 11. Pottery (semicoarse and coarse) of Phase IA2. Scale 1:2.

tempered, and frequently contains small white pebbles, or sometimes light gray; a little mica is usually present; vegetable tempering matter seems to have been added more frequently than in pottery of fine fabric. The surface is ordinarily smoothed, coated with a thin slip, and lightly or streakily burnished, but is sometimes left either poorly finished or plain. The colors tend to be somewhat lighter than in Fine Burnished Ware. Tan and light brown are common, often tinged with gray; brick red and dark gray to black are seen occasionally. Mottling occurs, but is inconspicuous.

Bowls: Fragments of about ten with plain rounded or thinned rim; sides most often steep, and either slightly convex or virtually straight; profiles of four are shown (Fig. 10): **127**; tan. **128**; brick red to black. **129**; black, darkened by fire. **130**; brick red to black; unusually heavy.

Open vessels with upright sides: Rim fragments, **131**, **132**, Fig. 10.

Flat bottoms: A few fragments.

Handles: Several loop handles, one nearly flat and the others oval in section.

Lugs: **133**, Fig. 10; brick red; small, knob-like, horizontally pierced, on sidewall of a small vessel; this is the only well-preserved pierced lug (cf. **107**, **108**) recovered from deposits of this phase. **134**, **135**, Fig. 10 and Pl. 72 (showing underside); biscuit crumbly, brick red; the lug on a jar fragment from Hanay Tepe (*Praeh. Zeit.* 23, 1932, p. 115, fig. 2:9), a tongue-shaped lug from Beşik Tepe (Berlin Schl. Coll. 10122), and a "solid ovate lug" from the Upper Cave at Agio Gala (*Proc. Preh. Soc.* 22, 1956, p. 201 and pl. XXII: 8) may be analogous; cf. lugs of Neolithic coarse ware at Olynthos (G. E. Mylonas, *Excavations at Olynthus*, Part I, *The Neolithic Settlement*, Baltimore, 1929, p. 29, figs. 44, 45); also cf. a lug set on sidewall of a jar of coarse fabric, from Saratse (W. A. Heurtley, *Prehistoric Macedonia*, Cambridge, 1939, p. 184,

no. 260); two lugs from Phylakopi and Grotta (*Emergence*, p. 155, fig. 10.2:3 and 9) may be of the same general type but are relatively short; more distantly related, if at all, is an unperforated 'ledge handle' of Beycesultan Late Chalcolithic 2 (*Beycesultan I*, fig. P. 7: 24).

Pans: Numerous fragments. The fabric already has the essential attributes of the Baking-pan Ware of Troy I and later (cf. *Troy I*, pp. 56 and 224). Clay more coarse than in ordinary household pottery; vegetable matter as well as grit used for tempering. The undersurface tends to be rough, but the face of the pan is sometimes coated with a slip and burnished. The color ranges from tan, which is common, through brick red to shades approaching black. The pans were evidently large, but the shape as a whole is elusive. Certain details are shown by the three fragments illustrated: **136**, Fig. 10; rim nearly flat topped, flaring slightly. **137**, Fig. 10 and Pl. 72; cf. **235**. The rim of **138**, Pl. 72, is scalloped, and curves down to the edge of the flat bottom. For further remarks on pans, see *Troy I*, p. 75, shape D23.

Pithoi: Two brick-red fragments and one gray; very gritty biscuit; interior smoothed; exterior coated with slip, burnished.

STONE

Cup, **139** (inv. no. K-49), Fig. 8 and Pl. 70; found under the chin of skeleton in Burial R1, where it had undoubtedly been placed as a burial gift; moderately fine-grained creamy white marble, possibly Cycladic; H. 0.040 to 0.045, D. at rim 0.086, D. of bottom 0.03; one third of side and half of rim missing; unevenly worn; parts of surface heavily incrustated (showing marks of plant roots possibly owing to original shallowness of the burial); plain rim, slightly convex side, flat bottom. Though the cup may well have been imported, the form is essentially the same as that of the popular local pottery bowls of the subperiod; see **102-**

109 for comments on profiles; also cf. **119**, **120**. For an earlier example of a plain rim in marble, see *Saliagos*, fig. 22 right. For a marble cup or bowl from Amorgos resembling **139**, see 'Εφ. 'Αρχ., 1898, col. 155, pl. 10: 8. A small marble bowl from Kephala is somewhat similar in profile, but has horizontally pierced vertical lugs at the rim.¹¹

Scraper, **140** (inv. no. K-51), Pl. 70; found near Burial R2 but at a slightly lower level, virtually on bedrock, and not necessarily belonging to the burial. L. 0.05, W. 0.045, Th. 0.013; yellow-brown chert; roughly triangular in section; one edge, formed by a rude longitudinal facet, is retouched. As already mentioned, a few fragments of the same kind of stone were found close to bedrock elsewhere in the trench, perhaps indicating that a flaking industry had once used this spot. In any case, **140** may well be a relic of Upper Palaeolithic times; in form and workmanship it bears some resemblance to two scrapers found at Tigani whose possible Aurignacian affinities were noted by Buttler (*Ath. Mitt.* 60-61, 1935-1936, pp. 198-199, fig. 7).

Obsidian fragment, inv. no. K-53, not illustrated; ca. 0.03 × 0.02 × 0.003; black; probably Melian; shape irregular, with no sign of prepared surface or worked edge.

PHASE IA2

TRENCH R

Habitation deposits of this phase in Trench R reached an average thickness of 0.60 m., from -4.60 to -4.00 (Fig. 4), forming a layer somewhat lighter in color than that of the preceding phase, and containing smaller quantities of carbonized matter and potsherds. At -4.00, there was a thin, horizontal, silt-like deposit of clay and sand. The covering stratum, attaining an average level of -3.90 and clearly marking the end of the phase, included a great deal of brown earth similar to that found in the ruins of mud-brick construction in Troy I; in addition, there were some lumps of reddish earth and of yellow clay mortar or wall-facing, and scattered bits of charred matter, but virtually no potsherds.

BONE

Blunt implement, **141** (inv. no. K-41), Pl. 71. Found under the feet of the skeleton of Burial R2, but not assignable with certainty to the burial. L. 0.073, W. 0.02, Th. 0.007; metatarsal bone of *cervus*; point rounded, one side being worn and the other showing the hollow of the bone; cf. **729**. For similar implements found at Sesklo, see Ch. Tsountas, *Αἱ προϊστορικά ἀκροπόλεις Διμηγίου καὶ Σέσκλου*, Athens, 1908, col. 355, pl. 45: 8-12.

TERRACOTTA

Crudely cylindrical object, **142** (inv. no. K-59), Pl. 71. Found under skeleton of Burial R2, but not assignable with certainty to the burial. One end missing; L. pres. 0.073, D. 0.068. Biscuit gritty; core gray, exterior buff; smoothed, coated with slip. The tip (lower end in Plate 71) was formed by pressing a pellet of clay against the end of the stout shaft before the object was baked. A phallic image?

Disks, inv. nos. K-63 and K-64, not illustrated; crudely made from potsherds of coarse fabric; D. of larger, 0.055-0.061; D. of smaller, 0.048-0.051. These disks, as well as one from Trench S, Phase IB4, are unperforated, whereas disks at Troy, with very few exceptions, are perforated. At *Saliagos*, both types occur (*Saliagos*, figs. 84-85).

¹¹ Information kindly provided by John E. Coleman, whose book, *Keos, I, Kephala*, is in press.

SHELLS AND ANIMAL BONES

The shells and animal bones of the preceding phase have been grouped together with those of IA2. Species identified: *Ostrea plicata* (very numerous), *mytilus edulis* (numerous); also (but sparse) *pecten glaber*, *murex brandaris*, *murex trunculus*, *eobania vermiculata*, and *venus gallina*. *Capra/ovis*, *bos*, *cervus dama* (all sparse). Small bird.

POTTERY

Several hundred sherds.

FINE BURNISHED WARE

The use of vegetable matter for tempering becomes less frequent and the trend towards darker colors, already perceptible at the end of the preceding phase, is more evident. Gray sherds begin to outnumber the tan. Mottling diminishes. A few pure black pieces make their appearance, as well as some of pure red.

Essentially the same shapes continue to be found, but there is a little more variety among the still predominantly plain rim profiles of bowls. Handles of a characteristic arched type, one example of which is known from the previous phase, are in vogue (**201**, **202** and **215-217**).

Burnished linear decoration (see footnote 7) is found on a fragment of a jar or jug (**223**). There are two examples of linear decoration in dull white paint (**216**, **222a**).¹²

Bowls: Plain-rimmed bowls, generally with steep, slightly convex sides, remain popular; about two dozen of Phase IA2 are represented by fragments, ten of which are illustrated (Fig. 9). **201**, **202** (also in Pl. 73); the first is tan mottled with gray, the second

tan; each has vestiges of an arched handle; a plain-rimmed fragment of an open vessel, from Hanay Tepe, has a handle possibly of related form high on the sidewall (*Praeh. Zeit.* 23, 1932, p. 115, fig. 2: 7, 7a); for further remarks on arched handles, see **215-217**. **203**, with rounded, horizontally pierced lug a little below the rim; dark gray. **204-210**, varied rim forms, ranging from straight to convex. For general comparison of rim profiles, as well as references to comparable pieces at Beşik Tepe and Emborio, see **101-109**.

The marked inward bend at the rim of **211-212**, Fig. 9, seems to foreshadow some rim forms of Subperiod IB (cf. **303**, **304**). Several fragments from Beşik Tepe (Berlin Schl. Coll. 10084, 10086, 10103, 10109, and 10111-10113) resemble **211**, **212** in profile.

Handles: Fragments of five, of three different types. **213**, Fig. 9 and Pl. 73; vertical, flat loop handle, with fragment of sidewall; reddish tan mottled with gray, red, and black. **214**, Fig. 9 and Pl. 73; dark gray; possibly horned, but not of the same type as **114**; may be analogous to a horned handle from the Upper Cave at Agio Gala (cf. Furness, *Proc. Preh. Soc.* 22, 1956, pp. 199 and 201, pl. XXII: 3). **215**, **216**, Fig. 9 and Pl. 73, and **217**, Pl. 73; dark gray; arched (cf. **115**, **201**, **202**); virtually triangular in section, the outer edges being thinned. The outer edge of **216** is also serrated; three lines painted in dull white, now hardly visible, meet the first three serrations at the lower left (as seen on Pl. 73). Arched handles such as **215-217** and **115** were attached probably to the sidewalls of plain-rimmed steep-sided bowls (cf. **201**, **202**). Handles of essentially the same shape have been found at Beşik Tepe (Berlin Schl. Coll. 10119, triangu-

¹² Three examples of linear decoration in dull white paint have been found at Kum Tepe, two (**216**, **222a**) being of the second phase of Subperiod IA, and one (**622**) of the fourth phase of Subperiod IB. Decoration of this kind occurs at numerous sites over a considerable period of time, often showing remarkable uniformity (cf. Furness, *Proc. Preh. Soc.* 22, 1956, pp. 203-205), and cannot be relied on for precise chronological comparison of examples not in stratigraphical contexts.

lar in section), Hanay Tepe (*Praeh. Zeit.* 23, 1932, p. 116, fig. 2: 11 and 11a, triangular in section), the Upper Cave at Agio Gala (*Proc. Preh. Soc.* 22, 1956, pl. XXII: 9, p. 202, termed "triangular"). Possibly a simplified form of the wish-bone type; cf. an example from the Vathy Bay Cave in Kalymnos (*ibid.*, pl. XIX: 5, p. 190).

Round tapering legs: Four examples, possibly from bowls (cf. **109**, **116**). **218-220**, Fig. 9 and Pl. 73, and **221**, Pl. 73; mottled tan and light gray; **218** is remarkable for its height (0.155 m.); the tips of **220**, **221** are missing.

Flat bottoms: Pieces belonging to two open vessels, probably bowls; similar to **119**, **120**.

Jug: **222a** (Fig. 9 and Pl. 73), part of shoulder, slightly concave spreading neck, and rim of a small jug, and **222b**, a non-joining fragment of a flat loop handle (underside shown in Pl. 73), almost certainly from the same vessel; dark gray with olive-green tinge; a linear pattern in dull white paint is partially preserved on the exterior of **222a**, with two (originally three?) lines parallel to and just below lip, three horizontal lines at bottom of neck, and vestiges of multiple chevrons (or zigzags?) on shoulder; similar decoration is seen on the jugs of the first period at Poliouchni (e. g. *Poliochni* I, ii, pl. I, d-g); cf. **622**.

Jugs or jars: **223**, pl. 73; fragment of neck and shoulder, most likely of a small jug; gray; on shoulder, a burnished pattern of closely spaced latticework, with an obtruding, incompletely preserved lozenge at the right (probably near a handle) and a bordering line at the top (i. e. at junction of shoulder and neck); for an earlier latticework pattern, see **101**. **224**, Fig. 9; part of rim and sloping neck of a large jug or jar, with stub of a vertical loop handle; tan mottled with a little red.

Non-circular vessel (or spout?): **225**, Fig. 9; rim fragment; grayish tan; exterior streakily burnished; interior surface crudely smoothed, with a few streaks of burnishing.

SEMICOARSE SMOOTHED WARE

Sherds of this ware begin to appear in small numbers in Phase IA2. The biscuit contains grit; there are indications that vegetable matter, possibly chopped straw, also was used for tempering. At least one surface is coated with a clayey slip, and smoothed or possibly compacted by means of a blunt implement; this treatment imparts a distinctive texture. The fabric undergoes only slight changes later, developing into the "intermediate" ware used principally for tripod cooking pots in late phases of Kum Tepe I and in Troy I (cf. *Troy* I, p. 55).

In Phase IA2 the only vessels of this ware whose shapes could be recognized are two bowls, both fragmentary: **226**, Fig. 11; reddish gray mottled with dark gray; thinned rim. **227**, Fig. 11 and Pl. 73; gray to brown; lumpy, crudely formed; on the rim, which rises almost vertically from a slight angle (cf. **305**), part of a horizontal pierced lug is preserved—the earliest Kum Tepe example of a lug of this type set at the rim of a bowl; the slight concavity near the hole in the lug is overstressed in *Emergence*, fig. 5.3: 1.

COARSE WARES

Fabrics generally as in Phase IA1, but vegetable matter is less frequently used for tempering.

Bowls: Fragments of several with convex sides and plain rim; two are illustrated: **228**, Fig. 11; lumpy and crudely shaped; surfaces pitted, apparently owing to the presence of straw or chaff in the clay before firing; grayish tan mottled with dark gray; the horizontal pierced lug is very uneven, and its form should not be considered typical. **229**, Fig. 11 and Pl. 73; gray; hole in sidewall indicates ancient repair.

Flat bottoms: Several fragmentary examples.

Pedestal bases: **230**, Fig. 11, probably from a bowl; dark gray; hollow, not perforated; the simple spreading form contrasts with the con-

vex and more decorative perforated forms of two earlier bases (117, 118); 230 is the earliest found at Kum Tepe of the type of pedestal base that continues to occur on bowls in later phases at this site and in Troy I.

Handles: One round loop handle, with decorative short gashes across outer side. One vertical, flat loop handle.

Basins or open jars (Fig. 11): 231, also in Pl. 73; gray red; inner surface coated with slip, burnished; flat rim, rising at one point to form a scallop. 232, with out-turning rim. 233; surfaces well smoothed; exterior somewhat lustrous, black; interior brown black; thinned rim. 234; moderately fine biscuit; micaceous; surfaces bear marks of a stiff brush or comb; possibly imported.

Pans: A number of pieces. 235, Fig. 11, is typical; cf. 137; also cf. two sherds of Late Chalcolithic 2 and 4 at Beycesultan (*Beycesultan* I, figs. P.8: 24, P.13: 14).

TERRACOTTA

Loom weights: Fragment, 236 (inv. no. K-24), Pl. 71; L. pres. 0.04, D. 0.06; biscuit tempered with coarse grit as well as straw or chaff; tan; one rounded end (probably the top) is preserved, the break being along the line of a transverse perforation. Unnumbered fragment: Part of the body and the much worn flat bottom of another object, probably of the same type; H. pres. 0.055, D. est. 0.08; body oval in cross section, increasing in diameter towards bottom; roughly horizontal perforation ca. 0.04 m. above bottom.

TRENCH U

Two layers which seem to have been approximately contemporaneous with the deposits of Phase IA2 in Trench R were probed in Trench U (Fig. 7). The relatively thin upper layer consisted of gray earth, its top at -3.40. Below the level of -3.45 there was a deposit of soft black earth containing carbonized matter and some potsherds. The bottom of this deposit had not been reached when digging had to be stopped at -4.20 because the space was too narrow. The principal discovery was a burial.

Burial U1 (Fig. 7). Between -4.20 and -4.00 lay the skeleton of a woman (see footnote 6) buried in contracted position. The grave was evidently a shallow pit, simply hollowed in the earth.

POTTERY

About two hundred sherds; none of these seemed to be associated directly with the burial. Among the fragments of Fine Burnished Ware

were several representing plain-rimmed bowls such as are described above (see 201-210), as well as an arched handle of the type exemplified by 201, 202 and 215-217.

SUBPERIOD IB

The strata of IB attained a depth of 2.50 m. in Trench R, and represented four successive phases of habitation; these are termed IB1 to IB4 in the present report. No great difference in stratification was observed in the other trenches, but in some of them the digging had to be halted before the early strata could be

reached. The total area excavated ranged from about eight square meters for the early strata to some thirty square meters for the latest of this subperiod.

PHASE IB1

TRENCH R

Immediately above the stratum of debris that marked the end of the previous phase in Trench R was a dark layer of habitation deposits, attaining a depth of 0.30 m., from -3.90 to -3.60 (Fig. 4). A covering stratum of brown earth, probably from the disintegration of mud-brick construction, lay between -3.60 and -3.50.

POTTERY

A few hundred sherds.

FINE BURNISHED WARE

The slight changes in fabric that take place in IB1 recall trends already perceptible in the preceding phase. Whereas grit continues to be used for tempering, the addition of vegetable matter for this purpose has largely ceased in this ware. Gray sherds now become considerably more numerous than the tan. Dark shades predominate. Mottling becomes rare. An unusually lustrous finish is achieved in a number of jet-black sherds.

Among bowls, plain rims are no longer common, and a new profile appears (303); its rolled form is to become popular in the next phases of Subperiod IB.

A single example of burnished linear decoration (306), the latest found during the trial excavations, was obtained from the deposits of Phase IB1.

Bowls (Fig. 12): Rim fragments of eight, with varied profiles; five are illustrated. 301; reddish tan; badly worn; the fabric and appearance suggest that this piece dates from an earlier phase. 302; mottled tan and gray; rim curves almost imperceptibly in. 303 (also in Pl. 74); dark brownish gray; incurving rim, with a slight rounded (rolled) thickening on the inside, differing in this respect from simple incurving rims such as 211, 212 of the pre-

ceding phase; cf. 401-408. 304 (also in Pl. 74); reddish gray; incurving rim, with pronounced but not exactly rolled lip; the form seems related to that of the preceding piece; also cf. 211, 212; see 546 for further comment and references. 305; gray; the bend below the nearly upright rim is almost angular (cf. 227).

Flat bottoms: Fragments of three, from open vessels, probably bowls.

Jars (Fig. 12): 306; dark gray to black, mottled with tan; fragment of upper part of a globular, wide-mouthed jar with out-turning, slightly thinned lip; on the exterior, there is a burnished pattern (not illustrated) of closely spaced oblique lines topped by a broad horizontal band at the rim; cf. 112, and see footnote 7. 307; tan; fragment of inward-sloping neck of a narrow-mouthed jar; cf. 123, the neck of which is slightly concave; for later, virtually upright collar-necks, see 626, 627, and 822.

RED-SLIPPED WARE

A single example: 308, Fig. 12; exterior coated with red slip, worn; interior surface grayish tan; fragment of steep-sided open vessel, probably a bowl.

SEMICOARSE SMOOTHED WARE

Fabric generally as in the preceding phase. Two of the sherds, possibly representing cooking pots, have distinctive profiles (Fig. 16): 309, 310.

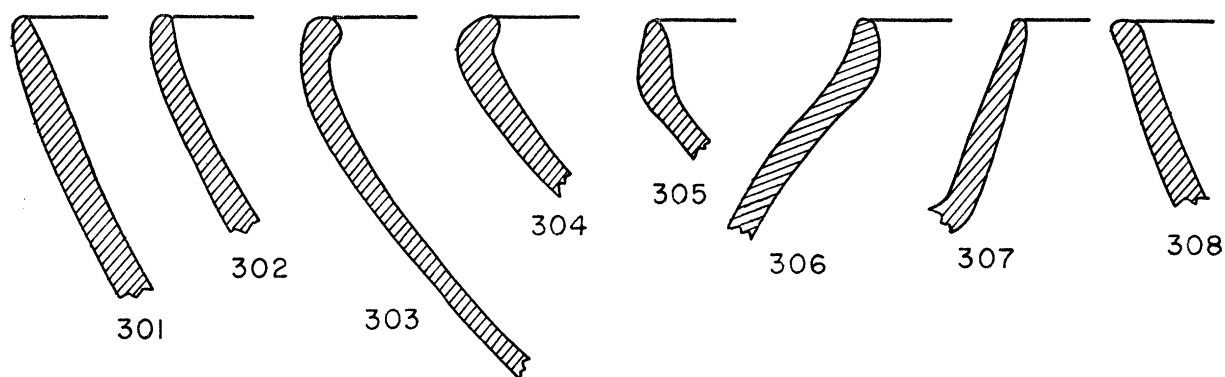


FIG. 12. Pottery (fine) of Phase IB1. Scale 1:2.

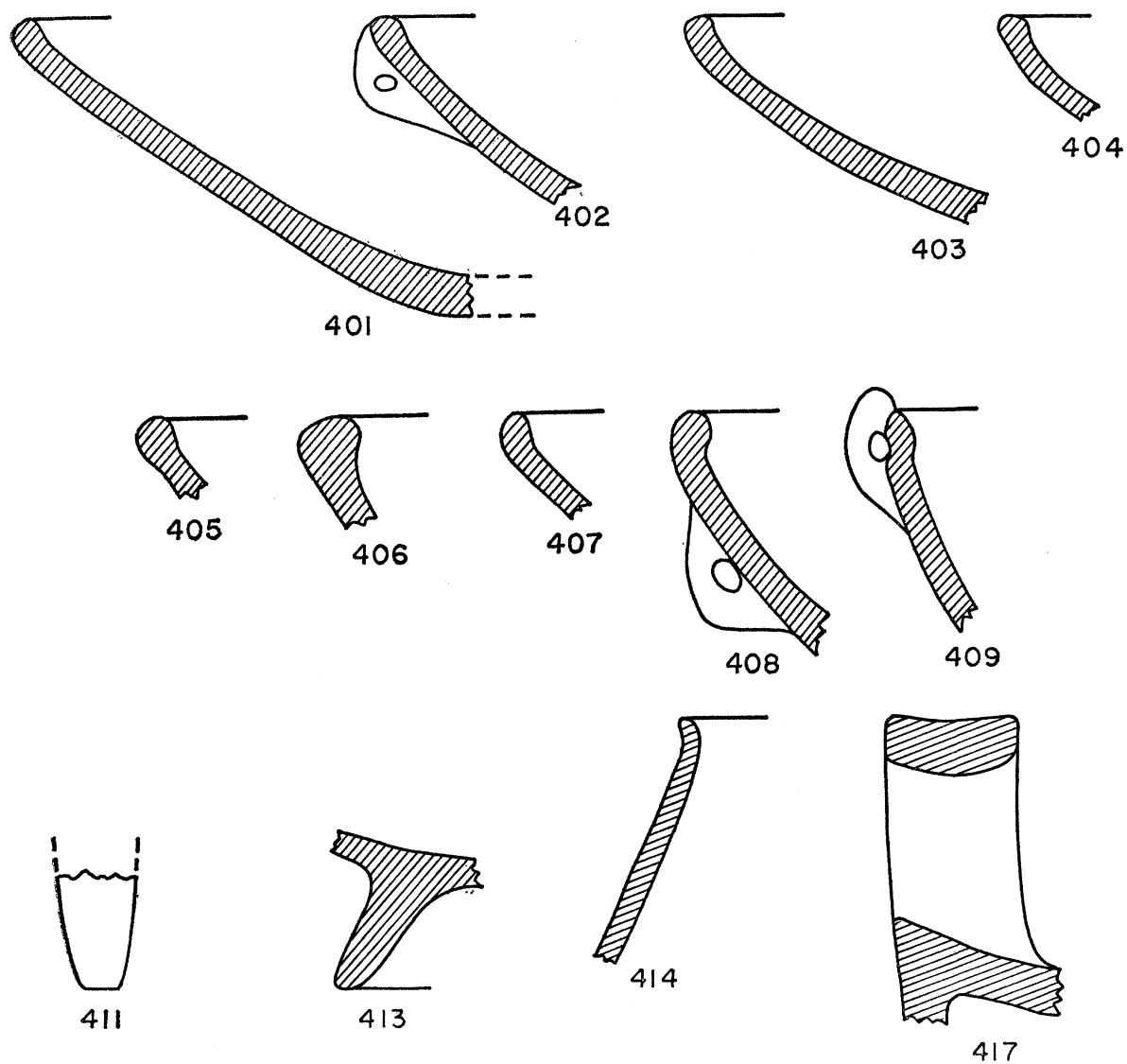


FIG. 13. Pottery (fine) of Phase IB2. Scale 1:2.

COARSE WARES

Indications of the addition of vegetable matter for tempering go on diminishing.

Bowls: Three fragments are illustrated (Fig. 16): **311**, also in Pl. 74; biscuit contains pebbles as well as grit; burnished on the inside; gray to brown; plain rim, with a crude, somewhat rounded, horizontally pierced lug. **312**; biscuit pitted from the use of straw or chaff for tempering; plain rim. **313**; traces of slip and light burnishing; tan; slightly splaying rim.

Jar: Fragment, **314**, Fig. 16 and Pl. 74; pebbly biscuit; coated with slip, lightly burnished; grayish to reddish tan; the raised plastic band, a little below the rim, is decorated with a series of impressed dots.

Pans: A number of fragments. The profile

of one is illustrated: **315**, Fig. 16; brick red to blackish.

Pithos: A single fragment of sidewall; core and inner surface dark gray; exterior bright red.

STONE

Celt, **316** (inv. no. K-9), Pl. 70; L. 0.065, W. 0.045, Th. 0.02; dark blue speckled with white; butt is rounded; both faces of the cutting edge are beveled and polished. For shape, cf. **424**, **560**.

BONE

Blunt implement, **317** (inv. no. K-47), Pl. 71; L. 0.08, D. 0.009 to 0.016; radius of *capra* or *ovis*; narrow and obliquely cut or worn, broken. Found heavily coated with carbonized matter.

TRENCH U

A stratum of habitation deposits and scant remains of rude stone construction, UF, possibly part of a pavement if not the socle of a house wall, lay between -3.40 and -3.20 in Trench U (Fig. 7). The masonry is the earliest discovered during the trial excavations. The pottery from this stratum is generally like that of Phase IB1 in Trench R (see pp. 327, 329 above).

PHASE IB2

TRENCH R

Extending from northeast to southwest across the southern part of Trench R, and evidently belonging to a house of Phase IB2, is a wall, RB, which rests upon debris of the preceding phase at an average level of -3.50 (Fig. 4). Built of two courses of irregular and mostly flattish stones mortared with yellow clay, the wall is about 0.30 m. high and 0.70 m. thick; at the time of excavation, a clay facing 0.02 m. to 0.03 m. thick was still preserved on the northwestern side. At this side of the wall, successive levels of the earthen floor formed a compact layer about 0.25 m. deep. Immediately above, at *ca.* -3.25 to -3.20, was a stratum of brown earth, probably comprising debris of mud bricks or other earth from the superstructure; this stratum reached the upper edge of the masonry, and marked the end of the phase.

POTTERY

A few hundred sherds.

FINE BURNISHED WARE

About three fourths of the pieces in Phase IB2 are dark gray; the rest range from tan to brown, sometimes with a reddish tinge. The most common shape is that of bowls with incurving, inwardly thickened and rounded (i.e. rolled) rim.

Bowls: Fragments of nearly a dozen with rolled rim; eight are illustrated. **401**, Fig. 13; one side is preserved from rim to flat bottom. **402**, Fig. 13 and Pl. 74; gray, with streaks of light brown; at rim, a horizontal pierced lug of slightly concave form with somewhat spreading ends;¹³ cf. **408**, **410**, **421**, **619**, **620**, **649**; two bowl fragments from level VIII at Emborio, each with a lug at the rim, have something in common with **402**, the rim of one (*Emergence*, fig. 5.2: 5) being rolled, and the lug of the other (*ibid.*, fig. 5.2: 6) having a distinctly concave form with oblique ends; a few of the earliest horizontal pierced lugs at Poliochni (e.g. *Poliochni* I, ii, pl. VI, a and r) are somewhat similarly shaped. **403-408**, Fig. 13, show variety in the inner roll. Set well below the rim of **408** (Pl. 74) is a slightly concave, somewhat angular, horizontal pierced lug (cf. **402**); for a similar rim and lug from level VII at Emborio, see *Emergence*, fig. 5.2: 8. For general comparison with **401-408**, see **303**, **501-508**, **535-540**.

Fragment, **409**, Fig. 13 and Pl. 74; side convex; rim slightly concave (cf. **518-521**); the body of the horizontally pierced lug is short and markedly concave, with enlarged ends which rise in the form of ridges terminating in a pair of decorative rounded projections above the rim—a style of plastic decoration reminiscent of Tigani, but not exactly datable there; for a

similar rim and lug of the next phase, see **547**; for a somewhat similar rim and markedly concave lug of Emborio VII, see *Emergence*, fig. 5.2: 11; also comparable to **409**, and closely resembling the Emborio fragment, is a lug on a rim fragment from the Upper Cave at Agio Gala, shown by Furness, *Proc. Preh. Soc.* 22, 1956, pl. XXII: 23.

Fragments probably of bowls: **410**, Pl. 74; black; part of sidewall, with slightly concave, horizontal pierced lug (cf. **402**). **411**, Fig. 13 and Pl. 74; tan; worn lower end of a round tapering leg; this may be a stray, perhaps dating from Subperiod IA; cf. **109**, **116**, and **218-221**. **412**, Pl. 74; black; part of a slightly hollowed bottom and spreading convex lower side.

Pedestal base, Fig. 13 and Pl. 74: **413**; exterior dark gray, coated with slip, burnished; interior light brown, worn; part of a broad, relatively low, hollow base, probably of a large vessel; for an earlier example of a base of this type, probably of a bowl, of coarse fabric, see **230**.

Jar or bowl, Fig. 13: Fragment, **414**; gray, with tinges of pink; inward-sloping shoulder, with slightly out-turned rim. Compared by Renfrew (*Emergence*, p. 155, fig. 5.3: 10, and fig. 10.2: 2 and 8) to fragments of jars from Phylakopi and Grotta; a bowl or jar fragment, of coarse fabric of the earliest period at Ayia Irini (Caskey, *Hesperia* 41, 1972, fig. 2: A65); a somewhat similar profile in coarse ware is seen at Saliagos (*Saliagos*, fig. 40: 12).

Lugs, probably of jars, Pl. 74: **415**; grayish tan; vertical pierced lug set low on shoulder of small vessel of biconical shape; the lug is decorated with small rounded horizontal ridges. **416**; black; vertical pierced lug, low on shoulder of small globular (or biconical?)

¹³ The horizontal pierced lugs of slightly concave form that occur occasionally in Subperiod IB at Kum Tepe seem to have been largely if not entirely displaced in Kum Tepe IC—Early Troy I by straight tubular lugs, and should not be confused with the sometimes more exaggerated concave lugs of Middle and Late Troy I (*Troy* I, pp. 60-61, A12), which succeed the straight tubular lugs.

vessel; the lug is triangular in section; for two apparently similar lugs from the Upper Cave at Agio Gala, see *Proc. Preh. Soc.* 22, 1956, pl. XXII: 14 and 18.

Handles: A number of flat loop handles, and a fragment of one round loop handle.

Lid: **417**, Fig. 13 and Pl. 74; biscuit gritty and pebbly; surfaces olive gray to dark gray; well coated with slip, streakily burnished; fragment of large lid with vertical side, crudely flattened top; rising vertically from edge of top is a heavy flat loop handle; presumably the shape is a forerunner of Troy shape D9 (see remarks on **554**).

RED-SLIPPED WARE

A single fragment, apparently from a small jug or jar with globular body; biscuit tan; moderately fine, with a few pebbles and very few mica specks; pitted owing to burning out of straw or chaff; red slip on exterior only; badly worn; this fragment may be a stray, perhaps dating from an earlier phase.

SEMICOARSE SMOOTHED WARE

Fragments slightly more numerous in this phase than before. The first two pieces illustrated are possibly from cooking pots, while the third may represent either a cooking pot or a jar: **418**, Fig. 17 and Pl. 74; immediately below out-turned rim, a nearly conical projection; cf. projections on cooking pots of Troy shape D24 (*Troy I*, pp. 75-76); also cf. bosses on cups of Troy shape A25 (*ibid.*, p. 63). **419**, Fig. 17, with convex side and out-turned rim. **420**, Fig. 17; fragment with slightly out-

turned rim; blackened apparently by use; the surface feels almost greasy—a quality noted also on blackened fragments of this ware in Early Troy I (*Troy I*, p. 55). Unnumbered: Flat bottom.

COARSE WARES

No significant change in fabric has been noted.

Bowl: Fragment, **421**, Fig. 17 and Pl. 74; core gray; biscuit pitted from use of straw or chaff for tempering; surfaces milky tan; crudely smoothed, coated with slip, burnished; not far below rim, a horizontal pierced lug, which is somewhat angular and contracts a little towards the middle (cf. **408**).

Basin or deep bowl: **422**, Fig. 17; hard, pebbly biscuit; gray buff throughout; fragment of wide-mouthed vessel; part of a long heavy vertical pierced lug is preserved.

Pedestal base: **423**, Fig. 17; crudely shaped; broad and heavy; hollow; not perforated.

Handles: Several flat loop handles.

Pithos: A single fragment of sidewall; brick red; exterior coated with slip, burnished.

STONE

Celt, **424** (inv. no. K-29), Pl. 70; L. 0.041, W. 0.035, Th. 0.021; dark blue stone; polished. For shape, cf. **316**, **560**.

Blade, **425** (inv. no. K-28), Pl. 70; L. 0.035, W. 0.012, Th. 0.003; gray-black obsidian, probably Melian; two moderately good cutting edges; cf. **561**.

TRENCHES S AND U

In Trench S, brown earth probably from disintegration of mud-brick construction was uncovered at -3.40. The bottom of the stratum had not been reached when digging was halted at -3.60 (Fig. 5).

In Trench U (Fig. 7), habitation deposits of roughly the same date as those of Phase IB2 in Trench R lay between -3.20 and -2.60.

POTTERY

Not significantly different from that of Phase IB2 in Trench R.

PHASE IB3

TRENCH R

Habitation deposits of Phase IB3 accumulated above the thin course of brown earth that marked the end of the preceding phase in this trench; ultimately they attained an average depth of one meter, from -3.20 to -2.20 (Fig. 4). A slight change in the color of the earth at -2.60 suggested that the phase might here be divided into two stages. The habitation deposits were covered at -2.20 by a stratum of yellow clay (see Phase IB4).

POTTERY

About eight hundred sherds.

FINE BURNISHED WARE

Four fifths of the sherds of this ware in Phase IB3 are dark gray, often tinged or streaked with brown or olive green. Tan and brown sherds occur less frequently than before.

As in the preceding phase, the most common shape is that of bowls with incurving, inwardly thickened and rounded (rolled) rim, but there is a growing number of variations.

Bowls: Fragments of two dozen with rolled rim. Eight are illustrated: **501-506**, Fig. 14, and **507, 508**, Pl. 75; **504** is also shown in Plate 75. Cf. **401-408, 535-540, 601-607, 637-640**.

Among the fragments varying from the common rim profile are **509, 510**, Fig. 14; edge slightly thinned (cf. **546**) rather than rolled; the horizontal lug somewhat below the rim of **510** (also in Pl. 75) is unusual, being unperforated. On the sidewall of **511**, Pl. 75, the upper part of a horizontal pierced lug is preserved; the rim of this fragment is virtually plain, its inner side (not illustrated) having only a very slight roll. Other variations are

COPPER

Fragment, extremely corroded; found at -3.00 in Trench U; L. 0.013 m.; original shape unknown; this is the earliest piece of metal found during the trial excavations.

seen in **512-517**, Fig. 14; **513** (also in Pl. 75) and **514** each have a plain horizontal pierced lug; the near-angularity of the inner edge of **514-517** is worth noting (cf. **610, 644-648**).

Four fragments, representing perhaps only two or three bowls, have slightly concave rims: **518**, Fig. 14 and Pl. 75, with part of a horizontal pierced lug (also shown in *Emergence*, fig. 5.3: 8), and **519**, Fig. 14, nearly match in the tilt of the rim. **520**, Fig. 14 and Pl. 75, has a nearly upright rim, with a horizontal pierced lug. The rim of **521**, Fig. 14 and Pl. 75, is more distinctly concave. For other examples of concave or slightly concave rims at Kum Tepe, see **409, 547**, and **660** (with comparanda from Poliochni I, Beycesultan Late Chalcolithic 3 and 4, and the end of Early Troy I).

Jugs: Pieces of flaring lips, **522, 523**, Fig. 14; cf. **552, 621**.

Jars: **524**, Fig. 14; fragments of a small hole-mouthed vessel. **525**, Fig. 14 and Pl. 75; part of a hole-mouthed vessel a little larger than the preceding; olive gray; high-swung handle, with string hole near lower end.

Handles: A few loop handles; some oval, others flat in section.

SEMICOARSE SMOOTHED WARE

A moderate number of sherds, mostly small. Four rim fragments are illustrated (Fig. 18): **526**; biscuit tan; thin dark gray slip; convex side and out-turned rim; cf. **310**, **629**, **630**. **527**; convex side, with nearly conical protuberance well below out-turning thin-edged rim. **528** (also in Pl. 75, shown upside down) and **529**, each with a heavy, flat loop handle; cf. **557**; somewhat similar handles were used on certain vessels of this ware in Early Troy I, e. g., deep cups of shape A25 (*Troy I*, p. 63) and cooking pots of shape D24 (*ibid.*, pp. 75-76).

COARSE WARES

Fabrics generally as in Phase IB2. Fragments numerous, but only a few shapes have been identified.

Bowls, Fig. 18: Four rim fragments are illustrated. **530**; biscuit pitted a little, apparently owing to burning out of straw or chaff; buff; several holes, indicating ancient repair. **531** (also in Pl. 75); conical protuberance somewhat below rim. **532**; red brown; thinned flaring rim. **533**; thickened band on inner side of rim; on exterior, a small rounded protuberance.

Pans: Several fragments. One profile is shown: **534**, Fig. 18.

TRENCHES S, T, AND U

Habitation deposits roughly contemporaneous with those of Phase IB3 in Trench R were found in Trench S (Fig. 5) between -3.40 and -2.40. Here, too, the phase may have had two stages, since the color of the earth changed slightly at -3.20.

In Trench T (Fig. 6), the earth below -2.20 contained few potsherds. The bottom of the stratum had not been reached when digging had to be halted at -2.60.

Extending from northeast to southwest across Trench U (Fig. 7), and probably once part of a house, is a wall, UE, which is 0.40 m. thick and is built of two courses of irregular flattish pieces of limestone; it rests at -2.60 and is 0.30 m. high. On its northwest side, habitation deposits were found between -2.60 and -2.30. The covering stratum, between -2.30 and -2.20, consisted of earth and debris.

POTTERY

Representative sherds found between -3.40 and -2.40 in Trench S are described here to supplement the account of the pottery of Phase IB3 in Trench R. The pottery from corresponding deposits in Trenches T and U does not call for separate description.

FINE BURNISHED WARE

Bowls (Fig. 15): The most common shape, with incurving rolled rim, is consistently represented; six rim fragments are illustrated. **535**; at rim, a plain horizontal pierced lug. **536** (also

in Pl. 76); dark gray; a relatively long (0.055 m.) plain horizontal pierced lug is set well below rim. **537**; reddish gray; vestige of horizontal pierced lug low on side. **538-540** (**538** and **540** also in Pl. 76). Cf. **401-408**, **501-508**, **601-607**, **637-640**.

A broader thickening appears on the inner side of two rim fragments: **541**, Fig. 15 and Pl. 76; dark gray, mottled and streaked with yellowish tan; coated with slip, well burnished; original diameter (est.) at least 0.30 m. **542**, Fig. 15 and Pl. 76.

Three bowls with slightly thickened shoulder

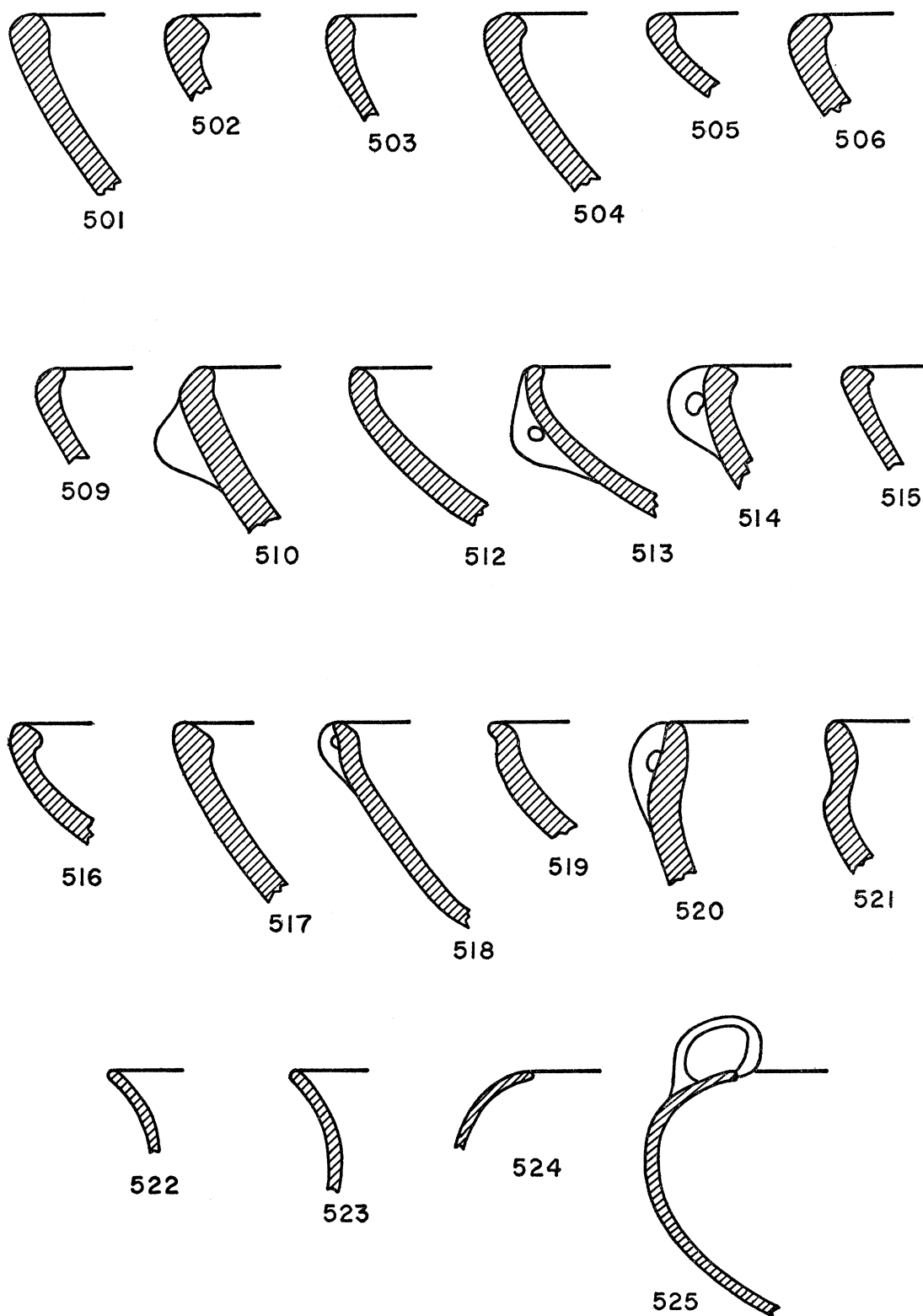


FIG. 14. Pottery (fine) of Phase IB3, from Trench R. Scale 1:2.

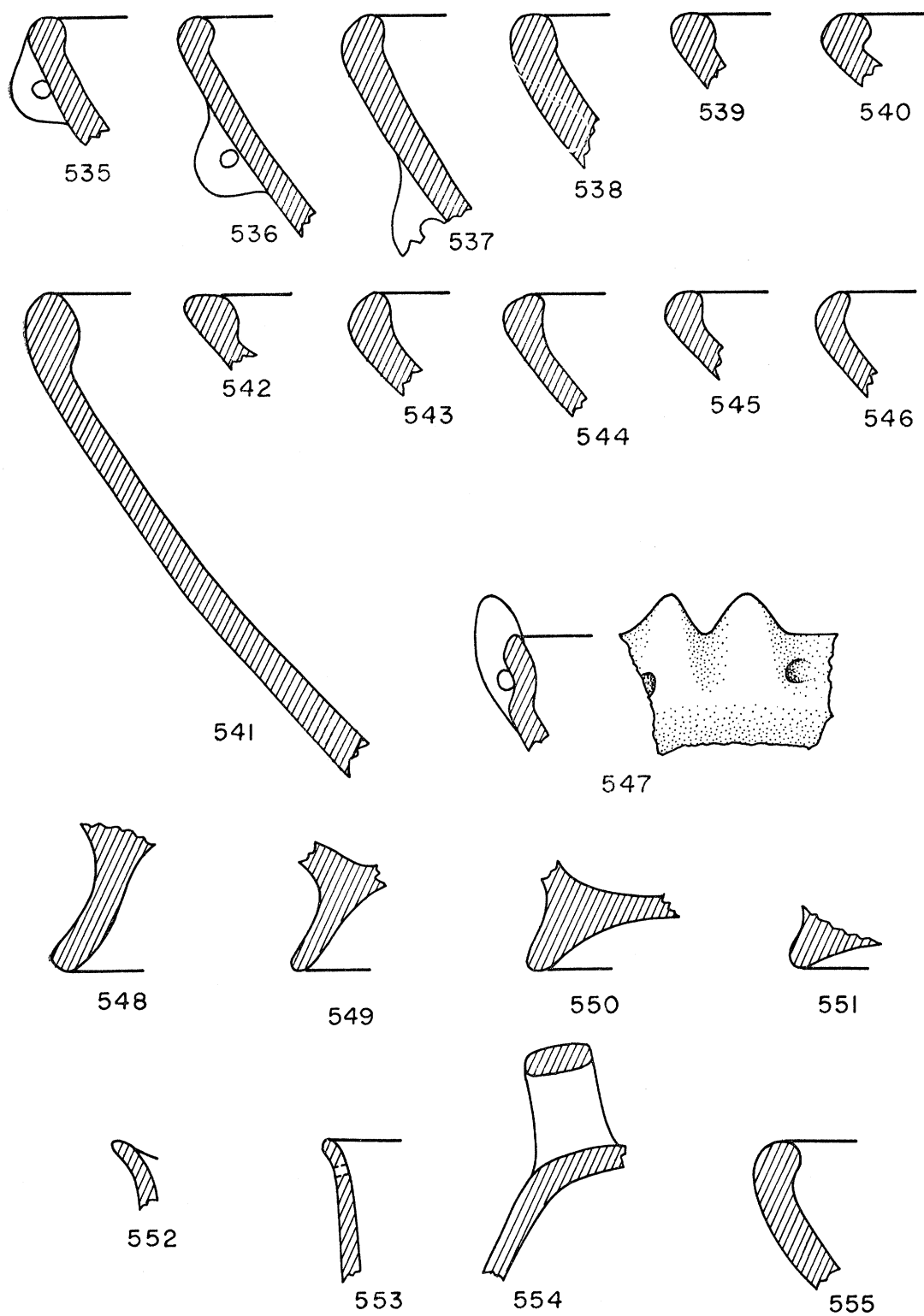


FIG. 15. Pottery (fine) of Phase IB3, from Trench S. Scale 1:2.

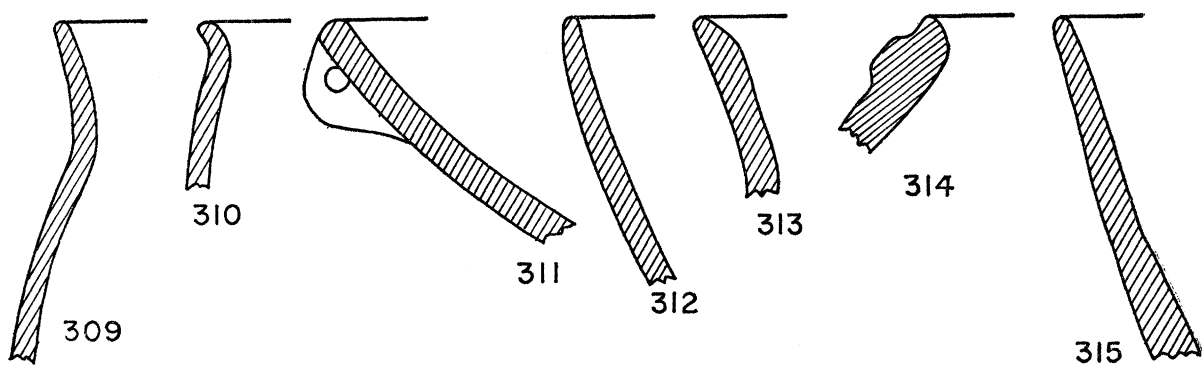


FIG. 16. Pottery (semicoarse and coarse) of Phase IB1. Scale 1:2.

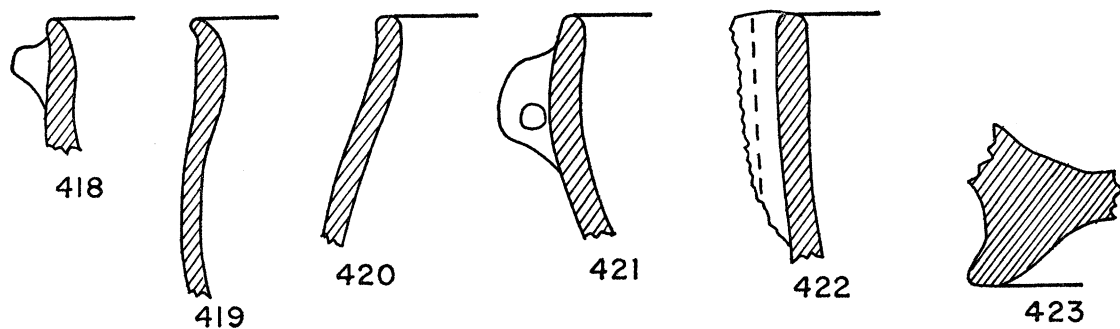


FIG. 17. Pottery (semicoarse and coarse) of Phase IB2. Scale 1:2.

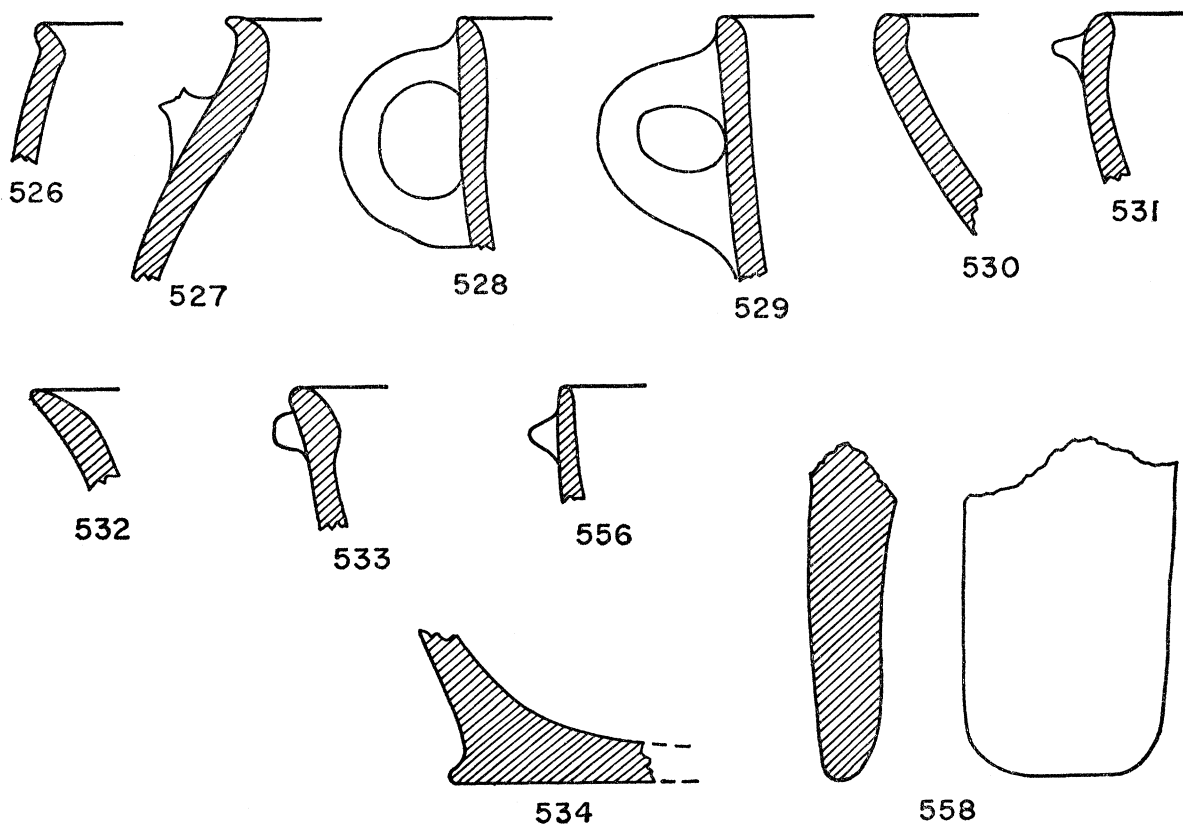


FIG. 18. Pottery (semicoarse and coarse) of Phase IB3. Scale 1:2.

are represented by rim fragments: **543-545**, Fig. 15; cf. **406**, **611-617**, **633**, **651-659**.

The rim of **546**, Fig. 15, curves markedly in, but is not rolled; cf. **304**, **509**, **609**; a bowl with markedly incurving rim, of Late Chalcolithic 3 at Beycesultan (*Beycesultan* I, p. 107, fig. P.9: 7), is perhaps distantly related.

A fragment with a slightly concave rim, **547**, Fig. 15 and Pl. 76, has a horizontally pierced lug, which is decorated with two rounded vertical ridges terminating in knob-like projections above the rim; for rim profile, cf. **521**, **660**; for another knobbed lug and a reference to a possibly related piece at Emborio, see **409**. Paired rim projections, regularly above lugs, continue to occur occasionally on bowls of shape A6 in Troy I, and somewhat similar plastic decoration is well known at Tigani and certain other sites.

Pedestal bases, Fig. 15: **548**, one quarter of a hollow pedestal; buff; poorly shaped and finished; concave, flaring towards lower edge, differing in this respect from the usually plain spreading shape that is seen in the other examples listed here. **549**, fragment of a hollow pedestal; cf. **413**. **550**, also in Pl. 76, and **551**; fragments of two low hollow pedestals.

Jug: **552**, Fig. 15; fragment of obliquely rising, flaring lip; cf. **522**, **523**, **621**.

Jar or jug: **553**, Fig. 15 and Pl. 76; fragment of shoulder, neck, and slightly flaring rim; both surfaces coated with slip, burnished; string hole near rim.

Jar or lid: Fragment, **554**, Fig. 15 and Pl. 76; dark gray; flat loop handle, with part of shoulder of a jar (cf. **623**) or top of a lid; the handle may be an ancestor of oblique ('lunate') loop handles such as characteristically occur on jars of Troy shape C4 (cf. **417**, **628**, **822**) and also on lids of Troy shape D9 (see remarks on an unnumbered fragment of a lid of Phase IC2, Trench S, p. 353 below).

RED-SLIPPED WARE

A small number of fragments. The only distinctive one, **555**, Fig. 15 and Pl. 76, has an incurving rolled rim, and is evidently from a bowl of the shape most common in Fine Burnished Ware (cf. **501-508**, **535-540**); a drilled hole (shown in plate only) indicates ancient repair.

SEMICOARSE SMOOTHED WARE

Three fragments are illustrated. **556**, Fig. 18; a little below rim, a decorative, nearly conical protuberance. **557**, Pl. 76; grayish tan; rim with vertical, flat loop handle; the profile is like that of **528**. **558**, Fig. 18 and Pl. 76; found in Trench S; mottled light brown and gray; broad leg, with nearly rectangular, flattish outer surface and virtually straight sides; two legs of essentially the same form are mentioned in the account of this ware in the next phase in Trenches S and T; such legs presumably belonged to tripod cooking pots.

COARSE WARES

Generally as in Trench R, Phase IB3.

COPPER

Pin(?), **559** (inv. no. K-33), Pl. 71; from Trench U; L. pres. 0.03, Th. 0.003; slightly bent; extremely corroded.

STONE

Celt, **560** (inv. no. K-34), Pl. 70; from Trench S; L. 0.054, W. 0.03, Th. 0.0013; black and white speckled stone; one face of cutting edge is beveled and polished. Cf. shape of **316**, **424**.

Blade, **561** (inv. no. K-14), Pl. 70 (side view); from Trench S; L. 0.054, W. 0.01, Th. 0.002; gray-black obsidian, probably Melian; trapezoidal in cross section; two cutting edges. Cf. **425**.

Pointed implement, inv. no. K-55, not illustrated; from Trench S; L. 0.056, W. 0.021, Th.

0.012; grayish white flint, with a few reddish streaks; one side is roughly flat, and the other has two longitudinal facets of unequal width; both edges sharp; shaped somewhat like Troy 35-300 (*Troy* I, p. 97 and fig. 217). A fragment of another implement of the same kind of flint was found near by; L. pres. 0.032, W. 0.02,

Th. 0.005; only one edge is sharp, and point is missing.

BONE

Awl, 562 (inv. no. K-44), Pl. 71; from Trench T; L. 0.081, W. 0.018, Th. 0.004; piece of split rib of *bos* or *cervus*, with good worked point; for shape, cf. 664, 727.

PHASE IB4

TRENCH R

The strata of Phase IB4 in the southern half of Trench R had a total thickness of 0.80 m., from -2.20 to -1.40 (Fig. 4). Between -2.20 and -2.15 there was yellow clay, possibly the original floor of a house, but no associated walls were uncovered. Overlying the clay was a dark layer of habitation deposits, up to the level of -1.80. Next above was a thirty-centimeter stratum of debris, including some charred matter and a few lumps of burnt earth, and finally there was a ten-centimeter layer of gray ashy earth, reaching the level of -1.40. Down to -1.60, these layers showed some signs of having been disturbed in the time of Kum Tepe II.

The northern part of Trench R was not tested for deposits of IB4, the area being largely occupied by a stone-lined pit of Kum Tepe II.

SHELLS AND ANIMAL BONES

The shells and animal bones of all phases of Subperiod IB in Trench R have been grouped together, along with shells and bones of this subperiod from the other trenches. Species identified: *Ostrea plicata*, *mytilus edulis* (both numerous); *murex trunculus* (sparse). Large fish, probably *thunnus*. *Capra/ovis*, *bos*, *sus* (probably wild), *cervus dama* (all sparse). Bird.

POTTERY

The following account is based on some six hundred sherds from strata lying between -2.20 and -1.60 in the southern part of Trench R.

FINE BURNISHED WARE

Predominantly dark gray, often tinged or streaked with brown or olive green; occasionally almost pure black. Tan and brown sherds go on decreasing in number.

The incurving rolled rim is still favored for bowls, but begins to give way to variant forms, particularly a more or less angular profile that is to be common in the next phases and in Early Troy I.

Deposits of this phase yielded the latest Kum Tepe examples of horizontal pierced lugs set on the sidewalls (i. e. well below rim) of bowls.

White-painted decoration is seen on a fragment of a jug (622).

Bowls with incurving rolled rim: Pieces of about 30 were collected; 7 are illustrated. 601, Fig. 19 and Pl. 75; light tan, apparently discolored by fire; fragment of a large deep bowl; inward curve of sidewall and rim is more pronounced than in the preceding phases; one badly chipped oblique end of a prominent horizontal pierced lug is preserved. 602, Fig. 19; moderately dark gray; a horizontal pierced lug is set well below rim (cf. 639-641, 646, 648-650). 603-607, Fig. 19 (also see Pl. 75

for 605-606). Cf. 637-640, as well as 501-508, 535-540.

Variations of the rim profile are illustrated by fragments of three different bowls, Fig. 19: 608, with broader thickening on inner side of rim; cf. 541, 542, 641-643, 702, 703. 609, with incurving, slightly thinned lip; cf. 509, 546. 610, with heavy offset band on inner side of rim; cf. 514-517, 644-648, 704-709.

Bowls with sharply rounded or angular shoulder, in-turning rim, and thinned or sometimes merely rounded lip first appear as a distinguishable group in Phase IB4. More than a dozen bowls of this kind are represented by fragments from Trench R; seven are shown: 611-617, Fig. 19. The thickness of the shoulder of 611-613 is greater than one would expect in later examples. Plain (i. e. straight) tubular lugs such as that of 617, set horizontally on outside of rim, continue to be found in the next phases at this site and in the initial phases of Troy I. For general comparison with 611-617, see 633 and 651-659; for earlier forms, see 543-545. The shape is discussed further under Phase IC1, below.

Lugs, probably of bowls (Pl. 75): 618-620; three horizontal pierced lugs, with portions of sidewalls of vessels; the lugs vary a little in form, 618 being virtually plain, and 619, 620 slightly concave (cf. 410).

Bottoms, probably of bowls: One flat, two slightly hollowed.

Jugs: Fragment, 621, Fig. 19 and Pl. 75; olive gray; concave neck, with stub of loop handle at rim; cf. 522, 523, 552. 622, Pl. 77; fragment, probably of a globular jug; on shoulder, just below neck, there is part of a pattern in dull white paint, consisting of a group of four oblique lines (part of a chevron pattern?); cf. 222a.

Jars (Fig. 19): 623; reddish tan; fragment of nearly biconical body of a small jar; cf. Troy shape C24 (e. g. Troy I, fig. 230: 37.983, of

Early Troy I). 624, 625; pieces of spreading, slightly concave necks, probably of jars; the body of 624 was apparently globular. 626, 627; fragments of straight collar-necks; necks of this type are also found in Kum Tepe IC (see 822), as well as in the initial phases of Troy I; for an earlier, inward-slanting neck, see 307.

Handle: 628, Pl. 75; core tan to gray, surface deep red; streakily burnished; part of a fine large oblique loop handle of a type that continues to occur in Kum Tepe IC (cf. 822) and in Early Troy I; the derivation is uncertain, but see 554.

SEMICOARSE SMOOTHED WARE

Numerous fragments, often thinner than those of coarse wares; the colors generally range from gray to dusky tan. Pieces representing four different vessels are illustrated. 629, 630, Fig. 21; rim fragments with profiles largely similar to those of the ordinary cooking pots of Kum Tepe IC and Early Troy I (cf. Troy I, pp. 55 and 75-76, shape D24); cf. 526. 631, Fig. 21 and Pl. 77, is decorated with a vertical plastic ridge that ends at the rim; ridges of this style occur on cooking pots occasionally as late as Troy Ia (*ibid.*, fig. 235: 24), but begin then to be supplanted by ridges terminating in small projections above the rim. 632, Pl. 77; vestige of sidewall, with upper part of a tapering leg having a flattish outer surface; a few other tapering legs were also found; the type seems to be new in this phase, but occurs regularly in Kum Tepe IC and Early Troy I (*ibid.*, pp. 75-76); similar legs as well as some of the older, more or less rectangular type were found in deposits of Phase IB4 in Trenches S and T (see p. 344 below).

COARSE WARES

The sherds in this category are more numerous than those of fine fabric, but only a few shapes have been identified.

Bowls: 633, Fig. 21; gritty, pebbly biscuit;

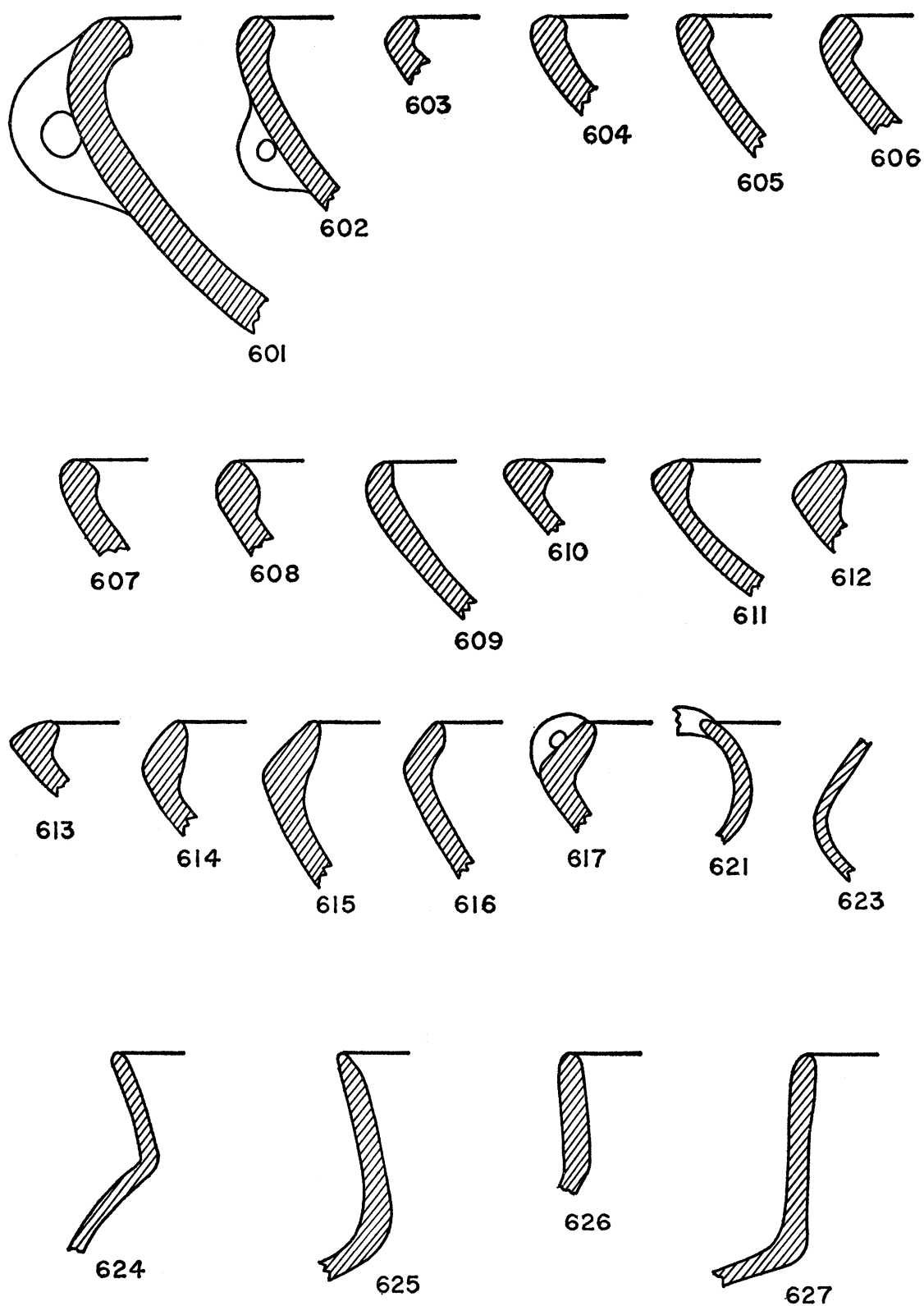


FIG. 19. Pottery (fine) of Phase IB4, from Trench R. Scale 1:2.

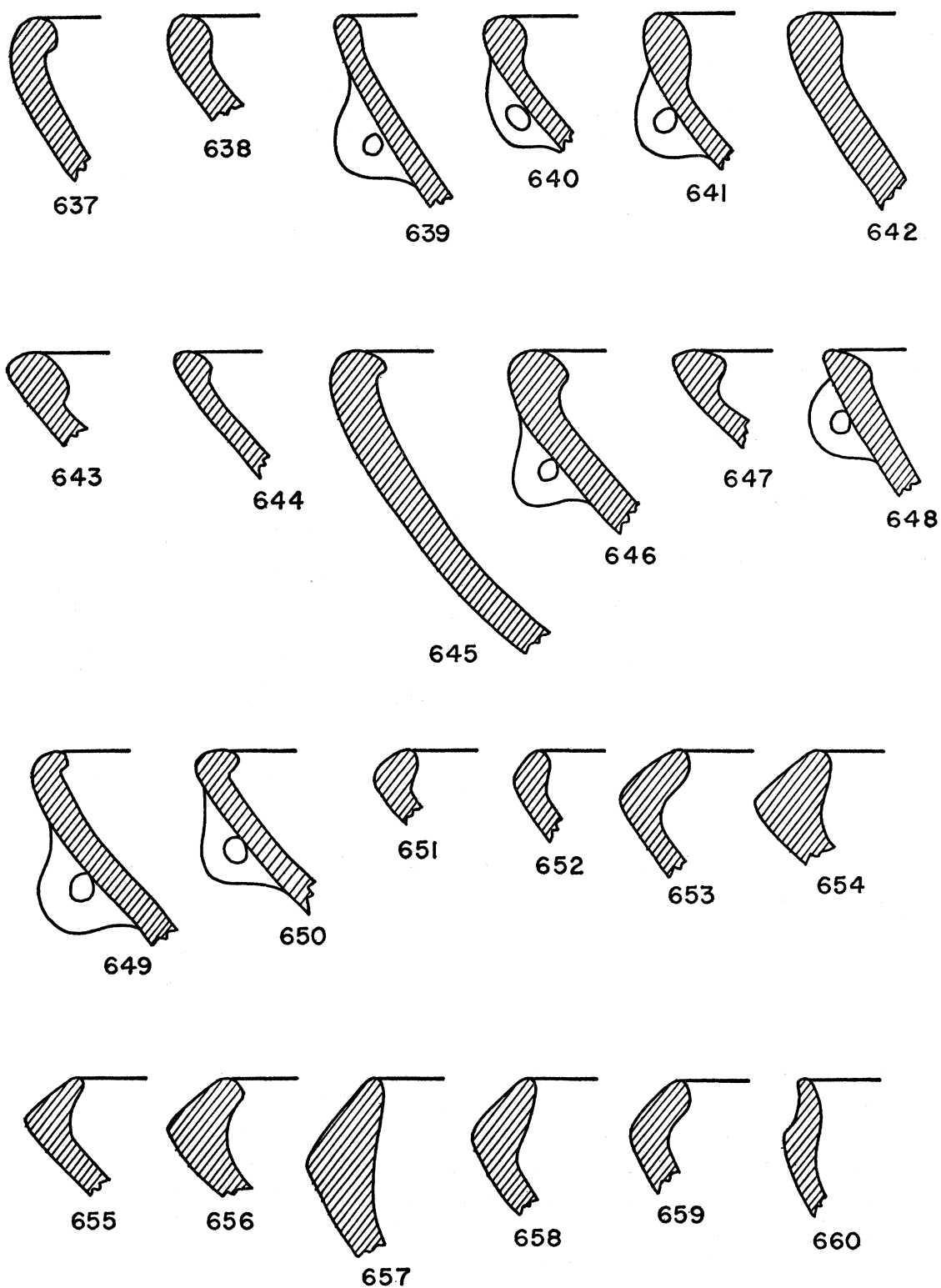


FIG. 20. Pottery (fine) of Phase IB4, from Trenches S-U. Scale 1:2.

coated with slip, smoothed; brick red; fragment of sidewall, sharply rounded shoulder, and in-turning rim; similar to **612** in profile, but larger. Not illustrated: Low, hollow pedestal base, probably of a bowl.

Basin(?): Rim fragment, **634**, Fig. 21; exterior roughly finished; interior surface streakily smoothed.

Cooking pot or open jar: **635**, Fig. 21; exterior roughly finished; inner surface smoothed, worn; fragment of side, with prominent loop handle rising a little above rim.

TERRACOTTA

Whorl, **636** (inv. no. K-10), Pl. 71; found at -1.70 in Trench R in disturbed stratum of burnt debris, and possibly intrusive. H. 0.021, D. 0.024; coated with slip, burnished; dark gray; unevenly biconical. Terracotta whorls occur in Kum Tepe IC, as well as in Troy I from the very beginning of that settlement (cf. *Troy I*, pp. 49-50). In view of stratigraphical uncertainty about the original context of **636**, additional evidence would be needed to prove that whorls were known at Kum Tepe before Subperiod IC.

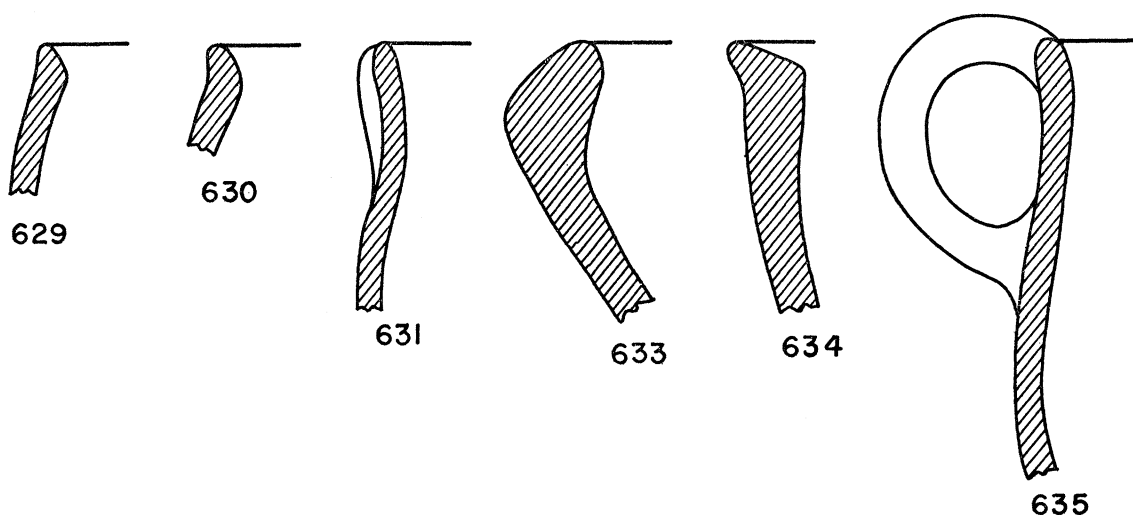


FIG. 21. Pottery (semicoarse and coarse) of Phase IB4. Scale 1:2.

TRENCHES S-V

In Trench S (Fig. 5), habitation deposits roughly contemporaneous with those of Phase IB4 in Trench R lay between -2.40 and -2.00; they were associated with a wall, SF, about 0.60 m. thick, probably part of a house; the masonry is preserved to a height of 0.60 m. A stratum of brown earth, most likely from the disintegration of a mud-brick superstructure, covered the habitation deposits to a depth of 0.20 m., reaching the level of -1.80 and coming up to the top of the masonry.

In Trench T (Fig. 6), habitation deposits of approximately the same time lay between -2.20 and -2.00. Towards the north, traversing the trench from northeast to southwest, is a single course of a wall, TD, 1.10 m. thick, built of moderately large, flattish stones. To the south, and only partly uncovered, is a rectangular corner, TE, built of similar stones; without further excavation, one cannot say whether

this is part of a rectangular platform within the building, or of a wall next to a doorway. Lying between -2.00 and -1.60 , and covering TD and TE as well as the habitation deposits, was a stratum of earth and debris, apparently from the disintegration of the upper part of the building.

In the southern part of Trench U (Fig. 7), there was a rude stone construction, UD, about 0.20 m. high, with its top at -2.00 ; this was probably a platform within a house. Habitation deposits starting at -2.20 had risen gradually and then spread over the top of the stonework, ultimately reaching the level of -1.60 . The uppermost stratum of this phase, lying between -1.60 and -1.20 , contained debris probably from the collapse of a superstructure.

In Trench V, deposits of about the same time had barely been uncovered, at -2.60 , when digging had to be stopped.

POTTERY

The sherds selected for description are mostly from habitation deposits of this phase in Trenches S and T.

FINE BURNISHED WARE

Bowls with incurving rolled rim: Fragments of several dozen; four are illustrated. **637-640**, Fig. 20; cf. **601-607**. **639** and **640** each have a horizontal pierced lug on sidewall (cf. **602**, **641**, **646**, **648-650**).

Variations of the rim profile are seen in fragments of eight bowls. **641-643**, Fig. 20; the thickening is relatively broad (cf. **541**, **542**, **608**, **702**, **703**); on the sidewall of **641** there is a plain horizontal tubular lug 0.055 m. long. **644-648**, Fig. 20; the inner edge of the thickening tends to be angular (cf. **514-517**, **610**, **704**, and **705-709**); the plain horizontal tubular lug on the sidewall of **646** is 0.055 m. long, and that on the sidewall of **648** is shorter, as is more common.

Other variations of the rim profile are shown by **649**, **650**, Fig. 20; the lip turns in sharply; the horizontal pierced lug on the sidewall of **649** is slightly concave and unusually long (0.07 m.), and that of **650** is plain (i. e. straight) and shorter.

Bowls with sharply rounded or angular shoulder, in-turning rim, and thinned or some-

times merely rounded lip are represented by a moderate number of fragments, as in Trench R; nine rim pieces, mostly from Trench T, are illustrated: **651-659**, Fig. 20; for further remarks, see **611-617**.

Bowl with concave rim: Fragment, **660**, Fig. 20; gray; the rim is low, rising from a slight angle, which is high on the sidewall; the greatest thickness is at the angle; for earlier, slightly concave rims, see **409**, **518-521**, **547**.

Comment: The shape is uncommon at Kum Tepe, and has not been recorded from Subperiod IC at this site, but there is a good example of it, with a distinctly concave rim and a vertical handle, from the end of the Early Subperiod at Troy I (Troy I, 61-62, shape A15, fig. 266: 1), whose date must be near the close of Kum Tepe IC. The general shape here discussed is somewhat more common in the first period at Poliochni (e. g. *Poliochni* I, ii, pl. VI, c, j, k, and r-u), sometimes having one or two vertical handles (*ibid.*, pl. VII, f) resembling that of the above-mentioned example of the shape from Early Troy I. The carinated bowls that begin to appear at Beycesultan in Late Chalcolithic 3 (*Beycesultan* I, p. 93) also seem to be related, though only distantly, and in Late Chalcolithic 4 they sometimes have vertical handles (*ibid.*, pp. 95 and 97, fig. P.11: 6-7), which seem analogous to the above-mentioned examples from Troy and Poliochni.

Jug: **661**, Pl. 76; found in Trench S; H. pres. 0.074, D. 0.077; grayish tan mottled with dark gray; lower part of small jug with globular body, slightly flattened bottom; remnant of loop handle rises from shoulder.

Jars, not illustrated: Part of globular body of small jar, with plain vertical pierced lug just above middle; similar lugs occur in Troy I on small jars of shapes C27 and C31 (*Troy I*, pp. 71-72). Oblique loop handle, probably of a jar; red; similar in shape to **628**.

SEMICOARSE SMOOTHED WARE

Legs, probably of tripod cooking pots: The nearly rectangular form already seen in **558** (Fig. 18 and Pl. 76) is represented in Phase IB4 in Trenches S and T by three pieces (unnumbered); the best preserved, 0.105 m. high, diminishes in width from 0.055 m. at the top of its flattish outer surface to 0.042 m. at the bottom. There are also a few legs of tapering form (see remarks on this ware under Trench R, above).

COARSE WARES

Many fragments, as in Trench R.

COPPER

Awl or drill(?), **662** (inv. no. K-30), Pl. 71; found in upper layer of debris of this phase in Trench S, and possibly assignable to the next phase; L. pres. 0.093, D. 0.003; one end worn or broken; shaft square in section, tapering towards each end; may originally have been pointed; for square-shafted copper implements

of Troy I, likewise tapering, see *Troy I*, fig. 215: 37-743, 37-748, and 37-749.

STONE

Button, **663** (inv. no. K-15), Pl. 70; found in upper layer of debris of Phase IB4 in Trench S, and possibly assignable to the next phase; D. 0.025, Th. (av.) 0.01; dark blue stone; annular; the upper and lower surfaces, though flat, are not exactly parallel to each other. For similar objects, see *Troy I*, fig. 363: 37-493, of Troy IId; cf. Ch. Tsountas, *Αἱ προϊστορικαὶ ἀκροπόλεις Διμηνίου καὶ Σέσκλον*, Athens, 1908, col. 338 and pl. 43: 26-29, from Dimini.

Scraper, inv. no. K-54, not illustrated; from Trench S; L. 0.076, W. 0.055, Th. 0.021; milky white flint; one side more or less flat, not retouched; the other side has two rudely chipped longitudinal facets, the upper being broad, and the lower narrow and irregularly retouched to form a scraping or cutting edge; possibly a relic of earlier times.

BONE

Awl, **664** (inv. no. K-7), Pl. 71; from Trench U; L. 0.077, W. 0.019, Th. 0.005; worked from shoulder blade of *bos* or *cervus*; both surfaces flat and smooth; good point. Cf. **562**, **727**.

TERRACOTTA

Disk, not illustrated; from Trench S; D. 0.042-0.045; crudely made from a potsherd of Fine Burnished Ware; unperforated; for comments on unperforated disks, see Phase IA1, Trench R.

SUBPERIOD IC

Layers of this subperiod having an average total thickness of one meter or more were found in all trenches. Two successive phases are represented; there are possibly slight differences from one trench to another with regard to the date of the phases, but there is certainly a general parallelism. In three of the trenches (R, S, and T), there were signs that the layers were disturbed in the time of Kum Tepe II.

PHASE IC1

TRENCHES R-V

In the southern half of Trench R (Fig. 4), habitation deposits of Phase IC1 lay between -1.40 and -1.15 . They were covered by earth and debris apparently from the ruin or leveling of a building, though no walls of this phase lay within the excavated space; this layer reached the level of -0.70 . Both layers showed considerable indications of disturbance, and contained intrusive potsherds of Kum Tepe II.

In Trench S (Figs. 3 and 5, Pl. 69, d), walls SB, SC, and SD, resting at -1.80 upon debris of the preceding phase and standing about one meter high, evidently are part of the rectangular northwest end of a house of Phase IC1; the interior is about 4.75 m. wide; floor deposits lay between -1.80 and -1.60 . The walls are 0.50 m. thick, built of unhewn flattish stones packed with yellow clay. Traces of a light reddish brown clay coating could be seen on the walls at the time of excavation. Extending into the room from the northeast wall, but only partly uncovered, is a low rectangular platform, SE, which probably served as a couch (cf. *Troy I*, pp. 93-94); built of stones mortared with clay, it rests on the original earthen floor of the house, and is 0.30 m. high; the middle of the top is formed of small unhewn flattish stones, mostly set on their sides; they are bordered by two courses of larger stones, laid flat; originally a clay coating concealed the stonework. The platform and the floor deposits alongside were covered by a thick stratum of earth and debris, which reached the level of -0.80 and consisted apparently of disintegrated remains of the upper part of the building. Intrusive potsherds of Kum Tepe II were found as low as -1.20 .

Resting at -1.60 and traversing Trench T (Figs. 3 and 6) at a right angle to each other are two walls, TB and TC, that probably intersect a short distance to the east, presumably forming a corner of a house. They are 0.90 m. high and 0.60 m. thick, being built of unworked pieces of limestone packed with yellow clay. Habitation deposits lay between -1.60 and -1.40 ; the overlying two strata, from -1.40 to -1.20 and from -1.20 to -0.70 , consisted respectively of brown earth and of earth mixed with what may have been building debris. Intrusive potsherds of Kum Tepe II were found as low as -1.20 in this trench, as in S.

A wall, UC, extending from southeast to northwest across the western part of Trench U (Figs. 3 and 7), and probably belonging to a house, rests at -1.20 upon debris of the preceding phase; its possible southeastward continuation was not investigated, since the eastern part of the trench was not dug to the same depth. The excavated portion of the wall is 0.95 m. high and 0.65 m. thick, built of small to moderately large pieces of limestone mortared with yellow clay. Habitation deposits lying between -1.20 and -1.00 were identified. Covering them was a stratum of

brownish earth, about 0.40 m. thick, reaching the level of -0.60; this stratum probably resulted from the disintegration of a mud-brick superstructure.

In Trench V, the layer of this phase was below -1.20 at the southern side of the trench, and sloped down towards the north. Architectural remains were not found. The principal discovery was a burial.

Burial V1. Between the levels of -2.30 and -2.10 in the northern part of Trench V lay the skeleton of a young man (see footnote 6) buried in contracted position, the head being at the north and the body turned towards the right. The burial was apparently a simple inhumation.

POTTERY

The following account is based mainly on pottery recovered from undisturbed deposits in Trenches S, T, V.

FINE BURNISHED WARE

The fabric changes very little from that of the preceding phase, and is indistinguishable from that of the fine ware of Early Troy I. The color is predominantly dark gray, often with tinges of olive green, sometimes of brown; black also occurs; red and lighter colors such as tan are uncommon.

The shapes are virtually the same as those occurring in the initial phases of Troy I, and their descent from shapes observed in the preceding phases at Kum Tepe is for the most part obvious. Bowls continue to be very common.

Incised decoration (**705-709**, **717**, **718**, **720**, **724**, **725**) first appears in this phase.

Cup: **701**, Fig. 22; from Trench V; H. 0.04; a single fragment, nearly one third of a small cup; black; flat bottom, slightly convex spreading side, plain rim. Cups of this general type occur sporadically in Troy I (cf. *Troy I*, p. 58, shape A5, fig. 264: 29).

Bowls with convex thickening along inner side of rounded rim: Fragments, **702**, **703**, Fig. 22; from Trench S; probably variants of the common rolled rim of Subperiod IB; cf. **541**, **542**, **608**, **641-643**; also cf. a sherd from Hanay Tepe (*Praeh. Zeit.* 23, 1932, p. 115, fig. 2: 1).

Bowl with flat-topped rim: Fragment, **704**, Fig. 22; from Trench V; inner edge of rim is offset; cf. **705-709**; also cf. **610**, **647**, and a sherd from Hanay Tepe (*ibid.*, fig. 2: 3). The rim of bowl 36.739 of Troy Ia (*Troy I*, fig. 224) is somewhat similar but is slightly flanged on the exterior.

Bowls with thickened, usually offset band along inner side of rim (Pl. 77): Fragments of at least a dozen, including **705** (profile in Fig. 22) and **706-709**; the thickening becomes perceptible immediately below the thin rounded lip, and increases towards the lower edge of the rim band. In most instances the rim band bears incised decoration, originally no doubt white-filled, but the filling is not always preserved; the motifs include opposing groups of slanting lines (**705**, **706**), crude X's (**707**), and crosshatching (**708**, **709**). The rim profiles and incised decoration of bowls of shape A6 of Early Troy I (cf. *Troy I*, pp. 58-59 and figs. 253-257) are closely similar to those of this shape in Subperiod IC (i. e. this phase and the next) at Kum Tepe; cf. **801-811a-c**. The shape may well have developed from some of the thickened rim forms of the preceding phases, e. g. **514-517**, **610**, and **664-648**, all undecorated. It is quite likely that the introduction of incised decoration, approximately at the beginning of Subperiod IC, motivated the potters to improve the shape of the rim band; certainly its developed form, as exemplified by **705**, is better suited than any of the earlier forms to display decoration.

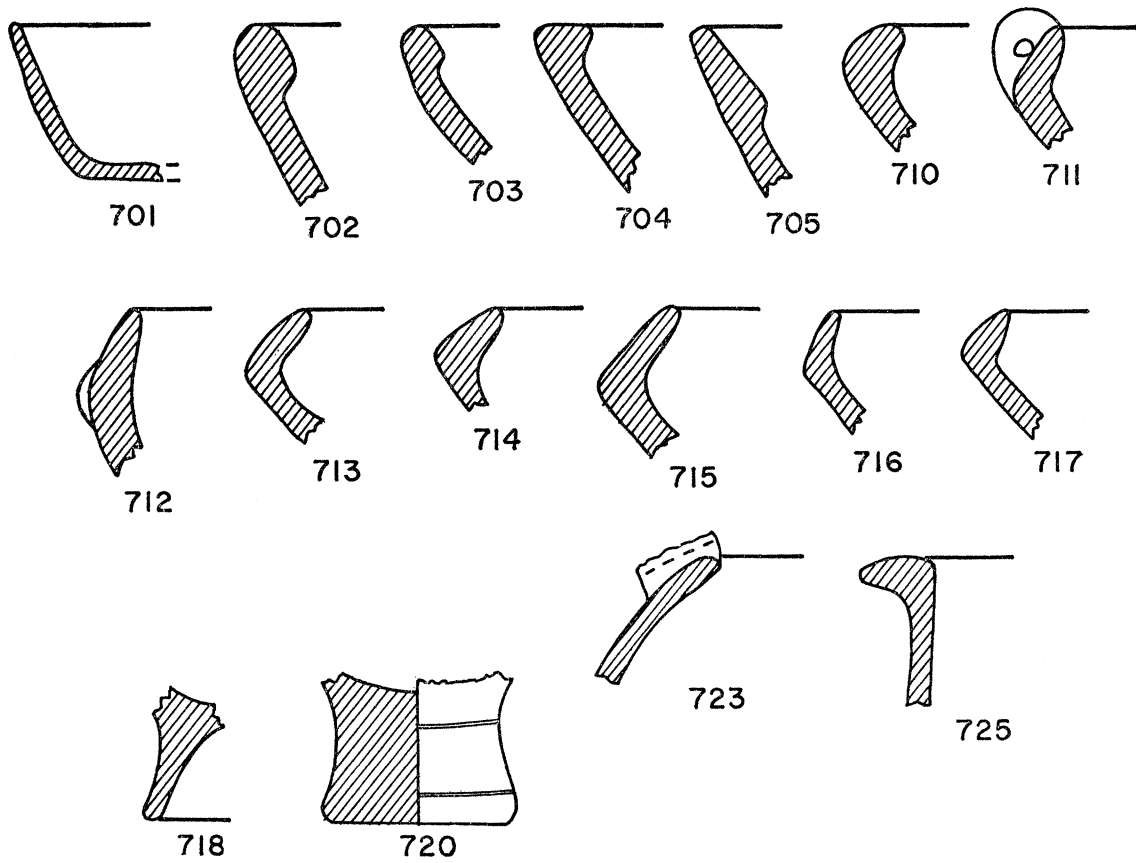


FIG. 22. Pottery (fine) of Phase IC1. Scale 1:2.

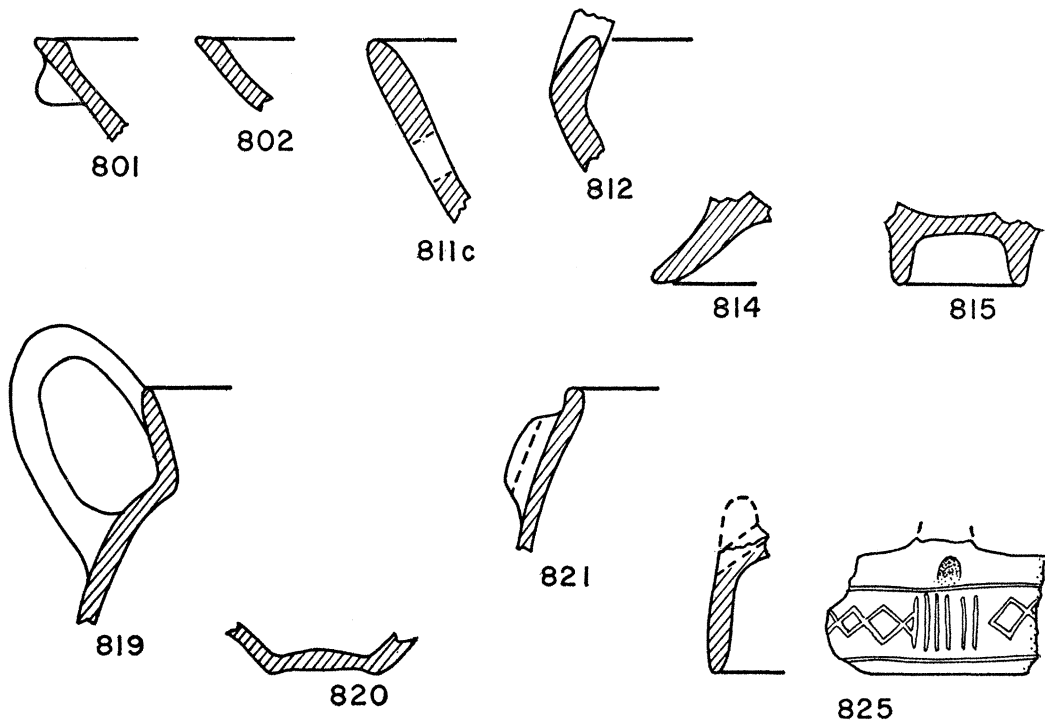


FIG. 23. Pottery (fine) of Phase IC2. Scale 1:2.

Bowls with sharply rounded or angular shoulder, in-turning rim, and thinned or rounded lip: Fragments of nearly one hundred, but no restorable pieces. For examples of the preceding phase, see **611-617**, **633**, **651-659**. In Phase IC1, the shoulder is usually more angular than before, and the profiles closely resemble those seen in Early Troy I (cf. *Troy I*, pp. 60-61, shape A12, and figs. 258-261). Eight fragments are illustrated in Fig. 22: **710**, with rounded shoulder, recalling the earlier form. **711**, with plain horizontal pierced lug (cf. **617**); ten more lugs of the same kind were found; lugs of this shape are common also in the initial phases of Troy I (e. g. *loc. cit.*, figs. 235: 1, 260: 8). **712** (also in Pl. 77), with low protuberance on shoulder; the same kind of plastic decoration occurs on bowls of this type at the beginning of Troy I (*ibid.*, fig. 260: 6). **713-717**, with angular shoulder. On exterior of **717**, as shown in Plate 77, the zone between angle and lip is decorated with incised cross-hatching; there are a few instances of similarly placed, incised decoration, using other motifs, on bowls of this type in Early Troy I (*ibid.*, pp. 88, 105, 112, and 115).

Pedestal bases; slightly hollowed bottoms: The pieces listed here probably belong to bowls of the shapes described in the immediately preceding paragraphs. **718**, Fig. 22 and Pl. 77; gray; fragment of a hollow pedestal base; decorated with a broad incised wavy line resembling an elongated letter S. **719**, Pl. 77; small piece of a hollow pedestal base, showing part of a round perforation. **720**, Fig. 22 and Pl. 77; dark gray; massive pedestal base with flat undersurface; two white-filled incised horizontal lines encircle the base; no example of this shape has been found in Early Troy I, but cf. a solid-stemmed base of phase Id (*Troy I*, fig. 255); also cf. the heavy solid stem of a vessel in coarse ware of the earliest period at Ayia Irini (Caskey, *Hesperia* 41, 1972, p. 361, fig. 2, A28). Unnumbered: Fragments of five slightly hollowed bottoms of open vessels.

Jugs: **721** (inv. no. K5), Pl. 78; found at -1.75 in floor deposit in Trench S; H. 0.13, D. 0.105; biscuit moderately coarse; coated with a slip, well burnished; surface is crackled; dark brownish red; body globular, bottom rounded (partly restored); on the shoulder there are three low rounded plastic protuberances, including one at each side and one at the front; loop handle nearly oval in section; small, slightly concave neck; the lip flares obliquely to form a spout, but is not so distinctly set off as the characteristic flanged lip of jugs of Troy shape B16 (e. g. *Troy I*, figs. 236: 14, 240: 7); **721** may have been imported, since the color and finish are unusual, and there is no exact parallel to the shape at Troy. **722** (inv. no. K12), Pl. 78; found at -1.00 in Trench U; H. est. 0.12, D. 0.10; marks of burnishing show clearly; mottled olive gray, dark gray, and brown; slightly bulging globular body, rounded bottom; offset, spreading neck, rising to moderately high lip at front (partly restored); vestige of loop handle; for similar spreading necks and slightly bulging bodies, see jugs 36.735, 36.843, and 36.676 of Troy Ia (*Troy I*, fig. 228); cf. **816**. Unnumbered: Fragments of two jugs of the same shape as **722**.

Jugs or jars, not illustrated: Fragment of sidewall of fine dark gray vessel decorated with two low parallel plastic ridges; similar ridges occur on a sherd of Troy Ib (*Troy I*, fig. 237: 15). Fragment of sidewall of another fine dark gray vessel, with groups of three parallel grooves in zigzag or chevron arrangement; the grooves are somewhat like those seen on a sherd of Troy Ib (*ibid.*, fig. 237: 20).

Jar: **723**, Fig. 22; fragment of hole-mouthed jar; D. mouth est. 0.06; fine gray; a partly preserved, prominent vertical tubular lug comes up to the edge of the lip.

Lids: **724** (inv. K13), Pl. 78; from Trench V; H. 0.025, D. 0.06; gray; undersurface flat; edge slightly thickened; top rises concavely to nearly conical knob; four string holes almost

evenly spaced near the edge; the top is decorated with an incised pattern of three groups of radial lines, which occupy three quarters of the area, leaving one quarter undecorated; a decorated lid of similar shape has been found in Troy Ia (*Troy I*, fig. 232, 36.690). Not illustrated: Lid, inv. no. K9, found at -1.00 in Trench U; H. pres. 0.063, D. 0.146; grayish tan; roughly cylindrical, with slightly convex sides and flattish top; the stubs of four oblique loop handles and the base of the central knob are preserved; the shape resembles that of lid 35.642 of Troy Ic (*ibid.*, fig. 231); for a predecessor of lids of this type, see 554.

Handles, not illustrated: One small and one medium-sized oblique loop handle; both are reddish gray. Handles of this type may occur on jars (e. g. 822) as well as lids (cf. inv. no. K9, immediately above).

Pyxides: 725, Fig. 22; from Trench V; two non-joining fragments of one vessel; D. est. 0.12; inner surface as well as exterior coated with slip, burnished; black; side vertical; rim flanged, with nearly flat top; the shape is somewhat different from, and possibly a little earlier than, that of the pyxides commonly found in Early Troy I (cf. *Troy I*, p. 72, C37); on the sidewall, there is a partially preserved incised pattern (not illustrated), bordered at the top (i. e. just below rim) by a horizontal line, below which two intersecting zigzag lines form a series of diamond-shaped figures and adjacent pairs of triangular spaces; in the latter there are decorative impressed dots; the white filling that must originally have existed has left no trace; the incised figures are like those seen on pyxis 35.648 of Troy Ia (*ibid.*, fig. 230), but there the impressed dots are in the diamonds, not in the triangles; comparable patterns occur on a few other pyxides of Early Troy I (*ibid.*, fig. 235: 22, of Ia; fig. 236: 18-19, of Ib; and figs. 230: 33.159, and 265: 16, twin pyxides, approximately of Ic). Unnumbered: Fragment of a small pyxis, from Trench T; black; vestiges of incised decoration on exterior of sidewall;

rim profile similar to that of pyxis 36.677 of Troy Ib (*Troy I*, fig. 230). A fragment of the offset lower edge of another pyxis of the same type, in fine black fabric, with a string hole near the edge, was found in Trench V.

SEMICOARSE SMOOTHED WARE

Fabric as in Early Troy I (see *Troy I*, p. 55, "intermediate" ware). In Kum Tepe IC1, fragments of tripod cooking pots, resembling those of Troy shape D24, occur regularly; the legs are usually of the tapering form that first appeared in Phase IB4. Nevertheless, a single broad-ended, nearly rectangular leg, similar to 558 (Fig. 18 and Pl. 76), was discovered in floor deposit of Phase IC1 in Trench S; legs of this older form have not been found in Troy I.

COARSE WARES

Fragments more numerous than those of the finer wares, but the shapes are difficult to identify.

COPPER

Pin, 726 (inv. no. K-31), Pl. 71; from Trench V; L. pres. 0.076, D. 0.002; shaft bent; good point at one end, other end missing.

STONE

Celt, inv. no. K-57, not illustrated; from Trench U; L. 0.11, W. 0.05, Th. 0.036; speckled dark gray; both ends worn.

Grinder, inv. no. K-58, not illustrated; from Trench U; H. 0.013, Th. 0.07 to 0.085; speckled light gray; roughly conoid, with blunt top and somewhat rounded, worn bottom; shape similar to that of a grinder of Troy Ia (*Troy I*, fig. 218: 35-159).

BONE

Awls: 727 (inv. no. K-6), Pl. 71; found in Trench U; point missing; L. pres. 0.07, W. 0.025, Th. 0.003; from rib of *bos*; for shape, cf. 562, 664, and bone implements of type 5 at

Troy (*Troy* I, p. 28 and fig. 126). **728** (inv. no. K-13), Pl. 71; found in Trench S; L. 0.096, W. 0.012, Th. 0.005; from extremity bone of moderately large animal, probably *cervus*; good point; surfaces smooth and rounded; cf. bone implements of Troy type 1.

Blunt implement, **729** (inv. no. K-39), Pl. 71; from Trench V; L. 0.097, W. at head 0.037, W. near narrow end 0.013, Th. 0.01; ulna of *bos* or *cervus*; narrow and worn smooth, slightly rounded; implements of this kind may have been used for smoothing and burnishing

pottery; cf. **141**; also cf. *Troy* I, fig. 220: 36-412 and 36-420.

TERRACOTTA

Whorl, **730** (inv. no. K-27), Pl. 71; from Trench R; H. 0.026, D. 0.029; tannish clay; biconical. With the possible exception of **636**, whose date is not entirely certain, **730** is the earliest whorl found at Kum Tepe; cf. **834-843**. At Troy, whorls of biconical shape (*Troy* I, fig. 128, type 15) are common throughout the early phases of the First Settlement.

PHASE IC2

TRENCHES R-V

In the southern part of Trench R, a partly disturbed layer of habitation deposits of IC2, the last phase of Kum Tepe I, was found between -0.70 and -0.60 (Fig. 4). Besides a good deal of carbonized matter, the deposits contained numerous fragments of pottery lying upon what seemed to have been a floor of pressed earth. No walls were uncovered, however, within the excavated area. Above the level of -0.60, the ground was less firm, and showed increasing signs of having been disturbed in the time of Kum Tepe II. The upper limit of the strata assignable to Phase IC2 was at -0.45. In the northern part of the trench, where there is a stone-lined pit of the next period, strata of IC2 were not available for testing.

Lying partly within Trench S (Fig. 5) and probably belonging to a house of this phase is a wall, SA, which is 0.50 m. thick, built of unhewn stones packed with yellow clay; the masonry rests at -0.80 upon debris of the previous phase, and is 0.50 m. high. Alongside the lower part of the wall lay a twenty-centimeter stratum of floor deposits, containing much carbonized matter. Remnants of several good-sized pots were *in situ* at the uppermost level of this stratum. Covering the floor deposits and extending over the top of the masonry was a layer of brown earth about 0.35 m. thick, probably from the disintegration of a superstructure of unbaked bricks; this layer reached the level of -0.25. Intrusive potsherds of Kum Tepe II were found here and there.

In Trench T (Fig. 6), the phase was represented by a stratum of gray earth lying between -0.70 and -0.45. Apparently this was not a floor deposit. Among the pottery fragments were intrusive sherds of Kum Tepe II.

In Trench U (Figs. 3 and 7), remains of the final phase of Kum Tepe I, including habitation deposits and possibly a certain amount of debris, the upper limit of which could not be accurately determined, lay between -0.60 and -0.20.

In the southern part of the trench, the ruins of two roughly parallel walls, UA and UB, were found resting upon debris of the preceding phase; they are only 0.35 m. thick, and consisted of two courses of rude stones. The excavated space was too restricted to show whether the walls belong to one building, or to different buildings with a common orientation.

The southeast corner of what was probably a house of this phase was uncovered in Trench V (Fig. 3, Pl. 69, b). The walls, VA and VB, are built of unworked pieces of limestone mortared with clay, and are nearly 1.20 m. thick, reaching a maximum height of 0.95 m. At the interior of the corner, the bottom of the stonework is at -1.20, but towards the northwest it slopes down. There are indications that the corner was at some time remodeled or repaired. Extending in a westerly direction along the inner face of the southern wall for more than one meter from the corner is a rude stone construction, possibly the lower part of a wall antedating the remodeling.

SHELLS AND ANIMAL BONES

Shells and animal bones collected from the two phases of Subperiod IC in the various trenches have been grouped together. Species identified: *Ostrea plicata* (numerous), *murex trunculus* (sparse), *Capra/ovis* (more numerous than in preceding subperiod), *sus* (more numerous than in preceding subperiod), *bos* (sparse).

POTTERY

The following account is based primarily on pottery from undisturbed deposits in Trench V.

FINE BURNISHED WARE

Fabric as in the preceding phase. Shapes and the occasional examples of decoration continue to be similar to those of the fine ware of Early Troy I. Two principal types of bowls are represented, corresponding to shapes A6 and A12 of Early Troy I; as at Troy, those of the second type greatly outnumber the first.

Bowls with thickened, usually offset band along inner side of rim: Small numbers of fragments, as in the preceding phase (cf. 705-709); for a detailed description of the shape and decoration used with it in Troy I, see Troy I, pp. 58-59, A6, and figs. 253-257. Eleven

pieces of this type from Trench V are illustrated, only the first of which lacks incised decoration on the rim band: 801, Fig. 23 and Pl. 77; high on sidewall, a small horizontal lug with vertical piercing. 802, Fig. 23; on inner rim band, there are opposing groups of oblique incised lines; on the exterior, shown in Pl. 77, there is a somewhat similar pattern below a roughly horizontal line. 803-807, Pl. 11: opposing groups of oblique incised lines on rim band; 807 has, in addition, a continuous incised zigzag immediately below the rim band (cf. Troy I, figs. 234: 23, 238: 13, of Troy Ib and Ic respectively). Other incised patterns, Pl. 77: 808, part of an X and a group of vertical lines; 809, widely spaced groups of vertical lines; 810, crude crosshatching. All the foregoing pieces fall probably within the time span of Early Troy I. Three fragments, 811a, b, Pl. 77, and 811c, Fig. 23 and Pl. 77, apparently of a single bowl of the same general type, were noted in the uppermost deposit in Trench V; crude X's are incised on the rim band; the rim of the first fragment rises to form a low scallop, below which there originally was a round perforation; part of the edge of another round perforation may be seen at the left side (as shown on Plate 77) of the third fragment. The date of 811a-c can be roughly estimated

from the fact that at Troy the earliest analogous example of a perforated scallop-like rim projection or handle on a bowl of shape A6 (*Troy* I, fig. 262: 21) belongs to a late stage of the early subperiod.

Bowls with sharply rounded or angular shoulder, in-turning rim, and thinned or rounded lip remain very common in Phase IC2; fragments of about one hundred were found in Trench V, and similar quantities in other trenches. The profiles continue to be angular (cf. **710-717**; also cf. *Troy* I, pp. 60-61, shape A12, and figs. 258-261). Two fragments from Trench V are illustrated: **812**, Fig. 23 and Pl. 77; rising from the rim is a stub of what may have been a round loop handle, a detail which is unusual on a bowl of this shape. **813**, Pl. 77; plain horizontal pierced lug between angle and rim (cf. **711**); altogether some two dozen lugs of this plain straight form were found in deposits of this phase in Trench V, and proportionate numbers in other trenches. Not illustrated: Three horizontal unpierced lugs; except for the lack of perforation, the form is the same as that of **813**.

Pedestal bases; slightly hollowed bottoms: **814**, Fig. 23 and Pl. 77 (showing undersurface); fragment of hollow pedestal base with concave spreading side; the undersurface is decorated near the edge with an incised wavy line. **815**, Fig. 23; fragment of small hollow pedestal base with low upright side; from an open vessel. Unnumbered: Fragments of several hollow pedestal bases with decorative perforations; for bases of the same type in *Troy* Ib, see *Troy* I, fig. 236: 29, 30. Fragments of slightly hollowed bottoms of several open vessels were also found. Most of the pieces listed in this paragraph, if not all, belong probably to bowls of the shapes described above.

Jugs: **816** (inv. no. K6), Pl. 78; from Trench U; H. pres. 0.105, D. 0.087; greater part of handle, rim, and neck missing; light brown mottled with black; globular body;

somewhat spreading neck, rising at the front to form a spout; cf. **722**, which has a slightly more bulging body. **817** (inv. no. K8), Pl. 78; from Trench R; H. 0.10, D. 0.076; virtually whole; mottled grayish tan and dark gray; body rounded, almost pear shaped, with flattened bottom; straight cylindrical neck and plain rim, rising at the front to form a spout; flattened loop handle; cf. **818** for shape of body and neck; for jugs of this shape in *Troy* Ib and Ic, see *Troy* I, fig. 228: 36.760 and 35.541 respectively. **818** (inv. no. K4), Pl. 78; from Trench U; H. 0.093, D. 0.07; handle and small pieces of neck and side missing; gray; globular body with slightly flattened bottom; straight cylindrical neck and plain rim, rising at the front to form a spout; similar to **817** in shape. Unnumbered: Fragments of five slightly spreading spouts, of the form seen in jug 36.735 of *Troy* Ia (cf. **722**). Fragment of a spout with a flanged lip, of the type that is characteristic of jugs of shape B16 at *Troy* (*Troy* I, p. 67, figs. 236: 14, 240: 7).

Jugs or jars: **819**, Fig. 23; fragment from Trench V; high-swung handle, with small part of rim and sidewall; fine gray tinged with yellow; cf. a slightly angular high-swung handle of *Troy* Ia (*Troy* I, fig. 235: 15). **820**, Fig. 23; fragment from Trench V; slightly hollowed bottom; dark gray; low on sidewall, a partly preserved incised pattern, consisting of X's (a remnant of crosshatching?) resting on a horizontal line; what is left of the pattern is equivalent to the lower half of the incised decoration on pyxis 36.677 of *Troy* Ib (*ibid.*, fig. 267).

Jar (or bowl?): Fragment, **821**, Fig. 23; dark gray; from a small vessel with convex side and slightly splaying rim; a little below rim, a vertical pierced lug.

Four-handed jar: **822** (inv. no. K2), Pl. 79; found *in situ*, but broken, at uppermost level of habitation deposit of this phase in Trench S. H. 0.40 to 0.42, D. mouth 0.18, D. body 0.45. Biscuit reddish brown, crumbly; exterior coated with slip, nicely burnished, considerably worn;

surface reddish brown of various shades. Plain flattened bottom, bulging sides, rounded shoulder, and moderately low collar-neck, which narrows slightly towards the mouth; four large oblique loop handles (cf. 628) are set horizontally on the shoulder, not quite equally spaced; the shape and position of the handles is well adapted to lifting. A pair of holes drilled into the neck and another pair high on the shoulder are signs of ancient repair. This vessel served as a model for the drawing of Troy shape C4 (*Troy I*, p. 69 and fig. 223b) because only fragmentary examples of the shape were recovered from Early Troy I. For earlier examples of straight collar-necks, see 626 and 627.

Jar(s) with plastic representation of human facial features: Fragments, 823, 824, Pl. 79; found near 822 in Trench S; clay gritty, brown at core; inner surface coated with slip, smoothed; exterior coated with slip, well burnished, moderately dark gray somewhat mottled with tan; though resembling each other in fabric, these pieces possibly come from two different vessels. 823 comprises a little of the neck and part of the shoulder of a jar that probably had a globular body; immediately below the neck there is a schematized representation of a human face in low relief, with curving brows, knob-like eyes, a straight nose, and distinctly defined lips. 824 includes part of the neck and shoulder of a jar; immediately below the neck there is a slight rounded curving ridge, perhaps representing brows, and an apparent nose with a prominent tip; cf. the ridges on a fragment of a closed vessel of Troy Ic (*Troy I*, fig. 241: 5), and also the "nose" on a fragment of another closed vessel of Early Troy I (*ibid.*, fig. 244: 16). For discussions of various types of schematized representations of facial features in Troy I, see *Troy I*, pp. 155-157, and II, p. 31, footnote 3.

Handles, not illustrated: Fragment of a round loop handle with decorative plastic ridges, similar to a piece from Troy Ib (*Troy*

I, fig. 236: 24). Several flat loop handles, probably of jars.

Lids: 825, Fig. 23 and Pl. 77; from Trench V; fragment of steep side, flattish top, and stub of upright tapering lug with an oblique string hole; cf. Troy shape D11 (*Troy I*, p. 74); on sidewall, a zone bordered above and below by single horizontal incised lines is decorated with an incised pattern of intersecting zigzags flanking a group of six vertical lines; the latter are centered under the string-hole; in Early Troy I, lids of this shape are sometimes but not always decorated (cf. *loc. cit.*, fig. 241: 34), 826 (inv. no. K15), Pl. 78; from Trench V; H. pres. 0.027, D. est. 0.085; black and gray; undersurface concave; upper surface convex; offset conical knob; cf. Troy shape D15 (*ibid.*, p. 74); four stringholes (two restored) midway between knob and edge; incised decoration includes multiple chevrons and single connecting lines, with rude double square enclosing the knob. 827 (inv. no. K14), Pl. 78; from Trench U; H. 0.03, D. 0.04; mottled brown and gray; under surface concave, upper surface convex (cf. 826); knob is unusual, having a relatively thin spool-shaped shaft with a rounded depression at top. Unnumbered, from Trench V: Fragment of small, fine, dark gray lid, of same general shape as the preceding; the incised decoration resembles that on a fragmentary lid of shape D15 of Troy Ib (*Troy I*, fig. 237: 3), but is bordered by a wavy instead of a plain curving line. Unnumbered, from Trench S: Fragment of lid; D. est. 0.25; upright side, flat top with heavy, oblique loop handle at edge; lid 35.642 of Troy Ic (*ibid.*, figs. 231 and 267, pp. 73 and 107: D9) is similarly shaped but smaller.

SEMICOARSE SMOOTHED WARE

Fabric as in Phase IC1 and in Early Troy I. The only shape identified in this ware in Phase IC2 at Kum Tepe is that of tripod cooking pots resembling those of shape D24 at Troy (cf. *Troy I*, pp. 55 and 75-76). One vessel is

illustrated: **828** (inv. no. K7), Pl. 78; from Trench U; legs missing; H. pres. 0.10, D. 0.084 to 0.091; biscuit fairly fine; surface bumpy, but compact and well smoothed; light tan, blackened on one side by fire, presumably during use; bottom rounded; sides upright, ending in rounded rim, which is decorated with three small, symmetrically spaced, plain (ridgeless) projections (cf. *Troy I*, fig. 242: 5, of *Troy Ic*); flattened loop handle rises well above rim, and curves down sharply to side of vessel. Unnumbered: Several dozen tapering legs of tripod cooking pots. Also numerous rim fragments of such vessels, a few with vertical plastic ridges projecting a little above rim (cf. *op. cit.*, fig. 242: 2, 4, 6, 11); for an earlier plastic ridge, not rising above rim, see **631**.

COARSE WARES

Fragments very numerous, as before, and generally small. Several good-sized flat loop handles, probably of jars.

COPPER

Knife, **829** (inv. no. K-37), Pl. 71; found in habitation deposit near jar **822**, in Trench S; L. 0.135, W. (max.) 0.021, Th. 0.003; relatively narrow tang, with a single rivet hole; the blade curves slightly upward to a rounded end; the middle of the blade is strengthened by a slight, almost ridgelike, longitudinal thickening; the single cutting edge is much worn; at the time of excavation, a rivet was still in place in a hole near the cutting edge (now corroded) at the widest part of the blade; near by were two other rivets, one of them probably fallen from the hole in the tang. A somewhat similar knife was found by Schliemann at Kara Ağaç Tepe, the so-called tumulus of Protesilaos (*Troja*, London, 1884, p. 259, fig. 136).

STONE

Tapering vase. Fragment, **830** (inv. no. K-50), Pl. 70; from Trench U; only lower end is preserved; H. pres. 0.085, Th. of sidewall

0.01; white marble; exterior smooth but unevenly shaped or worn; the interior, which had a calcareous incrustation when found, shows the furrows of the drilling or turning by which it was originally hollowed out; the vessel, or at least this fragment, was probably a relic of earlier times; cf. a marble vase of tapering shape found at Kephala (*Hesperia* 31, 1962, p. 265 and pl. 92, d and see now Coleman, *Keos*, I, *Kephala*, no. 103).

Whetstone, **831** (inv. no. K-23), Pl. 70; from Trench U; L. 0.06, W. 0.025, Th. 0.023; greenish gray sandstone; one surface worn.

BONE

Awls: **832** (inv. no. K-17), Pl. 71; from Trench U; L. pres. 0.072, Th. 0.008 to 0.013; radius of *capra* or *ovis*; exterior worn, point missing; cf. bone implements of *Troy* type 2 (*Troy I*, fig. 126). **833** (inv. no. K-12), Pl. 71; from Trench U; L. 0.103, W. 0.025, Th. 0.008; sliver of lower jaw of *sus* (probably wild); outer side worn smooth; cf. bone implements of *Troy* type 5 (*loc. cit.*).

TERRACOTTA

Whorls (Pl. 71): Whereas only two whorls were found in earlier deposits, ten were recovered from strata of Phase IC2. The most common shape is the bicone, as in Early *Troy I* (cf. *Troy I*, pp. 50-51, fig. 128); the first eight in the following list are of this shape. **834** (inv. no. K-18), Trench S; H. 0.033, D. 0.038; reddish tan. **835** (inv. no. K-19), Trench T; H. 0.031, D. 0.041; black and tan, apparently discolored by fire. **836** (inv. no. K-25), Trench T; fragment; H. pres. 0.029, D. 0.035; gray. **837** (inv. no. K-1), Trench T; H. 0.03, D. 0.036; brown; crudely shaped. **838** (inv. no. K-21), Trench T; H. 0.019, D. 0.032; gray; crudely shaped. **839** (inv. no. K-8), Trench U; H. 0.029, D. 0.031; tan. **840** (inv. no. K-2), Trench U; H. 0.026, D. 0.033; tannish gray. **841** (inv. no. K-4), Trench U; H. 0.026, D. 0.031; gray. **842**

(inv. no. K-22), Trench V; H. 0.023, D. 0.027; mottled gray and brown; crudely rounded. **843** (inv. no. K-26), Trench V; H. 0.026, D. 0.045; gray; shape somewhat like that of Troy type 21.

Disk (not illustrated): Cut from potsherd

of fine fabric; D. 0.047 to 0.05; perforated. Disks of this kind are common in the early layers at Troy (cf. *Troy* I, pp. 49-50). Three earlier disks found during the trial excavation at Kum Tepe are unperforated (see Phase IA1, p. 323 and Phase IB4, p. 344).

DISCUSSION

KUM TEPE I AND RELATED SETTLEMENTS IN THE TROAD

The earliest settlers at Kum Tepe were no doubt attracted by the natural advantages of the site. The alluvial soil of the adjacent part of the plain is easily cultivable, and the Scamander River offers a year-round supply of water. The now marshy land closer to the Hellespont may have been a little bay. Oysters and other molluscs from these waters were favorite foods, as is shown by the many discarded shells, and there was surely also fishing. From the evidence of animal bones, it is known that goats, sheep, and cattle, though not common, were included in the domestic economy from the beginning, and that deer and wild boar were hunted.

The first dwellings at Kum Tepe must have been built on or near bedrock. No walls happened to lie within the narrow areas where deposits of Subperiod IA were examined (Trenches R and U), but the stratification indicated that houses had stood near by. Vestiges of stone construction of each phase of Subperiod IB were discovered. A good example is a socle of Phase IB2 in Trench R, 0.70 m. thick and 0.30 m. high, consisting of two rude courses of unworked stones mortared and faced with clay. Socles of this kind belong probably to house walls whose now missing upper part was of mud brick. In Subperiod IC, the mode of construction is essentially the same, but sometimes the socles are nearly one meter high, being comparable to several walls excavated by Schliemann in his great north-south trench at the lowest levels of Troy I. Stone couches similar to those in early houses at Troy are also known at Kum Tepe. So far as one can tell from the very limited excavation, the houses of Kum Tepe IC, like those of Early Troy I, were usually rectangular and free standing.

Closely related, stratified comparative material is not at present available to help fix the date of the beginning of settlement at Kum Tepe, but a very rough estimate can be made through a comparison of the stratification itself to that of Troy I. In the latter settlement, an analogous series of layers represents phases whose average length is thought to have been at least 30 or 40 years.¹⁴ The analogy would support a guess of more than two centuries for the total length of the six pre-Troy phases of Kum Tepe I. If, then, the beginning of Troy I is dated in round

¹⁴ Cf. *Troy* I, pp. 22, 36-37, and 40-41.

numbers at 3000 B.C.,¹⁵ the start of habitation at Kum Tepe will have taken place somewhat before 3200 B.C.

The settlement at Kum Tepe may at the outset have been part of a wider movement of people into the region, as is hinted by the imperfectly known early ceramic remains at Beşik Tepe and Hanay Tepe. The comparative material from Schliemann's excavation at Beşik Tepe includes a few handles of special types (cf. **114, 215-217**), fragments of bowls of plain-rimmed and related forms (cf. **101-109, 201-210, 211, 212**), and more than a dozen pattern-burnished sherds (cf. **101, 102**, and footnote 7). So far as one can tell from one hundred-odd sherds of fine ware available from Beşik Tepe, the fabric is sometimes coarser, and the colors are more frequently dark brown and gray, than in the fine ware of the initial phase of Kum Tepe IA; although the difference may be a purely local phenomenon, it is possible on the other hand that the moderately light colors favored at the beginning of the Kum Tepe ceramic series reflect a new technological development in the firing of pottery, as in Late Chalcolithic 2 at Beycesultan (cf. *Beycesultan* I, pp. 79 and 85); in this case, some of the Beşik Tepe sherds may antedate Kum Tepe I. So far as pottery shapes are concerned, very few if any of the sherds from Beşik Tepe can be considered stylistically later than Kum Tepe IA. The pottery recovered by Calvert and Schliemann at Hanay Tepe includes a few handles of the special types seen also at Beşik Tepe. More material would be needed for a closer chronological comparison of the early period of habitation at either of those sites with the earliest phases of Kum Tepe I.

During the immediately succeeding phases (= Subperiod IB), Kum Tepe was the only inhabited site, so far as one can tell at present, in the northwest quarter of the Troad. The most significant development is the occurrence of objects of copper in the second, third, and fourth phases of Subperiod IB, showing that the metal was in use in the region at least a few generations before the beginning of settlement at Troy. The copper was not necessarily imported from a great distance. A source at the southern fringe of the Troad, used certainly in later times, was possibly already being exploited; cf. H. Schliemann, *Ilios*, London, 1880, p. 253, and Strabo, XIII, 1, 51.

A spread of habitation to other sites in the region becomes discernible in the time of Kum Tepe IC. The hill of Troy is first settled at this time, and the material culture of Early Troy I is virtually indistinguishable from that of Kum Tepe IC. It is possible, however, that the beginning of the subperiod at Kum Tepe is a little earlier than the earliest habitation at Troy; this is hinted by the relative infrequency of incised decoration on pottery, the rarity of terracotta whorls (see

¹⁵ This essentially was Blegen's view (cf. *Troy* I, pp. 40-41, *Troy and the Trojans*, London, 1963, p. 174, and *Cam. Anc. Hist.*³, I, ii, p. 414), but margins of several centuries must be allowed, as he clearly stated, for possibly error. An earlier date now seems possible.

730), and the occurrence of a pre-Troy shape in Semicoarse Smoothed Ware (see under Phase IC1, Trench S) in the initial phase of Kum Tepe IC. Hanay Tepe is reoccupied perhaps even before the close of Kum Tepe IB (see 702-704 for comparative material). Surface finds of pottery of the general era of Kum Tepe IC-Early Troy I indicate the presence of small settlements at Han Tepe and Beşik Burnu on the west coast and Çoban Tepe near the Hellespont (for map, see Fig. 1).¹⁶ The first settlement at Kara Ağaç Tepe, north of the Hellespont, probably also dates from the general era of Kum Tepe IC-Early Troy I. These developments evidently reflect an increase in population and a need for more land. To what extent the increase resulted from new arrivals, perhaps of a related stock, the evidence does not really tell.

The abandonment of Kum Tepe, completed at the end of Subperiod IC, may well have taken place gradually, or at least not all at once, since there is no clear proof of a general catastrophe. Presumably some people had moved away to join in the initial settlement and fortification of the hill of Troy; others would naturally have followed as it became more obvious that Kum Tepe failed to provide the kind of security offered by the more advantageously located, newly fortified site.

About the same time that Kum Tepe was deserted (i. e. at the end of Period I), the occupation of the coastal sites of Beşik Burnu and Çoban Tepe (see above) seems also to have come to an end. This may be inferred from the observation that surface finds at those sites did not include any sherds clearly assignable to the time of Middle or Late Troy I.

Evidence regarding the sequel has been partially identified at Troy. The initial settlement at that site grew rapidly in size, spreading to at least one part of the northern foot of the hill before the end of the early subperiod (cf. *Troy I*, p. 108). Furthermore, a new and more extensive fortification wall than that of the early subperiod was built in the time of Middle Troy I (*ibid.*, pp. 145-149, etc.), i. e. soon after the end of Kum Tepe I and the presumed abandonment of the coastal sites of Beşik Burnu and Çoban Tepe. What took place in the region seems to have been not a loss of population but a regrouping for the sake of protection.

CHRONOLOGICAL RELATIONSHIP TO EMBORIO, POLIOCHNI, AND BEYCESULTAN

Early strata of the settlement at Emborio in Chios show a pottery sequence with some parallels in Kum Tepe I, and the publication is eagerly awaited. Certain bowl rims and lugs of Emborio levels VIII-VII (*Emergence*, fig. 5.2) seem to be at the same stage of ceramic development as some of the characteristic forms seen

¹⁶ The site of Beşik Burnu (i. e. Beşik Promontory), on whose surface some potsherds of the time of Kum Tepe IC-Early Troy I were noted by members of the Cincinnati expedition, was inadvertently omitted from the relevant passage in *Troy I*, p. 35. J. M. Cook (*The Troad*, Oxford, 1973, pp. 177-178) has also recorded the site.

in the middle phases of Kum Tepe IB (cf. **402**, **408**, **409**, and **547**). Kum Tepe IA (see **101-109**) must have been at least partly contemporaneous with Emborio X-IX.

In the pottery of the first settlement at Poliochni in Lemnos,¹⁷ a distant relationship to a few ceramic forms of Kum Tepe IB and of the time of Kum Tepe IC-Early Troy I can be detected (see remarks on **402** and **660**), but convincing parallels for Kum Tepe IA are lacking. A comparison of the relatively rare examples of white-painted decoration of Kum Tepe I with those of Poliochni is of uncertain value for chronology (see **222a** and footnote 12). The fine burnished ware of the first settlement at Poliochni, even at the very beginning, is much darker than that of Kum Tepe IA, and seems technologically closer to that of Kum Tepe IB and IC. The comparative material, though scanty, suggests that Subperiod IA at Kum Tepe largely if not entirely antedates the Poliochni settlement, and that Subperiods IB and IC at Kum Tepe are of the same general era as Poliochni I.

The relative chronology of Kum Tepe I and Beycesultan is not yet completely certain, and needs to be documented. Distantly related developments may be seen in some features of the pottery of Kum Tepe IA and that of Beycesultan Late Chalcolithic 2, e. g. in pattern burnishing (see footnote 7), lugs of a special type (cf. **134**, **135**), and fragments of baking pans (e. g. **235**), as well as in the moderately light and somewhat mottled colors appearing at that epoch in fine ware at both sites (see discussion of Beşik Tepe, p. 356 above).

Bowls with rolled rims such as are characteristic of Kum Tepe IB have not been observed at Beycesultan, the nearest approach at that site probably being a bowl with markedly incurving rim, of Late Chalcolithic 3 (for reference and further remarks, see **546**). Though truly carinated bowls such as appear in Beycesultan Late Chalcolithic 3 have not been found at Kum Tepe, a few slightly to moderately concave rim fragments from Kum Tepe IB seem vaguely related in style (cf. **660**).

An analogy to the vertically placed handles of Beycesultan Late Chalcolithic 4, which are often associated with carinated bowls, may be seen in a bowl fragment from the end of Early Troy I (see **660** for references)—a date corresponding roughly to the end of Kum Tepe I. Another vertical handle, on a plain-rimmed vessel of Beycesultan Late Chalcolithic 4 (*Beycesultan* I, fig. P.13:10) has a parallel in the initial phase of Troy I (cf. *Troy* I, fig. 259, shape A5). Both sets of parallels suggest that the era of Early Troy I-Kum Tepe IC was at least partly contemporaneous with Beycesultan Late Chalcolithic 4.

Bowls of Troy shapes A6 (with thickened band on inner side of rim) and A12 (with angular shoulder and inward-sloping rim) must be reconsidered as criteria

¹⁷ I am greatly indebted to Dr. L. Bernabò-Brea for the opportunity in July 1953 to examine the early pottery recovered at Poliochni up to that time. For data from the immediately subsequent deep soundings in Megaron 605 and Megaron 832, I have relied on the stratigraphical account in *Poliochni* I.

in determining the chronological relationship of Kum Tepe IC-Early Troy I with Beycesultan.¹⁸

Bowls of the first of these two shapes, A6, occur throughout Troy I, and are found at Kum Tepe throughout Subperiod IC (see **707-709** and **801-811a-c** for references and further remarks). At Beycesultan, there are only two examples of a corresponding shape, the earlier of which, of Late Chalcolithic 4 (*Beycesultan* I, fig. P.12:35, pp. 97 and 110),¹⁹ more nearly resembles the Trojan shape at its best; the form of the second, which is dated in Beycesultan Early Bronze 1 (*op. cit.*, fig. P.14:1, p. 117), seems moderately late in relation to the Trojan sequence of bowls of shape A6, and need not be earlier than Middle Troy I.

The evidence pertaining to bowls of Troy shape A12 (with angular shoulder and inward-sloping rim) is more plentiful. The shape begins to occur at Kum Tepe towards the end of Subperiod IB, becomes very common in Kum Tepe IC-Early Troy I (see **710-717** and **812, 813** for the form and references), and continues to occur in Middle and Late Troy I (e. g. *Troy* I, figs. 258, 259), i. e. for some time after the end of Kum Tepe I. In Middle and Late Troy I, bowls of shape A12 are gradually supplanted by bowls of a more or less new shape A16, with rounded shoulder and incurving lip (*ibid.*, p. 62, fig. 263). At Beycesultan, a single bowl fragment of Late Chalcolithic 4 (*Beycesultan* I, fig. P.12:44)²⁰ seems related in profile to Troy shape A12, but there are at least a dozen pieces in Beycesultan Early Bronze 1 (e. g., *ibid.*, fig. P.14:20-25 and fig. P.15:16, 21, 22, 28, 29, 31, 38) that may be considered parallels to rim forms of shape A12 of Middle and Late Troy I.²¹ Likewise chronologically significant in Beycesultan Early Bronze 1 is the context, since it includes numerous examples of bowls with rounded shoulder and incurving lip (e. g., *ibid.*, p. 119, fig. P.14:10-14 and fig. P.15:9-11, 27, 30, 32, 36, 37), typologically related to, and perhaps roughly contemporaneous with, bowls of the above-mentioned shape A16 of Middle and Late Troy I.

¹⁸ For the chronology given by Mellaart, see especially *Beycesultan* I, p. 117, but it should be noted that his statement disregards the chronological significance of certain changes in the shapes and their context in the later subperiods of Troy I; also see this page and footnote 21 below for details on bowls of Troy shape A12.

¹⁹ Mellaart rightly describes the sherd as having a thickened rim, but lists it in a group having a different rim form (*op. cit.* [footnote 18], p. 97, Beycesultan Late Chalcolithic 4 shape 22, "with everted rim").

²⁰ Classified by Mellaart (*op. cit.* [footnote 18], p. 97) as Beycesultan Late Chalcolithic shape 20, the other two examples of which have an incurving rim.

²¹ Mellaart's chronological comparison of the shape at Beycesultan (*op. cit.* [footnote 18], p. 121) with that at Troy (shape A12) and Kum Tepe disregards the history of the development of the shape in the different subperiods of Troy I (*Troy* I, p. 60 and figs. 258, 259). The greater angularity and thickness to which he refers are often seen in shape A12 in Early Troy I and Kum Tepe IC, an era which should therefore be earlier than Beycesultan Early Bronze 1, whereas the generally thinner and less angular profiles of the shape in Middle and Late Troy I correspond nicely, and are presumably more nearly contemporaneous, with manifestations of the shape in Beycesultan Early Bronze 1.

It should be added that there are also parallels to Troy shape A16 at Early Helladic and Macedonian sites of about the same epoch (*sc.* the time of Middle and Late Troy I; see *Troy I*, p. 62). The epoch was certainly one of widening external contacts, as is shown, for example, by the appearance of pieces of imported Aegean pottery in strata of the middle and late phases of Troy I.²² It is therefore not hard to imagine that at that time both Beycesultan and Troy, as well as settlements in the other regions mentioned, were reflecting, in varying measure, certain widespread stylistic trends.

From the series of comparisons outlined in the foregoing seven paragraphs, one may deduce that Subperiods IA, IB, and IC at Kum Tepe are roughly parallel to Late Chalcolithic 2, 3, and 4 at Beycesultan, and that the beginning of the period called Early Bronze 1 at Beycesultan falls probably near or in the time of Middle Troy I rather than at the beginning of Early Troy I and Kum Tepe IC.

KUM TEPE II

A millennium or so after the end of Kum Tepe I, part of the site was reoccupied for a relatively short period. This is called Kum Tepe II in the present report. No chronological subdivisions have been distinguished. The characteristic pottery (see below) falls almost entirely within the time span of Troy V, only a few sherds possibly being a trifle earlier, and a few a little later.

Immediately below the modern surface soil, a poorly defined stratum of habitation deposits of Kum Tepe II was found in Trenches R and T (Figs. 4 and 6); in Trench S, only a small bothros of this period was identified. In these three trenches, intrusive potsherds of this period were found to have penetrated to depths of as much as a meter into the strata of Kum Tepe I. (In the other two trenches, U and V, there were no significant traces of Kum Tepe II.)

Resting at -0.45 upon debris of the last phase of Kum Tepe I in the southwestern part of Trench R, and extending little more than one meter in a northeasterly direction, is a segment of a ruined wall, RA (Figs. 3 and 4), belonging probably to a dwelling of Period II. The wall is 0.25 m. high, and consists of two courses of stones packed with earth. Disturbed vestiges of habitation deposit were found alongside, between -0.45 and -0.20. The wall was originally at least 0.70 m. thick, but the northwestern side is dilapidated, and an exact measurement cannot be given. Along the southeastern or presumed inner side, moderately large, roughly rectangular stones form the bottom course, and smaller, irregular stones the second. The style of construction is like that found in some houses of Troy V (*cf.* *Troy II*, pp. 253 and 284).

²² Cf. *Troy I*, pp. 39, 41, and 53-55.

About five meters north of wall RA there is an oval, stone-lined pit (Fig. 3, Pl. 69, c). It is cut into the strata of Kum Tepe I down to the level of -1.85 , and has an earthen bottom. The more or less vertical lining of the sides is preserved at one place to a height of 1.65 m.; moderately large, irregular blocks form the base course, and flattish thinner stones make up the other courses—a style of construction somewhat analogous to that of wall RA. The inside of the pit is roughly 2.20 m. long, from north to south, and 1.75 m. wide. Extending from east to west, a little north of the middle, is a ruined partition wall about 0.30 m. thick, which may or may not have been part of the original design.

The pit contained earth and fallen stones, as well as a good deal of refuse, including ashy matter, shells, some animal bones, and pottery fragments of Kum Tepe II. In addition, a scattering of small potsherds of late phases of Kum Tepe I appeared at various levels; these sherds could easily have come along with earth that may occasionally have been tossed into the pit to cover the refuse. Below -1.40 , no difference could be detected between the deposits on the two sides of the partition. Between -1.40 and -1.00 , the deposit south of the partition contained much gray ashy matter and many mussel (*mytilus*) shells, while the earth on the north side was virtually free of ash and shells. Between -1.00 and -0.60 , ashy matter and mussel shells were found on both sides of the partition. Above -0.60 , orderly stratification ceased.

The size of the pit, the nature of the lining, and the existence of the partition suggest that the pit originally was intended not for the disposal of refuse but for some other purpose, e. g. storage of agricultural produce, possibly of two different kinds; R. W. Hutchinson's discussion of circular walled pits at Knossos and Mallia (*Prehistoric Crete*, London, rev. 1968, p. 171) seems apropos. No good parallel has been found at Troy; see, however, *Troy* II, pp. 210, 273, and 295-296, respectively, for a bipartite, nearly circular pit of Troy IV, an oval pit of Troy V, and an underground store(?) room of Troy V.

In Trench S, immediately below the modern surface soil, there was a circular, clay-lined bothros or pit, 0.90 m. wide and 0.15 m. deep. Lying near by were some pottery fragments of Kum Tepe II, but it was impossible to tell whether, as seemed likely, there had been an earthen floor at this level. The bothros contained many dozens of mussel shells and much fine light gray ash such as occurred at certain levels in the stone-lined pit in Trench R as well as in the pit of Troy IV mentioned above.

In the southern part of Trench T, a remnant of a wall, TA, about 0.55 m. thick and probably belonging to a house, was found between -0.45 and -0.20 . The nearby earth had been disturbed.

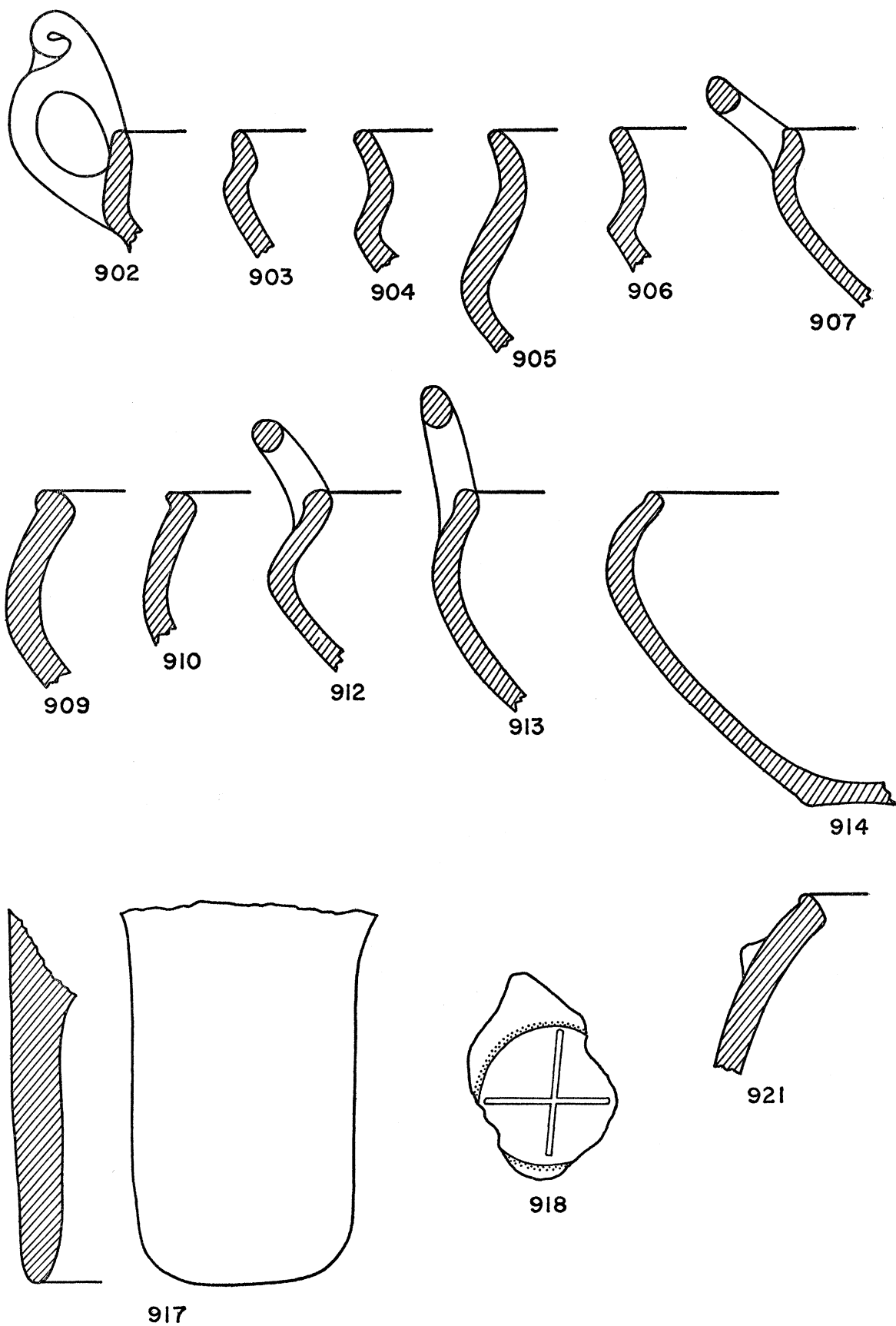


FIG. 24. Pottery of Period II. Scale 1:2.

POTTERY

A few hundred sherds ascribable to Kum Tepe II were collected in Trench R, and smaller numbers in S and T. The wares, shapes, and modes of decoration are generally like those of Troy V. A few sherds, however, vaguely recall wares of Troy IV, and there are a few fragments of Gray Minyan probably of Early Troy VI.

RED-COATED WARE

For a description of the ware, based on examples found at Troy, see *Troy II*, pp. 235-236.

Bowl with incurving rim (= shape A16 at Troy); **901** (inv. no. K3), Pl. 80; from the oval pit in Trench R; H. 0.075, D. 0.232; much of handle and pieces of rim of the opposite side are missing; clay light reddish tan; well coated with slip, burnished; surface brick red, mottled in a few spots with grayish brown; for a bowl of somewhat similar shape, assigned to Middle V at Troy, see *Troy II*, fig. 239: 35.439.

Bowls with slightly angular shoulder and high rim (= shape A18 at Troy): Rim fragments of at least eight; six are illustrated. **902**, Fig. 24 and Pl. 81, with high-swung vertical loop handle topped by a decorative plastic volute; no exact parallel has been recorded at Troy. **903-906**, Fig. 24. **907**, Fig. 24 and Pl. 81, with horizontal handle; a cross is burnished on the red slip which coats the interior, and another on the exterior; for other red-cross bowls, see below.

Bowls with projecting rim (= shape A21 at Troy): Fragment, **908**, Pl. 81; the obliquely rising horizontal handle has a decorative volute at either side; for comparable rims and handles of Troy V, see *Troy II*, fig. 251 and pp. 241 and 250; additional examples of handles are shown *ibid.*, fig. 249: 1a, b and 3a, b. For a decorative volute which may have come from a handle of the same type as **908**, if not from a jar, see **916**.

Bowls with inward-slanting rim and small externally rolled lip (= shape A23 at Troy): Fragments, **909-910**, Fig. 24; **911**, Pl. 81; **912, 913**, Fig. 24 and Pl. 81; the horizontal handles are typical. **914**, Fig. 24 and Pl. 80. At Troy, bowls of this kind make their appearance in the Fifth Settlement (*Troy II*, p. 242).

Red-cross bowls, of undetermined rim profile: Fragment, **915**, Pl. 81; the side and the entire inner surface are coated with red slip and burnished; on the exterior of the flat bottom (partly preserved), there is a cross, painted in red slip and burnished, the background being reserved. Unnumbered: A fragment of the sidewall of another bowl; on the inner surface, part of a red cross is preserved. For red-cross bowls of Troy V, see *Troy II*, pp. 250-251. Cf. **907**.

Jar (?): Fragmentary decorative volute, **916**, Pl. 81; perhaps a crook handle of a jar of Troy shape C29; for an example from the Fifth Settlement, see *Troy II*, fig. 258: 11. Alternatively, **916** may have been attached to a handle such as **908**.

Leg: **917**, Fig. 24; found in Trench R; biscuit tan; coated with red slip, burnished; outer surface broad and nearly rectangular, with virtually straight sides; somewhat similar in form to **558**, but different in fabric and finish; the shape of the vessel to which **917** was originally attached has not been determined. No good parallel in Troy V, but cf. a slightly tapering leg of coarse ware of Middle V (*Troy II*, pp. 248-249 and fig. 243: 35.1090), and also some nearly rectangular legs of coarse ware of Troy VI (e.g. *Troy III*, figs. 329: 37.1171, 389: 7-9).

GRAY(?) WARE

Anthropomorphic jar: Fragment, **918**, Fig. 24; found in Trench R; broken in antiquity from a moderately large vessel, considerably worn; preserved on the exterior is the greater part of a low, roughly circular, plastic knob (D. ca. 0.05 m.), on which there are two rudely

crossed grooves or impressed lines—most likely a representation of female genitalia. From its worn condition one may suppose that this fragment was kept for some time as a talisman after the vessel broke. For essentially similar representations on two well-preserved anthropomorphic jars found by Schliemann in the "Fourth City" of Troy, see *Ilios*, London, 1880, nos. 986 and 991. For further remarks on anthropomorphic jars (especially of shapes C7, C8, and C30 at Troy) see *Troy II*, pp. 29, 31, 35, 130-131, 133-134, 137, 244-246, and 249.

PLAIN WARE

For a description of the ware in Troy V, see *Troy II*, p. 236.

Jug with trefoil lip (= shape B24 at Troy): **919**, fragment of neck and rim, Pl. 81; found in Trench R; similar in fabric and shape to sherd V-95 of Late Troy V (*ibid.*, figs. 248: 18a, b, 258: 12).

Two-handled jar: **920** (inv. no. K1), Pl. 80; restored from fragments that lay in a heap at the uppermost stratified level (−0.60) in the oval pit in Trench R; the present appearance of the jar is patchy, owing at least partly to mottling caused by fire after the vessel broke into fragments; H. 0.49, D. 0.36; biscuit grayish brown, firm; surface smoothed and partly burnished; flat bottom, ovoid body, moderately low concave neck; two horizontal, round loop handles at middle of sides; the handles resemble those on jars of shape C14 in Troy V, whereas the body is similar to that of jars of shape C10 in the same period (*Troy II*, p. 245).

COARSE WARES

Numerous sherds, but only one with a distinctive profile: **921**, Fig. 24; biscuit gritty, somewhat pebbly; surface rough, pitted; reddish brown to black; fragments of a wide-mouthed basin or jar; a little below the rim, there are two small rounded plastic knobs, as on a sherd of Troy Middle V (*Troy II*, fig. 255: 10, p. 276).

TERRACOTTA

Whorls, Pl. 80. Of the four whorls of Kum Tepe II that were recovered, the first one listed here is similar to those of Troy type 17, and the remaining three are like Trojan whorls of type 23 (*Troy II*, fig. 42). **922** (inv. no. K-20), found at −0.60 in Trench R; H. 0.021, D. 0.039; reddish tan clay; the shoulder is decorated with four incised double chevrons and a single impressed dot; a little white inlay is preserved. **923** (inv. no. K-11), found at −0.20 near the oval pit in Trench R; H. 0.02, D. 0.031; tannish gray; on shoulder, incised triple chevrons with traces of white inlay. **924** (inv. no. K-3), found between −0.40 and −0.60 in Trench S; H. 0.023, D. 0.038; tan, partly discolored by fire; four quintuple chevrons incised on shoulder, with traces of white inlay. **925** (inv. no. K-5), found between −0.40 and −0.20 in Trench T; H. 0.02, D. 0.036; grayish tan; the shoulder is decorated with a continuous festoon-like arrangement of six triple arcs. These whorls cannot be dated exactly, but would be at home in Troy IV-V so far as fabric, shapes, and decorative motifs are concerned; cf. *Troy II*, figs. 151-153 and 236-237.

JEROME W. SPERLING



a. Kum Tepe from southwest; in background, trees lining Scamander River



b. Trench V, walls of Phase IC2, from northwest



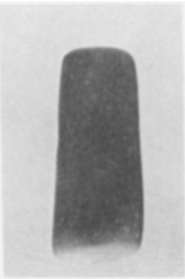
c. Trench R, Period II, oval pit, from east



d. Trench S from north



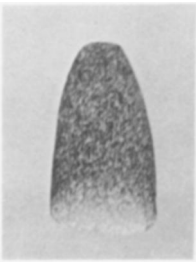
e. Trench R, burials of Phase IA1 near bedrock, from north



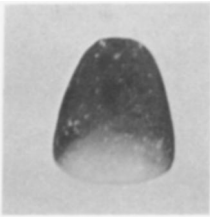
831



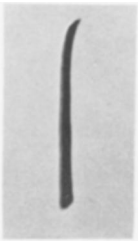
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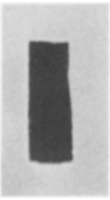
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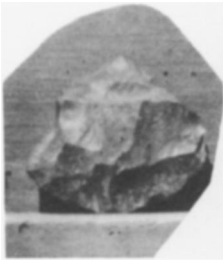
424



561



425



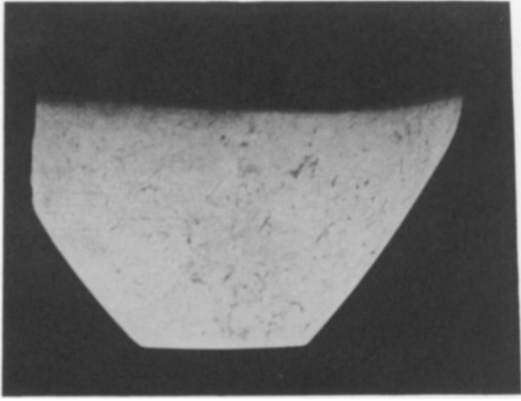
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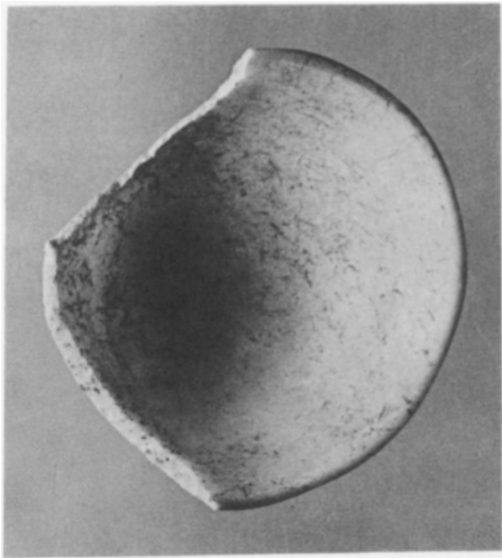
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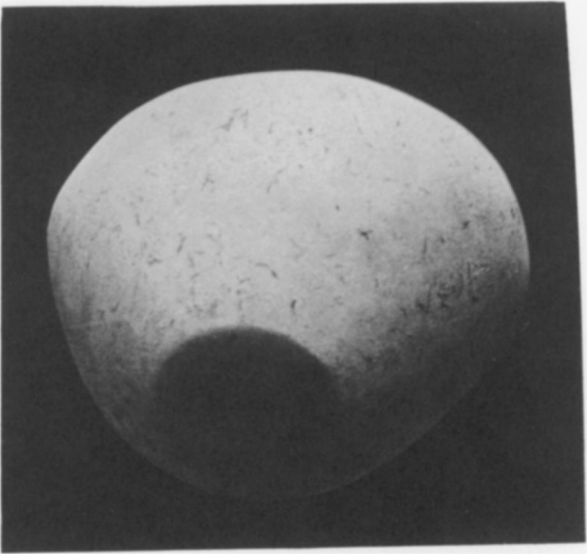
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139

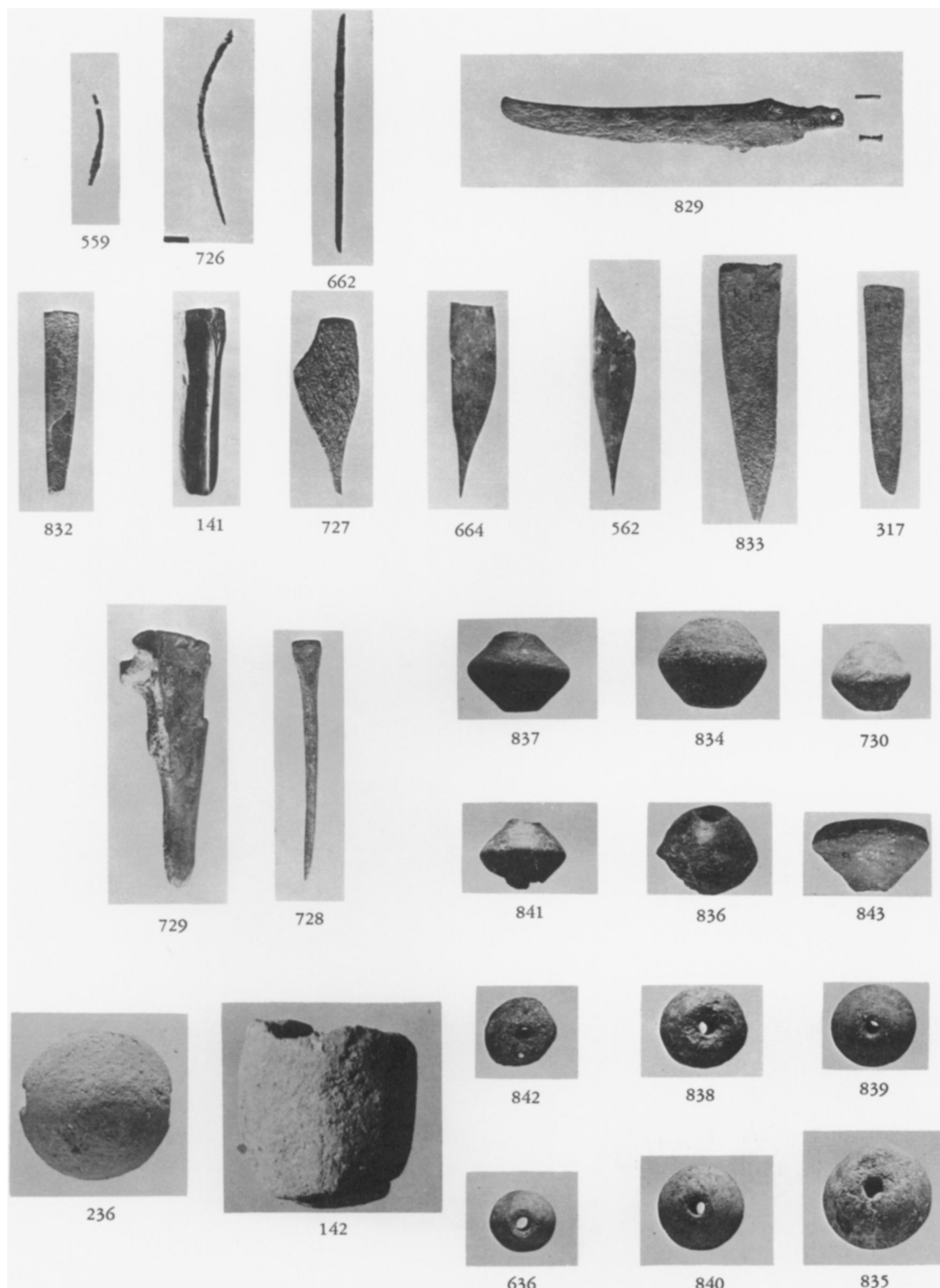


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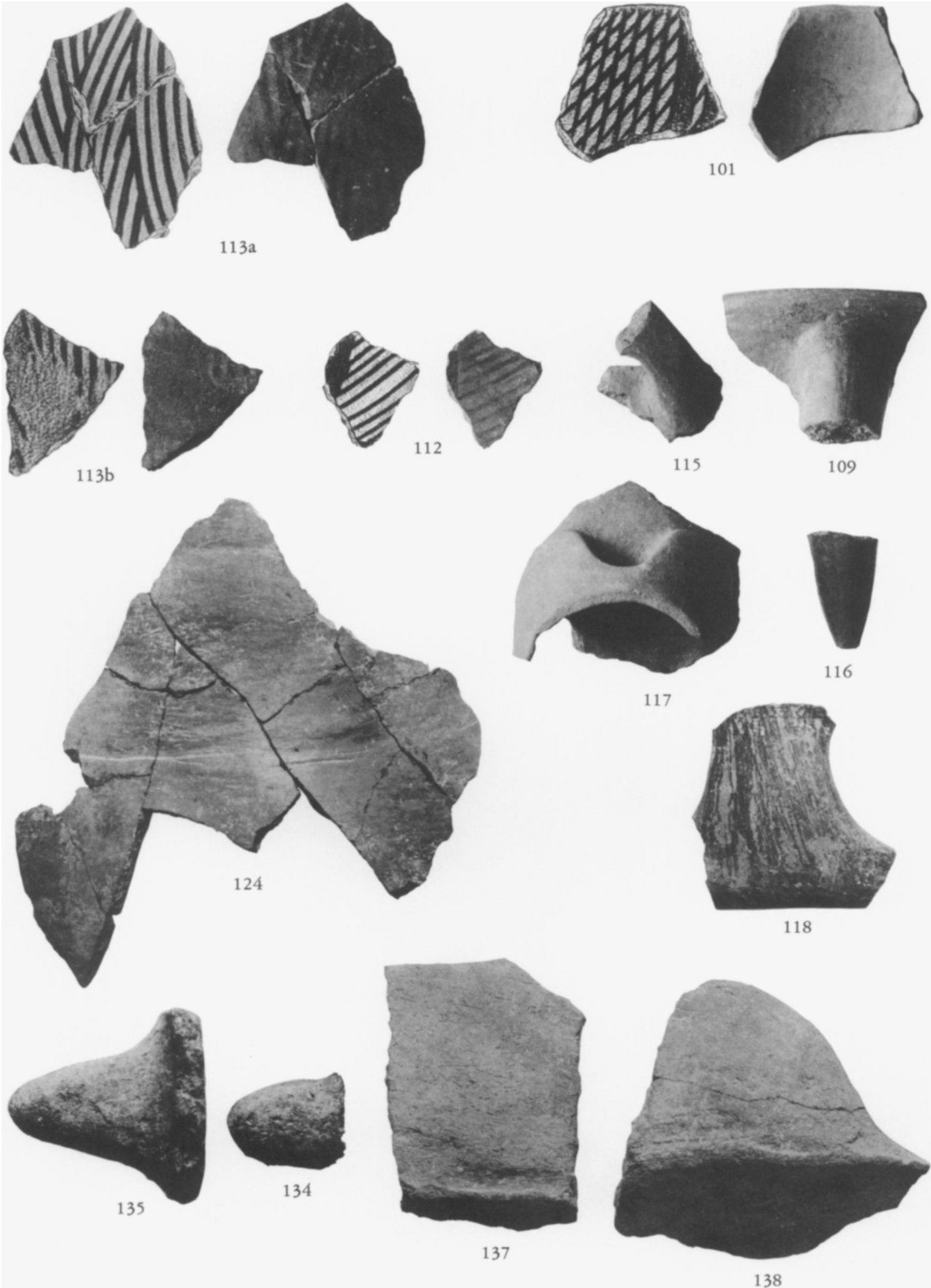


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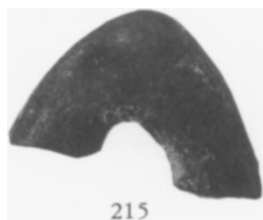
Objects of Stone, Period I. Scale *ca.* 1:2



Objects of Copper, Bone, and Terracotta, Period I. Scale *ca.* 1:2



Pottery of Phase IA1. Scale *ca.* 1:2



215



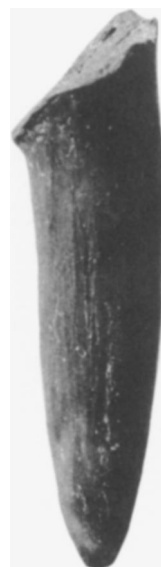
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220



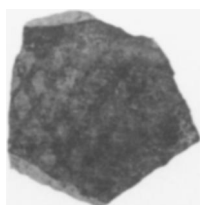
219



218



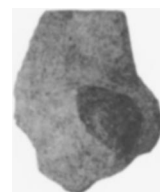
216



223



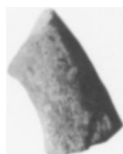
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202



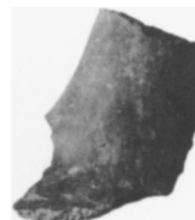
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217



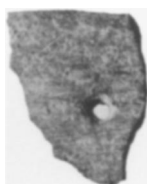
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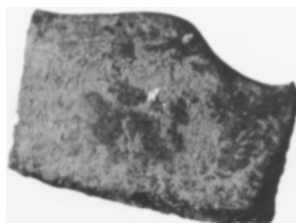
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227



229



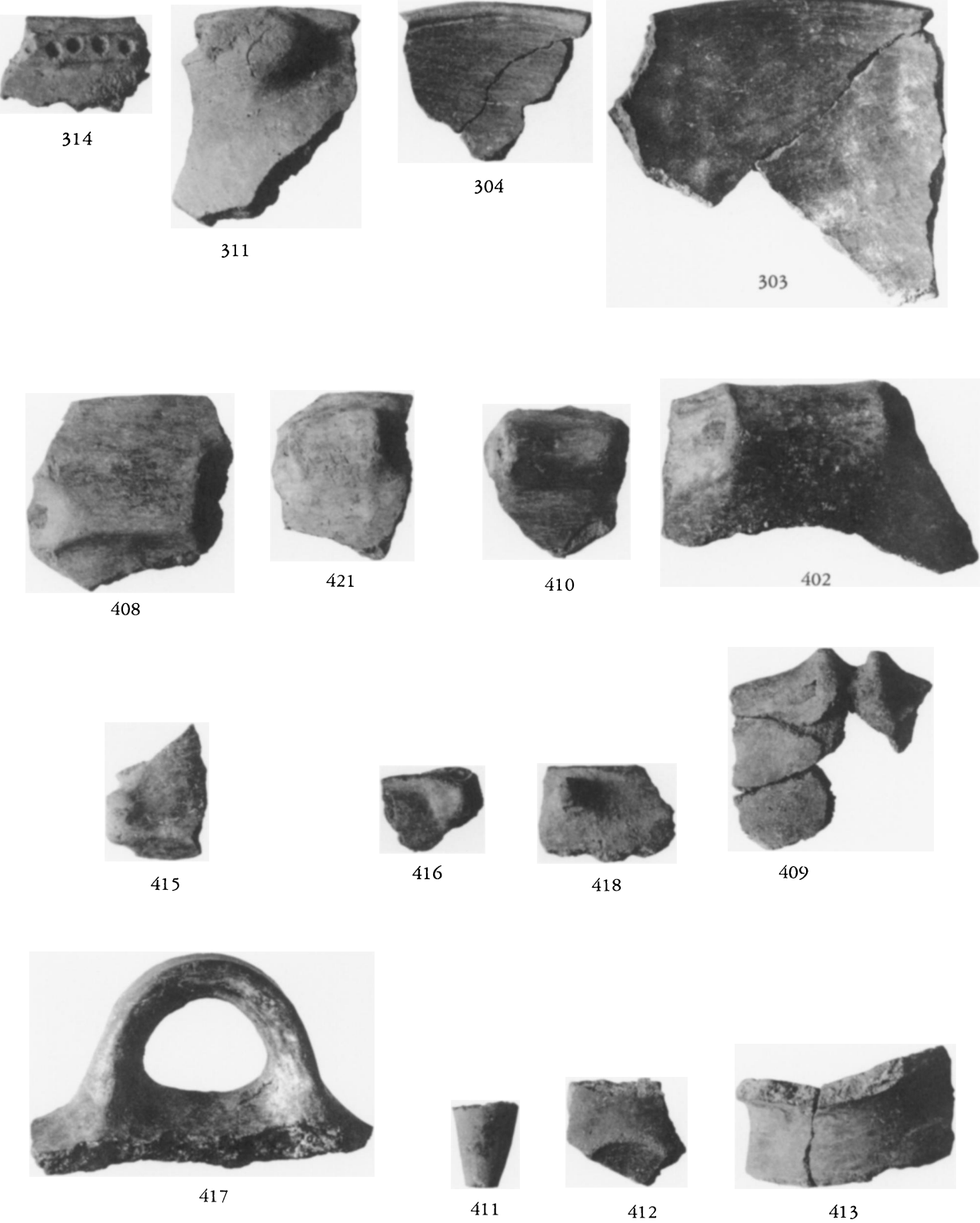
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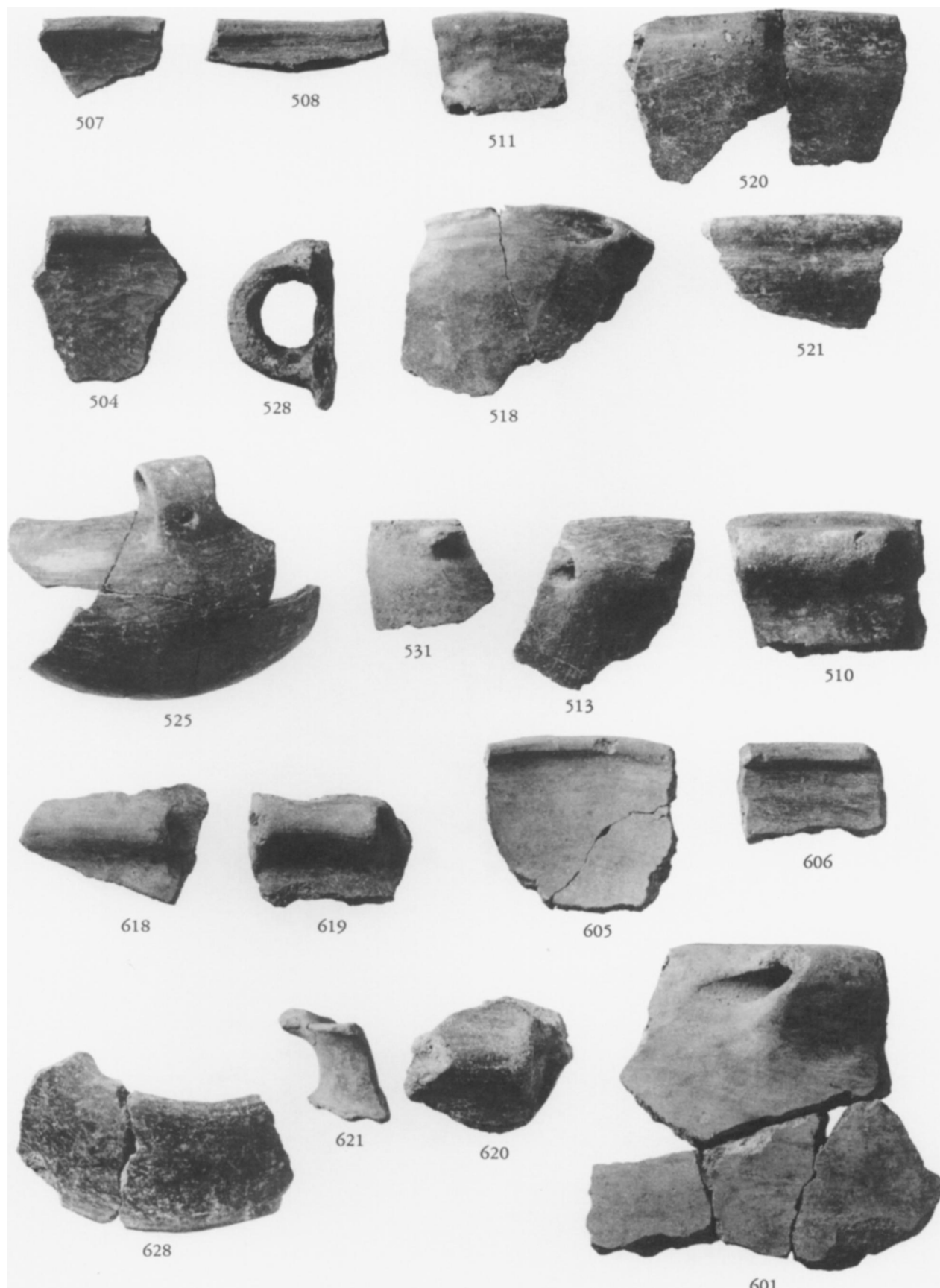
213

Pottery of Phase IA2. Scale *ca.* 1:2

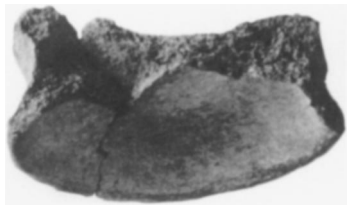
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Pottery of Phases IB1 (top row) and IB2. Scale *ca.* 1:2



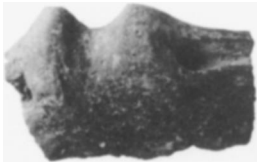
Pottery of Phases IB3 (upper three rows) and IB4, from Trench R. Scale *ca.* 1:2



550



554



547



538



557



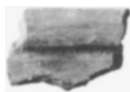
558



555



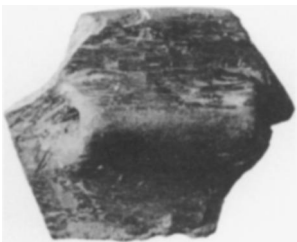
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540



542



536



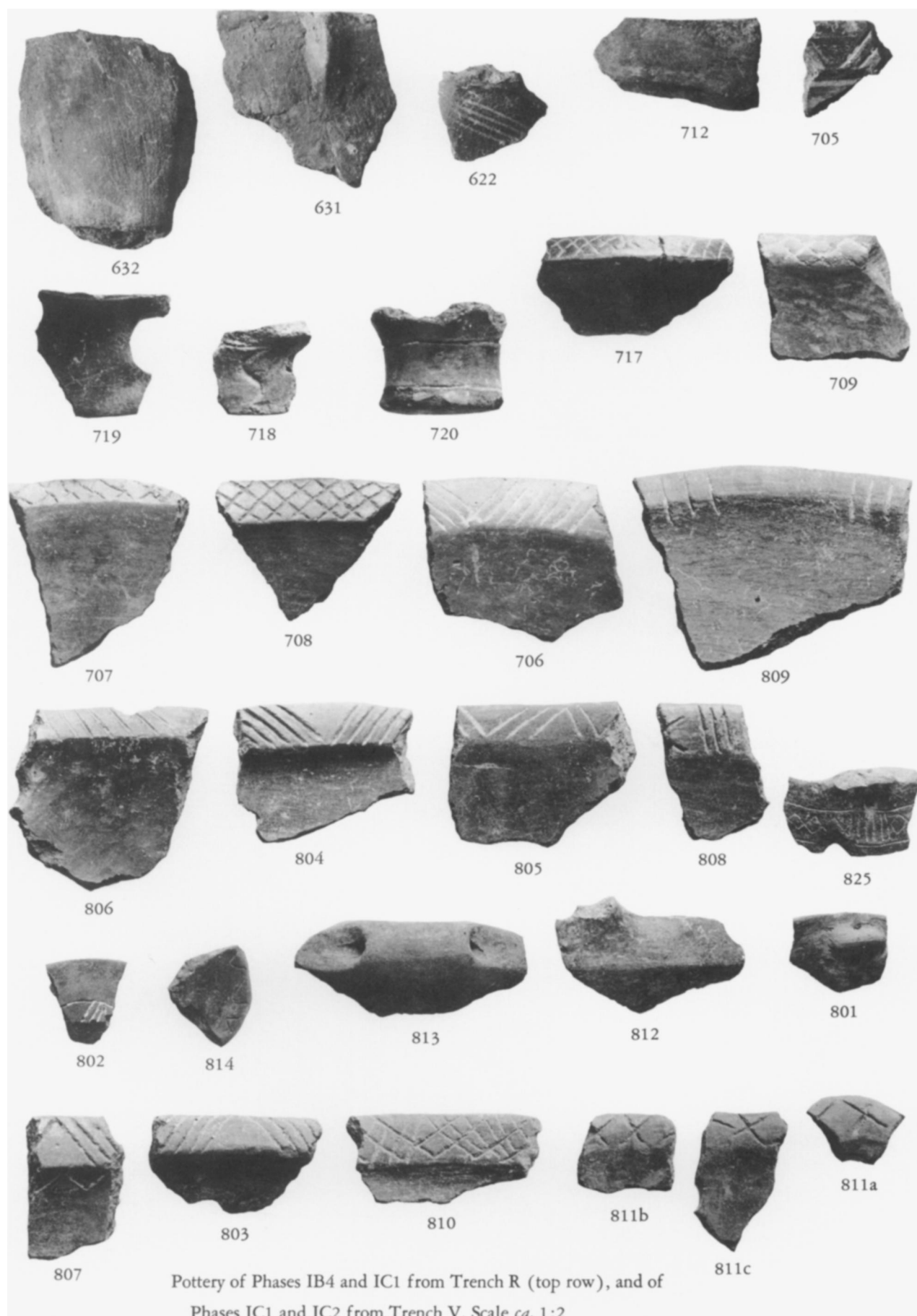
553



661

Pottery of Phases IB3 and IB4 (661 only), from Trench S. Scale *ca.* 1:2

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818



816



817



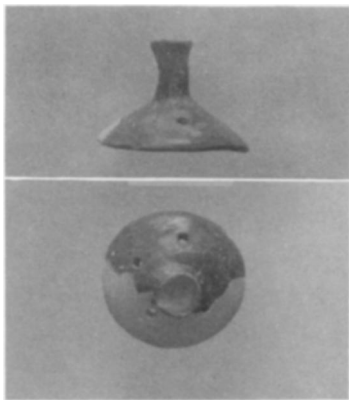
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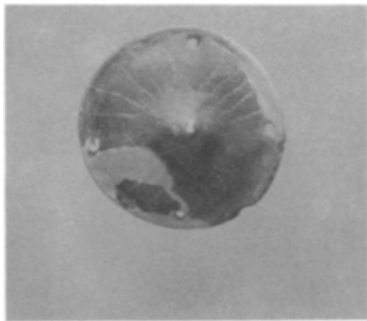
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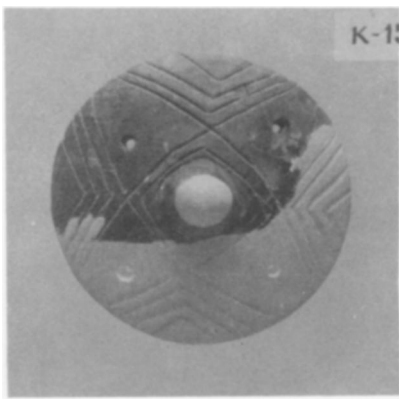
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827

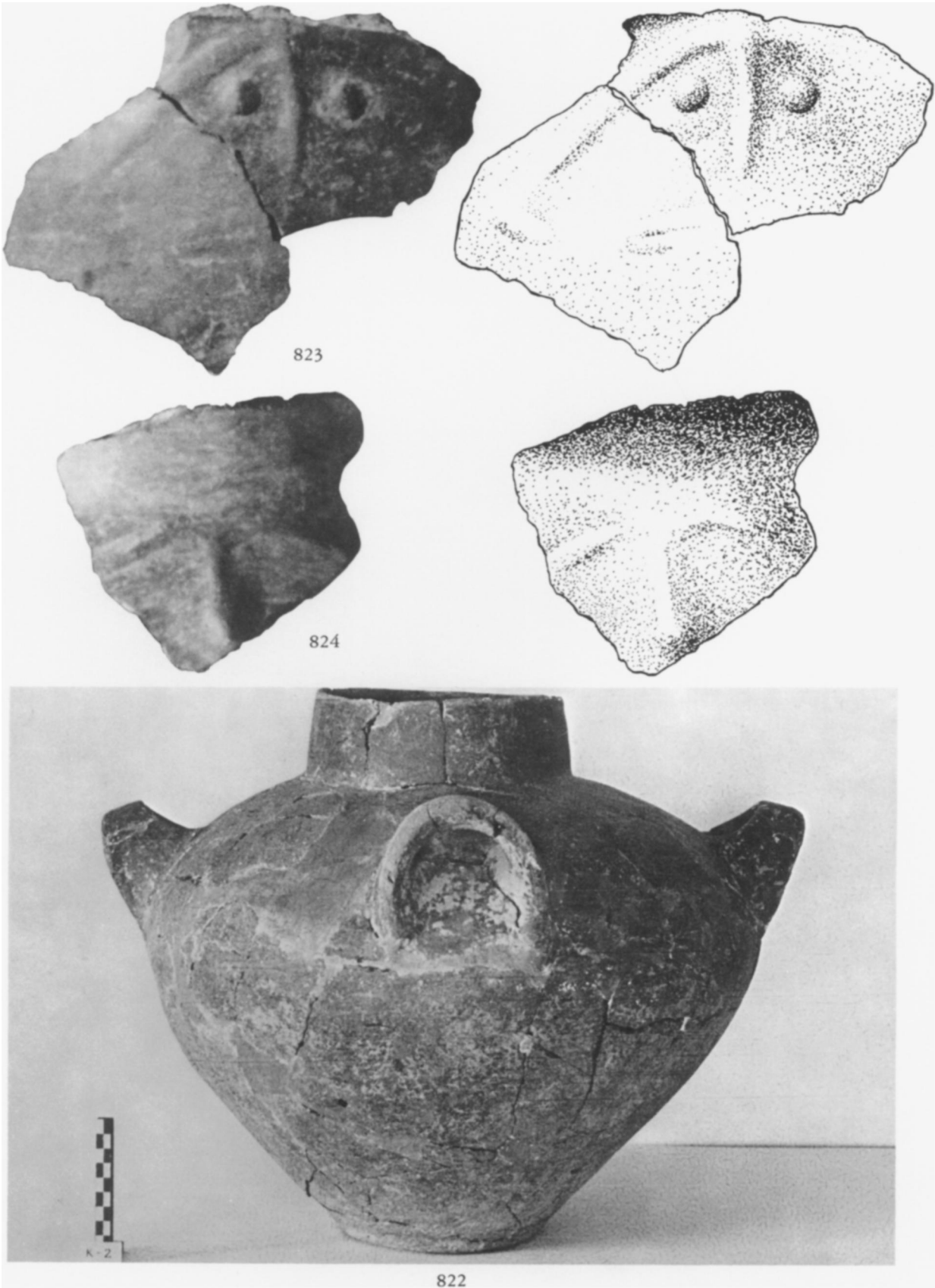


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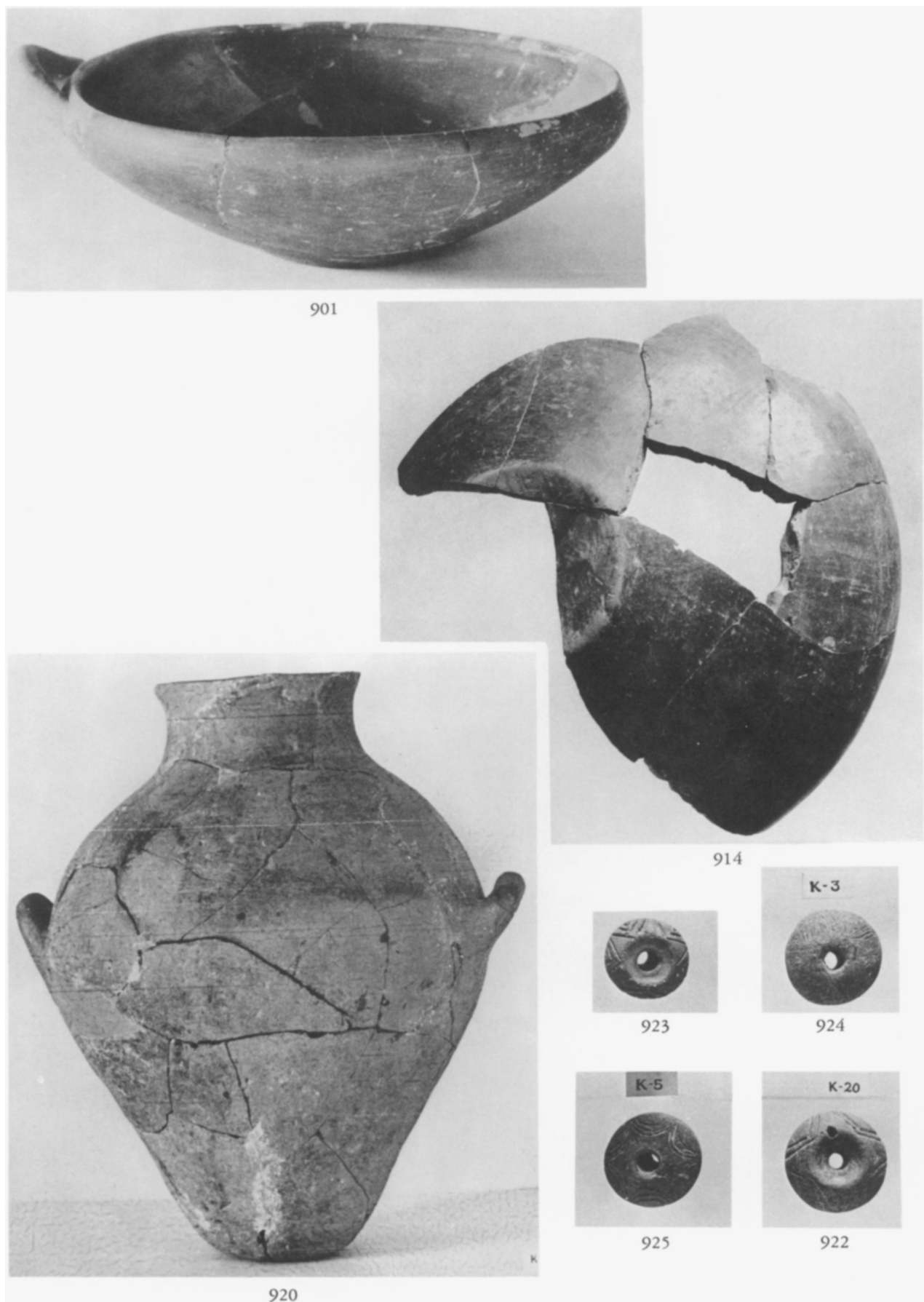


826

Jugs, Cooking Pot, and Lids, of Phases IC1 and IC2. Scale *ca.* 1:2



Pottery of Phase IC2, from Trench S, Floor Deposit. Scale of 823, 824 *ca.* 3:4; 822 as shown



Pottery and Whorls of Period II. Scale *ca.* 1:2, except 920, *ca.* 1:4



Pottery of Period II. Scale *ca.* 1:2

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