

The Upper Tigris Archaeological Research Project: a final report from the 1999 field season*

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With contributions by

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Abstract

During the summer of 1999 members of the Upper Tigris Archaeological Research Project (UTARP) conducted archaeological excavations and surveys at two sites in the upper Tigris river region of southeastern Turkey. This article presents the results of that research. At the site of Boztepe excavations yielded four Halaf period burials, all of which contained grave goods, and an Iron Age house dated by C14 to the Assyrian Imperial period. Intensive surveys at Talavaş Tepe and Boztepe have refined the chronology and size of both sites. Although the exposures of the Halaf period are very small, these data add important insights into Halaf mortuary practices, while evidence from both Boztepe and Talavaş Tepe supplements our understanding of the upper Tigris river region during the Iron Age.

Özet

1999 yılı yaz aylarında Yukarı Dicle Arkeolojik Araştırma Projesi (UTARP) üyeleri Türkiye'nin güneydoğu Anadolu bölgesinde yer alan yukarı Dicle bölgesindeki iki yerleşimde arkeolojik kazı ve yüzey araştırması yapmıştır. Bu makale bu araştırmanın sonuçlarını içermektedir. Boztepe yerleşiminde yapılan kazılar, hepsinde mezar buluntuları olan dört tane Halaf dönemi mezarını ortaya çıkarmıştır. Ayrıca C14 yöntemi ile Asur Krallık dönemine tarihlenen bir Demir Çağ evi de bulunmuştur. Talavaş Tepe ve Boztepe'de yapılan yoğun araştırmalar ise, her iki yerleşimin de kronolojisini ve büyüklüklerini ortaya koymuştur. Her ne kadar, Halaf dönemine ait ortaya çıkan buluntular çok azsa da, bu bulgular Halaf ölü gömme uygulamalarıyla ilgili bilgilerimizin önemli derecede artmasına neden olmuştur. Boztepe ve Talavaş Tepe bulguları ise, Demir Çağ'da yukarı Dicle bölgesini daha iyi anlamamızı sağlamıştır.

The river Tigris begins in central eastern Anatolia north of lake Hazar. The river flows southeast from the lake for about 100km, joining several tributaries before reaching the modern city of Diyarbakır. Just beyond Diyarbakır, the Tigris makes an abrupt turn due east. In these upper reaches of the river Tigris, before it has gathered the strength of its main tributaries (the Batman, Garzan and Bohtan rivers), it flows through a

broad valley known as the upper Tigris river valley (fig. 1). This valley begins a few kilometres south of Diyarbakır and stretches for about 60km to the east until the river enters the 'Tigris canyon' about 5km east of the Tigris-Batman confluence (fig. 2). Although the flood plain of the Tigris is still relatively limited in this area, the surrounding low-lying terraces are mantled in many places by deep silt and clay deposits making this

*This article is dedicated to Susannah Topham, a valuable member of the UTARP team, who died in a bicycle accident near Kamas, Utah, on 4 September 2000. Susannah worked as Bradley Parker's research assistant in the UTARP laboratory at the University of Utah for nearly two years. Susannah helped process the data from the 1999 season, worked on the figures

that appear in this article and in our preliminary report of these data, and was a great help in proofing and compiling several grant applications that made UTARP's 2000 field season possible. Susannah was a wonderful person and an excellent student. Our deepest sympathy goes out to Susannah's family and friends. We all miss her dearly.

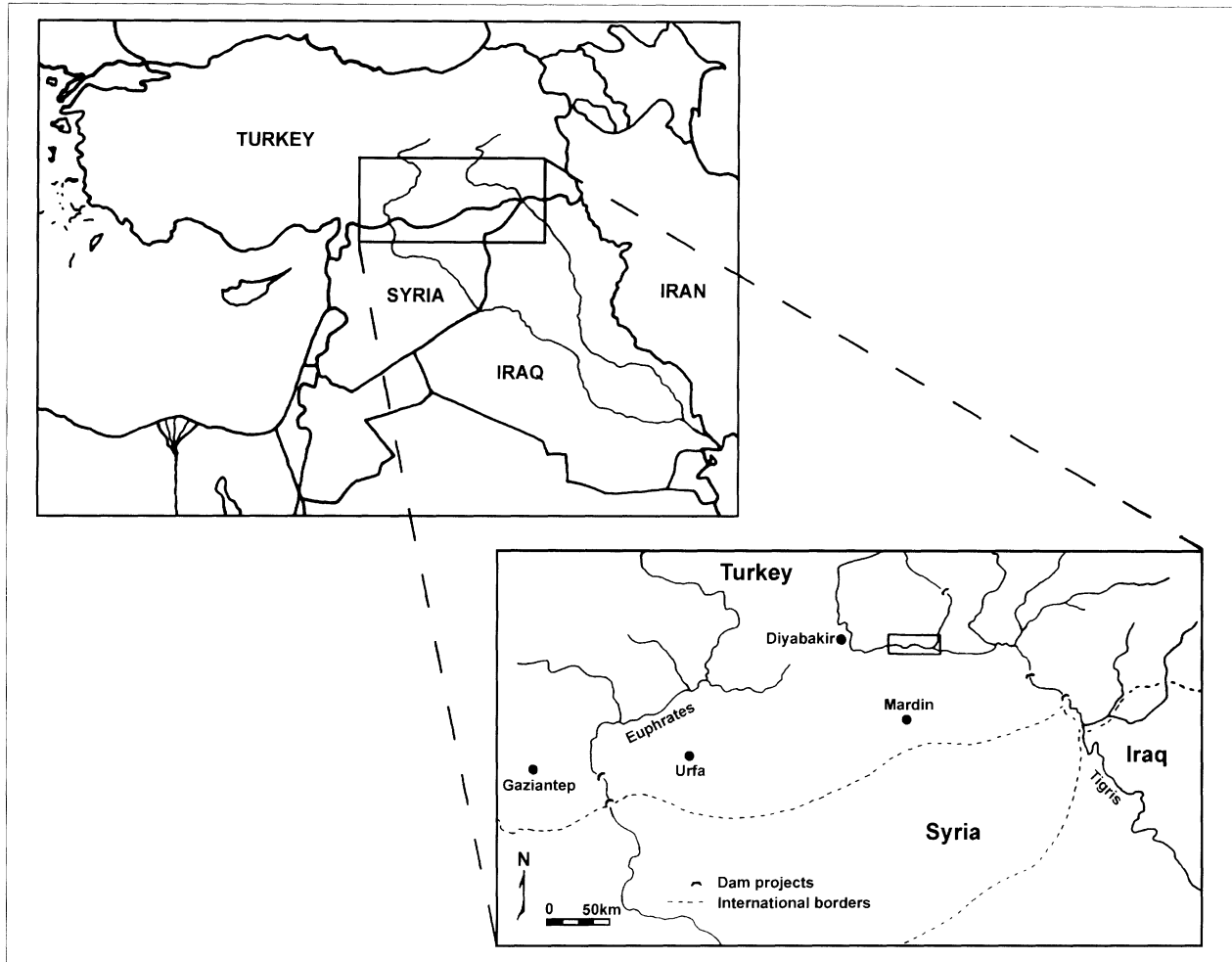


Fig. 1. Map of the modern Middle East with an enlargement of southeast Turkey and north Syria. The box on the Tigris river marks the location of fig. 2

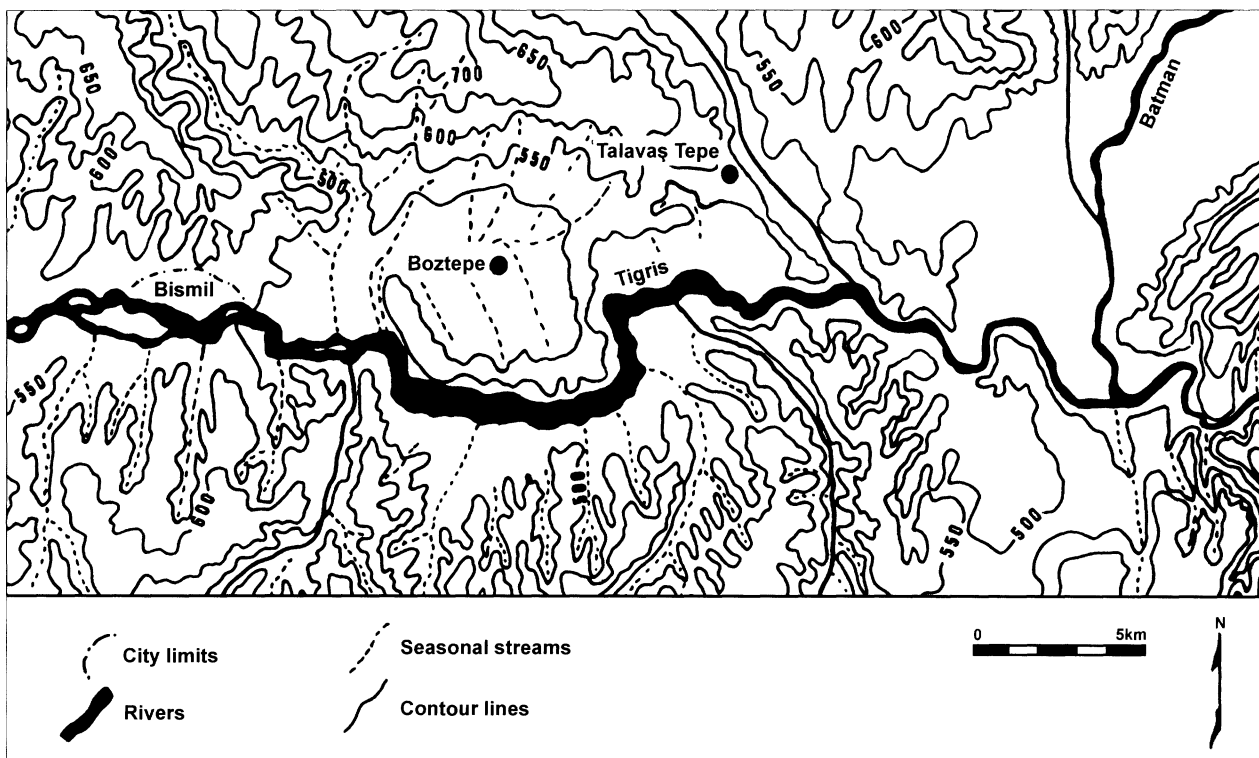


Fig. 2. Topographic map of the upper Tigris river valley showing the location of Boztepe and Talavaş Tepe

valley one of the most fertile areas in the region. Sinkholes are common along this section of the river. Many of these sinkholes are still active, forming ponds and small lakes at several locations, especially on the north bank of the river (Algaze et al. 1991: 180). The upper Tigris river valley is bordered on the south by the vast arid expanses of the Tur Abdin mountains, which effectively cut the valley off from the plains of north Syria some 75km to the south. On the north, the valley gives way to rolling hills, foothills and eventually mountains that make up the Taurus range in this part of Turkey.

As part of the Southeastern Anatolia Development Project (Güneydoğu Anadolu Projesi or GAP), the Turkish government is in the process of constructing two dams on the river Tigris in southeastern Anatolia. The first, the Cizre dam, will be located just north of the town of Cizre near the Turko-Iraqi frontier. The second, much larger Ilisu dam will be located about 50km upstream from the Cizre dam. In spite of the fact that the Ilisu dam will be located several hundred kilometres southeast of the upper Tigris river valley, the resulting reservoir will nearly reach the town of Bismil and will thus inundate a large portion of the upper Tigris river region, including much of the upper Tigris river valley. It is for this reason that, early in 1998, the authors formed the Upper Tigris Archaeological Research Project (UTARP). UTARP is a multi-year regional project aimed at researching and documenting archaeological remains in and around the area threatened by the Ilisu dam and its reservoir.

During the first season, UTARP focused on two sites in the upper Tigris river valley: Boztepe, where we conducted archaeological excavations; and Talavaş Tepe, where we conducted intensive archaeological surveys. It should be noted from the outset that, although our intention has always been to make this a complete and final report from the 1999 season, several factors beyond our control have made this goal difficult to achieve.¹ Given these difficulties, we have decided to publish this report in as complete a form as possible.² We apologise for any shortcomings in the following pages.

¹ During the winter of 2000 the basement of the Diyarbakır Museum flooded, destroying most of our faunal material and many of our human bones. This material is now being stored in the UTARP depot in Bismil, Turkey.

² We have attempted to address all the major issues and avenues for research in this paper. However, there is still room for more study of the ceramics, and our lithic material has yet to be analysed. Anyone who might be interested in studying the material is invited to contact the authors.

Boztepe

The site of Boztepe is located some 8km east of the modern town of Bismil in Diyarbakır province, south-eastern Turkey (figs 1, 2). Although Boztepe is situated only about 500m south of the modern Diyarbakır to Batman highway, in antiquity its position was quite precarious. Boztepe lies on an unprotected plain close to, but separated from, the then formidable river Tigris by an ancient limestone outcropping. Boztepe's advantage lay in its command over the productive farmlands of the relatively limited low-lying plains surrounding the Tigris river course in southeastern Anatolia. Another advantage of the site is that, since prehistoric times, the low natural mound upon which the site was founded has directly bordered a spring or small pond whose geologic origin is certainly the same as that of the many sinkholes still active in the region today.³

Boztepe is a small, relatively low mound. In spite of the fact that in some areas cultural debris measures more than 4m in depth, its façade against the rolling terrain and neighbouring hills make it almost indistinguishable from the surrounding landscape (fig. 3). A preliminary evaluation of the cultural history of the site, based on an analysis of the reconnaissance survey data from the Tigris-Euphrates Archaeological Reconnaissance Project's initial survey of the region pointed to several preliminary conclusions that made research at this site appealing and urgent (Algaze 1989; Algaze et al. 1991; Parker 2001).

To begin with, the reconnaissance survey data suggested that this was a single period Iron Age site that was directly influenced by, if not the result of, the Assyrian conquest of the region which began, according to the Assyrian king Ashurnasirpal, in 882 BC (Grayson 1982; 1991). The fact that large quantities of Neo-Assyrian ceramics were discovered at a site that appeared to have no previous occupation suggested to us that Boztepe might have been a colony set up by the Assyrians as part of their policy of deportation and resettlement. Urgency was added to the archaeological equation not only by the construction of the Ilisu dam, whose completion is still perhaps seven years away, but also by the fact that Boztepe has recently sustained considerable damage. These factors combined with the impending likelihood that Boztepe and many other archaeological sites in the upper Tigris river region will soon be under cotton, as many of the fields in the region already are, put this site at the forefront of UTARP's agenda.

³ This sinkhole is no longer active, but there is ample evidence of its use in earlier times. In fact, the modern village of Boztepe was probably founded at this site to take advantage of its easy access to ground water.

Excavations at Boztepe

In early July 1999, UTARP team members opened four 5x5m trenches in two separate areas at Boztepe (Areas A and B, see below). At the same time work also began on intensive surveys at Boztepe and at the neighbouring site of Talavaş Tepe (see below), and on topographic maps of both sites. The four initial trenches at Boztepe were eventually expanded to 11 trenches and two soundings in four areas (Areas A, B, C and D).

Area A trench summaries

Area A is located at the centre of the mound of Boztepe. Because modern overburden covers large parts of the central portion of the mound, Area A trenches were not all oriented north-south, but were instead placed to fit in what we believed to be yards between, or courtyards within, two destroyed modern houses.⁴ Trench A-1 and its expansion (see below) were oriented roughly north-south on the western edge of the highest part of the mound. Trenches A-2, A-3, A-4, A-5, A-6 and A-7 were clustered together about 15m northeast of A-1. These trenches were oriented roughly northwest-southeast (fig. 4). Although trench A-1 contained a significant amount of modern overburden, this trench yielded some of the season's most important finds. These finds included four Halaf period burials, all of which contained grave goods. Trenches A-2 through A-7 yielded an Iron Age house complete with walls, floors, a kitchen and an impressive destruction layer.

Area A, trench 1

The uppermost layers in trench A-1 (L1000+)⁵ contained modern debris mixed with standard Iron Age, Imperial (for discussion see Parker 1997b; 2001) and Halaf period ceramics and worked stone. After removing almost a metre of contaminated fill, we decided to focus our efforts in a 1.5m² sounding (L1010) in the northeast corner of the unit. At a depth of 1.77m below ground

⁴ For ease of reference, the units in Area A are discussed as if they were oriented on a north-south axis.

⁵ Archaeological features and contexts will be referred to in this article by their locus number, which is expressed by the letter 'L' followed by a four-digit number. Each trench is given 1000 locus numbers at the start of the season. Using this system, trench A-1 will always have numbers in the 1000s, trench A-2 will always have numbers in the 2000s etc. Note that these numbers repeat in each area. Thus Area B also has numbers in the 1000s and 2000s, etc. On some occasions the locus number will be followed by a '+', which means that this context was excavated using more than one locus. Finds will be referred to by their find number, which is expressed by the letters 'BZ' followed by a four-digit number. These numbers also correspond to the trench number. Thus, Area A BZ1000s come from trench A-1, Area A BZ2000s come from trench A-2, etc.



Fig. 3. View of Boztepe looking south

surface we finally reached uncontaminated levels (L1011). However, to our surprise, these levels contained no Iron Age remains, but instead yielded numerous examples of typical Halaf period ceramics (figs 5, 6). At approximately 2m below ground surface we discovered part of a human skull (L1009) protruding from the west baulk. This prompted us to expand the sounding (L1008) to encompass the entire northern half of the trench and, later, to expand the trench itself 1.5m to the north and west. This effort eventually yielded three complete burials and one fragmentary burial dating to the Halaf period.

The deceased were placed in simple pits spaced roughly 1m apart in a relatively straight line from east to west. The burial pits were cut into and filled with hard clay that contained scattered pieces of white limestone. This material is very similar to that which we identified as virgin soil in trenches B-1, B-2 and C-1, although time constraints prevented further excavation to confirm this identification. No architecture was discovered in trench A-1 suggesting that these burials were part of an open area cemetery rather than a settlement. Each individual was buried on the right side roughly facing north. The bodies were all placed in the foetal position with the legs brought up to the chest cavity and the arms flexed so that the hands were under or near the skull.

Several factors contributed to the deterioration of the skeletal remains from these burials during and after excavation. First, the chemical composition of the soil caused the bones to be extremely brittle making excavation very difficult. For this reason we attempted to make as many measurements as possible while the bones were still *in situ*. Second, the bones of two of the skeletons were damaged during the transfer from our original depot to the Diyarbakır Museum. And third, one of the skeletons did not survive the flooding of Diyarbakır Museum's depot.

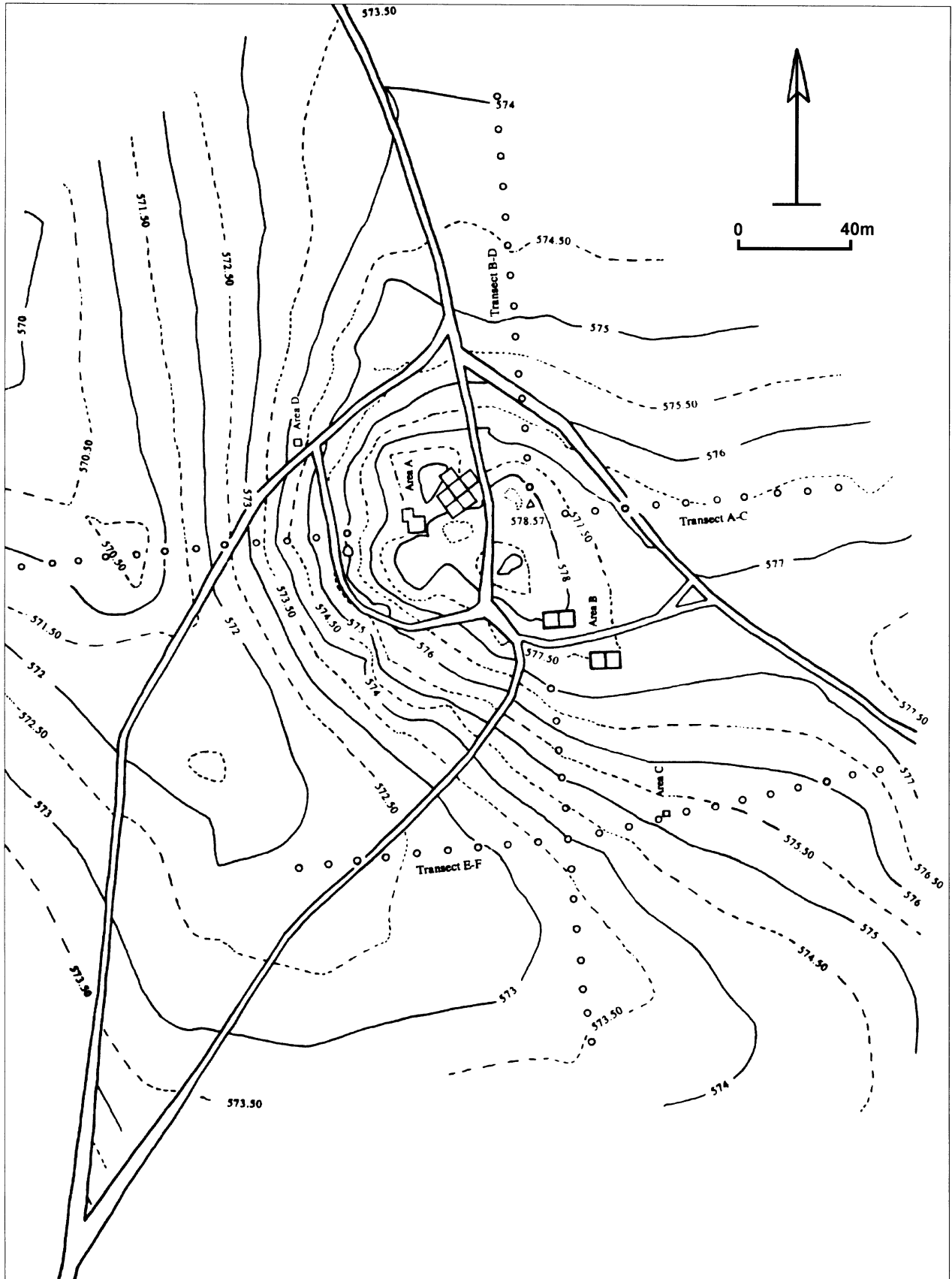


Fig. 4. Topographic map of Boztepe. Excavation units and areas are marked, as are the survey transect circles. Note that the transect circles are not to scale

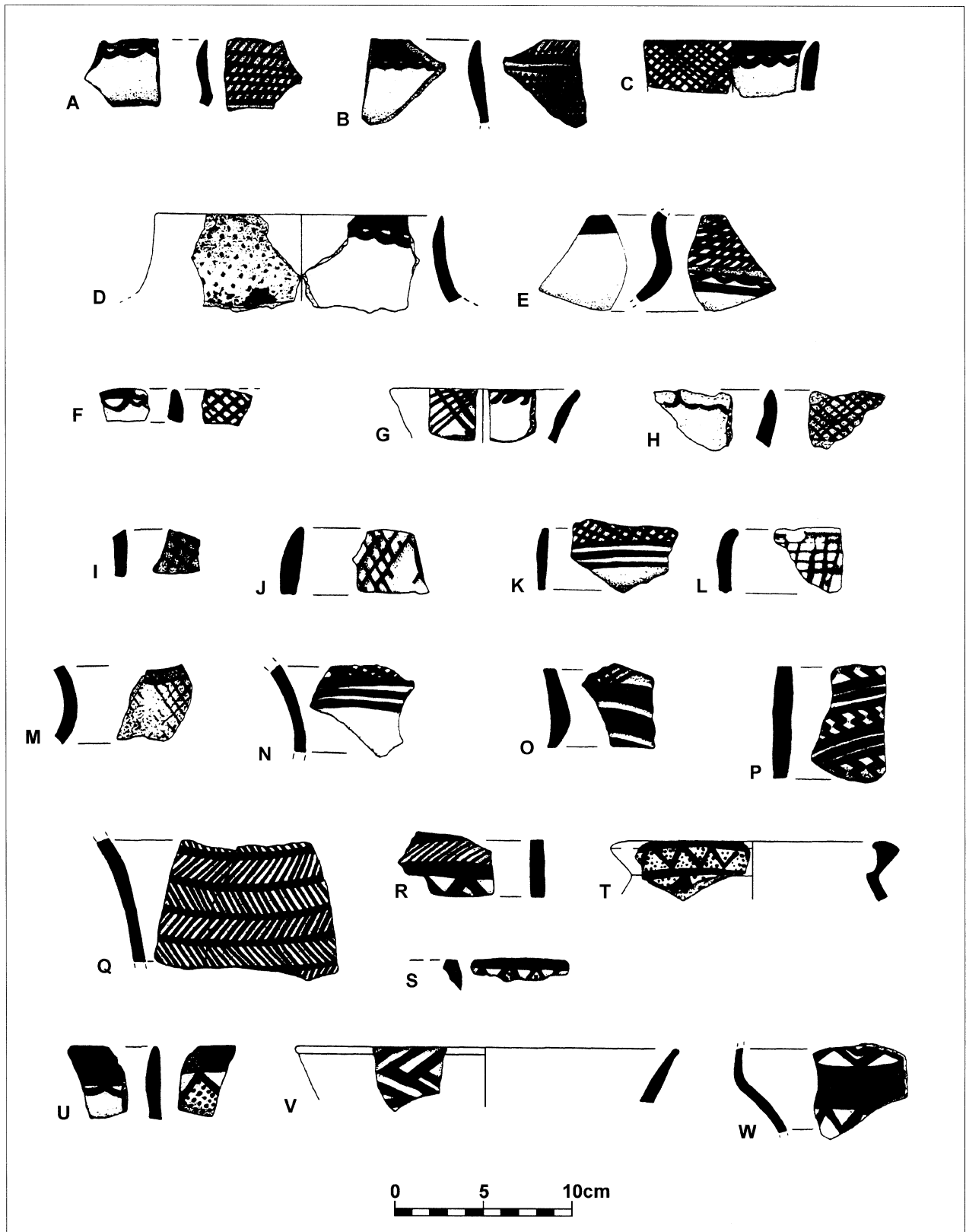


Fig. 5. Halaf period ceramics from Boztepe

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- A. A1007 BZ1037. Interior and exterior surface pale yellow (2.5Y 8/3), paint brown (10YR 3/2), core pale yellow (2.5Y 8/4). Medium grit temper.
- B. A1013 BZ1077. Interior light grey (2.5Y 7/2), exterior pale yellow (2.5Y 8/2), exterior paint dark grey (2.5Y 4/1), core light yellowish brown (2.5Y 6/3). Fine grit temper.
- C. A1013 BZ1092. Interior and exterior surfaces pale yellow (2.5Y 8/3), surface paint dark olive brown (2.5Y 3/3), core pale yellow (2.5Y 8/3). Medium grit temper. Diameter 9cm.
- D. A1009 BZ1040. Exterior surface very dark grey (5YR 3/1). Interior and exterior surfaces covered with greenish-grey wash (2.5YR 8/3), interior rim painted black (2.5YR 3/1), core grades from light grey to orange. Grit temper. Diameter 16cm.
- E. A1000 BZ1000. Interior surface light grey (10YR 7/2), exterior surface light brownish grey (2.5Y 6/2), core grades from greyish brown (2.5Y 5/2) to light yellowish brown (2.5Y 6/4). Medium grit temper.
- F. A1 Sounding BZ1029. Interior and exterior surfaces light grey (10YR 7/2). Medium grit temper.
- G. A1013 BZ1077. Interior and exterior surfaces very pale brown (10YR 7/4), interior and exterior paint grades from red (2.5YR 5/8) to dark reddish grey (2.5YR 3/1), core light yellowish brown (10YR 6/4). Fine grit temper. Diameter 10cm.
- H. A1 Sounding BZ1029. Interior and exterior surfaces light grey (10YR 7/2). Medium grit temper.
- I. A1008 BZ1047. Interior and exterior surfaces light grey (10YR 7/2), exterior paint dark grey (10YR 4/1), core grades from reddish grey (5YR 5/2) to light red (2.5YR 6/6).
- J. A1008 BZ1047. Interior and exterior surfaces pale yellow (2.5Y 8/2), exterior paint pale brown (10YR 6/3), core reddish yellow (5YR 6/6).
- K. A1014 BZ1083. Interior and exterior surfaces pale yellow (2.5Y 7/3), exterior paint dark olive brown (2.5Y 3/3), core yellowish brown (10YR 5/4). Medium grit temper.
- L. A1008 BZ1047. Interior surface light grey (10YR 7/2), exterior surface light reddish brown (5YR 6/4), exterior paint light yellowish brown (2.5Y 3/1), core light grey (10YR 7/3).
- M. A1008 BZ1047. Interior and exterior surfaces light grey (10YR 7/3), exterior paint very dark grey (10YR 3/1), core brown (7.5YR 5/4).
- N. A1013 BZ1077. Interior surface pink (5YR 7/4), exterior surface very pale brown (10YR 8/2), exterior paint red (2.5YR 4/6), core reddish yellow (5YR 6/6). Fine grit temper.
- O. A1013 BZ1092. Interior and exterior surfaces reddish yellow (7.5YR 7/6), exterior paint dark brown (7.5YR 3/3), core reddish yellow (7.5YR 7/6). Fine to medium grit temper.
- P. A1008 BZ1071. Interior surface reddish yellow (7.5YR 6/6), exterior surface very pale brown (10YR 7/3), exterior paint yellowish red (5YR 4/6). Medium grit temper.
- Q. A1013 BZ1077. Interior surface very pale brown (10YR 7/4), exterior surface pale yellow (2.5Y 7/3), exterior paint very dark grey (10YR 3/1), core light yellowish brown (10YR 6/4). Fine grit temper.
- R. A1014 BZ1083. Interior surface strong brown (7.5YR 4/6), exterior surface yellowish brown (10YR 5/4), exterior paint dark brown (7.5YR 3/3), core dark greyish brown (2.5 Y 2). Fine grit temper.
- S. A1001 BZ1005. Interior and exterior surfaces and core brown (7.5YR 5/4), exterior paint black (7.5YR 2.5/1). Fine grit temper.
- T. B1025 BZ1168. Interior and exterior surfaces very pale brown (10YR 7/4), exterior paint brown (10YR 4/3), core very pale brown (10YR 7/4). Medium grit temper. Diameter 13cm.
- U. B1025 BZ1154. Interior surface reddish yellow (7.5Y 8/6), exterior paint black (10YR 2/1), core reddish yellow (7.5YR 7/6). Interior and exterior highly burnished. Fine to medium grit temper.
- V. A1008 BZ1071. Interior surface brown (7.5YR 5/4), exterior surface pale yellow (7.5Y 8/3), exterior paint yellowish red (5YR 5/8), core reddish brown (5YR 4/4). Medium to coarse grit temper. Diameter 21cm.
- W. A1013 BZ1077. Interior surface reddish yellow (5YR 7/6), exterior surface pinkish white (7.5YR 8/2), exterior paint dark reddish brown (5YR 3/2), core light reddish brown (5YR 6/5). Fine grit temper.

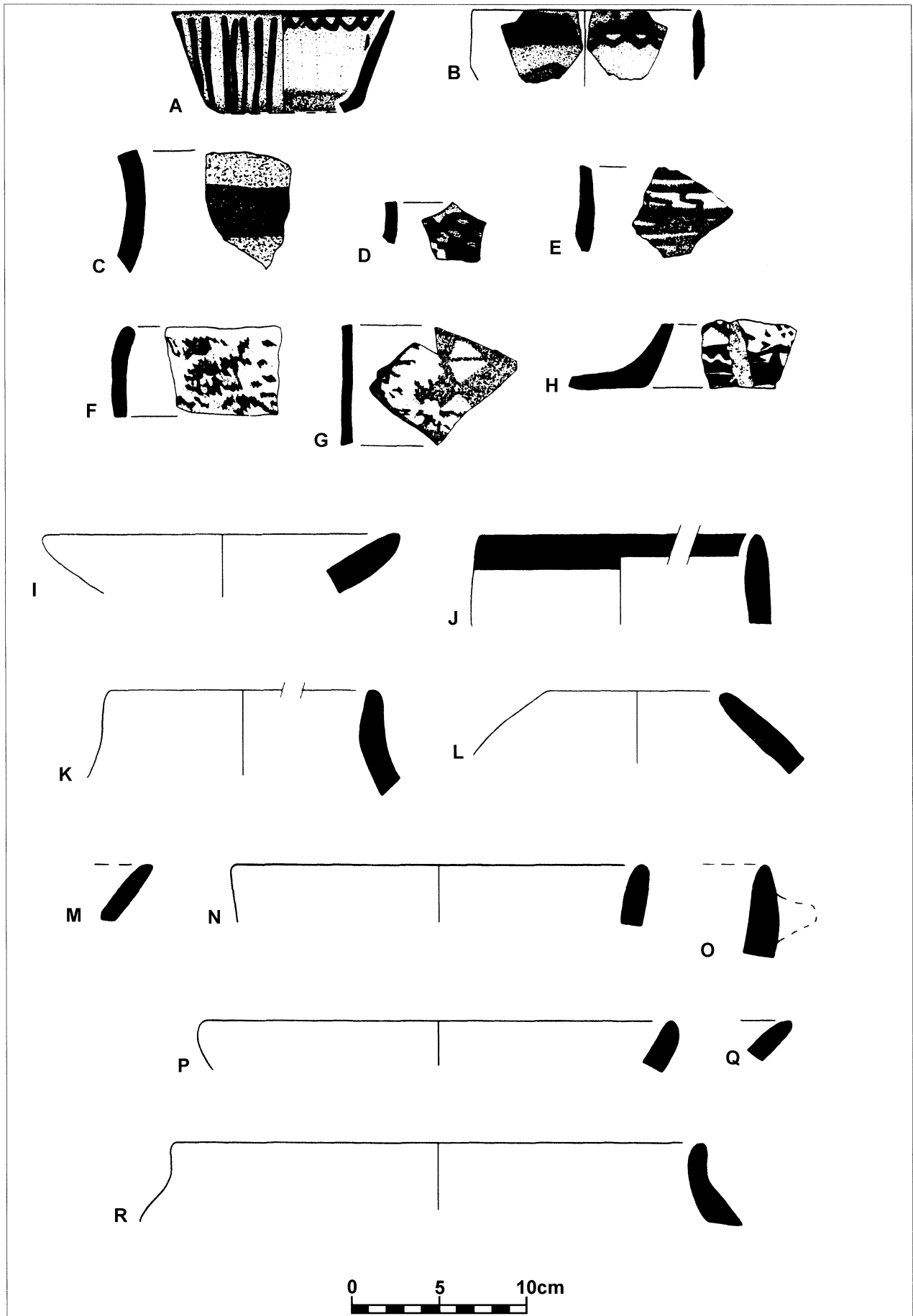


Fig. 6. Halaf period ceramics from Boztepe

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- A. B1025 BZ1183. Interior and exterior surfaces reddish yellow (5YR 7/6), exterior paint dark reddish brown (5YR 2.5/2), core reddish yellow (5YR 7/6). Fine grit temper. Diameter 12cm.
- B. A1008 BZ1047. Interior and exterior surfaces pink (7.5YR 7/4), interior and exterior paint yellowish red (5YR 4/6), core yellowish red (5YR 5/6). Diameter 12cm.
- C. A1008 BZ1047. Interior and exterior surfaces pale yellow (2.5 Y 7/3), exterior paint dark greyish brown (10YR 4/2), core light brown (7.5YR 6/4).
- D. A1008 BZ1047. Interior and exterior surface very pale brown (10YR 7/3), exterior body paint dark grey (10YR 4/1).
- E. A1008 BZ1047. Interior and exterior surfaces very pale brown (10YR 7/4), exterior paint light brown (7.5YR 6/4), core brown (7.5YR 5/4).
- F. A1008 BZ1047. Interior surface light brown (7.5YR 6/4), exterior surface brown (7.5YR 5/4), core abrupt shift from greyish brown (10YR 5/2) to pink (7.5YR 7/4).
- G. A1008 BZ1047. Interior and exterior surfaces pink (7.5YR 7/4), exterior paint reddish brown (5YR 4/4), core yellowish red (5YR 5/6).
- H. C1000 BZ1035. Painted stone base. Interior and exterior surfaces light reddish brown (2.5YR 6/3).
- I. A1007 BZ1037. Interior and exterior surfaces light grey (10YR 7/2), core has abrupt shift from very pale brown (10YR 7/4) to black (7.5YR 2.5/1). Coarse chaff temper. Diameter 19cm.
- J. B1025 BZ1154. Interior and exterior surfaces pale yellow (2.5Y 7/4), interior and exterior paint very dark greyish brown (2.5Y 3/2), core very pale brown (10YR 7/4). Fine grit temper. Diameter 39cm.
- K. A1009 BZ1053. Interior and exterior surfaces brown (7.5YR 4/4), core black (10YR 2/1). Very coarse chaff temper. Diameter 33cm.
- L. B1025 BZ1183. Interior and exterior surface wash dark grey (5YR 4/1), core grades from brown (7.5YR 4/2) to greyish brown (2.5Y 4/2). Medium grit temper. Diameter 9cm.
- M. B1025 BZ1168. Interior and exterior surfaces and core dark grey (7.5YR 4/1). Medium grit temper.
- N. A1008 BZ1047. Interior and exterior surfaces light brown (7.5YR 6/3), core black (7.5YR 2.5/1). Diameter 22cm.
- O. B1025 BZ1154. Lug handle. Interior and exterior surfaces light brownish grey (10YR 6/2), core light olive brown (2.5Y 5/3). Fine grit temper.
- P. A1 Sounding BZ1029. Interior and exterior surfaces brown (7.5YR 5/3), core very dark grey (7.5YR 3/1). Fine chaff temper. Diameter 29cm.
- Q. B1025 BZ1183. Interior and exterior surfaces very dark grey (10YR 3/1), core very dark greyish brown (10YR 3/2). Coarse grit temper.
- R. A1 Sounding BZ1023. Interior surface light brown (7.5YR 6/4), exterior surface pinkish grey (7.5YR 6/2), core black (7.5YR 2.5/1). Medium chaff temper. Diameter 29cm.

Burial 1 (A-1, L1009, BZ1061)

Excavation and context

This individual was buried on the right side facing north (fig. 7A). Unfortunately, the pelvic girdle was too fragmentary to yield any information about its age and sex during excavation. However, an on-site examination of the temporal and occipital bones of the skull, in addition to the presence of fully adult dentition, led us to the initial supposition that this was the remains of an adult female over the age of 18, but probably not older than about 35. The arms were bent at the elbows, placing the hands under the mandible, and the legs were tightly flexed and brought up to the torso. A squat jar, beautifully decorated with black dots on a tan background with a reddish wash (see below and figs 8, 9), was placed behind the skull.

Skeletal analysis⁶

Boztepe skeleton BZ1061 was badly damaged during excavation and storage. Upon examination during the summer of 2001, the bones present included: pelvic fragments including the right pubic symphysis, cranial fragments including the right mastoid process and external auditory meatus, mandibular fragments and teeth, maxillary fragment and teeth, the distal thirds of both humeri, the proximal thirds of both ulnae and both radii, midshaft fragments of both tibiae, fibulae, at least one femur, clavicle and scapula fragments, assorted tarsals, carpals, metatarsals, metacarpals and phalanges, and fragmentary remains of vertebra and ribs. In consulting the excavation notes it appears that at least one box of bones from this burial is missing meaning that the remains available for analysis represent less than 30% of the original skeleton.

Sex and age estimation

Both cranial and pelvic markers indicate this individual was probably female. The mental eminence, though fragmentary, is narrow and poorly defined. The right mastoid process does not extend far below the external auditory meatus (score 1–2), though its volume score would be higher (2–3). Based on the fragmentary remains on the pubic symphysis, there is evidence of a ridge on the medial aspect, a ventral arc, and a sub-pubic concavity. All of these indicators suggest the individual was female, though the fragmentary nature of the remains leaves considerable room for error.

The age estimate is based on two lines of evidence: pubic symphysis morphology and tooth wear. Remnants of the ridge and furrow system are present on the symphyseal face. The dorsal margin is well defined, and a ventral rampart is forming. The inferior margin is becoming distinct. The superior extremity is becoming dense, though there is no nodule present (Todd 3–6; 25–35). Tooth wear scores are as follows: mandibular M₁ (18 Scott), M₂ (8 Scott), I₁ (3–4 Smith), C (1–2 Smith); maxillary: C (3–4 Smith), Pm¹ (1–2 Smith), M² (27 Scott). In this series, and the one from Kenan Tepe, this constitutes relatively light wear and suggests this is a younger adult. Overall age assessment: younger adult (20–40).

⁶ The analysis of the Boztepe skeletons offered here is the work of Professor Richard Paine.

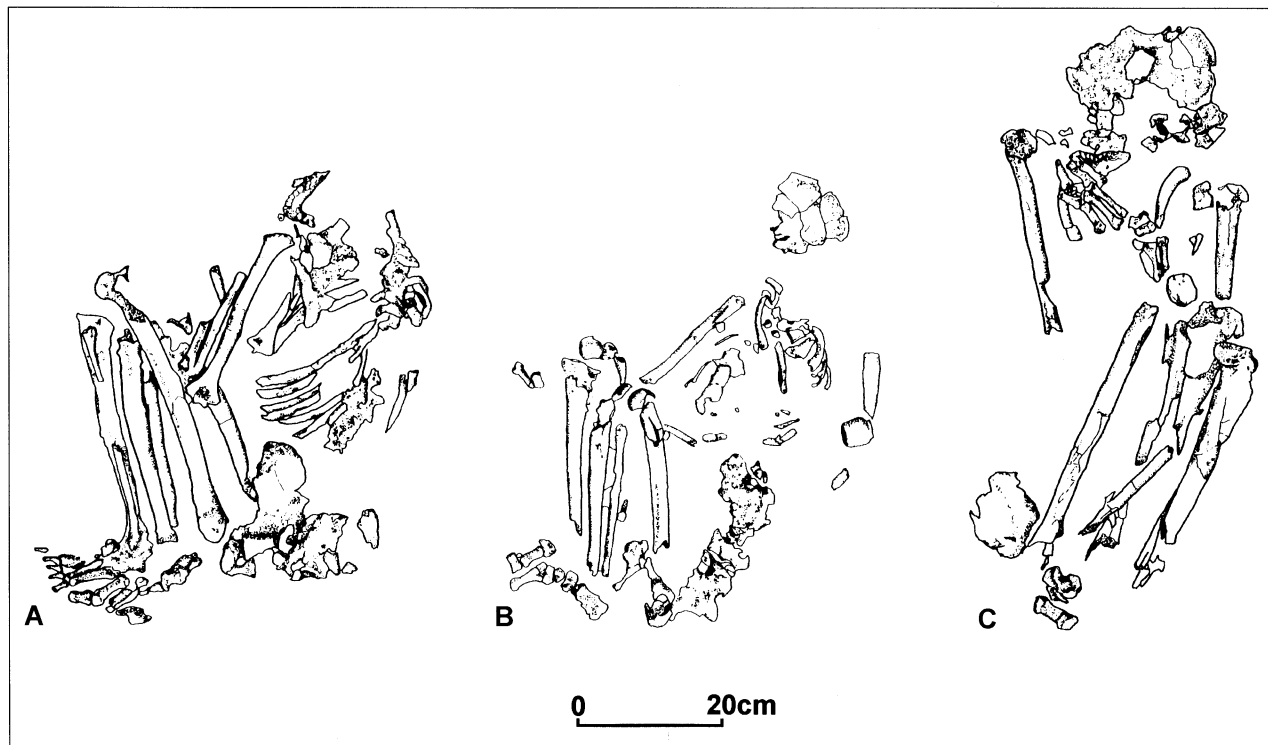


Fig. 7. Halaf period skeletons from trench A-1. (A) Burial 1 (L1009); (B) Burial 2 (L1009); (C) Burial 3 (L1014). Note the miniature collared jar (A1009 BZ1055) in the far right of drawing B (see also figs 8 and 10)

Grave goods

The Halaf burials discovered in trench A-1 yielded an interesting corpus of whole pots. Burial I contained a beautiful squat jar (BZ1043, figs 8G, 9) precisely paralleled in Campbell et al. 1999 (fig. 10 no. 4). The vessel's form also has parallels in southeastern Turkey and northern Iraq (Watson, LeBlanc 1990: fig. 4.1 no. 14; or Hijara 1980: fig. 9 no. 230). This vessel measures 13cm in width by 7.5cm in height and is made up of a fine orange fabric. Its outer surface is decorated with 18 alternating rows of small brown (ca. 2x2mm) and larger oval dots (ca. 5x2mm). The dots are set against a tan-orange background that is slightly lighter than the natural fabric.

Our assumption is that the surface of the vessel was lightly slipped before the brown decorations were applied. The decoration ends in a thick brown line that circumvents the vessel at the widest point of its body. After the decoration was applied, the decorated area, from the lip of the vessel to the stripe across its midsection, was covered in a light wash and then polished giving the otherwise bland orange fabric a beautiful glossy finish. The flat base and interior surface of the vessel are paler orange and unpolished. The interior of the vessel's lip is decorated with a brown stripe and scalloped design.

Burial 2 (A-1, L1009, BZ1064)

Context and excavation

Burial 2 was a skeleton interred directly beneath and in the same orientation as Burial 1 discussed above (on the right side with the head in the east and facing north).

Fig. 8. Whole pots from Halaf Burials in trench A-1

- A. A1009 BZ1055. Interior and exterior very pale brown (10YR 7/4). Temper indeterminate, however, vessel is porous. Rim diameter 3cm. Height 4.2cm. Weight 60.6g.
- B. A1015 BZ1099. Interior and exterior very pale brown (10YR 7/4). Rim diameter 4cm. Weight 224.3g.
- C. A1008 BZ1072. Interior and exterior light brown (7.5YR 6/4). Fine grit temper. Similar to A1009 BZ1055 and also porous. Rim diameter 3.25cm. Height 3.7cm. Weight 46.2g.
- D. A1014 BZ1087. Interior pink (7.5YR 7/4). Exterior reddish yellow (5YR 7/6). Paint ranges from reddish black (10R 2.5/1) to reddish brown (2.5YR 4/4), varying with thickness and preservation. Body covered with a repeating motif of running birds (ostriches?), surrounded by dots running at a roughly 45° angle. Rim diameter 10cm. Height 9.4cm.
- E. A1008 BZ1073. Fine ware. Interior very pale brown (10YR 7/3). Exterior very pale brown (10YR 8/4). Paint reddish brown (5YR 4/3). Body painted solid, except where interrupted by four, 2x3cm, trapezoids, located between each of the four lug handles. Inside trapezoids several upward pointing chevrons painted. Rim diameter 5cm. Height 5.4cm.
- F. A1008 BZ1074. Interior and exterior light brown (7.5YR 6/4). Paint black (7.5YR 2.5/1). Rim diameter 5.5cm. Height 4.2cm. Weight 78.8g.
- G. A1009 BZ1043. Fine ware. Interior reddish yellow (5YR 6/6). Exterior reddish yellow (5YR 6/8). Paint very dusky red (10 R 2.5/2). Rim diameter 10cm. Height 7.8cm.

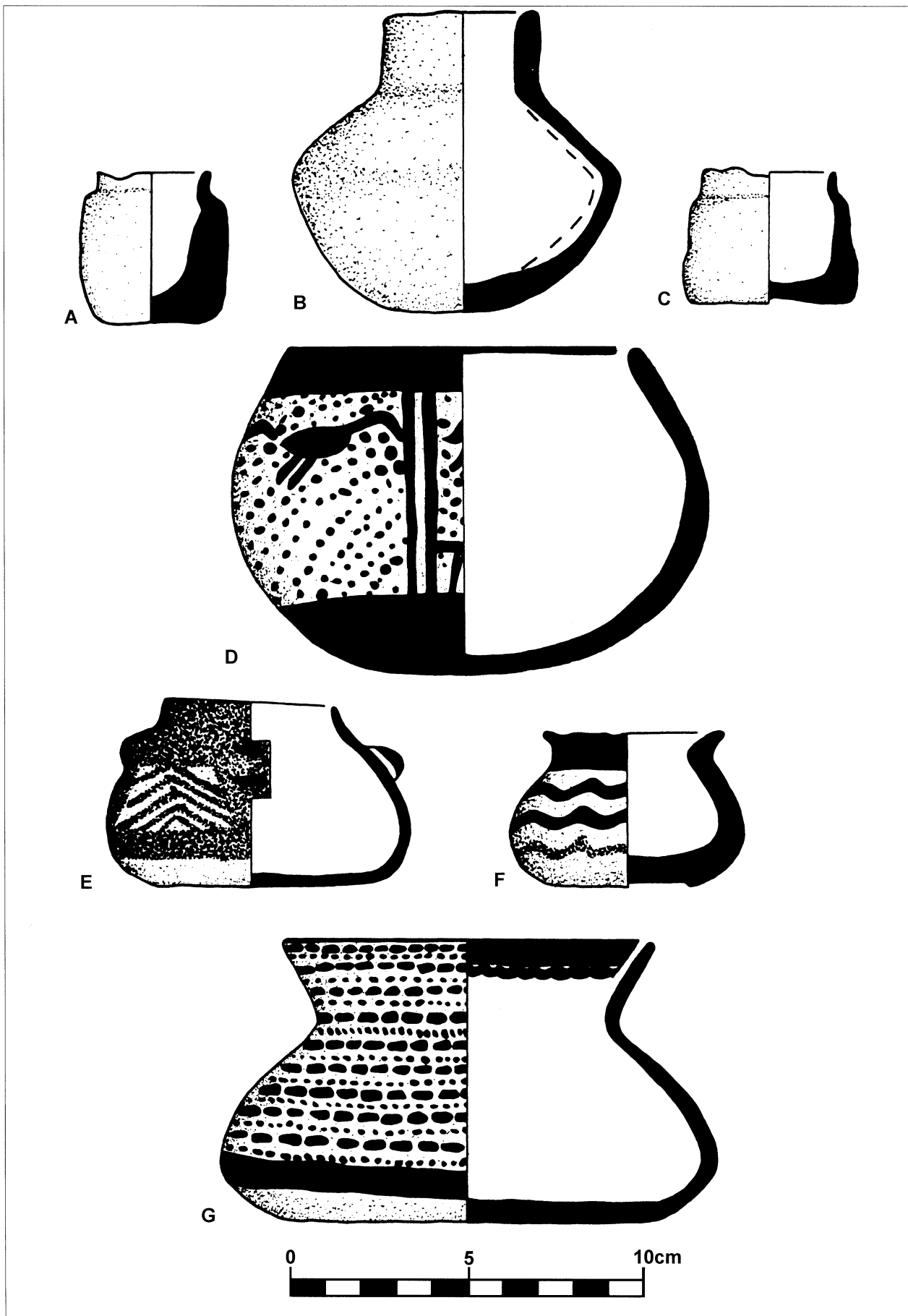


Fig. 8. Whole pots from Halaf burials in trench A-1

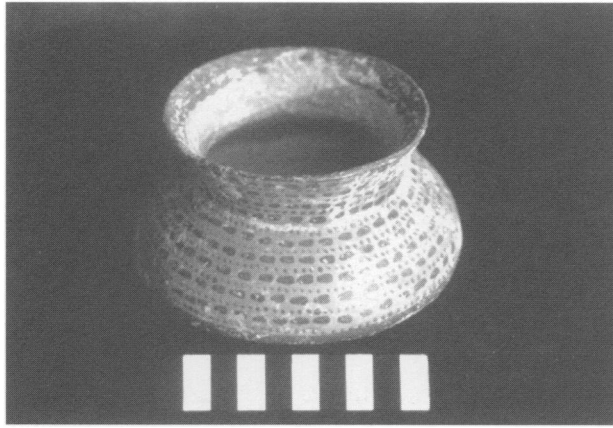


Fig. 9. Halaf jar from Burial 1 (L1009)

An on-site analysis of the pelvis, skull and dentition suggested that this individual was an adult, probably male. However, its poor state of preservation meant that excavation of this burial and all the burials in A-1 was very difficult. As with Burial 1, the legs were tightly flexed and brought up to the chest, but this time the right arm was outstretched toward the north with the phalanges of the right hand pointing upward (fig. 7B).

At the time of excavation there was no visible division between Burial 1 and Burial 2 (no pit lines or visible soil change), and indeed the top elevations of the two excavation units (BZ1061 and BZ1064) are separated by only 10cm. Thus the evidence suggests that these two individuals were buried together. A stamp seal (BZ1059, see below and fig. 24A) was found near the joint of the right humerus and clavicle and a small collared jar (BZ1055) was discovered at the side of this individual (figs 7B, 8A, 10A).

Skeletal analysis

Boztepe skeleton 2 (L1009, BZ1064) was poorly preserved. However, the remains of this skeleton survived storage much better than skeletons 1 and 3. Cranial remains are limited to tiny fragments; less than 10% was recovered. Other bones present include: fragments of the mandible and teeth, the proximal third of the right radius, midshaft fragments of both humeri and the right ulna, a few small fragments (<10% recovered) of the innominate (no auricular surface, pubis, ischium, or greater sciatic notch were present), a fragment from the proximal third of the left femur, a fragment of the proximal third of the left tibia, midshaft fragments of both femora, and both tibiae, a fragment of the proximal articulation surface of the left tibia, nine unsided metacarpals (six complete) and a single phalanx.

Age and sex estimation

There were no reliable sex markers preserved in this skeleton. The proximal epiphysis of the right radius is visible and fully closed; it typically closes between 14 and 18 years. Presence of a single third molar (M₃) suggests the individual is an adult (18+). Other skeletons from Boztepe and Kenan Tepe display extreme tooth wear at early ages. Essentially unworn M₃s (Scott score 4) may indicate this was a younger adult. Other tooth-wear scores: I₁s Smith 5; I₂s Smith 4; M₁s Scott 29, 37; M₂s Scott 28, 27. Best estimate: adult (18+), sex indeterminate.

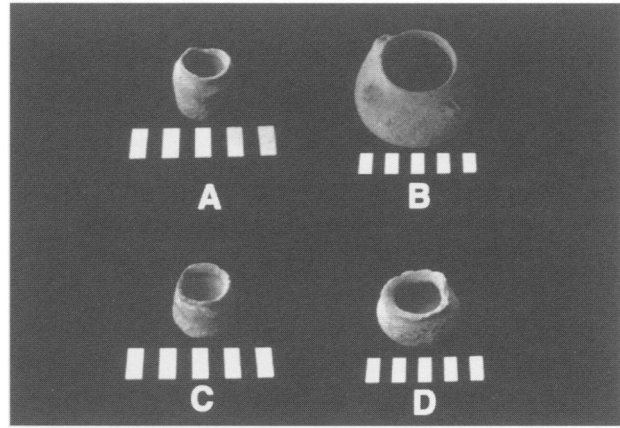


Fig. 10. Miniature Halaf vessels from burials in trench A-1 (before cleaning). (A) Burial 2 (L1009); (B, C, D) Burial 3 (L1014)

Grave goods

Burial 2 contained a miniature straight-sided collared jar measuring 4.1cm in width by 4.2cm in height (BZ1055, figs 8A, 10A). This is a crude handmade vessel that is not decorated. It was discovered behind the ribcage. Burial 2 also yielded a stamp seal similar in shape (although not in ornamentation) to those illustrated in Campbell et al. (1999: fig. 14 nos 1, 2) and by Watson and LeBlanc (1990: fig. 6.18 no.1). This seal is made of soapstone and measures 1.8cm by 1.7cm (BZ1059, fig. 24A). The seal is roughly square. Incisions on its face form a symmetrical chequerboard pattern crossed by three diagonal incisions. Five identically sized and symmetrically arranged holes are drilled through the face of the seal: one in the centre and one in the centre of each quadrant. The back side of the seal has a pierced shank that shows considerable wear suggesting that the seal was suspended by a string passed through the shank. The seal was discovered near the right humerus and clavicle.

Burial 3 (A-1, L1014, BZ1090)

Context and excavation

On-site analysis of the dentition suggested that Burial 3 was the remains of an adult individual. However, due to the poor preservation of the skeleton, we were unable to estimate its sex. The body was tightly flexed with the legs bent up to the torso and the arms bent so that the hands were placed under the skull (fig. 7C). As in Burials 1 and 2, this individual was lying on the right side with the head to the east facing north. A hole-mouthed jar decorated with a procession of long-necked animals (BZ1087, figs 8D, 11) was placed behind the occipital bone of the skull. In addition, three small jars (one pierced-lug jar [BZ1074], one collar-rimmed jar [BZ1072] and one squat painted vessel [BZ1073], figs 8C, 8E, 8F, and figs 10B, 10C, 10D respectively) were discovered a few centimetres east of the skull.

Skeletal analysis

Boztepe skeleton 3 (L1014, BZ1090) was not only poorly preserved but was badly damaged during storage. Bones available for study during the summer of 2001 included: various cranial fragments including the right mastoid process and external auditory meatus (less than 10% of the

cranium was preserved), the distal third of the right humerus, the proximal thirds of both ulnae, the proximal third of the right radius, a midshaft fragment of the left radius, several small pelvic fragments, midshaft fragments of both tibiae, both fibulae and at least one femur, both patellae, both tali, various tarsals, metatarsals and metacarpals, a single phalanx, and several rib and vertebral fragments.

Age and sex estimation

Little could be determined about this individual's age or sex. The right mastoid process did not extend far beyond external auditory meatus (score 2–3), but had considerable mass. No other sex markers were sufficiently preserved to allow an assessment. Therefore this individual's sex remained indeterminate. Age indicators are also lacking. The distal epiphysis of the right humerus was fused; this usually occurs between nine and 13 years of age. The proximal epiphysis of the right radius was also fully fused, which typically happens between 13 and 18 years of age. The best age estimate for the skeleton is 15+ years.

Grave goods

Burial 3 contained a complete globular hole-mouthed jar measuring 13.5cm in width by 9.4cm in height (BZ1087, figs 8D, 11 [Watson and LeBlanc 1990: fig. 4.1 no. 12]). This vessel was discovered 5cm southwest of the base of the skull. The reddish-tan exterior surface of this vessel is painted with an exceptional reddish-brown decoration. There is a thick stripe on top of the vessel's upper body and lip. A similar uneven stripe exists on the bottom portion of the lower body. The flat base is not painted. The central register, bordered by the upper body and lower body stripes, is filled with a design that consists of polka-dots surrounding a procession of long-necked animals (fig. 12). As if in motion, the animals are leaning forward with out-stretched necks. The animals have oval bodies, two legs, a head, a long nose or beak and a small tail. The scene is divided by two rows of two vertical lines.

Three small complete ceramic vessels were also discovered in Burial 3 to the east of the skull (figs 8C, 8E, 8F, 10B, 10C, 10D). The first (BZ1072, figs 8C, 10C) is a miniature straight-sided collared jar very similar to, although slightly less symmetrical than, BZ1055 described above. It

measures 4.2cm in width and 3.7cm in height. Both this and BZ1055 appear to have been moulded in the palm of the hand and crudely formed with the fingers. Although neither of these vessels are broken, a small chip in the lip of BZ1072 reveals that these vessels are composed of a fine grit tempered fabric. The miniature jar BZ1072 was discovered on top of and partially inside a second slightly larger and more bulbous jar (BZ1074, figs 8F, 10D) measuring 7cm in width and 4.2cm in height. The form of this second vessel (BZ1074) is paralleled in Watson and LeBlanc (1990: fig. 4.1 no. 14) and Hijara (1980: fig. 9 no. 230). Poorly preserved brown painted wavy or zigzag designs circumvent the vessel's exterior surface.

Slightly northeast of the two vessels just described a third jar was discovered (BZ1073, figs 8E, 10B). This small bulbous jar, measuring 8.6cm in width and 5.4cm in height, has four evenly spaced lug handles on its shoulder. The lugs are pierced vertically and exhibit some wear suggesting that the vessel was hung by strings inserted through the lugs. On the exterior surface the vessel's pale fabric is slipped, smoothed and painted with a dark red paint. Thick bands of paint cover the upper portion of the vessel's body above the shoulder and the lower portion of the body below the midsection. Its flat base is undecorated. The bands are connected by vertical bands covering each lug and forming four 2x3cm trapezoids which are decorated with four or five rows of hatched lines.

Burial 4 (A-1, L1015)

Only a few fragments of this burial were recovered. These fragments include parts of a skull, a left scapula and a left humerus. Although this does appear to be the remains of a single person, the fragmentary nature of the remains means that we are not able to estimate its age or sex. No remains belonging to this BZ number were available for study during the summer of 2001.

Grave goods

A miniature undecorated long-necked jar (BZ1099, fig. 8B) that presumably belonged to this burial was discovered 25cm northwest of the skull fragments. This jar measures 9.5cm in width (at its widest point) and stands 8.4cm tall. The vessel's shape is similar, although not identical to Watson and LeBlanc 1990: fig. 4.1 no. 15.

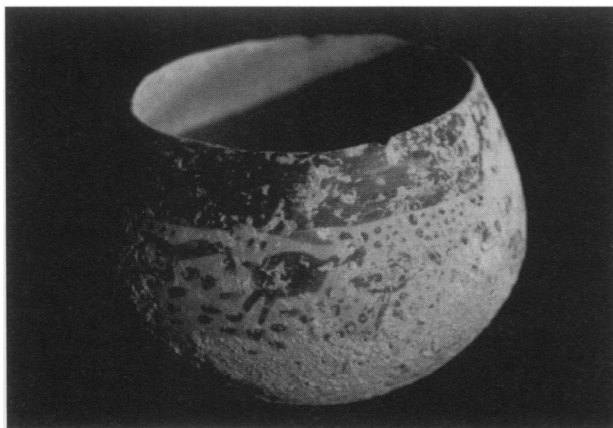


Fig. 11. Halaf pot with procession of long-necked animals (L1014 BZ1087)

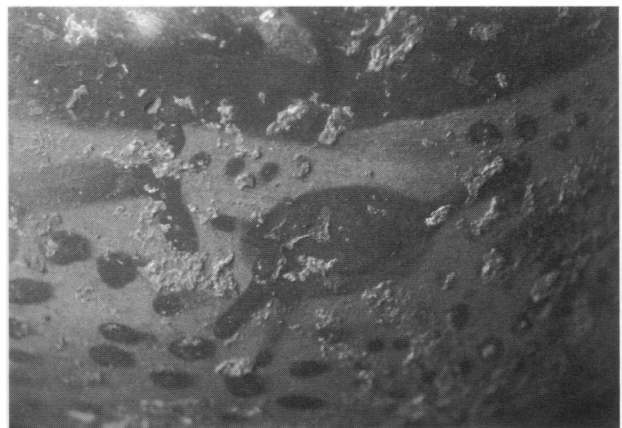


Fig. 12. Close-up view of Halaf pot with procession of long-necked animals (L1014 BZ1087)

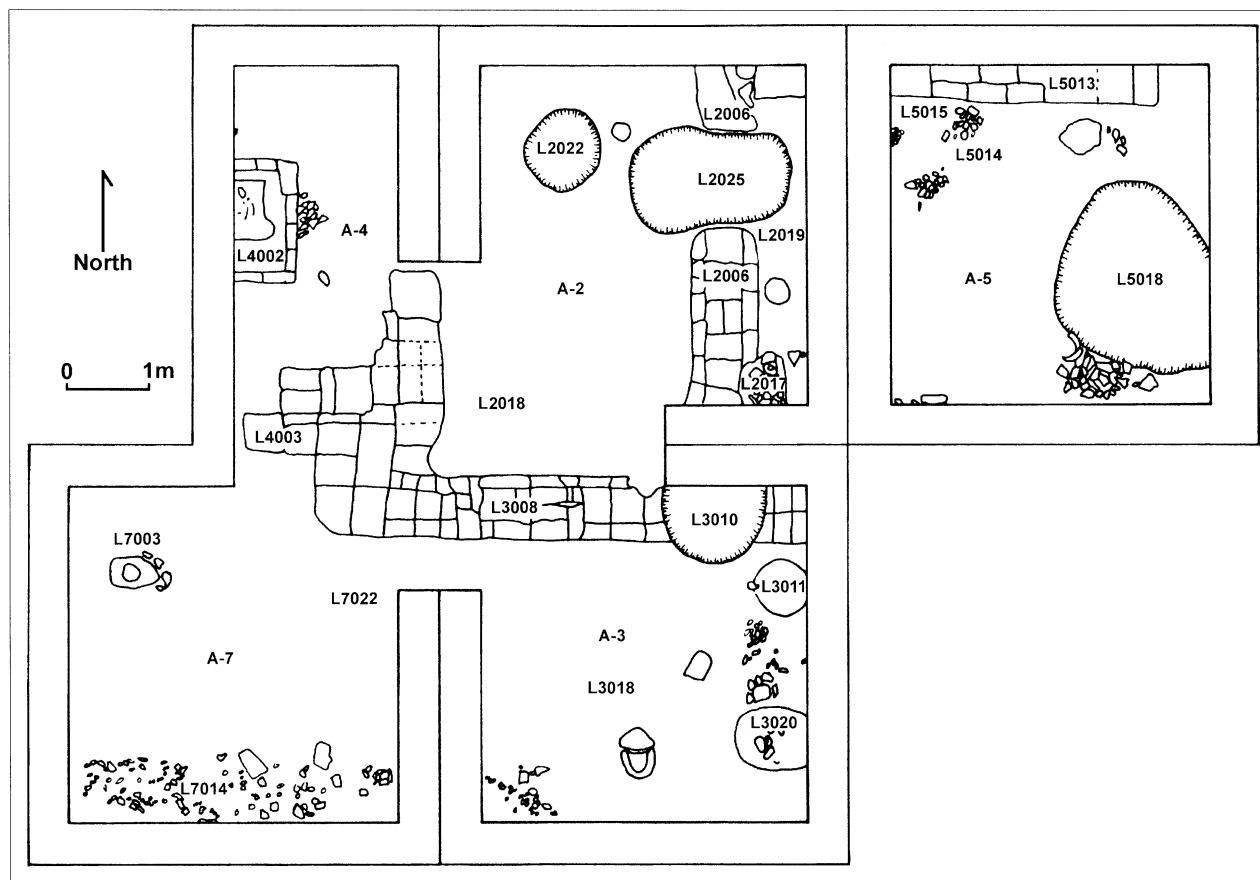


Fig. 13. Plan of trenches A-2, A-3, A-4, A-5 and A-7 showing some of the loci mentioned in the text

Area A, trench 2

Once the topsoil (L2000) was removed from trench A-2 it became clear that modern construction had largely destroyed the latest levels of occupation in this trench. The only remains of this latest phase of occupation came in the form of numerous plaster-lined, flat-bottomed pits (L2022, L2025+ and L2027+) of Hellenistic date. A wall stub (L2003+) consisting of mud-brick debris on a few foundation stones was discovered in the northwest corner of the trench near pit L2022. Unfortunately, the ceramics associated with this feature, which included a mix of Iron Age (Standard Iron Age and Imperial period) and Hellenistic wares, make firm dating very problematic. It is nevertheless quite likely that this wall stub and the various plaster-lined pits are all that remains of any Hellenistic structures that probably existed in or around this part of the mound.

The first significant feature to be encountered in A-2 was a mud-brick wall (L2006) that originally extended from the south baulk directly across the trench to join with wall fragments against the north baulk (L2006, figs 13, 14). This wall was cut by a large (approximately 1.25x2m) flat-bottomed, plaster-lined Hellenistic pit (L2025+, fig. 14). The context surrounding the wall on

the west (L2005) was composed of mud-brick collapse mixed with charcoal and small chunks of plaster. This context also contained various examples of Imperial period type fossils including hammerhead bowls, indented rim bowls, several examples of fine ware and one nipple base fragment (fig. 15). Other notable finds from this layer include a nearly intact sheep skull and various other animal bones.

The context lying to the east of wall L2006, context L2007, was composed mostly of mud-brick collapse with several Imperial period type fossils, although this context did not contain the charcoal and plaster debris that characterised L2005. After removing the fill layer (L2007), we discovered a small cobbled area (L2017) abutting wall L2006. This cobbled area was probably the remains of a much larger cobbled surface that connected this with similar cobbles encountered in the neighbouring trench A-5 (L5014 and L5015). If this hypothesis is correct, then L2017, L5013 and L5014 originally formed a single surface that lay between wall L2006 and wall L5013 in the adjacent trench A-5 (figs 13, 16). Pressed within the matrix of this cobbled area (L2017) were several examples of Iron Age s-curved bowls.

Once we cleared away the mud-brick collapse on the west side of wall (L2006) it became clear that we had encountered a large ash layer (L2005+) that spanned almost the entire trench west of wall L2006, except where it was cut by another Hellenistic plaster-lined pit (L2022, approximately 80cm in diameter). This ash layer was especially thick (as much as 40cm) in the southwest corner of the trench and contained numerous finds including various animal bones, fragments of burnt wood and Imperial period ceramics (fig. 17). We ran three radiocarbon samples from this context (L2035, BZ2193, BZ2194 and BZ2191) and one from the same collapse layer in the neighbouring trench (A-3, L3015, BZ3100, see below). These samples yielded calibrated carbon ages of 900 to 360BC and 280 to 240BC (BZ2193); 990 to 820BC (BZ2194); 1040 to 790BC (BZ2191); and 880 to 740BC and 710 to 553BC (BZ3100). For details see appendix 3. Although the range of the first sample (BZ2193) makes it somewhat suspect, the overlap of the three samples yields a relatively tight time range between 880 and 820BC. These data have several important implications. First, they support the dating of this structure based on ceramic analysis to the Neo-Assyrian Imperial period. And second, they suggest that the destruction of this house occurred some time during the Neo-Assyrian Imperial period.

The most notable finds from this collapse layer were pieces of two unique ceramic vessels. Sherds from these vessels were handmade of a relatively coarse grit tempered fabric with highly burnished surfaces, many of which had been blackened, presumably in the fire that destroyed the house. These sherds consist mainly of ringed pedestals, bowls, clay rods and rod intersections (figs 18, 19, 21). An examination of these artefacts during the summer of 1999 led us to some initial conclusions published in our preliminary reports (Parker et al. 2001). However, a re-examination of these artefacts during the summer of 2001 has led to some revision of our preliminary conclusions. To begin with, it is quite clear now that we are dealing with the remains of two very similar vessels. Furthermore, each of these vessels contained nine shallow bowls whose rims were connected to form a single interconnected set (fig. 20).⁷

⁷ We originally hypothesised that there was a total of five bowls in each vessel and in our original reconstruction we erroneously illustrated the central bowl as being slightly higher and disconnected from the other bowls. Note the possible parallel with Van Loon 1991: fig. 15, pl. 32. Other parallels might be drawn with pedestalled cups, bowls, braziers (Lamon, Shipton 1939: pl. 33 for example), basalt three-footed bowls (Lamon, Shipton 1939: pl. 112), interconnected vessels (Loud 1948: pl. 77 no. 8) and kernos rings (May 1935: pl. XVI) from Megiddo.



Fig. 14. View of trench A-2 (looking east) showing wall L2006, pit L2025 and floor L2018

The corner bowls were supported by four ringed pedestals that were connected to each other by two sets of clay rods. The rods intersected under each of the four central outside bowls. From there another rod ran to an intersection that supported the central bowl. The complete vessel was four footed, square and had a total of nine shallow bowls.

This collapse layer (collapse 2005+) sealed a hard-packed earthen surface (surface 2018). Directly on top of this surface were at least three pots that had been shattered onto the floor by the fallen debris. After cleaning, it became clear that wall L2006 was built on top of surface L2018 and had no foundation stones. This throws some question onto whether or not wall L2006 was a load-bearing wall. However, various lines of evidence would support the hypothesis that this wall marked the divide between the inside of this house and its courtyard (figs 13, 16). First, further excavation revealed that none of the walls of this house utilised foundation stones (see below). Second, the fact that the ash, charcoal and plaster debris was concentrated on the west side of wall L2006, and little or no debris of this type was discovered on the east side of the wall, would support the hypothesis that the debris (L2005+) contained the remains of a collapsed second storey, while L2007 represents collapse that fell onto an outside surface. If this hypothesis is correct then the cobbled surface, portions of which were recovered in A-2 (L2017) and A-5 (L5014 and L5015), might be the remains of the paved courtyard of this structure.

The matrix of floor L2018 contained a mix of earlier Halaf period ceramics, obsidian blade fragments (BZ2136) and Iron Age sherds. Directly below surface L2018 we came upon a second surface (L2026). No artefacts were discovered resting on this earlier surface, suggesting that surface L2026 was deliberately cleaned before the construction of floor L2018 and wall L2006.

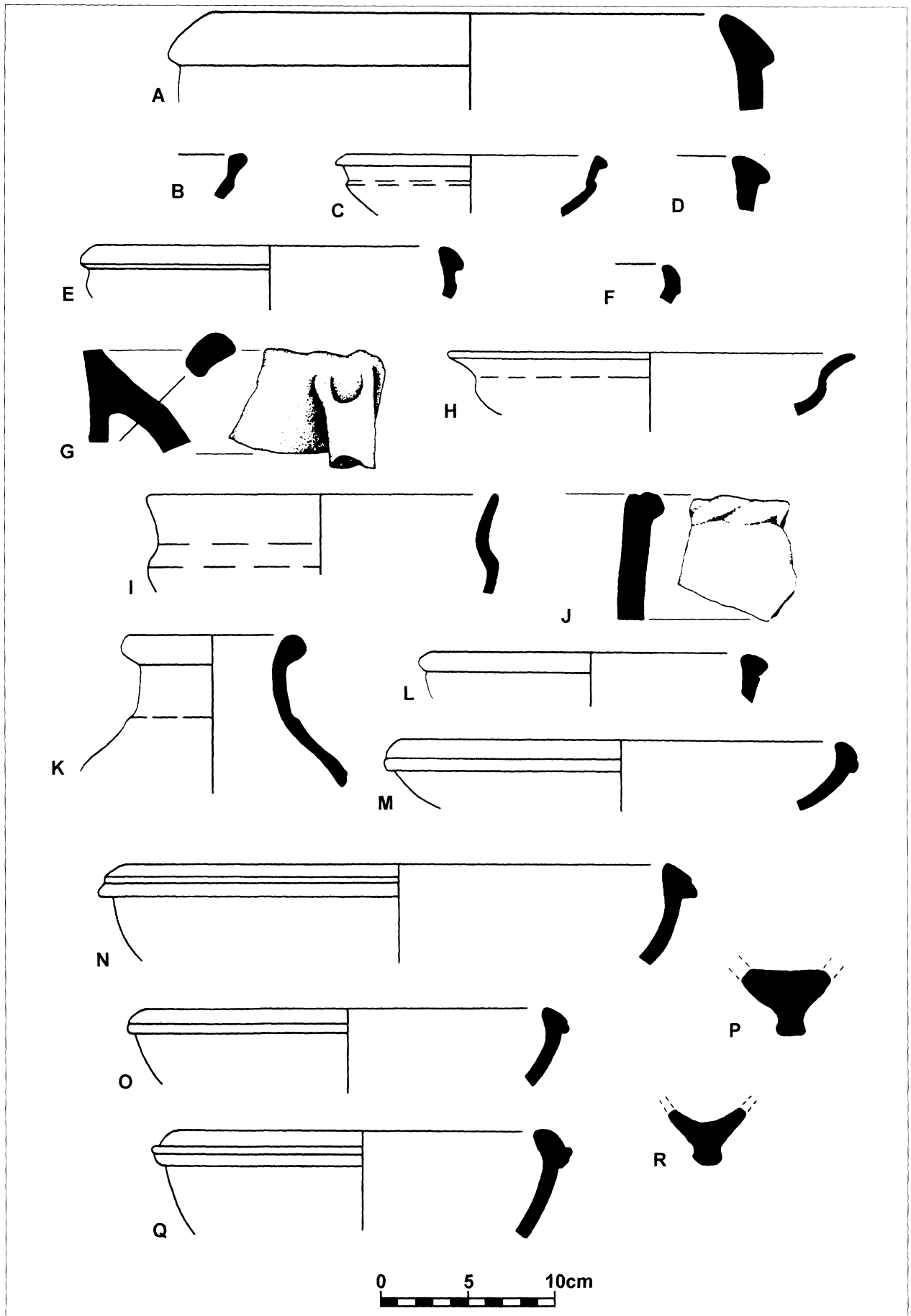


Fig. 15. Miscellaneous Iron Age ceramics from various contexts at Boztepe

Fig. 15. Miscellaneous Iron Age ceramics from various contexts at Boztepe

- A. B1019 BZ1147. Surface reddish brown (2.5YR 5/4), core grades from reddish brown (2.5YR 5/4) to dark reddish gray (2.5YR 4/1). Medium grit temper. Diameter 29cm.
- B. B3001 BZ3013. Surface pinkish gray (7.5YR 7/2). Medium grit temper.
- C. A3001 BZ3007. Surface reddish yellow (7.5YR 6/6). Medium grit temper. Diameter 14cm.
- D. A7010 BZ7038. Surface pinkish gray (5YR 6/2). Chaff temper.
- E. A2001 BZ2002. Surface very pale brown (10YR 8/2), core light reddish brown (5YR 6/4). Fine grit temper. Diameter 19cm.
- F. A7002 BZ7034. Surface pink (5YR 7/4). Chaff temper.
- G. A3005 BZ3140. Handle. Surface pink (5YR 7/4). Medium grit temper.
- H. A2001 BZ2016. Surface pink (5YR 7/4), core black. Medium grit temper. Diameter 21cm.
- I. A4008 BZ4090. Surface reddish brown (2.5YR 5/3). Medium grit temper. Diameter 19cm.
- J. B3002 BZ3030. Surface light brown (7.5YR 6/4). Fine grit temper.
- K. A2010 BZ2099. Surface light brown (7.5YR 6/4). Medium grit temper. Diameter 9cm.
- L. A2018 BZ2236. Surface pinkish gray (7.5YR 7/2). Fine grit temper. Diameter 18cm.
- M. A2000 BZ2000. Surface light reddish brown (2.5YR 7/4). Chaff temper. Diameter 23cm.
- N. A1013 BZ1077. Surface reddish brown (5YR 5/3), core grades from reddish brown (5YR 5/4) to dark gray (5YR 5/3). Medium grit temper. Diameter 30cm.
- O. A2003 BZ2032. Surface pink (7.5YR 7/3). Medium grit temper. Diameter 22cm.
- P. A5019 BZ5102. Base. Surface red (2.5YR 5/6).
- Q. A7013 BZ7054. Surface reddish yellow (5YR 6/6). Coarse grit/chaff temper. Diameter 20cm.
- R. A7013 BZ7054. Base. Surface light gray (10YR 7/2). Chaff temper.

- A. A2005 BZ2138. Surface light gray (7.5YR 8/2). Fine chaff temper. Diameter 23cm.
- B. A2005 BZ2072. Surface pink (5YR 7/4). Medium grit temper. Diameter 14cm.
- C. A2005 BZ2072. Surface pink (5YR 7/3). Medium grit temper. Diameter 12cm.
- D. A2005 BZ2104. Surface reddish yellow (5YR 6/6), core reddish brown (5YR 5/3). Fine grit temper. Diameter 16cm.
- E. A3015 BZ3097. Surface pink (5YR 7/4). Fine grit temper. Diameter 8cm.
- F. A2005 BZ2072. Surface pinkish gray (7.5YR 6/2). Grit/chaff temper. Diameter 31cm.
- G. A2044 BZ2217. Surface light reddish brown (5YR 6/4), core dark gray (5YR 4/1). Medium grit temper. Diameter 11cm.
- H. A3015 BZ3097. Surface gray (10YR 5/1). Medium grit temper. Diameter 9cm.
- I. A2005 BZ2082. Surface brown (7.5YR 5/2). Fine grit/chaff temper. Diameter 26cm.
- J. A2005 BZ2072. Surface pinkish gray (7.5YR 6/2). Grit/chaff temper. Diameter 31cm.
- K. A2005 BZ2082. Surface pale red (10R 6/4). Medium grit temper. Diameter 21cm.
- L. A3004 BZ3044. Surface pink (7.5YR 7/4). Coarse grit temper. Diameter 15cm.
- M. A2005 BZ2082. Surface pink (7.5YR 7/3). Coarse grit temper. Diameter 22cm.
- N. A2044 BZ2217. Surface light reddish brown (5YR 6/4), core dark gray (5YR 4/1). Medium grit temper. Diameter 19cm.
- O. A3015 BZ3092. Surface pink (7.5YR 7/4). Coarse grit temper. Diameter 26cm.
- P. A3015 BZ3097. Surface light brown (7.5YR 6/4). Chaff temper. Diameter 9cm.
- Q. A2005 BZ2072. Surface pink (5YR 7/4). Chaff temper. Diameter 30cm.

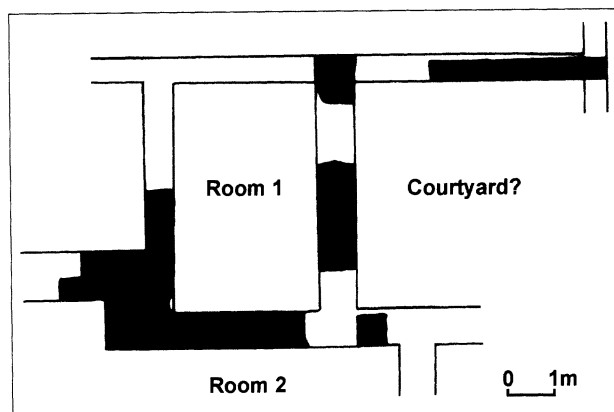


Fig. 16. Reconstruction of Structure 2 showing the locations of Room 1, Room 2 and the possible courtyard. Note that the solid areas are the walls actually excavated while the open sections are reconstructions

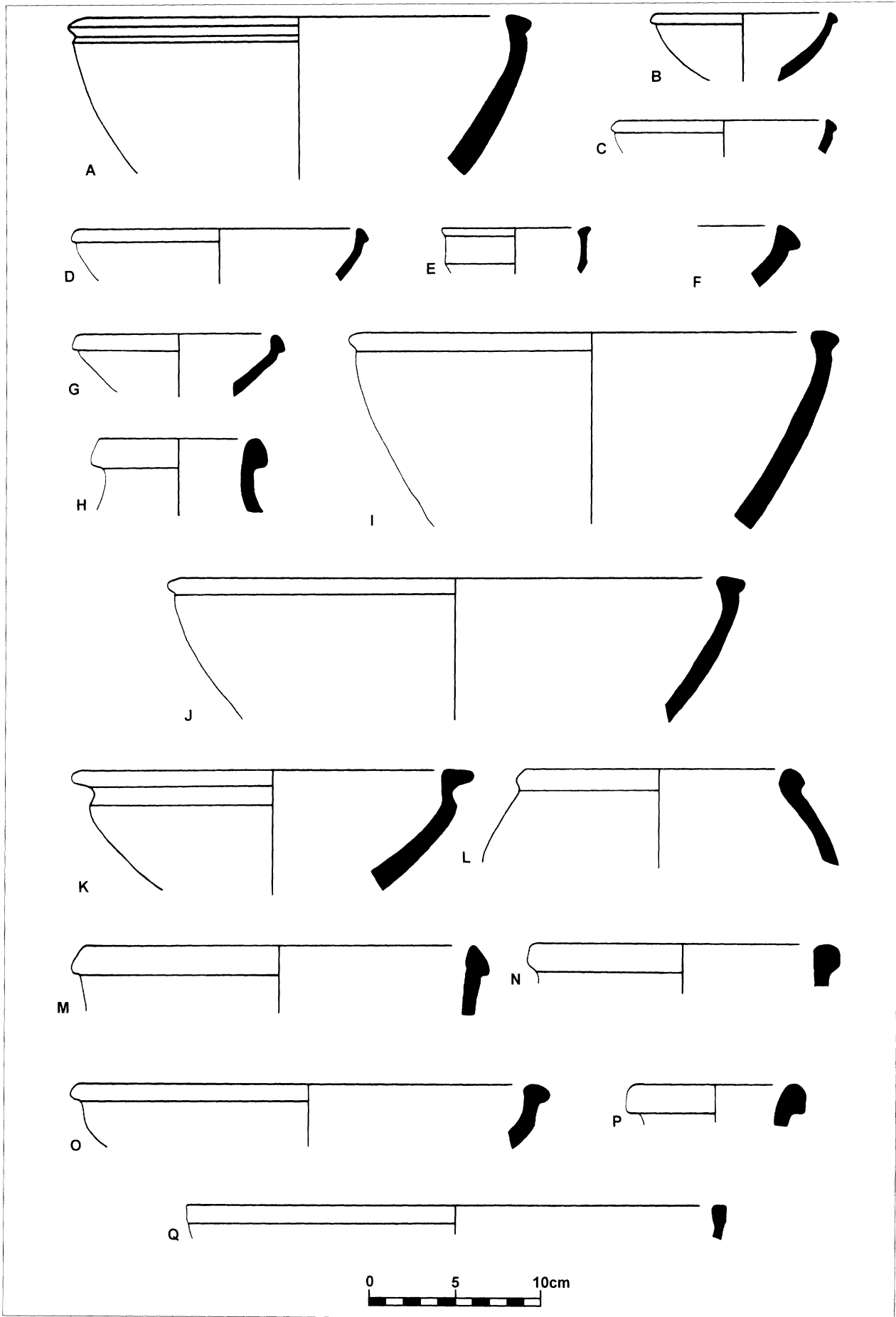


Fig. 17. Iron Age sherds from Structure 2 collapse layer

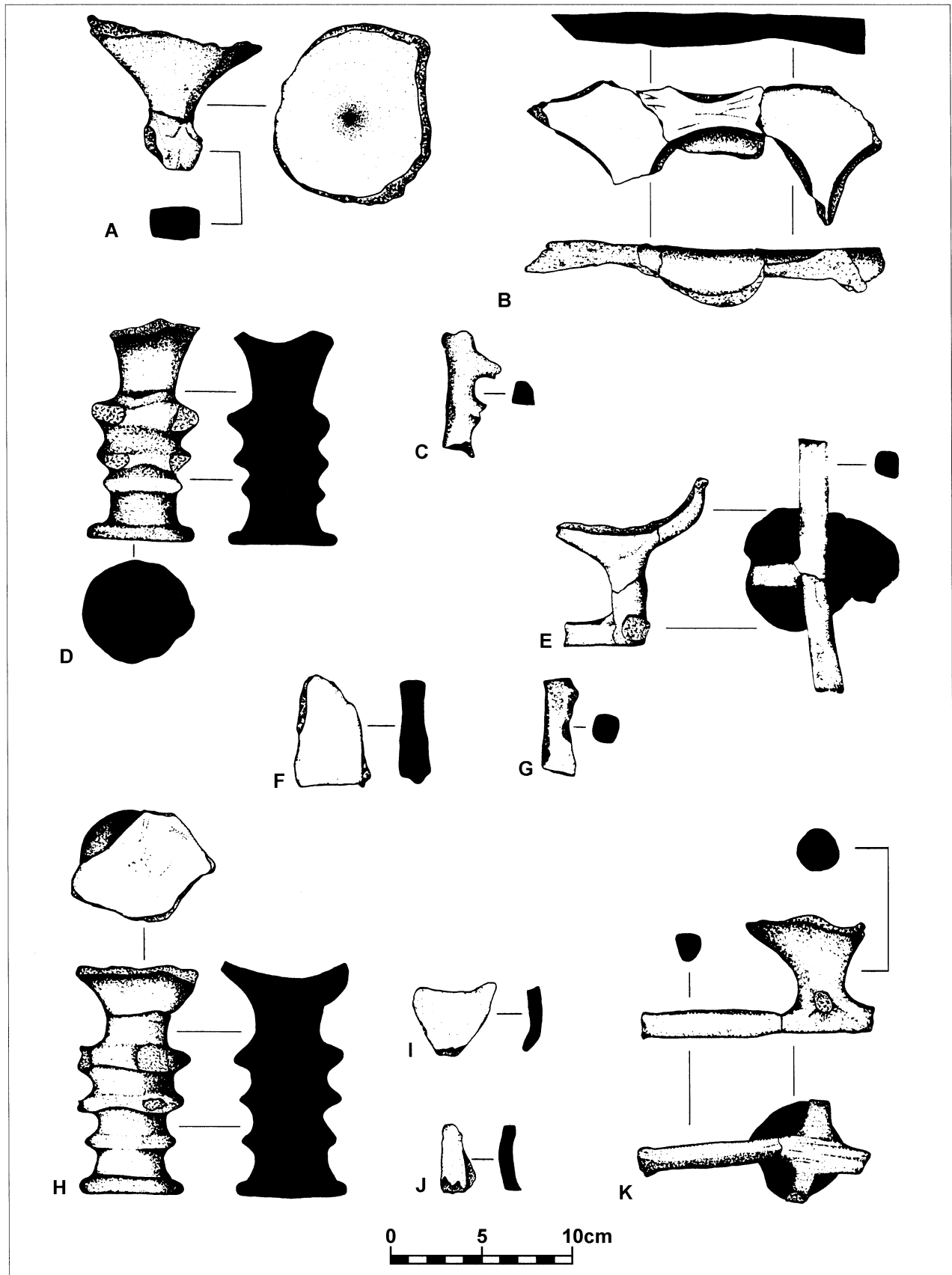


Fig. 18. Handmade ceramic pieces from enigmatic vessel discovered in Structure 2 collapse layer. The surfaces were probably originally pink (7.5YR 7/3) but the vessel was severely blackened in the conflagration of Structure 2. Coarse grit tempered fabric with highly burnished surfaces. Sherds consist of mainly ringed pedestals (D and H), bowls (A and B), clay rods and rod intersections (E and K)

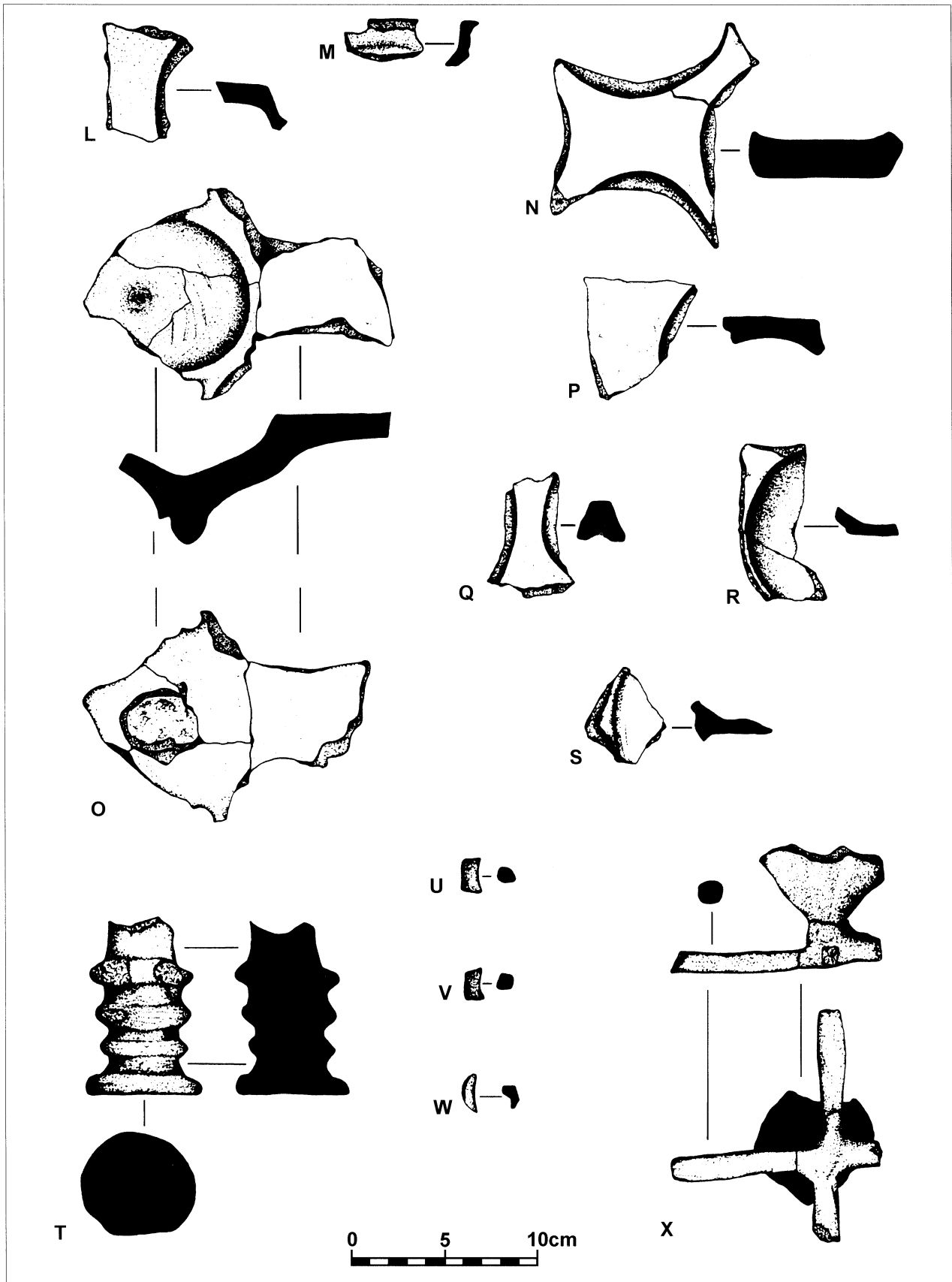


Fig. 19. Handmade ceramic pieces from enigmatic vessel discovered in the Structure 2 collapse layer. The surfaces were probably originally pink (7.5YR 7/3) but the vessel was severely blackened in the conflagration of Structure 2. Coarse grit tempered fabric with highly burnished surfaces. Sherds consist of mainly ringed pedestals (T), bowls (O to S), clay rods and rod intersections (X)

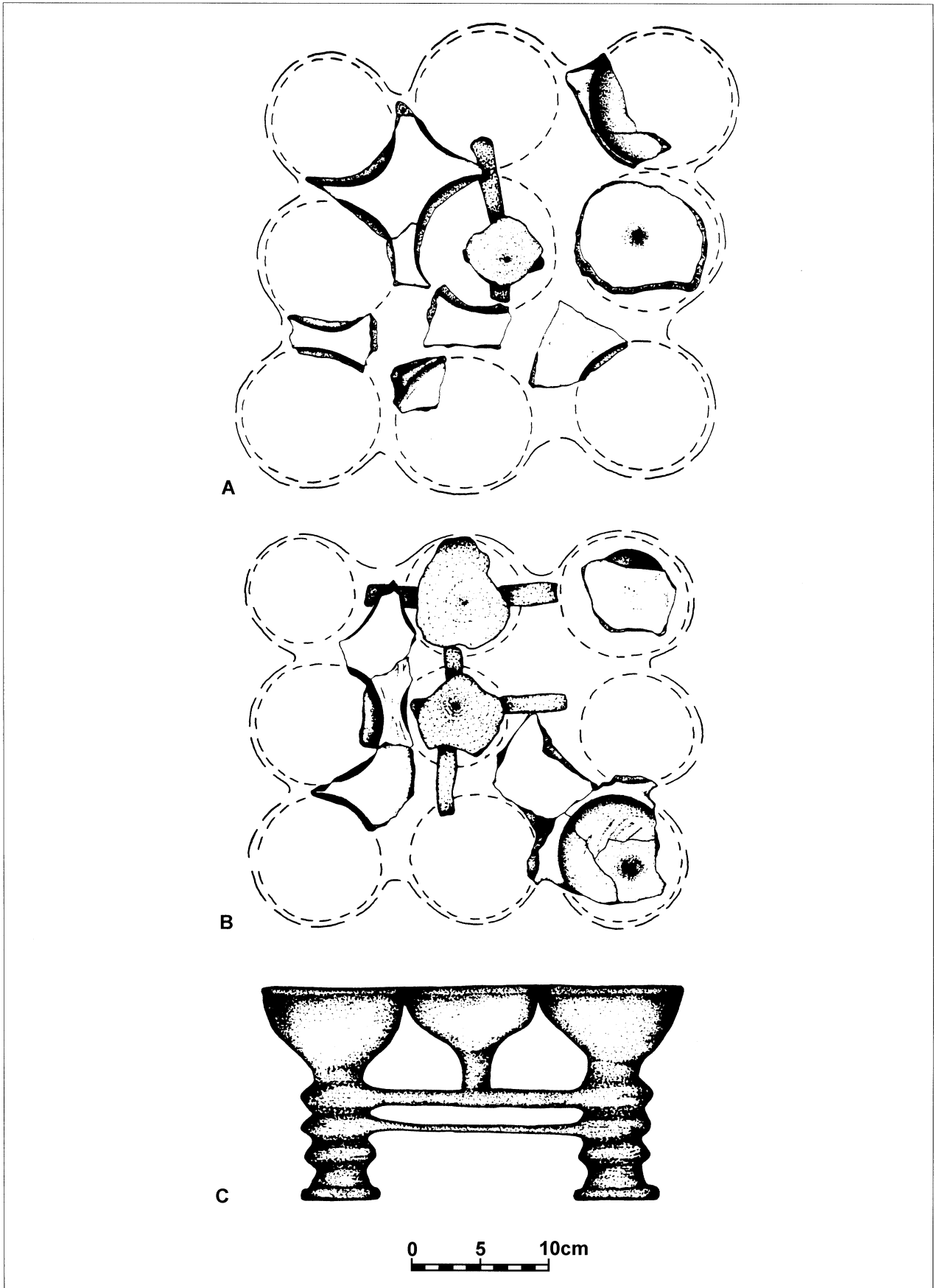


Fig. 20. Reconstruction of enigmatic vessel from Structure 2 collapse layer



Fig. 21. Sherds from enigmatic vessel discovered in the Structure 2 collapse layer

Directly below surface L2026 we discovered two lines of stones that marked the top of a second set of walls (walls L2049 and L2051) at a slightly different orientation from those of the later structure described above. These walls were composed of two rows of nearly square mud-bricks (averaging approximately 40x50cm). A large plastered surface associated with these walls (L2052) covered most of the northwest section of the trench. This surface abutted a semicircular hearth that contained a high concentration of ash and charcoal.

Area A, trench 3

The discovery of the collapsed Iron Age house in trench A-2 prompted us to expand in this area in an effort to define further the nature of Imperial period occupation at Boztepe. Trench A-3 was a 5x5m unit located directly south of A-2 (fig. 13).

The first feature to be unearthed in A-3 was an oven (L3002) measuring 60x40cm protruding from the west baulk. This oven was filled with fine silt mixed with ash. The fill surrounding the oven (L3004) contained ash mixed with mud-brick debris and a few standard Iron Age ceramics. Removing the oven (L3002) and its surrounding fill (L3004) confirmed that the oven partially cut through a collapse layer (L3015+) identical to that discovered in A-2 (L2005). Thus, the stratigraphic location of this oven suggests that this feature post-dates the collapse of the Iron Age house discovered in A-2 and therefore suggests that there may have been some type of Late Iron Age (Post-Assyrian?) occupation at Boztepe. Unfortunately, the proximity of these remains to the ground surface means that this may be the only feature of this date recovered during our excavations in A-3.

The collapse layer (L3015+), which measured more than 40cm in thickness in some places (fig. 22), contained the same type of debris discovered in L2005 in A-2. This debris included significant amounts of

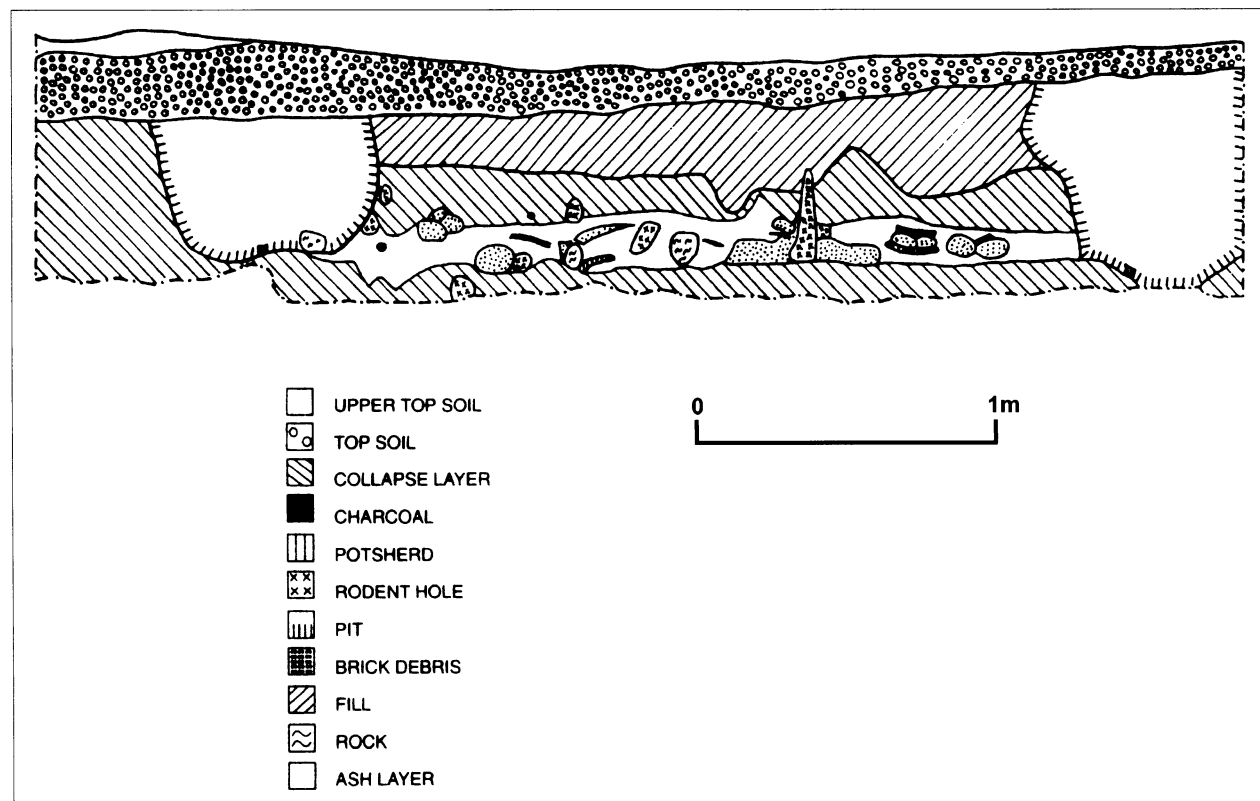


Fig. 22. A-3 south section

ash and charcoal, some fragments of wood, numerous Iron Age ceramics, pieces of mud-brick and a large amount of bone. A carbon sample from this context (L3015, BZ3100) yielded a calibrated radiocarbon age of 880 to 740BC and 710 to 553BC (see appendix 3). The collapse layer (L3015+) abutted a well preserved wall (L3008) running perpendicular to wall L2006 in trench A-2 (figs 13, 16). Wall L3008 was composed of large square mud-bricks averaging 38x38cm. Three courses of these bricks were preserved in some areas, and a probe (L3025) revealed that this wall did not have a stone foundation. Wall L3008 originally ran the entire length of the trench, although part of its midsection, and its direct connection with wall L2006 in A-2, was cut by another plaster-lined flat-bottomed Hellenistic pit (L3010).

Collapse L3015+ sealed a floor (L3018) precisely complementing floor L2018 in trench A-2. In addition to several smashed cooking pots, two mortars and one pestle were discovered *in situ* on the floor (fig. 23). Two ovens were also discovered near the west baulk (L3011 and L3020). This time these ovens were clearly associated with floor L3018. Several clusters of stones, as well as a small area of cobbles (L3007) in front of one of the ovens, were also discovered resting on floor L3018. The combination of these ovens, several smashed cooking pots, two mortars and one pestle, all of which were discovered resting on floor L3018, led us to the firm conclusion that the ground level of this structure uncovered in A-3 was indeed the kitchen and domestic processing area of the house that spanned all of the trenches in Area A (figs 13, 16).

The similarity between the composition of the collapse layers discovered in A-2 (L2005) and A-3 (L3015+) suggests that this kitchen was roofed. Moreover, the amount of artefacts and debris contained within the collapse, as in A-2, suggests that there was a second floor over this kitchen.

Tracing wall L3008 into the northwest baulk revealed a well preserved corner. At this point, wall L3008 turned north into trench A-4 just west of trench A-2 (see below and fig. 13). Approximately 10cm below floor L3018 we discovered another surface that corresponded directly to the surface L2026 in A-2. This surface also appears to have been swept clean before it was resurfaced by floor L3018.

Area A, trench 4

Trench A-4 was a 2x5m unit located directly west of A-2 (fig. 13). After clearing away the topsoil, it was again clear that the immediate subsurface consisted of fill containing Hellenistic ceramics. Wall L3008, originally discovered in trench A-3, turned into this trench

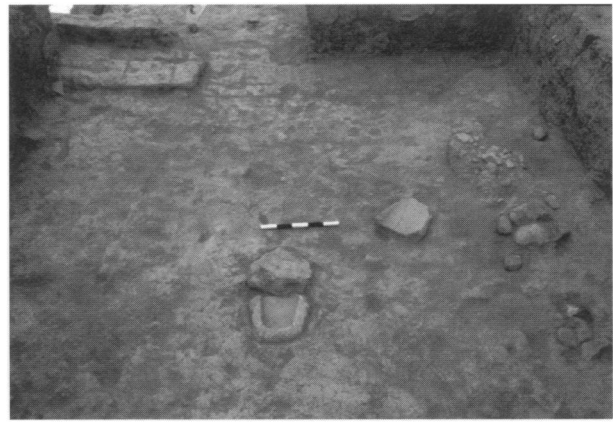


Fig. 23. View of trench A-3 looking north with floor L3018 partially excavated. Note wall L3008 and pit L3010 in background. Oven L3011 is visible on the right

from the south. A course of mud-bricks (L4003) was also discovered in the south portion of the trench heading west from wall L3008 (fig. 13). Unfortunately, both of these mud-brick features were largely destroyed by later pits and at least one Hellenistic robber/foundation trench (L4004+). The feature that may have been responsible for much of the destruction of the Iron Age architecture in A-4 was the burial of a child (L4002) discovered on the west side of the trench protruding from the west baulk.

The burial consisted of a relatively large foundation pit within which a mud-brick burial chamber was constructed. This burial chamber measured approximately 1.5m north-south by 1m east-west and was at least 75cm in height. The burial chamber was capped with several large stones. The deceased child was placed inside the mud-brick chamber with the head to the south facing west. The head was apparently supported by one or two small bricks. The child was buried with several interesting artefacts including an iron dagger, two bronze bracelets and a shell necklace (figs 24C, 24D, 24H, 25, 26. See small finds descriptions for details).

A few obsidian flakes were discovered in the matrix of the surrounding soil, although it is not clear whether or not these flakes were churned up from earlier levels during the construction of the burial chamber. Several pots of Hellenistic date were apparently deliberately smashed against the east face of the burial chamber, and the matrix of the surrounding fill included ash suggesting that some sort of funerary ritual was performed during or after the interment of the child (fig. 27). Unfortunately, the surrounding contexts were not sealed and the proximity of this burial to levels disturbed by modern activities means that some of the surrounding loci were susceptible to contamination.

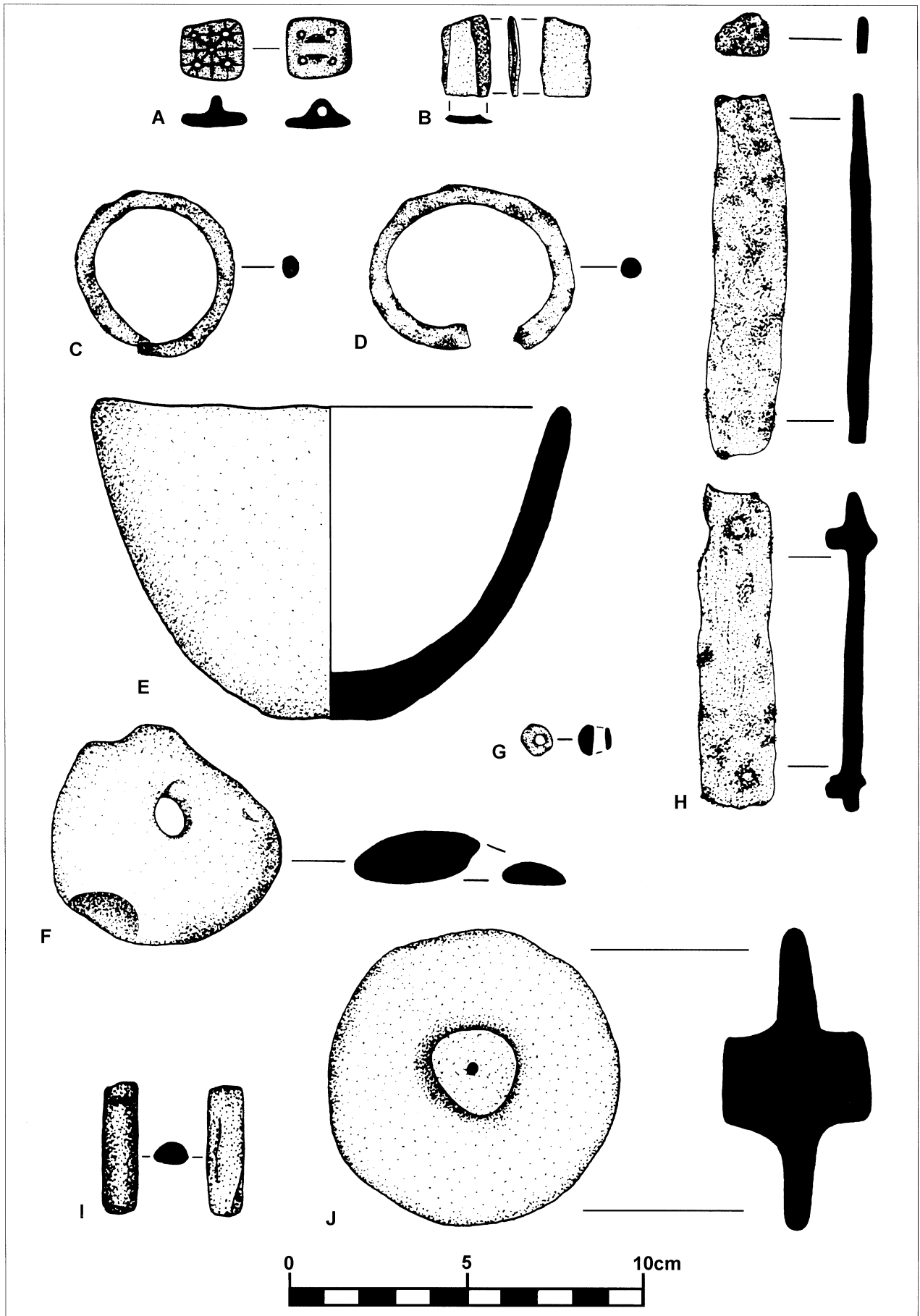


Fig. 24. Selected small finds from Boztepe

Fig. 24. Selected small finds from Boztepe

- A. A1009 BZ1059. Halaf period stamp seal from Burial 2. Smooth dark blueish grey (Gley 2 4/10B) soapstone. Seal roughly square. 1.6x1.7x0.7cm.
- B. A2018 BZ2136. Obsidian blade fragment. Fingernail chipping on both lateral sides, hinge fracture on proximal end, incipient fracture followed by an impact fracture on the distal end. 2.2x1.4x0.3cm. Weight 1.2g.
- C. A4002 BZ4013. Bronze bracelet found with child burial. Dark greyish green (Gley 1 3/5G). 4.6x4.2x0.6cm. Weight 19.6g.
- D. A4002 BZ4013. Bronze bracelet found with child burial. Dark greyish green (Gley 1 3/5G). 4.6x5.8x0.6cm. Weight 23.8g.
- E. A3013 BZ3081. Complete ceramic bowl. Interior surface reddish yellow (5YR 6/6), exterior surface pink (7.5YR 7/4), core light reddish brown (2.5YR 7/4). Medium grit temper. Diameter 12cm. Height 8.6cm. Weight 381g.
- F. A7000 BZ7003. Stone loom or fishnet weight. Smooth conglomerate stone with two dominant colours: light yellowish brown (10YR 6/4) and grey (2.5Y 5/1). 6x6.3x1.6cm. Weight 71.3g.
- G. A5014 BZ5089. Glazed ceramic bead. Overall colour dark blueish grey (Gley 2 3/5PB) punctuated with random dots of green, red and white. Diameter 0.9cm. Height 0.8cm. Weight 0.6g.
- H. A4002 BZ4016 and BZ4020. Iron knife blade and handle. Broken into three pieces: the tip (length 1cm; width 1.5cm; height 0.4 cm; weight 1.2g); the blade shaft (length 10.2cm; width 2.1cm; height 0.7cm; weight 35.7g); and the handle (length 8.9cm; width 2.1cm; height 0.6cm; weight 29.5g). Originally had a handle attached by two iron rivets.
- I. A6000 BZ6001. Worked bone. Highly burnished on the anterior side, single notched line going in a lateral direction on the distal end. 3.7x1x0.5cm. Weight 3.1g.
- J. A7013 BZ7102. Ceramic spindle whorl. Surface colour pink (7.5YR 7/4).

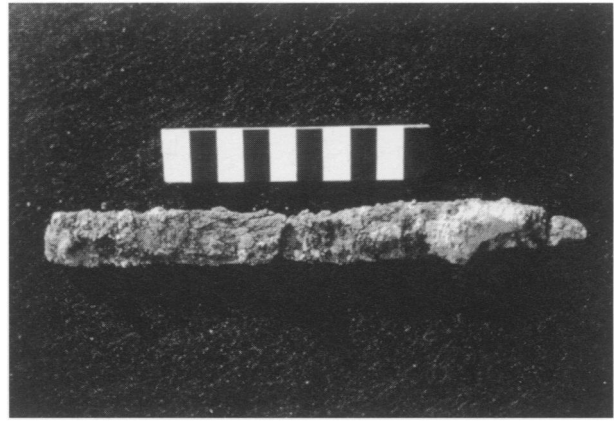


Fig. 25. Dagger from child burial in trench A-4 (L4002 BZ4016+)

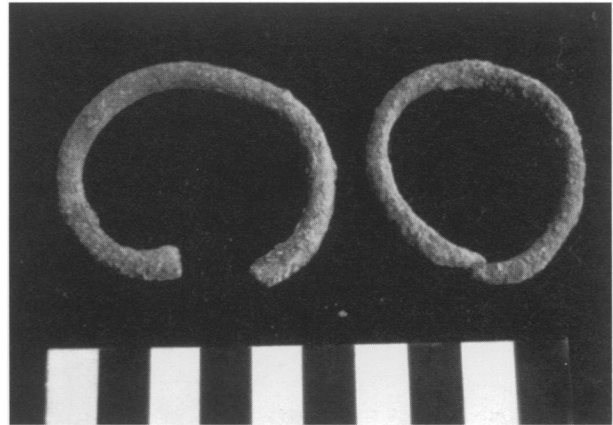


Fig. 26. Bronze bracelets from child burial in trench A-4 (L4002 BZ4013)



Fig. 27. View of burial chamber in trench A-4. Note the sherds in the foreground

The foundation pit (L4004) and another possibly associated pit (L4005) cut a course of mud-bricks (L4003) heading west from wall L3008. This locus consisted of only one course of roughly square bricks measuring approximately 40x40cm laid in a row at least three bricks wide. The fact that these bricks seem to have been laid side by side with no evidence of a second course suggests that this might not be the remains of a wall, but could rather be a mud-brick pavement (fig. 13).

Area A, trench 5

Trench A-5 was located on the east side of trench A-2 (fig. 13). Once the topsoil was removed, it became clear that this trench was traversed from its south baulk to its northeast corner by a modern drainage ditch. This ditch probably contributed to the extreme diversity of ceramic types discovered in the upper levels of this trench. These finds included ceramics dating to the Iron Age and the Hellenistic period, with one Islamic example.

After removing the topsoil and cleaning the modern drainage ditch, we encountered a series of pits from a range of periods. At least one of these pits was obviously modern (L5002), while others were probably Hellenistic in date. One pit (L5006) contained a human skull. The proximity of this pit (L5006) to the ground surface makes it very difficult to reach any conclusions about its nature or date. However, the fact that it contained only a skull suggests it is not a primary burial. As in trench A-2, most of the Hellenistic pits were flat-bottomed and plaster-lined. One of these pits (L5018) was quite large, measuring 2.05m north-south by 1.95m east-west. In addition to being plastered, pit L5018 may also have been lined with mud-bricks (L5020), leading us to believe that pit L5018 and the similar pits discovered in trench A-2 (L2015 and L2022), A-3 (L3010) and A-6 (L6011 and L6012) may have been part of a single, large Hellenistic storage system (see below).

Once the pits were removed, we came upon Iron Age architecture. The first indication of Iron Age levels was a wall (L5013) still partially contained within the north baulk. This wall (L5013) traversed the trench from the west, almost reaching the east baulk before being cut by a later pit. A small sounding (L5019) next to the northeastern extremity of the wall not only showed that three courses of bricks were preserved, but also revealed the remains of an oven well dated by an Assyrian nipple base discovered within it. Remains of several surfaces were discovered south of wall L5013, leading to the conclusion that this structure was occupied through several phases of rebuilding. The earliest floor was a packed earthen surface (similar in colour, texture and elevation to surface A-2, L2018). Two later phases saw cobbled surfaces (L5014 and L5015) constructed over the original earthen

surface to abut directly wall L5013. At least one of these cobbled surfaces was plastered (L5015) and may have been connected with other plastered areas (L5016 and L5017) at the same or similar elevations found at various locations throughout trench A-5. This surface may also have been related to the cobbled surface discovered in A-2 (L2017 discussed above).

Area A, trench 6

Relatively late in the season we opened a 5x2m trench directly north of trench A-2. Unfortunately, this area was characterised by deep layers of modern debris and late pits. The disturbed nature of the deposits meant that it was difficult to trace any of the architectural remains discovered in A-2, A-4 or A-5. However, we did find a wall stub/architectural feature (L6017) beginning in the southeastern part of the trench running north. The remains of this feature were in relatively close alignment with wall L2006 in trench A-2, although the relationship between these features remains unclear. This architectural feature was associated with a hard-packed earthen surface (L6010), whose elevation and material composition was nearly identical to surface L2018 in trench A-2. Two fragments of a strainer were discovered on the surface (L6010, figs 28O, 28R) possibly indicating that this area was used for domestic processing. Notable finds from this unit included one bone pendant, one metal pendant (fig. 24I) and one shell artefact, all of uncertain date.

Area A, trench 7

Trench A-7 was a 5x5m unit located west of trench A-3 and south of trench A-4 (fig. 13). Trench A-7 quickly yielded two interesting features well above the elevation of the Imperial period features in A-2, A-3 and A-5. First, in the west of the trench, we recovered a large circular grinding stone (L7003). Second, we encountered two phases of a cobbled surface traversing the southern part of the trench (L7009 and L7014). Although the matrix surrounding the grinding stone was relatively close to the surface and therefore subject to contamination, the surface upon which the grinding stone stood (L7004) appears to have been directly connected with the cobbled surface (L7009) indicating that these two features were probably contemporary. The latest phase of the cobbled surface (L7009) was composed of small cobbles of an average size of 3x3cm placed side by side in a clay matrix. The earlier level of this surface (L7014) was made up of slightly larger stones of up to 10x15cm in a similar clay matrix. The context directly on top of the cobbled surface (L7002), as well as the few ceramics recovered from within the cobbled surface itself (L7009), indicate that these features are of Iron Age date,

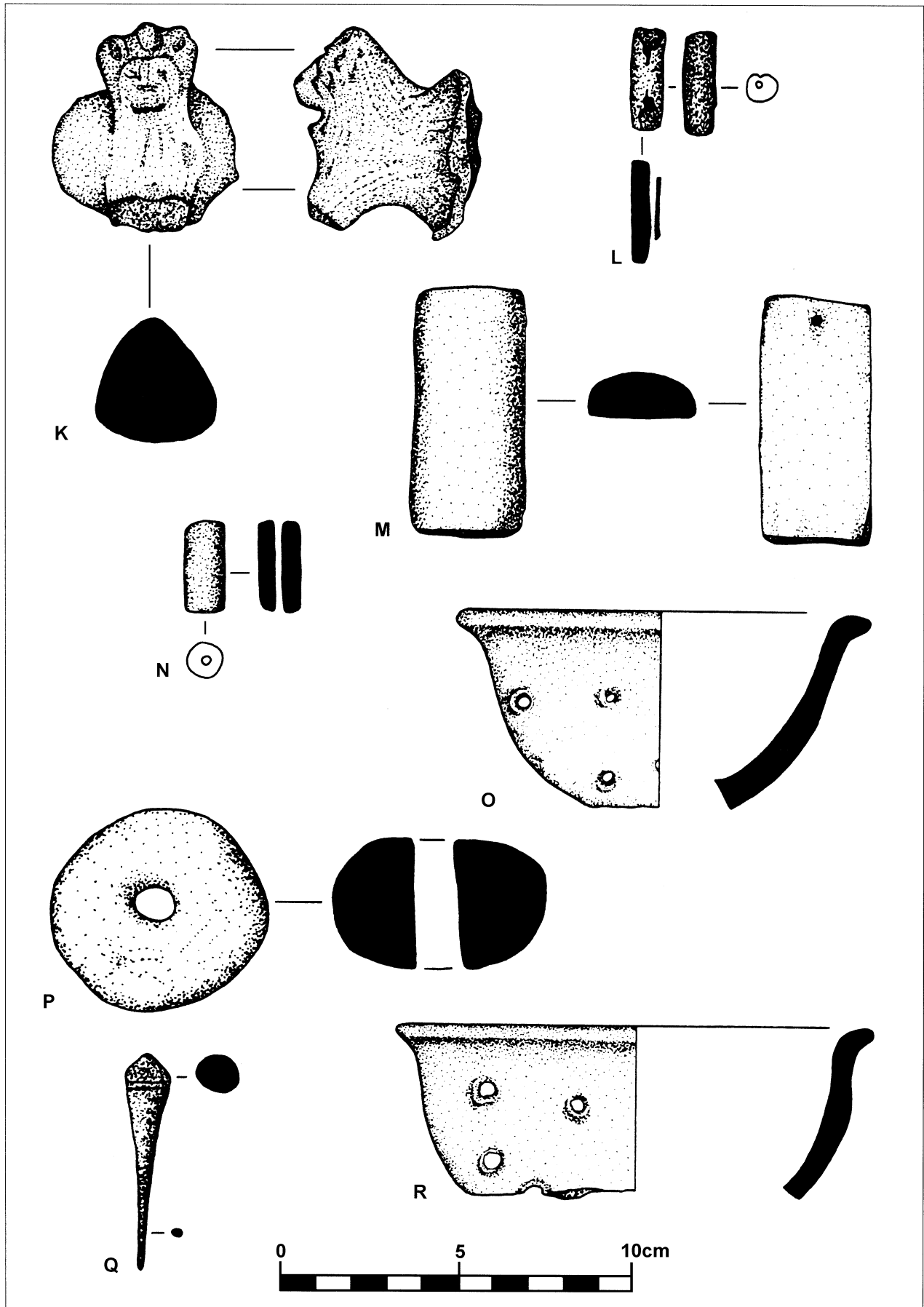


Fig. 28. Selected small finds from Boztepe

Fig. 28. Selected small finds from Boztepe

- K. B1017 BZ1089. Ceramic lion head. Most likely part of a handle of a ceramic vessel. Interior and exterior surface pink (7.5YR 7/4), core grades from pink (7.5YR 7/4) to light yellowish brown (2.5Y 6/3). Medium grit temper. Height 5.2cm. Length 4.3cm. Width 5cm.
- L. B3001 BZ3016. Metal cylinder, possibly a weight or pendant. Colour light grey (10YR 7/2). Pierced by a small slightly off-centre hole from the distal to the proximal end. Wear marks suggest this piece was worn on a string. 2.8x0.8x0.8cm. Weight 13g.
- M. B1019 BZ1120. Shaped stone palette. Rounded on the anterior side, smooth and flat on the posterior side with a small round notch in the distal end. Dark grey (10YR 4/1). 7x3x1.3cm. Weight 58.5g.
- N. B1017 BZ1155. Ceramic cylinder. Completely burnished on the exterior. A small hole from the distal to the proximal ends. Reddish yellow (5YR 6/6). 2.6x1.2x1.2cm. Weight 6.1g.
- O. A6010 BZ6074. Strainer fragment. Interior and exterior surfaces pink (7.5YR 7/3). Fine grit temper. Diameter 10cm.
- P. B2006 BZ2080. Ceramic loom weight. 6x6.1x3.7cm. Weight 103.8g.
- Q. B3001 BZ3008. Bronze awl. Rounded cone distal end gradually sloping to a point at the proximal end. There is a total of five incised lines circumventing the pin, two on the distal end and three in the midsection. Dark greenish grey (Grey 1 3/10Y). Length 6cm. Width 1.3cm. Weight 19.4g.
- R. A6010 BZ6071. Strainer fragment. Interior, exterior surfaces and core light reddish brown (2.5YR 6/4). Fine grit temper with small white grains. Diameter 12cm.

Fig. 29. Selected small finds from Boztepe

- S. B2006 BZ2055. Intact amphora. Unusual in that it has no handles. Interior surface pink (7.5YR 7/4), exterior surface reddish yellow (7.5YR 7/6). Height 47cm. Maximum body diameter 24cm.
- T. A7013 BZ7057. Small jar. Partially reconstructed. Interior surface light brown (7.5YR 6/3), exterior surface pale yellow (2.5Y 8/2), core light reddish brown (5YR 6/4). Coarse grit temper. Maximum body diameter 9.9cm. Height 12.9cm. Weight 147.3g.
- U. A7016 BZ7069. Potter's tool? Surface burnt to dark gray (5YR 4/1). Very fine chaff temper. 4.7x2.9x2.5cm. Weight 28.5g.
- V. B3002 BZ3028. Ram's head ceramic spout. Interior surface reddish yellow (5YR 6/8), exterior surface reddish yellow (5YR 7/6), core yellowish red (5YR 5/6). Coarse grit temper. Diameter 6cm.

although the lack of a significant number of diagnostic sherds in these loci makes it difficult to date these features with any more precision. However, the fact that a surface (L7022) associated with wall L3008 was discovered below the level of the cobbles (L7009 and L7014) and underneath the grinding stone matrix (L7004+) confirms that these features post-date the Imperial period house discovered in other Area A trenches. It is therefore tempting to assign these features to the Post-Assyrian period although the nature of the contexts as well as the relative lack of diagnostic ceramics makes this attribution uncertain.

In the northern end of the trench, we successfully articulated the corner of the Iron Age wall (L3008) to find a surface (L7022) that contained the remains of two whole pots smashed against the surface by fallen debris. This context also contained numerous cooking pot fragments, but was not covered by a collapse layer such as those discovered in A-2 (L2005) and A-3 (L3017+). The lack of a significant collapse layer supports the conclusion that this surface (L7022) was outside the Imperial period house discovered in A-2, A-3 and A-5. Other interesting finds from this context include several loom weights and a potter's tool (fig. 29U and see below) suggesting that various domestic activities took place on this surface.

Small/special finds from Area A

Area A yielded a significant number of small finds. The Halaf burials in A-1 contained numerous complete vessels and the Halaf period stamp seal described above. The most significant finds from trench A-2 were the enigmatic vessel fragments discovered in the collapse layer L2005 discussed above (BZ2086). Other finds include two obsidian blade fragments, both of which were discovered in the matrix of floors (BZ2136 in floor L2018 and BZ2136 in floor L2026, fig. 24B). A chert core (BZ2287) was also discovered on floor L2026. One oval burnishing stone (BZ2225) measuring 4.9x2.6cm was discovered in the collapse layer (L2005+) and a few pieces of shell (BZ2264) were discovered on top of a wall (L2049). Unfortunately these shells were too fragmentary to yield any information about species or origin. Two mortars and one pestle were discovered sealed beneath collapse L3017 on floor L3018 (fig. 23) and a complete undecorated ceramic vessel was discovered in nearby fill (fig. 24E). Trench A-4 contained numerous finds associated with the Hellenistic child burial (described above) including one iron dagger (BZ4016, figs 24H, 25), two bronze bracelets (BZ4013, figs 24C, 24D, 26) and one shell necklace (BZ4022). Significant finds from A-5 include an obsidian blade fragment (BZ5045), a loom or fishnet weight (BZ5077) and a glazed ceramic bead (BZ5089, fig. 24G). An inter-

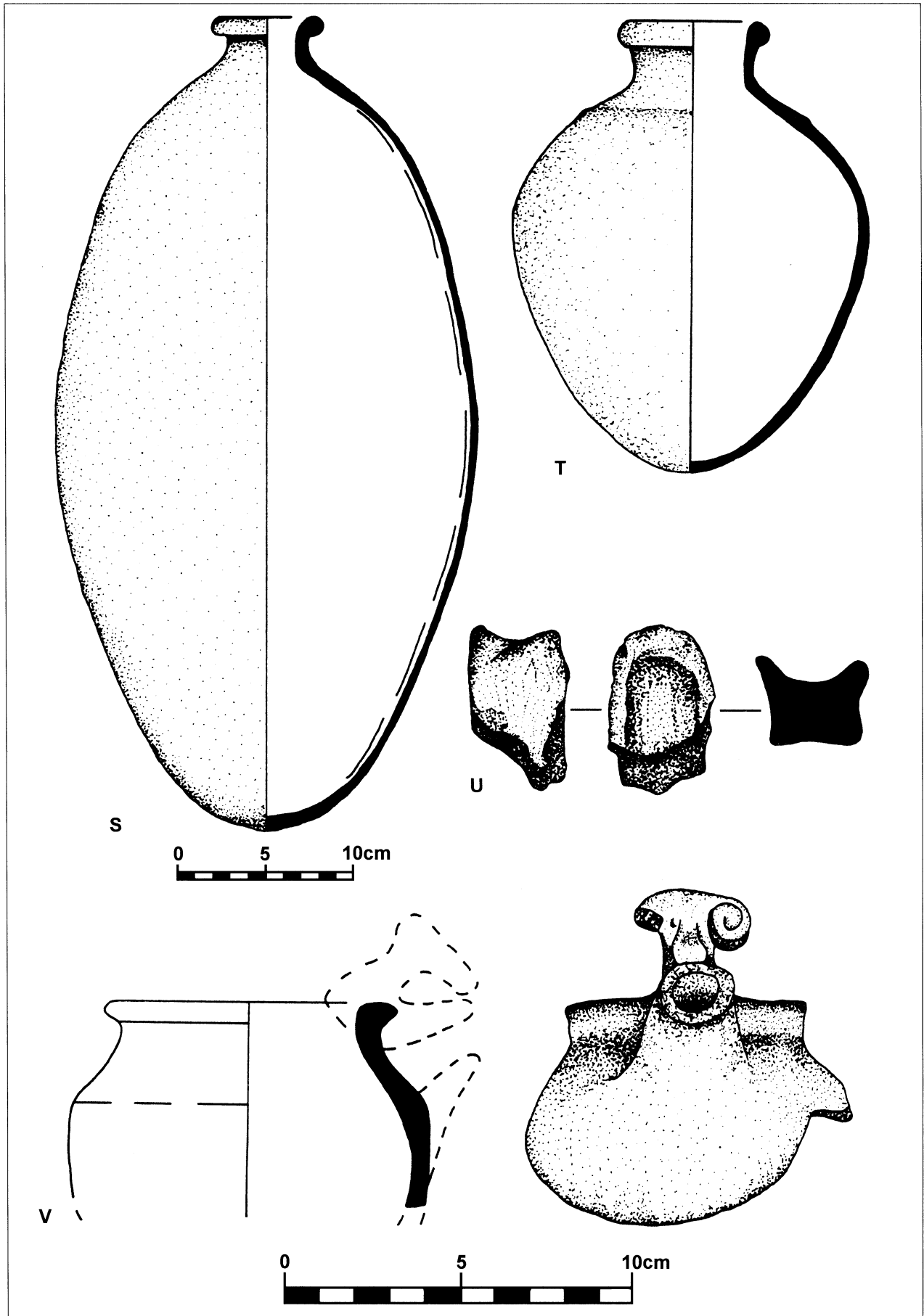


Fig. 29. Selected small finds from Boztepe

esting ceramic tool, interpreted as a tool for moulding wet clay on a wheel, was discovered in a pit in A-7 (L7016, BZ7069, fig. 29U). A loom or fishnet weight was discovered in the surface fill (L7000, BZ7003, fig. 24F). A nearly complete pot (L7013, BZ7057, fig. 29T) and a spindle whorl (L7013, BZ7102, fig. 24J) were discovered in mixed fill.

Area A synthesis

The ceramics and associated remains discovered in Area A indicate that this portion of the mound was occupied during three broad time periods: the Hellenistic; the Iron Age; and the Halaf periods. Remains dating to the Hellenistic period, as well as any possible Post-Assyrian occupation in Area A at Boztepe are very spotty. Although trench A-2 yielded a wall stub (L2003+) that is probably Hellenistic in date, the most significant Hellenistic feature discovered in Area A was the child burial recovered in A-4. This burial consisted of a rectangular brick-lined pit (L4002) containing the remains of a child. This burial also contained a significant number of grave goods, as described above. The only other Hellenistic features discovered in Area A were numerous large pits (L2022, L2025+, L2027+, L3009, L3010, L5004, L5006 and L5018). All of these pits were plaster-lined, and at least one (L5018) was lined with mud-bricks. There is also evidence that at least one of these pits was in use long enough to warrant replastering (L2025 and L2026). The careful construction of these pits would suggest that they were used for storage rather than refuse disposal. It is significant that most of these pits were relatively shallow. For example, both L2025 and L2022 ended slightly less than 1m below the ground surface. If these pits were indeed used for storage, one would expect them to be quite a bit deeper. This, combined with the fact that few or no remains of any Hellenistic structures were recovered during our excavations, would support the hypothesis that the highest occupation levels at Boztepe have been significantly altered by modern earth-moving. In spite of the fact that these pits might, therefore, have originally been significantly deeper, their number and width attest to the high storage capacity of the Hellenistic settlement.

Curtis (1989: 17–18, 51–2) and Wilkinson and Tucker (1995: 64, 100; see also Oates 1968: 58–9) have argued that there is considerable ceramic continuity between the Assyrian Imperial period and the Post-Assyrian period. In fact, only a few ceramic types have been tentatively proposed by Wilkinson and Tucker as marking the distinction between these sub-phases of the Iron Age (Wilkinson, Tucker 1995: 64). Unfortunately, only a precious few architectural features post-dating the destruction of the Imperial period house (Structure 2)

survived recent construction and earth-moving activities at Boztepe. These contexts include the cobbled surfaces (L7009 and L7014) and associated contexts (L7003+) unearthed in A-7, as well as the oven (L3002) discovered in A-3. Although these data suggest that Boztepe had at least some occupation after the destruction of the Imperial period house discovered in trenches A-2 through A-7 (see below), the ephemeral nature of these contexts means that little can be confidently concluded about the nature of occupation or material culture during the Post-Assyrian period.

The Imperial period levels at Boztepe are much better preserved than those of the Hellenistic or Post-Assyrian periods. Area A trenches 2 through 7 yielded the remains of a large house securely dated to the Imperial period by ceramics discovered in abundance in sealed contexts on the floors of several rooms (figs 15, 17) and by four radiocarbon dates. This structure witnessed two main building phases during which the load-bearing walls changed orientation slightly. Both phases of this house utilised mud-brick walls without stone foundations. Only a small portion of the earlier structure (Structure 1) was exposed in A-2. The floors of this structure were plastered, and the only room of this house excavated contained a large hearth. The floors of Structure 1 were apparently swept clean before the later structure (Structure 2) was built. The later, more substantial house (Structure 2, figs 13, 16, 23) was eventually destroyed in a catastrophic fire. Despite the irregularities in the radiocarbon calibration curve for the Iron Age, in no cases do the four C14 dates extracted from this layer contradict the dating of this structure based on ceramic analysis to the Assyrian Imperial period. Remains discovered on the floors in A-2 and A-3 (L2005+ and L3017+) indicate that this house probably had a second storey. Room 1 in trench A-2 and Room 2 in trench A-3 were both inside the house, while we now believe the cobbled surfaces in A-5 to have been the courtyard of the house (figs 13, 16). Although any direct connection between the possible courtyard (in A-5) and Room 1 (in A-2) was likely destroyed by a later pit (L2015+), Room 1 was probably linked to the courtyard by a doorway and therefore may have served as a kind of reception room. This hypothesis is supported by the fact that few domestic processing tools were discovered on the floor (L2018) of this room. Instead, most of the artefacts in this room, including bone, a small burnishing stone (BZ2225), a large corpus of standard Iron Age and Imperial period ceramics, and the enigmatic pedestalled vessel (BZ2086+) described above, were contained within the collapse layer (L2005+). The stratigraphic position of these artefacts indicates that they probably fell from an upper storey. Unlike Room 1 (in A-2), Room 2 (in A-3) contained

numerous domestic artefacts. Several large pots and numerous bones were broken onto the floor when the upper storey collapsed while two large mortars and at least one oven were discovered *in situ* on the same floor in Room 2. Thus it is reasonable to assume that Room 2 was the kitchen serving Structure 2 (figs 13, 16). Furthermore, its position adjacent to Room 1 supports the hypothesis that Room 1 served as a reception room. The composition of the debris discovered to the south and west of wall L3008 above surface L7022 in A-7 suggests that this was an outside work space associated with Structure 2. What is much less clear is the function of the mud-brick feature (L4003) continuing west from wall 3008 in A-4. One possibility is that this represents a paved courtyard or floor, while the second, perhaps more likely explanation is that this is the remains of another wall.

Several lines of evidence support the hypothesis that the Iron Age village discovered at Boztepe was established by the Assyrians as part of an effort to colonise the valley after its integration into the Neo-Assyrian provincial system. As mentioned above, both ceramic and carbon dating indicate that Boztepe was occupied during the Neo-Assyrian Imperial period. This combined with the fact that no Early Iron Age remains were discovered in our excavations and surveys suggests that Boztepe was not occupied in the era prior to Assyrian imperial penetration into the valley. It should also be noted that the ceramic corpus discovered at the site consists of a mix of Neo-Assyrian types and standard Iron Age types (Parker 1997a). Only a handful of sherds that might be classified as indigenous Iron Age were discovered.⁸ When we compare the ceramic assemblage excavated at Boztepe with that collected at Talavaş Tepe (see below) it is clear that the ceramics at Boztepe are much more closely related to the Assyrian assemblage than to that of the indigenous inhabitants of the valley. Whether or not the enigmatic pedestalled vessels (see above and figs 18, 19, 20, 21) represent imports, goods brought to the region by people resettled by the Assyrians, or locally manufactured products is impossible to say. Although pedestalled vessels, kernos rings and three-footed basalt bowls are known from Megiddo (May 1935; Lamon, Shipton 1939; Loud 1948), and a tripartite bowl was discovered in an Iron Age context at Boğazköy (Beran 1963: fig. 14, pl. 32; van Loon 1991: fig. 15), the similarities between our finds and these are too remote to draw any real conclusions.

⁸ It should be noted that the discovery of two 'rope imitation band' sherds and two 'indigenous handle' sherds at Boztepe supports the conclusions about the dating of these type vessels given in Parker 1997a.

The uppermost levels in trench A-1 (L1000 through L1010) were obviously contaminated by modern construction and earth-moving, and thus any architectural remains dating to the Hellenistic period or the Iron Age that may originally have stood on this part of the mound were recently destroyed. However, the Halaf period cemetery is located well below the ground surface and therefore has not sustained significant damage from modern activities. In spite of the fact that our total exposure to this level was only about 12m², we uncovered four burials (L1009, L1014 and L1015). Most interesting among these were Burials 1 and 2 (L1009). If our in-field interpretation of the bones is correct, the first burial (Burial 1) was a female, and the second (Burial 2) was a male. The positioning of the bodies directly on top of one another suggests that these two individuals were buried together. It is perhaps significant that the Halaf burials in A-1 were situated in a line running roughly east-west and were spaced about 1m apart. If we assume that a large area of the central mound was given over to this cemetery, then this relatively close spacing might indicate that this cemetery contains a large number of burials.

Area B trench summaries

Area B is located on the southeastern portion of the mound. In contrast to Area A, Area B is characterised by a gentle slope and an absence of modern ruins on the surface. Four 5x5m trenches were excavated, trenches B-1 and B-4 north of the modern path that loops the centre of the site, and trenches B-2 and B-3 south of the path (fig. 4). Although none of the Area B trenches contained significant architecture, several interesting small finds were uncovered, and we obtained a useful stratigraphic profile by reaching virgin soil in trenches B-1 and B-2. Notably, a 1x1m sounding sunk at the base of the Iron Age material in trench B-1 contained over 2m of Halaf remains, while virgin soil was reached in trench B-2 without encountering any prehistoric strata. Trenches B-3 and B-4 were only excavated to a depth of approximately 1m before we closed them in order to concentrate our efforts on Area A. These two trenches contained mud-brick debris and various finds, but no substantial architecture.

Area B, trench 1

After removing the topsoil (L1000) and subsoil (L1001) in this unit, both of which contained mixed debris with Halaf, Iron Age and Hellenistic ceramics, we uncovered a poorly preserved cobblestone surface (L1006, L1007 and L1009). The remains of two nearly complete vessels were discovered smashed onto this surface. Several mortars were also recovered both on top of and as part of

the makeup of the cobbles. An earthen surface (L1003) in the western third of the unit abutted the cobblestone surface, but no earth or stone surface was discovered in the eastern third of the trench. The cobblestone surface was divided into three loci due to the fact that the northern half (L1006) contained larger cobbles than the southern half (L1007), some of which may have been the fallen continuation of a wall stub (L1008) located in the northwestern corner of the unit. Unfortunately, any former connection between L1008 and L1006 was not preserved. Finally, a fragment of an earlier phase of this cobblestone surface (L1009) was discovered in the centre of the unit. The contexts surrounding these cobblestone surfaces and the earthen surface adjacent to them (L1003) were composed of a mixture of Halaf, Iron Age and Hellenistic ceramics. This suggests that these remains are all that is left of a Hellenistic structure or working area that was originally located on this portion of the mound.

Another cobblestone surface fragment (L1017) was uncovered about 30cm beneath L1003 in the northwestern corner of the trench. The material on this surface contained a mix of Iron Age and Hellenistic ceramics. The remains of an oven (L1023) covered part of this surface. Both the surface and the oven continued beneath a wall stub, mentioned above (L1008), in the northwestern corner of the unit. No evidence of this wall or the surface beneath it was uncovered in the adjacent trench, B-4. While uncovering L1017, we recovered a Hellenistic ceramic handle with a lion's head sculpted on it (BZ1089, fig. 28K).

Although surface L1006+ did not continue into the eastern third of the square, in the northeastern corner we uncovered the top of a large storage jar filled with earth and ash (L1013) at approximately the same level as the surface. This jar was intact, standing upright and, when fully excavated, was 69cm tall. We were unable to locate any surfaces associated with this jar. The soil around the pot (L1014) and soil at the same level across the trench (L1018) contained a mix of Halaf, Iron Age and Hellenistic ceramics. Due to the similar elevation of the top of the storage jar and the cobblestone surface fragment discussed above (L1006+), it seems likely that the jar was buried beneath a section of the floor that did not survive or was not detectable.

At the base of L1018 and the pot (L1013), we noted several whitish patches located beneath the jar in the centre of the unit, in the southwest corner of the unit and along the south baulk. This white residue formed spots that were roughly square. We suspect that this residue was not the remains of a plastered surface but the 'stain' of organic material beneath deteriorated mud-bricks removed in antiquity.

In order to expose a long stratigraphic section and probe to deeper levels, we excavated a 1m wide trench along the length of the east baulk of B-1. This operation uncovered a series of pits, most notable of which was pit L1021, which contained ash, charcoal, animal bones and Hellenistic ceramics. Another pit was identified in the southeastern corner of the trench. Unfortunately, we did not recognise this pit until we had reached its plastered bottom (L1020). We recovered a stone palette (BZ1120) from mixed fill (L1019) above L1020 (fig. 28M). At the level of the plastered bottom (L1020) of this pit, we were already deeper than the virgin soil reached in trench B-2, located just 10m to the south. Thus, in an effort to measure the depth of virgin soil, we sank a 1x1m sounding against the centre of the east baulk of the trench (fig. 30).

To our surprise, the sounding (L1025) yielded over 2m of Halaf material before reaching virgin soil 4.15m below ground surface. The sounding was excavated as a single locus (L1025), but collection bags were changed whenever we observed a soil change. Halaf ceramics, obsidian tools and animal bones were recovered throughout the sounding, and three earthen surfaces were identified. The first surface occurred at 574.49m, or 3.30m below the ground surface. In the matrix above this surface we recovered daub or pisé material (BZ1185), several obsidian blades (BZ1185 and BZ1188) and animal bones (BZ1187). A second surface was identified at 574.24m, or 3.55m below the ground surface. This surface also had associated pottery, bones and lithics in the surrounding matrix (BZ1165, BZ1166 and BZ1167).

The final surface was found resting on virgin soil at a depth of 573.69m, or 4.15m below the ground surface. Associated with this surface were ceramics, an obsidian core, a worked stone and numerous pig bones. The virgin soil beneath the deepest surface was the same clay that we found in trenches B-2 and C-1 (see below), although it was much more moist than in the other trenches and consequently less cracked and crumbly.

Area B, trench 2

Like the adjacent unit, B-3, trench B-2 began with loose silt topsoil (L2000), followed by compact mud-brick debris (L2001). The topsoil was contaminated with modern debris, including a piece of modern metal that was recovered in L2001. Once we removed the contaminated contexts, we began L2002 in a loose to compact loam beneath the more compact mud-brick debris of L2001. As we removed L2002, several flat-lying artefacts appeared at about the same level, betraying the presence of an earthen surface (L2003). This surface is

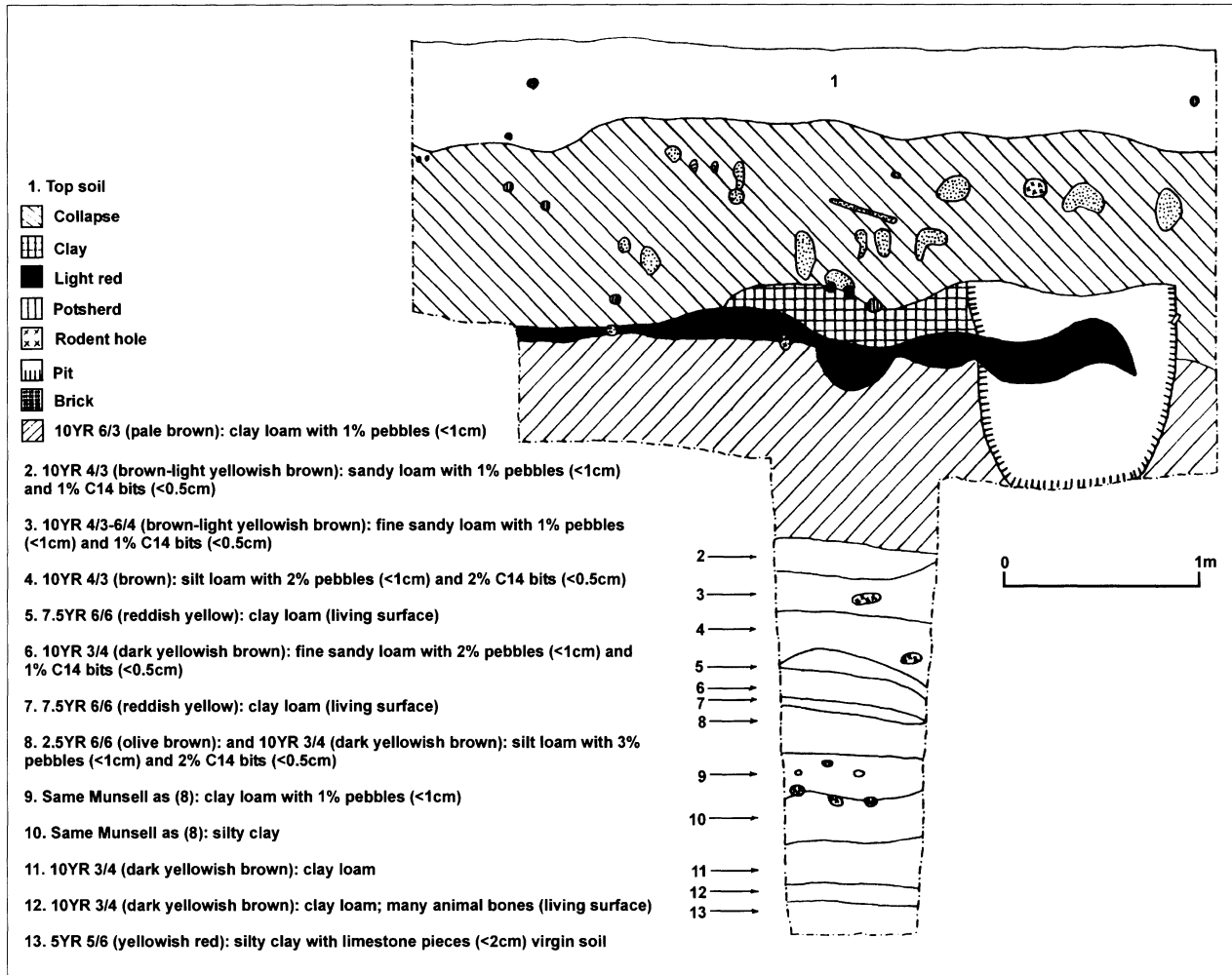


Fig. 30. B-1 east section

probably equal to one uncovered later in trench B-3 (see below). Resting on this surface were a smashed storage jar (BZ2024), a basalt grindstone (BZ2046), numerous flat-lying potsherds, and a soft limestone door pivot or pillar base measuring approximately 35x35x15cm and containing a 10cm diameter depression in its centre (BZ2048). We also found another flat, square piece of limestone (BZ2047), which was too badly eroded to tell if it too had served as the base for a post or door pivot. No walls were associated with the surface or door pivot, although several mud-bricks in the northern half of the unit prompted us to excavate this area as a different locus (L2004).

After removing the artefacts and the surface (L2003) beneath them, we encountered more mud-brick debris and compact loam (L2005). Within this matrix, we uncovered an intact Hellenistic amphora (BZ2055) resting upside down at an oblique angle (fig. 29S). This jar is especially notable for its small rim diameter and the absence of handles. Beneath L2005 and the remnants of adjacent L2004, which together covered the

entire unit, we reached a much softer soil with less mud-brick debris (L2007). At this time, we began a 1.75m (north-south) by 1.50m (east-west) sounding (L2006) in the southeast corner of the trench. Here, we encountered more mud-brick and ash debris, including a pit (L2010), before reaching virgin soil at a depth of 3m below ground surface. The virgin soil (L2009) was composed of hard, red, cracked clay with limestone pebble inclusions. This same soil was reached at the base of the sounding in B-1 (above) and C-1 (below). Yet, unlike the soundings in B-1 and C-1, we did *not* find a Halaf layer above the virgin soil in B-2.

The finds from trench B-2 include five basalt grindstones (L2001, BZ2012; L2002, BZ2030; L2003, BZ2037 and BZ2038; and L2006, BZ2073), a pestle (L2006, BZ2070), two ceramic stoppers (L2001, BZ2017; L2010, BZ2096), a loom weight (L2006, BZ2080, fig. 28P) and the stone bases (L2003, BZ2047 and BZ2048), a nearly complete broken pot (L2002, BZ2024) and a whole pot (L2005, BZ2055), mentioned previously.

Area B, trench 3

Trench B-3 was a relatively unproductive unit. Just over 1m of fill was removed before the trench was closed. Three soil loci were excavated and one small architectural feature was uncovered. L3000 was removed as topsoil, a loose silt loam containing modern debris. Beneath the topsoil we encountered an extremely compact layer (L3001) comprised of dry silt loam and mud-brick debris. A single Islamic glazed sherd was recovered from the top half of L3001. A cylinder-shaped metal weight (BZ3016, fig. 28 L) and a bronze awl (BZ 3008, fig. 28Q) were also recovered in L3001. Beneath L3001 we began L3002, a softer, looser silt loam with a fair amount of compact mud-brick debris. A complete broken pot (BZ3023) appeared in L3002 resting on a surface at the base of this locus. Although no obvious surface was identified, the complete smashed pot, several cobblestones, a large flat stone and an installation (L3004) were resting at about the same level, suggesting the presence of an earthen surface beneath these finds.

An interesting artefact, a ceramic spout with a ram's head sculpted above the opening (BZ3028), was recovered in L3002 along the south baulk (figs 29V, 31). A modern coin was recovered nearby. Since no pits were identified, we assume that the coin, about 1cm in diameter, entered this layer through the large, deep cracks that often form in dry earth. Along the south baulk, in the same area where the ram's head and the coin were found, we uncovered a stone bench or work surface (L3004) consisting of a 45x35x15cm flat stone set on top of at least three courses of cobblestones. L3004 was associated with a surface at the base of L3002. Below L3002 we began L3003, a loose silt loam mixed with mud-brick debris and small stones. Soon after beginning L3003, we closed trench B-3 and shifted our efforts to opening more trenches in Area A, where we had encountered more promising architecture and other features.



Fig. 31. Ram's head spout from trench B-3 (BZ3028)

Each soil locus in trench B-3 contained Iron Age ceramic material, and L3001 also contained two Halaf sherds and one Islamic sherd. Despite the lack of architecture, numerous basalt grindstones (BZ3003, BZ3009, BZ3015, BZ3036, BZ3038, BZ3039 and BZ3040), a spindle whorl (BZ3041) and several interesting small finds were recovered. These include a metal weight or pendant (BZ3016, fig. 28L), a bronze awl (BZ3008, fig. 28Q) and a ram's head spout (BZ3028, figs 29V, 31).

Area B, trench 4

After removing compact silt loam topsoil (L4000), we encountered a very loose silt loam (L4001) with many small stones and animal bones. Two grindstones (BZ4011 and BZ4015) were recovered from L4001 before we began to uncover a jumble of small stones and mud-brick debris (L4002), which covered the entire trench. This debris was very disorganised and did not resemble a simple wall slump or collapse, but rather a wide scatter of eroded bricks. Within L4002 we identified two other loci, L4003 and L4005. L4003 consisted of an area of stones and an unusual grindstone (BZ4040) around a possible domestic installation. The grindstone was quite large (ca. 30cm diameter and 20cm thick) with one side hewn flat and a 2–3cm groove carved into the opposite, naturally curved side. It appears that a stick was placed horizontally into the groove to serve as a handle when the grindstone was in use. Similar examples of this type of grindstone are known from the Halaf period. The grindstone rested above the opening of a whole jar (BZ4044) buried upright in the same debris. The groove in the stone was oriented towards the opening in the jar. This grindstone might, therefore, have been reused as a drain leading to the pot.

Small/special finds from Area B

Despite the lack of significant architecture, UTARP team members uncovered several interesting finds in Area B. In trench B-1, a portion of a Hellenistic ceramic handle containing a simple sculpted lion's head was unearthed in the debris above the cobblestone surface L1017 (fig. 28K). In addition, a limestone palate (BZ1120) was recovered from mixed fill in L1019 (fig. 28M). Finally, a large intact storage jar (L1013) was found buried in fill (L1014). The lion's head is 2.5cm wide from ear to ear and 3cm tall from the mane to the base of the chin. The lion's eyes, ears, nose and chin are simply but clearly formed. The small, polished palate measures 7cm long by 3cm wide by 1cm thick. One side of this palate is rounded like a half-cylinder, while the other side is polished flat with a small divot at one end. The storage jar (L1013) is 69cm tall, 49cm at its widest point, has a rounded base, no handles and a 17cm diameter opening.

Unique finds from trench B-2 include a ceramic spindle whorl (BZ2080) recovered from mixed fill in L2006 and a Hellenistic amphora (BZ2055) unearthened in fill (L2005, fig. 29S). A parallel for the amphora can be found in Oates and Oates (1958: 151–2, pls XXVII nos 11, 12, XXVIII no. 23), although an identical example has yet to be located.

From mixed debris contexts in trench B-3, we recovered a bronze awl (fig. 28Q), a cylinder-shaped metal weight or pendant (fig. 28L) and a ceramic spout with a ram's head sculpted above the opening so that the head faces the direction of the pouring spout (figs 29V, 31). The awl measures 6cm in length with a 1.25cm wide head that tapers to a sharp point at the base. The metal weight measures 1cm in diameter and 2.75cm in length. The ram's head above the spout is a simple rendering of a snout with curling horns, one of which has broken off. The entire piece of the pot measures approximately 7x7cm in maximum height and width, while the ram head itself is about 2cm from horn to horn and 2cm from nose to neck, with a 2cm long neck connecting the head to the vessel.

Area B, synthesis

The absence of substantial architecture combined with the lack of sealed loci make it difficult to define precisely the occupational history of Area B. However, the ceramics indicate that occupation in Area B fits into three broad time periods: the Hellenistic; the Iron Age; and the Halaf periods. The uppermost layers, including topsoil, subsoil and the first surfaces reached in B-1 (L1003, L1006 and L1007), B-2 (L2003) and B-3 (at the base of L3002), date to the Hellenistic period. Below these levels, about 1.5–2m beneath the ground surface, we encountered a combination of Iron Age and later materials in generally mixed contexts.

This mixing was probably caused by later Hellenistic pits, which disturbed the earlier strata, pulling up Iron Age, and occasionally Halaf artefacts and mixing them with Hellenistic material. Such pits appear in B-1 (L1021, L1022 and L1020) and B-2 (L2010). Further mixing may also have taken place during the construction of the modern village at Boztepe. In B-2, no clean prehistoric loci were identified, although some prehistoric sherds were recovered. The earliest Iron Age material in B-2 rests on virgin soil 3m below the surface. In contrast, over 2m of Halaf strata lie beneath the Iron Age and later material in B-1.

Despite the lack of significant architecture, the artefacts recovered in Area B do allow us to make some conclusions about the activities that took place on this part of the mound. The lack of both Hellenistic and Iron Age architecture may indicate that beginning in the

Iron Age and lasting through the Hellenistic period, Area B was an outdoor space, between houses or on the edge of house compounds. Another possibility is that any architectural remains in this area fell victim to modern construction and earth moving activities. In either case, the artefacts recovered indicate that, certainly during the Hellenistic period and possibly also during the Iron Age, domestic processing activities took place in and/or around Area B. This conclusion is supported by the 29 mortars recovered (B-1: 14; B-2: 5; B-3: 7; B-4: 3) in this area (although only a single pestle was found [in B-2]). Rarer tools discovered include a loom weight (B-2), a spindle whorl (B-3), a metal weight (B-3) and an awl (B-3).

In addition, we recovered smashed or unbroken whole storage jars in three units, including one large whole pot (L1013) standing upright in B-1, a broken but largely complete pot (BZ2024) resting on a surface (L2003) in B-2, and a whole storage jar situated upright beneath a drain in B-4. We also found a large basin (BZ3023) smashed on a surface (at the base of L3002) in B-3.

Besides the possible stone drain installation in B-4, we identified a bench or work surface (BZ3004) in B-3, the remains of an oven in B-3 (in L3003) and B-1 (L1024), and four pits, three in B-1. Finally, flint blades and other tools were recovered throughout Area B. Most of these artefacts and features are probably of Hellenistic date. The lack of sealed Iron Age loci means that it is much more difficult to make these kinds of distinctions in regard to the nature of occupation in Area B during the Iron Age. However, the fact that some of the artefacts mentioned above come from mixed fill does not rule out the possibility that similar domestic activities took place in Area B during the Iron Age.

Taken together, the artefacts and installations listed above identify Area B as the location of domestic processing activities. The lack of many identifiable walls or surfaces suggests either that these activities took place outdoors or that any associated architecture was later destroyed.

Although the total excavated area dating to the Halaf period in Area B is extremely limited, enough remains were recovered to make some generalisations about the Halaf period occupation on this portion of the mound. In contrast to Area A, trench 1 where Halaf remains were limited to mortuary contexts, the numerous surfaces and faunal remains recovered in the sounding in B-1 suggest that this lower portion of the mound was the location of a Halaf period settlement, while the higher portion of the mound (in Area A) was the location of this community's cemetery.

Area C

During our transect survey of Boztepe (see below), we recovered numerous sherds far out in the fields south of the mound in transects E and F (fig. 4). In order to define further the nature of occupation and the depth of deposit on the southern slopes of the site, we dug a sounding adjacent to transect E, lot 3 where we recovered a total of 21 sherds in the survey. We began by excavating a 2x2m trench to a depth of 1.5m, at which point we narrowed the pit to 1x1m. At a depth of

1.5m below the ground surface we began to recover Halaf period ceramics in a hard clay matrix. We continued to encounter Halaf period ceramics and faunal remains until we reached virgin clay at a depth of 2.29m below the ground surface (fig. 32). This virgin clay was the same type of hard, dry clay that we discovered at the base of the soundings in B-2 and B-1 (note however that the clay in B-1 was wetter than that in B-2 or C-1). We excavated C-1 as a single locus (L1000) in arbitrary 25cm levels within strata. That is, we excavated

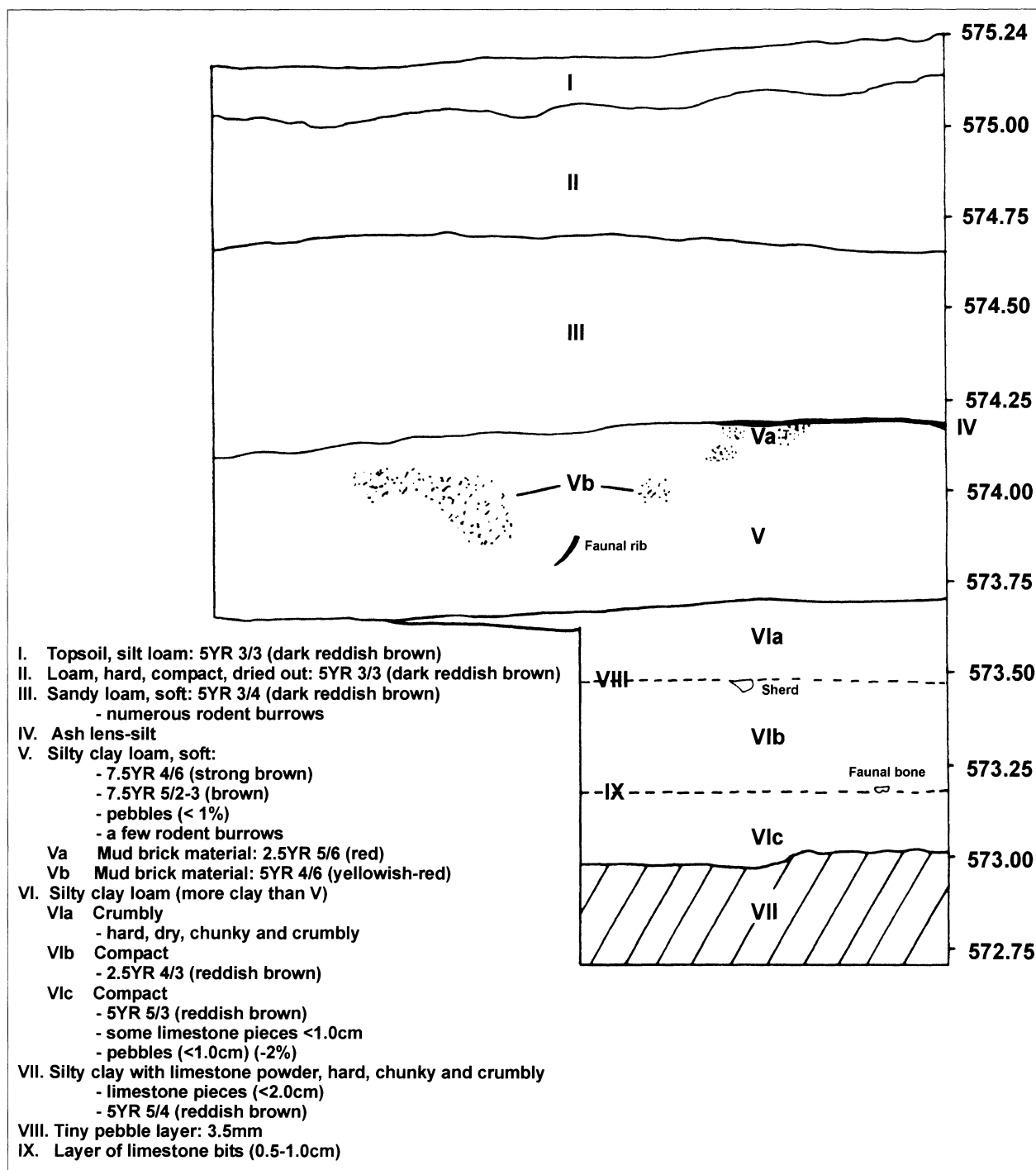


Fig. 32. C-1 west section

arbitrary 25cm levels but we started a new level whenever we noticed a soil change. A final level of 30cm (level 10) was excavated into the virgin clay. The complete absence of artefacts or faunal remains in level 10, along with the concrete-like consistency of the hard clay and its similarity to the clay discovered in the soundings in B-1 and B-2, confirmed that we had reached virgin soil. It should also be noted that no architecture was discovered in this unit.

The cultural levels in C-1 roughly correspond to our stratigraphic excavation units. Layer I (levels 1 and 2) contained a mix of modern, Iron Age and Hellenistic material. Layers II and III (levels 3 to 6) contained Halaf, Iron Age and Hellenistic pottery, but no modern artefacts. Layer IV, level 7, contained a mix of Iron Age and Halaf material, while levels 8 and 9 contained Halaf artefacts. After reaching virgin soil in C-1, an examination of the western section revealed a partial ash layer at the level of the change between layers II and III. A few unaligned mud-brick fragments were also identified in the section. The lack of architecture or features other than this ash layer, combined with the mixed contexts recovered in layers I–III, is similar to the stratigraphic profile of trench B-2 and the mixed period loci encountered throughout Area B. Nevertheless, from C-1 we learned that the Halaf settlement discovered in trenches A-1 and B-1 continued at least as far as transect E, where it is preserved as nearly 1m of material buried beneath 1.50m of later debris.

The Halaf ceramics from Boztepe

Halaf ceramics from Boztepe can be broken down into two basic categories: rough ware and fine ware. Rough ware ceramics from Boztepe are always undecorated and in nearly all cases fine ware ceramics are decorated (either with painted designs or slip). The former range from very rough course ware with grit temper, sometimes with large grit inclusions, to slightly finer rough ware also with grit temper. In a few cases chaff temper is evident. Many examples from Boztepe are not well fired creating a marked difference between the surface colour and that of the core. The most common shape is the open flaring straight-sided bowl such as those illustrated by Watson and LeBlanc (1990: fig. 5.2) (fig. 6I, 6M–6Q).

In contrast to the rough ware, fine ware ceramics are thinner and much more delicately made. The fabrics are generally orange and are relatively well fired although some examples grade to a grey core. Temper is always fine or very fine grit and in some cases the temper is fine enough to be barely visible. No examples of fine ware with chaff temper have been found. The most common shapes are shallow and

flaring straight-sided bowls (Watson, LeBlanc 1990: fig. 4.1 nos 1, 2, and 3, 4 respectively), and globular squat and necked jars (Watson, LeBlanc 1990: fig. 4.1 nos 14 and 15 respectively). Some body sherds may belong to hole-mouthed bowls (Watson, LeBlanc 1990: fig. 4.1 no. 12). In all identifiable cases vessels have flat bases. No spouts have been discovered. Although stone vessels were not particularly common, one interesting example of a painted stone vessel base was recovered (fig. 6H).

A wide variety of decorations are evident on the fine ware ceramics. Nearly all fine ware sherds have a slip. Three paint colours have been recorded: red, brown and black. Nearly all paint is matt although in a few cases wet smoothing has produced a shiny finish. Although a statistical analysis of the painted motifs has yet to be undertaken, black and red cross hatching (fig. 5A–5C, 5E–5N, see Akkermans 1993: fig. 3.7 43; Wilkinson, Tucker 1995: fig. 63 no. 12; Campbell et al. 1999: fig. 10 no. 5), polka dots (fig. 5S–5U, see Campbell et al. 1999: fig. 10 no. 4), scalloped designs (usually red, figs 5A–5D, 5F, 5U, 8G, see Watson, LeBlanc 1990: fig. 4.7 nos 1, 3) and diamonds (fig. 6G, see Watson, LeBlanc 1990: fig. 4.16 no. 1; Wilkinson, Tucker 1995: fig. 63 no. 7; see also Hijara 1980: fig. 12 no. 481) are common. Red scalloped designs usually appear on the inside of vessel lips.

Boztepe Halaf ceramic count and weight for selected loci

Many of the archaeological contexts at Boztepe are disturbed or mixed. This is at least partially due to the fact that until very recently Boztepe was a living village (see below, ‘The survey results’). For this reason UTARP team members selected only a few loci from reliable contexts for further analysis during the summer of 2001. What follows is a short description of the ware types and a quantification of the decorated fine wares verses the non-decorated rough wares.

A1 L1008 BZ1071			
rough undecorated Halaf sherds	0.25kg	count: 7	
decorated Halaf sherds	0.35kg	count: 11	
A1 L1008 BZ1047			
rough undecorated Halaf sherds	0.35kg	count: 14	
decorated Halaf sherds	0.40kg	count: 22	
A1 L1009 BZ1045			
rough undecorated Halaf sherds	0.3kg	count: 5	
decorated Halaf sherds	0.0kg	count: 0	
A1 L1009 BZ1053			
rough undecorated Halaf sherds	0.1kg.	count: 1	
decorated Halaf sherds	0.01kg	count: 1	
A1 L1009 BZ1048			
rough undecorated Halaf sherds	0.04kg	count: 2	
decorated Halaf sherds	0.02 kg	count: 2	

A1 L1013 BZ1092			
rough undecorated Halaf sherds	0.83kg	count: 18	
decorated Halaf sherds	0.40kg	count: 2	
A1 L1014 BZ1083			
rough undecorated Halaf sherds	1.3kg	count: 8	
decorated Halaf sherds	0.08kg	count: 5	
B1 L1025 sounding			
rough undecorated Halaf sherds	0.23kg	count: 13	
decorated Halaf sherds	0.17kg	count: 14	

The animal remains

Chiara Cavallo and Rik Maliepaard

Introduction

The faunal remains from Boztepe considered in the following pages consist of a small sample of 280 fragments, belonging to two major periods: Halaf (160 fragments) and Iron Age (120 fragments) (table 1, table 2 and appendix 1). The size of the sample was arbitrarily limited to the amount of material we were allowed to export from Turkey. Because of this constraint, we exported only samples from good contexts. The faunal material is heavily fragmented. About half of the material from the Iron Age levels and slightly more from the Halaf levels could be identified to species level. Most of the identified animals are domestic mammals (cattle, pig and sheep). Two wild species (hare and tortoise) were also present. Only one bird bone was found belonging to domestic fowl (chicken). The unidentified material was divided into three categories: large mammals (LM); medium mammals (MM); and small mammals (SM). Few remains could be measured according to the standardised procedures of von den Driesch (1976) and they are reported in appendix 2.

Taphonomy

The Halaf bones are dark brown in colour, while the Iron Age bones are a lighter yellowish-brown colour. We noticed only a few traces of gnawing marks, butchering marks (on one bovid mandible and on one bovid radius) and indications of burning. The scarcity of taphonomic evidence may be partly due to the relatively high degree of weathering of the bones. One specimen has been used as a tool. It consists of an awl made from a sheep metapodial (fig. 33).

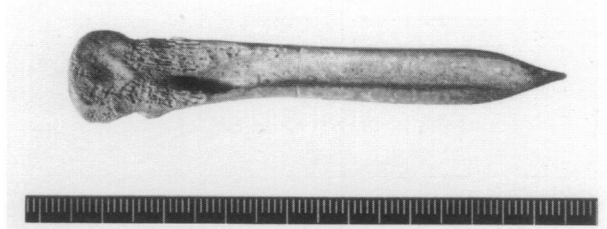


Fig. 33. Awl made from a sheep metapodial, Halaf period (BZ1161)

Halaf period

Three species were identified in the Halaf levels: pig, sheep and cattle. Pigs (*Sus domesticus*) are the most represented animals in the Halaf sample. Mainly cranial elements are present (table 2). The small size of the pigs leaves no doubt about the domestic status of the animals. In addition, most of the pigs were young or very young animals. The analysis of the lower jaws shows that most of the animals were juveniles between six and 12 months old (fig. 34).

List of species		Halaf Period		Iron Age	
		Number of fragments	Percentage	Number of fragments	Percentage
<i>Bos taurus</i>	Cattle	7	5.8	14	8.8
<i>Sus domesticus</i>	Domestic pig	17	14.2	32	20.0
<i>Ovis aries</i>	Domestic sheep	3	2.5	2	1.3
<i>Ovis/Capra</i>	Sheep or goat	9	7.5	10	6.3
<i>Lepus europaeus</i>	Brown hare			3	1.9
<i>Homo sapiens</i>	Man			1	0.6
LM	Large mammal	3	2.5	18	11.3
MM	Medium mammal	80	66.7	77	48.1
SM	Small mammal	1	0.8		
<i>Gallus domesticus</i>	Domestic chicken			1	0.6
<i>Testudo graeca</i>	Spur-thighed tortoise			2	1.3
Total number of fragments		120		160	

Table 1. List of species indentified at Boztepe

Iron Age

Element	<i>Bos</i>	<i>Sus domesticus</i>	<i>Ovis</i>	<i>Ovis/Capra</i>	Large mammal	Medium mammal	<i>Lepus europaeus</i>
cranium	1	4		1	6	1	
premaxilla				1			
maxilla		1					
mandibula	2	1		1	3		
incisive	1			1			
canine		2					
premolar	2	1					
molar	1	1		1			
atlas		2					
axis		1					
cerv. vert.				1			
thorac.vert.		5		1	1	1	
vertebra						3	
sternum	1						
costa	2	2			2	9	
scapula	1	1					
humerus		2	1				
radius		1					
carpal		1					
metacarpal							1
pelvis		1					
femur	1						
tibia		3		2			
astragalus	1						
metatarsus			1	1			
metapodium							1
phalanx 1		3					1
sesamoid	1						
unidentifiable					6	63	
TOTAL	14	32	2	10	18	77	3

Halaf period

Element	<i>Bos</i>	<i>Sus domesticus</i>	<i>Ovis</i>	<i>Ovis/Capra</i>	Large mammal	Medium mammal	Small mammal
cranium		5					
maxilla		2					
mandibula		3		1			
incisive	1			1			
molar				4			
thorac. vert.		1					
vertebra						2	
costa						3	
scapula		1		1			
humerus			1				
radius	2		1				
ulna		1		1			
carpale	1						
femur	1	2					
metacarpus	1		1				
tibia		2					
metapodium				1			
phalanx 2	1						
unidentifiable					3	75	1
TOTAL	7	17	3	9	3	80	1

Table 2. List of elements per species identified at Boztepe

In addition, one newborn and a few older individuals of approximately two years were found. No animals older than two years are present in the sample. This evidence suggests that most of the pigs were bred and killed before they reached their first year and that a few were left for reproduction and killed after they had

delivered their first litter. In modern pigs, females are fertile already around six to eight months and have a gestation of 115 days (Clausen, Ipsen 1975: 132). The pigs from Boztepe are presumably a more primitive animal, similar to today's wild boar. A female wild boar is fertile slightly later than domestic pigs, generally not

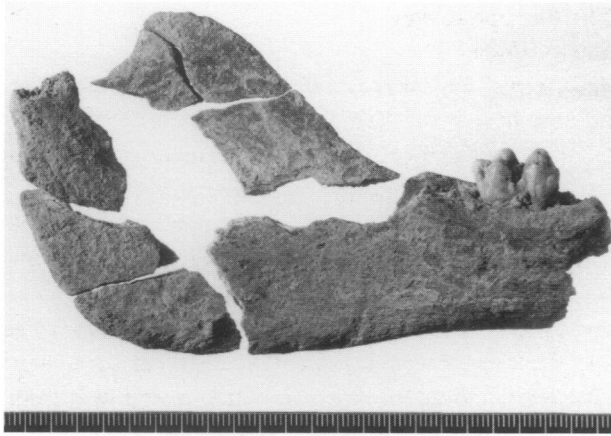


Fig. 34. Lower jaw of pig, Halaf period (BZ1167)

before one and half years and has a slightly longer gestation of 125 days. It is likely that the pigs of Boztepe followed this more primitive breeding cycle.

Ovicaprids (*Ovis/Capra*) form the second group of animals represented in the Halaf sample. So far, only sheep have been identified. The ovicaprid remains consist of adult animals of a rather small size. Evidence of old age was observed on the bones (a radius and the worked metapodial) in the form of exostoses at the muscle attachments at the distal end. The only worked bone present in the sample is an awl from B-1 (L1025, BZ1161) (fig. 33). This awl was made from a distal part of a metatarsal bone. Traces of use are present along the diaphysis (shaft) in the form of lines parallel to the axis of the tool. Part of the condyles (end) has been eroded.

Cattle (*Bos taurus*) are the least represented species in the Halaf sample in terms of bone fragments. These fragments are from small- or medium-size animals and therefore belonged to adult, but not very old, animals.

The Iron Age

A larger number of species was identified in the Iron Age sample (table 1). Pigs (*Sus domesticus*) are again the most common species, and their incidence is slightly higher than in the Halaf sample. In contrast to the Halaf remains, however, pigs from the Iron Age are represented by more post-cranial fragments and by fewer cranial elements (table 2), suggesting that the sample reflects the results of food consumption rather than butchering activities. This interpretation is supported by the fact that the remains mainly come from floor levels (see appendix 1). The Iron Age pigs are mostly young or very young individuals, though adult animals are also present, as shown by the presence of a fused first phalanx belonging to an individual older than two years (Silver 1970). A fragment of a lower canine could be attributed to a male individual.

The incidence of ovicaprids (*Ovis/Capra*) in the Iron Age sample is clearly lower than in the Halaf sample, and only sheep were identified. The size of the sheep (*Ovis aries*) appears also to be rather small. Cattle (*Bos taurus*) are slightly more common than in the Halaf sample. They consist of small-sized individuals, generally older than cattle from the Halaf period, though a few mandibles attest to the presence of young individuals as well.

The Iron Age sample contains other species not found in the Halaf sample. The brown hare (*Lepus europaeus*) is attested by three bones of the lower part of the limb (metacarpal and phalanges), probably belonging to the same individual. One of them shows traces of burning. One bone of a chicken (*Gallus domesticus*) was discovered, representing the only bird found in the sample. The domestic fowl is not a species indigenous to Turkey. It originates in India or western China (West, Zhou 1988). It appears in southeastern Turkey as early as the Early Bronze Age, as attested at Lidar Höyük (Kussinger 1988: 183–5).

In addition, a large fragment of plastron of an adult spur-thighed tortoise (*Testudo graeca*) was found (fig. 35). *Testudo graeca* is the most common tortoise in the Mediterranean and is distributed from Spain to Iran. It is the most abundant tortoise in Turkey. It is common in mountains and plateaus from sea level to high altitudes of ca. 2,700m above sea level (Ernst et al. 2000). Its habitat consists of open and dry areas of steppes, hillsides and wasteland with varied vegetation. It is predominantly a herbivore, feeding mainly on plants and grasses.



Fig. 35. Fragment of plastron of tortoise (*Testudo graeca*), Iron Age (BZ2218)

Conclusion

The faunal sample available for study from UTARP's 1999 excavations at Boztepe is rather small. Nevertheless, some observations and preliminary conclusions about the economy and animal exploitation at the site can be drawn. The sample is characterised by the presence of almost exclusively domestic animals. The advanced status of domestication in the Halaf period is attested by the presence of rather small animals (cattle, sheep and pigs). Pigs are the major species consumed in both the Halaf period and the Iron Age, while the importance of ovicaprids (sheep) appears to decrease in the Iron Age.

Comparisons with other sites show that the percentage of pig remains in other southeastern Halaf settlements, like Çavi Tarlasi, Girikihacıyan and Tell Turlu, is lower (about 20% to 30% of the main domestic species), while ovicaprids largely predominate, except in the case of Çavi Tarlasi where their percentage is almost equivalent to that of the cattle (Cavallo 1997: fig. 4.4). Pig remains were also abundant in the Early Bronze Age site of Hassek Höyük, being almost half of the faunal sample (Stahl 1989: 34), while in the Middle Bronze Age Assyrian colony of Kaman-Kalehöyük in central Anatolia ovicaprids outnumber pigs and cattle, which appear to have been of equal importance (Hongo 1998: 271, fig. 1). The presence of a high percentage of pig remains at Boztepe reflects the sedentary nature of the community, which was probably more dependent on agricultural than pastoral production. The high rate of reproduction of pigs makes them a quicker and easier source of meat than sheep and cattle. However, the water demand of these animals requires that suitable environmental conditions are available, conditions which could easily be fulfilled by the location of Boztepe close to the Tigris river.

Cattle are a minor species in both the Halaf period and the Iron Age at Boztepe, though it must be kept in mind that their yield in calories/meat per single animal is much higher than that of pigs and sheep. So far, no goat and, remarkably, no equids have been identified in the sample from Boztepe. Though no bones were found, the presence of dogs can be indirectly hypothesised by the presence of gnaw marks on a few bones.

The faunal sample from UTARP's 1999 season suggests that the animal economy of Boztepe was, in both the Halaf and the Iron Age periods, characterised by husbandry mainly of pigs and, to a lesser extent, of sheep and cattle. Hunting presumably played a minor role, probably relegated to an occasional activity, as attested by the presence of a single hare in the Iron Age levels.

The Boztepe survey

Methodology

We began our survey of Boztepe by creating a topographic map of the site (fig. 4). We created this map by shooting approximately 600 points with a total station. The resulting map illustrates that Boztepe is a low mound rising only a few metres above the surrounding plain. In order to determine precisely Boztepe's size, to search for any special activity areas and to help localise chronological variation across the site, the UTARP team conducted a radial transect survey. First, we removed all brush and other overgrowth from four transect lines radiating out from the centre of the site. We laid out these transect lines at right angles to one another roughly facing the cardinal directions. We later added two more transect lines in the fields to the south of the site (fig. 4). At 10m intervals along each transect line we established a 1m radius circle (area = 3.14m²). We excavated these circles (hereafter referred to as 'lots') to a depth of 15cm (volume = 0.471m³) with a large pick, effectively mimicking a shallow plough, and then collected all ceramics from each lot. We counted and weighed the ceramics recovered in each lot.⁹

Since the centre of Boztepe contains the ruins of several modern houses, the first lots in two of the transects (transect B and C) did not begin until these lines were beyond the disturbed area of the mound. Additionally, a few circles were shifted slightly off-line when obstacles such as irrigation furrows occurred in the path of the transect (for example lots A-7 and C-9). The total number of lots excavated along each transect was: A = 11; B = 14; C = 13; D = 14; E = 11 and F = 9.

We did not utilise area collections at Boztepe for several reasons. In addition to the ruins of the modern village that occupied much of the centre of the mound, most of the site was covered by a thick growth of prickly weeds, shrubs and high grass. Consequently, we could not conduct an area survey without substantial clearing efforts. Under these conditions, we decided that the radial transect survey, the soundings in trenches B-1, B-2, C-1 and D-1, and the excavations would provide sufficient information to determine site size and occupational history.

⁹ In order to facilitate and make uniform the counting process, we defined a sherd as a ceramic piece of 3cm or more in diameter. Ceramic pieces under this size were considered 'crumbs' and, although they were not counted, they were included in the measurement of the weight of ceramic material from each lot.

LOT	TR. A-C - #	TR. A-C - wt	TR. B-D - #	TR. B-D - wt	TR. E-F - #	TR. E-F - wt
1	0	10	4	100	0	0
2	3	30	8	350	1	20
3	1	30	1	30	1	70
4	2	50	4	260	7	135
5	4	60	8	130	21	310
6	10	230	13	520	7	110
7	4	80	37	640	20	380
8	15	230	22	440	14	280
9	9	280	34	680	21	530
10	10	170	30	720	21	385
11	16	240	30	550	24	460
12			22	570	23	360
13			19	470	16	910
14			8	80	34	820
15					10	290
16					10	450
17					4	55
18	43	730	7	250	2	80
19	14	350	17	455	4	75
20	19	670	3	100	14	245
21	71	780	27	480		
22	43	1040	21	320		
23	22	550	18	490		
24	21	390	31	630		
25	3	60	16	370		
26	3	90	5	160		
27	4	70	7	230		
28	7	115	5	100		
29	11	385	4	70		
30	13	180	4	105		
31			2	100		

Table 3. Boztepe survey results: sherd number (#) and weight in grams (wt) by lot and transect. Note that opposing transects are combined and renumbered to form one long transect

For this analysis, we will combine opposing transects to create three long lines, A-C (30 lots), B-D (31 lots), and E-F (20 lots). In the field we numbered these transects individually beginning at the centre of the mound, but here and in the accompanying table, the combined transects are renumbered in ascending order beginning at the edge of the site on the higher alphabetical transect (table 3).¹⁰ Due to significant modern disturbances, including concrete blocks and large mud-brick structures, we skipped six lots in the middle of transect A-C and three in transect B-D.

Unlike the Talavaş Tepe survey, which yielded clear edges for the site (see below), the sherd count and weight values for the Boztepe transects were somewhat blurred near the edges of the site. In general, we identified cut-off values of ten sherds and 200g sherd weight as delimiting

the site boundaries. We interpreted lots yielding consistently less than 200g sherd weight and/or less than ten sherds as the edges of the site. Using these values, we determined that the site lies between lots 6 and 29 of transect A-C, lots 6 and 27 of transect B-D, and lots 5 and 16 of transect E-F (table 3).

Yet, modern disturbances complicate our conclusions. For example, in transect A-C, lot 25 lies in a shallow depression, probably scooped out to create a pond, and this feature may explain the sudden drop in sherd weight in this lot. Additionally, lot 26 lies on the raised border of this depression, and lot 27 lies within the likely scatter area for the excavated pond. Thus, the low weight in lots 25–7, and perhaps also lot 28, are likely due to modern disturbance. The apparent jump to 385g in lot 29 may in fact reflect the ‘normal’, undisturbed value for this part of the site. Similarly, along transect E-F, lot 20 presents another anomaly, with 14 sherds weighing 245g. A short distance north of lot 20, we

¹⁰ Note that the sherd counts given in this analysis vary slightly from those given in previous reports of these data.

observed another modern disturbance, consisting of pitting and scattered debris, activity that may have contaminated lot 20. No further lots were excavated along this transect because the area was densely covered with thorny brush and was approaching additional modern disturbances to the west.

Despite the impact of modern disturbances, we are confident that our chosen values of 200g sherd weight and ten sherds mark the edges of the site because the fields beyond the end of each transect were recently ploughed, and our inspection of the furrows yielded very little ceramic material. We suspect that the edges of Boztepe are blurred from a combination of several factors, including earth-moving, ploughing and manuring (Wilkinson 1982). In spite of these variables, we were able to determine the primary occupation zone of Boztepe.

The survey results

Using the transect sherd counts and weights as a guide, we estimate the maximum extent of cultural remains at Boztepe to be 3.14ha — an area quite a bit larger than we had originally assumed. In order to determine if the site did in fact extend into the fields south of the main mound, we excavated a sounding next to lot E3 (see fig. 4). This sounding, named Area C, trench 1, revealed 2.20m of deposits dating from the Hellenistic and the Iron Age periods (in the first 1.69m), and the Halaf period (in the bottom 0.5m). Additionally, a shallow sounding to the northwest (Area D, trench 1), just beyond the road that bisects transect C, yielded Iron Age material and two burials (fig. 4).

Although the survey data suggest that cultural remains at Boztepe reach far out into the fields on all sides of the mound, soundings placed in these fields (in Areas C and D) revealed no architecture. This result, combined with the disturbed nature of archaeological contexts in the upper levels of all the excavation units, the fact that architecture was almost completely lacking from Area B trenches and the absence of any Hellenistic structures, suggests that the remains at Boztepe have been severely disturbed by modern construction. Our working theory is that Boztepe was originally quite a bit taller than it is today and that the site was levelled sometime in the recent past, possibly to make way for the modern village. This levelling not only mixed the cultural remains and spread them far out into the neighbouring fields, but also obliterated the higher levels of the mound where any Hellenistic structures would have been located.

Given these findings, it is very difficult to estimate the size of Boztepe during any period of its occupation. We must assume that both the Iron Age and Hellenistic villages were concentrated in the centre of the mound and that the actual size of the site in these periods was significantly less, perhaps half, the site maximum of

3.14ha. We are on slightly firmer ground when we consider the Halaf period settlement. Since the Halaf remains are buried beneath nearly 2m of later debris and are therefore relatively well insulated from modern earth moving activities, the extent of these remains is a much better indicator of the size of the site during the Halaf period. It is notable that we found significant levels dating to the Halaf period in their correct stratigraphic position in the sounding in Areas B and C. Although both of these exposures were extremely limited, they did produce evidence of Halaf period living and working areas. Our limited exposure of Halaf remains at the centre of Boztepe (in Area A) was, as discussed above, restricted to mortuary contexts. Thus during the Halaf period, the site probably did cover a large portion of the mound. However, it is likely that the Halaf settlement was restricted to the lower portions on the south of the site including Areas B and C, while the top of the natural hill of Boztepe probably served as the village cemetery.

Talavaş Tepe

Introduction and methodology

The second site examined as part of UTARP's 1999 field season was Talavaş Tepe. Talavaş Tepe lies approximately 15km east of the modern town of Bismil just north of the Bismil to Batman highway. It is located in an area of rolling hills about 5km north of the Tigris river corridor (fig. 2). Although the initial reconnaissance survey data indicated that Talavaş Tepe is, like Boztepe, an Iron Age site (Parker 1997a: 174–86; 2001: 232–6), the archaeological profile of Talavaş Tepe is quite different from that of Boztepe. First, Talavaş Tepe is higher than Boztepe. It is located above the 550m contour line on a natural hill overlooking a seasonal stream and part-time tributary of the Tigris called the Moradan Çay. And second, Talavaş Tepe is a much steeper and more asymmetrical mound than Boztepe (fig. 36). This location offers Talavaş Tepe natural protection from at least two sides.



Fig. 36. View of Talavaş Tepe

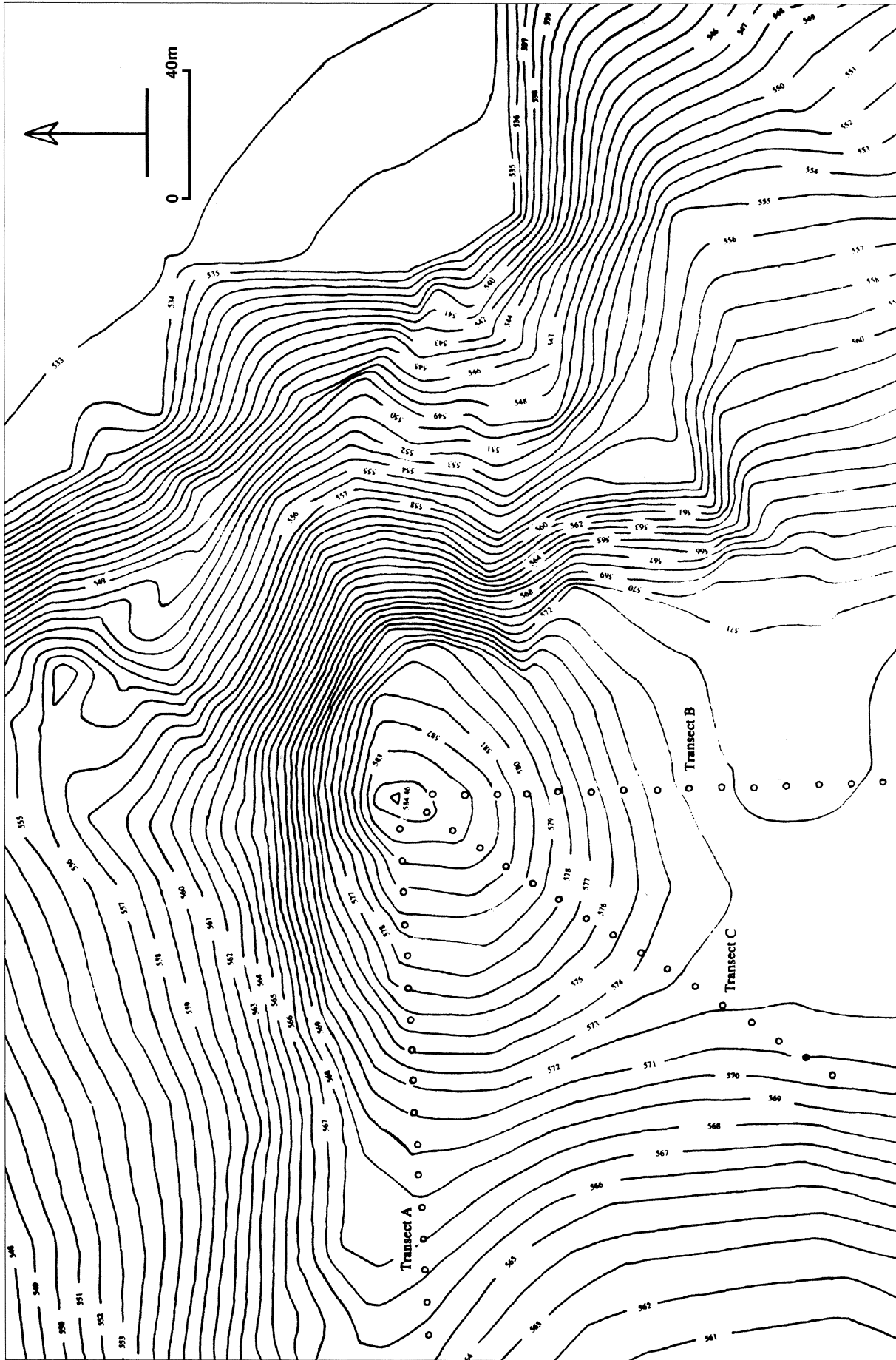


Fig. 37. Topographic map of Talavaş Tepe showing the survey transects. Note that the transect circles are not to scale

Our survey objectives at Talavaş Tepe were: (1) to create a topographic map of the site; (2) to date the site accurately; (3) to determine the precise size of the site; (4) to localise chronological variation across the site; and (5) to search for any special activity areas. To achieve these goals, the UTARP team began by creating a topographic map by shooting approximately 650 points with a total station (fig. 37). We then carried out two types of survey: a radial transect survey and an area survey (fig. 38). To conduct the transect survey, we implemented the same methodology utilised at Boztepe (discussed above). We laid out three transect lines radiating from the centre of the highest part of the mound roughly towards the west, southwest and south. No transects were established to the north or east due to the steep slopes on these sides of the mound. We then collected 1m radius circles at 10m intervals along each transect line. In order to determine if there was any occupation on the surrounding terraces, each transect line was continued far out onto the neighbouring terraces. The total number of lots collected was: A = 20; B = 25; C = 16 (fig. 37).

In addition to the radial transect survey, the UTARP team also conducted an area survey at Talavaş Tepe. Utilising this survey methodology the site was divided into eight morphological areas, two exposed sections and one robber's pit.¹¹ Team members then walked each area and collected all diagnostic or potentially diagnostic potsherds, typically rims, bases, handles, spouts and painted or decorated pieces. The two exposed sections (cuts 1 and 2) were scraped with trowels and diagnostic potsherds were collected. This method of collecting material is highly biased and therefore not suitable for statistical analysis. However, collecting diagnostic potsherds from all areas of the site enables a rapid acquisition of a substantial corpus of material covering all the time periods that the site was occupied. This method also permits some discussion of site size in each time period based on the spatial control of the collection.

The survey results

The first three lots on each line contained few sherds. By lot 4, each transect lot contained over 200g of ceramics and over ten sherds, with the exception of transect B, which only contained eight sherds. All of the transect lots contained high numbers of sherds and a high sherd

¹¹ These eight morphological areas and sections are: (1) high mound top; (2) mound west; (3) mound south; (4) mound east; (5) mound two (a large adjacent hill); (6) terrace; (7) north slopes, top 10m; (8) north slopes, bottom 10m; (9) cut 1 (an exposed section on the east side of the mound); (10) cut 2 (an exposed section on the north side of mound two); and (11) robber's pit (a sherd scatter around a 2m deep/wide robber's pit on the southeast side of the mound).



Fig. 38. View of transect A at Talavaş Tepe

weight until lot 11, when each transect dropped near or below the ten sherd/200g level. Finally, by lot 13 the count and weight for each transect had dropped to negligible levels, containing fewer than five sherds or approximately 100g of ceramic material. Beyond lot 16, transect lines A and C produced no sherds and only one sherd was found in transect line B (table 4).

Thus unlike Boztepe, where the edges of the site were blurred, the table of sherd number and weight from Talavaş Tepe clearly indicates that the site does not continue beyond lot 13 in any of the transect lines (table 4). The clear peak in sherd number and weight between lots 3 and 12, in contrast to the low weight and count recovered in lots 1 and 2 on each line, is probably the result of slope erosion. The general absence of sherds beyond lot 16 in each line clearly establishes lot 16 as the absolute maximum site boundary.

Using lot 16 as the edge and adding 50m north and east of lot 1 of transects A and B for the steep slopes, the maximum extent of the site would be 3.14ha. Considering lot 13 to be the edge of the site reduces the size to 2.27ha. Both the area survey and the transect survey confirmed that an adjacent hill to the south, 'mound two', is not part of the site, nor is the terrace to the west. Although equal in size to the mound of Talavaş Tepe, only 26 sherds, including five diagnostics, were found after searching the entire surface of mound two. Similarly, a meagre seven sherds were recovered from an exposed section of mound two, 'cut 2'. The sherds from mound two and cut 2 may be evidence of manuring in antiquity (Wilkinson 1982; Wilkinson, Tucker 1995: 19). In contrast, not a single sherd was recovered from the terrace west of the site. We can therefore be confident that we have accurately defined the primary occupation area of the settlement at Talavaş Tepe.

Defining the size of Talavaş Tepe during the periods represented by the survey ceramics is difficult due to the low number of identifiable diagnostic ceramics. The

LOT	TR. A - #	TR. A - wt	TR. B - #	TR. B - wt	TR. C - #	TR. C - wt
1	4	95	3	130	8	65
2	8	245	8	95	8	170
3	10	180	10	240	7	170
4	12	320	8	270	31	555
5	48	1030	28	750	22	595
6	63	1315	26	770	26	550
7	30	550	24	715	20	565
8	56	1310	19	790	17	575
9	26	305	40	780	27	480
10	22	275	12	310	11	135
11	9	145	12	245	12	215
12	12	235	6	95	6	75
13	2	35	2	50	4	105
14	4	55	4	90	1	20
15	2	45	1	55	4	80
16	0	0	0	0	1	15
17	0	0	0	0		
18	0	0	1	25		
19	0	0	1	40		
20			0	0		
21			0	0		
22			0	0		
23			0	0		
24			1	30		
25			1	20		

Table 4. Talavaş Tepe survey results: sherd number (#) and weight in grams (wt) by lot and transect

Fig. 39. Sherds from Talavaş Tepe

- A. Mound south. Surface light gray (10YR 7/2), core black (10YR 2/1). Chaff temper. Diameter 52cm.
- B. Surface collection mound west. Surface pink (7.5YR 7/3), core black (10YR 2/1). Chaff temper. Diameter 73cm.
- C. Mound east. Surface light brown (7.5 YR 6/3). Fine chaff temper. Diameter 61cm.
- D. Area survey cut 1. Surface light reddish brown (5YR 6/4), core black. Grit temper. Diameter 42cm.
- E. Transect A lot 8. Surface light reddish brown (5YR 6/4), core reddish yellow (5YR 6/6). Diameter 15cm.
- F. Area survey cut 1. Surface pinkish gray (7.5YR 7/2). Grit temper. Diameter 20cm.
- G. Mound south. Surface pale yellow (2.5 Y 7/3), core grayish brown (2.5 Y 5/2). Chaff temper. Diameter 65cm.
- H. High mound. Surface light reddish brown (5YR 6/4). Coarse grit temper. Diameter 54cm.
- I. Transect A lot 8. Surface light reddish brown (5YR 6/3), core black (5YR 2.5/1). Diameter 12cm.
- J. Mound south. Surface and core light brown (7.5YR 6/3). Chaff temper. Diameter 22cm.
- K. Mound south. Surface and core light brown (7.5YR 6/3). Chaff temper. Diameter 24cm.
- L. Area survey cut 1. Surface light reddish brown (5YR 6/4), core dark gray (5YR 4/1). Diameter 19cm.
- M. Robber pit southeast side of mound. Surface brown (7.5YR 4/4), core black. Grit temper.
- N. Southeast side of mound. Surface reddish yellow (5YR 6/6), core black. Grit/chaff temper. Diameter 41cm.
- O. High mound. Surface pink (7.5YR 7/3). Fine chaff temper. Diameter 36cm.
- P. Area survey cut 1. Surface red (2.5YR 4/6). Fine grit temper. Diameter 10cm.
- Q. Area survey cut 1. Surface light reddish brown (5YR 6/4), core black. Grit/chaff temper. Diameter 26cm.
- R. High mound. Surface strong brown (7.5YR 5/6). Fine grit temper. Diameter 31cm.
- S. High mound. Handle. Surface pink (7.5YR 7/4), paint black (2.5YR 2.5/1).
- T. Area survey cut 1. Surface light reddish brown (5YR 6/4), core black (5YR 2.5/1). Chaff temper. Diameter 30cm.
- U. Mound south. Surface light brown (7.5YR 6/4), core grayish brown (10YR 4/2). Fine grit temper. Diameter 24cm.
- V. Area survey cut 1. Surface light reddish brown (2.5YR 6/3). Fine grit temper. Diameter 29cm.
- W. High mound. Surface and core pink (7.5YR 7/3). Fine grit temper.
- X. Transect A lot 5. Surface light yellowish brown (10YR 6/4), paint red (2.5YR 5/6), core makes an abrupt shift from yellowish red (5YR 5/6) to brown (10YR 5/3).
- Y. Transect A lot 5. Surface light gray (10YR 7/2), paint light brown (7.5YR 6/4).
- Z. Transect A lot 6. Surface light reddish brown (5YR 6/4), paint yellowish red (5YR 4/6).
- AA. Area survey cut 1. Surface red (2.5YR 5/6). Chaff temper.
- BB. High mound. Surface light brown (7.5YR 6/4). Coarse grit temper. Diameter 26cm.
- CC. High mound. Surface reddish yellow (5YR 6/6), surface wash grades from weak red (2.5YR 5/2) to dusky red (2.5YR 3/1), core reddish yellow (7.5YR 7/6). Grit temper. Diameter 16cm.

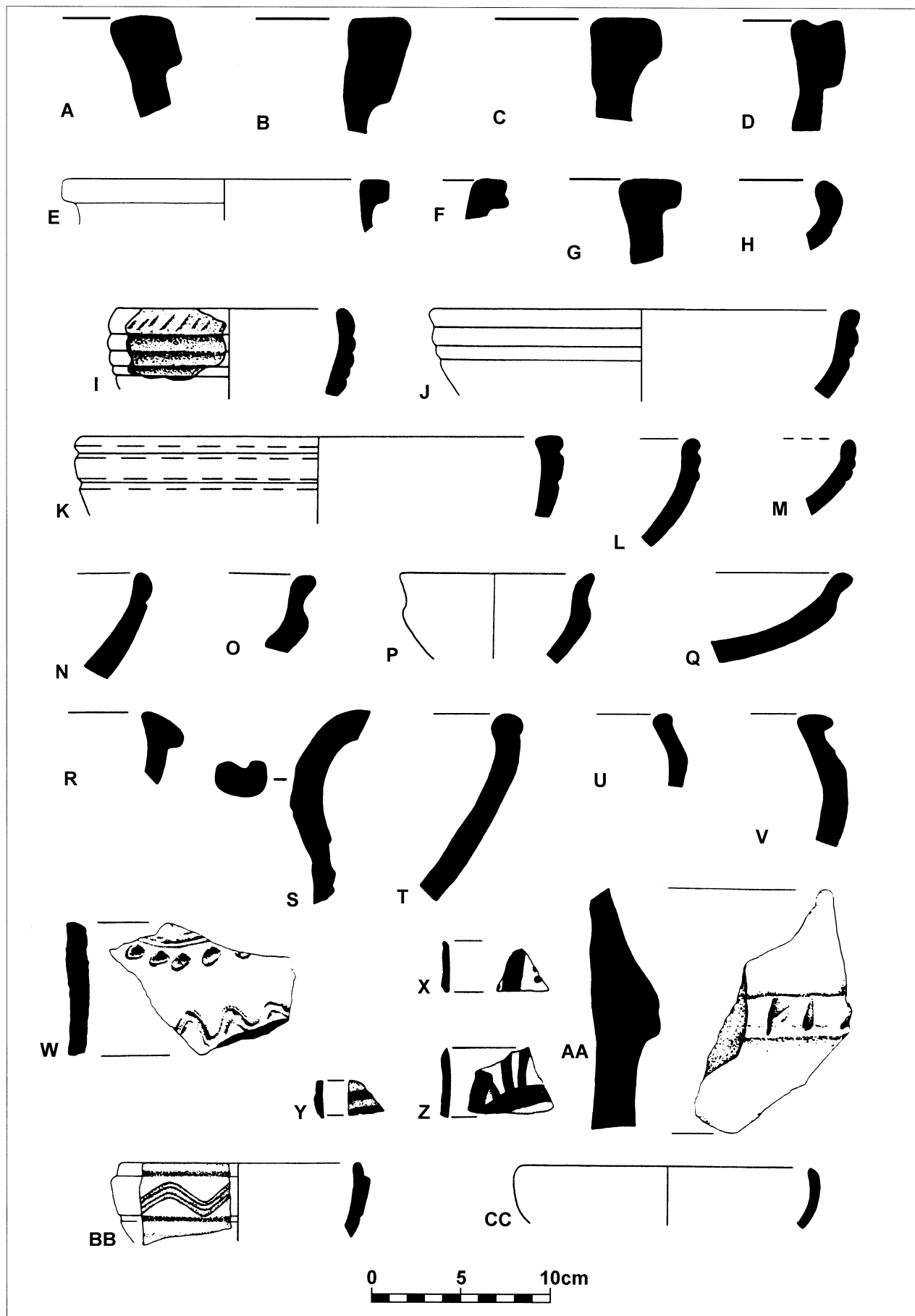


Fig. 39. Sherds from Talavaş Tepe

area survey on the western part of the mound recovered a handful of Late Bronze Age (two), Iron Age (two), Islamic (three) and Hellenistic (one) diagnostic sherds. Transect A, which crosses the western part of the mound, yielded a mix of periods similar to the western area collection, including Early Iron Age (four), Iron Age (nine), Late Bronze Age (three), Hellenistic (five) and Islamic (one). These finds from the western portion of the mound differ from the southern area collection unit and associated transect B, both of which uncovered material from the Late Bronze Age (three) and Iron Age (11). Missing from the southern part of the mound are Islamic and Hellenistic materials, suggesting that during these time periods the settlement or activity was concentrated on the western portion of the mound. Interestingly, transect C, which cuts across the southwestern part of the mound, contained only Iron Age material (fig. 39).

Based on some depressions on the western portion of the mound, as well as information supplied by a resident of the adjacent modern village who said that human bones had been found on the site, we believe that there are Islamic burials on the site and that the Islamic material we recovered derives from activity associated with this cemetery rather than an Islamic settlement. Only one other Islamic sherd was found outside the western part of the site, on mound two. In contrast, the area survey of the eastern part of the mound recovered Late Bronze Age and Early Iron Age material, while the top and northern slopes of the mound yielded numerous Iron Age sherds (13 early; 16 standard), three Hellenistic and no Late Bronze Age sherds.

In sum, Late Bronze Age material occurs on the eastern, western and southern portions of the mound, suggesting that the settlement during this time period was spread across the entire 3.14ha mound. The absence of Late Bronze Age material on the top of the mound coincides with a general absence of material there, but its absence on the northern slopes of the mound is somewhat puzzling, considering that erosion should have brought this material out to the surface. During the Iron Age, the settlement clearly covered the entire mound, as evidenced by the widespread occurrence of Iron Age material, while in the Hellenistic period the occupation appears to have been confined to the western, 1.8ha portion of the mound. Finally, during the Islamic period the western slopes were probably used as a cemetery.

The intensive survey data collected during UTARP's 1999 field season shows that Talavaş Tepe exhibits a much different material culture in comparison to that exhibited at Boztepe. To begin with, Talavaş Tepe has a different chronological range (see above). Regarding the Iron Age occupation at Talavaş Tepe, it is extremely important to note that the ceramics dating to that period recovered at

Talavaş Tepe are very different from those unearthed at Boztepe from approximately the same period. None of the Assyrian Imperial period ceramics were recovered at Talavaş Tepe. Instead, the assemblage is restricted to the indigenous Iron Age ceramics of this region (fig. 39; Parker 1997a: 222–4; 2001: 126–7, 110–14).

This combined data (including: the location of the site far from the river's flood plain on a high naturally defensible position; the chronology of occupation at the site which shows not only that Talavaş Tepe was occupied long before the Neo-Assyrian empire annexed the region, but also that occupation there stopped sometime directly before or during the Neo-Assyrian Imperial period; and the fact that the Iron Age ceramics recovered at Talavaş Tepe belong to the indigenous culture of the upper Tigris river region) strongly suggest that this site was neither a colony nor a garrison of the empire, but instead belonged to the indigenous culture of the region.

Conclusion

The Upper Tigris Archaeological Research Project's 1999 excavations and intensive surveys at Boztepe suggest that the site was originally a low natural mound that was probably next to a small pond or spring. During the Halaf period the high ground at the centre of the mound was utilised as a cemetery, and a village or hamlet was established below the cemetery. Unfortunately, the limited extent of the exposure to this period makes it impossible to estimate the size or to speculate about the nature of the Halaf period settlement. However, the data do indicate that the Halaf settlement stretched at least from Area B to Area C, a distance of about 75m, while the Halaf period cemetery was located outside the settlement in and around Area A.

The burials unearthed in trench A-1 produced intimate details about Halaf burial practices and yielded some beautifully preserved artefacts. Although our sample of four burials is very small, it is nevertheless interesting to note that all the skeletons were in the same basic position (in the foetal position on the right side facing north) and all the burials contained grave goods. Burials 1 and 2 are somewhat perplexing. The data appear to show that this was a double burial. Although the re-analysis of the skeletal material from Burial 2 did not yield data about this individual's sex, our initial hypothesis was that this was a male. The skeletal re-analysis did suggest that Burial 1 was a female and that both represented the remains of young adults. There is still room to question whether or not these individuals were buried together but our data suggest that they were. In fact, the position of the right arm of the individual in Burial 2 indicates that this person may have been embracing the individual in Burial 1.

The combined evidence from UTARP's 1999 research at Boztepe and Talavaş Tepe points to some general conclusions regarding the nature of settlement in the upper Tigris river region during the Mesopotamian Iron Age. In the last centuries of the second millennium BC, and at the beginning of the first millennium BC, the upper Tigris river region of southeastern Anatolia was home to a flourishing indigenous culture that exhibited a unique material culture and distinctive settlement system (Parker 1997a: 224–34; 2001: 110–36). Although this material culture is shared among the indigenous settlements of this and the neighbouring river valleys (Parker 1997a: 236; 2001: 110–27, 174–206), the fact that the indigenous settlement system prior to Neo-Assyrian intervention contained little or no settlement hierarchy suggests that the political centralisation of this culture was relatively low. These data imply therefore that this area was home to several ideologically linked yet politically autonomous chiefdoms (Wright 1984; Earle 1987; Berman 1994). The continuity of settlement between the Late Bronze and Iron Ages at Talavaş Tepe, the location of the site in the hills away from the Tigris flood plain and the indigenous nature of the Iron Age ceramic assemblage indicate that Talavaş Tepe was home to an indigenous village during the Iron Age.

After 882 BC, these prestate political formations came into direct contact with, not just a state level society, but a fully-fledged territorial empire. Once the Assyrian king, Ashurnasirpal, had constructed a fortified garrison centre and provincial capital at Tuşhan (modern Ziyaret Tepe, only about 7km from Boztepe; for identification see Kessler 1980: 110–21; Parker 1998), the Assyrians began the process of integrating the surrounding valley into their imperial structure. The exponential population growth taking place in the Assyrian heartland at this time meant that the upper Tigris river valley, which was directly linked to the Assyrian heartland by the Tigris river, was a prime location for Assyrian agricultural development.

It is well known that Assyrian foreign policy included the mass deportation and resettlement of huge numbers of people to and from all corners of the empire (Oded 1979; Parker 1997b: 83–4; 2001: 99–100, 206–12, 262–3). First and foremost, such a policy was certainly meant to break up nationalistic tendencies among rebellious populations and to separate them from the land of their origin. However, what is not generally discussed in the literature is the fact that these deported peoples were a vital part of Assyrian imperial policy, since they served to colonise newly conquered regions and bring under-utilised land into agricultural production. Several lines of evidence support the hypothesis that the Iron Age village at Boztepe was established by the Assyrians as

part of this policy of 'agricultural colonisation'. The most persuasive argument to support this theory is the chronology of Boztepe's Iron Age town.

Excavations at Boztepe produced no Early Iron Age ceramics and the Iron Age structure discovered in Area A at Boztepe is securely dated to the Assyrian Imperial period by ceramics and four carbon dates. Thus the data indicate that Boztepe's Iron Age village was not founded until after Neo-Assyrian annexation of the valley and the construction of the Assyrian provincial capital at Tuşhan. In this context it is worth noting that the recent reinterpretation of a text from the reign of Tiglath-pileser III shows that, after the annexation of the upper Tigris river region to the Assyrian empire and its incorporation into the Assyrian province of Tuşhan, large numbers of people were deported, probably from cities on the eastern coast of the Mediterranean, and settled in the upper Tigris river region (for text see Tadmor 1994: 62–3; for interpretations see Parker 2001: 219–20).

In spite of this evidence it is nevertheless very difficult to *prove* that Boztepe was home to persons resettled in the valley by the Assyrians. If more precise parallels could be found to link the enigmatic pedestalled vessels discovered in the collapse layer of Boztepe's Iron Age house to some foreign land this attribution would admittedly be substantially strengthened. Unfortunately, such a conclusion cannot yet be confidently drawn. Instead, we must rely on the above mentioned lines of convincing, but not conclusive, evidence. To this we can add two more pieces of circumstantial evidence. First, in spite of the fact that Boztepe and Talavaş Tepe probably overlap chronologically, the ceramic assemblages are very different. Talavaş Tepe yielded types belonging to the indigenous assemblage with very few Assyrian types, while Boztepe yielded Assyrian type survivals with only a handful of indigenous types. Second, although Assyrian letters show local governors were responsible for the well-being of deported people either passing through or settled permanently in their provinces (Parker 2001: 225–7), there is no evidence that these officials gave more than basic commodities to resettled peoples. Furthermore, since the ultimate goal of Assyria's resettlement policies was to create revenue through increased agricultural output in newly annexed territories, resettled populations, once established, were certainly required to give a large portion of their produce to the imperial authorities as 'agricultural tax'. Thus we would expect a colony of resettled persons to be relatively impoverished. In this context it should be noted that Boztepe's Iron Age house appears to have been relatively poorly constructed. Only mud-mortar was used between mud-bricks and even load-bearing walls did not have stone foundations.

If this theory is correct, it has several important implications for the study of imperialism and colonialism in the ancient world. First, contrary to the standard picture of colonialism as interaction between two groups, the colonised and the coloniser, colonialism in the upper Tigris river region during the Neo-Assyrian period may have included three groups: the colonised (indigenous peoples at sites like Talavaş Tepe), the colonisers (the Assyrians administrating the region from sites like Ziyaret Tepe) and the colonists (foreign populations resettled in the region at sites like Boztepe). Furthermore, if our interpretation of the data is correct, Boztepe may be evidence that the Assyrians used deportation and resettlement in some areas for the express purpose of increasing agricultural production in underdeveloped parts of the empire.

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Appendix 1. Catalogue of faunal remains from Boztepe

Iron Age

Trench	Locus	BZ#	Layer/Period	Species	Element	Description
A2	2005	2044	supra floor/Iron Age	<i>Sus domesticus</i>	cranium	juvenile with dc,P1; 25%
A2	2005	2044	supra floor/Iron Age	<i>Sus domesticus</i>	atlas	juvenile; 50%
A2	2005	2044	supra floor/Iron Age	<i>Sus domesticus</i>	axis	juvenile; 25%
A2	2005	2044	supra floor/Iron Age	<i>Sus domesticus</i>	scapula	left; 25%
A2	2005	2044	supra floor/Iron Age	<i>Sus domesticus</i>	tibia	diaphysis; <25%
A2	2005	2044	supra floor/Iron Age	<i>Bos taurus</i>	molar	inf. adult; 50%
A2	2005	2044	supra floor/Iron Age	MM	costa	25%
A2	2005	2044	supra floor/Iron Age	MM	unidentifiable	fragment; <25%
A2	2005	2044	supra floor/Iron Age	LM	unidentifiable	fragment; <25%
A2	2005	2055	supra floor/Iron Age	<i>Sus domesticus</i>	cranium	fragments, juvenile; < 25%
A2	2005	2055	supra floor/Iron Age	<i>Sus domesticus</i>	maxilla	left, P1,dp2,3,4, juvenile; 50%
A2	2005	2055	supra floor/Iron Age	MM	thorac.vert.	25%
A2	2005	2055	supra floor/Iron Age	LM	unidentifiable	diaphysis; <25%
A2	2005	2073	supra floor/Iron Age	<i>Bos taurus</i>	femur	diaphysis, right; <25%
A2	2005	2073	supra floor/Iron Age	<i>Homo sapiens</i>	incisive	I2, right inferior, adult; 75%
A2	2018	2134	floor/Iron Age	<i>Sus domesticus</i>	molar	M2, right inferior, adult; 75%
A2	2018	2145	floor/Iron Age	<i>Sus domesticus</i>	phalanx 1	prox. unfused; 75%
A2	2018	2145	floor/Iron Age	<i>Sus domesticus</i>	canine	inferior; <25%
A2	2018	2145	floor/Iron Age	<i>Ovis/Capra</i>	metatarsus	diaphysis; 25%
A2	2018	2145	floor/Iron Age	LM	unidentifiable	diaphysis; <25%
A2	2018	2145	floor/Iron Age	MM	vertebra	<25%
A2	2018	2145	floor/Iron Age	MM	cranium	pars petrosum; <25%
A2	2018	2145	floor/Iron Age	MM	unidentifiable	diaphysis; <25%, 2X
A2	2018	2154	floor/Iron Age	<i>Bos taurus</i>	mandibula	left, cutmarks; <25%
A2	2018	2154	floor/Iron Age	<i>Bos taurus</i>	incisive	adult; 100%
A2	2018	2154	floor/Iron Age	<i>Sus domesticus</i>	humerus	distal. fused; 25%
A2	2018	2154	floor/Iron Age	<i>Sus domesticus</i>	radius	juvenile; 75%
A2	2018	2154	floor/Iron Age	<i>Sus domesticus</i>	canine	male, small fragment; <25%
A2	2018	2154	floor/Iron Age	<i>Sus domesticus</i>	thorac.vert.	juvenile; <25%, 2X
A2	2018	2154	floor/Iron Age	<i>Sus domesticus</i>	costa	juvenile; 25%, 2X
A2	2018	2154	floor/Iron Age	MM	unidentifiable	<25%, 3X
A2	2018	2154	floor/Iron Age	<i>Testudo graeca</i>	plastron	50%
A2	2018	2237	floor/Iron Age	<i>Ovis aries</i>	humerus	left distal, adult; 75%
A2	2018	2237	floor/Iron Age	<i>Bos taurus</i>	mandibula	right, (dp2),dp3,(dp4); <25%
A2	2018	2237	floor/Iron Age	<i>Sus domesticus</i>	humerus	left juvenile; 50%
A2	2018	2237	floor/Iron Age	<i>Sus domesticus</i>	pelvis	right ilium, juvenile; 25%
A2	2018	2237	floor/Iron Age	MM	unidentifiable	diaphysis; <25%
A2	2018	2237	floor/Iron Age	LM	unidentifiable	diaphysis; <25%
A2	2018	2237	floor/Iron Age	LM	costa	<25%
A2	2035	2198	supra floor	<i>Ovis aries</i>	metatarsus	left, distal fused; <25 %
A2	2035	2198	supra floor	<i>Ovis/Capra</i>	molar	superior; <25%
A2	2035	2198	supra floor	<i>Ovis/Capra</i>	cranium	small fragment; <25%
A2	2035	2198	supra floor	<i>Sus domesticus</i>	phalanx 1	prox fused; 100%
A2	2035	2198	supra floor	<i>Sus domesticus</i>	thorac.vert.	<25%, 3X
A2	2035	2198	supra floor	<i>Sus domesticus</i>	atlas	juvenile; 25%
A2	2035	2198	supra floor	<i>Bos taurus</i>	scapula	small fragment; <25%
A2	2035	2198	supra floor	LM	costa	<25%
A2	2035	2198	supra floor	LM	unidentifiable	<25%, 2X
A2	2035	2198	supra floor	MM	costa	<25%, 3X
A2	2035	2198	supra floor	MM	unidentifiable	<25%, 10X
A2	2035	2198	supra floor	<i>Gallus domesticus</i>	femur	left, adult; 50%
A2	2044	2218	baulk	<i>Sus domesticus</i>	cranium	juvenile occipital fragment; <25%
A2	2044	2218	baulk	<i>Ovis/Capra</i>	mandibula	left, dp2,3,4,M1, juvenile; 50%
A2	2044	2218	baulk	<i>Ovis/Capra</i>	tibia	right, dist. unfused; 25%
A2	2044	2218	baulk	<i>Ovis/Capra</i>	cerv. vert.	50%
A2	2044	2218	baulk	MM	unidentifiable	<25%, 6X
A2	2044	2218	baulk	<i>Testudo graeca</i>	carapax	juvenile fragment; <25%
A2	2044	2223	baulk	<i>Bos taurus</i>	astragalus	right, subadult?; 100%
A2	2044	2223	baulk	<i>Bos taurus</i>	costa	first rib, subadult; 100%
A2	2044	2223	baulk	<i>Bos taurus</i>	costa	<25%
A2	2044	2223	baulk	<i>Bos taurus</i>	sternum	one unfused sternebra; <25%

Trench	Locus	BZ#	Layer/Period	Species	Element	Description
A2	2044	2223	baulk	<i>Bos taurus</i>	sesamoid	distal sesamoid; 100%
A2	2044	2223	baulk	<i>Bos taurus</i>	premolar	dp3, left inferior, juvenile; 25%
A2	2044	2223	baulk	<i>Sus domesticus</i>	phalanx 1	prox. fusing; 100%
A2	2044	2223	baulk	<i>Sus domesticus</i>	premolar	dp4 inferior right, juvenile; 50%
A2	2044	2223	baulk	<i>Sus domesticus</i>	cranium	occipital fragm., juvenile; <25%
A2	2044	2223	baulk	<i>Sus domesticus</i>	tibia	left distal epiphysis, juv.; <25%
A2	2044	2223	baulk	<i>Ovis/Capra</i>	incisive	left I2 inferior; 100%
A2	2044	2223	baulk	<i>Ovis/Capra</i>	thorac.vert.	25%
A2	2044	2223	baulk	<i>Ovis/Capra</i>	premaxilla	right, juvenile; 75%
A2	2044	2223	baulk	MM	costa	50%
A2	2044	2223	baulk	MM	vertebra	<25%, 2X
A2	2044	2223	baulk	MM	unidentifiable	<25%, 10X
A3	3015	3098	collapse layer/Iron A.	<i>Lepus europaeus</i>	metacarpal	MC III, left; 100%
A3	3015	3098	collapse layer/Iron A.	<i>Lepus europaeus</i>	phalanx 1	100%
A3	3015	3098	collapse layer/Iron A.	<i>Lepus europaeus</i>	metapodium	juvenile bur nt bone; 50%
A3	3015	3098	collapse layer/Iron A.	<i>Bos taurus</i>	premolar	p2 inferior, right; 75%
A3	3015	3098	collapse layer/Iron A.	<i>Bos taurus</i>	cranium	temporal fragment; <25%
A3	3015	3098	collapse layer/Iron A.	<i>Sus domesticus</i>	mandibula	left juvenile; 25%
A3	3015	3098	collapse layer/Iron A.	<i>Sus domesticus</i>	carpal	intermedium, right; 100%
A3	3015	3098	collapse layer/Iron A.	<i>Sus domesticus</i>	tibia	right dist., juv.; 25%, calcined
A3	3015	3098	collapse layer/Iron A.	<i>Ovis/Capra</i>	tibia	right prox.; 25%
A3	3015	3098	collapse layer/Iron A.	LM	cranium	fragments; <25%, 6X
A3	3015	3098	collapse layer/Iron A.	LM	mandibula	fragments; <25%, 3X
A3	3015	3098	collapse layer/Iron A.	LM	thorac.vert.	25%
A3	3015	3098	collapse layer/Iron A.	MM	costa	fragments; <25%, 4X
A3	3015	3098	collapse layer/Iron A.	MM	unidentifiable	fragments; <25%, 30X

Halaf period

Trench	Locus	BZ#	Layer/Period	Species	Element	Description
B1	1025	1155	sounding/Halaf	MM	unidentifiable	diaphysis; <25%, 2X
B1	1025	1157	sounding/Halaf	MM	unidentifiable	diaphysis; <25%
B1	1025	1157	sounding/Halaf	<i>Bos taurus</i>	radius	right, prox. fused; 25%
B1	1025	1161	sounding/Halaf	MM	unidentifiable	diaphysis; <25%
B1	1025	1161	sounding/Halaf	<i>Ovis/Capra</i>	incisive	I2, left; 75%
B1	1025	1161	sounding/Halaf	<i>Ovis aries</i>	metacarpus	left, dist. fused; 25% artefact
B1	1025	1163	sounding/Halaf	<i>Ovis/Capra</i>	metapodium	dist. fragment; <25%
B1	1025	1163	sounding/Halaf	<i>Ovis/Capra</i>	molar	superior; 75%
B1	1025	1163	sounding/Halaf	<i>Ovis/Capra</i>	mandibula	burnt fragment, right; <25%
B1	1025	1163	sounding/Halaf	<i>Sus domesticus</i>	tibia	diaphysis, right; <25%
B1	1025	1163	sounding/Halaf	<i>Sus domesticus</i>	tibia	dist. unfused, right; 25%
B1	1025	1163	sounding/Halaf	<i>Sus domesticus</i>	cranium	occipital fragment; <25%
B1	1025	1163	sounding/Halaf	<i>Sus domesticus</i>	maxilla	right, dp4, M1 present; M2 and P3 unerupted, juvenile; 25%
B1	1025	1163	sounding/Halaf	MM	unidentifiable	fragments; <25%, 8X
B1	1025	1163	sounding/Halaf	LM	unidentifiable	fragments; <25%, 3X
B1	1025	1167	sounding/Halaf	<i>Sus domesticus</i>	mandibula	right, M1 present; M2 unerupted, juvenile; 50%
B1	1025	1167	sounding/Halaf	<i>Sus domesticus</i>	cranium	left frontal, juvenile; <25%
B1	1025	1167	sounding/Halaf	<i>Sus domesticus</i>	ulna	right, juvenile; 50%
B1	1025	1167	sounding/Halaf	<i>Sus domesticus</i>	thorac. vert.	25%
B1	1025	1167	sounding/Halaf	MM	costa	25%
B1	1025	1167	sounding/Halaf	MM	unidentifiable	fragments; <25%, 14X
B1	1025	1169	sounding/Halaf	<i>Ovis aries</i>	humerus	right, dist. fused; 25%
B1	1025	1169	sounding/Halaf	<i>Sus domesticus</i>	cranium	parietale right, juvenile; <25%
B1	1025	1169	sounding/Halaf	MM	unidentifiable	diaphysis fragments; <25%, 5X
B1	1025	1174	sounding/Halaf	<i>Ovis/Capra</i>	scapula	right; 25%
B1	1025	1178	sounding/Halaf	<i>Bos taurus</i>	femur	right, dist. fused; 50%
B1	1025	1178	sounding/Halaf	<i>Bos taurus</i>	metacarpus	left, dist. fused; 25%
B1	1025	1178	sounding/Halaf	<i>Bos taurus</i>	radius	right unfused dist. epiph.; 25%
B1	1025	1178	sounding/Halaf	<i>Bos taurus</i>	incisive	I1, right inferior, unworn; 75%
B1	1025	1178	sounding/Halaf	<i>Ovis aries</i>	radius	left, dist. fused; 25%
B1	1025	1178	sounding/Halaf	<i>Ovis/Capra</i>	ulna	right; 25%
B1	1025	1178	sounding/Halaf	<i>Sus domesticus</i>	cranium	parietale; <25%

Trench	Locus	BZ#	Layer/Period	Species	Element	Description
B1	1025	1178	sounding/Halaf	<i>Sus domesticus</i>	cranium	zygomatic process; <2 5%
B1	1025	1178	sounding/Halaf	<i>Sus domesticus</i>	maxilla	left, M2,M3, subadult; 25%
B1	1025	1178	sounding/Halaf	<i>Sus domesticus</i>	mandibula	left and right, juvenile; 50%
B1	1025	1178	sounding/Halaf	MM	vertebra	25%, 2X
B1	1025	1178	sounding/Halaf	MM	costa	25%, 2X
B1	1025	1178	sounding/Halaf	MM	unidentifiable	fragments; <25%, 25X
B1	1025	1181	sounding/Halaf	<i>Bos taurus</i>	phalanx 2	prox. fused, adult; 75%
B1	1025	1181	sounding/Halaf	<i>Ovis/Capra</i>	molar	M2 superior, left, adult; 100%
B1	1025	1181	sounding/Halaf	<i>Ovis/Capra</i>	molar	M2 superior, left, adult; 75%
B1	1025	1181	sounding/Halaf	<i>Ovis/Capra</i>	molar	M superior, left; 50%
B1	1025	1181	sounding/Halaf	<i>Sus domesticus</i>	mandibula	right, M1, M2, M3, subadult; 50%
B1	1025	1181	sounding/Halaf	MM	unidentifiable	diaphysis fragment; <25%
B1	1025	1184	sounding/Halaf	<i>Sus domesticus</i>	femur	left, diaphysis fragment; 25%
B1	1025	1184	sounding/Halaf	MM	unidentifiable	diaphysis fragments; <25%, 5X
B1	1025	1184	sounding/Halaf	SM	unidentifiable	diaphysis fragment; <25%
B1	1025	1187	sounding/Halaf	<i>Bos taurus</i>	carpale	fourth carpal, left; 100%
B1	1025	1187	sounding/Halaf	<i>Sus domesticus</i>	scapula	left; 25%
B1	1025	1187	sounding/Halaf	<i>Sus domesticus</i>	femur	right, neonatal; 50%
B1	1025	1187	sounding/Halaf	MM	unidentifiable	burnt fragmen t; <25%
B1	1025	1187	sounding/Halaf	MM	unidentifiable	fragments; <25%, 12X

Appendix 2. Measurements of faunal remains from Boztepe

Iron Age

Trench	Locus	BZ#	Layer/Period	Species	Element	Description	Dimensions
A2	2035	2198	supra floor	<i>Ovis aries</i>	metatarsus	left, distal fused	bd:24,9
A2	2035	2198	supra floor	<i>Sus domesticus</i>	phalanx 1	prox fused	glpe:30,9 bp:13,9 sd:11,2 bd:12,9
A2	2044	2223	bauk	<i>Bos taurus</i>	astragalus	right, subadult?	gll:62,8 bd:42,2

Halaf period

Trench	Locus	BZ#	Layer/Period	Species	Element	Description	Dimensions
B1	1025	1169	sounding/ Halaf	<i>Ovis aries</i>	humerus	right, dist. fused	bd:28,2 bt:2 7,3
B1	1025	1181	sounding/ Halaf	<i>Sus domesticus</i>	mandibula	right, M1, M2, M3, subadult	length M3: 33,7 (ca. 21-3 months)

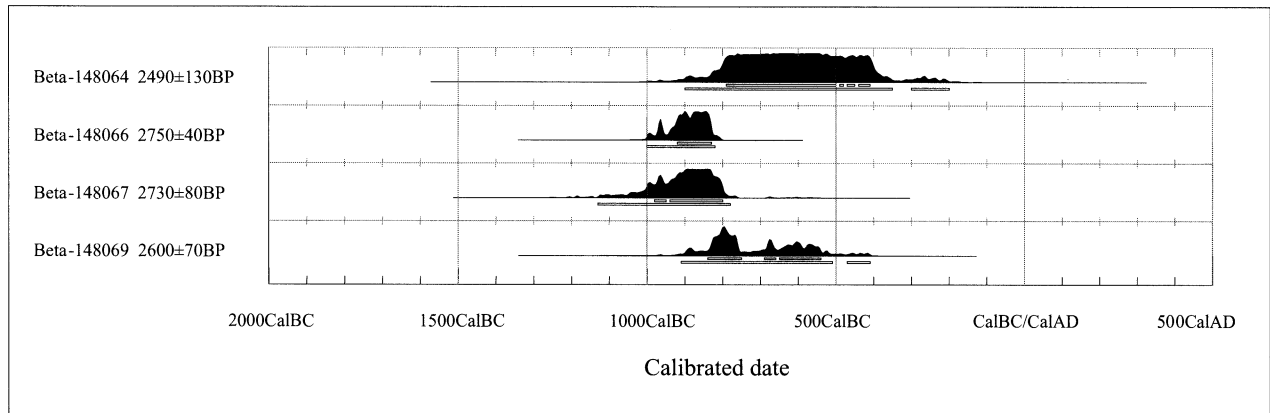
Abbreviations

bd	Breadth of the distal end
bt	Breadth of the trochlea
gll	Greatest length of the lateral half
glpe	Greatest length of the peripheral half
sd	Smallest breadth of the diaphysis

Appendix 3. Radiocarbon results

Sample Data	Measured Radiocarbon Age	¹³ C/ ¹² C Ratio	Conventional Radiocarbon Age(*)
Beta-148064 2 sigma calibration:	2490+/-130 BP Cal BC 900 to 360 (Cal BP 2850 to 2310) and Cal BC 280 to 240 (Cal BP 2230 to 2190)	-25.0* ‰	2490+/-130* BP
Beta-148066 2 sigma calibration:	2750+/-40 BP Cal BC 990 to 820 (Cal BP 2940 to 2770)	-24.9 ‰	2750+/-40 BP
Beta-148067 2 sigma calibration:	2730+/-80 BP Cal BC 1040 to 790 (Cal BP 2990 to 2740)	-25.0* ‰	2730+/-80* BP
Beta-148069 2 sigma calibration:	2600+/-70 BP Cal BC 880 to 740 (Cal BP 2840 to 2690) and Cal BC 710 to 530 (Cal BP 2660 to 2480)	-25.0* ‰	2600+/-70* BP

Radiocarbon data



Radiocarbon graphs

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