

**TELL ABU AL-KHARAZ**  
**THE SWEDISH JORDAN EXPEDITION 1991**  
**SECOND SEASON PRELIMINARY EXCAVATION REPORT**

by  
Peter M. Fischer

**Preface**

The second season of excavation at Tell Abu al-Kharaz situated north of Wadi al-Yabis and about 4 km east of the Jordan River (see map in Fischer 1991a), lasted from 26th September to 15th November 1991. The excavations were directed by the author from Gotenburg University, Sweden.

The excavation team consisted of the curator of the Irbid Archaeological Museum, likewise the Department's representative, Mr Hikmat Ta'ani, acting as trench supervisor, Miss Sara Fritsch, conservator, Dr Ian Hedley, geophysicist, Mr Richard Holmgren, trench supervisor, Mrs Lamia Khoury, MA, draughtperson, Mr Elias Markou, architect, Miss Linda Mol, MA, trench supervisor, Mrs Eva Toivonen-Skage, trench supervisor, and Miss Anica Tanevska, trench supervisor. The team was further supported by the Department of Antiquities Inspector of the Irbid District, Mr Sultan Shreidah, Mr Badi Madri, Mr Hassan Rahmi and Mr Jonas Robertsson. 25 skilled workers from Pella and Mashare' were employed. They usually serve the Australian excavations at Pella, and most of them were already employed in 1989.

The permission of the Department of Antiquities, and its Director General Dr Safwan Tell, is very gratefully acknowledged. Most valuable help was received from Mr Shreidah and Mr Ta'ani during the trying negotiations with the land owner. Many thanks also to Dr Fawzi Zayadine for his kind support. I would like to express my gratitude to Professor Basil Hennessy, who very generously offered the Pella dig house and the vehicles, and to the British Institute at Amman, Drs William Lancaster and Graham Phillip, for all their help and hospitali-

ty. My great gratitude to their R. H. Prince Raad and Princess Majda, and Princess Nissa, perhaps an archaeologist in the making, for their genuine interest in the project. Finally, I wish to thank all the team members for their excellent and self-sacrificing work accomplished under sometimes difficult conditions.

Financial support was given by BITS, the Swedish Government Agency for International Technical and Economic Cooperation. Other financial support was gratefully received from the following Swedish funds: the Gyllenstiernska Krapperup's Foundation, Nyhamnsläge, and the Royal Academy, Stockholm, very kindly supported by Professor Paul Åström.

**RESULTS OF THE 1991 SEASON**

**Introduction**

In 1989 two trenches were opened in Area 2: Trenches III in Grid MM29, and IV in LL29 (see map in Fig. 1). Area 2 represents a westward sloping part of the tell below a steeper slope. The steep slope, separating the upper plateau from the rest of the tell, very likely contains the continuation of massive Late Bronze Age walls (city walls?) discovered in Area 1 in 1989. Within Trench III parts of a building with an altar-like, square construction were exposed at the end of the 1989 campaign. The exposed remains showed parallels with Structures I and II of the "Fosse Temple" from Lachish (Fischer 1991b). The building was provisionally dated to the beginning of the second part of the Late Bronze Age, Late Bronze Age II A.

The main task of the 1991 excavation was therefore to expose the remaining parts

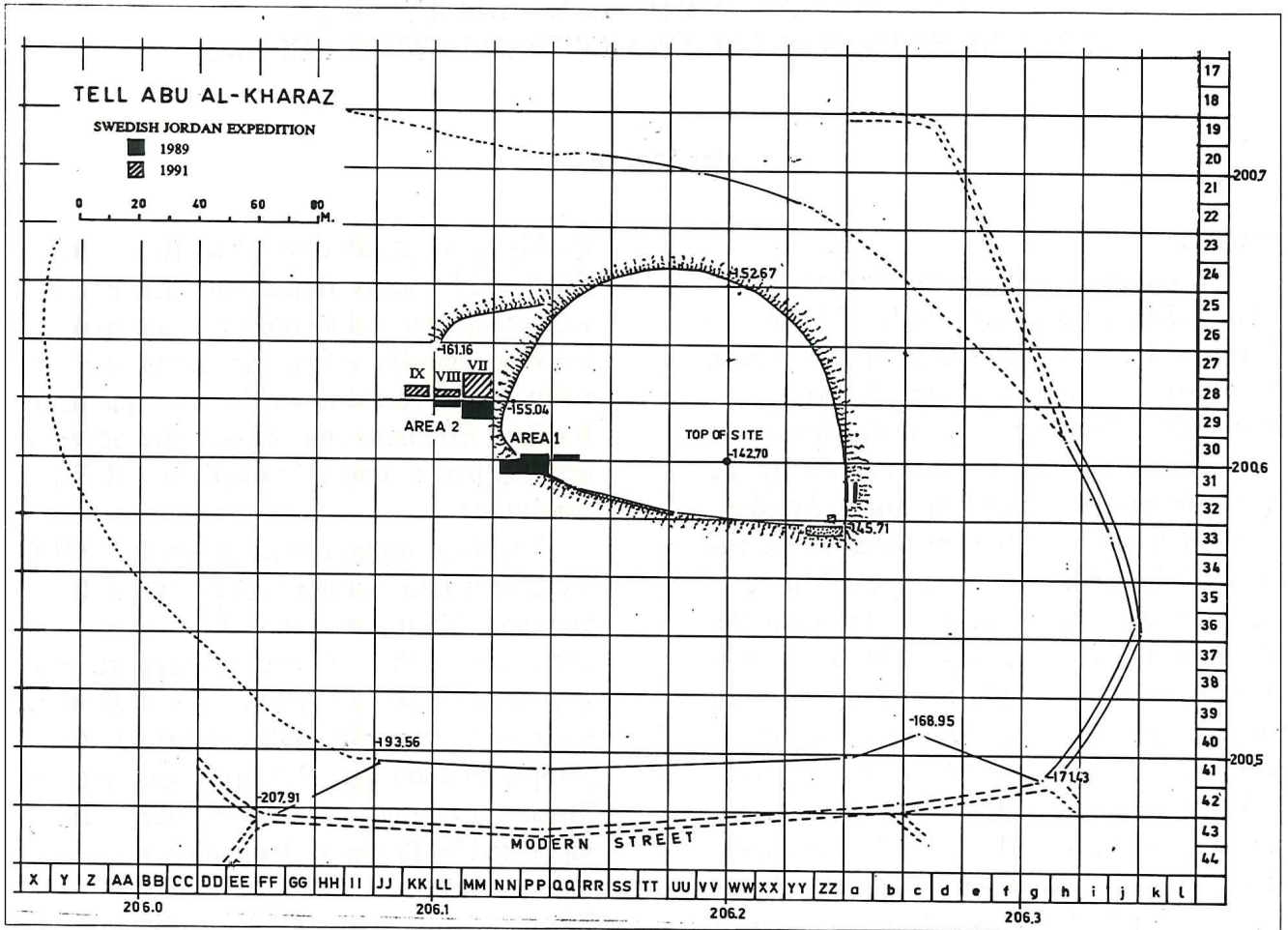


Fig. 1. Sketch of the excavation areas (1989 and 1991).

of the building, which was assumed to continue to the north and north-west. Two trenches were opened: VII, measuring 9 m x 10 m, in Grid MM28, and VIII, 2 m x 9 m, in LL28. Trench VII was further subdivided into VIIA, B, C and D, each of them measuring 4.25 m x 4.75 m and separated by baulks 0.5 m wide. At the end of the campaign Trench IX, 3 m x 8 m, in KK28, and Trench X, 3 m x 6 m, in JJ28, were opened in order to investigate the occupational sequence at the lower part of the tell. Supplementary excavations were also performed in Trench V, in PP31, which was opened in 1989.

Archaeological prospecting was done by Dr. Ian Hedley. He performed an electrical resistivity survey west and north-west of Trench X at the lowest part of the tell close to the rocky west facade. The instrument

used was the Terrameter SAS 300B, manufactured by ABEM, Sweden. An area of 1100 m<sup>2</sup> was surveyed. The electrode separation within a Double Dipole arrangement was 1 m (report forthcoming).

Other electronic devices used during the excavations included an EDM equipment with a data storage unit, a portable lap-top computer with a data base software, and an electro-magnetic Very Low Frequency detector (cf. Fischer 1991a). Soil samples were taken from each stratum and crucial loci for later flotation of plant remains (under investigation by Dr. Tim Holden), and charcoal samples for 14-C AMS-dating. All bones, teeth and shells were collected for later classification by Dr. Paul Croft.

In the following description the results are presented by period, starting from colluvium. The four periods present belong to

the Late Roman, the Iron Age, and the Late and Early Bronze Age. Detailed explanations concerning the nomenclature and abbreviations may be found in Fischer 1991a.

### Colluvium

The colluvial soil is about 5-10 cm thick. In T VIII scanty remains of two tabuns resembling previously excavated tabuns from the Iron Age, were found. One close to the east section and the other close to the north section in the middle of the trench. Among unstratified finds the rim and neck of a Roman glass bottle, a broken grinding stone and flint blades all discovered in T VII should be mentioned.

### The Late Roman (Fig. 7:1,2)

The architectural remains representing this period are scattered. W 17 in VII A and L 91 in VII B are remains of a demolished wall. In VII B remains of a sun-dried mud-brick wall, once at least 3 m high, were found. This substantial wall has fallen from higher up the slope in a west-southwesterly direction. An oven in VII C and several pits containing pottery of Roman origin should be mentioned.

The main part of the pottery, represented by e.g. a pot and a jar, belongs to the Late Roman period. Among stray finds of pottery there is one possible Mycenaean sherd, as well as some Hellenistic sherds.

An accurate interpretation of this phase is not possible. It seems, however, that the area was occupied by Late Roman squatters during two phases.

### The Iron Age (Fig. 7:3-9)

The well stratified findings in T VII A offer the possibility of a division into seven subphases, G-A.

#### *Iron Age II C*

The five Subphases G-C, found in T VII A, belong to this period. Iron Age II C is also represented in VII B, C and D, and T

X, which was not completely excavated.

Architectural remains of interest were found in T VII A and T X. At both spots they consist of water systems: a water channel and a possible cistern. Channel 1 (T VII A, L 88) was built in Subphase E (Fig. 2). It was in use during Subphases F and G as well. Its direction is straight north-east/south-west and is parallel with W 19. It is incorporated into W 18 and emerges into a shallow basin (L 97). Both the channel and the basin were once covered by stones, the basin by a large stone slab. The c. 25 cm wide channel is bordered by two parallel rows of stones. The bottom of both the channel and the basin consists of hard-packed clay. No continuation of the water system below the basin has yet been found. The channel gives the impression of an out-flow.

An oven to the east of the channel belongs to Subphase G. The Wall W 20 was built during Subphase C. It was later covered by W 18, which has an almost identical extension, and Channel 1. It is a well built wall but it was not possible to connect it with any other architectural remains. Several plastered floors were found in VII A.

The pottery reflects the repertoire which is traditionally dated within Iron Age IIC. Bowls, kraters and cooking pots were found.

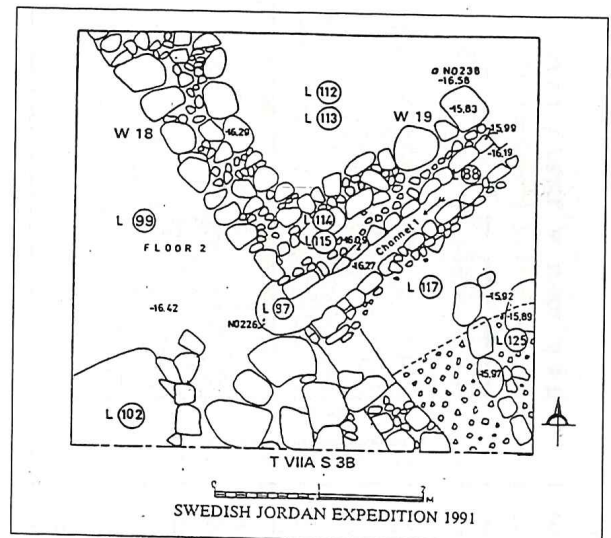


Fig. 2. Trench VII A. Iron Age II C, Subphase E.

*Iron Age II B/C*

This period can be divided into the two Subphases A and B. Channel 2 is the oldest Iron Age II construction in the area (T VII A; Fig. 3; Pl. I, 1; Section 7/91 in Fig. 6a). It was built during Subphase A, but was used during Subphase B as well. It was later covered by W 20. Its construction is different from Channel 1. The channel turns from north-east to west. It is 30-40 cm wide and bordered by two parallel rows of stones. At its most westward extension the channel splits into two branches separated from each other by a stone slab. No stones covered the channel at any point. Its bottom is a stone paving of closely laid small stones. Unlike Channel 1, Channel 2 is an outdoor construction obviously used to transport water to a cistern situated further down. The partly exposed, approximately contemporaneous (?) round construction in the lower T X may possibly be interpreted as a cistern (not completely excavated; see above). The channel is bordered to the south by a stone pavement at least 5 m broad, which continues into T VII D.

The pottery includes sherds which can be ascribed to Iron Age II C and II B as well. A preliminary date is therefore the transition between Iron Age II B/C.

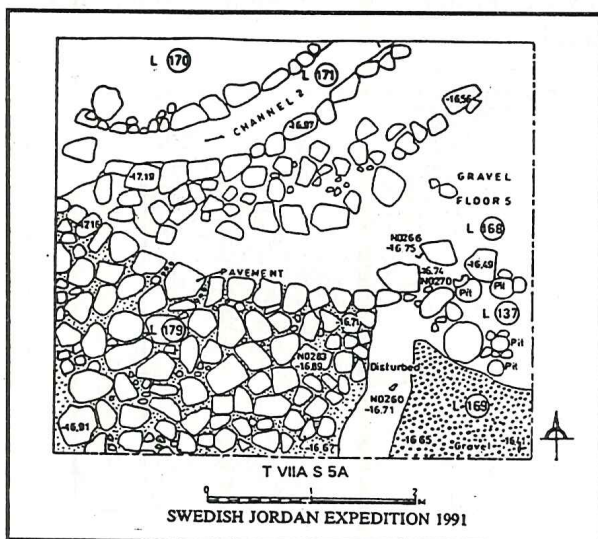


Fig. 3. Trench VII A. Iron Age II B/C, Subphase A.

**The Late Bronze Age (Figs. 8-10)**

*Late Bronze Age II A (Fig. 8:1-4)*

The continued excavation of the temple, parts of which were exposed in 1989 (Fischer 1991a and b), was *a priori* the main task of the 1991 campaign. It was shown that the building stretches from T III (1989) into T VII C (Fig. 4). It measures c. 6.8 x 5.2 m (outer boundaries). The limiting stone-based walls (W 13, 14, 10=42) are well constructed and approximately 75 cm wide. The eastern corner of the building is in some disarray. The building is open to the north-west, where stone slabs were found supporting the roof. An altar is situated in the eastern part of the room. A bench was found in the south-east.

The pottery excavated in 1991 corresponds to the rich repertoire of different wares and types discovered in 1989 in the temple area: two plain shallow bowls (cf. Fischer 1991: 89, Fig. 10: 1, 2, 4), a burnished shallow pedestalled bowl, a burnished bowl with a degenerated carination and traces of an attached handle, a plain juglet with pointed base, and a lamp (Fischer 1991: 93, Fig. 12:9) should be mentioned. Worth noticing is the discovery of the remaining parts of the early Cypriot White Slip II bowl which was excavated in 1989 close to a section (Fischer 1992). Among other finds there is a "paste" bead covered with a thin layer of an oxidized glass-like material. Immediately to the east of the building a bronze arrow head was found.

A small area of excavation in T VIII, L 80, i.e. the corner of a house bordered by W 23 and 24, may belong to the same period. The area is to some extent disturbed by subsequent Iron Age populations. However, besides the wares which have parallels in the temple, Chocolate-on-White was also found.

In 1989 the temple was dated to the beginning of the Late Bronze Age II period.

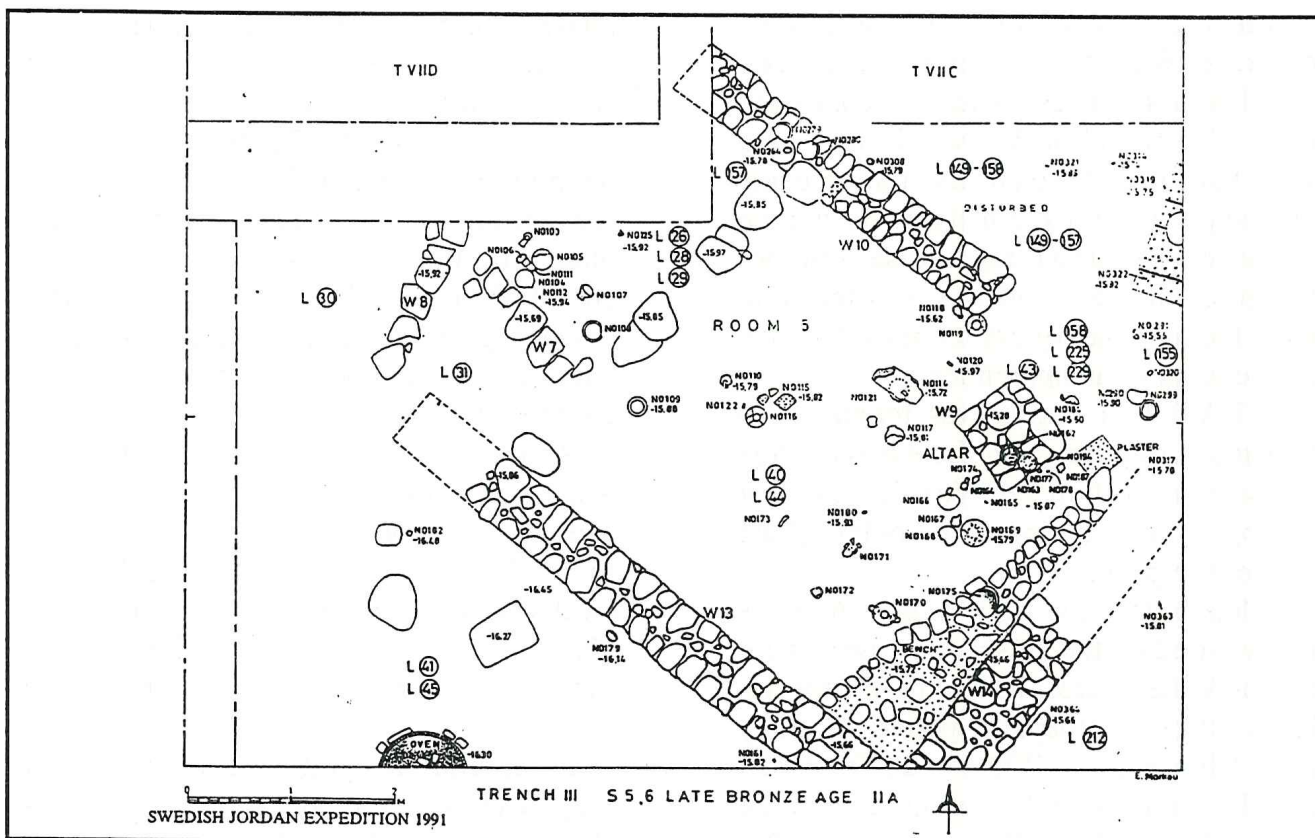


Fig. 4. Trench III/VII C. Late Bronze Age IIA temple.

This date was mainly based on the Cypriot early White Slip II bowl with a possible Kalavassos provenance. A date of c. 1375 B.C. has been suggested for this “milk bowl” (personal communication, Prof. P. Åström and Dr. A. Kromholz). No further evidence was found in 1991 which would contradict the date of Late Bronze Age II A.

*Late Bronze Age I* (Figs. 8: 5-9; 9-10)

In T VIII a kitchen-like room (L 83) was found. It seems that an earlier wall (W 27) was partly destroyed to build the kitchen. All finds were discovered embedded in a substantial ash layer covering the whole stratum.

Pottery from T VIII found within this stratum included a bowl with a metopic pattern, and two jugs one of which shows metopic decoration. Other types included a complete spouted krater with a “double base-ring”, another large krater, and a stor-

age jar with two handles. The form of the spouted krater, excluding its base, has a parallel at Lachish (Tufnell 1940: Pl. XLIII B: 150). The small L 120 produced two plain bowls with pronounced carination. Chocolate-on-White pottery is well represented.

Another area representing remains from the Late Bronze Age I was found in T VIIA. Unfortunately it was partly disturbed by the construction of the oldest Iron Age channel.

The pottery from T VII A included a Chocolate-on-White juglet decorated in the metopic style, two cooking pots including a miniature one, a two handled krater and a storage jar. Close to the Iron Age channel, and certainly moved from their original position, parts of a Chocolate-on-White jar (cf. Fischer 1991a: 97, Fig. 14:6) and a Chocolate-on-White bichrome sherd with black and chocolate brown decoration were found. From the same find context comes a

jug which differs from the hitherto discovered Late Bronze Age repertoire at Tell Abu al-Kharaz. It resembles Chocolate-on-White. The wheel-made ware is very hard fired, but with a relatively thin creamy white slip. The stylized metopic decoration is light reddish brown and coarse: splashes of paint on the neck and a flow of the paint below the metopic decoration makes it look like the work of an apprentice.

In T VII B a cistern was found which was used during the entire Late Bronze Age (see Section 7/91 in Fig. 6a): it was most probably built during the oldest Late Bronze Age phase.

A date within the Late Bronze Age I is mainly based on the presence of the Chocolate-on-White ware, which definitely includes different groups of pottery (a study of the Chocolate-on-White ware from Tell Abu al-Kharaz is forthcoming; cf. also the material from Pella in Hennessy 1985: 100-113). It is evident that the Late Bronze Age I people built directly on the latest phase of the Early Bronze Age, thus, but only to a limited extent, destroying the most recent Early Bronze Age features (Early Bronze Age squatter phases). The Late Bronze Age I period came to an end by a violent fire as shown by an ash layer.

#### **The Early Bronze Age (Figs. 11-14)**

Whereas the Late Bronze Age finds were discovered at single spots without connecting features, the temple excepted, the remains from the Early Bronze Age give the possibility of interpretable architectural features. Early Bronze Age remains were found immediately below the Late Bronze Age I stratum. The Early Bronze Age material from all phases is very well stratified. The different Early Bronze Age phases represent the bulk of finds during the 1991 excavation campaign.

#### *Early Bronze Age II*

*Squatter phases* (Fig. 11): The latest

phase within this period is represented by squatter occupations: they probably occurred shortly after the destruction of the older phase (see below). Different subphases within this occupational sequence could be recognized. It is very likely that these subphases occurred within a relatively short period of time. In T VII A the find context belonging to the latest squatter phase (L 140) shows signs of intensive heat and is covered with ash.

Architectural remains are scanty. The walls are orientated northeast/southwest and the corresponding walls at right angles. In T VII A and B both reused and newly erected walls surround three (?) rooms: W 45, 46, 56, 59 (reused), 60 and 61, which should be considered as a bench in front of W 45.

In general the pottery does not differ very much from the pottery of the previous phase (see below): bowls and lamps, platters, one handled jugs and one or two handled juglets, large storage jars with both vertical and ledge handles. One small pierced column handle was found. Many of the bowls show spots of soot, no doubt as a result of their use as lamps. A Metallic Burnished juglet (Fischer and Toivonen-Skage, forthcoming) has the shape of Abydos juglets but only two lug handles on the shoulder and no vertical handle. The surface treatment includes slipped and burnished wares, wash wares and wares without any surface treatment.

The date within the Early Bronze Age II period is mainly based on the occurrence of the Abydos shapes.

*Main phase* (Figs. 12, 13): The oldest phase within the Early Bronze Age II period is represented by an impressive destruction layer which can be seen in all trenches: heavy burnt mudbricks, charred wood and a large number of finds (Fig. 5; Pls. I, 2; II, 1-2; see also e.g. Sections 1/91 and 7/91: Strata 11/12 in Figs. 6 a, b). More than 50

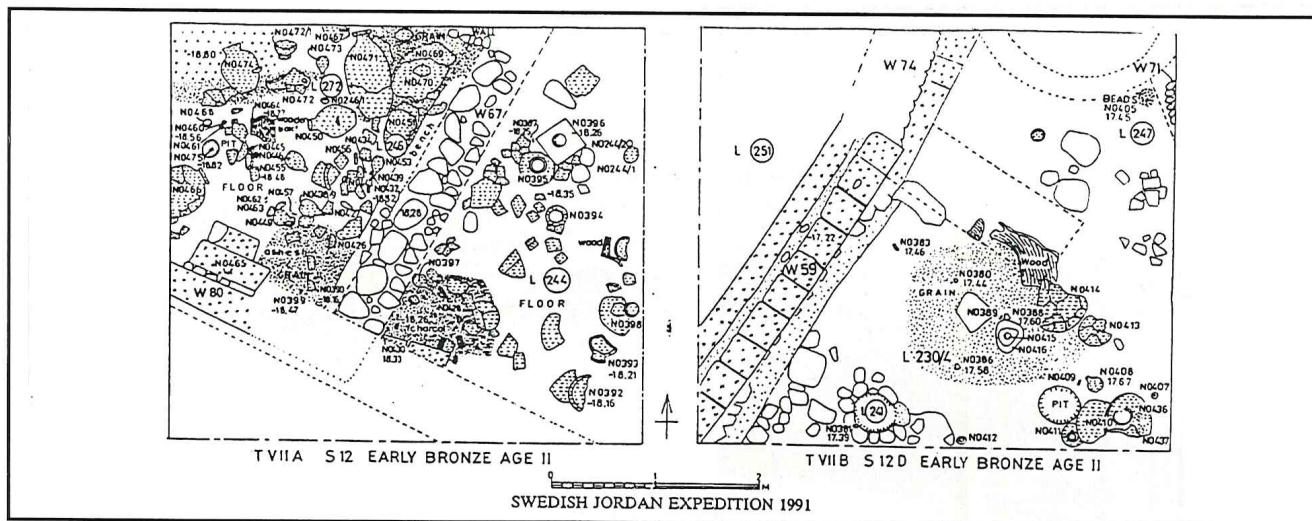


Fig. 5. Trench VII A and B. Early Bronze Age II, Main Phase.

complete vessels were found *in situ* or somewhat moved from their original position due to the collapse of the roofs. They were covered by up to 0.5 m thick ashy debris (cf. the catastrophe in an Early Bronze Age II phase at Tell es-Sa'idiyeh excavated in 1990; Tubb and Dorell 1991: 79-85). It is noticeable that the majority of the fallen vessels, fell in a northerly direction (between north-west to north-east). Many storage jars were still filled with grain. A carbonized wooden container was found in T VII B with grain. Grain was found over the entire area of excavation reaching up to 20 cm thick layers. The quantity of grain was measured. A cautious calculation resulted in an amount of c. 1 m<sup>3</sup> within the area of excavation. In a room in T VIII a carbonized wooden board was found. It was sent to The Malcolm and Carolyn Wiener Laboratory for Aegean and Near Eastern Dendrochronology, Cornell University, Ithaca, New York. Unfortunately it was not possible to put it into a dendrochronological sequence. The sample is diffuse-porous, probably acacia. This kind of wood is not usable for dendrochronological dating since the ring boundaries are indistinct (personal communication Dr. Ian Kuniholm).

A number of rooms (very likely eight) was exposed, bordered by reused and newly constructed walls. The walls, many of them

carefully plastered, are orientated northeast/southwest and the corresponding walls at right angles: W 67 and 80 (T VII A); W 59/74 (T VII B; reused); W 35, 38, 39 and 40 (T VII D) with the entrance from the northwest; W 64 and 72 (T III) with the entrance from the south-east; W 41 and 44, and possibly 31 and 32 (T VIII); W 55, 57 and 68, and 65 (T IX) which separates the area into two rooms. Benches of clay or mudbrick were found below some of the walls. The great amount of pottery points to a storage area with only a limited living space.

Small finds consist of bronze tools, such as axes and a chisel, and different stone tools: spindle whorls, one of them with the wooden pin still *in situ*, and basalt mortars and grinders, pestles, polishers, hammers, and flint blades and saws. A stone pendant has incisions and a shape resembling an ear of grain Pl. III, 2:60). A cylinder bead of bone belongs to the same period (Pl. III, 2:59). A necklace consisting of 52 beads and one pendant of black stone was found *in situ* in T VII B (Pl. III, 1). The beads include those of shells, multi-coloured stones and faience. A special manufacturing technique is shown by some bead-inlays which were put into the outer bead (certainly by a perishable clue) in order to protect it from wear caused by the string. Remains of the perishable string in the shape of tiny white

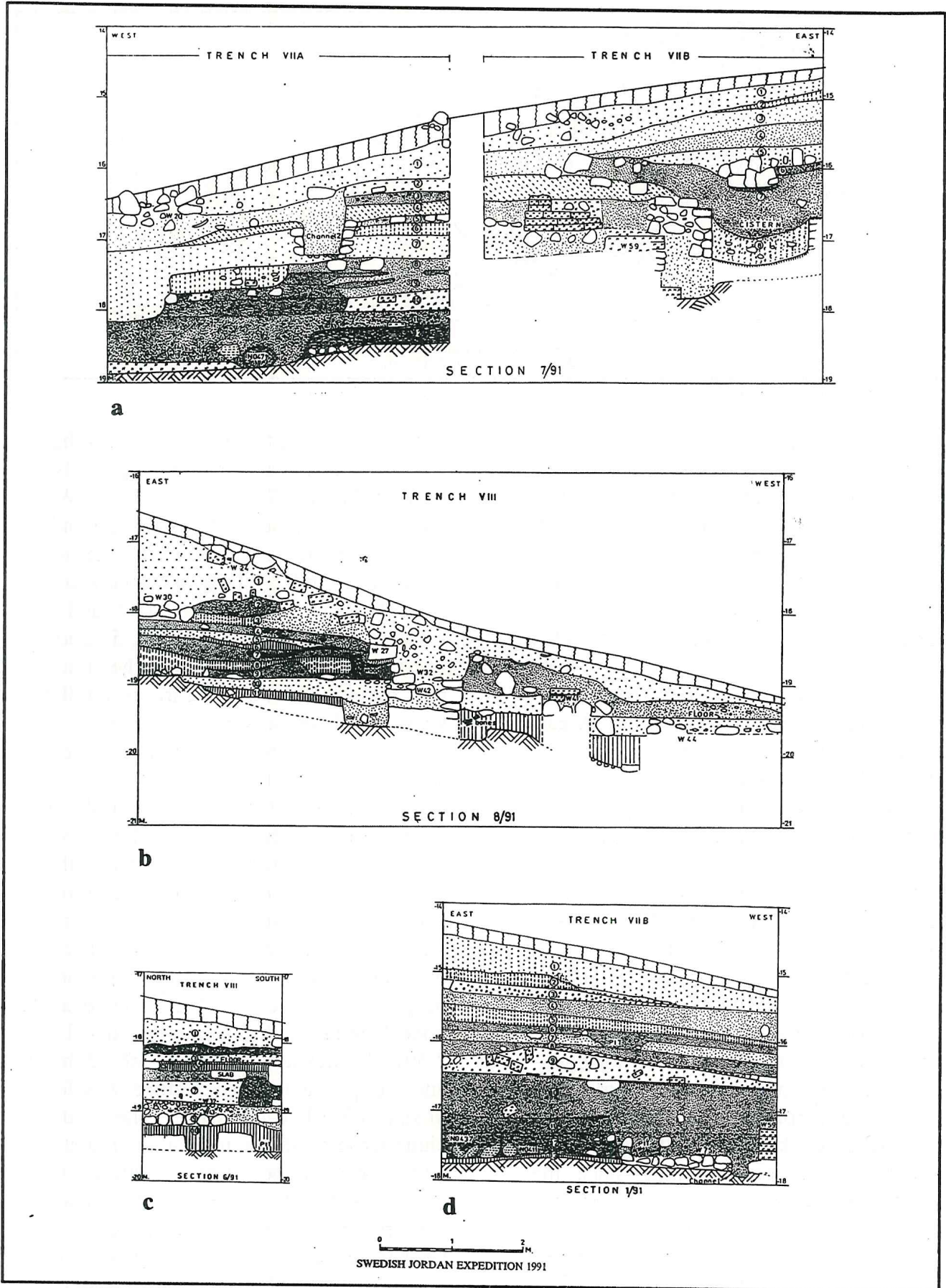


Fig. 6 a-d. Trenches VII A, B and VIII. Selected sections.



needles mostly disintegrated into powder could be recognized but not preserved.

The pottery includes bowls and lamps, cups, platters, one handled jugs, one, two and three handled juglets, spouted craters and large storage jars with both vertical and ledge handles. The surface treatment includes slipped and both random and pattern burnished wares, which dominate, wash wares, painted wares and wares without surface treatment. Band-slip and Grain-wash ware are represented among the vessels found *in situ*. Relief decoration was applied on both small and large jars. Potters marks are found frequently.

The classic Abydos ware is the most significant form within this phase: the Metallic Burnished ware, and another type decorated with red zig-zag lines on a beige burnished slip, as well as slipped and pattern burnished, plain slipped, and vessels without surface treatment were found. Some of the burnished vessels show a complicated pattern dividing the vessel into zones. Two small jars have rope decoration and knobs in relief, and another small jar has two degenerated half-moon shaped handles. A large storage jar of a metallic quality and excellent finish has four tiny vertical handles as decorative elements and rope decoration in relief on the shoulder.

The dating of this phase is based on the presence of the Abydos shapes. The occurrence of the Band-slip and Grain-wash wares together with the former wares may possibly give a tentative date within the early part of Early Bronze Age II. This date is supported by the fact that there is a clear continuity without a cultural break or debris layers between this and the preceding phase. This phase of an Early Bronze Age II occupation came to a violent end by an intensive conflagration.

#### *Early Bronze Age I (Fig. 14)*

As mentioned above there is no break between the Early Bronze Age I and II.

Walls belonging to the Early Bronze Age I period were found over the entire area. They are built directly on bedrock or on levelled surfaces. They are either well preserved and covered by debris, or reused or disturbed during the intensive building activities of the succeeding period. Their foundations consist exclusively of courses of stones covered by tiles of sun-dried mudbrick. The function of the area can be deduced from the finds and seems to be a combined living and storage place.

W 59/74, 0.5 m wide and built in line, and 75 (T VII B) as well as the 1.2 m wide W 35 (T VII D) belong to this period. W 59 is a mudbrick wall built on several courses of stone. W 74 is an extension of W 59 and built somewhat later. It is as high as W 59 but built entirely of stones (as preserved). There is a drainage channel, c. 0.2 m wide and deep, in front of the first course of stones following the entire extension of the walls. Both W 59/74 and 35 have a north-east/southwest direction.

W 43 (T VIII), running northeast/southwest, is 1 m wide and has five stone courses. Its dimensions indicate a function additional to merely being the wall of a building. Perhaps it is also a terrace retaining wall. At an approximately right angle to it lies W 47, c. 0.75 m wide. It is very likely a wall separating two rooms. W 36 is possibly an internal wall leaving a space of c. 1.2 m for an entrance.

W 70 (T IX), running northwest/southeast, is c. 0.6 m wide. It consists of three stone courses covered by four courses of mudbrick as preserved. A 1.2 m entrance is found to the east. The two rooms were separated by W 69, c. 0.5 m wide. The northern room contains a hearth.

Among the small finds are an excellent finished mace head of a beige stone, a number of spindle whorls of basalt, flint blades and tools of bone. A long cylindrical bead of bone, cross-hatched with markings defining a collar belongs to this period.

The pottery consists both of small and large vessels with a range from fine to coarse wares: shallow and deep bowls, platters, cups, juglets and storage jars. The bowls are mainly slipped and burnished. One juglet has ear handles attached high up on the neck. Another juglet has a high loop handle. A red slipped and burnished small hole-mouth jar with a collar-like folded out rim is particularly worthy of note. The long spout of a large vessel is slipped and pattern burnished. Band-slip wares, painted wares and wash wares with a wide range of colours are represented among the large jars. Relief decoration occurs. Potters marks were found.

The Early Bronze Age I date for this period is mainly based on the absence of the classic Abydos wares, the Metallic Burnished wares included. Parallels from primarily Bab edh-Dhra', Arad and Tell el-Far'ah were used to support the dating. The presence of Band-slip and Grain-wash wares alone could not be used as an indicator of Early Bronze Age I, since these wares were also found in the succeeding period. However, parallels from the above mentioned sites give a tentative date: the latter part of Early Bronze I, which corresponds to Early Bronze I B according to the prevailing terminology.

### **The Chalcolithic Period**

No architectural remains but a few sherds which can be ascribed to the Chalcolithic period were found directly on bedrock and mainly in natural depressions.

### **CONCLUDING REMARKS**

The 1992 excavations at Tell Abu al-Kharaz, conducted on the lower western part of the tell (Area 2), confirmed the results from 1989: the later part of the Iron Age II, Late Bronze Age I and I/II, Early Bronze Age I and II are represented. Additional finds from the Late Roman period were discovered.

### **The Late Roman**

This two-phase period is represented by scattered walls and typical pottery wares. It seems that the area was occupied by squatters.

### **The Iron Age**

Eight subphases were found stretching from the transition of Iron Age II B/C throughout II C. The number of subphases points to intensive occupation. The architectural remains include two water channels, an outflow and a channel for the water supply, which leads to a possible cistern lower down the slope.

### **The Late Bronze Age**

The Late Bronze Age temple from the very beginning of the Late Bronze Age II A period was further excavated. The repertoire of the excavated pottery from 1991 does not change the preliminary dating arrived at in 1989. The preceding Late Bronze Age I period is well represented by pottery finds but only by scanty architectural remains. An ash layer manifests the end of the Late Bronze Age I.

### **The Early Bronze Age**

The well stratified settlement layers make different periods distinguishable. The Early Bronze Age II period is represented by the bulk of finds excavated during the 1991 campaign. Squatter occupations cover a thick, ashy destruction layer, both dated within the Early Bronze Age II. Within the destruction layer a rich repertoire of vessels was excavated in a number of store rooms. Approximately 1 m<sup>3</sup> of grain was found both *in situ* within storage vessels and in a wooden container. There is no break between this and the preceding Early Bronze Age I period. The distinction between the two periods is based on the presence of different Abydos shapes in the latter period. The Band-slip and Grain-wash wares were found in both periods and consequently

could not be used as indicators of the former period.

### The Chalcolithic Period

The period is indicated by stray sherds but no architectural remains so far.

For the next season in October 1992, it is planned to open an area on the upper part of the tell west of the summit, in order to es-

tablish the chronological sequences there.

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## CATALOGUE OF ILLUSTRATED POTTERY AND OTHER FINDS FROM AREA 2

Description/abbreviations: identification number, shape, HM (hand-made pottery includes techniques as pinching, drawing, mould-modeling and coiling; no further distinction is done in this report), WM (wheel-made pottery includes wheel thrown and turn table pottery; see above), fired hard (H), medium (M) or soft (S), colour of clay, core, inclusions (refer to the Wentworth scale; Wentworth 1922: 377-292; and 1933: 633-634), slip (SS=self slip) and surface treatment, and selected parallels; see also Fischer 1991 for further parallels.

Fig. 7. *Late Roman (1, 2) and Iron Age II; all WM; for Iron Age parallels see the 1989 report (Fischer 1991: 82-85).*

1. VIIC2L68/1, depressed globular jar, H, brownish red, very fine, SS; e.g. Petra, Stucky 1991: 257, Fig. 4: 11; 271, Pl. IV: 2.
2. VIIC2L68/2, jar, H, brownish red, buff core, fine, SS.
3. VIIA3L88/1, bowl, M-H, pinkish buff, medium coarse with white and crushed pottery inclusions, thick pink slip in and out, brownish red paint on rim and in.
4. VIIC4L109/4, bowl, H, light brown, thick grey core, coarse with grey inclusions, yellowish brown slip, red paint on rim.
5. VIID3L75/1, cooking pot, H, orange brown, dark grey core, coarse with white and black inclusions, SS.
6. VIID3L75/4, cooking pot, H, orange brown, light brown core, coarse with grey inclusions, SS.
7. VIID3L107/1, cooking pot, H, reddish brown, light brown core, medium coarse with white inclusions, reddish brown slip.
8. VIIC4L109/2, cooking pot, H, light brown, thick grey core, coarse with white inclusions, SS.
9. VIIB6L136/1, jug, MH, light brown, thick grey core, coarse with dark grey inclusions, thick pink slip with white inclusions, red paint on rim and down to both handles.

Fig. 8. *Late Bronze Age II A temple area (1-4; cf. Fischer 1991: 89, Figs. 10-12); Late Bronze Age I (5-9); all WM.*

1. VIIC5L155N0289, bowl, MH, buff, medium coarse with mainly white inclusions, beige slip; cf. Tell Deir 'Alla, Franken 1992: 116, Fig. 7-1:6.
2. VIIC5L155N0290, pedestalled bowl, MS, buff, light grey core, coarse with grey inclusions, light orange brown slip, horizontal burnished bands on foot, burnished (very worn).
3. VIIC5L156/1, bowl with slight carination, MS, buff, medium coarse with grey inclusions, light reddish brown slip, burnished; cf. the form from Baq'ah, McGovern 1986: 113, Fig. 30:7, 32:1.

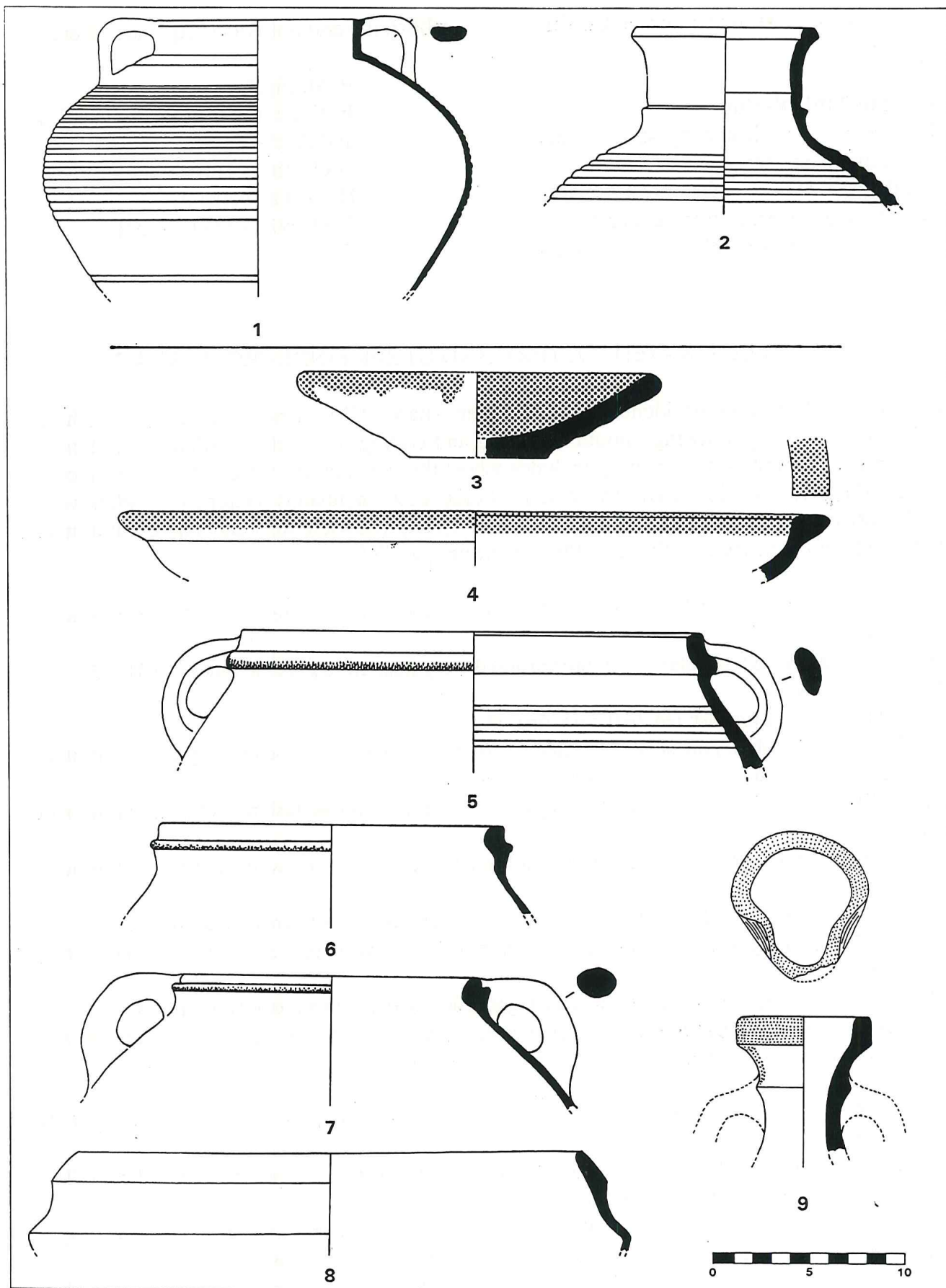


Fig. 7. Late Roman (1, 2); Iron Age II (3-9).

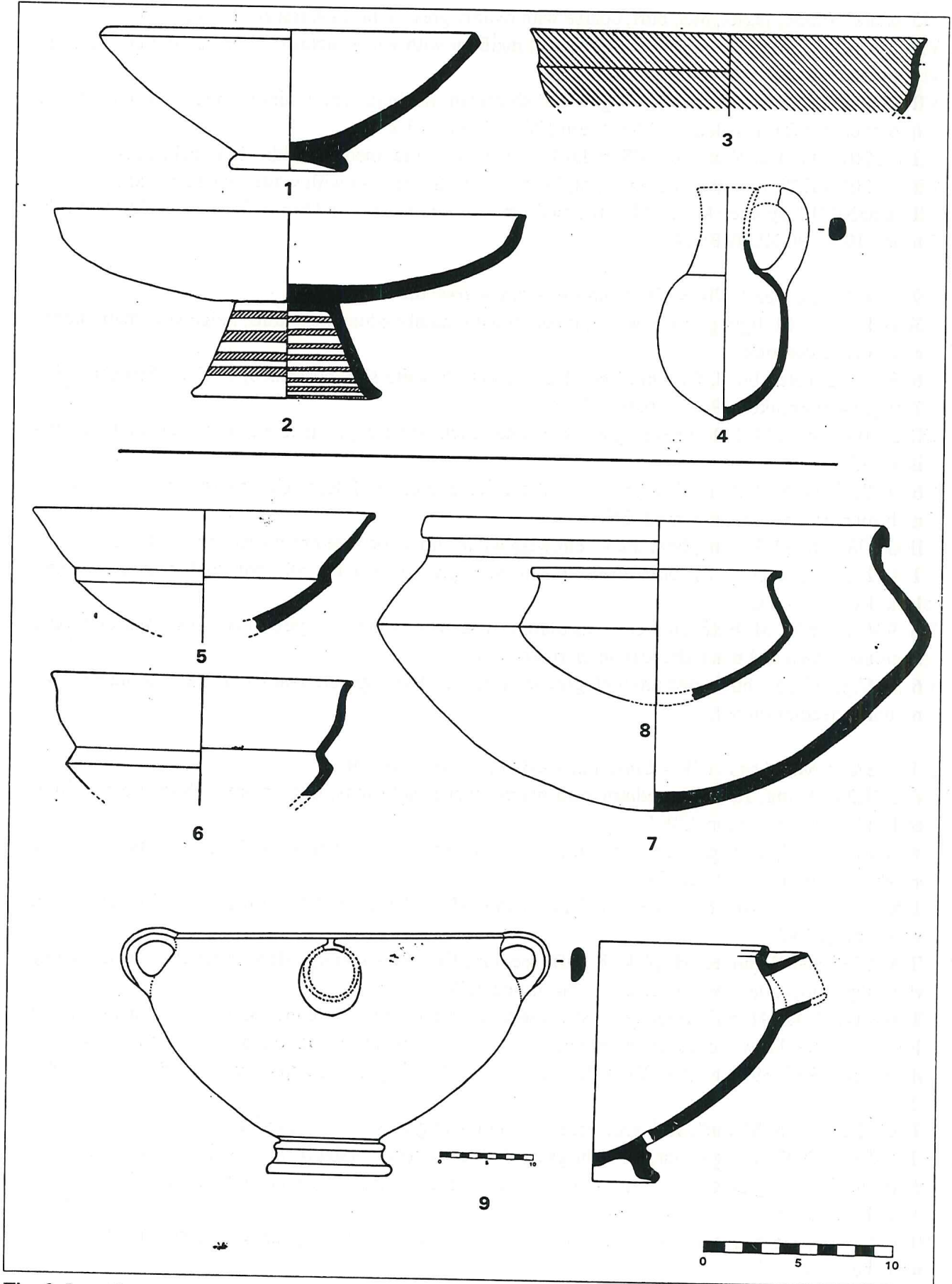


Fig. 8. Late Bronze Age II A (1-4); Late Bronze Age I (5-9).

4. III5“baulk”N0356, juglet, MS, buff, coarse with mainly grey inclusions, traces of white slip.
5. VIII2L120/2, carinated bowl, M, pinkish buff, medium with white inclusions, beige slip; cf. the form at Baq‘ah, McGovern 1986: 95, Fig. 21:22.
6. VIII2L120/1, carinated bowl, MH, light reddish brown, medium with mainly white inclusions, beige slip out; cf. the form at Baq‘ah, McGovern 1986: 89, Fig. 18:2.
7. VIIA7L201N0330, cooking pot, MS, reddish brown, grey core, medium with white inclusions, SS.
8. VIIA7L201N0329, miniature cooking pot, M, orange buff, medium with white inclusions, SS.
9. VIII1L83N0210, spouted krater, M, buff, medium coarse with grey and brown inclusions, SS; Lachish, Tufnell 1940: Pl. XLIII B:150.

Fig. 9. *Late Bronze Age I. CW = Chocolate-on-White wares; all WM.*

1. V6L99/8, bowl, M, light greyish brown, medium with mainly white inclusions, beige slip, matt chocolate brown decoration.
2. V6L99/1, carinated bowl, H, pink, fine, thick yellowish white slip, burnished; CW; cf. Fischer 1991: 97, Fig. 14:1; Franken 1992: 116, Fig. 7-1:5.
3. IX2L210/4, bowl, H, light brown, grey core, fine, thick white slip, chocolate brown decoration, burnished; CW.
4. V6L99/3, bowl, M, light reddish brown, light grey core, medium fine, thick pinkish white slip, chocolate brown decoration, burnished; CW.
5. VIIAL178/1, bowl, H, buff, fine, thick yellowish white slip, chocolate brown decoration; CW.
6. VIIAL272/A, goblet(?), M, buff, medium fine with grey inclusions, SS, matt bichrome brown and black decoration out.
7. V6L99/10, jar(?), M, buff, grey core, medium coarse with white and grey inclusions, matt bichrome chocolate brown and black decoration on rim and out.
8. V6L99/7, jug(?), M, buff, medium with grey inclusions, white slip out, matt bichrome chocolate brown and black decoration out.

Fig. 10. *Late Bronze Age I; CW = Chocolate-on-White wares; all WM.*

1. VIIA7L248/1, jug, H, buff, medium with mainly white inclusions, thin creamy white slip out, light reddish brown decoration; CW ?
2. V6L99/4, jug, M, buff, grey core, medium with grey inclusions, thick pinkish yellow slip, chocolate brown decoration in and out; CW.
3. VIIA4L145/1, jug, MH, buff, medium fine, creamy white slip, chocolate brown decoration, burnished (very worn); CW.
4. VIIA7L248N0403, juglet, H, pinkish buff, medium fine with mainly white inclusions, thick creamy white slip, chocolate brown decoration, burnished; CW.
5. VIIA4L145/2, jar, H, buff, thick grey core, medium with mainly white inclusions, thick creamy white slip, chocolate brown decoration, burnished; CW; cf. the form and band decoration at Baq‘ah, McGovern 1986: 89, Fig. 18:6; Pella, Hennessy 1985: 107, Fig. 3:9; Zerqua, Amiran 1970: 159, Photo 156.
6. VIIA7L201/1, jug, M, buff, dark grey core, medium with grey inclusions, red decoration.
7. VIIA3BL113N0238, jug or jar, H, light grey, dark grey core, medium fine, thick creamy white slip, chocolate brown decoration, burnished; CW; cf. some decorative elements from Lachish, Tufnell 1958: Pl. LXIV:6.
8. VIIB5L124/1, jug or jar, H, buff, medium fine, thick creamy white slip, chocolate brown decoration, burnished; CW.

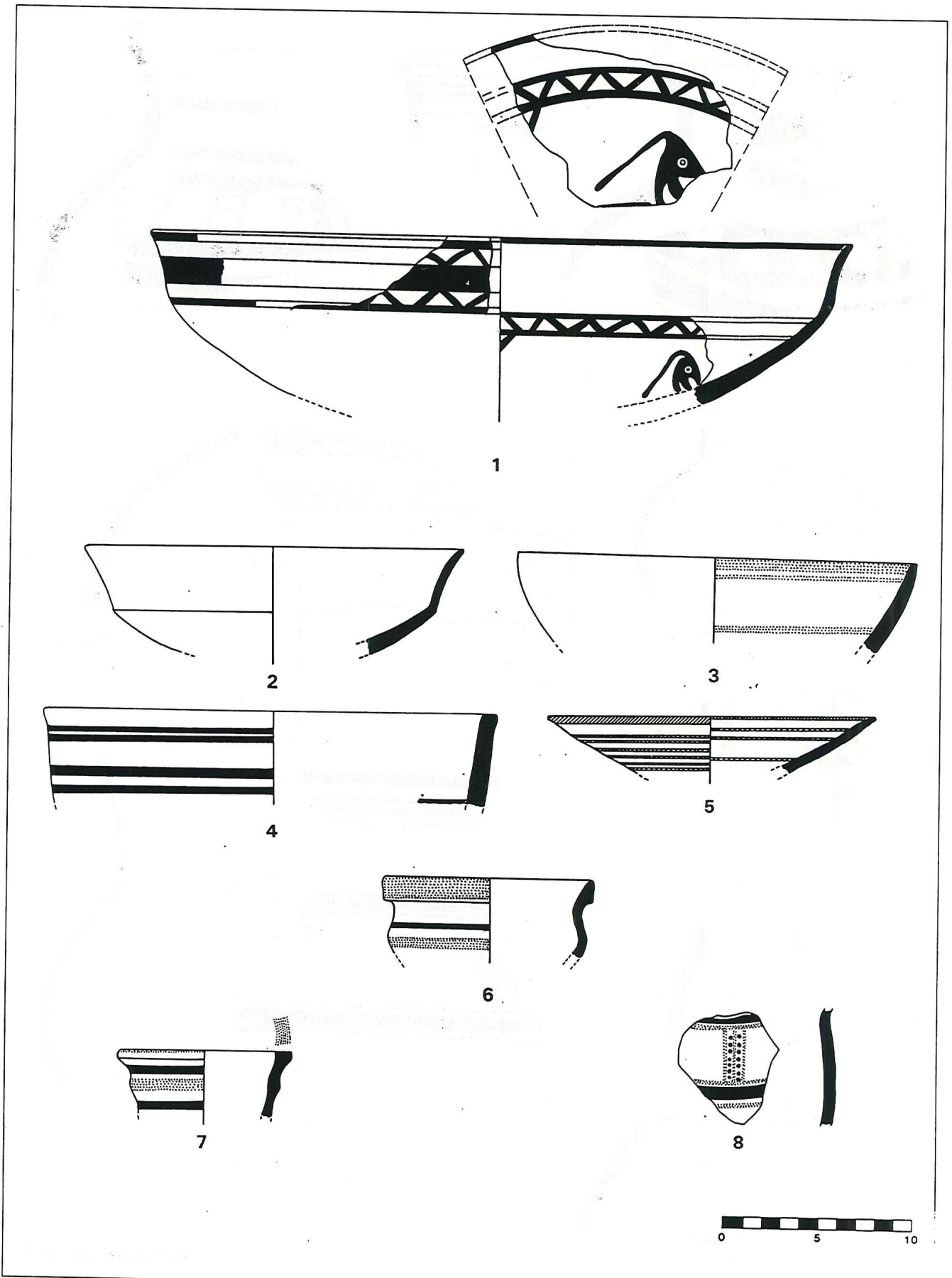


Fig. 9. Late Bronze Age I.

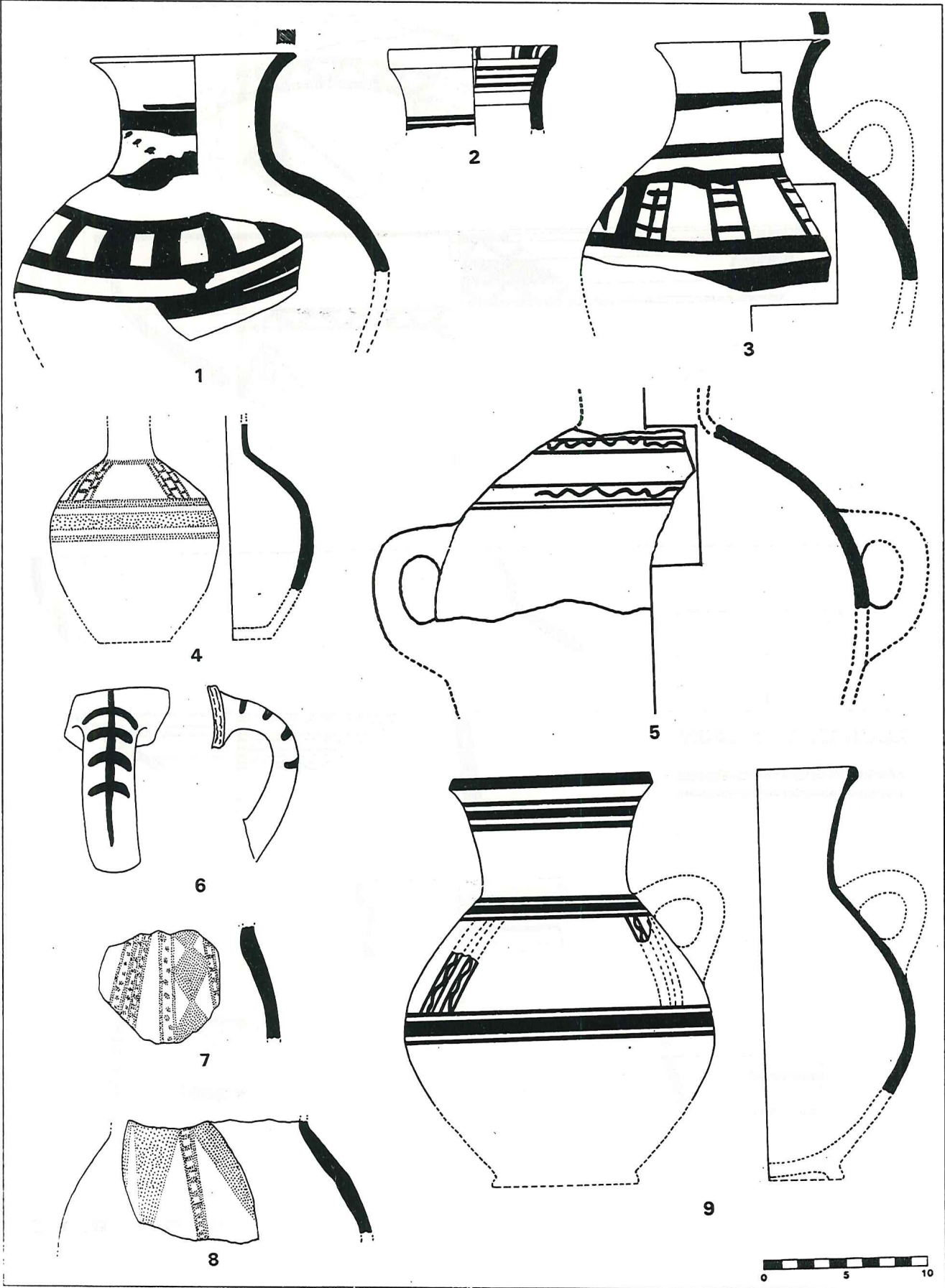


Fig. 10. Late Bronze Age I.



9. VIII1L83/1, jug, M, buff, medium with light grey inclusions, light yellowish brown slip, burnished (?).

Fig. 11. *Early Bronze Age II. Squatter phase.*

1. VIIA7L200N0323, bowl, WM, MH, pinkish buff, buff core, medium with mainly light grey inclusions, red slip out, diagonally hand burnished; cf. Ai, Callaway 1980: 136, Fig. 90:22.
2. VIIA8L204/1, platter, WM, MH, orange red, buff core, medium coarse with grey and white inclusions, red slip out, hand burnished; cf. with the single knob-handle from Arad, Amiran 1978: Pl. 13:34.
3. VIIA7L200N0324, platter, WM, H, orange brown, medium fine with grey and white inclusions, orange red slip in and out, burnished; cf. 'Ai, Callaway 1980: 136, Fig. 90:20.
4. VIIC6L159/1, juglet, HM, MS, buff, medium with grey inclusions, pinkish red slip, hand burnished.
5. VIIC6L140N0271, amphoriskos, HM, H, light greyish brown, medium fine grey inclusions, reddish brown to greyish brown slip, vertically metallic hand burnished; Far'ah, de Vaux and Steve 1948: Fig. 8:9, Fig. 9:7; Lachish, Tufnell 1958: Pl. 58:134, Pl. 61:266; Jericho, Kenyon 1960: 104, Fig. 35:9; Kenyon and Holland 1982: 233, Fig. 87: 29; Bab edh-Dhra', Schaub 1981: 114, Fig. 19:8.
6. VIIC6L140N0444, jug, HM, S, buff, grey core, coarse with grey inclusions, SS; cf. Ai, Callaway 1980: 140, Fig. 92:26; Bab edh-Dhra' Rast and Schaub 1989: 351, Fig. 217:4.
7. VIII2L128N0258, jar, HM — possibly finished on a slow wheel, H, light pinkish brown, coarse with white inclusions, orange red slip, vertically hand burnished.
8. VIIA8L204/2, jar, HM — rim WM, greyish buff, coarse with white and grey inclusions, SS.

Fig. 12. *Early Bronze Age II. Main phase.*

1. VIIA12L244N0392, platter, WM, MH, light reddish brown, grey core, medium fine grey and white inclusions, brownish red slip in and out, irregularly hand burnished, cross pattern burnished on base.
2. VIII5L144/17, bowl - platter, WM, MH, greyish buff, fine, pinkish buff slip in and out, both diagonally hand burnished and wheel burnished.
3. III8L237N0424, bowl, HM, S, orange buff, fine, brownish red slip, hand burnished out.
4. IX3L223/12, bowl, HM, MS, pinkish buff, greyish buff core, coarse with white and crushed pottery inclusions, lilac slip on rim and in.
5. VIII5L144N0294, juglet with three knobs, HM, M, buff, medium multi-coloured inclusions, traces of a slip blackened by fire.
6. VIII5L144N0296, juglet, HM, S, buff, coarse with white and grey inclusions, red slip.
7. III8L235N0442, juglet, HM — finished on a slow wheel, MH, pinkish buff, buff core, medium with mainly grey inclusions, orange slip, vertically hand burnished; Schaub 1981: 115, Fig. 19:4.
8. VIII5L144N0343, amphoriskos with two vertical pierced lug handles and one vertical handle from rim to body, WM ?, H, brownish grey, medium with dark grey and crushed pottery inclusions, reddish brown slip, vertically metallic hand burnished; Wright 1937: 58, Fig. B:IV:c (unpierced lugs?); Jericho, Kenyon 1960: 173, Fig 64:4; Kenyon and Holland 1982: 229, Fig. 85:9 (jug with unpierced lugs); Amiran 1970: 59, Photo 56; Arad, Amiran 1978: Pl. 25:3 (juglet with unpierced, degenerated handles); 'Ai, Callaway 1980: 91, Fig. 62:19.
9. III8L235N0441, mortar, basalt.
10. VIIA12L246N0464, pendant, stone, resembling an ear of grain.
11. III9L268N0459, cylinder bead, horizontal and oblique markings, collars defined; cf. Bab edh-Dhra', Rast and Schaub 1989: 474, Fig. 270, dated within Early Bronze II, *ibid.* 441; and Tell Halif, in Jacobs *et al.* 1988: Pl. 36 B, dated within Early Bronze Age I.

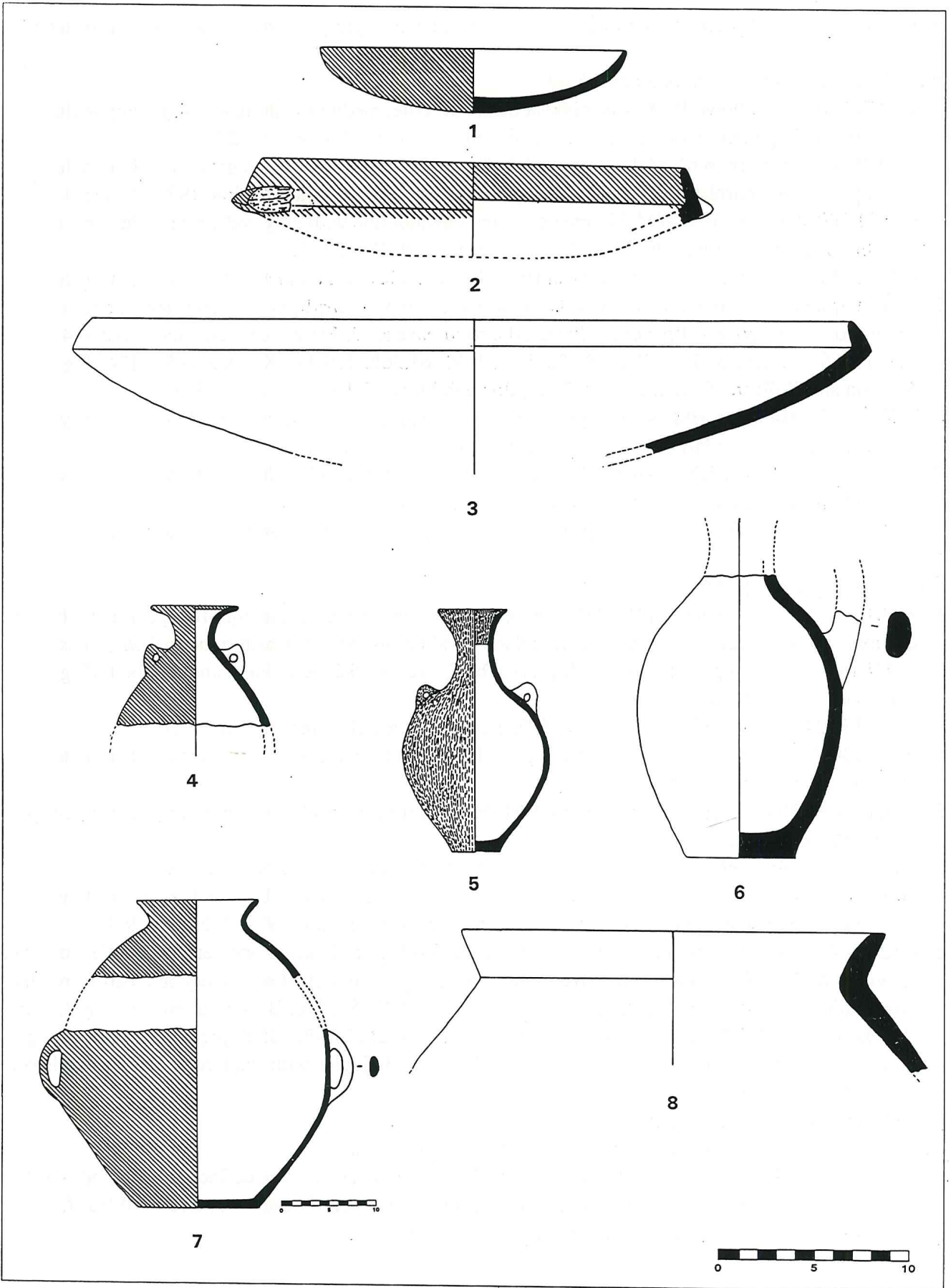


Fig. 11. Early Bronze Age II, Squatter Phase.

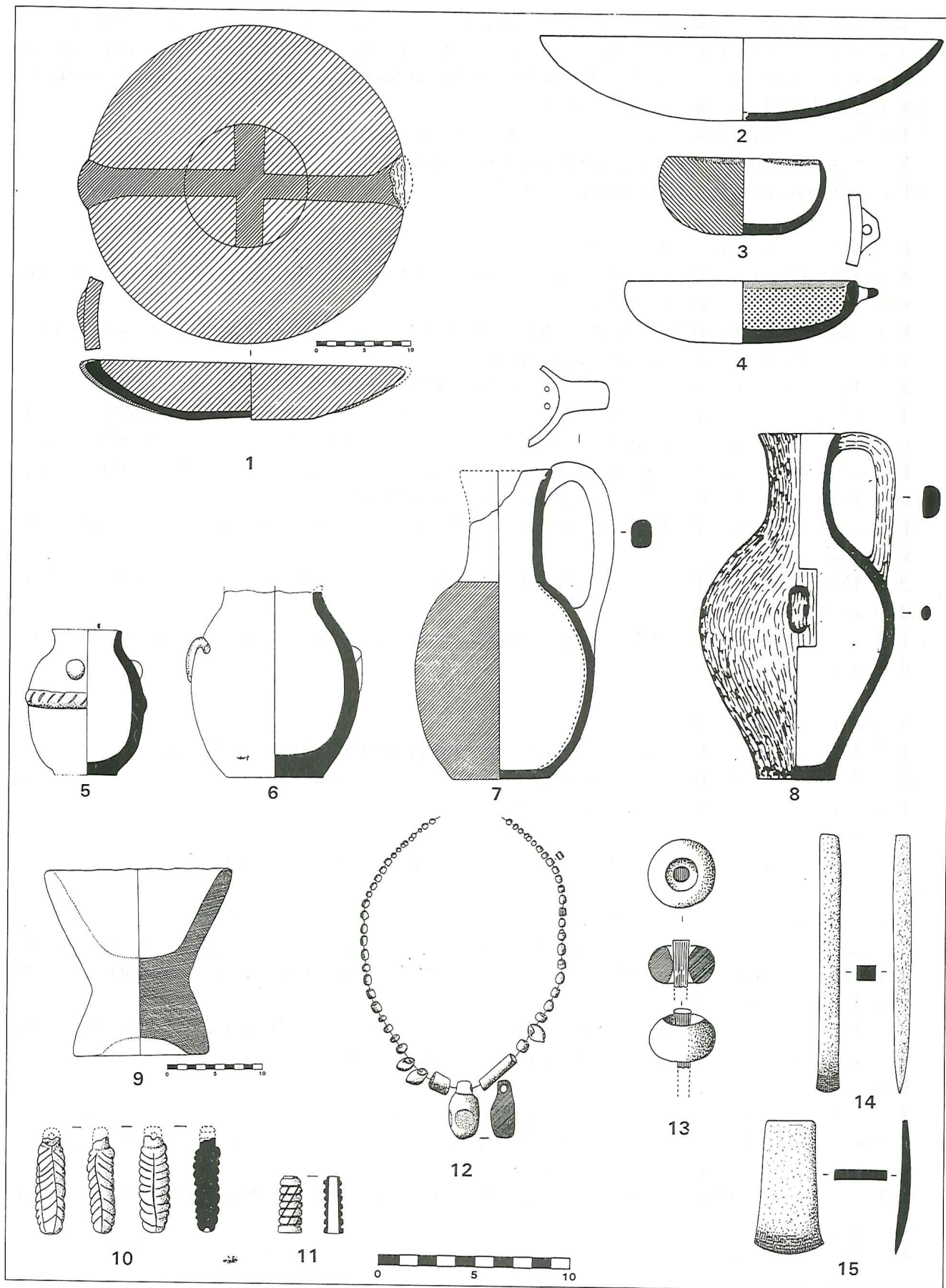


Fig. 12. Early Bronze II, Main Phase.

12. VIIB12L247N0405, necklace consisting of 52 beads and one pendant (arranged on drawing); pendant of dark grey burnished stone; beads: four black stones, ten light greyish brown stones, three pinkish orange stones, one white stone, 14 white and six turquoise paste (faience ?) beads, four pierced shells, nine beads of shell and one of a sea-anemone.
13. VIIB12L241N0381, spindle whorl, basalt, with preserved wooden pin.
14. III8L235N0391, bronze chisel; e.g. the smaller chisel in Amiran 1978: Pl. 71:4.
15. III7L229N0376, bronze axe; Amiran 1978: Pl. 71:2.

Fig. 13. *Early Bronze Age II. Main phase.*

1. III8L235N0442, jug, WM?, MH, light brown, grey core, medium with grey and white inclusions, orange red slip, pattern hand burnished.
2. VIIA12L246N0453, jug, HM, MH, buff, medium with multicoloured inclusions, red slip, pattern hand burnished; V-shaped potmark inside handle on body.
3. IX3L223/3, amphoriskos, HM, M, buff, fine, red slip, vertically hand burnished.
4. VIIA12L272N0472, spouted jar, HM, M, greyish buff, coarse with white and grey inclusions, SS, brownish red grain wash; Arad, Amiran 1978: Pl 42:3; Bab edh-Dhra', Schaub 1981: 109, Fig. 16:22.
5. VIIA12L246N0395, jar, HM — neck and rim WM, M, pinkish buff, greyish buff core, medium coarse with grey and white inclusions, SS, orange red grain wash; trident-shaped potmark below neck.
6. VIIA12L244N0393, jar, HM/WM, MH, yellowish buff, medium coarse with grey and white inclusions, SS, red grain wash.
7. IX3L223N0476, jar with four miniature handles and rope relief, H, HM — neck and rim WM, pinkish buff, fine, thick pinkish buff slip.
8. VIIA12L246N0450, jar, HM, MH, orange buff, greyish buff core, coarse mainly white inclusions, SS, red grain wash.

Fig. 14. *Early Bronze Age I B.*

1. IX8L265/1, bowl-lamp, WM, M, pinkish buff, very fine, pinkish red slip out, burnished.
2. IX7L259/1, bowl, HM, MH, buff, very fine, brown slip on rim and out.
3. IX6L250/2, bowl, WM, MH, buff, greyish buff core, medium with white and grey inclusions, SS, red wash out.
4. IX6L250/3, bowl-lamp, WM, MH, buff, medium mainly grey inclusions, pinkish buff slip, spots of red paint in.
5. III9L270/1, platter, WM, S, buff, fine, red slip on rim and out, wheel burnished out.
6. VIIA4L260/1, juglet, HM, M, buff, medium coarse with grey inclusions, orange red slip on rim and out; see form at Arad, Amiran 1978: Pl. 9:7; Bab edh-Dhra', Schaub 1981: 91, Figs. 6-9; Jericho, Kenyon and Holland 1982: 227, Fig. 84:11.
7. III9L268/1, small hole-mouth jar, WM, S, light brown, medium fine with white and grey inclusions, red slip on rim and out, diagonally hand burnished; Jericho, Kenyon and Holland 1982: 178, Fig. 63:44.
8. VIIB13L261/1, amphoriskos, HM, M, grey, coarse with mainly white inclusions, red slip or wash.
9. VIIB13L256/1, jar, HM — neck and rim WM, M, yellowish buff, coarse with mainly light grey inclusions, yellowish buff slip, orange red wash.
10. VIII6L196/1, jar, HM/WM, MH, buff, grey core, coarse with light grey and white inclusions, beige slip, orange red grain wash.
11. VIIB13L256/2, jar, HM/WM, MH, buff, greyish buff core, coarse with grey and white inclusions, SS, red grain wash.

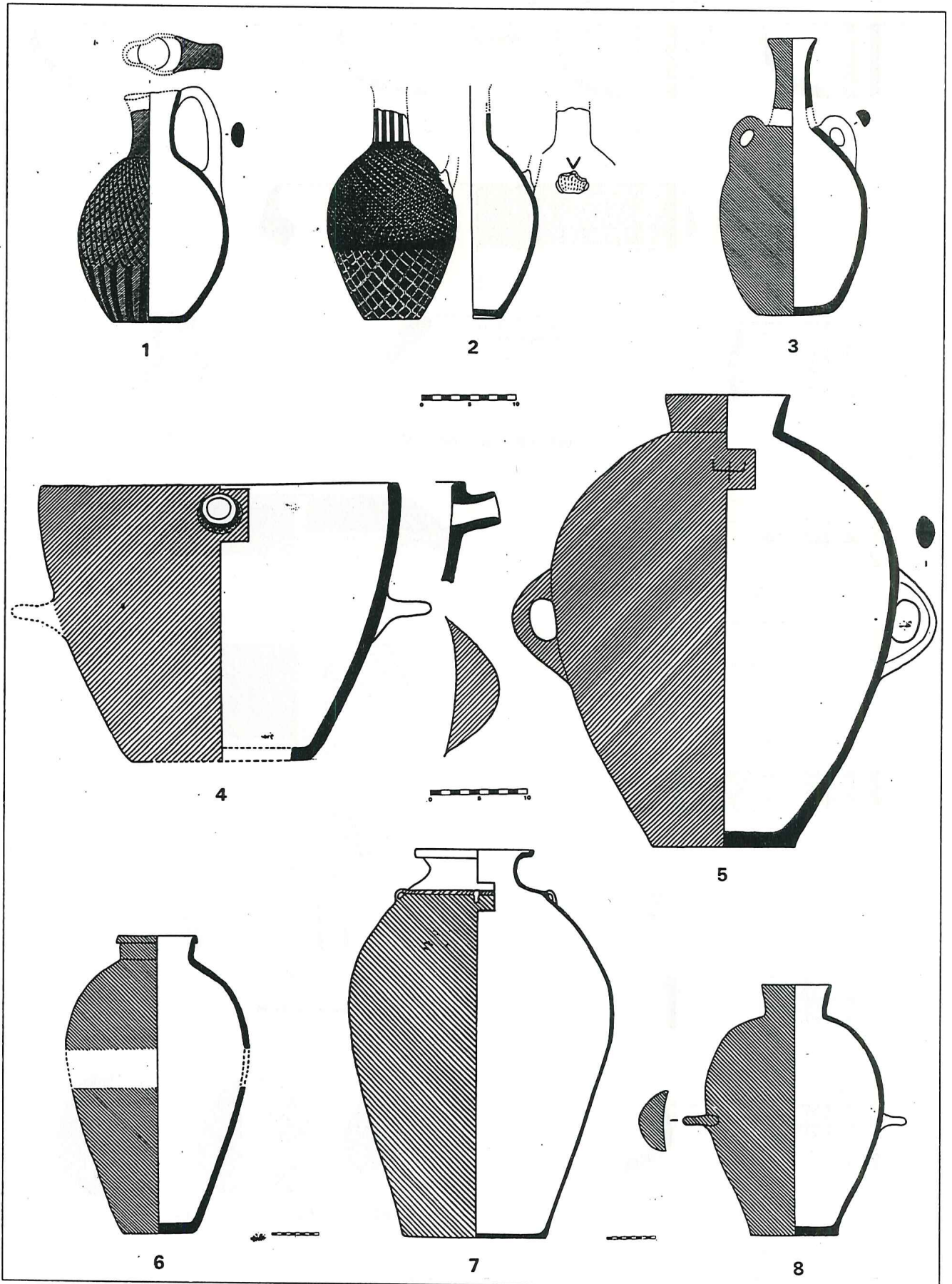


Fig. 13. Early Bronze II, Main Phase.

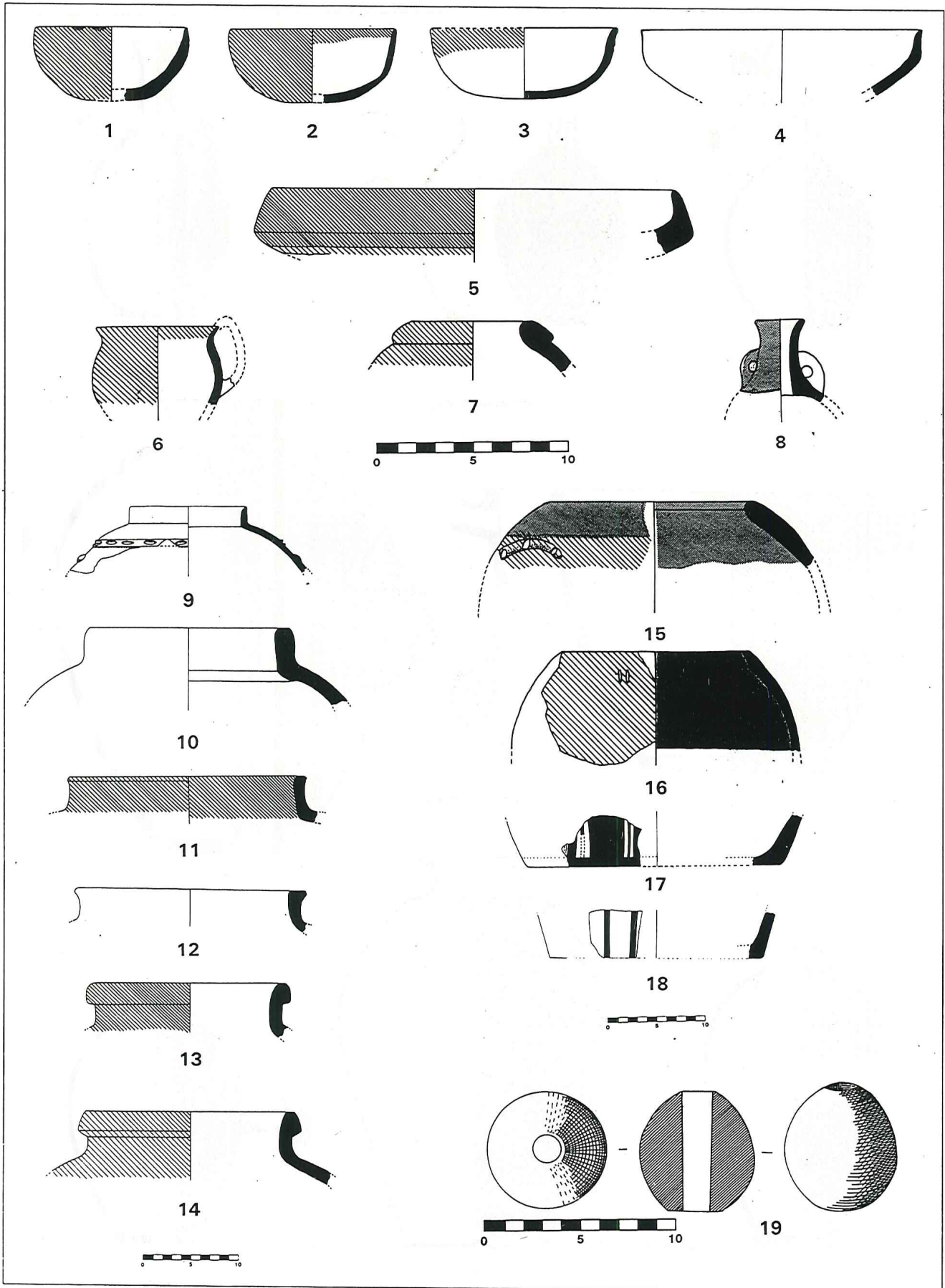


Fig. 14. Early Bronze I B.

12. VIII5L186/5, jar, HM/WM, MH, buff, grey core, coarse with grey and white inclusions, SS, red grain wash.
13. VIID8L190/1, jar, HM/WM, MH, buff, greyish buff core, coarse with grey and white inclusions, SS, red grain wash.
14. VIID8L190/2, jar, HM/WM, MH, buff, greyish buff core, coarse with grey and white inclusions, SS, red grain wash.
15. VIII5L186/3, hole-mouth jar, HM/WM, M, greyish buff, coarse with white and grey inclusions, SS, light brownish red wash.
16. VIII5L186/7, hole-mouth jar, HM/WM, M, greyish buff, coarse with grey and white inclusions, SS, light brownish red wash; II-shaped potmark below rim.
17. VIID9L203/1, jar, HM, M, greyish buff, coarse with grey and white inclusions, beige slip, black paint; see decoration at Arad, Amiran 1978: Pl. 11.
18. VIII5L186/2, jar, HM, M, buff, pinkish red core, coarse with white and grey inclusions, buff slip; dark brown paint; see decoration at Arad, Amiran 1978: Pl. 11.
19. VIIA12L260N0458, mace head, greyish buff (lime?)stone, very smooth finish out and burnished inside hole.

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1. Water channel 2; Iron Age II B/C, Subphase A (VIIAL160/L171).



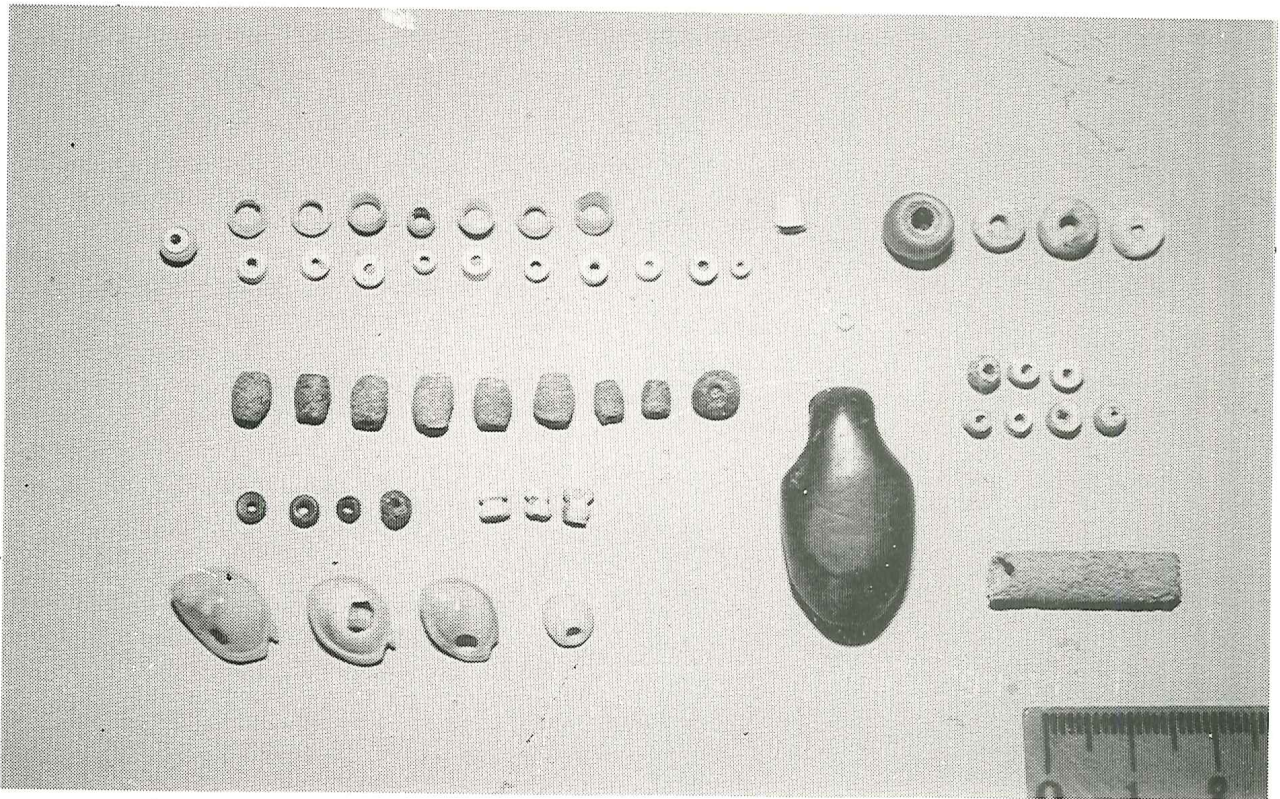
2. Destruction layer; Early Bronze Age II, Main phase (VIIA12L246).



1. Destruction layer; Early Bronze Age II, Main phase (IX3BL223).



2. Destruction layer; Early Bronze Age II, Main phase (VIII5L144).



1. Necklace; Early Bronze Age II, Main phase (VIIB12I230No405)



2. Stone Mace head (57: VIIA12L2260No458) and pestle (58: VIII6L108N0338); Early Bronze Age I B. Bone cylinder bead (59: III9L268No459) and stone pentant (60: VIIA12L246N0464); Early Bronze Age II, Main phase.