

**TALL ABŪ AL - KHARAZ**  
**THE SWEDISH JORDAN EXPEDITION 1993**  
**FOURTH SEASON PRELIMINARY EXCAVATION REPORT**

by  
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with a contribution by Alan G. Walmsley

**Preface**

Excavations were carried out at Tall Abū al-Kharaz, north of Wādī al-Yābis and about 4 km east of the River Jordan, from 5 October - 16 November 1993. The director of the expedition, as during the previous years, was the author from Gothenburg University in Sweden. Members of the team were Hikmat Ta'ani, the representative of the Department of Antiquities of Jordan from Irbid, who also acted as trench master and foreman in the field; Richard Holmgren, University of Uppsala, trench master and assistant field director, acting also as photographer and draughtsman; Anna Berggren, University of Uppsala, trench master, José Gallart, LSU Graduate School of Anthropology, Louisiana, USA, trench master; Margrét Hermanns-Audardóttir, National Museum of Iceland, trench master; Torbjörn Jansson, University of Gothenburg, trench master; Elias Markou, Nicosia, Cyprus, architect and draughtsman; Linda Mol, MA, Museum van Oudheden, Holland, trench master; Jessica Randén, University of Gothenburg, trench master; and Lilian Weman, University of Gothenburg, trench master. The team was further supported by Hassan Rahmi Abu Sami, Aladin Yousif Hasan and Badri Madi Abu Isa. Twenty skilled workers from Pella and al-Mashāre' were employed.

I would like to express my great gratitude to T.R.H. Prince Raad Zeid and Princess Majda Raad Zeid for their interest and support of *SwedJordEx*. Thanks to the generous assistance of the Department of Antiquities and its former Director-General, Professor Safwan Tell, which included the

loan of one of the Department's vehicles, the excavations were carried out successfully. Thanks are also due to H.E. Mr. Christian Bausch, Swedish ambassador to Jordan, for his sincere interest in the project. Further valuable help was received by Mrs Stefania Khalifeh, Icelandic consul to Jordan. I am also indebted to Professor Emeritus Basil Hennessy for permission to rent the Pella Dig House, and to Dr Alan Walmsley, with whose Australian team we shared the dig house during October in a good spirit. Finally I wish to thank all the team members for their hard work, which greatly contributed to the successful execution of the excavations.

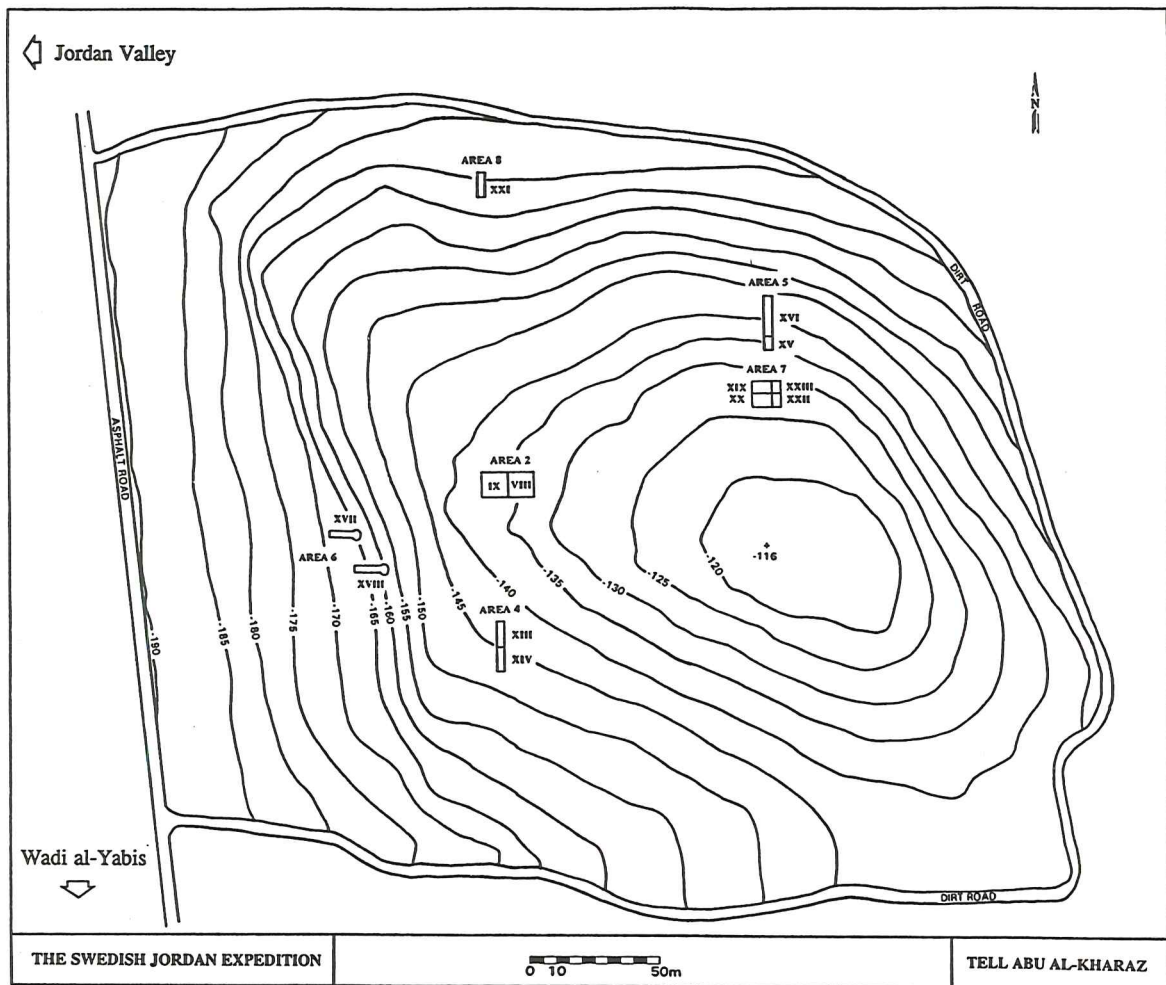
Financial support was given by the Swedish Board for Investment and Technical Support (BITS), the Gyllenstiernska Krapperup Foundation, Nyhamnsläge, Sweden, the Wilhelm and Martina Lundgren's Foundation, Gothenburg, Sweden, and the private company Polylys Com, also of Gothenburg.

**RESULTS OF THE 1993 SEASON**

**Introduction**

The main objectives of the 1993 season of excavation were (for the location of areas and trenches see Fig. 1):

1. The extension of the 1989 and 1991 excavations in Area 2, the area on the sloping west part of the tall, in order to illuminate the stratigraphy and architecture of the Early Bronze to the Iron Ages on this part of the tall (Area 2, Trenches VIII and IX). The investigation of the transitional Early



1. Tall Abū al-Kharaz 1993: areas and trenches.

Bronze I-II period, the verification of the apparent gap in occupation during the Middle Bronze Age, the beginning of the Late Bronze Age and the transition to the Iron Age were of special emphasis. The new trenches were labelled VIIIA, measuring 9 x 4.25 m, VIIIB, 9 x 2.25 m and IX, 7 x 6.25 m. These trenches are extensions of the test Trenches, VIII and IX from 1991, and Trench VIIA-D, started in 1991 and were completely excavated in 1992. The total length of the east-west section obtained in Area 2 is now 36 m. Using the grid system established in 1989, the coordinates for Trenches VIIIA-B are

LL28 and for Trench IX KK28 (see Fischer 1993: 280, Fig. 1, except for the later revised coordinates and heights in Fischer 1994). The centre of Trench VIII corresponds to E 206 110 and N 200 647  $\pm$  1 m on the Palestine Grid Coordinate System.

2. The investigation of the north part of the tall with emphasis on occupation and/or tombs (Area 5, Trenches XV and XVI; and Area 7, Trenches XIX, XX, XXII and XXIII).
3. The investigation of the south-west part of the tall with emphasis on occupation and/or tombs (Area 4, Trenches XIII and XIV).

4. The investigation of an area just below the tall to the north-west with emphasis on occupation and/or tombs (Area 8, Trench XXI).
5. The investigation of two caves in the rocky west steep slope, in order to search for burials (Area 6, Trenches XVII and XVIII).

The choice of the spots within each area was supported by an Overhauser Memory Gradiometer, GSM-19G, made by GEM Systems Inc., Canada (see forthcoming report). This high-sensitivity magnetometer/gradiometer is well-suited for archaeological surveys. It is a secondary standard for measurement of the Earth's magnetic field with a 0.01 nT (gamma) resolution, and 0.2 nT absolute accuracy over its full operating range (-40° to +60°C). Details of further electronic support and information concerning excavation and sampling techniques may be found in the preliminary reports previously published in *ADAJ* (Fischer 1991, 1993, 1994).

In the description below the results are presented area by area, and period by period from colluvial soil. When a slope is excavated, the number of strata frequently differs from place to place, that is strata with the same number from different areas do not necessarily belong to the same period.

**Area 2: Trenches VIII A-B and IX** (see section Fig. 2)

**Colluvial soil**

The colluvial soil is 20-40 cm deep. Parts of stone structures which originate from Stratum 1 are visible on the surface in the eastern part of the area.

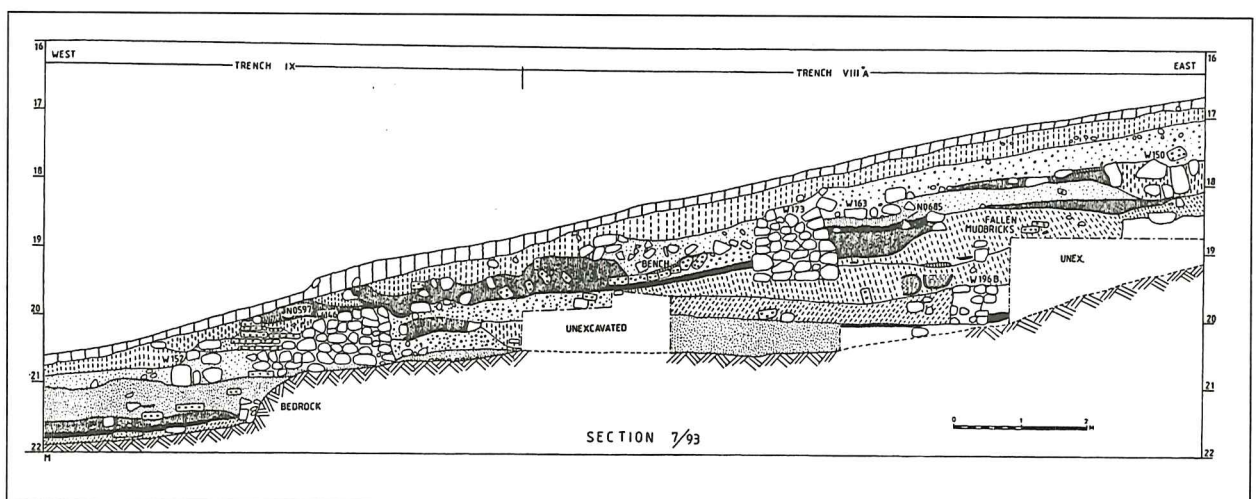
The pottery is a mixture of all the periods found at Tall Abū al-Kharaz. The Late Bronze Age is best represented in the western part (Trench IX) and Iron Age II in the eastern part (Trench VIII). Sherds from the EB I/II periods are frequently found, which is not surprising since pottery from this period is the best represented on the tall.

**Iron Age II**

*Strata 1, 2 and 3*

All three strata contain a tower, which was originally erected in Stratum 3. After being partly demolished, it was repaired with some modifications in the uppermost two strata. For reasons of clarity the following description starts with the original building in Stratum 3.

The rectangular building in Stratum 3 measures 8 x 4 m, which is approximately half the size of the tower in Area 7 (see below). It is integrated within a wall which runs north-west to south-east (W145,



2. Section of Trenches VIII and IX, Area 2.

W163), 1.2 -1.4 m wide, thereby forming a projection to the south-west. No connection with any other construction was found, which suggests that the tower was an isolated structure. The inner space, filled with disintegrated mudbrick tiles, measures 2.6 x 1.4 m. There is no entrance to an inner "room", which indicates that the structure was compact and served as an observation platform, very likely approached by a ladder. Almost no pottery or other finds except a female figurine were found within the filling (Fig. 6:1). The figurine was found in the north-eastern corner and very probably represents a foundation deposit (see the foundation deposits of the tower in Area 7 below). The figurine is of the pillar type, with a solid body made in a double mould. It was broken in antiquity with the mid-part of the body preserved. The nude female has her arms by her sides. It is carefully decorated with dark brown-black matt paint on a light yellowish-brown slip. The genitals are marked with a vertical incision, and the pubic hair triangle is painted. Three bracelets are painted on her left lower arm (cf.

e.g. Tall Bayt Mirsim, Stratum C 1500-1230 BC; Albright 1936: Pl. 26:4.). Only one of the original three bracelets on her right arm has been preserved. There is some paint on her right hand, possibly indicating further jewellery. There are three apparently decorative bands on each thigh. From the ware the figurine should be dated within the Late Bronze Age, however, the context is Iron Age II, and probably the transition Iron Age II B/C.

In the next phase, Stratum 2, the tower's northern foundation wall was extended northwards (Fig. 3). Its width is now 2.1 m. The most significant change can be seen north-east of the tower. A carefully stone-paved glacis was built. An area of 6 x 6 m of the glacis was exposed during the 1991 and 1993 campaigns. This was certainly also used as a street, which leads to the upper part of the tall. To the north-east the glacis is bordered by a water channel which turns from north-east to west (see the description and interpretation of Channel 2 in the report from the 1991 season, Fischer 1993: 282, Fig.3, and Pl.



3. Iron Age II tower from Stratum 2 , Area 2.

I:1). Traces of ash were found in the north-east corner of the tower. A preliminary date of this phase is the transition Iron Age IIB/C.

In the final phase, remains of which are partly visible on the surface, the tower was strengthened with stone buttresses to the north and west. The most significant change can again be seen north-east of the tower. The stone glacis is no longer used. A building bordered to the south by Channel 1 was erected parallel to the free-standing tower on top of the glacis and Channel 2 (see Fischer 1993: 281, Fig. 2). The distance between the tower and the new building is approximately 4 m. This space was certainly used as a road. The structure covering the glacis could possibly be explained by the need for building space due to overcrowding within the Iron Age IIC city.

#### **Late Bronze Age**

##### *Strata 4 and 5 (Figs. 8 and 9)*

Architectural remains from the latest Late Bronze Age phase, Stratum 4, were found mainly in the eastern part of Trench VIII. In the western part, Trench IX, erosion has obviously destroyed any possible constructions. A rectangular building with two rooms was found in the eastern part, built directly upon the remains of the destruction layer in Stratum 5 and partly using the foundation walls of the previous period. Its longitudinal axis points to the north-east. The main entrance is from the north-west and leads directly into the northern room. The southern room is entered from the north-east through a passage in the wall dividing the rooms. The southern room measures 4.2 x 2.2 m; the northern room continues into Trench VII A, excavated in 1991. Unfortunately Iron Age building activities have destroyed the architecture from this phase in Trench VII A and only pottery was found. A theoretical reconstruction of the building would measure 5.4 x 6.4 m with a probable continuation to the north-

east. A hearth encircled by stones has a diameter of approximately 1.6 m and lies opposite the main entrance, covering a wall from the previous Late Bronze Age period.

The earliest Late Bronze Age discoveries include two quite well preserved buildings. The building to the west lies on a lower level and is separated from the other one by a narrow passage. The excavated part suggests an outer measurement of 9 x 8 m, however it continues to the north into the section. The building is possibly "open" to the north-west, since no wall was found. On the other hand one must consider the possibility that erosion, which is quite heavy on the lowest excavated part of the site, may have destroyed a wall. The remaining outer walls are preserved to a height of 0.7 m. They are carefully plastered on the outside. Two rooms were found in the building, separated from each other by a wall which contains two postholes for wooden pillars. The north-eastern, smaller room seems to have been used for commercial purposes. It is plastered on the inside. The plaster, which is supported by a thick layer of smoothed clay on the wall, is white and quite fine, forming a sort of basin or silo inside this room. This interpretation is supported by the discovery of two large storage vessels, partly filled with grain. Grain was found everywhere in this room, which suggests that it was used as a store room. Three different floor levels were found. The south-western room is much larger and was very likely a roofed courtyard. A well preserved oven stands in its southernmost part. Many vessels were found in the courtyard, most of them of high quality. Chocolate-on-White ware dominates. One vessel is decorated with a metope pattern and shows a landing bird with a long neck (Fig. 8:1).

The building to the east lies at a higher level. It measures 9 x 7 m as reconstructed and has two rooms. The room to the north-east is a roofed courtyard. Three postholes

and stone supports for wooden pillars were found. In the middle of the courtyard is a deep pit which contains an intact jug, a cooking pot and a bowl. The entrance, 0.9 m wide, to the south-western, smaller room is from the courtyard in the north-eastern corner. It contains almost no finds. In 1989 and 1991, in the same stratum, two significant, complete vessels were found to the south-west of this building: the "double-ring-base" spouted krater close to a hearth (Fischer 1993: 291, Fig. 8:9) and the Chocolate-on-White bowl with the bird and checker-pattern decoration close to an oven (Fischer 1991: 97, Fig. 14:4). The building was destroyed by a violent fire. Ash covered the entire area of excavation.

### Early Bronze Age II

#### *Strata 6 and 7. Squatter Phases*

Stratum 6 is a stratum belonging to the latest Early Bronze Age phase which is disturbed by Late Bronze Age activities. Several pits from the latter period were found.

Stratum 7 is synonymous with the squatter occupation mentioned in the preliminary reports from the site (Fischer 1993 and 1994). Their remains are best preserved in the northern and eastern part of the area. Locus 402 is a room in a building the axis of which is roughly north-west to south-east. Three of the four foundation walls of the previous building from Main Phase II (Locus 416) were reused. However, they were originally constructed in Main Phase I (Locus 444). The length of the outer walls of the square house is approximately 4.5 m. The building may continue northwards into the section. The entrance is from the south-west. An intact, large storage jar was found still standing upright in the eastern part of the room. To the east another building was found, built on a higher level and separated from the former by a retaining wall. The retaining wall limits the plateau in front of the upper house, which continues to the east

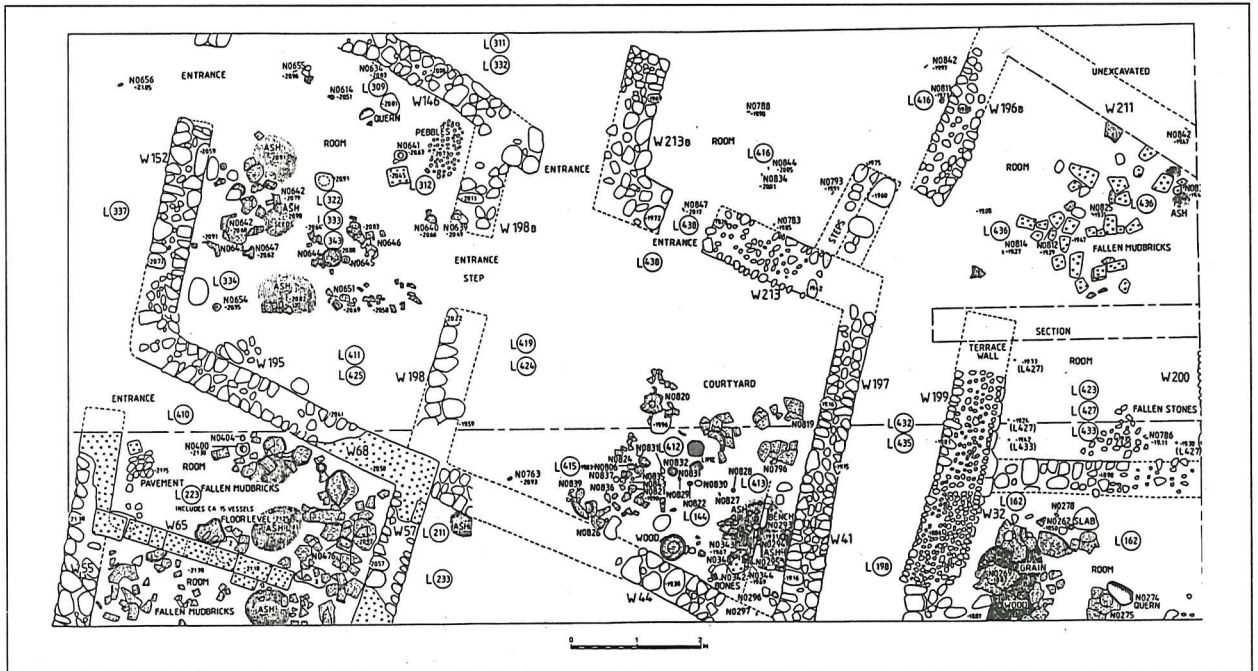
into Trench VII (Fischer 1993). The room is 4 m x 3 m and has its entrance from the south-west. It seems that the squatter occupation was of short duration. A fire ended it, and the area was abandoned for about 1000 years until the early Late Bronze Age period.

#### *Stratum 8. Main Phase II* (Figs. 4b and 10)

This and the next phase correspond to what was called Early Bronze Age II Main Phase in the previous report (Fischer 1993). Two phases of extensive occupation were found, which makes a subdivision into I and II necessary. Main Phase II succeeds Main Phase I without any significant interruption.

The complex of buildings, partly excavated in 1989 and 1991, was exposed further. It was covered by a thick layer of ashy debris. The part of the complex which was excavated this season is built on three artificial terraces. The average thickness of the foundation walls is 0.6 m. On the lowest terrace to the west three aligned rooms were exposed. The room, or possibly a roofed courtyard, to the north is approximately 5 m x 4 m. It has an entrance from the north-west. To the east there is a stepped passage leading to the next upper terrace. The room contains at least ten vessels, mainly storage jars including one which is metallic-hard fired and decorated with combed incisions, but also vessels of the "Abydos shape" and Metallic Burnished ware (Fischer *et al.* 1995: Fig. 9:3, but this is from the courtyard on the middle terrace). Two smaller rooms lie to the south, one of which, approximately 4 x 2 m, was excavated in 1991. It contained fifteen or more complete vessels.

The courtyard on the middle terrace measures 5.5 x 4.5 m. It could be approached via the above-mentioned steps. More than twenty complete vessels were found within the courtyard and on a bench



4. Early Bronze Age II, Main Phase II, Area 2.

in the eastern part, all embedded in ash and the remains of the roof construction. The courtyard can also be reached through an entrance in the north-western corner. There is an entrance to the room in the north (Locus 416; see above). Two rooms lie south of the courtyard, but they are not entirely excavated.

The upper terrace is approached by steps from the northern room. The northern part of this terrace could not be interpreted satisfactorily: it may be an outside area. A terrace wall, neatly built of small stones and pebbles, is to the south. Two rooms were built against it. In the northern room a platter was found with a red painted motif on the inside below the rim. This appears to represent a male figure carrying some sort of object (animal?; Fig. 10:2). In the southernmost room two storage jars and a wooden beam, undoubtedly a roof support, were found. A conflagration brought this phase to an end.

*Stratum 9. Main Phase I (Fig.11)*

On the lower terrace to the west, in the north-western corner of the trench, a room with a variety of stone tools was exposed

indicating a kind of workshop. Buried in a pit at the level of a destroyed foundation wall on the east side of the workshop an interesting find was made: an "Abydos-shaped", pattern-burnished jug containing fourteen flint tools, one spherical stone and one bone tool (Fig. 11:1).

The room to the north on the middle terrace (Locus 444) has an entrance from the south-west and steps in the south-east leading to the upper terrace. Quite a few vessels were found in this room, some of which were intact. Two rooms lie to the south. The east one, 3.6 x 2.4 m, has its entrance from the north-west. It is built against the terrace wall to the east.

The north "room" on the upper terrace, very likely a roofed courtyard approximately 5 x 4 m, contained eight vessels, stone pestles and other tools of stone, together with a spearhead and an axe of copper alloy, both in surprisingly good condition. In the south-eastern corner was revealed a considerable amount of grain. There is a bench separating the courtyard from another room, which was excavated in 1991. An area on a higher terrace, containing sev-

eral rooms and a great variety of complete items (Trench VII), also belongs to this phase and was excavated in 1991 and 1992. This phase, too, was brought to an end by a violent fire.

### Early Bronze Age I

The scanty architectural remains of approximately eight rooms on three terraces were found built directly on bedrock. Further studies of the finds and continued excavations of this phase will reveal more important data. There is, as has been pointed out in the earlier reports, no abrupt break between this and the succeeding phase.

### Area 7. Trenches XIX, XX, XXII and XXIII

Area 7 lies on the first plateau north of the top plateau. It is limited to the north by a steep slope leading down to the next plateau, Area 5, and to the south by a slope leading up to the summit of the tall. The area contains the adjoining Trenches XIX, measuring 5 x 5 m (Grid VV25), XX, 5 x 4 m (Grid VV24), XXII, 3.5 x 5 m (Grid WW25) and XXIII, 3.5 x 4 m (Grid WW24). The centre of the crossing baulks between these four trenches corresponds to E 206 196.5 and N 200 683.5 ± 1 m.

### Colluvial Soil

The colluvial soil is 20 - 40 cm deep. A partly destroyed wall crossing Trenches XX and XXIII west-north-west is visible in the disturbed colluvial layer. The date of the wall is problematic. Late Iron Age II is a *terminus post quem*. In the south-west of the area, Trench XIX, a deep pit, approximately 5x3 m, dug in Islamic times, was found (see the separate report by Alan Walmsley on the associated pottery, Fig. 12). It may have been dug to find building material for the construction of a building upon the uppermost plateau, and thereafter used to dump rubbish.

The pottery represents the majority of the periods found at Tall Abū al-Kharaz. The most recent pottery is Abbasid.

### Iron Age II

#### *Strata 1 and 2* (Figs. 5; 6:4-7; 7)

The late Iron Age II period is well represented in the area with finds which are astonishingly well preserved considering their closeness to the surface. A building complex of the "atrium-type", containing four rooms and a partly roofed courtyard, was exposed. The exposed walls suggest a square house, 9 x 9 m (outer measurements). The rooms to the north are built against the northern tower wall, which originates from the preceding period.

In the north-west part of the building lies Room 1. It is a small room measuring 1.5 x 2.4 m (inside) with a hard-packed clay floor. In its north part there is a bench, approximately 0.15 m high and 0.4 m deep. There is an about 1 m wide stone filling between the bench and the reused wall to support the older wall. The entrance to the room is from the west via a step built of stone slabs. The threshold is part of the western outer wall. The room contained a variety of vessels, two pithoi leaning against the walls of the north-west and north-east corners, a two-handled ovoid jar, two jugs with trefoil mouths, one of them with a rounded base and the other with a ring-base, and a cooking pot. The room was obviously used for storage of liquids and food.

Room 2 lies to the south-east. It is separated from Room 1 by a wall, 0.4 m wide. It contained among other finds an iron arrow-head. Its southern part was destroyed by pits dug in Islamic times (see above). It seems to have had the same function as Room 1.

Room 3 in the south-east corner of the building is open (to the north-west) to the central courtyard. It measures approximate-





5. Iron Age II house from Strata 1 and 2, Area 7.

ly. 2.8 x 2.4 m. A posthole surrounded by stones with a bottom stone for a wooden roof support was found in the centre of the opening. In the north-west corner there is a table built of flat stones. A number of finds had fallen down from the table or once been put around it. A complete tripod basalt bowl and approximately fifteen iron arrowheads with parts of the wooden shafts preserved were among them. It is very likely that the arrows were deposited in a quiver which was not preserved. A number of vessels were found around the table: a bowl, three jugs with rounded bases of which two have an ovoid and one a long cylindrical body, and a lamp. Many unfired clay loom

weights were found just outside the room, suggesting the position of a loom. Close to them was a carinated and perforated bowl on three stump legs used as a sieve. The room seems to have been used as a combined living and working room.

The neighbouring Room 4 to the north-east is 3.8 x 2.0 m (reconstructed). It is not entirely excavated. The 1 m wide entrance is from the south-west. The eastern tower wall from the preceding period was reused as a bench in the eastern part. A cooking pot and a large crudely hand-made bowl were found on the bench. A juglet and a one-handed jug with a trefoil mouth and ring-base were found close to the entrance.

The jug contained 41 astragali. A broken jar in the southern part seems to have contained about forty unfired loom weights. A large jar was found in the north-west corner close to the city wall. The room was used for preparing food and for storage.

The area between Rooms 1-2 and 3-4 is a partly roofed courtyard measuring 7 x 3.5 m (cf. Hazor Stratum VA, Yadin *et al.* 1960: 50). Collapsed ceiling was found in the northern part. In the north-western part a storage jar, a jar with a cup-like spout, two jugs (one of them of the hard-fired decanter type), a black juglet and a cooking pot with an unusual low carination were excavated. The majority of the other courtyard finds were discovered outside Room 4 and near its entrance: three cooking pots, a seven-spouted lamp with its stem missing, a decanter jug, and a jar with ten astragali. Many iron arrowheads, spindle whorls, weights and stone tools including flints were found in the courtyard and elsewhere in the rooms. The character of the finds suggests that the courtyard was used for various purposes, food preparation and weaving clearly being among them.

Outside the building and north of the steps leading to Room 1 two basalt querns were found on top of a 0.5 m high, 1.5 m long and 1 m wide stone bench. The position of the querns suggests that they could be used simultaneously by two persons kneeling to grind grain. A black burnished juglet and a Black-on-Red jug came from the same area.

Ash and collapsed parts of the ceiling were found everywhere in that building, which was apparently destroyed by fire. It is unlikely that the building was destroyed by an earthquake since the foundation walls were found quite intact. The inhabitants of this house did not return after the catastrophe and this particular area was abandoned until Islamic times. A tentative date of the destruction of this building is the beginning of Iron Age IIC.

### *Stratum 3*

The function of the building from this period is totally different from the later structure, being a tower. The square building is 8 x 8 m (reconstructed) and is partly built upon the foundation walls of another tower from the preceding period (see below). The tower is larger than the previous one and does not follow its direction. Its longitudinal axis is still roughly north-east to south-west but turned more towards the north compared to the older tower. The constructors reused only Wall 188 in the north-west and Wall 187A in the north-east from the preceding period. The 0.7 m wide entrance is from the north-west where a threshold of mudbricks was found. There may be another entrance in the north-east. In Trench XXIII the south-eastern corner of the tower is quite intact. Its foundation is constructed as follows: the distance between the outer wall, 0.5 m wide, and the inner wall, 0.4 m wide, is 1.6 m. The space in between is stone-paved, but leaving a 0.4 m wide "gutter", which was perhaps used for drainage. The central room is square, with a side length of 4 m. The middle-part of the north-eastern outer wall, W 177A, is supported towards the steep slope by a outward projecting stone buttress. A tentative date is transitional Iron Age IIB/C.

### *Stratum 4*

The dimensions of this somewhat smaller tower are 7.6 x 6.6 m. It reuses the uppermost part of the Late Bronze Age city wall in the north-east (W 187A). The other walls are new.

The south-eastern part of the tower in Trench XXIII is quite intact. The distance between the outer wall, 0.5 m wide, and the inner wall, 0.4 m wide, is 1.2 m. The space in between is stone-paved, but no drainage gutter was found in this phase. The central room measures approximately 2.8 x 2.8 m. The middle part of the north-eastern outer

wall, W 187A, is supported towards the steep slope by a projecting stone buttress. A stone-paved area was found north-west of the building, bounded on the west by a wall which is visible in the section. The building was destroyed by fire and ash was found everywhere.

Two interesting foundation deposits were discovered. Within the north-western wall (W 188) a complete and intact one-handed mug was found (Fig. 6:3). It was perfectly integrated within the wall and standing on a bed of clay. It is indeed surprising that it could survive in that position considering that tons of stone and soil were built upon it. The other foundation deposit is a burnished amphoriskos with black and red decoration (Fig. 6:2) found together with a basalt spindle whorl above the stone pavement in the south-eastern part of the building. It is broken but complete. In the central room a jar stand built of stones and mudbrick and a black and red decorated jug were found close to the north-western inner wall. A tentative date is transitional Iron Age IIB/C.

### Late Bronze Age

#### *Strata 5 and 5A*

The well constructed stone foundation of a Late Bronze Age city wall was found. It follows the natural course of the tall. It is about 2 m wide and preserved to a height of 0.7 m. A lime-plastered bench was found in Trenches XXIII and XX. It is rounded and approximately 0.2 m high. There is no certain connection with the city wall. Its function is not yet clear. However, it seems to have served as a working table for the production of flint tools: to the south of the bench was a concentration of unfinished flint blades and flakes. The whole area inside the city wall was used as a quarry during the Iron Age and only minor parts of Late Bronze Age walls were left undisturbed.

The earliest pottery from this stratum be-

longs to the Late Bronze Age I period. Some examples are of Chocolate-on-White ware: a bowl of high quality with a stylized tree-decoration on the inside and two chalices. An unusual piece is a biconical jug of bichrome Chocolate-on-White ware with a stylized tree. Chequer-pattern decoration occurs. An example of Bichrome ware is a jug with a metope decoration on the shoulder and a stylized tree enclosed within the metopes. A juglet and cooking pots belong to the same period. Cypriot imported ware is represented by a Base-Ring I bowl (for the ware see Åström 1972: 137, for the shape *ibid.* Fig. XLVII:7 and 9). A straight-sided cup with a concave profile resembles the Mycenaean Vapheio and "Straight-sided" cup (e.g. Mountjoy 1986: 15-16; Late Helladic I-IIA), but it has no handle. The ware is definitely not of Mycenaean origin.

From the second part of the Late Bronze Age period there are two craters and a Pilgrim flask with a cup-like mouth with incised decoration.

#### *Stratum 6*

At the end of the season the most recent Early Bronze Age stratum was reached. Well preserved walls and typical Early Bronze Age II (possibly beginning of EB III) pottery were found. Once again it has been confirmed by the findings from this area that there is a gap in occupation between the Early Bronze Age II/III period and the beginning of the Late Bronze Age.

#### **Area 4: Test Trenches XIII and XIV**

Area 4 lies on the south-west part of the tall. The area is quite flat, with its most southern part gently sloping to the south. The entire southern part of the tall contains no steep slopes and is consequently quite exposed to enemy attacks. In order to protect this vulnerable side there ought to be some kind of defence system. There are in fact remains of at least seven walls visible

below the uppermost city walls and parallel to them. They are equally distributed over an area of ca. 100 x 300 m (see Fischer 1991: 73-82).

Two test trenches were opened in Area 4: Trenches XIII (Grid KK34) and XIV (Grid KK35), both measuring 2 x 9.5 m. The centre of the baulk between these two trenches corresponds to E206 095.5 and N200 582.5 ± 1 m. These trenches are on at a point where one might expect a defensive structure, for example a tower. Close to the north section and in the middle of Trench XIII (W 142) there are two destroyed architectural constructions, once foundation walls. In a depression between them an accumulation of soil was found, containing six strata with Early Bronze Age pottery. Ashy clay was found just below the first course of stones.

The remainder of the trenches were covered only by a thin layer of colluvial soil just above bedrock. It seems that this part of the tall suffered from heavy erosion. Stones from the Early Bronze Age structures in this area were probably used during later periods to build the walls, parts of which are described above. These walls could then possibly belong to the Late Bronze Age which should be considered as a *terminus post quem*.

The pottery from these strata is exclusively Early Bronze Age I/II. Red Bur-nished, different wash and "Abydos" wares were found. The shapes include bowls, platters, jugs, juglets and storage jars.

#### Area 5: Test Trenches XV and XVI

Test Trench XV measures 2 x 6 m on the upper part of the northern steep slope (Grid WW 23), and test Trench XVI, 2 x 15.70 m. Their position is north of the tall's summit, on the steep slope (XV) and on the second terrace (XVI) below it, north of Area 7 (Grid WW 21-22). The centre of the baulk between these two trenches corresponds to E206 197.5 and N200 704 ± 1 m.

A number of retaining walls were found

in Trench XV. They rested directly on bed-rock in a single stratum. The walls which run horizontally follow the natural course of the tall with filling below them in vertical clefts. These walls are supported by perpendicular walls. In Trench XVI three layers of washed-down soil were found, about 3 m deep in its most northern part on the edge before the next steep slope. A wall following this edge was therefore expected. However, such a wall could not be found. The shape of the edge may be due to the shape of the underlying natural bedrock or the wall may be missing within the area. Trench XVI contains some destroyed walls running in approximately the same direction as those in the trench above. It seems that the function of these walls was to retain constructions higher up the tall. No evidence of tombs could be found. However, this plateau might possibly reveal houses at other spots.

The pottery of all the strata is exclusively of the later part of Early Bronze Age I and the earlier part of Early Bronze Age II, not taking into account the colluvial soil which contained washed-down pottery from Late Bronze I to Iron Age. A jar with a ledge handle decorated with diagonal red-dish-brown broad bands, another with a collar-like rim and with a slightly inverted rim resembling the spouted jars found during the 1991 and 1992 excavations, as well as one with a flared rim and one hole-mouth jar, the last two with pot marks, should be mentioned.

#### Area 6: Trenches XVII and XVIII

This area lies approximately in the centre of the rocky steep slope to the west. Two caves are visible from below the tall. The first cave and its extension to the west were labelled Trench XVII (Grid EE30) and the second Trench XVIII (Grid FF31).

#### *Trench XVII: Tomb 2 (Cave 1)*

The cave was already observed in 1991.

A trench was opened covering the entire cave, 2 x 3 m, and 2 x 10 m extending to the west. The coordinates of the centre of the first cave, henceforth called Tomb 2, are E206 038 and N200 627 ± 1 m (see Tomb 1, Fischer 1994).

The colluvial soil measures 30-40 cm. Two strata could be recognized below it. The elliptical cave measures approximately 1.5 x 2 m, part of which was cut into the rock.

Stratum 1 contains a straight row of stones separating the inside of the cave from the slope. It enclosed scattered remains of at least two individuals, one male (?), about 45 years old and one child, 5-6 years old. A bronze pin should be mentioned among the finds. The pottery is mainly of the Late Bronze Age (about 80%), but Iron Age and Early Bronze Age is also represented.

Stratum 2 produced a toggle pin and mainly Late Bronze Age pottery. A body sherd of a Grey Burnished bowl was also found in Stratum 2.

The finds in this cave lead to the conclusion that it has been used as a tomb during two periods, very likely during the Late Bronze Age. It is also clear that both burial phases were looted during later periods.

#### *Trench XVIII*

The centre of the second cave has the coordinates E 206 046 and N 200 613 ± 1 m. This cave turned out to be a natural cave. It contained two animal channels and unstratified sherds washed down from the steep slope.

#### **Area 8: Test Trench XXI**

This area lies just below the tall on its north side. Test Trench XXI (Grid KK16) measures 2 x 10 m. The south-east corner of the trench corresponds to E 206 088 and N200 762 ± 1 m. No architectural remains were found. Early Bronze Age pottery dom-

inates.

#### **A Short Note on the Accelerator Radiocarbon Dates from Tall Abū al-Kharaz (Table 1)**

Twelve samples were taken, five from the 1991 season of excavation and seven from 1992, for radiocarbon dating by the Accelerator Unit at Oxford University. Nine samples, eight of charcoal and one of charred bone, could be dated. The calibrated dates showing the radiocarbon determinations converted into calendar years are presented in Table 1. The remaining three samples failed in the pretreatment and combustion stages.

Samples 1-8 are from the later part of Early Bronze Age I and the Early Bronze Age II period, and Sample 9 from Iron Age I, according to the pottery.

Samples 1, 3 and 4 are from contexts where vessels were discovered which definitely belong to the "Abydos-shaped" and "Metallic Burnished" groups (Fischer *et al.* 1995). These vessels are contemporary with the First Dynasty in Egypt and were found at Abydos, Saqqara and elsewhere (see e.g. Kelly 1976). Sample 8 comes from a context where the "Light-Faced-Painted" ware was present.

It is worthy of note that all dates of the Early Bronze Age II Samples 1, 4 and 8 - with 95.4% (2 sigma) confidence and a probability of 89-99% - are between 3020 BC (lowest date of Sample 1) and 3514 BC (highest date of Sample 4; lowest date of the same sample is 3096 BC). The 2 sigma date for Sample 3 is 3335-3153 BC (with 39% probability) and 3140-2920 BC (with 61% probability).

Even without detailed consideration of the contexts of the samples within the Early Bronze Age II period, we can say with confidence that all dates, except the latest date of Sample 3, are higher than 3000 BC (cf. e.g. Hassan 1980).

**Table 1:** Accelerator radiocarbon dates from Tall Abū al-Kharaz

<b>1. DATE OxA-4329 : 4475+/-60BP</b>			
1 sigma			
3331BC (0.47)	3224BC	3190BC (0.14)	3156BC
3133BC (0.24)	3074BC	3070BC (0.14)	3037BC
2 sigma			
3346BC (0.89)	3020BC	2991BC (0.11)	2925BC
<b>2. DATE OxA-4330 : 4440+/-60BP</b>			
1 sigma			
3297BC (0.25)	3237BC	3173BC (0.01)	3170BC
3106BC (0.44)	3020BC	2992BC (0.30)	2925BC
2 sigma			
3335BC (0.28)	3211BC	3201BC (0.09)	3153BC 3139BC (0.64) 2918BC
<b>3. DATE OxA-4331 : 4445+/-60BP</b>			
1 sigma			
3300BC (0.28)	3235BC	3178BC (0.04)	3165BC
3108BC (0.42)	3022BC	2988BC (0.26)	2926BC
2 sigma			
3335BC (0.39)	3153BC	3140BC (0.61)	2920BC
<b>4. DATE OxA-4332 : 4600+/-65BP</b>			
1 sigma			
3500BC (0.23)	3453BC	3436BC (0.02)	3430BC
3379BC (0.38)	3306BC	3231BC (0.19)	3184BC
3161BC (0.18)	3115BC		
2 sigma			
3613BC (0.01)	3600BC	3514BC (0.99)	3096BC
<b>5. DATE OxA-4333 : 4360+/-60BP</b>			
1 sigma			
3036BC (1.00)	2907BC		
2 sigma			
3299BC (0.05)	3236BC	3176BC (0.01)	3166BC 3107BC (0.94) 2876BC
<b>6. DATE OxA-4334 : 4435+/-65BP</b>			
1 sigma			
3296BC (0.08)	3275BC	3270BC (0.13)	3238BC
3105BC (0.44)	3014BC	3000BC (0.35)	2923BC
2 sigma			
3335BC (0.36)	3153BC	3140BC (0.64)	2916BC
<b>7. DATE OxA-4335 : 4405+/-65BP</b>			
1 sigma			
3095BC (1.00)	2919BC		
2 sigma			
3332BC (0.17)	3221BC	3192BC (0.04)	3155BC 3136BC (0.78) 2890BC
<b>8. DATE OxA-4336 : 4540+/-70BP</b>			
1 sigma			
3353BC (0.29)	3293BC	3280BC (0.05)	3266BC 3239BC (0.66) 3103BC
2 sigma			
3499BC (0.04)	3455BC	3379BC (0.93)	3028BC 2976BC (0.03) 2930BC
<b>9. DATE OxA-4337 : 2910+/-65BP</b>			
1 sigma			
1201BC (0.09)	1179BC	1166BC (0.91)	998BC
2 sigma			
1296BC (0.01)	1286BC	1267BC (0.99)	911BC

**Islamic pottery from Tall Abū al-Kharaz**  
by Alan G. Walmsley (Fig. 12)

The small selection of Islamic pottery from Trench XIX (see above) featured in this report reflects the limited range of ceramic wares and forms recovered from Tall Abū al - Kharaz in 1993. Three wares were identified: Islamic Cream ware (incorporating "Khirbat al - Mafjar" ware), a coarse gritty ware used for cooking vessels and Dark Grey ware. These wares constitute three of the nineteen early Islamic wares identified at nearby Pella (Walmsley forthcoming, wares 7/18, 13 and 14), where they all occur in an Abbasid context (Walmsley 1991).

Ten examples were selected to represent the excavated material (Fig. 12), and are described in the catalogue below. Cream ware jars and bowls were prevalent (Figs. 12:1-6), and were joined by cooking vessels (Fig. 12:7-9) and a large ceramic tub (Fig. 12:10). The utilitarian, domestic character of the pottery is apparent: jars for water and storage, bowls for eating and drinking, cooking and mixing vessels. The catalogue lists a number of parallels from Pella, Jarash, and "Khirbat al- Mafjar", all of which lie within reasonable distance of Tall Abū al-Kharaz. These sites were chosen because of their (mostly) reliable ceramic chronologies. The dates range from the mid-eighth to tenth centuries AD, with many

comparisons to Pella material from the later phase of the Islamic town centre, provisionally placed in the second half of the ninth century. The Jarash North Theatre excavations provide interesting mid-eighth century comparisons. There is, however, now some doubt as to the late Umayyad attribute for this material, and an early Abbasid (second half of the eighth century) date may be more satisfactory. The presence of an applied 'turban' handle on a Cream ware jar (Fig. 12:1) and a trimmed (pared) Cream ware base (Fig. 12:5) particularly recommends a ninth century date for the Tall Abū al-Kharaz corpus. The absence of any glazed, red and white painted, Kerbschnitt (cut, incised and painted), or incised/moulded cream wares could be taken to suggest that the Tall Abū al-Kharaz Islamic deposits belong to the first half of the century, although it is dangerous to draw any firm conclusions based on negative evidence due to the small size of the collection.

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CATALOGUE OF ILLUSTRATED POTTERY AND OTHER FINDS

Description/abbreviations: identification number (trench/stratum/locus/find number), shape, HM (hand-made pottery includes techniques as pinching, drawing, mould-modelling and coiling; no further distinction is made in this report), WM (wheel-made pottery includes wheel thrown and turntable 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; 1933: 633-634), slip (SS=self slip) and surface treatment, and some parallels.

*Fig. 6. Tower foundation deposits: Area 2 (1); Area 7 (2-3). Finds from Iron Age II house, Area 7 (4-7), see also Fig.3*

1. VIII A3L309N603, figurine made in a double mould, H, light yellowish-brown, medium coarse with black inclusions, yellow fine slip, black decoration; cf. Tell Beit Mirsim, Albright 1936: Pl. 26:4.
2. XXII3L53N754, amphoriskos, WM, M, light brown, medium fine with multicoloured inclusions, orangish-buff slip, red and black decoration, burnished; cf. Tall Abū al-Kharaz, Fischer 1994, Fig. 3:4; Tell el-Far'ah, de Vaux 1951: 414-415, Fig. 11:20, Pl. XIV:2 and Chambon 1984: Pl. 46:8, Niveau 7d, 9th-8th century BC.
3. XX4W188N773, mug, WM, H, light brown, medium coarse with mainly grey inclusions, light brownish-red slip, red wash ?
4. XX1L6N675, juglet, WM, M, dark grey, fine, black slip, once burnished; cf. Zayadine 1968: 581, Fig. 7.
5. XX1L10N626, juglet, WM, M, dark grey with grey core, medium-fine, black slip, vertically burnished; cf. Zayadine 1968: 581, Fig. 7.
6. XXII2L42N740, juglet, WM, H, greyish-brown, medium-fine, yellowish-brown slip, red paint.
7. XXII2L40N739, bowl, basalt, turned.

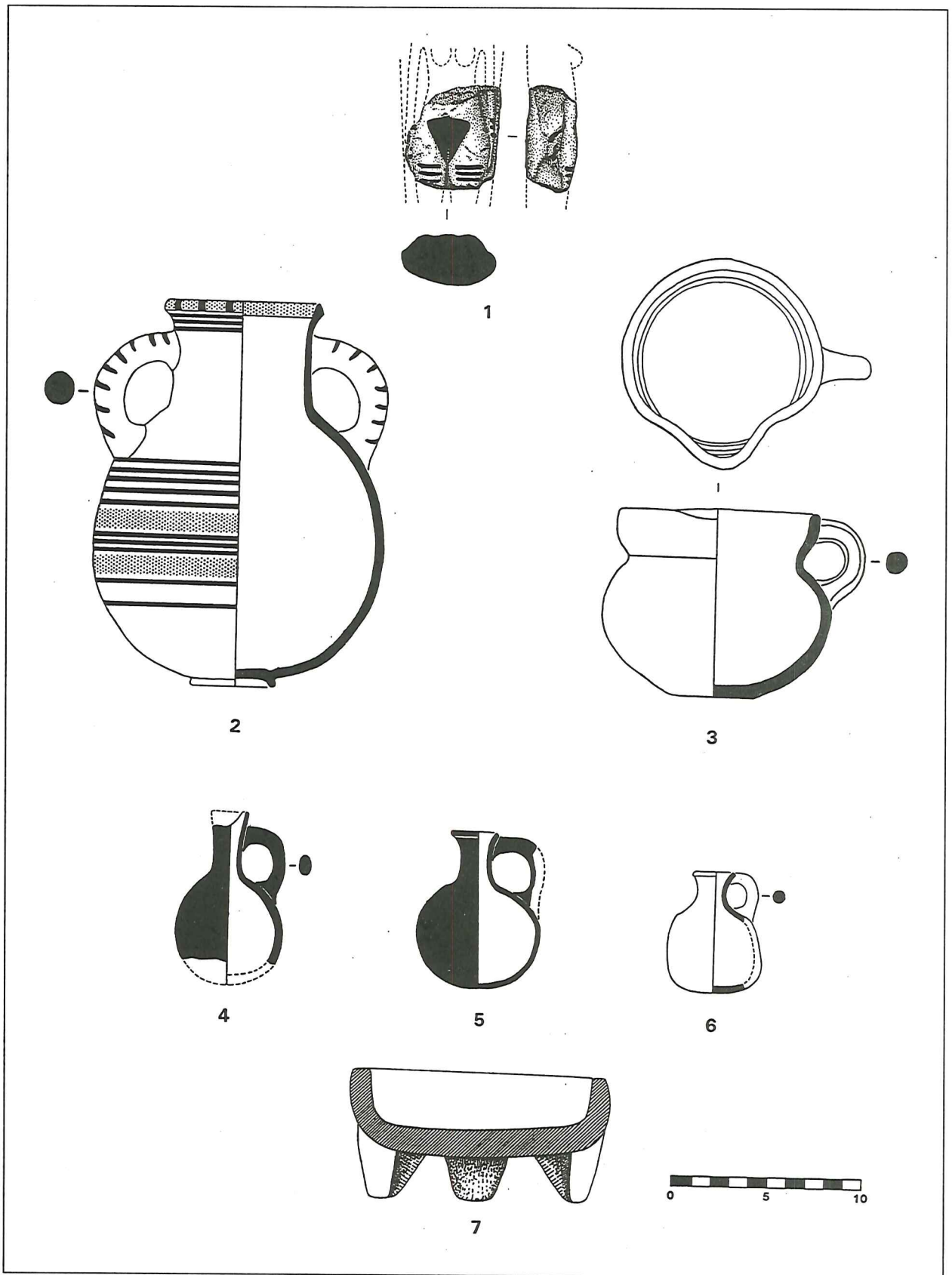
*Fig. 7. Finds from Iron Age II house, Area 7.*

1. XX1L10N658, cooking pot, WM, M, dark reddish-brown, coarse with black and grey inclusions, reddish-brown slip.
2. XXII2L40N744, perforated bowl on three stump legs, WM, MH, yellowish-brown, coarse with white inclusions, SS.
3. XIX1L2-1, perforated bowl on three stump legs, WM, H, yellowish-brown, medium-fine with some medium-large grey inclusions, orangish-brown slip.
4. XXII242N730, WM, H, reddish-brown with grey core, medium-fine inclusions, pinkish-yellow slip; contents: 41 astragali.
5. XX1L6N665, amphoriskos, WM, M, pinkish-orange, medium-fine mainly grey inclusions, thin yellow slip, brown paint.

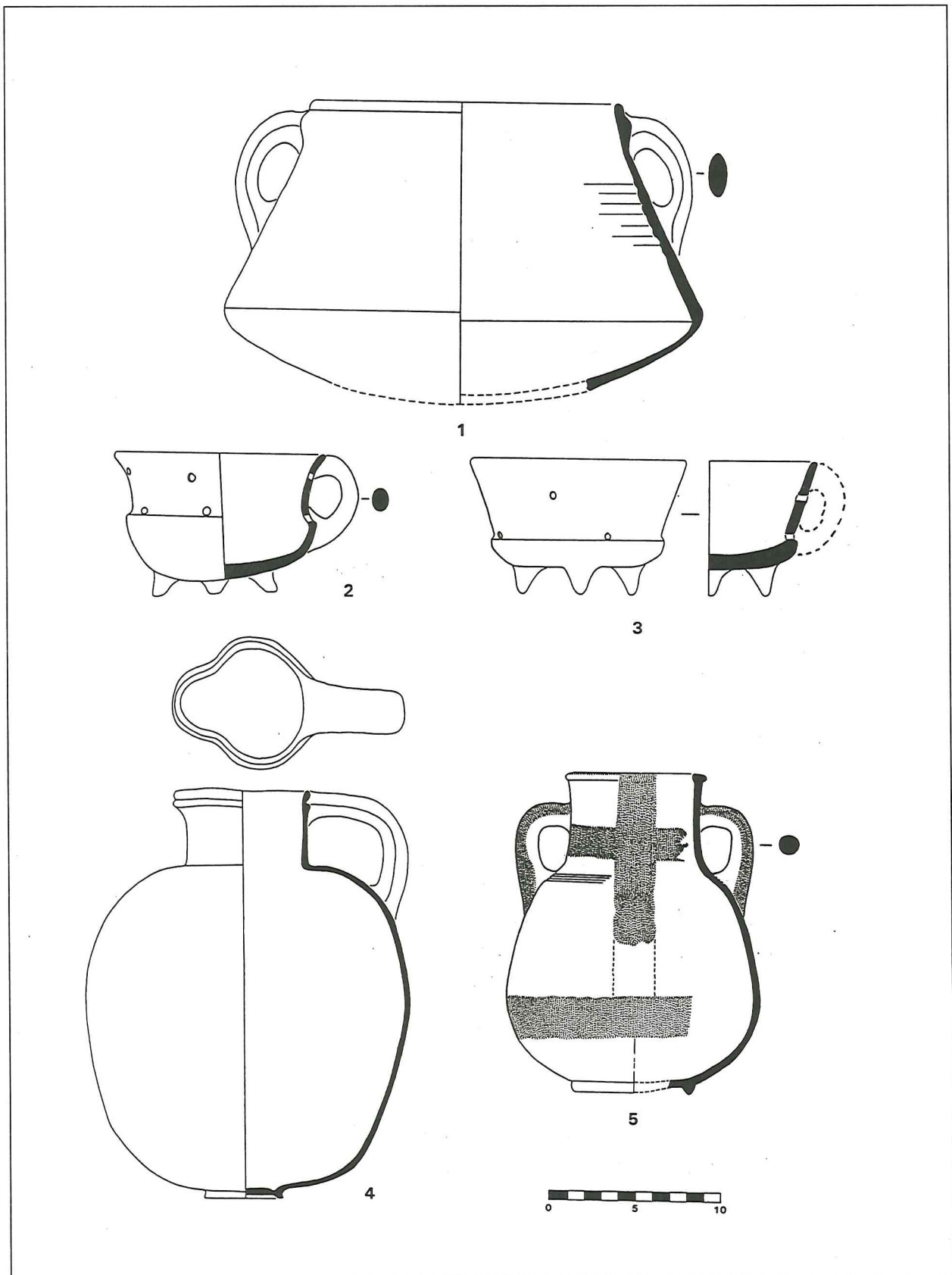
*Fig. 8. Chocolate-on-White pottery from Late Bronze Age I building, Area 2.*

1. IX2L406N790, biconical jug, WM, H, light yellowish-brown, medium fine with a few dark grey inclusions, pink slip, burnished, matt chocolate brown decoration incl. a bird.
2. IX2L292-2, amphoriskos, WM, H, light brown, medium coarse with mainly white inclusions, burnished, matt chocolate brown decoration; cf. Tell el-Far'ah, de Vaux 1951: 579, Fig. 9:10-12.
3. IX2L292N598, amphora, WM, H, reddish-orange, grey core, coarse with white and black inclusions, thick yellowish-white slip, burnished, matt chocolate brown decoration.

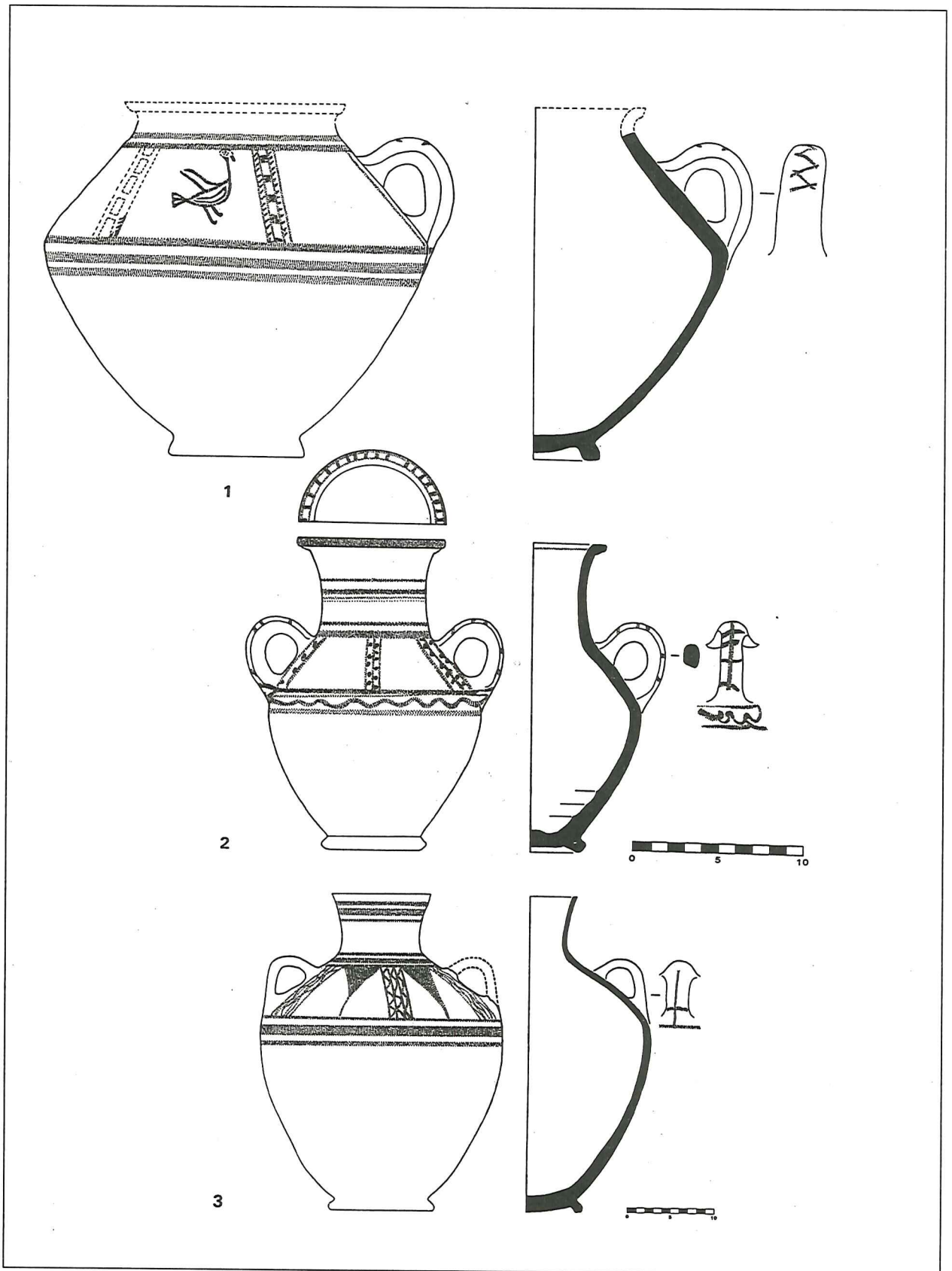




6. Two tower foundation deposits: Area 2 (1); Area 7 (2-3). Finds from Iron Age II house, Area 7 (4-7).



7. Pottery from Iron Age II house, Area 7.



8. Chocolate-on-White pottery from the Late Bronze Age I building in Area 2.

*Fig. 9. Chocolate-on-White pottery from Late Bronze Age I building, Area 2 (1-4); Late Bronze Age II jug, Area 2 (5).*

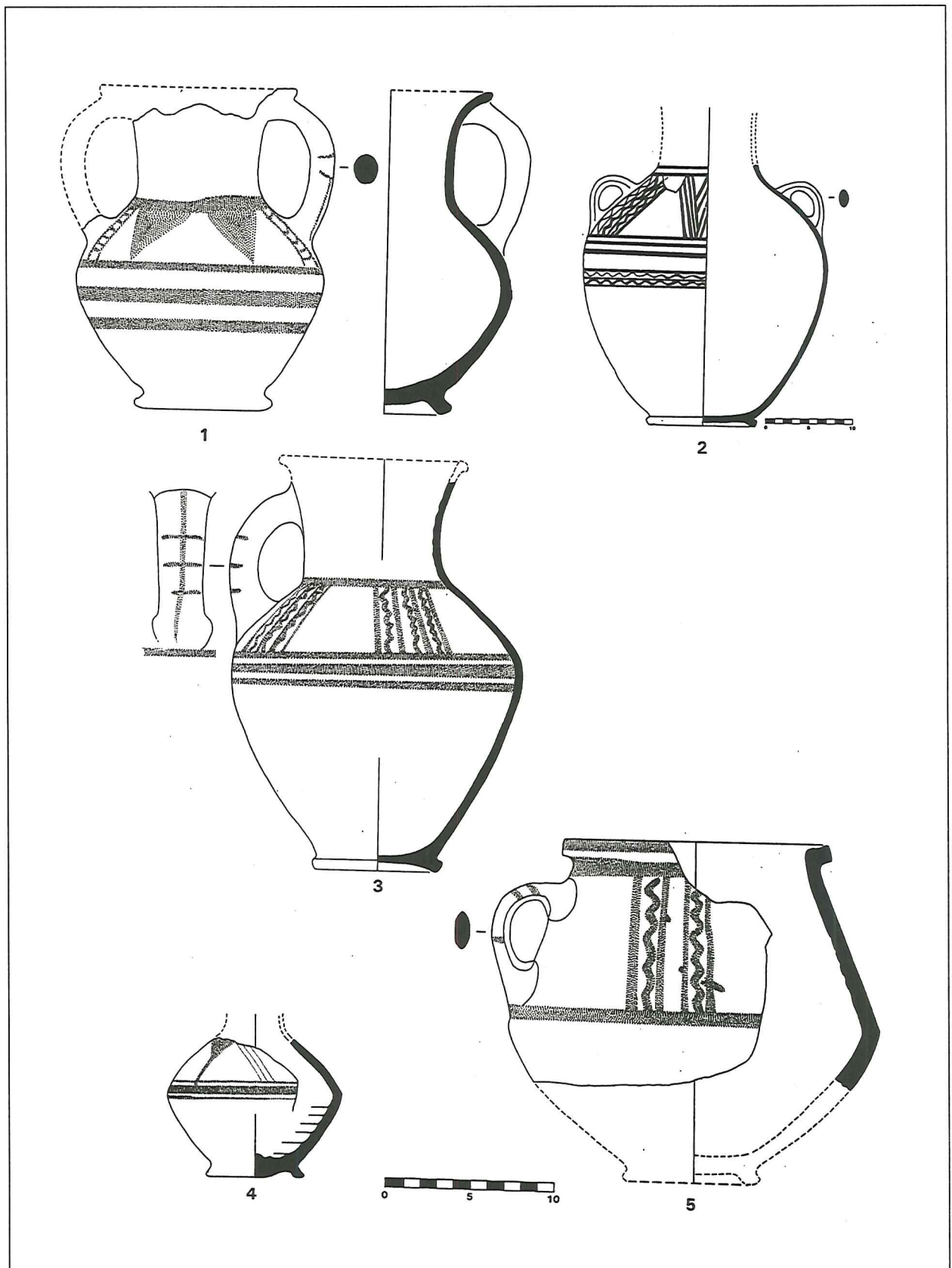
1. IX3L293N602, amphoriskos, WM, H, light brown, thick dark grey core, medium coarse with some multicoloured inclusions, thick pinkish-white slip, burnished, matt chocolate brown decoration.
2. IX2L292N841-1, jug, WM, M, yellowish-brown, coarse with mainly dark grey inclusions, burnished (?), matt chocolate brown and orangish-brown decoration.
3. VIII B5L367N686, jug, WM, H, yellowish-brown, coarse with mainly dark grey inclusions, beige slip, burnished, matt chocolate brown decoration.
4. IX4L312N611, juglet (amphoriskos?), WM, H, reddish-grey, medium-coarse with mainly white inclusions, thick yellowish-white to pinkish-white slip, burnished, matt chocolate brown decoration.
5. VIII A4L363N685, biconical jug, WM, H, yellowish-brown, medium-fine with some multicoloured inclusions, beige slip, burnished, matt chocolate brown decoration (resembles Chocolate-on-White pottery).

*Fig. 10. Early Bronze Age II pottery, Main Phase II.*

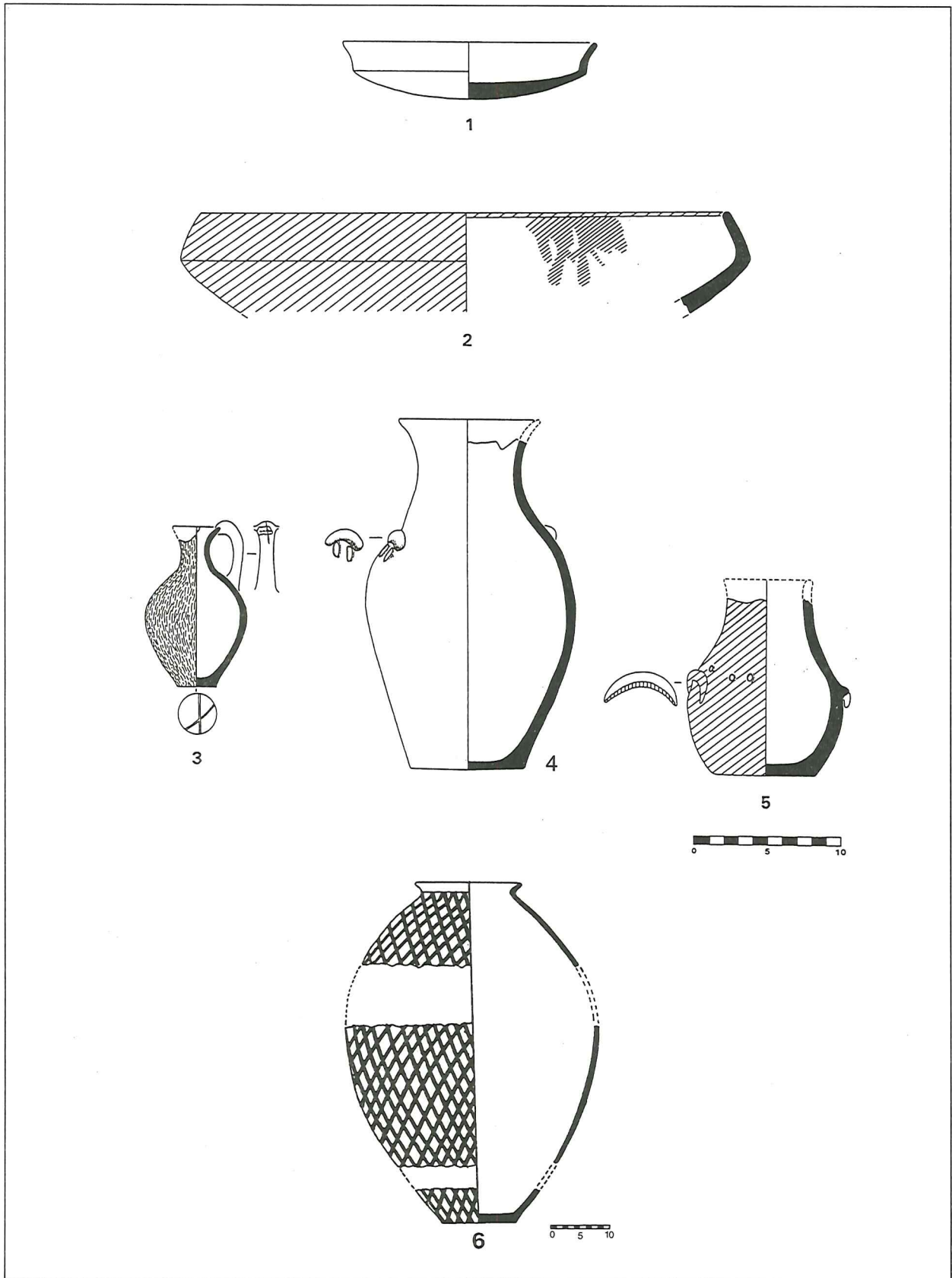
1. VIII B8L412N832, small platter, WM, M, light brown, coarse with multicoloured inclusions, brownish-red slip int. and ext.
2. VIII B8L427-1, platter, WM, H, pinkish-brown, thick light grey core, coarse with multicoloured inclusions, thick pinkish-yellow slip, red paint ext./rim and figural paint int.
3. VIII B8L412N796, juglet, HM, neck and rim WM, greyish-brown, medium-fine with a few brown inclusions, metallic burnished; two pot marks: cross on upper part of handle made before firing, cross on base after firing.
4. VIII B8L412N839, jug, WM, H, greyish-orange, yellowish-grey core, coarse with white and black inclusions, yellow slip, red wash; two degenerated half-moon shaped ledge handles and below each handle two vertical impressions.
5. VIII B8L412N764, juglet, HM, S, light brown, coarse with multicoloured inclusions, red slip; two degenerated half-moon shaped ledge handles and dot impressions forming a wavy line.
6. IX5L322N642-1, storage jar, HM/WM, medium-hard, yellowish-brown, coarse with dark grey, black and white inclusions, pinkish-yellow paint, reddish-brown net pattern.

*Fig. 11. Early Bronze Age II pottery, Main Phase I.*

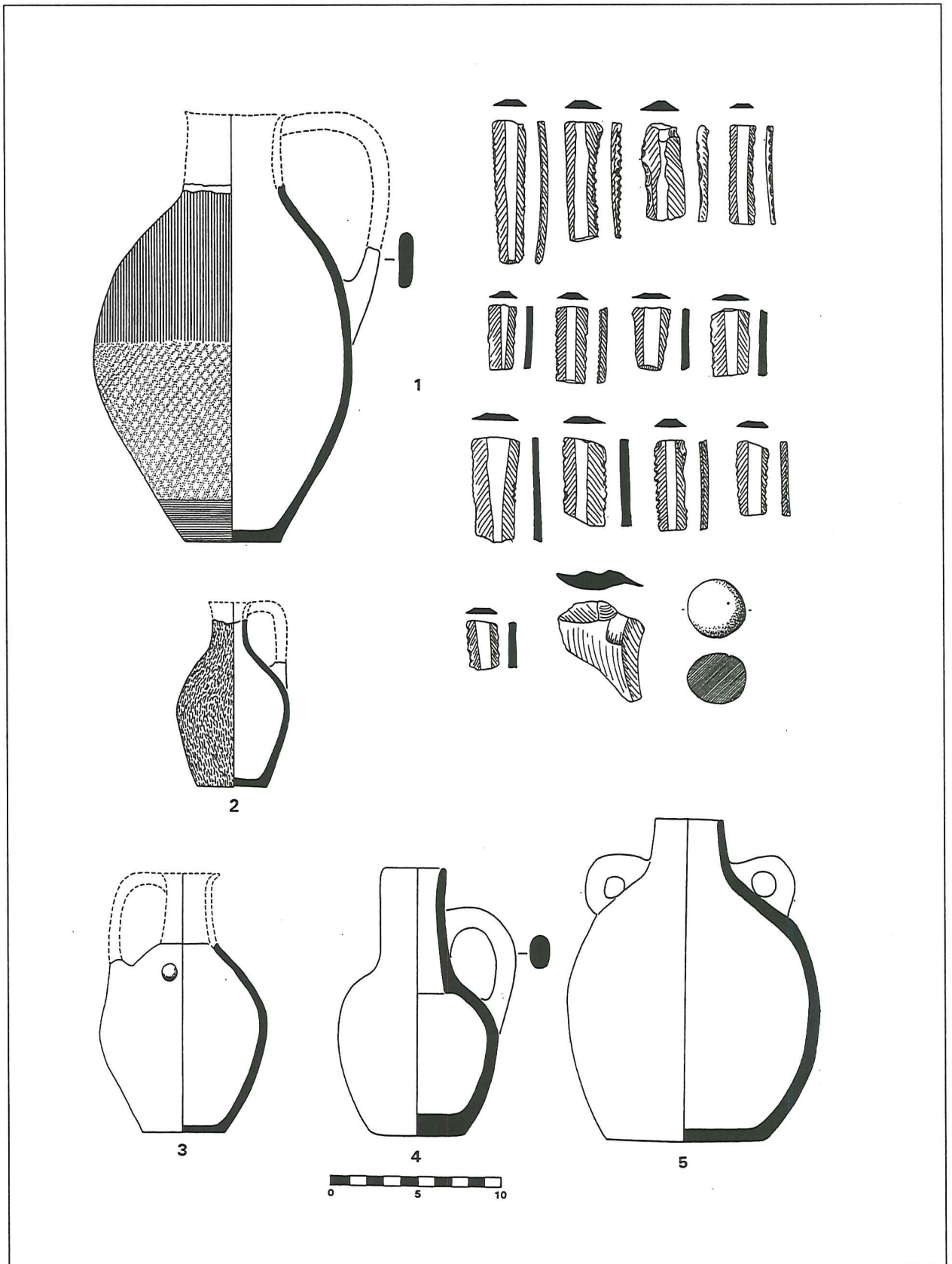
1. IX6L343N688, jug, WM/HM, MH, light pinkish-brown, medium-coarse with dark grey inclusions, orangish-brown slip, red paint, pattern burnished (three zones). Contents: 14 flint tools, one spherical stone, one bone tool (not in drawing).
2. VIII B9L440N823, juglet, HM/WM, H, orange, medium with multicoloured inclusions, metallic burnished.
3. VIII B9L434N818, jug, HM/WM, light brown, medium coarse with multicoloured inclusions, red slip, vertically burnished, knob decoration; upper part broken in antiquity, reused.
4. VIII B9L434N815, jug, HM/WM, M, light brown, medium coarse with mainly grey inclusions, light yellowish-brown slip, traces of red paint.
5. VIII A9L444N866, HM/WM, M, light brown, coarse with multicoloured inclusions, SS, traces of red wash; upper part of neck probably broken off.



9. Chocolate-on-White pottery from the Late Bronze Age I building in Area 2 (1-4); Late Bronze Age II jug, Area 2 (5).



10. Early Bronze Age II pottery, Main Phase II, Area 2.

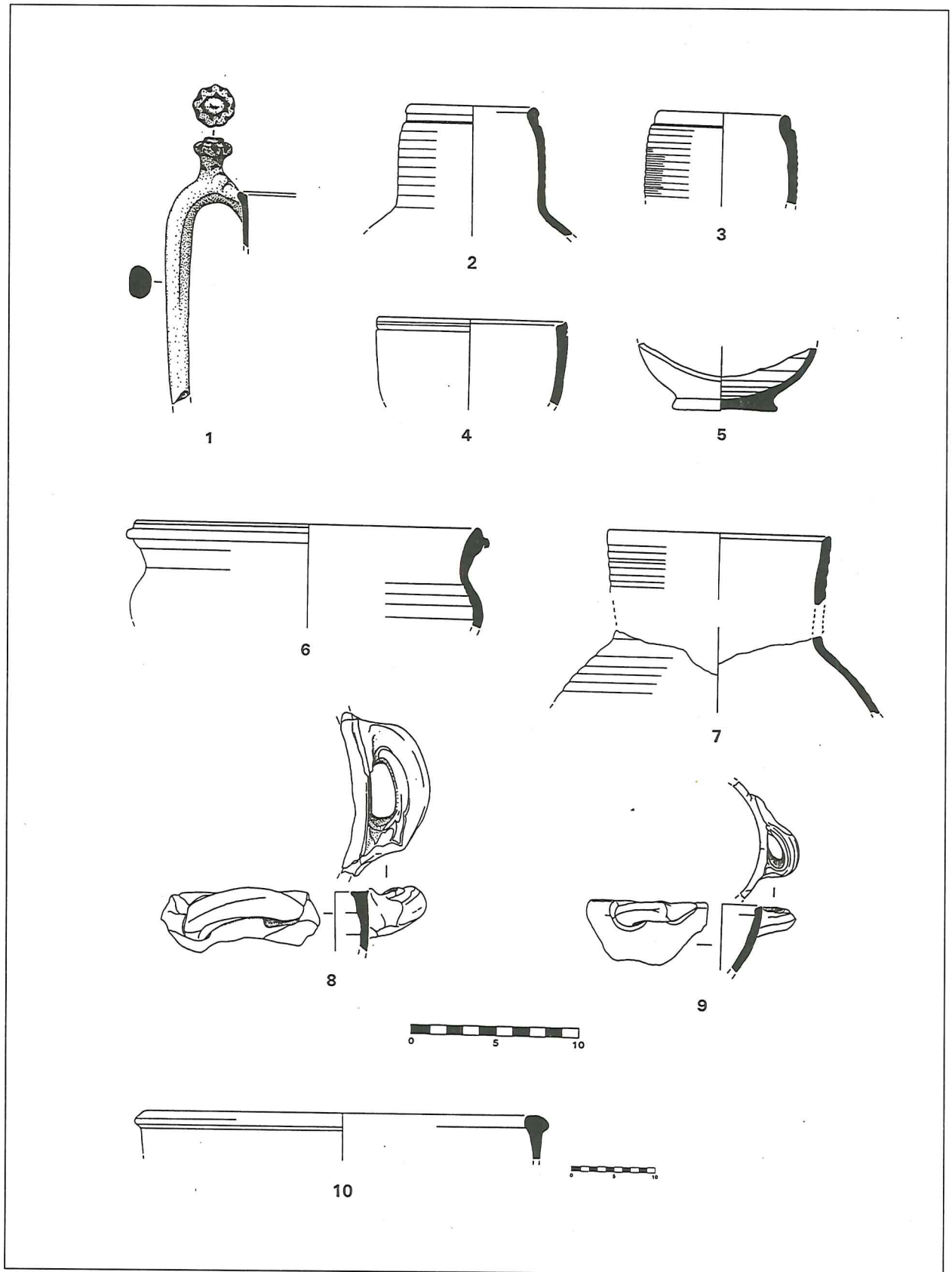


11. Early Bronze Age II pottery, Main Phase I, Area 2.

*Fig. 12. A selection of 9th century AD pottery. 1-6: Cream ware; 7-9: Coarse (Cooking) ware; 10: Grey ware.*

1. XIXIL2-2, jar, rim-handle.  
Fabric: Very pale yellow throughout, with fine grey and brown inclusions.  
Form: Applied 'turban' on handle.  
Parallels: 'Khirbat al-Mafjar', Baramki 1944: 103, Fig. 16.1-3 (Whitcomb 1988: 55, Fig. 1:B, redated AD 900-1000).
2. XIXIL2-3, jar, rim.  
Fabric: Patchy very pale orange to yellow ext., pale orange int., light brownish-orange core. Very fine white and grey grits.  
Form: Shallow ribbing ext. with deeper broad groove below rim.  
Parallels: Pella, Walmsley 1991: 158, Fig. 8:6 (2nd half 9th cent.).
3. XIXIL2-4, jar, rim.  
Fabric: Light yellow throughout, with fine light brown and white inclusions. Lightly aerated.  
Form: Deep groove below rim ext., with medium-fine ribbing on neck.  
Parallels: Pella, Walmsley 1991: 154, Fig. 4:7 (2nd half 9th cent.).
4. XIXIL2-5, bowl, rim.  
Fabric: Very pale brownish-yellow throughout, with fine to medium-fine light grey and brown inclusions. Lightly aerated.  
Form: Groove below rim ext. Body plain.  
Parallels: Pella, Walmsley 1991: 154, Fig. 4:9 - no incision (2nd half 9th cent.).
5. XIXIL2-6, jar, disk base.  
Fabric: Very pale yellow throughout, fine ware with mostly small but some medium-sized light grey and light orange grits.  
Form: String-cut base, trimming on lower body ext., rilling int.  
Parallels: Pella, Walmsley 1986: 186, Fig. 9:4 (late 8th-mid 9th cent.; Walmsley 1991: 157, Fig. 7:2 - base shape only (2nd half 9th cent.)).
6. XIXIL2-7, bowl, rim and body.  
Fabric: Very pale yellow throughout, with fine and occasionally medium-sized white and grey grits; soft and very aerated.  
Form: Out-turned rim with broad groove, shallow ribbing ext., ribbing int.
7. XIXIL2-8, cooking pot, rim and neck.  
Fabric: Dark reddish-brown int. and ext., purplish-brown core. Numerous medium-sized white, grey and transparent inclusions.  
Form: Ribbing on neck and body ext.  
Parallels: Pella, Walmsley 1991: 153, Fig. 3:12 (late 8th-early 9th cent.).
8. XIXIL2-9, casserole, rim and handle.  
Fabric: Dark reddish-brown ext., reddish-brown int. Gritty and coarse with numerous light to dark brown inclusions. Handle blackened on underside.  
Form: Horizontal loop handle.  
Parallels: Pella, Walmsley 1991: 159, Fig. 9:4 (2nd half 9th cent.); Walmsley 1993: Fig. 23:7 (mid-9th cent.).
9. XIXIL2-10, casserole, rim-handle.  
Fabric: Finer mix, orange-brown ext., brown int., with numerous small off white and transparent inclusions.  
Form: Horizontal loop handle with groove along top.





12. A selection of 9th century AD pottery from Area 7. Cream ware (1-6); Coarse (Cooking) ware (7-9); Grey ware (10).

Parallels: Jarash, Schaefer 1986: 431 (mid-8th cent.).

10. K93XIXIL2-11, bowl, rim.

Fabric: Grey throughout with many small and some medium white, transparent and reddish-brown inclusions.

Form: Applied rim, convex top, sloping to rounded point ext.

Parallels: Jarash, Clark *et al.* 1986: 250, Fig. 21:7 (8th cent. "Umayyad").

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