

THE EB/MB TRANSITION AT TELL MISHRIFEH: STRATIGRAPHY, CERAMICS AND ABSOLUTE CHRONOLOGY. A PRELIMINARY REVIEW

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1. INTRODUCTION

The transition from the late third to the early second millennium BC in Syria has been a subject of considerable debate in recent times (COOPER 1998; GIANNESI 1998, 103–106; MAZZONI 1998; 32–37; SCHWARTZ *et al.* 2000, 422–429; PONS 2001, COOPER 2006; NICHOLS and WEBER 2006; SCHWARTZ 2006). The archaeological record has emphasised the emergence of a widespread phenomenon of urban crisis and collapse during this period, that affected the various regions of Syria to a different extent and in diverse ways and is documented, for instance, by the desertion of settled sites in the Khabur region and the major reduction or abandonment of urban centres in the Middle Euphrates and Western Syria (WEISS *et al.* 1993, 995–1004; WILKINSON 1997, 67–106; COOPER 2006). The explanation of the nature and causes of urban collapse at the end of the third millennium and of the regeneration of complex societies and urban life at the beginning of the second are still a matter of intense discussion as are the character of the material culture of Central Inner Syria, especially with regard to ceramics, and the extent of the break and/or continuity in its development at the transition from the EBA to the MBA (WILKINSON 1990; VAN LOON 1992, 103–107; WEISS *et al.* 1993; COOPER 1997 and 1998; SCHWARTZ *et al.* 2000, 420–422).¹

The aim of the present article is to discuss these latter issues and particularly to present in a preliminary review fresh archaeological evidence concerning the occupation, pottery sequences and absolute chronology of these at the urban site of Mishrifeh during the transition from the third to the second millennium BC (Fig. 1).

Archaeological excavations conducted since 1999 by the Italian component of the Syrian-Italian-German co-operation project in Operation J (Fig. 2) on the summit of the central mound of the acropolis² have uncovered, among other things, a continuous

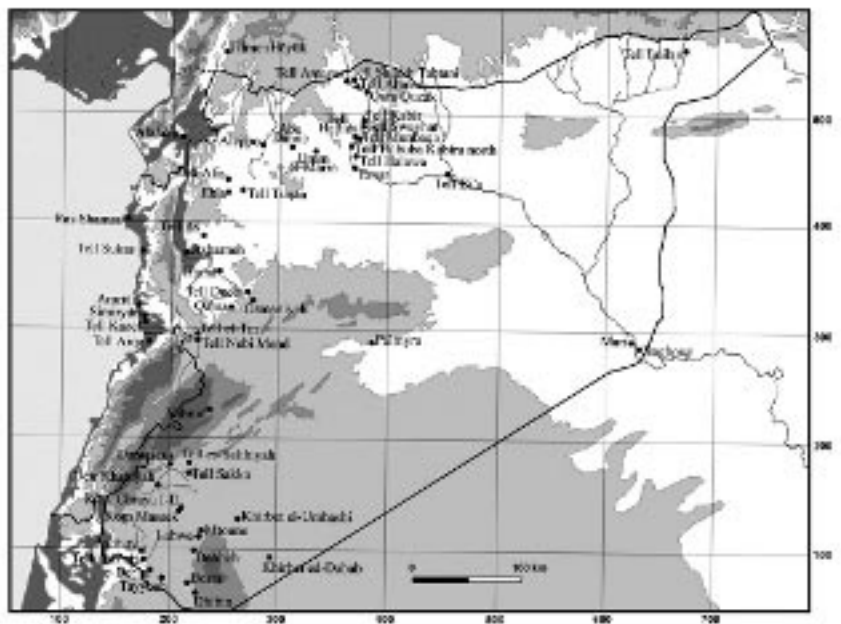


Fig. 1 Map of Syria

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¹ These topics were the subject of two workshops on the material culture of the Middle Euphrates area held in Blaubeuren in 2002 and 2003 (“From EB to MB. The Region at the Middle Euphrates”).

² The Italian component of the joint Syrian-Italian-German excavation project at Tell Mishrifeh is greatly indebted to the Directorate General of Antiquities and Museums, Syria, for its continued support. In particular, we wish to

express our gratitude to the Director General, Dr. A. Muazz, and the Director of Excavations and Archaeological Studies and co-director of the joint international project at Mishrifeh, Dr. M. Al-Maqdissi, for their valuable co-operation and assistance. For previous archaeological research at Mishrifeh, cf. DU MESNIL DU BUISSON 1935; AL-MAQDISSI 1996; AL-MAQDISSI 1997. For the new joint project, cf. AL-MAQDISSI, LUCIANI, MORANDI BONACOSSO, NOVÁK, and PFÄLZNER 2002; MORANDI BONACOSSO 2003.

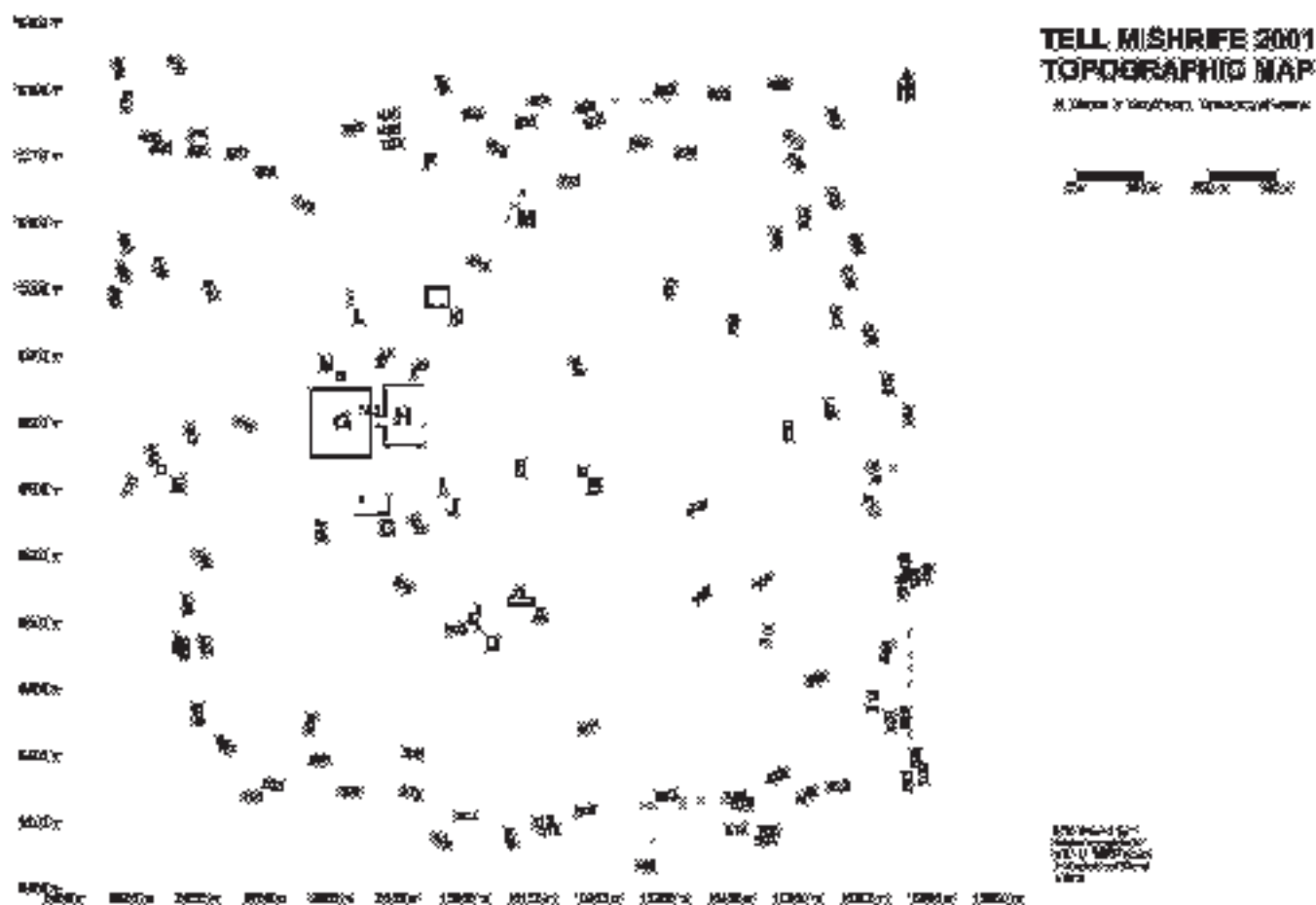


Fig. 2 Topographic map of Tell Mishrifeh with excavation areas

sequence of ten occupational phases (from 26 to 17) spanning the period from the EBA IVB to the MBA I. This sequence, which is the subject of the present article, furnishes valuable new evidence to the debate on the development of the pottery sequences and their relative and absolute chronology in Central Inner Syria at the end of the third and beginning of the second millennia BC.

However, before presenting the body of data recovered from Operation J,³ it is necessary to make two important cautionary remarks:

– The stratigraphic sequence discussed below was investigated only as from 2001. The detailed study of the related ceramic repertoires is therefore still in its early stages and only the more general and preliminary trends evidenced by first analysis can be outlined in this paper.

– A second and more serious caveat concerns the state of preservation of our contexts. The largest part of the sequence investigated (Phases 26 to 19) is rather poorly preserved due to the heavy, though localized, disturbances caused by EBA IV storage pits and silos and numerous pottery kilns and other installations of the MBA I that were dug deeply into the pre-existing tell deposits during the latest phases presented here, Phases 18 and 17. Fig. 3 gives an overview of Phase 25 and allows a visual assessment of the extent of the disturbances, which in some cases go even deeper than the earliest phase excavated so far (Phase 26). Obviously, these features account for a relevant degree of disturbance in the retrieved ceramic assemblages.

Early Bronze Age IVB pottery material was associated with MBA I ceramics from Phase 26 down to

³ I wish to express my gratitude to my collaborators, Dr. Giancarlo Garna and Monica Da Ros, who, with great enthusiasm and expertise, have been a constant source of

support and discussion in the field and during the process of post-excavation work on the pottery sequences.



Fig. 3 View of Phase 25 from the south with disturbances related to Phase 17 pottery kilns, Operation J

Phase 17. As the graph shows (Fig. 4), this association becomes statistically significant especially in the four latest phases of the late third-early second millennium sequence (20–17).

The problem posed by the archaeological record is how to interpret the excavated body of data. The situation is rather complex. However, notwithstanding the evident and substantial – though spatially circumscribed – disturbances recorded, it has to be stressed that EBA IVB diagnostics were also found in association with MBA I forms in quantitatively significant amounts on trodden floors in well stratified, undisturbed contexts, where the risk of residuality was extremely low or non-existent. Furthermore, as we shall see below, several wares that display a “transitional” character, combining elements of the EBA IV pottery tradition such as high-temperature firing (and the associated production of a metallic sound when struck) and the MBA tradition (coarser temper consisting mainly of heavy white grits and buff-yellowish colour), are mainly concentrated in Phases 21 to 17.

The Mishrifeh evidence suggests that it is not possible to explain away the combination of EB and MB materials attested in the latest phases of the sequence simply and exclusively as “background noise” related to the mixing of ceramics determined by residuality that affects our stratigraphic sequence. On the contrary, this pottery association may indicate that elements of a lingering EBA IVB tradition continued into the early second millennium sequence and/or that what we consider to be typical MBA I diagnostics were already present in the very late third millennium BC. Strong comparative evidence in

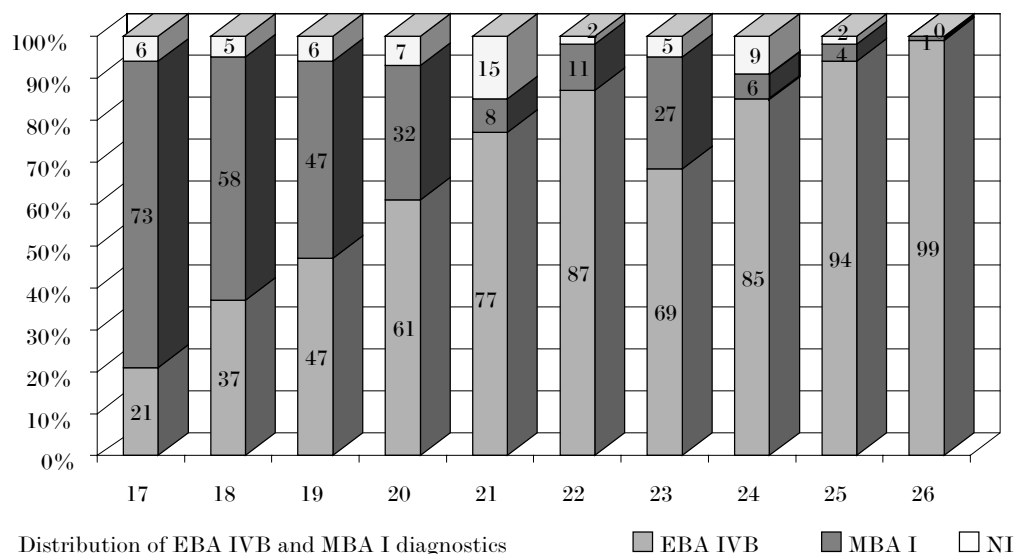


Fig. 4 Distribution of EBA IVB and MBA I diagnostics in the pottery assemblages of Phases 17–26, Operation J



Fig. 5 View of Phase 26 granary from the north, Operation J

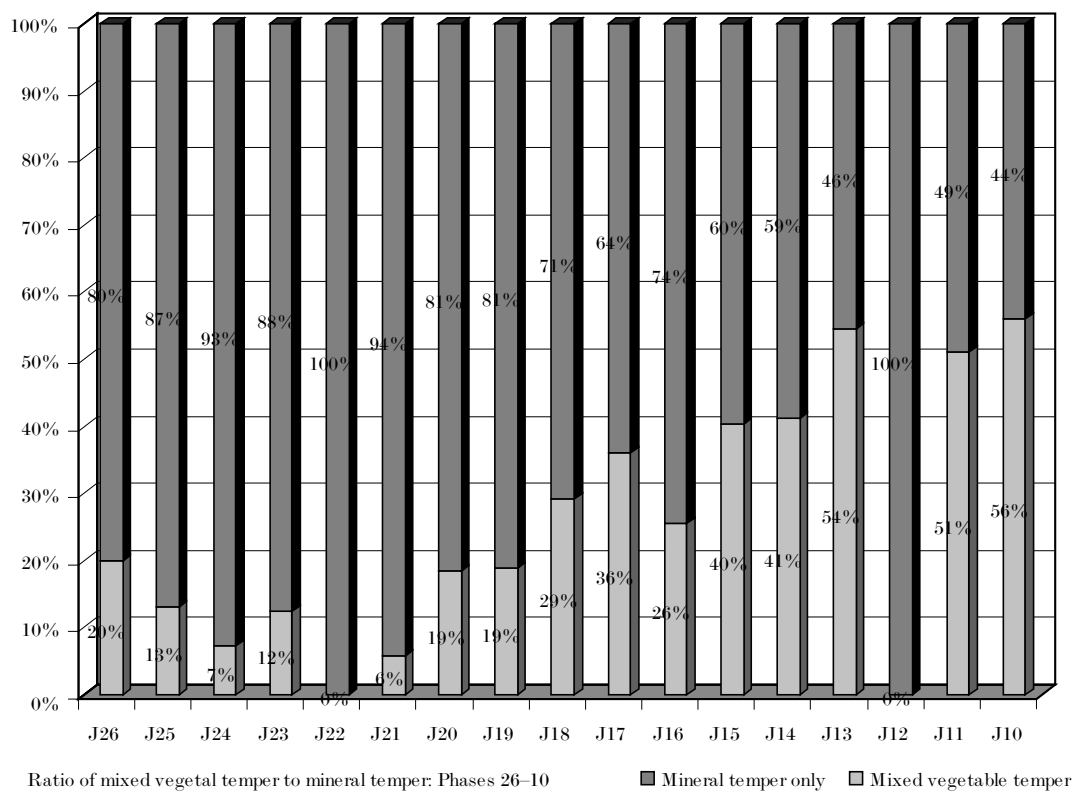


Fig. 6 Ratio of mixed vegetal temper to mineral temper in the pottery assemblages of Phases 26–10, Operation J

support of this hypothesis is provided by the stratigraphic and ceramic sequences excavated at numerous Syrian and Turkish sites in the Middle Euphrates region with EB/MB transitional levels presented at the Blaubeuren Workshop (cf. footnote 1), which shall be mentioned below,⁴ as well as by analogous observations made in a recent re-evaluation of the Hama J/H sequence (I. Thuesen, personal communication, December 2001).

2. THE ARCHAEOLOGICAL EVIDENCE

In the excavated part of the summit of the central mound of the acropolis no major architecture was present in Phases 26 to 19. Only the trodden floors of open-air areas with storage installations, such as silos and mud-brick granaries used for storing agricultural produce (mainly cereals, but also grapes and olives), were found. The presence of these facilities on the summit of the upper city and their extent suggest that during the late third millennium BC this part of the site was used for the intensive and probably centralized storage of bulk food items.

A major change in the function of the top of the central mound of the acropolis can be observed in Phase 18, when a pottery workshop was installed on the summit. The pottery manufacturing area remained in use, though with changes in its internal organization, up to the LBA I (Phase 7).

The archaeological evidence related to the EB/MB transition (Phases 26–17) is presented below, with particular reference to the ceramics recovered from the different phases.

Phase 26

During the earliest phase reached so far, the excavated part of the acropolis summit was used as a cereals processing and storage area. On an external trodden mud floor, a partially preserved building with a semi-circular wall, probably a silo, was constructed (Fig. 5). On its floor charred barley kernels were found.

The pottery horizon consists of an uncontaminated EBA IVB assemblage characterised by the prevalence of Plain Simple Ware with a grit-tempered buff fabric, fired at high temperatures; occasional sherds

have straw inclusions (Fig. 6). Various kinds of medium-sized storage jars with simple out-turned (Fig. 7: A–D)⁵ or modelled rims (Fig. 7: E–G), both with and without necks, dominate the assemblage.

Large patterned corrugated globular pots (Fig. 7: J), used for cooking and storage, were produced for the first time during the EBA IVA2 in the Ebla-Hama region (MAZZONI 2002: 78 with footnote 48, pl. 43: 118) and up to the coast, where they are attested for example at Tell Arqa (THALMANN 2000: fig. 24b.). These pots also continue at Mishrifeh in the later part of the EBA IV, as is documented in Hama J4 (FUGMANN 1958: fig. 85, 3E 969). Pouring vessels, such as teapots (Fig. 7: H) and Painted Simple Ware jars (Fig. 7: I),⁶ are also present. These jars are painted with thick reddish or brownish-blackish bands and crosshatched designs (cf. also MAZZONI 1998: 32).

Phase 25

Phase 25 consists of a trodden mud floor with a circular storage pit containing charred barley and grape seeds and again a structure with a semi-circular wall, which was probably a silo for barley storage like the one in the preceding Phase 26 (Fig. 8). Charred kernels were found on the floor of this structure. The presence of a small barley and grape storage pit and a larger barley silo suggests that the area was still used for the storage of cereals.

The ceramic assemblage is distinguished by the presence of characteristic EBA IVB shapes and wares, such as Painted Simple Ware caliciform goblets painted with thick blackish bands and combed with wavy lines, producing a combined effect of combed and reserved decoration (Fig. 9: C),⁷ and different Plain Simple Ware bowl shapes and jars with out-turned and ledge rims (Fig. 9).

A radiocarbon determination (Fig. 10), which is rather problematic due to the low carbon content found in the charcoal flecks and a consequently high standard deviation, places this phase between 2140 and 1760 BC. As we shall see below, however, the actual calibrated age range should be slightly higher.

⁴ I am deeply grateful to Dr. Uwe Finkbeiner, organizer of the 2nd Workshop “From EB to MB. The Region at the Middle Euphrates”, held in Blaubeuren in February 2003, and all the participants in the meeting for their kind cooperation and readiness to make their data available to me. The pottery charts with the EB/MB diagnostics and their lifetime that have been developed in the framework of the

workshop were an invaluable tool for comparative analysis of the pottery assemblages.

⁵ For comparisons to Fig. 7: C–D, cf. Ebla and Tell Afis: MAZZONI 2002: pls. 41:106 and 44: 124.

⁶ Cf. Tell Arqa: THALMANN 2000: fig. 24b.

⁷ Cf. MAZZONI 1991: fig. 6:20.

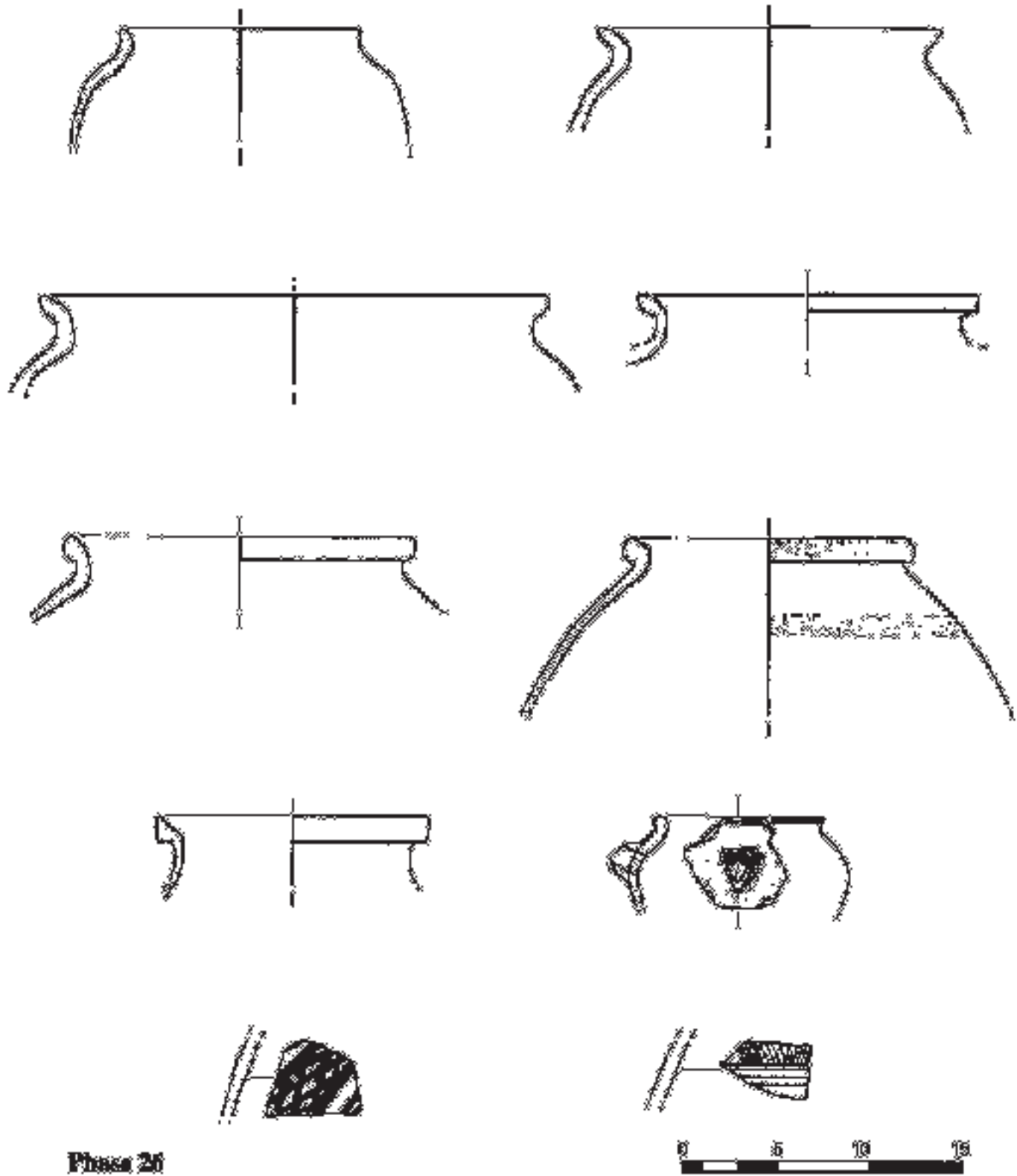


Fig. 7 Pottery from Phase 26, Operation J

Phase 24

On the trodden floor of Phase 24 only three fragmentary stone benches and an ash deposit were excavated. The walls of the granary of Phase 25 were razed to the level of the trodden floor and included in it. In a deposit on the trodden floor, a fragmentary cooking-pot containing charred barley kernels was found. Characteristic EBA IVB shapes and wares continue to be attested (Fig. 11).

Phase 23

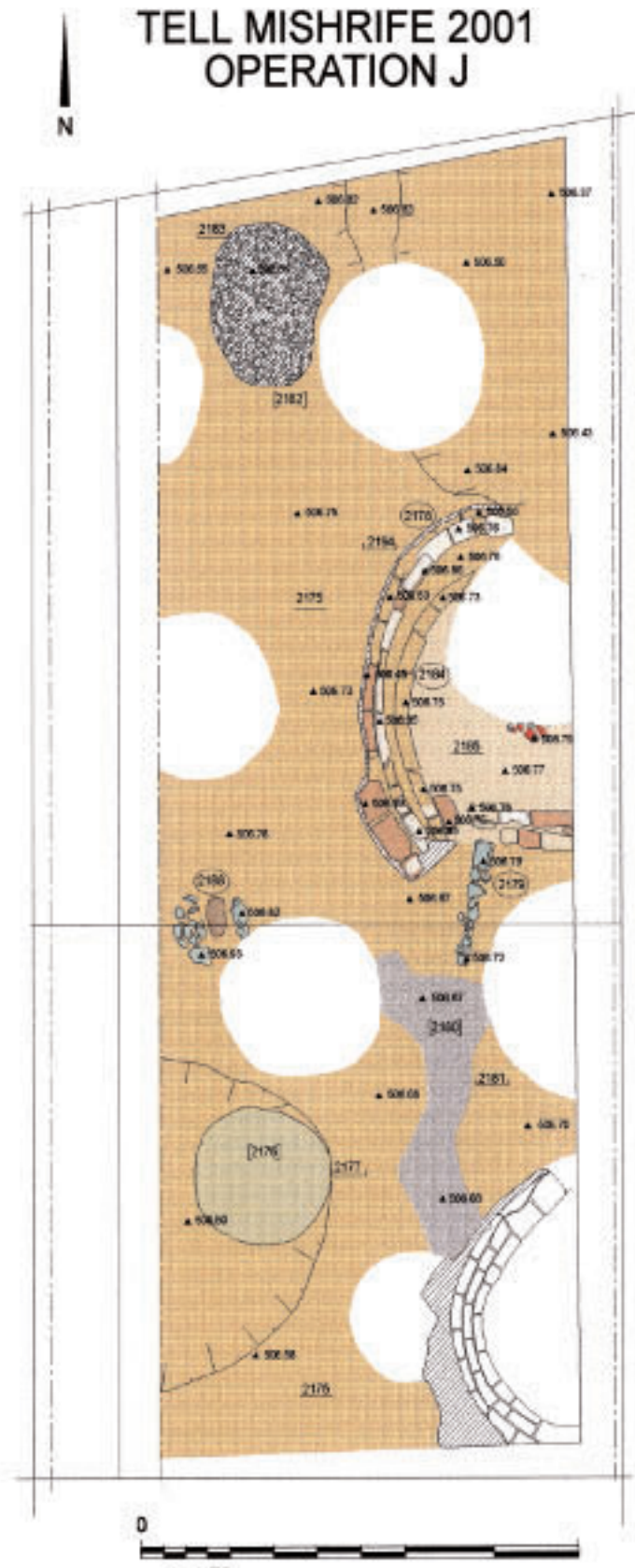
Phase 23 consists of a trodden floor with a circular pit extending under the southern limit of the excavation lined up with mud-bricks on edge, a second circular pit containing ash, possibly a storage pit for cereals, a stone bench and a circular pit filled with pebbles.

The high rate of disturbance related to Phase 17 and 18 features and the dearth of installations make a functional interpretation of this phase impossible. If the pit containing ash was a storage pit, a rural use of this floor could be suggested. A basalt hoe, a fragmentary basalt quern and a storage jar coated externally with a white plaster, which were found in the deposit covering the trodden floor lend support to this interpretation.

Pottery forms and wares are again characterised by pure EB IVB features with Painted Simple Ware, such as caliciform goblets (Fig. 12:B), and a jar with out-turned rim and bird designs (Fig. 12:G) with an exact parallel at Afis from Area E, level 17 (MAZZONI 1998: fig. 16:10). Plain Simple Ware miniature vessels (Fig. 12:A), bowls (Fig. 12:C), platters with plain rims, outside ledge handles and flat bases (Fig. 12:E),⁸ and the common medium-sized jars with plain, out-turned (Fig. 12:F,⁹ H) and ledge rims (Fig. 12:I) dominate the assemblage. Large patterned corrugated



Fig. 8 Plan of Phase 25, Operation J



⁸ Cf. Tell Afis: MAZZONI 1998: figs. 16:18, 18:12 and MAZZONI 2002: pl. 44:129.

⁹ For comparisons, cf. Tell Mardikh IIB2 (MAZZONI 1985: fig. 6:23).

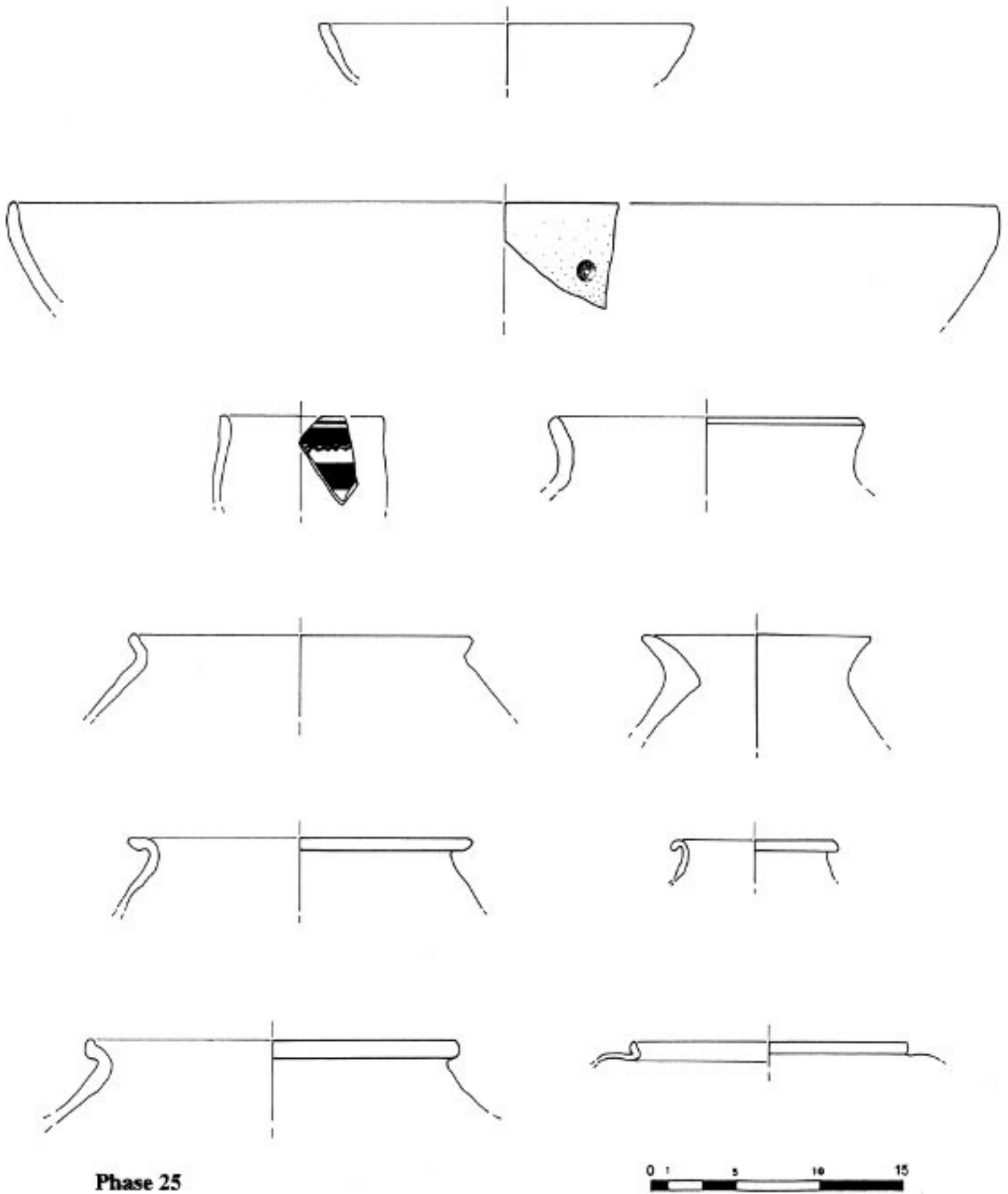


Fig. 9 Pottery from Phase 25, Operation J

Radiocarbon dates from Operation J

Lab. no.	Stratigraphic unit and sample description no.	Context	Phase	14C yrs. bp	BC range (95.4%)	BC range (68.2%)	Material	14C age determination system
GR 28924	2176.1	Silo	23	3600±130	2400-1600	2140-1760	Charcoal	Analysis with extended counting time
GR 28921	2044.1	Pit	23	3680±80	2300-1790	2150-1940	Charcoal	Conventional
GR 28920	2037.2	Deposit on trodden floor	23	3520±40	2410-2130	2210-2190	Charred barley	AMS
GR 28919	1897.3	Deposit on trodden floor	20	3310±50	2040-1630	1940-1736	Charcoal	Conventional
GR 28918	1887.1	Deposit on trodden floor	19	3350±100	2200-1600	1980-1746	Charcoal	Conventional
GR 28922	2157.1	Kiln	18	3630±40	2050-1830	2040-1926	Charcoal	AMS
GR 28917	1859.1	Kiln	17	3500±70	2040-1630	1930-1746	Charcoal	Conventional

Fig. 10 Radiocarbon dates from Operation J

globular pots with rounded bases, used for cooking and storage, are also attested (Fig. 12:J).

A radiocarbon determination (Fig. 10) places this phase in the interval between 2150 and 1940.

Phases 22–21

An even worse state of preservation characterises Phases 22 and 21. Only trodden floors and some agricultural tools such as a fragmentary stone hoe were found.

The pottery horizon continues to be distinguished by characteristic late third millennium shapes and wares. Figs. 13–14 present some examples of typical forms. Potters' marks are very frequent in the late third millennium pottery assemblage (Figs. 13:D, 14:C). The presence of MBA types in Phases 22 and 21 (respectively 11% and 8%) is still very low (Fig. 4) and can be regarded as extrusive.

An AMS 14C determination on a charred barley kernel (Fig. 10) provides us with a dating for Phase 22 to the interval between 2310 and 2190 BC, a date,

which goes very well with the EBA IVB pottery assemblage recovered.

Phase 20

In Phase 20 a trodden mud floor with some installations was uncovered. A complex of two rural installations consisting of a lime plastered surface and a complete storage jar with a pierced base decorated with scabbled wavy lines were excavated (Fig. 15:B). To the W of it, a small conical clay storage pit plastered with lime was found. From the storage pit a basalt quern and the rim and neck of a storage jar were recovered. The few Phase 20 installations of which the use could be reconstructed suggest that this phase too had a rural function related to the processing and storage of cereals.

The pottery assemblage retrieved from this phase is interesting. The percentage of MBA ceramics (Fig. 4) significantly increases (from 8% to 32%) and characteristic MBA shapes, such as jars with double everted rim (Fig. 15:H),¹⁰ start to be associ-

¹⁰ For parallels at MBA I Tell Afis and Tell Mardikh, cf. MAZZONI 1998: fig. 20:4–5; MARCHETTI-NIGRO 1997: fig. 6:34; NIGRO 2002: pls. 49:47, 49, and 50:51.

ated in undisturbed contexts (on the trodden floor or in deposits immediately above it) with EBA IVB ceramics, mainly Plain Simple Ware medium-sized storage jars (Fig. 15:A,¹¹ E–F) and pots (Fig. 15:B–D), and some specimens of Painted Simple Ware (Fig. 15:I–J). Furthermore, a characteristic range of what can be defined as “transitional” wares appears as from Phases 21 and 20. These fabrics associate characteristics of the late EBA pottery tradition – such as the high firing and the consequent metallic sound – and of the MBA one, such as the coarser temper consisting mainly of heavy white grits and the buff-yellowish colour.

A conventional radiocarbon determination (Fig. 10) places this phase in the interval between 1940 and 1730 BC. Actually, as we shall see below, this dating too should be slightly higher.

Phase 19

In Phase 19 a circular storage pit with ash containing many charred barley kernels was found on a trodden mud floor. A razed mud-brick work platform and a *pisé* platform were also excavated. Again, the presence of a barley storage pit and of work platforms suggests an agricultural use of the area. In the deposit covering the trodden floor two fragmentary agricultural tools (stone hoes) were found.

The pottery horizon is distinguished by a further increase of MBA vs. EBA IVB forms (from 32% to 47%; Fig. 4). The percentage of “transitional” wares rises too. Alongside typical EBA IVB forms and wares (Fig. 16), distinctive MBA I vessels are widely attested: shallow carinated bowls (Fig. 17:A), goblets with slightly rounded biconical shape and everted bead rims (Fig. 17:B),¹² jars with everted and ridged rims (Fig. 17:C,¹³ D,¹⁴ E¹⁵), jars with ledge rims (Fig. 17:F),¹⁶ large closed vessels with thick everted grooved rims (Fig. 17:G).¹⁷ Comb-incised decorations are documented with some frequency, including a distinctive design consisting of alternating horizontal registers of undulating lines and horizontal combed

bands (Fig. 17:H–I),¹⁸ and nail mark decorations associated with comb-incised horizontal lines (Fig. 17:J).¹⁹ The most frequent ware is the Standard Ware, which is characterised by grit-tempered fabrics mainly with calcareous inclusions and occasionally chaff (Fig. 6). Vegetal temper is more frequent than in the undisturbed EBA IVB assemblages of the previous phases. Surface finishing is limited to self-slip.

A ¹⁴C dating (Fig. 10) to the interval 1980–1740 BC is very close to the previous one and seems to present the same problem of all conventional dates vs. AMS determinations, which are all significantly higher, as the dating of a sample from the following Phase 18 will show.

Phase 18

From a functional point of view a major change in the stratigraphic sequence takes place between Phases 19 and 18. Phase 19 is the last occupation phase of the summit of the central mound of the acropolis with a rural function, whereas in the following phase a pottery manufacturing area was installed there. The pottery workshop, which remained in use during the whole span of the MBA I and II (Phases 18–10 of Area J) and up to the LBA I (Phase 7), started at the beginning of the second millennium BC as a small production area and reached its maximum extension during the MBA I (cf. MORANDI BONACOSSİ 2002; 2003 and MORANDI BONACOSSİ in press).

The excavated part of the workshop of Phase 18 consists of an open-air manufacturing area with a pottery kiln containing ceramic slag in its fill and a large settling tank. The settling tank was used to purify the raw material, the reddish B clayey palaeosol existing in the environs of Qatna, of extraneous unwanted materials such as roots, other organic matter and pebbles. It consists of a large basin of pure whitish clay, a waterproof material the surface of which was tamped down to form a smooth surface, laid in a large foundation trench.²⁰ The settling tank contained a 70 cm thick deposit of limestone pebbles.

¹¹ Cf. MAZZONI 2002: pl. 41:110.

¹² This type of vessel is very well known from MBA I contexts, such as Tell Arqa, Phase N (THALMANN 2000: fig. 46b), Tell Afis (MAZZONI 1998: fig. 24:2), Tell Mardikh IIIA1 (NIGRO 2002: pl. 47:14), and Umm el-Marra IIIId (SCHWARTZ *et al.* 2000: fig. 8:9).

¹³ Cf. MBA I Tell Afis (MAZZONI 1998: fig. 25:34).

¹⁴ Cf. NIGRO 2002: pl. 47:22 from Tell Mardikh IIIA1.

¹⁵ Cf. MBA I Tell Afis (MAZZONI 1998: fig. 25:35).

¹⁶ Cf. Tell Arqa, Phase N (THALMANN 2000: fig. 46b) and Tell Afis (MAZZONI 1998: fig. 25:16).

¹⁷ Cf. Tell Afis (MAZZONI 1998: figs. 20:10, 25:23).

¹⁸ This kind of decoration is ubiquitous in the MBA I assemblages (cf. MAZZONI 1998: fig. 22:1; SCHWARTZ *et al.* 2000, fig. 8:12; NIGRO 2002: pl. 46:1–2) but is attested in the Syrian Middle Euphrates as from the EBA IVB (source: 2nd Workshop “From EB to MB. The Region at the Middle Euphrates”, Chart 27) at Shavi Höyük, Level XVI and Tell Hammam, Level VI 5–6.

¹⁹ Cf. MAZZONI 1998: fig. 22:1–2.

²⁰ A similar and roughly contemporary installation has been recently excavated at Tell Arqa; cf. THALMANN 2000: 50.

These stones, which were contained in the reddish B palaeosol used as raw material to manufacture the pottery, probably represent the residue from the clay levigation process.

The pottery assemblage retrieved from this phase is characterised by an increase in the MBA I shapes that now reach 58% of the total and the persistence of “transitional” wares (Fig. 4). Typical MBA I diagnostics in Standard Ware, such as inturned rim bowls (Fig. 18:E),²¹ carinated bowls (Fig. 18:F),²² biconical goblets with everted bead rims (Fig. 18:G),²³ collared goblets (Fig. 18:H),²⁴ jars with everted and ridged rims (Fig. 18:I²⁵–J²⁶), double rims (Fig. 18:K),²⁷ and comb-incised decorations (Fig. 18:L) are still associated with characteristic EBA IVB types (Fig. 18:A–D) in well stratified contexts.

Among the most interesting vessels are the fragments of a handled jar (Fig. 19) in one of the so-called “transitional” fabrics painted with a reddish-brown wash with motives, which are common to the repertory of the MBA Levantine Painted Ware, such as parallel bands and triangles (cf. BAGH 2000: 30–35, fig. 1)²⁸, and are vertically crossed by groups of triple spirals. The triple spiral motive is not attested in the painted decoration of the Levantine Painted Ware. However, this decoration resembles that of a jar from Hama J3 (FUGMANN 1958: fig. 93:3A732) and seems to combine in a “transitional” fabric the technique of decoration of the late third millennium Smearred Wash Ware with motives typical of the later MBA painted tradition of the Levant.

An AMS radiocarbon determination (Fig. 10) places Phase 18, together with the two preceding phases, exactly at the transition from the third to the second millennium BC.

Phase 17

In Phase 17, the ceramics manufacturing workshop was greatly enlarged and ten new pottery kilns (Fig. 20) and other related installations were built. The

installations consisted of work platforms, a pebble floor, and a 1 m deep storage pit containing 3 cubic metres of purified clay used for pottery production.

The recorded evidence indicates that in Phase 17 the summit of the central mound was used as a large production area where pottery was manufactured and fired on a massive scale. In Phase 17 three different types of updraft kilns are attested:

1. Kilns constructed with mud-bricks laid in a pit (Fig. 21).

2. Elongated and rather shallow kilns (Fig. 22) with a horseshoe-shaped pottery firing chamber and an underlying fire pit divided into two kidney-shaped lobes by a baffle wall.

3. Kilns consisting of deep circular pits with a bell-shaped section dug into the underlying deposits (Fig. 23).

The reason why in Phase 17 three different kiln types existed is unclear so far. However, it seems reasonable to assume that different kiln types were used to fire specific ceramic productions. Ongoing archaeometrical analysis of the vitrified pottery slag from the kilns will hopefully help to make this clear.

A large amount of pottery slag was found in the fills of most of the kilns. Further evidence of pottery production were complete vessels recovered from the kilns, over-fired sherds, vessels slightly deformed by excessive firing, unbaked vessel fragments, and a possible fragment of a basalt potter’s wheel.

It is truly remarkable that in the Phase 18–10 Middle Bronze Age pottery production area²⁹ all stages of the ceramic manufacturing process are present, from the procurement, preparation and storage of raw materials to the forming, drying, firing, cooling, and preliminary storage of the manufactured vessels.

The nature, extensiveness, organisation, and duration in time of the Operation J ceramic manufacturing area indicate that pottery production at Qatna was on a greater scale than mere household

²¹ Cf. NIGRO 2002: pl. 52:62; MAZZONI 1998: figs. 20:7, 21:9, 23:6.

²² Cf. MARCHETTI-NIGRO 1997: fig. 6:7; NIGRO 2002: pls. 48:42, 54:79–80; MAZZONI 1998: fig. 19:16.

²³ Cf. THALMANN 2000: fig. 46b; MAZZONI 1998: fig. 48:31; SCHWARTZ *et al.* 2000: fig. 8:9.

²⁴ Cf. MARCHETTI-NIGRO 1997: fig. 7:3; NIGRO 2002: pl. 48:31; MAZZONI 1998 fig. 20:3. Collared goblets of this type are already attested in EBA IVB contexts at several Middle Euphrates sites (source: 2nd Workshop “From EB to MB. The Region at the Middle Euphrates”, Chart 1), such as Emar (under the Temple of Ba’al) Bauphase 5, Halawa Q, Phase 3, Tell Hadidi, Area B, Phase 3C, Selenahiye Late,

Umm el-Marra IV, Munbaqa EBA IV, Tell Sweyhat, Operation 1, Phase 5, Shavi Höyük Phases XVII–XV, Tell Chuera, Grabg.st. F 1b, Tell Bi’a Graves, Phase 3a.

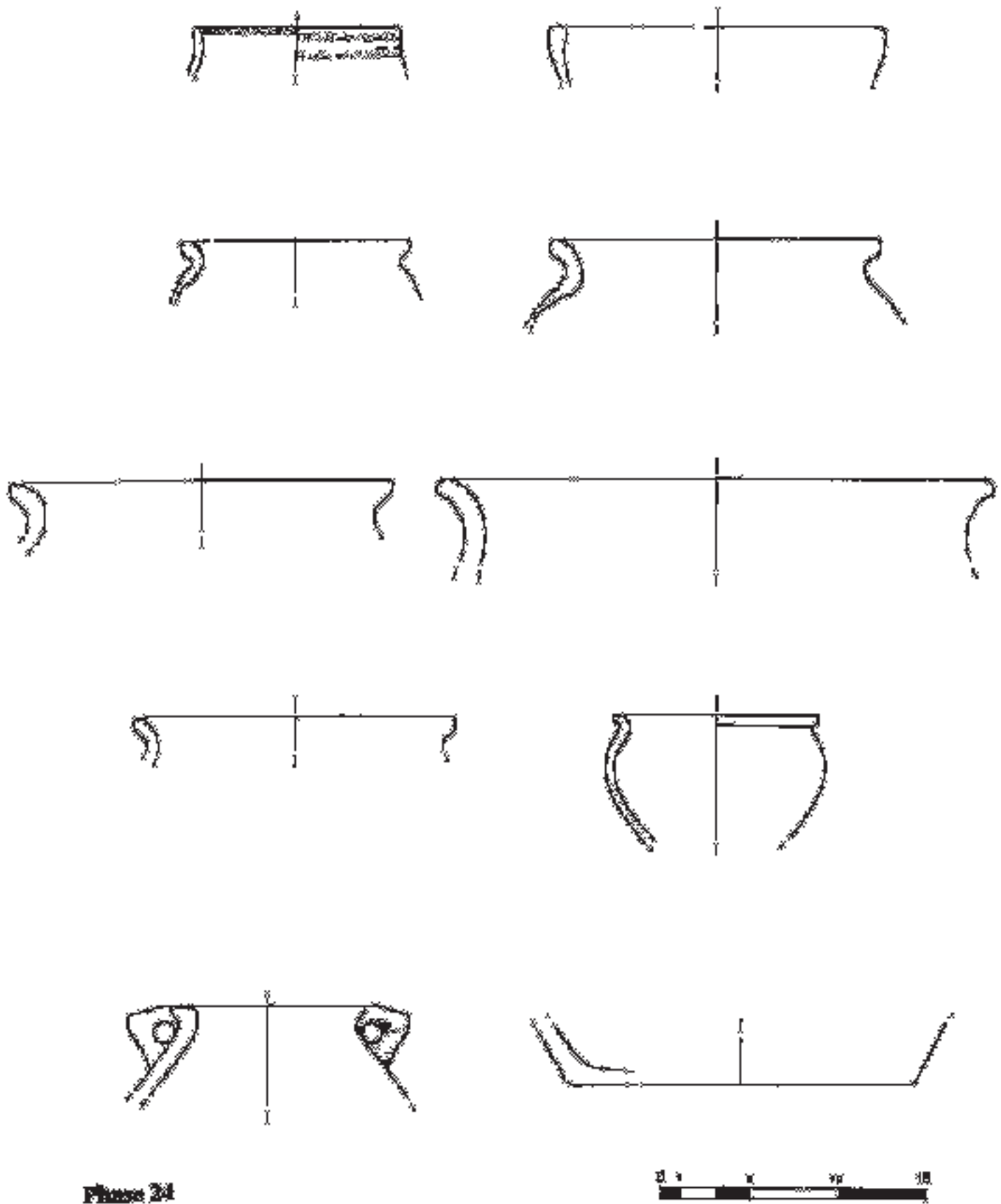
²⁵ Cf. NIGRO 2002: pl. 47:24.

²⁶ Cf. MAZZONI 1998: fig. 25:25; NIGRO 2002: pl. 47:25.

²⁷ Cf. MAZZONI 1998: fig. 23:12.

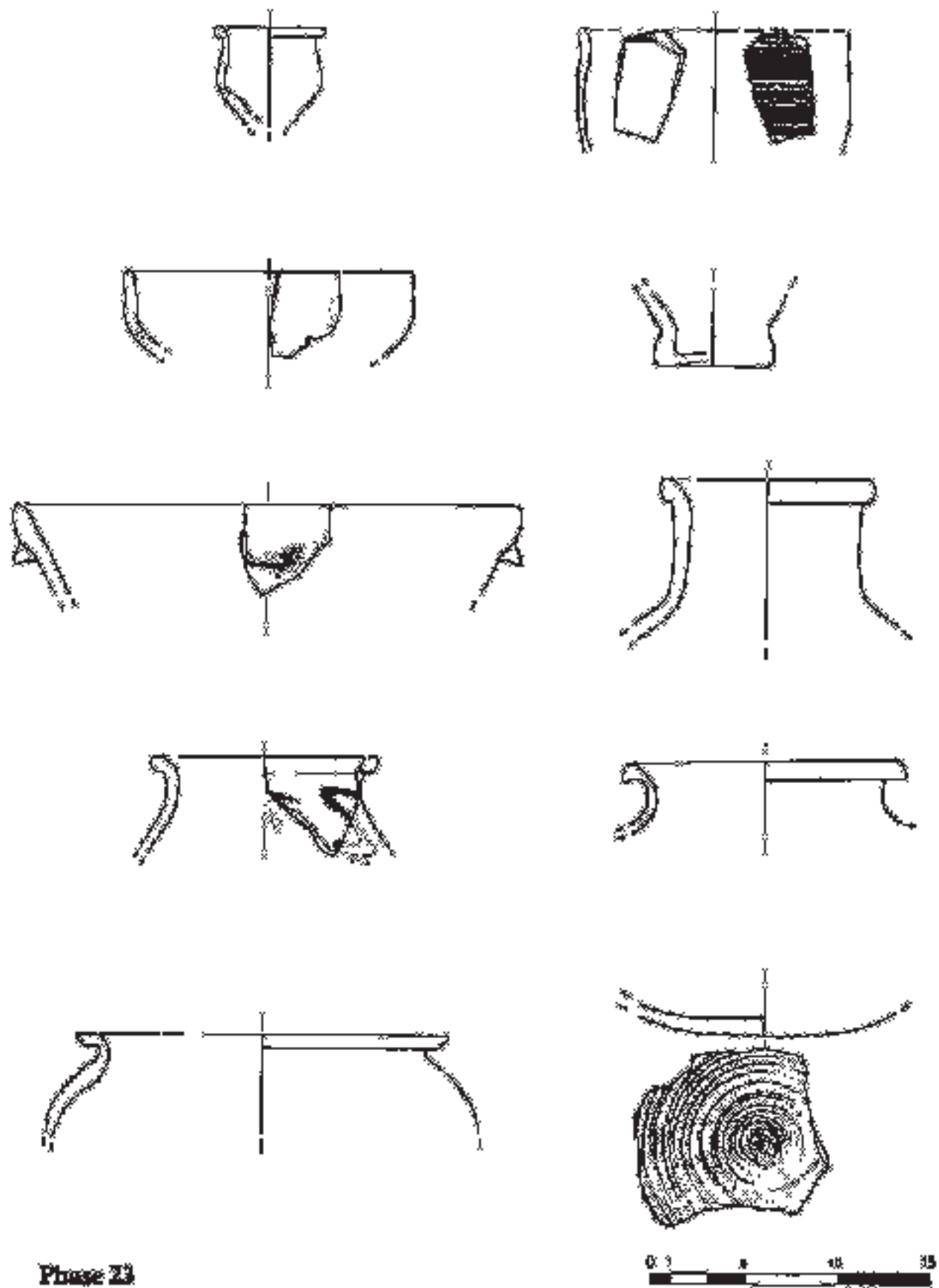
²⁸ I am greatly indebted to Dr. Tine Bagh for providing me with a copy of her dissertation on the Levantine Painted Ware.

²⁹ For the Phase 14–10 ceramic workshop of Operation J, cf. MORANDI BONACOSI 2002, 2003 and in press.



Phase 24

Fig. 11 Pottery from Phase 24, Operation J



Phase 23

Fig. 12 Pottery from Phase 23, Operation J

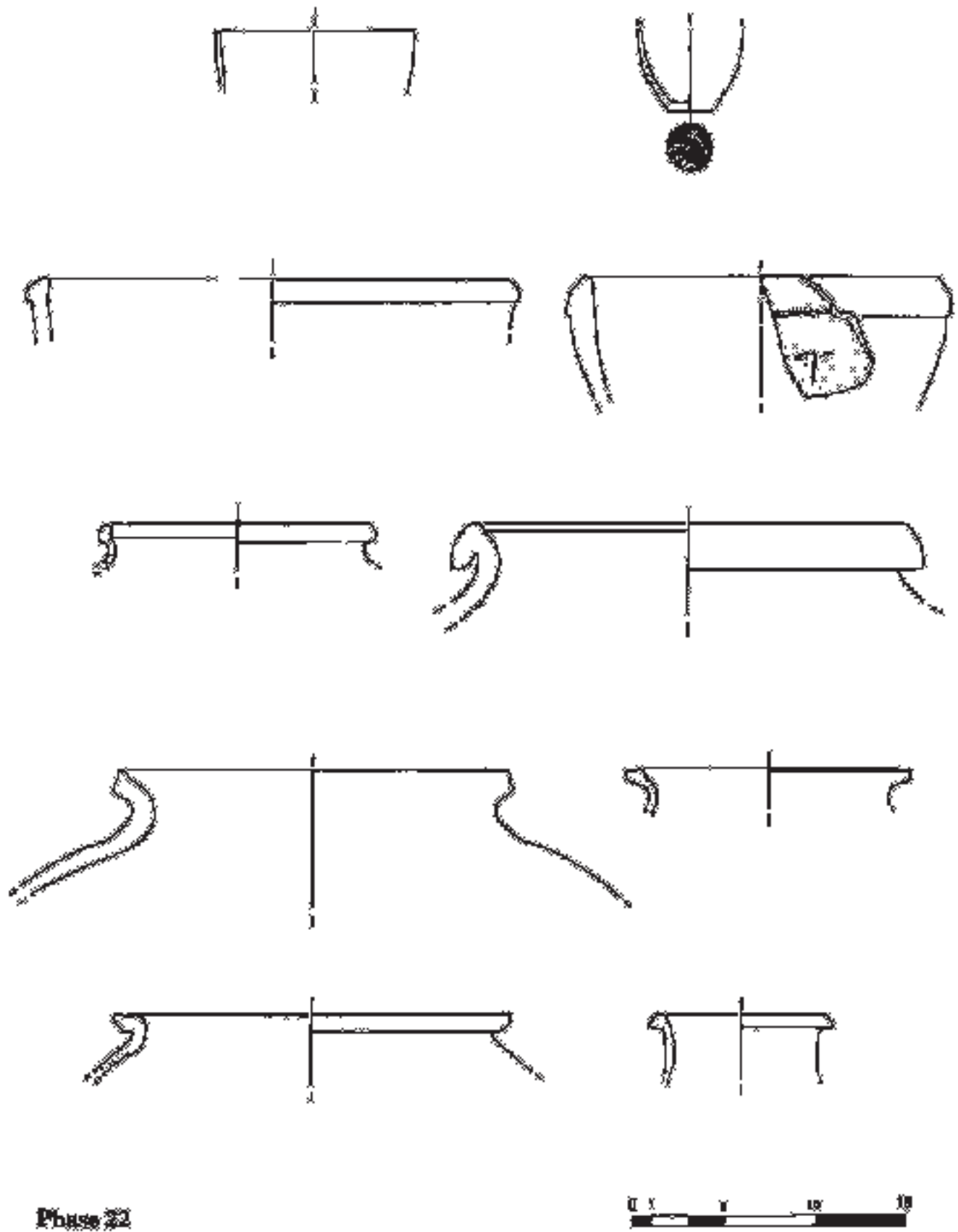
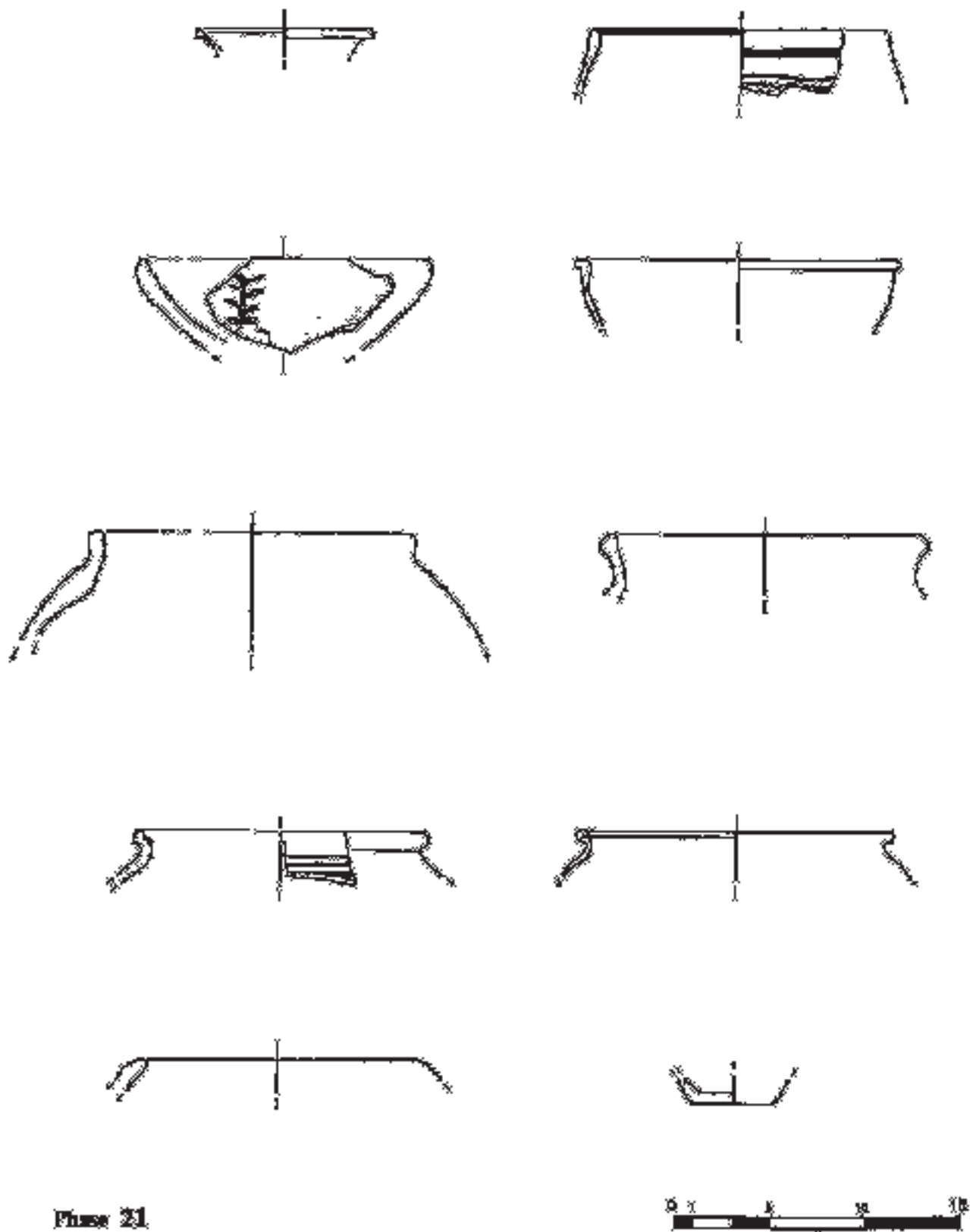


Fig. 13 Pottery from Phase 22, Operation J



Phase 21.

Fig. 14 Pottery from Phase 21, Operation J

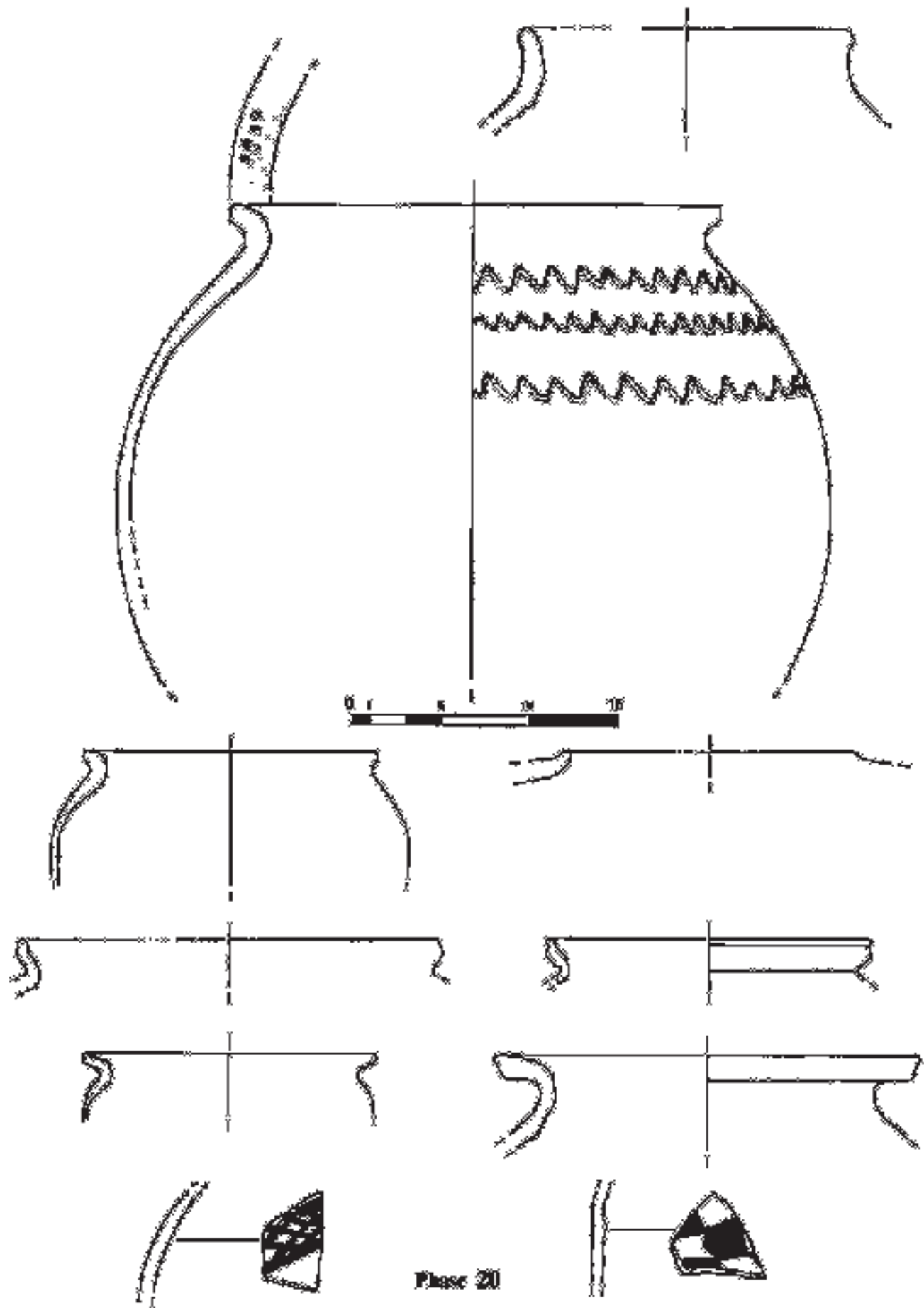


Fig. 15 Pottery from Phase 20, Operation J

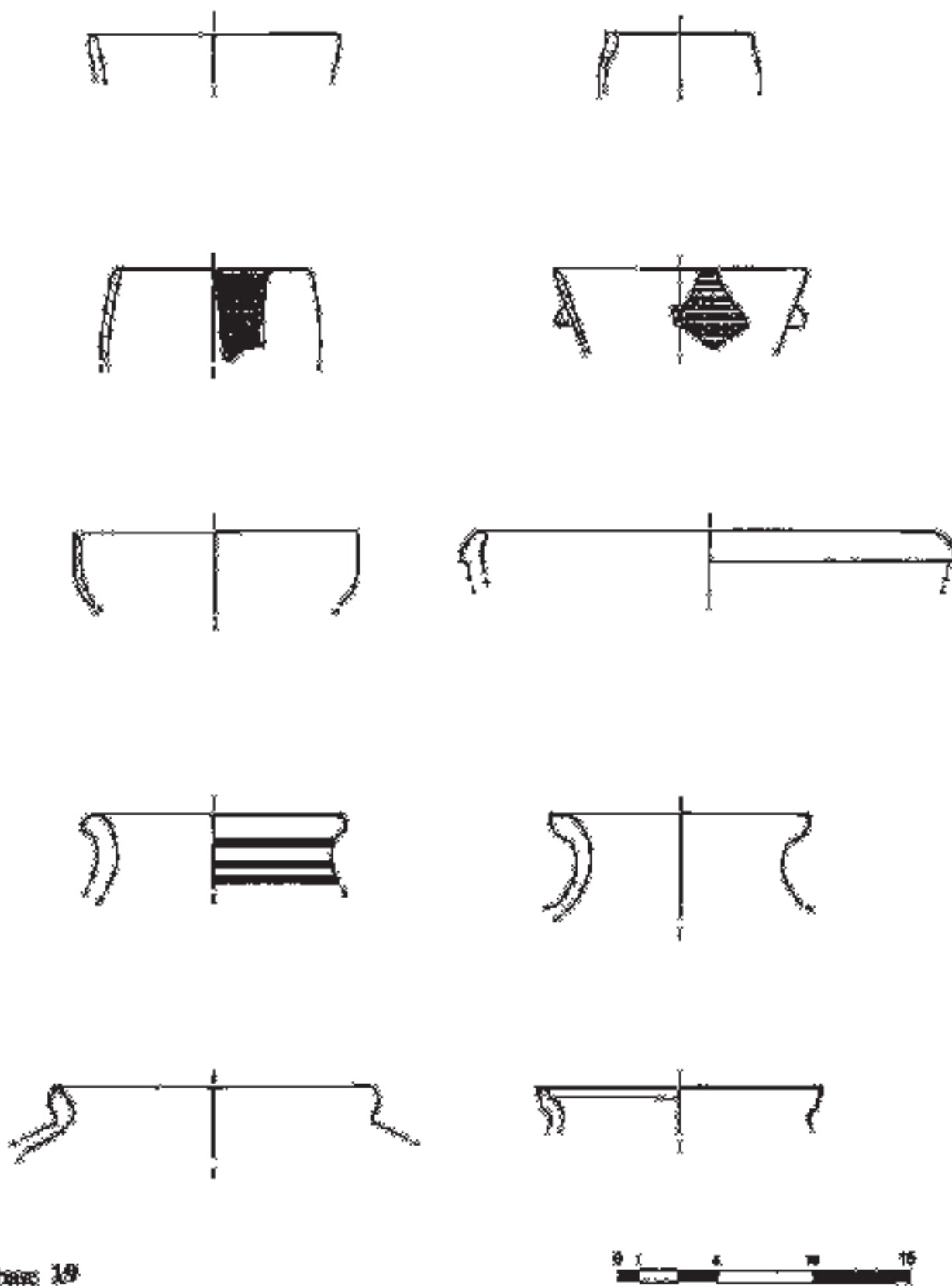


Fig. 16 Pottery from Phase 19, Operation J

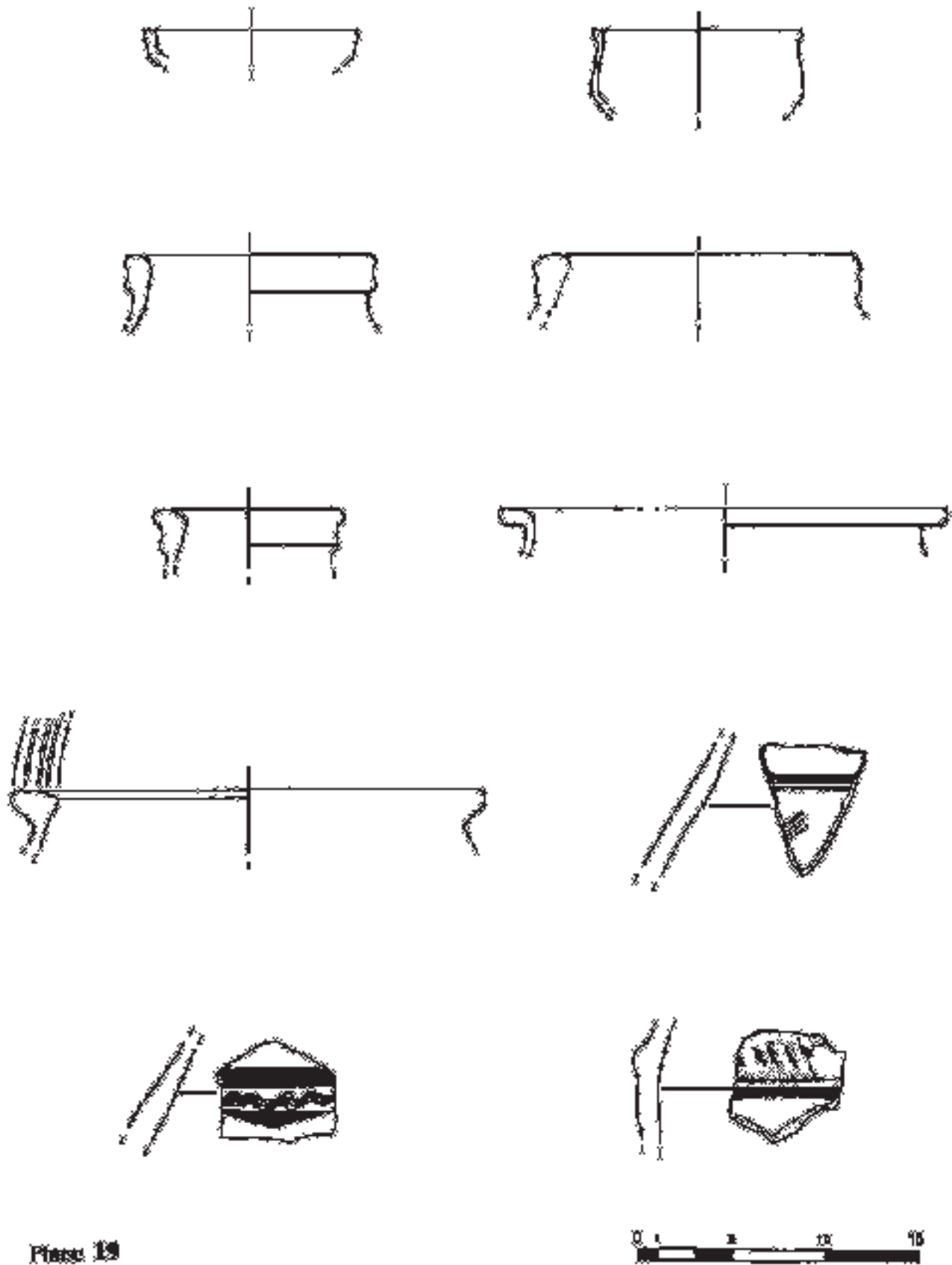


Fig. 17 Pottery from Phase 19, Operation J

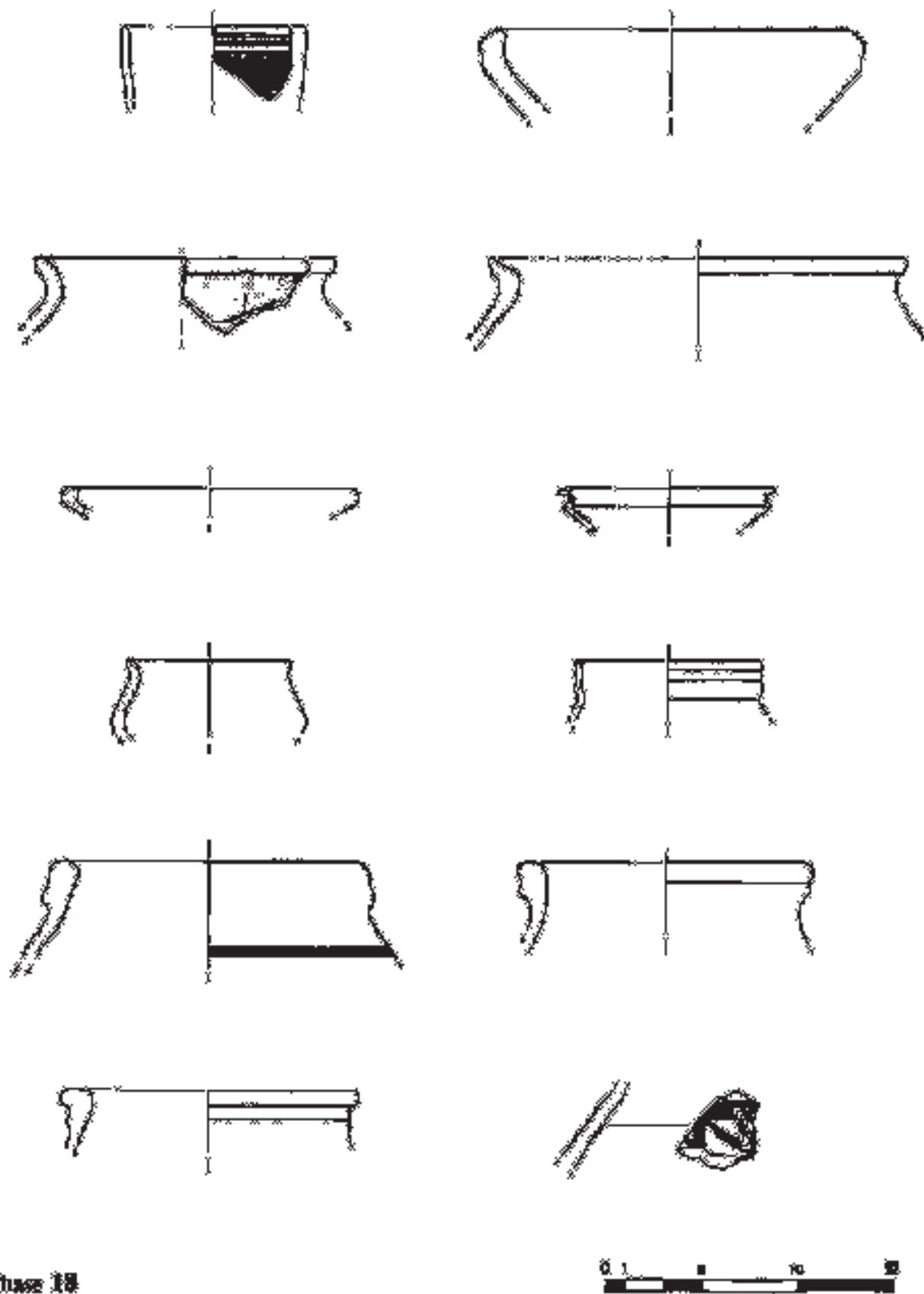


Fig. 18 Pottery from Phase 18, Operation J

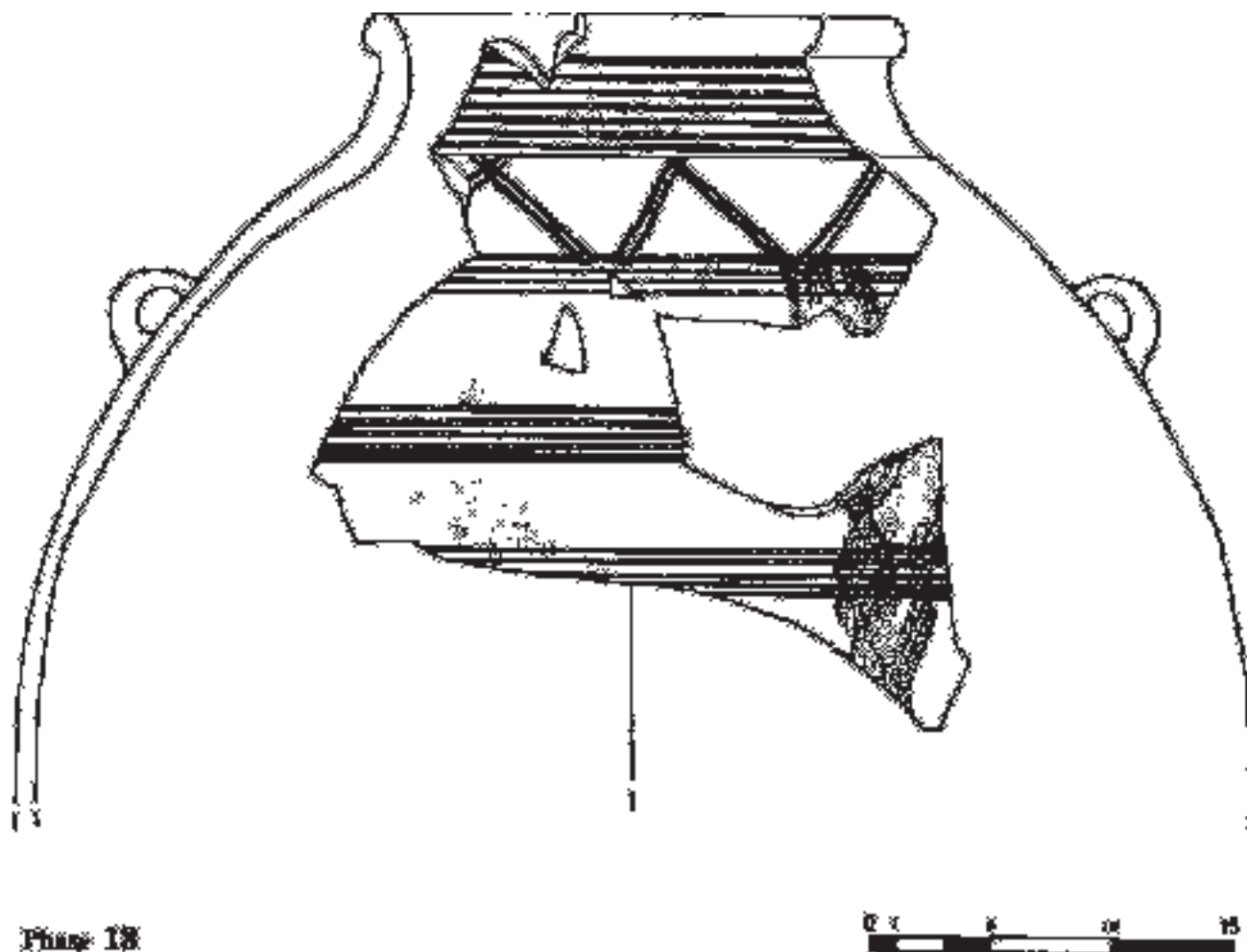


Fig. 19

Fig. 19 Pottery from Phase 18, Operation J

manufacturing, exhibiting, rather, the characteristics of a large, complex and commercially viable industry (VAN DER LEEUW 1977: 71–74; idem 1984: 720–724, 741–748). This suggests that in the large Syrian Middle Bronze Age urban centres pottery manufacture had reached a well-developed level of mass production based on the use of permanent and well organized workshops, fast wheels, and large and technologically diversified kilns. These were probably operated by professional potters who worked in what appear to have been authentic state-run “factories”.

The pottery horizon documented in Phase 17 is characterised by a significant drop in the percentage of surviving EBA IVB shapes (from 37% to 21%), which come now from the fills of the kilns and can therefore be considered as residual (Fig. 4). No sta-

tistically significant association of EB and MB diagnostics was observed in undisturbed contexts. The second millennium ceramic assemblage displays a full array of MBA I Standard Ware shapes and decorations (Fig. 24).

Painted sherds probably belonging to the so-called local Common Painted Ware identified by Nigro (2002),³⁰ which has ties with the more sophisticated North Syrian/Cilician Painted group and the Levantine Painted Ware, are attested from Phase 17 onwards. However, the scarcity of examples and their small dimensions do not allow us a precise classification of the few painted sherds found so far.

Painted wares were already known from Qatna. The pottery assemblage discovered by Du Mesnil du Buisson in Tomb I included specimens of Common Painted Ware as well as one true North Syrian/Cili-

³⁰ Cf. also BAGH 2000: 29–52.



Fig. 20 View of Phase 17 pottery kilns, Operation J, from the south

cian Painted jug (DU MESNIL DU BUISSON 1927: 13–17; BAGH 2000: 130–133).

A radiocarbon determination (Fig. 10) to 1950–1740 BC dates this phase to the MBA I.

3. CONCLUSIONS

As a result of the investigation of the EB/MB transitional levels in Operation J at Mishrifeh and the preliminary analysis of the pottery assemblages, three main points can be made.

A definite continuity can be documented from Phases 26 to 17 in the excavated stratigraphic sequence, which, according to the pottery assemblages and the radiocarbon determinations, covers the late third and early second millennium BC. The transition from the EBA IVB to the MBA I, a historically crucial though hitherto poorly known period in Syrian archaeology, is therefore documented in the Operation J sequence.

The only hiatus in its continuity – though minor settlement breaks between the different phases cannot be ruled out – is of a functional nature and is represented by a clear change in the use of the summit of the acropolis. Between Phases 26 and 19 the area had an agricultural function and was used to process and (especially) store cereals, whilst from Phase 18 onwards a state-run pottery factory was installed on the highest part of the ancient city. An AMS radiocarbon determination (Fig. 10) indicates that the



Fig. 21 Type 1 kiln, Phase 17, Operation J, from north-west



Fig. 22 Type 2 kiln, Phase 17, Operation J, from north-west



Fig. 23 Type 3 kiln, Phase 17, Operation J, from the east

pottery manufacturing area was built exactly at the transition between the two millennia, when apparently a relevant part of the acropolis was spatially and functionally re-organized.

As far as we know to date, this major transformation included the establishment of a large necropolis on a wide terrace in the northern part of the acropolis (Fig. 2, Operations G–H). This cemetery was built on a sequence of EBA IVB phases with fragmentary small-sized architecture, possibly dwellings (BARRO 2003). At the same time, on the nearby top of the acropolis, an area used for agricultural purposes was transformed into a productive area, where pottery was manufactured on a mass-scale probably under the control of a central institution.

From the point of view of the pottery assemblages, the transition from the late third to the second millennium BC, which, according to radiocarbon determinations, covers our Phases 20 to 18, is distinguished by a statistically significant association of EBA IVB and MBA I diagnostics occurring in stratified contexts. A similar combination has been recently observed also in the Hama J/H sequence as well as in several Middle Euphrates sites. On the one hand, MBA I shapes, such as double rim jars, carinated bowls, biconical goblets with everted bead rims, jars with everted and ridged rims, and jars with ledge rims, are documented as from Phases 20 and 19 (Figs. 15, 17). On the other, EBA IVB forms, such as Painted Simple Ware caliciform goblets,³¹ hammer-head bowls³² and jars with modelled everted rims,³³ continue to be represented in the pottery assemblages up to Phase 18 (Figs. 15–16, 18) – that is into the early part of the MBA I – alongside a wide repertory of MBA I shapes.

Finally, a series of “transitional” EB/MB wares and decorations characterise the ceramic assemblages of these phases (cf. for example Fig. 19).

To sum up, the archaeological evidence from Operation J at Mishrifeh shows that a major transformation of the urban layout of the acropolis and

its function marks the transition from the third to the second millennium BC, as witnessed by the establishment of a cemetery in an area previously occupied by houses and a large pottery factory on an open area used in the late third millennium for the intensive storage of bulk food items.

This significant structural re-modelling of the acropolis, which parallels similar developments at other urban sites in Central Inner Syria, such as for instance Hama (FUGMANN 1958: 86–97), Ebla (MATTHIAE 1997a–b) and Tell Afis (GIANNESI 1998: 104; MAZZONI 1998: 34), went hand in hand with what seems to be a significant degree of continuity in the development of the pottery sequences. The transformation of the material culture, which occurred at the end of the EBA and the dawn of the MBA may have taken place very gradually. The absolute chronology of such an uninterrupted development, which at Mishrifeh can be followed through different occupational phases on the basis of stratified contexts, can now be inferred by means of calibrated radiocarbon determinations.

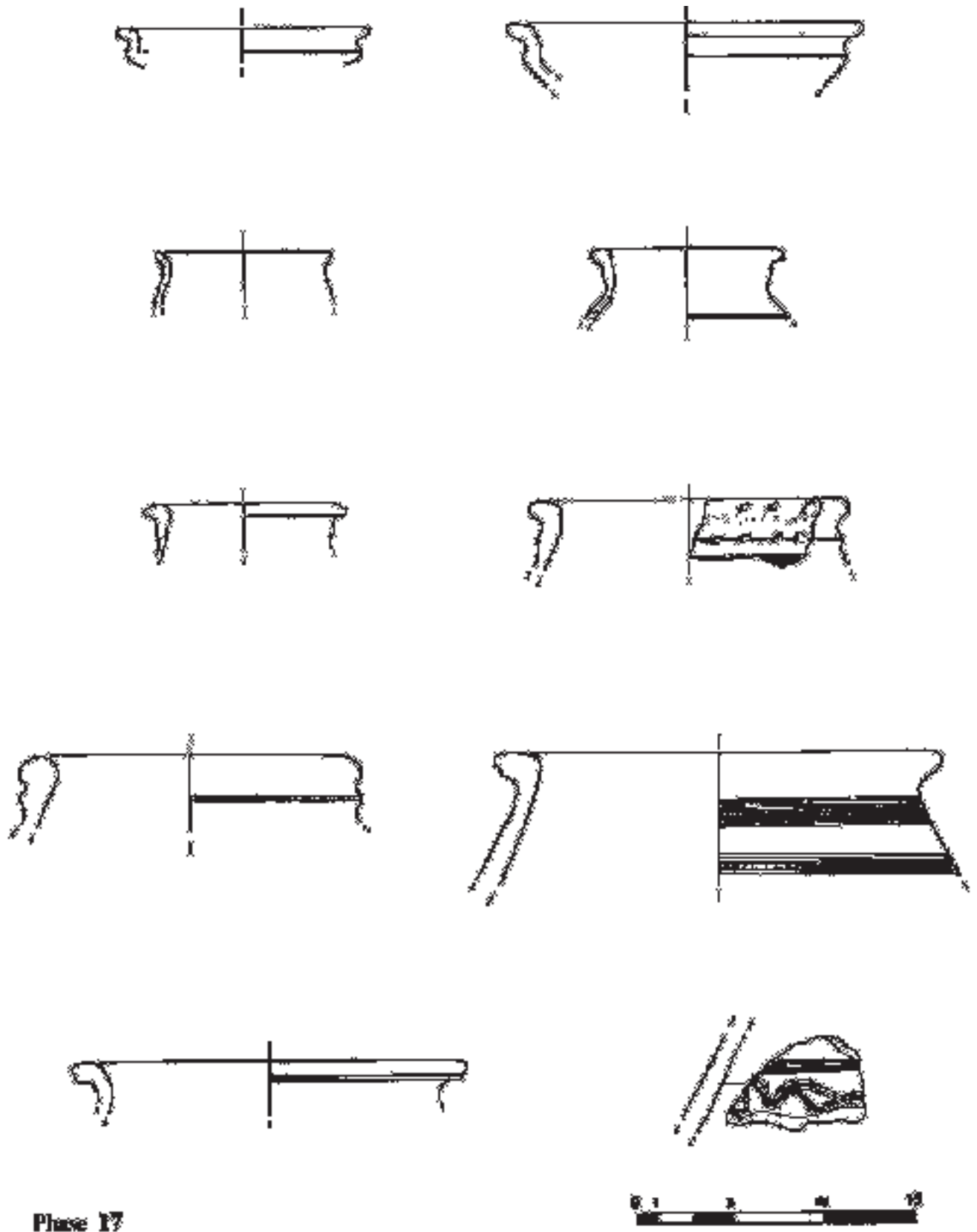
The data presented in this paper result from a preliminary evaluation of the excavated archaeological evidence. Only a detailed and complete statistical analysis of the entire body of stratigraphic and ceramic data related to Phases 26–17 from Operation J will allow a definitive assessment on the representativity of the excavated pottery assemblages, that is the degree to which our contexts may be biased by residual sherds. However, in spite of this important cautionary factor, the association of EBA IVB and MBA I diagnostics in several undisturbed contexts is undoubtedly significant and is common to quite a few sites with late third-early second millennium transitional levels in Central Inner Syria and the Middle Euphrates region. Carbon 14 dating allows us to emphasise, for the first time at Mishrifeh and its region, the early appearance of some MBA I diagnostics and the lingering of typical EBA IVB shapes into the first part of the twentieth century BC.

³¹ Also the corrugated caliciform goblets continue to be attested to the beginning of the MBA I at some Middle Euphrates sites (source: 2nd Workshop “From EB to MB. The Region at the Middle Euphrates”, Chart 28) such as Sweyhat, Operation 1, Phase 6, Tell El-Amarnah MBA I, and Shavi Höyük, Level XII.

³² This type of bowl (cf. Fig. 18: B) is still attested in MBA I contexts at several Middle Euphrates sites (source: 2nd Workshop “From EB to MB. The Region at the Middle Euphrates”, Chart 21) such as Halawa Q, Bausehicht 2C-

2B, Shavi Höyük, Level XII, Zeytinli Bahce Höyük, Building VII, Lidar Höyük, Phase 1.

³³ Jars with modelled everted rims are still present in MBA I contexts also at several Middle Euphrates sites (source: 2nd Workshop “From EB to MB. The Region at the Middle Euphrates”, Charts 12, 14, 15) such as Tell Hadidi, Area B, Levels 4, 5A–5B, Tell Sweyhat, Operation 1, Phase 6, Qara Quzaq, Level II-3, Shavi Höyük, Levels XIII–XII, Lidar Höyük, Phase 2, Tell Hammam, Level VII 1–8, and Halawa Q, Bausehicht 2C–2B.



Phase 17

Fig. 24 Pottery from Phase 17, Operation J

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