

Revisiting the Amuq sequence: a preliminary investigation of the EBIVB ceramic assemblage from Tell Tayinat

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The chronology of the Early Bronze Age in the Northern Levant has been constructed around a small group of key sequences and excavations, including the Amuq Sequence. Information about this sequence has predominantly been taken from excavations conducted in the 1930s. The final Early Bronze Age phase in the Amuq (Phase J, EBIVB) was, however, based on a comparatively small sample of ceramics originating only from the site of Tell Tayinat. Excavations of EBIVB levels by the Tayinat Archaeological Project have provided a larger sample of Amuq Phase J ceramics, which are described here, quantified and evaluated in comparison to the original Braidwood collection and to the larger Northern Levantine region.

Keywords Early Bronze Age, Amuq, Northern Levant, ceramics, quantitative analysis

Introduction

Examinations of the chronology of the Early Bronze Age in the Northern Levant have traditionally focused around a few key sequences and excavations. Among these is the Amuq Sequence, which was described in a seminal publication by Robert and Linda Braidwood in 1960. One of the remarkable aspects of this work is its longevity and resilience; it remains one of the most commonly cited sources for the archaeology of this period. The general sequence and its chronology have never been seriously challenged despite numerous excavations in the period since its publication, including the ground-breaking results from Tell Mardikh (Ebla) and further excavations in the Amuq (i.e. at Tell Kurdu, Tell Judaidah and Tell Tayinat).

This sequence, however, was primarily constructed from soundings at a number of sites that never achieved wide horizontal exposures. As a result, it remains possible to build upon the existing body of knowledge represented by the Amuq sequence, to create a more nuanced understanding of the period based on greater exposures and larger sample sizes.

This article examines the ceramic assemblage dating to the EBIVB period (Amuq Phase J) that has been collected by the excavations of the Tayinat Archaeological Project (TAP) (Welton *et al.* 2011).

Tayinat Archaeological Project investigations

Tell Tayinat and its history of excavations

The Amuq Plain is situated in a strategic location, linking routes between the Anatolian highlands, the Syro-Mesopotamian lowlands and the eastern Mediterranean littoral. As a result, it is home to some of the richest archaeological remains in the Near East (the Braidwood survey (1937) recorded 178 mounded settlement sites within the plain, while the latest results of the AVRPP have documented almost 400 sites (Dodd *et al.* 2011)). The primary settlements in the Amuq plain have been the scene of important excavations (e.g. Alalakh (Woolley 1955), Tell Tayinat, Tell Judaidah, and Çatal Hoyuk (Haines 1971)), which together have provided one of the foundational cultural sequences for the region (Braidwood 1937; Braidwood and Braidwood 1960).

Tell Tayinat is a large, low-lying mound located approximately 1.5 km east of Demirköprü, just north of the modern Antakya-Reyhanlı road. It sits within the flood plain of the Orontes River, at its northern

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bend, as the river turns westward towards Antakya (ancient Antioch) and the Mediterranean Sea (Fig. 1). A topographic survey of the site, conducted in 2001, revealed that the site comprised a principal upper mound, or citadel (*c.* 20 ha in size), and an extensive lower mound, hidden beneath the alluvium of the Orontes floodplain, extending to the north, east and south-east of the upper mound. The primary occupation of the lower town dates to the Iron II–III period; the full extent of the site during the Early Bronze Age remains unclear.

Four seasons of excavations were conducted at Tell Tayinat between 1935 and 1938 as part of the University of Chicago's Syrian-Hittite Expedition. These excavations focused primarily on the West Central Area of the upper mound, and produced large horizontal exposures of five distinct architectural phases, or 'Building Periods', dating to the Iron Age (Amuq Phase O; *c.* 950–550 BCE; Haines 1971: 64–66). In addition to these large horizontal-clearing operations, a series of deep soundings (designated T1, 2, 4, 5, 6, 8, and 13) was made into strata sealed by the Phase O remains. In some of these soundings

(T1, 4, 8, and 13; Fig. 2), 3rd-millennium levels (Phases H to J) were uncovered immediately below the earliest Iron Age floors (Braidwood and Braidwood 1960: 13–14; Welton 2012), indicating the existence of an extensive Early Bronze Age settlement on the upper mound at Tell Tayinat.

The preliminary field seasons of the TAP were conducted between 1999 and 2002, and were devoted to surveying and mapping the site (see Batiuk *et al.* 2005). Following this, work began at Tell Tayinat in 2004, expanding to full-scale excavation in 2005, and continuing thereafter on an annual basis (for yearly reports, see Harrison 2006; 2008; Harrison *et al.* 2009; 2011; Harrison and Batiuk 2010). As with the Syrian-Hittite Expedition, the TAP excavations have also revealed extensive remains dating to the Iron Age (Harrison 2001; 2005; 2009a; 2009b; 2010; 2011), but Early Bronze Age remains (either residual or *in situ*) have been uncovered in multiple excavation fields. In particular, excavations in Field 1 during the 2008–2012 field seasons thus far have exposed almost 300 sq m of a large complex dating to the EBIVB (Phase J).

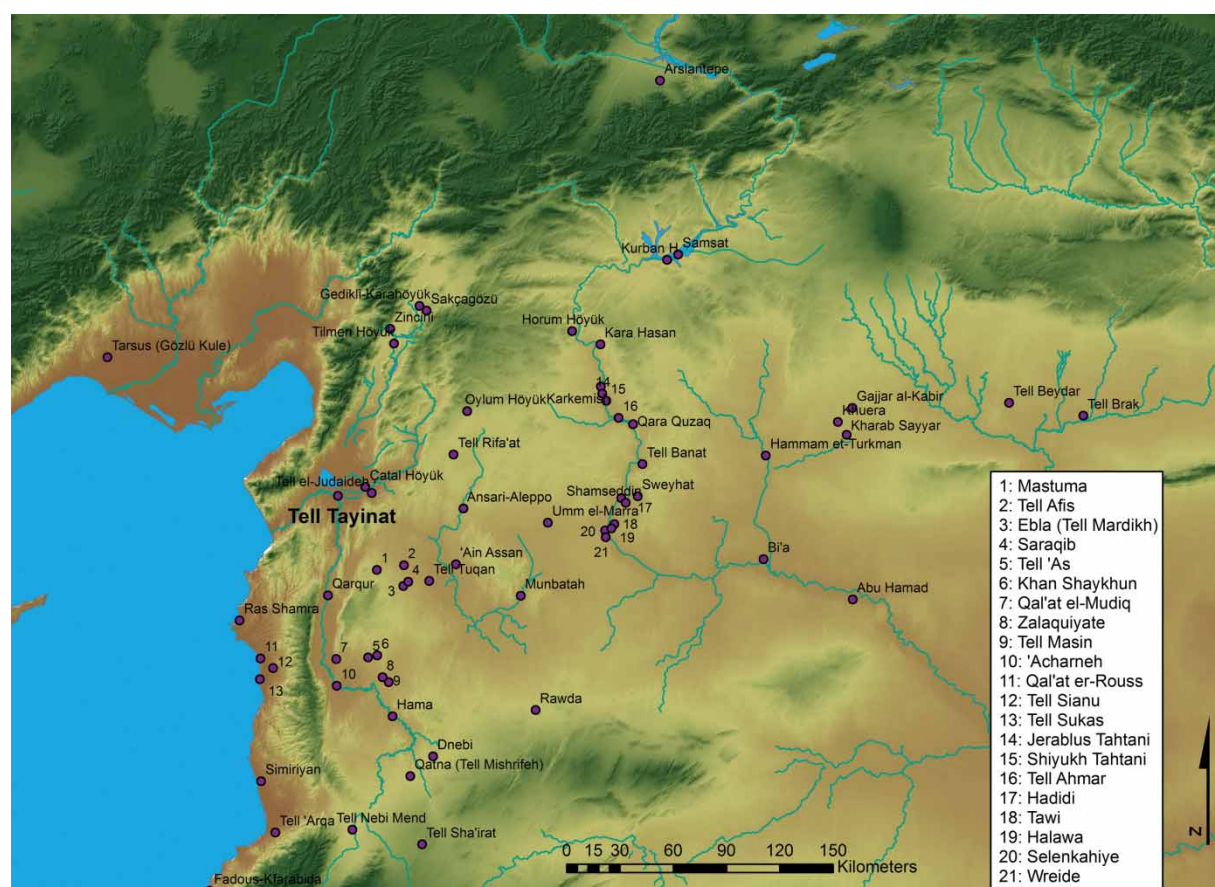


Figure 1 EBIV sites mentioned in the text.

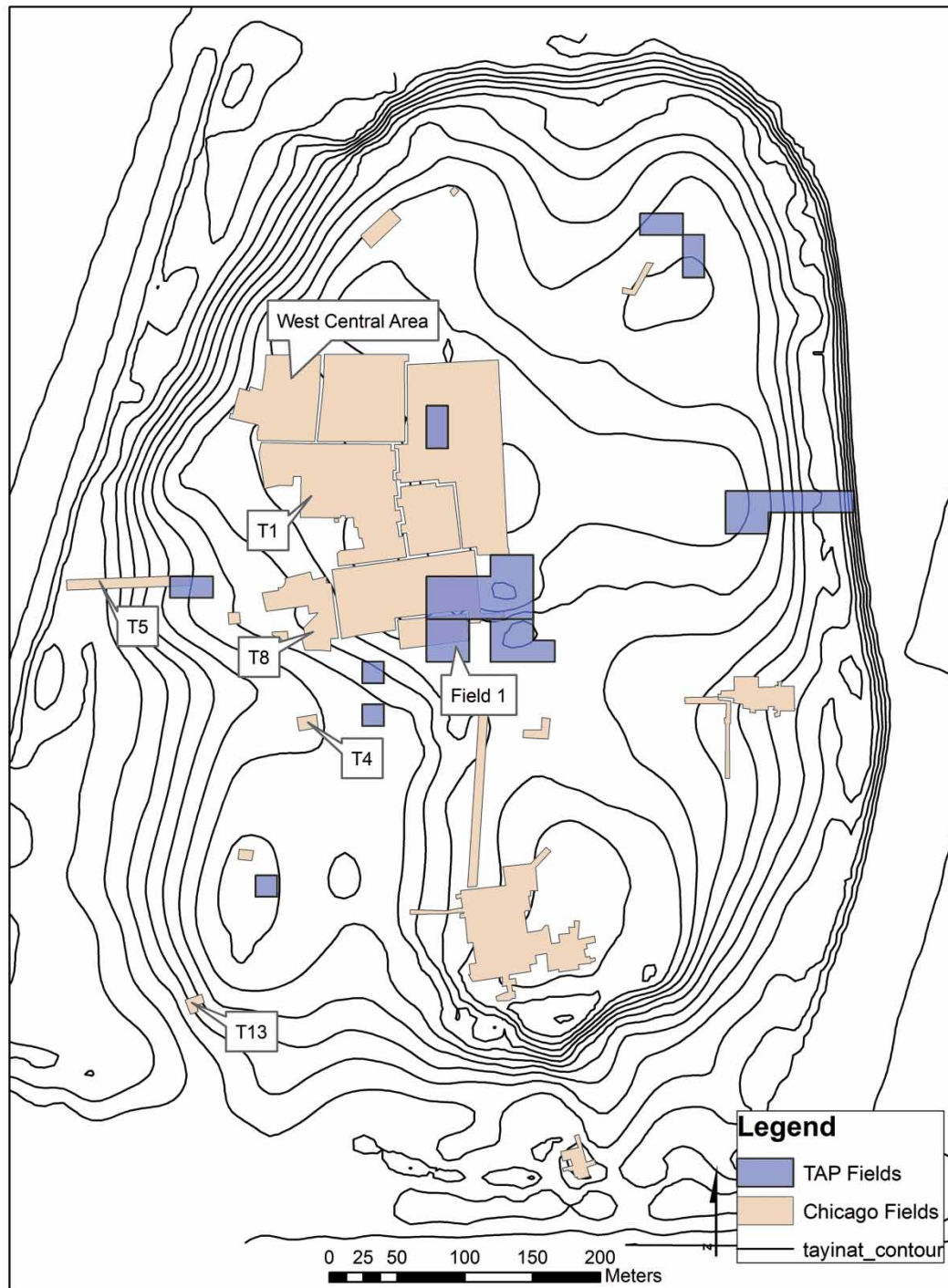


Figure 2 Plan of Tell Tayinat, showing areas excavated by the Syrian-Hittite Expedition, and Tayinat Archaeological Project (TAP) excavation areas.

Field 1 architecture and phasing

Field 1 is located in the centre of the upper mound, on the southern edge of the Syrian-Hittite Expedition's West Central Area (Fig. 2). The Field 1 excavations currently encompass four 10×10 m squares (G4.55, G4.56, G4.65, and G4.66; Fig. 3). To date, the excavations in this area have succeeded in delineating nine superimposed architectural phases or field

phases (FPs), with the primary sequence dating to the 12th–11th centuries BCE, or the Iron IA–B period (FPs 3–6), and the late 3rd millennium BCE, or EBIVB (FPs 7–9), corresponding to Amuq Phase J in the Braidwood sequence.

FP 7 dates to the later part of Phase J, and represents an ephemeral post-occupational phase of pits that followed the destruction of the more substantial



Figure 3 Plan of building complex associated with EBIVB field phase (FP) 8.

preceding settlement. As this phase was associated with no architecture, these pits and their surrounding fill loci were originally grouped stratigraphically to form FP7. However, as will be demonstrated below, the ceramic assemblage associated with the pits found in FP7 displays some characteristics distinct from that of the accompanying fills of FP7. As a result, the two groups of loci are treated separately in the descriptions that follow. In general, FP7F (fill loci) demonstrates greater continuity with the earlier phases (FPs 8b and 8a), with a more distinct change in the ceramic assemblage occurring in FP7P (pit loci). The pits associated with FP7P are stratigraphically later than the accumulated post-occupational fill loci of FP7F, and thus should be considered to

represent the terminal occupation at Tayinat in the EBA period immediately prior to its abandonment.

The remains of FP 8 are represented by a series of rooms of a large, well-preserved building, with walls preserved to a height of more than 1.5 m and floors covered in smashed ceramics, as well as the associated debris from the destruction of this building. This phase was sub-divided into the period associated with the use of the building (i.e. the ceramics found *in situ* on the floors of the building; FP 8b) and the burnt debris associated with the building's destruction that accumulated within the rooms (FP 8a). This building originally consisted of two large rooms, connected by a doorway, utilizing a construction technique involving the symmetric placement of interior buttresses

(Welton *et al.* 2011). While the interior walls between these rooms were relatively thin, they were bounded to the south and east by a substantially thicker wall that measured almost 2 m in thickness. Further intact architecture to the east and south of this larger wall was uncovered in squares G4.65 and G4.56, thus far consisting of 10–12 complete, or partial, additional rooms associated with this building complex.

The character of this architecture is, however, notably different from that observed to the west and north. There is no evidence at present for any interior buttressing, which was a key feature of the construction technique to the west. In addition, the architecture is much smaller and thinner in construction compared with the larger, thicker walls observed in the north-western part of the building. Finally, the architecture appears to be organized into a series of small cell-like rooms, in contrast to the larger rooms observed in G4.55.

FP 9 represents an earlier architectural phase with a different plan to that of FP 8. The new phase has not yet been fully examined, and thus the plan of the associated architecture has not yet been articulated. Its dating is also not certain, although very preliminary results suggest an early phase of Phase J.

Braidwood's Phase J ceramic data

One of the salient features of Braidwood's characterization of the Amuq ceramic sequence that has contributed to its resilience and long-term value was his detailed treatment of it, and particularly his quantitative discussion of ceramic development over time. His phases have remained stable despite the discovery of a number of other significant EBA sequences in this area largely because of his quantitative treatment of the data, which resulted in phases that were not simply based on presence/absence data.

This study will focus on material originating from Phase J (EBIVB). Braidwood's definition (Braidwood and Braidwood 1960: 431) of the ceramic characteristics of Phase J is as follows:

1. The only signs suggestive of Red-Black Burnished Ware (RBBW) are found in the cooking-pot group.
2. While the sherd bulk in the cooking-pot category is relatively small and the profiles and clays are somewhat varied, it may be that several new cooking-pot wares make their appearance in Phase J.
3. A few sherds of Brittle Orange Ware (BOW) occurred on the lowest Phase J floors.
4. Over half the Phase J sherd bulk (and some 112 complete or re-constructible pots) are in Simple Ware (SW) of the type which begins in Phase I. The proportion of sherds with corrugated surface drops

sharply, however, and there are a few cases of comb-incised and comb-impressed surfaces. Goblets are predominant in Phase J.

5. The proportion of Painted Simple Ware (PSW) increases markedly but is still relatively small in terms of the whole sherd bulk. A white-on-black effect achieved by incising through dark paint is one of the criteria chosen for the beginning of Phase J.
6. Smeared Wash Ware (SWW), making up about a fifth of the sherd bulk, increases at the beginning of Phase J, but shows a marked decrease in the uppermost floors.
7. Two types of 'imported' pottery are represented by a Troy IV type cup and grey burnished bottle sherds.

His criteria for the end of Phase J include (Braidwood and Braidwood 1960: 431):

1. Disappearance of distinctive SW features (cylindrical spouts and goblets).
2. Disappearance of 'white-on-black' decoration in PSW.
3. Disappearance of SWW.

Phase J remains were only excavated at Tell Tayinat. None of the other sites in the Amuq produced stratified remains dated to Phase J, although both Tell Judaidah and Çatal Höyük did produce Phase J types in mixed contexts dating to the Second Mixed Range (Braidwood and Braidwood 1960: 429). Thus, Braidwood's descriptions are based entirely on ceramic collections from the site of Tell Tayinat, and are as a result directly comparable to the data gathered by the TAP.

In general, the assemblages of Phase I and Phase J demonstrate a considerable amount of continuity. The most notable changes between the two phases occur in the relative frequencies of the various identified ware types (see Table 2). Particularly notable is the sharp decrease in the frequency of RBBW between Phases I and J. A corresponding increase in frequency, that largely compensates for this change, occurs in both SW and SWW. At the same time, PSW also increases in frequency, while BOW decreases and disappears at the very beginning of Phase J.

Apart from the general shifts in ware-type frequencies, there are fewer noticeable changes in typological aspects of the assemblage between Phases I and J. The most distinctive differences consist of a significant decrease in corrugation on SW during Phase J, and the rapid increase in goblets, which become the dominant form in the SW and PSW assemblage. The other primary characteristic change is the appearance of the white-on-black painted technique on both goblets and jars in Phase J.

Table 1 Sample sizes for the TAP quantified EBIVB ceramic assemblage

	Total	Diagnostics	SW	SWW	PSW	CW	RBBW	Other	A: Bowls	B: Jars	C: Coarse	D: Cups/Goblets	E: Other
7P	5119	822	521	51	78	83	10	22	153	79	75	178	6
7F	10642	1608	881	250	156	172	26	48	417	140	182	343	17
8a	7559	1145	678	169	86	112	51	20	253	105	96	283	16
8b	1923	344	178	48	43	39	18	5	73	27	32	73	8
9	757	124	83	17	8	9	2	3	31	14	6	34	2
Total	26000	4043	2341	535	371	415	107	98	927	365	391	911	49

SW, Simple Ware; SWW, Smeared Wash Ware; PSW, Painted Simple Ware; CW, Coarse Ware; RBBW, Red-Black Burnished Ware.

Typological and macroscopic fabric descriptions of Phase J ware types

Due to the comparatively limited exposures of Phase J levels at Tell Tayinat during the 1930s, and the absence of Phase J remains at other Amuq sites, Phase J represents one of the smallest collections of sherds in Braidwood's assemblage, and the single smallest assemblage for any phase since the Neolithic period. His Phase J descriptions are based on a collection of 912 sherds and 153 complete vessels (Braidwood and Braidwood 1960: 431). The TAP excavation assemblage represents a much larger collection than that included in Braidwood's original analysis. A representative selection (described below) of the excavated ceramic assemblage was quantified for this study, representing a total quantified diagnostic assemblage of 4043 sherds (Table 1).

In order to gain a better perspective on the typological and fabric-related composition of the EBIVB assemblage obtained by the TAP excavations, detailed quantitative data were obtained about form types, ware types, and decoration. For FP 7, representative loci were selected for analysis from each square (G4.55, G4.56, G4.65), representing both pits and fill loci. For FPs 8 and 9, all excavated loci were quantified. For FPs 7 and 8a, only diagnostic sherds were quantified; for FPs 8b and 9, all body sherds were also categorized by ware type, to evaluate the possibility of bias in the diagnostic assemblage.

The relative proportions associated with the ware types identified by the current TAP excavations were compared with the percentages Braidwood cites for the ware types observed in the EBIVA and EBIVB period, Phases I and J (Table 2). In Phase J, both SW and PSW are said to increase compared with their occurrence in Phase I, while RBBW is said to disappear completely in Phase J. TAP results are calculated for diagnostic sherds for all FPs. The numbers for all sherds, including body sherds, are displayed for FP 8b, associated with the construction phase of the large architectural complex, and FP 9, the earliest phase beginning to emerge. Values for both SW and PSW are much higher when considering only diagnostics, while coarse ware (CW) is much lower; SWW and RBBW remain about the same proportion of the assemblage regardless of the inclusion of body sherds. The 'Other' category refers to sherds that could not be assigned confidently to a particular ware type, which was most common among the body sherds.

In comparing these values to Braidwood's original numbers, focusing, for example, specifically on FP 8b, which has the larger sample size, it is clear that the numbers obtained by the current excavations by quantifying the diagnostic sherds approximate quite closely his original numbers; the primary differences lie in the RBBW and BOW categories. Each of the relevant ware types will be discussed in more detail below.

Table 2 Relative proportions of EBIVB ware types according to Braidwood results and TAP results

	Braidwood %		TAP %						
	Phase I	Phase J	FP 7P	FP 7F	FP 8a	FP 8b	FP 8b ALL	FP 9	FP 9 ALL
SW	41–46	53–58	65	57	62	53	48	68	45
PSW	0–4	9–14	12	10	7	13	3	7	2
SWW	3–8	18–23	9	17	14	15	14	14	16
CW	2–7	6–11	11	11	10	12	23	7	25
RBBW	35–40	0	1	2	4	5	4	2	2
BOW	4–9	0–3	0	0	0	0	0	0	0
RSW	0–4	0	–	–	–	–	–	–	–
Other	0	0	2	3	3	2	8	2	10

TAP, Tayinat Archaeological Project; FP, field phase; SW, Simple Ware; SWW, Smeared Wash Ware; PSW, Painted Simple Ware; CW, Coarse Ware; RBBW, Red-Black Burnished Ware; BOW, Brittle Orange Ware; RSW, Reserved Slip Ware. FP8b ALL and FP9 ALL include both diagnostics and all non-diagnostic body sherds.

Simple Ware

SW forms the dominant ware type observed in all sub-phases of Phase J. According to Braidwood, this fabric type constitutes 53–58% of the Amuq Phase J corpus, and in terms of fabric is indistinguishable from the SW of Phase I, representing a continuation of the earlier tradition (Braidwood and Braidwood 1960: 435). According to the TAP results, it forms between 53 and 68% of the diagnostic assemblage, depending on the sub-phase. This percentage may be slightly overestimated when the entire assemblage, including body sherds, is considered. The full assemblage from FPs 8b and 9 suggests that SW in fact forms only about 45–48% of the assemblage as a whole.

Vessels of this ware type are wheel-made, and are generally medium-to-high fired and fully oxidized; fabrics are buff in colour, ranging from orange to pink to greenish buff. Occasionally, a two-tone colour combination is visible, most commonly consisting of pinkish-buff and yellowish-buff; this appears to have been intentionally done, as this colour variation tends to occur in regular bands. Sherds often demonstrate evidence of a self-slip, which is generally lighter in colour than the clay of the vessel. Although it is generally suggested (Braidwood and Braidwood 1960: 406) that vessels of this type were made using the fast wheel, this has yet to be confirmed via microscopic examination at Tell Tayinat (Courty and Roux 1995). Features such as the delicate fine walls of many of the vessels, parallel striations (rilling) on the interior vessel surfaces and spiral string-cutting marks on the base of SW goblets, indicate the use of the wheel, but this could potentially be due to wheel-shaping or finishing rather than throwing. Most often, no inclusions are visible; most other examples show fine mineral inclusions. Coarse textures are generally rare, and tend to be found only in larger forms. According to Braidwood, corrugation decreases from *c.* 47% of the Phase I SWs to only 14% in Phase J. The results of the current analysis suggests that the corrugation that does occur in Phase J tends to be found in a narrow band near the rim of the vessel (particularly in conical cups and goblet forms, Fig. 4: 15, 20), compared with the larger zone of corrugation that was more common in Phase I. In some cases, widely spaced incised lines are used to imitate true corrugation, and suggest an attempt at simplification of the manufacturing process.

Microscopically, the fabrics of SW are quite variable; about two thirds are of Matson's serpentine-type clay, but the remaining third show great variety and include a number of Matson's other fabric types (Braidwood and Braidwood 1960: 408). This evidence

for high variability in SW fabrics raises the question of whether SW represents a true 'ware type', in the sense of a ceramic production that represents a consistent collection of technological traits, or whether it rather incorporates multiple different production sequences (see Campbell 2000). The SW of the Amuq is often linked to the broader spread of fine, buff-coloured table wares throughout western Syria during the EBIV. However, this level of variability within a single site or region detracts from the idea that these 'wares' can be usefully linked together to represent a larger pattern of related production over a wider area.

In terms of forms, SW is probably the most variable of the ware types. Even so, this ware is dominated by a few particularly common forms. The overall SW assemblage is dominated by goblets/cups (47%) and bowls (35%), with jars being less common (16%) and other forms (including teapots, pitchers and bottles) occurring regularly but much more rarely (1%).

The most common bowl types in SW include small shallow bowls with thin walls, curved sides, and fine in-turned hammerhead rims (Fig. 4: 1–2, 10% of bowls); and medium-sized shallow bowls with simple (Fig. 4: 3–4, 15%), slightly in-turned (Fig. 4: 5, 18%), or slightly out-turned (Fig. 4: 6–9, 47%) rims. These bowls occasionally have horizontal loop handles, most commonly placed mid-way down the body of the vessel (Fig. 4: 7, 9). Deep bowls are comparatively less common in Phase J than Phase I, but do occur consistently (*c.* 1.5%).

Small low-collared jars with a loop handle continue from Phase I (Fig. 4: 10–11, 32% of jars), but are less commonly corrugated than in Phase I. Medium-sized jars with a tall, narrow, flaring neck are also common (39%), while jars with a very short, highly flaring collar are somewhat less common (Fig. 4: 12, 12%). Large jars with a tall, flaring neck, triangular rim, and series of horizontal ridges on the shoulder occur occasionally (Fig. 4: 13, <1%). Jars generally have flat or very slightly concave bases.

Cup forms consist primarily of two types, goblets (67% of cups) and conical cups (32%). There are two primary types of goblet forms occurring in SW. The first has a narrow body, and is comparatively uncommon (Fig. 4: 14, 13% of all goblets). The second form, which is by far the most commonly occurring, has a wider, more flaring body, tapering to a tall narrow pedestal base (Fig. 4: 15–19, 87% of all goblets). Four main types of lips are observed, including simple (Fig. 4: 16, 53%), interior thickened (Fig. 4: 17, 14%), s-shaped (Fig. 4: 18, 26%), and beaded types (Fig. 4: 19, 8%). There are also four decoration types, including undecorated (Fig. 4: 16, 18, 45%),

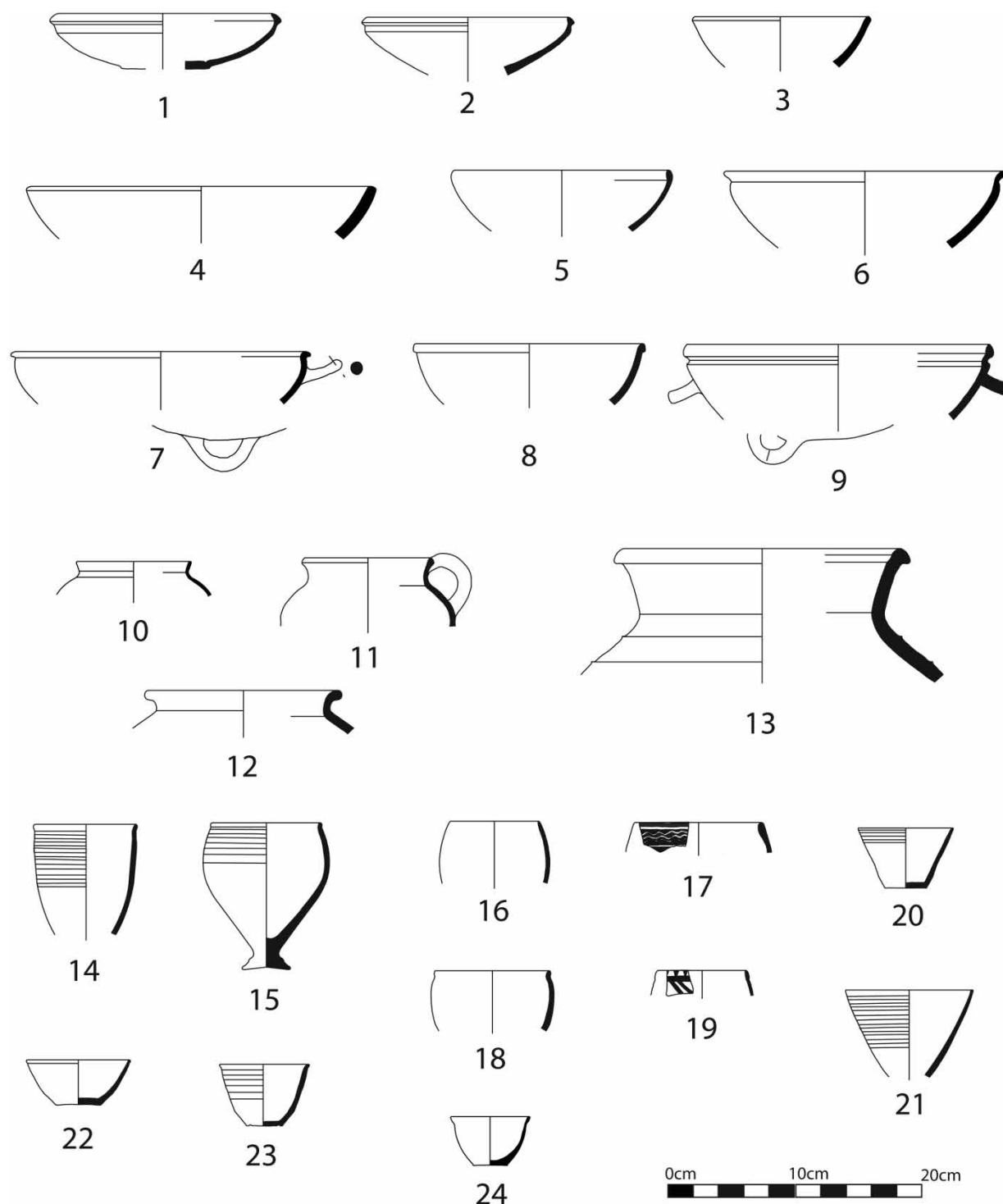


Figure 4 Characteristic forms associated with Simple Ware at Tell Tayinat in EBIVB.

corrugated (Fig. 4: 14–15, 36%), and two different types of painted goblets (Fig. 4: 17, 19, total 19%). The latter decoration types are described under PSW below.

Truncated conical cups, which first appear in Phase I, are still present in Phase J, but tend to have thicker walls and no incised ring base; these forms often have curved sides (Fig. 4: 22–24, 94% of conical

cups) compared with the straight sides (Fig. 4: 20–21, 6% of conical cups) characteristic in Phase I. Corrugated body surfaces are not as common as in Phase I (40% of conical cups), and corrugation is most often confined to a narrow band near the rim of the vessel (Fig. 4: 20), although occasional examples are more fully corrugated (Fig. 4: 21). Deeper mug-like cup forms, with a small collar and single handle

also occur in small numbers (Fig. 5: 1, <1%). Occasionally, both conical cups and goblets show evidence of burning confined to the area around the lip of the vessels, suggesting that these forms may have sometimes been used as lamps.

Bottles and pitchers also occur, but are much less common than other form types described above (Fig. 5: 2–3, each <1%). Pitchers tend to have modelled rims, and may have either quite wide or very narrow necks. Teapots tend to occur as jars with tall flaring necks, and have long narrow cylindrical spouts; at least in some examples, they include a basket handle (Fig. 5: 4). Krater or hole-mouth-type forms also occur in very small numbers (Fig. 5: 5–6).

Painted Simple Ware

PSW, according to Braidwood's estimates for Phase J, forms between 9 and 14% of the assemblage. The numbers obtained by the TAP examinations confirm these numbers, with PSW varying between 7 and 13% of the diagnostic assemblage. These numbers are substantially overestimated, however, as body sherds of PSW are considered diagnostic. Consideration of the entire assemblage (i.e. including all body sherds) for FPs 8b and 9 suggests that PSW forms only about 2–3% of the overall assemblage.

The fabric of PSW is indistinguishable from that of SW as a whole, although it tends towards finer fabrics due to the relative frequency of goblets in PSW and the general absence of larger forms. The overall similarity in fabric to SW, described above, suggests that PSW represents a modern analytical category, rather than a ware that would have been considered distinctive in the past, when it was likely considered to represent a specific sub-set of SW. It is retained here as a separate category due to the potential chronological significance of its typological development.

Paint in PSW generally varies from orange-red to black. The vast majority of examples bear monochrome paint, although extremely rarely intentional bichrome paint is observed ($n = 2$ examples).

The most characteristic form in this ware type is the goblet, making up between 72 and 88% of the PSW assemblage, depending on the FP. Painted goblets almost exclusively take the widely flaring form described above for SW, but most often have wider, squatter, and flatter bases than observed in SW examples (Fig. 5: 13–16). Jars (12% of PSW), bowls (7%), bottles (2%), and other cup types (3%) make up the remainder of the identifiable examples of PSW.

Bowls occur regularly, but are not particularly common (7%). The most common painted bowl forms are small shallow bowls with painted bands or

cross-hatching (Fig. 5: 7–8), medium-sized bowls with painted bands (Fig. 5: 9) or medium-size deep bowls with out-turned rims and cross-hatched painted decoration (Fig. 5: 10). Jars most commonly occur as small jars with a tall flaring neck (Fig. 5: 11) and medium-sized jars with short, highly flaring necks (Fig. 5: 12). Bottles with narrow necks and wide globular bodies also occur occasionally (Fig. 6: 2–3, 2%), and are painted with horizontal bands extending from the rim to the widest part of the body. Rare examples of globular cups with a single vertical loop handle (Fig. 5: 17, 3%) and painted teapots with a cylindrical spout (Fig. 6: 1, <1%) also occur.

Two types of painted decoration occur on PSW. The first type appears in small numbers during the previous phase, Phase I, and continues into Phase J where it remains common (67% of the PSW assemblage). This type is more variable both in terms of forms represented and decorative motifs (Fig. 5: 7–10, 12–13, 17, Fig. 6: 1–6). This painted type includes all examples of bowls and bottles, most examples of jars, and some examples of cups and goblets. Painted motifs often include carelessly applied horizontal or vertical bands (Fig. 5: 7, 9, 13), diagonal bands or ladder patterns (Fig. 5: 12, 17, Fig. 3: 1) and cross-hatching (Fig. 5: 8, 10, Fig. 6: 6). Dots are often placed around the rim, either on the interior or exterior of the vessel (Fig. 5: 12). Drippy wavy vertical lines often extend towards the vessel base on the exterior of both jars and goblets (Fig. 6: 4–5). Paint of this type appears to have been applied by hand without the use of the wheel.

In contrast, the second paint type is limited chronologically to Phase J (33% of PSW assemblage), and occurs almost exclusively in goblet forms, where it displays very finely painted bands (most often in black, but sometimes in red; Fig. 4: 17, Fig. 5: 14–16). This painted pattern is clearly applied using the wheel, and is extremely carefully executed. Some of these bands measure less than a millimetre in thickness, but they often occur along with a single thick band, in which the paint is reserved in an incised pattern consisting of several parallel wavy lines. The same painted pattern is observed in rare cases on thin-walled high-necked jars (<1% of PSW, Fig. 5: 11). Rarely does this painted pattern occur with any other motifs, but in very rare cases it occurs with diagonal lines extending from the bottom of the painted bands, or with dots along the lip of the goblet ($n = 2$ examples).

This white-on-black incised paint type is considered the hallmark of Phase J. This, however, is not due to its dominance in terms of frequency, as this paint type

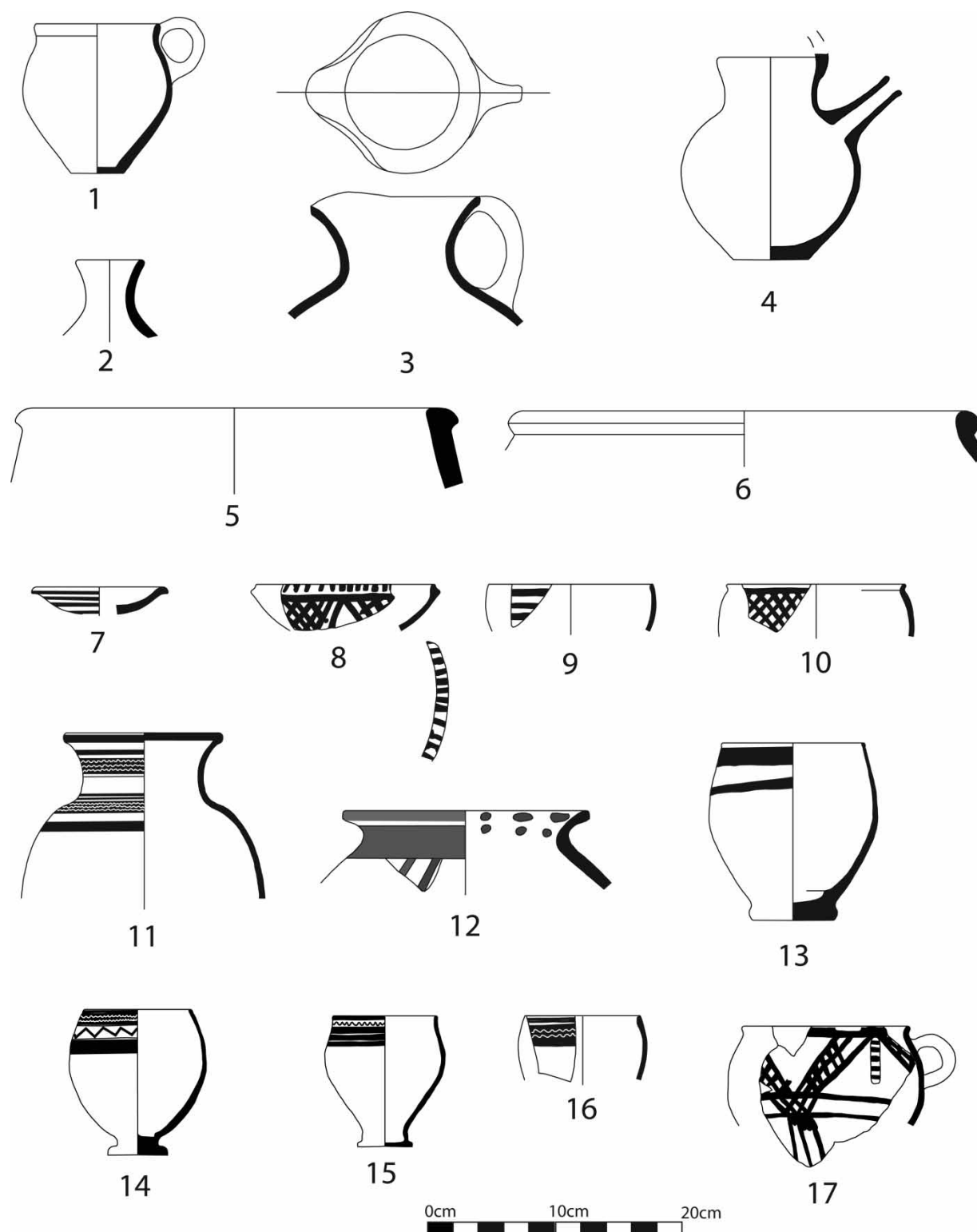


Figure 5 Characteristic forms associated with Simple Ware (1–5) and Painted Simple Ware (6–17) at Tell Tayinat in EBIVB.

only makes up 33% of the PSW assemblage overall. The current excavations suggest that when all examples of PSW are considered, the white-on-black incised paint type makes up between 25 and 48% of the assemblage, depending on the FP. When

unidentifiable painted body sherds are removed, however, and only examples with an identifiable form are considered, goblets with this type of painted decoration make up 57% of the PSW assemblage overall.

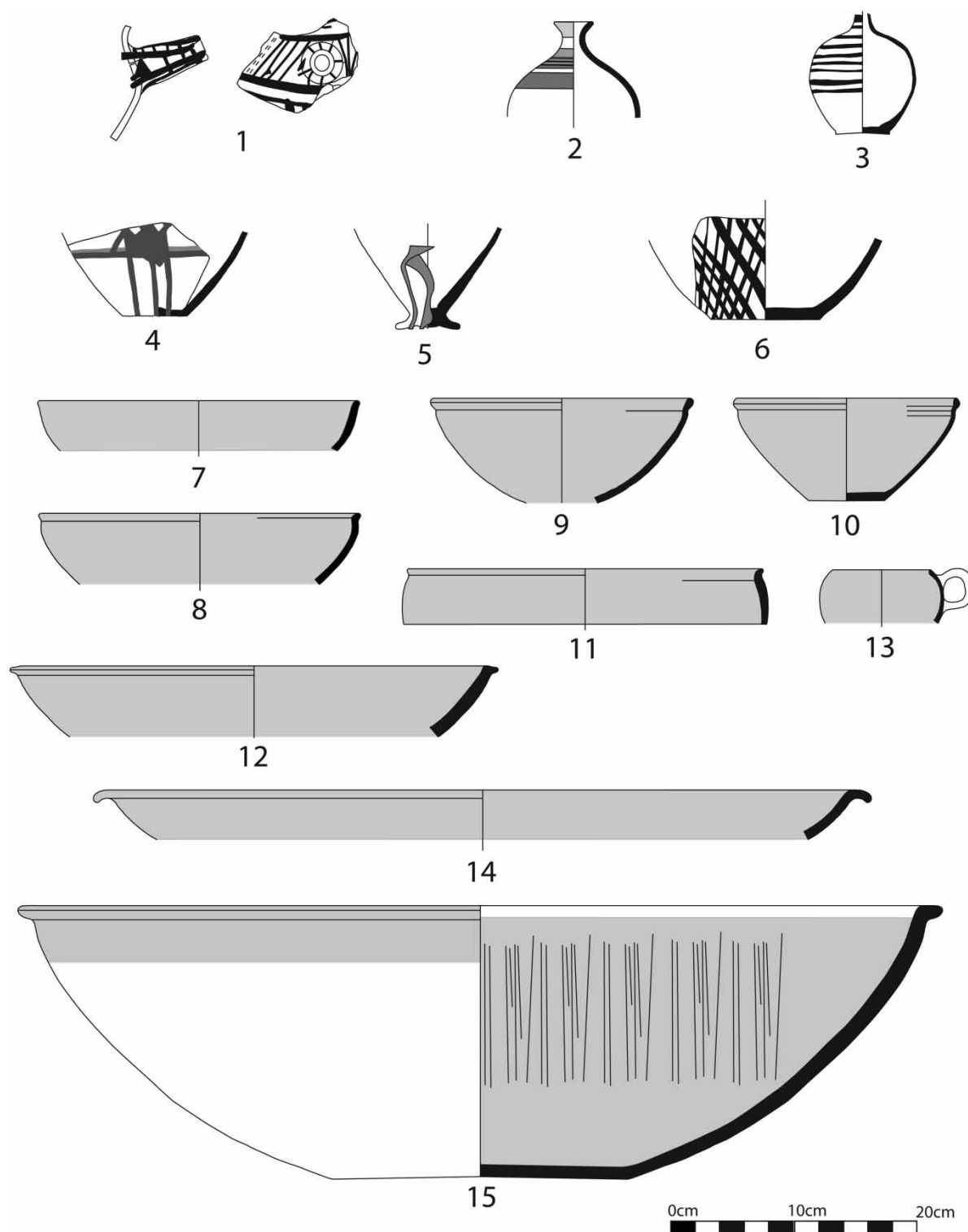


Figure 6 Characteristic forms associated with Painted Simple Ware (1–7) and Smeared Wash Ware (8–15) at Tell Tayinat in EBIVB.

Smeared Wash Ware

According to Braidwood's statistics, SWW increases from a very small percentage (*c.* 3–8%) in Phase I, to a greater proportion of the assemblage in Phase J (*c.* 18–23%). The numbers obtained from the TAP

investigations suggest, in fact, a slightly lower percentage of SWW, varying between 9 and 17% of the assemblage, depending on the FP. Braidwood says SWW falls off in uppermost Phase J floors (Braidwood and Braidwood 1960: 446), and indeed

the current investigations suggest that it is less common in the latest phase (FP 7P). In this phase, it forms only 9% of the assemblage, whereas in the remainder of the FPs, it remains fairly constant at a percentage of about 14–17%.

Bowls, jar rims, and bases are generally wheel-made, while jar bodies are likely hand-made. Clay selection for this ware type tends towards a more iron-rich clay than is commonly used for SW, with the majority of examples firing a pinkish-orange to pinkish-buff colour. In some cases, however, smeared wash decoration was applied to SW-type clay.

According to Braidwood, approximately one-third of the examples show no visible core, while the remaining two-thirds have a core varying from grey to black (Braidwood and Braidwood 1960: 416). Analysis of SWW from the TAP excavations suggests that complete oxidization tends to be most common in small-to-medium-sized bowl forms, while larger bowls and jar forms most commonly display a grey core.

Braidwood suggests that 80% of the examples are covered in a thin wash, ranging from red-orange to orange-brown or black in colour (Braidwood and Braidwood 1960: 416). The remaining 20% of the examples do not show traces of a wash. Two thirds of bowls, particularly larger forms, and one-third of jars show traces of burnishing. Bowls are most commonly radially burnished on the interior, while jars generally show an open vertical burnish on their exterior. Half of the available sherds show traces of open non-functional burnish.

The results of this analysis suggest that both the percentage of examples with no wash (*c.* 5%) and the percentage of examples with burnishing (*c.* 10%) may be somewhat lower than the values suggested by Braidwood. Burnishing occurs consistently on the very large platter-bowl forms, in a radial pattern, but is much less frequent on other bowl forms, particularly in smaller forms. Incised pot-marks are more common on SWW than on other ware types (Fig. 7: 6–8).

The Smeared Wash that occurs on bowls generally covers the entire vessel, both on the interior and exterior surface, with the exception of the very bottom of the base. If intentional smearing occurs, it generally occurs in a horizontal pattern. In contrast, jars display a wash on the exterior surface extending down to approximately 5 cm above the base, with the interior covered in wash only as far as the neck of the jar. Where intentional smearing occurs, it is generally done first in a horizontal manner, with occasional wavy line smears applied over the horizontal smearing.

The results indicate a great deal of observable variety in the decoration of SWW. In many cases, no smearing of the wash is visible at all. Part of the ‘smeared’ effect visible in SWW is due to the method of application of the wash, which appears to be lightly applied with some kind of brush or rag. In some cases, however, there is intentional reserving of the wash after its application, most often in a horizontal pattern, but occasionally with a secondary wavy line pattern. The latter wavy pattern, at least, is most often applied with the fingers, as evidenced by the occasional preservation of fingerprints in the wash. Additional, seemingly unintentional, smearing also occasionally occurs as a result of handling the vessels while the wash was wet. Vessels that are largely preserved suggest that there is a moderate amount of variation in the application of the wash within a single vessel. Based on study of 247 body sherds, the most common SWW types involved a black wash applied to the exterior surface of the vessel (likely jars), with no evidence of intentional smearing (17% of SWW bodies), or a brick-red wash applied in a similar manner (a further 17%). The black wash, in particular, is opaque and thickly applied. In a small number of cases (3%), two different layers of wash were applied to the vessel; first a reddish wash, followed by a black wash, with the black wash intentionally reserved to make the red wash visible beneath. In addition, there are a small number of examples with different colours of wash applied to the interior and exterior of bowls; often, these display a black and red colour combination, and may have been intended to imitate earlier forms of RBBW (although with no evidence of burnishing).

As with SW, many of the smaller and finer forms, particularly bowls in SWW, have few visible inclusions. Many jars also have few visible inclusions, but somewhat more coarse examples are also present. Matson’s technological studies (Braidwood and Braidwood 1960: 417) identified two main fabric groups associated with SWW. The first is the serpentine-type fabric that is characteristic of Amuq fabrics in general; this fabric was found at both Tayinat and Judaidah, and consists of examples with a reddish brown to black wash. The second group is composed of an actinolite clay type, which had previously been observed in Dark-Faced Burnished Ware examples from Phases A and B. This fabric type tends to be dark brown to black, and was only found at Tayinat.

The TAP investigations suggest that SWW is quite distinctive in terms of its range of forms when compared with SW. The forms observed in SWW are almost exclusively bowls and jars. Bowls form 73%

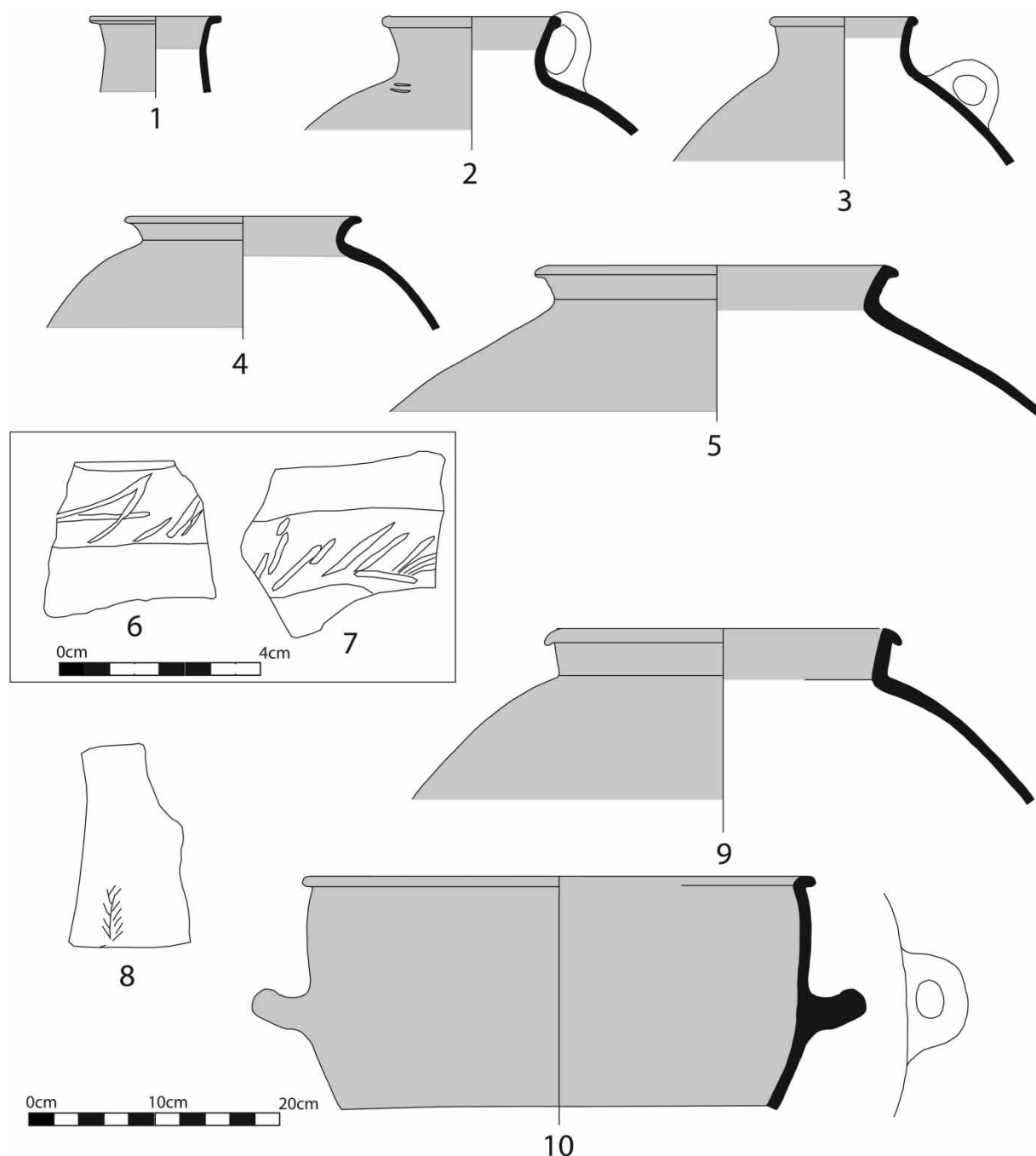


Figure 7 Characteristic forms associated with Smeared Wash Ware at Tell Tayinat in EBIVB.

of the diagnostic forms of SWW (between 45 and 84%, depending on the FP), with large platter-bowls forming a further 4% of the assemblage (between 0 and 9% depending on the FP). Jars form a further 20% of the SWW assemblage (14–45% depending on the FP). Cups and goblets, in contrast, form only 4% of the SWW assemblage (between 0 and 9% depending on the FP), compared with their predominance in SW.

No clear changes in form occur from Phases I to J (Braidwood and Braidwood 1960: 446). In both periods, SWW includes a large number of bowls.

Most are medium-sized shallow bowls with curved sides and out-turned or externally thickened rims (Fig. 6: 8–10, 61% of SWW bowls); simple and profiled rims also occur but are less common (Fig. 6: 7, total 25% of SWW bowls). There are substantially fewer medium-sized deep bowls (Fig. 6: 11, 3%), and larger-sized shallow and deep bowls (Fig. 6: 12, Fig. 7: 10, 0.8 and 1%, respectively); these examples most often have out-turned rims. Very large shallow platter-bowls also occur fairly frequently (Fig. 6: 14–15, 4%), and most commonly have out-turned

rim and radial burnishing on the interior of the vessel. There are few smaller jars (Fig. 7: 1), but larger and wide-mouthed collared jars are common. One common form demonstrates a medium-sized ovoid body, and a moderately narrow, tall flaring rim with an externally thickened rim, and a handle—either attached to the rim, or to the shoulder of the vessel (Fig. 7: 2–3, 22% of SWW jars). Medium-sized jars with short, highly flaring necks are also common (Fig. 7: 4, 22%), as are jars with a short, sharply defined collar, and a triangular rim (Fig. 7: 5, 9, 18%). There are very few examples of conical cups and goblets in this ware type, although globular cups with a single vertical loop handle occur occasionally (Fig. 6: 13).

Coarse Ware

Although this ware type was referred to as ‘cooking pots’ by Braidwood, it is referred to as ‘coarse ware’ here, because at least some of the forms in this ware type were likely not used strictly for cooking purposes, although Braidwood and Braidwood (1960: 431) do note this fact. According to Braidwood’s statistics, this ware type forms 6–11% of the assemblage in Phase J. Similar values were obtained by the TAP excavations, with Cooking Ware forming between 7 and 12% of the assemblage, depending on the FP. However, consideration of the entire assemblage, including body sherds, may suggest that this ware type is underestimated based on the diagnostic assemblage. When the entire assemblage is considered, cooking ware represents 23–25% of the assemblage for FPs 8b and 9.

Vessels of this ware type tend to be moderate-to-low fired and are most commonly grey-brown to black in colour, although some examples oxidize to a light red-brown. Almost all examples have a thick dark grey to black core. Most examples are hand-made, but at least in some examples, there is evidence of at least partial wheel-forming or finishing. Almost all examples are at least wet-smoothed, and many examples are moderately to quite well burnished on both the interior and exterior surfaces. Some examples display grog temper, a feature that was first observed in RBBW (Batiuk 2005).

Braidwood notes for this period an increase in the variety of forms observed (Braidwood and Braidwood 1960: 431); this observation is borne out by the results of the recent excavations. All the forms previously observed in Phase I continue in Phase J. Necked cooking jars, hole-mouths and bowl forms all continue to occur, as do the pan/tray forms that first appeared in Phase I.

Some of the forms are linked to the first cooking pot ware discussed for Phase I, which Braidwood suggests may be called ‘debased’ versions of RBBW (Fig. 9: 6–7). The CWs from both Phase I and Phase J contain, for example, bowl forms that are linked to those found in RBBW, but which may not have a red slip, and are more carelessly burnished (see further discussion below).

The three most common CW forms are necked jars, hole-mouth jars, and bowls. Necked cooking pots (Fig. 8: 1–3) are the most common form, and form 36% of the CW assemblage (varying between 27 and 46%, depending on the FP). The necked jars commonly have a globular body, a rounded base, and a short flaring neck with either a simple or externally thickened rim. Hole-mouth types (Fig. 8: 4–10) form 23% of CW (between 7 and 33% of the assemblage, depending on the FP), although particular types of hole-mouth forms display temporal patterns (see below). Hole-mouth jars display a variety of shapes, with either a globular or a tall narrow body and an upturned rim (Fig. 8: 4–7, 6% of CW assemblage), or with a globular body and an externally thickened, internally thickened, or squared rim (Fig. 8: 9–10, 14% of CW). Another less common hole-mouth form has a sinuous body with thick walls and horizontal ledge handles attached to the rim (Fig. 8: 8, 3% of CW). Bowl forms comprise 35% of the CW assemblage (between 23 and 41%, depending on the FP, Fig. 9: 1–2), and pedestalled bowls (incense burners?) form an additional 5% of the assemblage (3–17%, depending on the FP, Fig. 9: 3–4). Bowl forms are often large and deep with a simple rounded rim or a squared rim with ledge handles located at the rim. Small, relatively shallow bowls are also common. Small numbers of very large shallow bowls with out-turned rims also occur. Some of the bowls forms may in fact more properly fit into the RBBW assemblage, as they replicate bowl forms observed in this ware type in Phase J, and examples of RBBW without slip are observed in earlier phases (see below; Fig. 9: 6–7).

Also quite common are pans/trays (Fig. 9: 5): very few examples of rims have been found ($n = 2$ examples), but trays appear to be variable in shape. The lower (?) surface of the trays is generally perforated partway through the profile. These perforations are most commonly in the form of small round punctate holes, but occasionally are in the form of deep linear incisions. The inner (?) surface of these trays is commonly burnished to varying degrees, and is occasionally very well burnished. The trays display very variable tempers, with either very coarse mineral inclusions or heavy chaff temper.

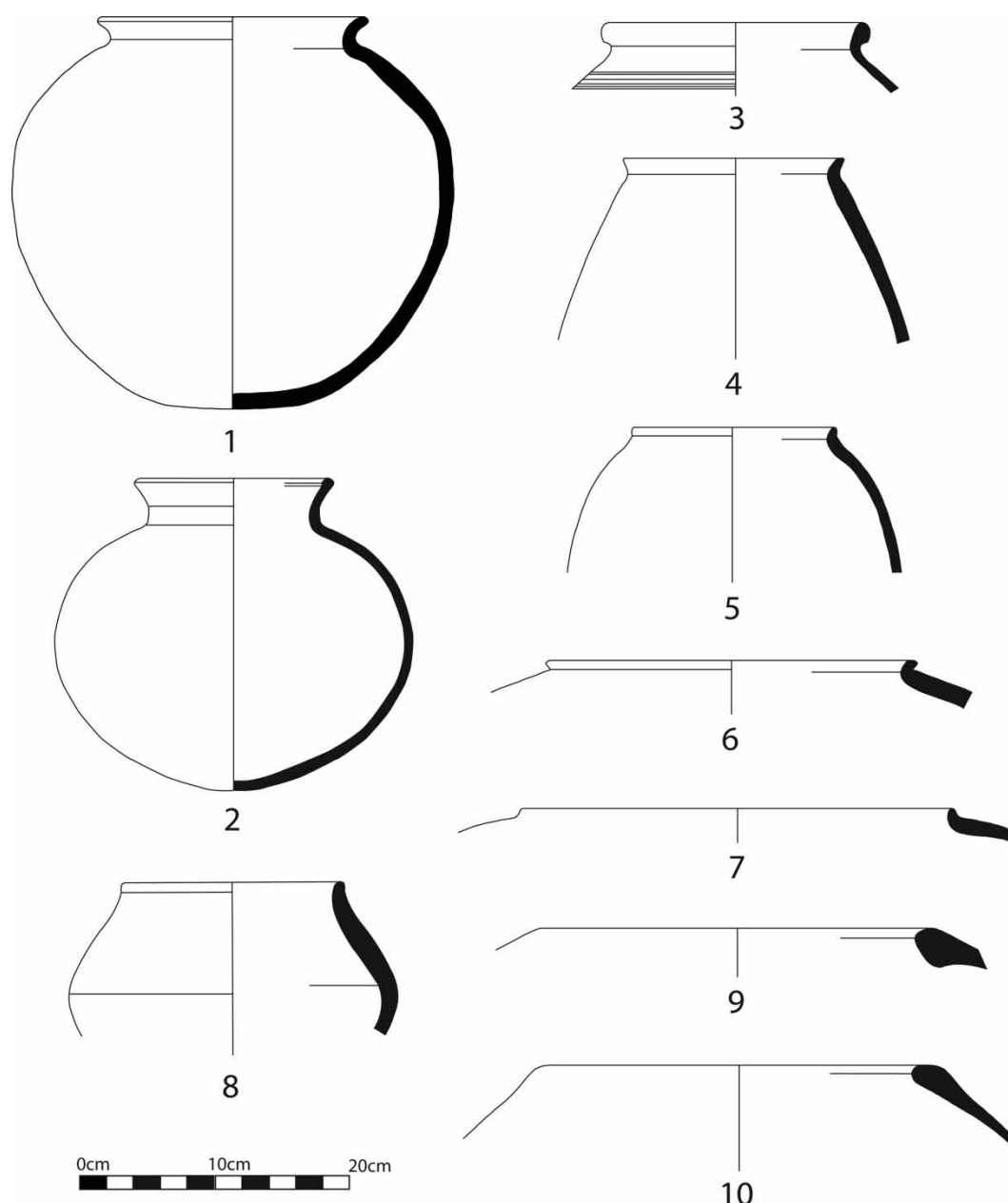


Figure 8 Characteristic forms associated with Coarse Ware at Tell Tayinat in EBIVB.

Brittle Orange Ware

According to Braidwood, in Phase I, this ware type increases to 4–9% of the ceramic assemblage, but decreases again to form only 0–3% of the assemblage in Phase J. This ware type is present only at the very beginning of Phase J, before disappearing completely.

The fabric of BOW is consistent throughout its occurrence, from its first appearance during Phase H to its disappearance in Phase J. This ware type is distinct, as it occurs in Matson's shale-type clay, with high amounts of shale and quartz; these inclusion types were not observed in any other wares (Braidwood and Braidwood 1960: 369). Although Matson speculated on the possibility of a source of

shale in the Amuq, based on the local geology it seems quite possible that this ware type may have been imported from somewhere north of the Amuq.

This ware type is wheel-made, and is generally quite-well fired and fully oxidized, and varies from orange-red to 'smoked' black. The ware is characterized by fairly coarse inclusions, and is very dense and brittle. The surface of the vessels is wet-smoothed, and just over half of the examples are burnished with open vertical or radial strokes; incised decoration also occurs in a number of cases (Braidwood and Braidwood 1960: 368–69).

The results of the TAP excavations have thus far been mostly unable to confirm the occurrence of

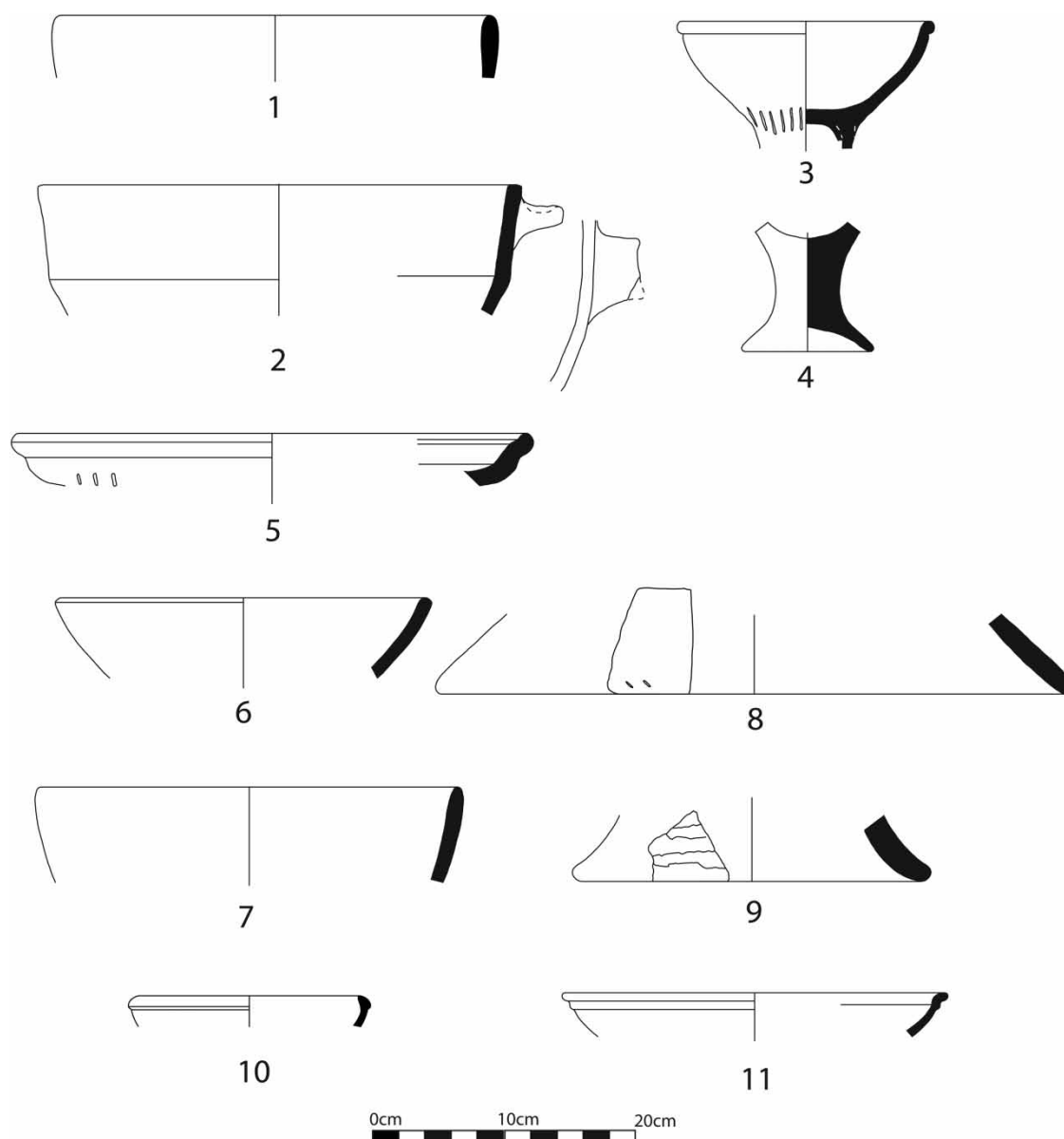


Figure 9 Characteristic forms associated with Coarse Ware (1–5) and Red Black Burnished Ware (6–9) at Tell Tayinat in EBIVB. Rare EBIVB forms at Tayinat with potential connections outside the Amuq (10–11).

BOW in Phase J, with only one or two possible examples having been identified thus far. This ware type has been very difficult to identify for a number of reasons. There are only two illustrated sherds in the colour plates from the original excavations (Braidwood and Braidwood 1960: pl. 86: 6, pl. 87: 2). Furthermore, there is not a clear set of diagnostic criteria for distinguishing BOW from SWW macroscopically. Microscopic analysis, however, may be able to clarify this issue in future.

As a result, some examples that are identified by Braidwood may not be true BOW in the sense of ceramics that have connections to the north in the Islahiye region. Based on the technological studies, however, at

least some of the examples do seem to have connections to this area. The primary link comes in the form of so-called Red Gritty or Sandy Ware at Tarsus, which occurs throughout the EBA sequence at the site. This has been linked to BOW from the Amuq, a link that was confirmed by Matson's technological studies, which had examined examples of both ware types (see Matson in Goldman 1956: 360–61).

Certainly, the published forms of BOW show links to the north (Braidwood and Braidwood 1960: figs 310–311, 335); one example, although incomplete, appears to show a pitcher with a rising spout, and a BOW jar with a highly flaring neck also shows parallels in Red Gritty Ware at Tarsus and

Gedikli-Karahöyük (Braidwood and Braidwood 1960: fig. 311: 1, 3; Duru 2006: pl. 79: 1–2; Goldman 1956: figs 255: 280, 260: 233). BOW is well attested at Zincirli (Von Luschan 1943: 38–41, taf. 15d–ad, taf. 16a–d), but is most common at Tilmen Höyük (Bell 2007) and Gedikli-Karahöyük (Alkım 1979; Duru 2006). At Gedikli, it appears in Level IVb of the settlement and continues until the end of Level IIIa (Duru 2006: 128–30). It also occurs in the Chamber and Cremation Graves, which seem to be later than the site's occupation sequence, and likely overlap partially with Amuq Phase J (Duru 2006: 171). It also occurs in the Cilician Plain (Steadman 1994: 98–99, fig. 7: 1–5), at Sakçagözü (Du Plat Taylor *et al.* 1950), in the Qoueiq (Period H, Mellaart 1981: 159) and in the Kahramanmaraş Region (Carter 1995: 334). Also, one example is known from Tell Brak to the east (Fielden 1977: 249; fig. XIII: 13).

Red-Black Burnished Ware

As described above, one of the primary criteria by which Braidwood defines Phase J is through the disappearance of this ware, and he suggests that the only features of RBBW that continue into Phase J occur in the CWs (see above). In a footnote, however, he does acknowledge the existence of a few sherds and one reconstructable bowl of RBBW in the excavated Phase J material, which he characterizes as extrusive (Braidwood and Braidwood 1960: 431).

However, the TAP excavations have found that RBBW is consistently present throughout Phase J FPs in proportions of approximately 3% (varying between 1 and 6%, depending on the FP). Examples occur in a repetitive, consistent and quite limited range of forms, consisting of large simple bowls (Fig. 9: 6–7), and bi-conical pot stands (Fig. 9: 8–9). The consistency of the typological assemblage suggests that these forms may not be intrusive, but rather that this ware type may continue in small numbers and in a limited typological range into Phase J.

The bowls tend to be large in size, thick-walled, and with a simple but slightly thickened rim; these bowls represent a continuation of forms that predominate in Phase I (Braidwood and Braidwood 1960: 399, fig. 304: 1–7). The pot-stands are of the large, double-flared cylindrical type seen in both Phases H and I (Braidwood and Braidwood 1960: fig. 306: 4, 307: 7). In contrast to earlier examples, the Phase J examples are predominantly undecorated, although one example does display uneven incised horizontal lines (Fig. 9: 9). Examples of RBBW observed in Phase J are typically covered in all-red slip, representing a continuation of the RBBW types characteristic of

Phase I. Most examples show a tendency towards a pink-red or orange-red slip colour.

Furthermore, some of the bowl forms observed in CW may in fact fit typologically more properly into the RBBW assemblage, as they replicate bowl forms observed in this ware type, but without the typical red slip (see Fig. 9: 1). Examples of RBBW without slip are frequently observed in earlier phases; in Phase I, for example, un-slipped examples with a tannish-buff surface form 18% of RBBW (Braidwood and Braidwood 1960: 398).

Both of the typical Phase J RBBW forms demonstrate continuity from shapes already occurring in Phase I. Large hemispherical bowls in particular were one of the dominant forms in Phase I (Braidwood and Braidwood 1960: 399). However, a number of other RBBW forms that continued into Phase I after their original appearance in Phase H have now disappeared, including bowls with incurved rims, bowls with vertical sides, s-shaped or *cyma recta* bowls, 'rail rim' jars, kraters, conical lids, and andirons (Braidwood and Braidwood 1960: 399–400).

Temporal development

The occurrence of basic form categories within the assemblage as a whole stays relatively stable over time (Table 3). The assemblage is dominated by bowls (33–36%) and cup/goblet forms (32–39%). CW forms (13–16%; FP 9 removed due to small sample size) and jars (13–16%) form a much smaller part of the assemblage. Other forms, including forms like pitchers, bottles and teapots, form a very small minority of the assemblage (1–4%) in all FPs. Nor are there many strong temporal trends that can be observed in the occurrence of the various ware types. The only possible chronological trend in this regard is the decrease in SWW that appears to occur in the final phase of occupation (FP 7P; from 14–17 to 9%).

Certain form categories, however, do display temporal developments in form sub-types. For example, a number of general chronological patterns can be observed in cup and goblet forms over time (Table 4). Straight-sided conical cups, which were common in Phase I, have mostly disappeared by Phase J, but continue to form a small minority of cup/goblet forms throughout the EBIVB period (Fig. 4: 20). They form roughly 1–4% of cup forms in FPs 9 to 7F, but decrease to only 0.5% in the final occupational phase (FP 7P). The wider, shorter, and somewhat curved conical cups that are characteristic of Phase J (Fig. 4: 22–24) are most popular in the earlier part of the sequence (FPs 8 and 9, where they form 31–40% of cup forms) and begin to decrease

Table 3 Temporal patterns in relative proportions of wares and form categories

Phase	Diags	Wares %						Forms %				
		SW	PSW	SWW	CW	RBBW	Other	A: Bowls	B: Jars	C: Coarse	D: Goblets/ Cups	E: Other
7P	882	64.97	11.95	8.99	10.89	1.42	1.54	32.61	13.94	15.37	36.64	1.44
7F	1919	57.06	10.30	16.78	11.12	1.85	2.83	36.14	13.66	16.47	32.32	1.41
8a	1256	61.53	7.42	14.18	10.11	4.24	2.53	34.51	13.54	13.17	36.59	2.20
8b	355	53.37	12.90	15.25	11.73	5.57	1.47	34.40	12.84	14.68	34.40	3.67
9	124	68.03	6.56	13.93	7.38	1.64	2.46	35.63	16.09	6.90	39.08	2.30
% of Total assemblage	4536	59.86	9.91	14.35	10.73	2.72	2.38	34.78	13.70	14.96	34.75	1.81
χ^2				90.2556						20.6068		
df				20						16		
P				0.0000						0.1941		
n				4368						3102		

SW, Simple Ware; SWW, Smeared Wash Ware; PSW, Painted Simple Ware; CW, Coarse Ware; RBBW, Red-Black Burnished Ware; BOW, Brittle Orange Ware.

somewhat in FP7 (decreasing to 18% of cups in FP7P). Within the conical cup assemblage, plain conical cups (Fig. 4: 22, 24) are almost always more common than examples with evidence of corrugation (Fig. 4: 20, 23), although the percentages are approximately equal in FP 7F. The frequency of corrugation on conical cups sharply decreases, however, in FP7P, to only 20% ($\chi^2 = 11.2560$, $P = 0.0238$). In general, however, the later examples of corrugated conical cups only display a small amount of corrugation towards the rim of the cup, in comparison to the more fully corrugated examples that are observed in Phase I (Braidwood and Braidwood 1960: fig. 313: 8–12).

Narrow goblet forms (Fig. 4: 14), which are uncommon in the Amuq in general, but which are more common to the south (i.e. at Hama and Ebla, Welton and Cooper 2014), occur most frequently in the early and middle FPs (FP 9 through 7F, forming 10–18% of goblet forms), but almost completely disappear in FP 7P, dropping to 4% of goblet forms in this phase. The wide, flaring goblet (Fig. 4: 15), which is the characteristic goblet form in the Amuq, is the dominant cup form throughout the Phase J sequence, but increases noticeably in FP 7, where it forms the majority of the cup/goblet assemblage ($\chi^2 = 17.1480$, $P = 0.0018$).

Among goblets, the s-shaped or out-turned lip type (Fig. 4: 18) begins as the most common shape at the beginning of the sequence, but gradually decreases over time (from 55% of goblets in FP9 to only 15% in FP 7P). In contrast, the simple lip shape (Fig. 4: 16) is less common in the earlier Phase J field phases (beginning at 30% of goblets in FP9), but increases over time, becoming the dominant form in the latest phase (FP7P), where it forms more than 70% of the goblet assemblage ($\chi^2 = 55.3691$, $P = 0.0000$). The interior thickened rim shape (Fig. 4: 17) is a minority

throughout the sequence (14–17% throughout FPs 9 through 7F), decreasing in FP 7P, at the very end of the sequence. The beaded lip type (Fig. 4: 19), which is commonly associated with the narrow goblet form, also remains a minority throughout the sequence.

Decoration types show similar chronological trends ($\chi^2 = 96.8672$, $P = 0.0000$). In the earlier Phase J phases (FPs 9 and 8), corrugation is the most common decoration type observed in goblet forms. As observed with conical cups, these corrugated goblets generally display only a small band of corrugation towards the rim of the vessel (Fig. 4: 15), in contrast to the small numbers of goblets observed towards the end of Phase I, which are more fully corrugated (Braidwood and Braidwood 1960: fig. 313: 8–12). Corrugation of goblets, however, declines sharply over time, from 65% of goblets in FP 9 to only 9% of goblets in FP 7P. Corresponding to the decrease in corrugated goblets, plain undecorated goblets increase over time from 25% in FP 9, forming over 70% of the goblet assemblage by FP 7P.

Painted goblets are less common than unpainted goblets throughout the sequence. The white-on-black incised painting type (Fig. 4: 17, 5: 14–16) that is considered the hallmark of the phase is always more common than goblets with other types of painted decoration (Fig. 5: 13), but consistently forms only a minority of the overall goblet assemblage. The white-on-black incised painted goblets increase very slightly over time, but never form more than 16% of the overall goblet assemblage. In general, the changes observed in goblet form and decoration suggest a gradual trend towards the simplification of the goblet form over time, with an increase in undecorated simple goblets.

Bowl forms in SW also display a number of chronological trends (Table 5; $\chi^2 = 35.6104$, $P = 0.0004$). Medium-sized shallow bowls with out-turned or

Table 4 Temporal patterns in relative proportions of goblet and cup forms and decoration

Phase	Cup form type %			Conical cup decoration %		Goblet form type %		Goblet lip type %			Goblet decoration type %					
	Goblet	Straight side	Curved side	Globular	Corrugated	Not	Narrow	Flaring	Simple	Int. Th.	S-shaped	Bead	None	Corrugated	Simple paint	WoB paint
7P	80.85	0.53	18.62	0.00	19.44	80.56	3.80	96.20	72.96	8.81	15.09	3.14	70.51	9.62	3.85	16.03
7F	71.51	2.15	25.81	0.54	49.04	50.96	15.50	84.50	48.64	14.79	26.85	9.73	42.21	34.84	7.79	15.16
8a	56.46	1.48	40.96	1.11	39.13	60.87	17.57	82.43	47.62	17.01	24.49	10.88	29.93	53.74	3.40	12.93
8b	53.16	3.80	39.24	3.80	44.12	55.88	18.00	82.00	32.00	16.00	46.00	6.00	28.00	56.00	2.00	14.00
9	60.00	2.86	31.43	5.71	25.00	75.00	10.00	90.00	30.00	15.00	55.00	0.00	25.00	65.00	5.00	5.00
of Total assemblage	67.09	1.80	30.05	1.06	40.20	59.80	13.09	86.91	52.61	13.90	25.75	7.74	44.73	35.66	5.19	14.42
χ^2		56.6627			11.2560		17.1480			55.3691				96.8672		
df		12			4		40			12				12		
P		0.0000			0.0238		0.0018			0.0000				0.0000		
n		945			301		634			633				617		

externally thickened rims (Fig. 4: 6–8) generally decline over time, from 68% of the bowl assemblage in FP 9 to 33% of the bowl assemblage in FP7P. In contrast, medium-sized bowls with in-turned rims (Fig. 4: 5) generally increase over time, from 18% of the bowl assemblage in FP 9 to 47% in FP 7P. Small shallow bowls with fine in-turned hammerhead rims (Fig. 4: 1–2) also increase over time, from 5% of the bowl assemblage in FP 9 to 14% in FP 7P. In contrast to the temporal patterns that can be observed in SW bowl forms, there are few obvious patterns in the occurrence of particular jar forms over time in SW.

While SW does not display any trends in the distribution of form categories within the assemblage overall, SWW does demonstrate some such patterns (Table 5; although these may not be statistically significant, $\chi^2 = 17.5868$, $P = 0.1288$). Bowls in SWW increase noticeably over time, from 45% of SWW in FP 9 to 84% in FP 7P. Because SWW is dominated by bowl and jar forms, there is a corresponding decrease in the frequency of jars over time, from 45% of SWW in FP 9 to only 16% in FP 7P. However, despite this more general pattern, SWW does not appear to display any noticeable temporal trends in the development of particular form types over time.

In terms of the CW assemblage, a few chronological trends are observable (Table 5; $\chi^2 = 65.8244$, $P = 0.0000$). FP 9 is not considered in this chronological assessment due to its small sample size compared with other FPs. In general, necked cooking pots (Fig. 8: 1–3) increase over time, from 27% of CW in FP 8b to 46% in FP 7P. Hole-mouth cooking pots with sinuous bodies (Fig. 8: 8) decrease over time, from 17% of CW in FP 8b, and disappear completely after FP 8. Hole-mouth forms as a whole (Fig. 8: 4–10) continue throughout the sequence, but decrease over time, from 33% in FP 8b to only 7% in FP 7P. Bowl-shaped CW forms (Fig. 9: 1–2), in contrast, increase over time, from 23% in FP 8b to 41% in FP 7P. Body sherds of cooking trays (Fig. 9: 5) are quite common throughout the sequence, but due to the fact that these body sherds were not consistently separated as diagnostic, and the fact that rim sherds of these types are so rare, it is currently impossible to quantify the occurrence of this form over time throughout the sequence.

Comparative discussion: the Amuq in its broader context

In terms of its general ceramic characteristics, the Amuq fits well into the broad ceramic province of North-western Syria in the EBIV period. These general characteristics include the proliferation of a

Table 5 Temporal patterns in relative proportions of Simple Ware, Smeared Wash Ware, and Coarse Ware Forms

Phase	Simple Ware bowls %			Smeared Wash Ware %					Coarse Wares %						
	Inturned rim	Outturned rim	Small hammerhead	Other	Platter	Bowl	Jar	Other	Necked jar	Upturned rim HM	Sinuous HM	Hole mouth	Bowl	Pedestal bowl	
7P	46.54	33.33	14.47	5.66	0.00	83.87	16.13	0.00	45.90	3.28	0.00	3.28	40.98	6.56	
7F	30.45	47.74	9.47	12.35	4.22	77.11	14.46	4.22	36.54	6.41	0.00	16.67	37.82	2.56	
8a	28.05	59.15	6.71	6.10	3.85	66.67	25.64	3.85	32.05	8.97	6.41	16.67	32.05	3.85	
8b	27.91	55.81	6.98	9.30	8.70	60.87	30.43	0.00	26.67	3.33	16.67	13.33	23.33	16.67	
9	18.18	68.18	4.55	9.09	0.00	45.45	45.45	9.09	—	—	—	—	—	—	
of Total assemblage	33.28	48.34	9.67	8.72	3.88	72.82	19.74	3.56	36.09	6.12	3.36	14.07	35.47	4.89	
χ^2	35.6104			17.5868					65.8244						
df	12			12					20						
P	0.0004			0.1288					0						
n	651			310					327						

fine well-made buff-coloured table ware (SW), the dominance of the goblet form in this ware type, the use of corrugated decoration, and the appearance of distinctive painted motifs, particularly on goblet forms, in the EBIVB period. These similarities have long been recognized (Braidwood and Braidwood 1960; Mazzone 1985; 2002), and the Amuq is generally included among the characteristic assemblages that demonstrate the general ceramic developments of EBIV Syria.

Amuq Phase I has been typically associated with Ebla IIB1 (Palace G), Hama J8–J5 and Ras Shamra IIIA2 (Mazzone 1985: 10). Other contemporary assemblages are represented by Qarqur Str. 14 (Dornemann 2008: 82–83), Tell Tuqan Area P Phase 5 (Peyronel 2011: 64), Umm el-Marra Tombs 1, 3, and 4 (Schwartz *et al.* 2003: 330–41, 2006: 609–23) and the earliest phase at Rawda (cistern C48, Castel *et al.* 2008: 12, 49). The first appearance of goblet forms only towards the very end of Phase I may suggest that Phase I begins somewhat earlier than Palace G at Ebla (where goblets are already ubiquitous), and that it spans a longer period of time. The Palace G complex, and particularly its associated archives and ceramic assemblage, likely represent only a comparatively short period of time dating to the later part of the EBIVA, in the period immediately preceding its destruction (Akkermans and Schwartz 2003: 243; Archi and Biga 2003; Mazzone 2002: 76). The earlier part of the EBIVA period, corresponding to early Phase I, is poorly represented by excavations in western Syria, but is likely to be equated with the three floors excavated immediately below Palace G (Mazzone 1991), Hama J8–J7 (Fugmann 1958: 50–56), and Tombs 5, 6, and 8 at Umm el-Marra (Schwartz *et al.* 2006: 606–9; 2012: 160–61).

Amuq Phase J is typically associated with Ebla IIB2, Hama J4–J1 and Ras Shamra IIIA3 (Mazzone 1985: 10). Ebla during this period is represented primarily by the Temple of the Rock sequence (Matthiae 2007; Sala 2012), as well as the Archaic Palace (Matthiae 2006: 87–90, fig. 6). The chronological relationship between the Ras Shamra Early Bronze Age sequence and the inland western Syrian assemblages has been questioned (Genz 1994), but the traditional *comparanda* are retained here (see Thalmann 2006: 109–10). Other contemporary assemblages are found at Tell Afis in Areas E3 and E1 (Felli and Merluzzi 2008; Mazzone 1998: 31–32, fig. 18–19), the majority of occupation at Rawda (Castel *et al.* 2008), Tell Tuqan Area P Phase 4 (Peyronel 2011: 62), Qatna Op. J. 27–19 (Morandi Bonacossi 2008), Qarqur Str. 13–12 (Dornemann 2008: 81–82, 84),

and Umm el-Marra Tomb 7 (Schwartz *et al.* 2006: 623–24). However, it is not yet clear how late the Phase J sequence as represented at Tell Tayinat extends, and therefore it may end earlier than the latest of these assemblages (e.g. Qarqur Str. 12, Tell Afis Area E3).

Despite its general similarities to these assemblages, however, in terms of specific forms, the Amuq shows a number of differences from the other assemblages observed in inland Northern Syria. Many of the most common inland North Syrian forms are not present in the Amuq, or are only present in very small numbers. *Vice versa*, most of the most common forms observed in the Amuq are quite different from those observed in the rest of Syria. The Amuq, therefore, seems to represent an idiosyncratic local variant of the north Syrian assemblage. They subscribe to the same general ceramic preferences of EBIV society, but communities in the Amuq interpret these patterns locally and separately from the remainder of inland Syria.

For example, goblet forms occurring in the Amuq differ somewhat from the most common goblet forms occurring in north-western inland Syria to the south (the typological development of the goblet form is discussed in greater detail in Welton and Cooper 2014). The most common goblet forms to the south are generally the narrow, barrel-shaped goblets that appear in corrugated form in the EBIVA period, and then become painted in the EBIVB period (see Fig. 10: A, B). The corrugated form of this shape spreads to the north and east along the Middle and Upper Euphrates, while the painted goblet remains more restricted within western Syria. In contrast, these narrow goblet forms are comparatively rare in the Amuq, where a wider, more flaring goblet form is the most common. This flaring goblet type occurs elsewhere in north-western Syria, but it is not as commonly occurring elsewhere as it is in the Amuq, where this form dominates the assemblage (see Fig. 10: C). The narrow goblets that do occur in Amuq Phase J are similar in form to those that occur in early EBIVB levels at Ebla, with a flattened beaded rim (Sala 2012: 59, fig. 8: 3–10). According to Mazzoni, this rim type decreases in frequency over time throughout the EBIVB, paralleled by an increase in simple, internally thickened or everted rims (Mazzoni 2002: 79). Both the narrow goblet form and the beaded rim type always remain a small minority of goblets in the Amuq. Furthermore, the Eblaite goblet fabrics, including the hard brownish-buff fabric that continues from the EBIVA and the porous whitish fabric appearing in the EBIVB, do

not appear in the Amuq examples, which are locally produced (Mazzoni 2002: 78; Sala 2012: 59).

The Amuq also represents the centre of the conical cup phenomenon (see also Welton and Cooper 2014). While these cups are found in the EBIVA period at a number of other sites (see Fig. 10: D), spreading more commonly further west to the coastal region than do goblet forms, only in the Amuq do they appear to continue to occur in any significant numbers into the EBIVB period. Indeed, in the Amuq, these cups at times even rival the frequency of goblet forms during the EBIVB. Miniature goblets of a form much more closely aligned to the traditional goblet form do occur at Ebla (Mazzoni 1991: fig. 1), but these are primarily limited to Palace G levels, and thus to the EBIVA (see also Qarqur Str. 14, Dornemann 2008: fig. 3: 19–20; Hama J6–J4, Fugmann 1958: figs 64–65, 74–75, 85; Qala'at al-Mudiq, Trench B1 Level 2, Collon and Zaqzouq 1972: fig. 5: 2102).

The most common bowl forms observed at Tayinat occur comparatively rarely at other sites. The very fine bowls with in-turned hammerhead rims are not attested elsewhere (apart from one example at Qarqur, Dornemann 2003: fig. 198: 39), although larger examples with much thicker walls do occur (this latter type also occurs in very small numbers at Tell Tayinat, $n = 2$ examples; see Fig. 9: 10). Medium-sized bowls with out-turned or externally thickened rims are also relatively rare, and tend to occur quite late in the EBIVB, appearing at Tell Mastuma, Qarqur and Hama J1 (Mastuma: Wakita 2009: fig. 3.7: 17; Qarqur: Dornemann 2008: fig. 3: 23; Hama: Fugmann 1958: figs 98, 103; see also Tell 'As Tomb I, Tomb III: du Mesnil du Buisson 1932: pl. XXXIX, pl. XL; Ras Shamra Level IIIA3, de Contenson 1969: fig. 4). Most of the bowl forms that are most common at sites in inland north-western Syria in the EBIVB, are, likewise, not attested at Tayinat. These include bowls with vertical modelled rims (see Fig. 11: A), which are also widely distributed in the Euphrates region. Tayinat has a single example that resembles those occurring at other sites (see Fig. 9: 11), but it has an out-turned rim, rather than a vertical one (out-turned rims are rarer in this type, but occur at Umm el Marra, Tomb 1, Schwartz *et al.* 2003: fig. 23: 3, and in Tomb 7, Schwartz *et al.* 2012: fig. 9: 10–11, as well as at Ebla, Mazzoni 1985: fig. 6: 13, 15, 16; Archaic Palace, Matthiae 1995: fig. 13: 9). One of the most characteristic forms of the late EBIVB throughout Northern Syria is the vertical grooved-rim bowl, which appears at virtually every known EBIVB site in the region and throughout the

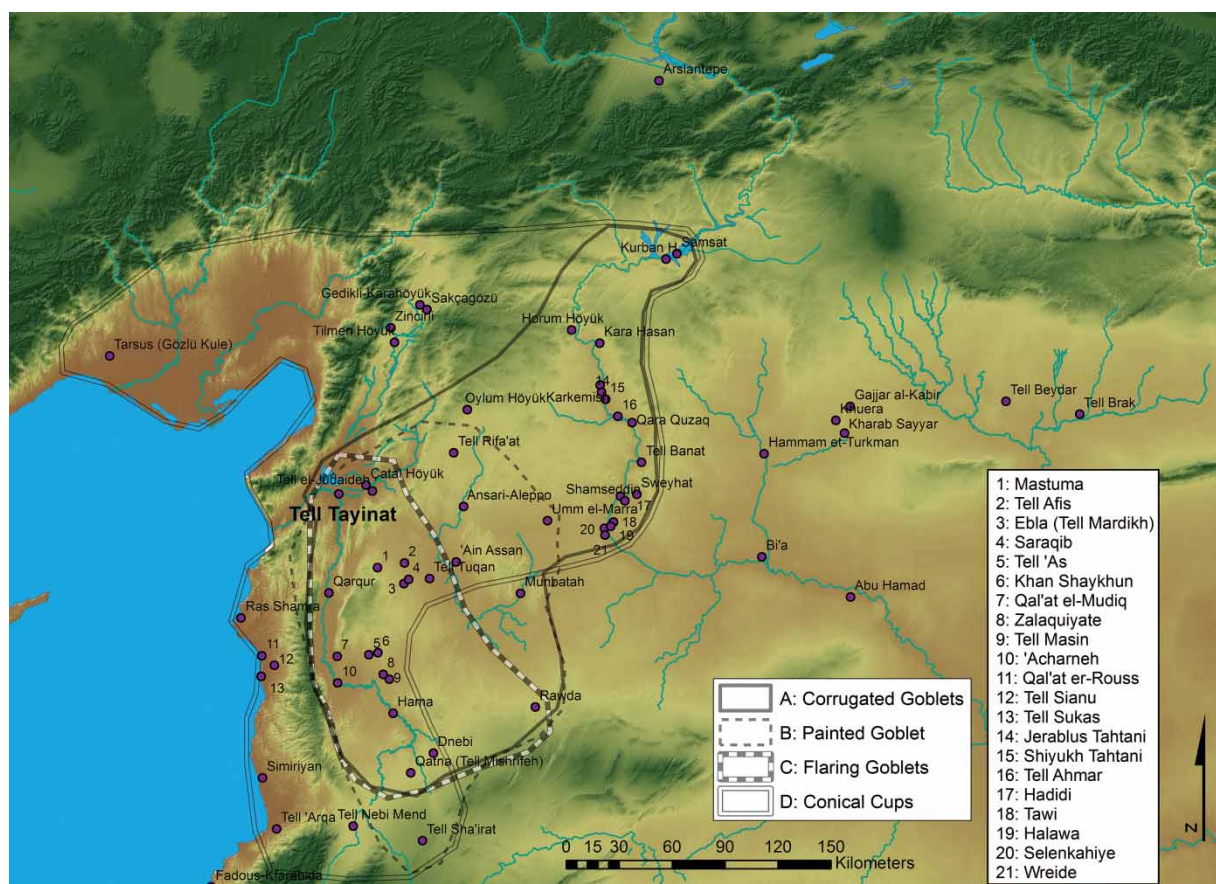


Figure 10 Distribution of goblet and cup types in western Syria.

Conical Cups: Umm el-Marra, Tomb 1, Tomb 4 and Tomb 7: Schwartz *et al.* 2003: fig. 23: 4–5; Schwartz *et al.* 2006: fig. 21: 12; Schwartz *et al.* 2012: fig. 9: 9; Ebla, pre-Palace G EBIVA: Mazzoni 1991: figs 7: 3; 8: 2; Qarqur, Area A, EBIVA: Dornemann 2008: fig. 2: 30–31; Qal'at al-Mudiq, Trench B1, Level 2: Collon and Zaqzouq 1972: fig. 5: 2758, 976; Tell 'As, Tomb III: du Mesnil du Buisson 1932: pl. XL; Tell Arqa, Phase P: Thalmann 2006: figs 40, 46: type G1; Tarsus, EBII: Goldman 1956: fig. 245: #178, 180–84; Gedikli Karahöyük: Duru 2006: pls 57: 5–6, 76: 2, 77: 3–4, 85: 6–7, 8–9, 118: 4–5; Ras Shamra, IIIA3: Courtois 1962a: figs 5:A, G, 7:D, E, 9:G, L?; Sianu: al-Maqdissi 1993: 447, fig. 8; 'Ain Assan, Tomb 4: al-Maqdissi 2006: fig. 11; Simiriyān: Braidwood 1940: 216–17, fig. 20: 5; Tell Sh'airat: al-Maqdissi 1995: fig. 57: 3; Qatna, Tomb IV: du Mesnil du Buisson 1935a: pl. XLVII; Tell Rifa'at: Matthers 1981: fig. 205: 10–11. **Corrugated Goblet:** Umm el-Marra, Tomb 1, Tomb 4 and Tomb 7: Schwartz *et al.* 2003: fig. 23: 7–8; Schwartz *et al.* 2006: fig. 2: 1–3; Schwartz *et al.* 2012: fig. 9: 4–6; Ebla, EBIVA: Mazzoni 1985: fig. 2: 1–3; Mazzoni 1991: fig. 6: 2; Marchetti 2013: figs 7.21: 6–8, 7.26: 2–3, 7.30: 4–12, 7.34: 2–6, 10; Ebla, EBIVB: Sala 2012: fig. 8: 7–15; Matthiae 2007: fig. 25; Rawda: Boudier 2007a: pl. I, #9–10, 12–14; Tell Afis: Felli and Merluzzi 2008: fig. 4: 3, 6; Qarqur: Dornemann 2008: fig. 4: 5; Hama, J5–J2: Fugmann 1958: figs 64–65, 74–75, 85, 93, 98; Mastuma, Str. IX, EBIVB: Wakita 2009: fig. 3.8: 4, Str. XI, fig. 3.9: 3–4, layers c–g; Tsuneki 2009: fig. 3.21: 11; 'Ain Assan: al-Maqdissi 2006: Tomb 3, fig. 8, bottom right; Tomb 4, fig. 11, ctr.; Khan Sheikhoun: du Mesnil du Buisson 1932: pl. XXXVI, #17; Dnebi, Tomb 1: du Mesnil du Buisson 1930: pl. XXXIII: 10, 16; Mishrifeh: du Mesnil du Buisson 1930: pl. XXXIII: 177, column #2; Masin: du Mesnil du Buisson 1935b: pl. XLIX: 11; Tell Tuqan, Area A, Baffi and Peyronel 2013: fig. 9.13:TT.78.A.36/4; Tell Rifa'at: Matthers 1981: figs 205: 27, 206: 5,31, 208: 16–20 (Kadrich); Arqa: Thalmann 2006: 118–19, pl. 56: 12–18; Ras Shamra: Courtois 1962a: figs 5:B, H; Qal'at er-Rus, Sukas: Ehrich 1939: pl. XXI, fig. XX; Simiriyān: Braidwood 1940: fig. 20; for discussion of Euphrates types, see Sconzo 2014. **Flaring Goblet:** Ebla: Sala 2012: fig. 11: 28–34; Rawda: Castel *et al.* 2008: fig. 19; Boudier 2007a: pls 1: 11, 18; Qarqur: Dornemann 2003: fig. 178; Tell Afis: Mazzoni and Cecchini 1995, pl. X: 1–6; Qatna: Besana *et al.* 2008, fig. 3: 6–9, 11; but also at Zalaquiyate: al-Maqdissi 1987: fig. 4: 2; Saraqib: Suleiman and Gritsenko 1986: fig. 1: 2; Dnebi: Tomb 3: du Mesnil du Buisson 1930: pl. XXXIII; Khan Sheikhoun: du Mesnil du Buisson 1932: pl. XXXVI. **Painted Goblet:** Rawda: Boudier 2007a or 2007b: pl. I: 11, 18; Qatna: Morandi Bonacossi 2008: fig. 9; Tell Afis: Area E1, Str. 17a, Mazzoni 1998: figs 18: 1–2, 4, 19: 10–11; Felli and Merluzzi 2008: fig. 5: 1–3; Tell Tuqan: Peyronel 2008: fig. 20: 1–5; area A, Baffi and Peyronel 2013; fig. 9.13:TT.78.A.26/2; Hama, J5–J1: Fugmann 1958: figs 74, 85, 93, 98, 103, 106; Ebla, EBIVB: Sala 2012: fig. 11: 1–34; Matthiae 1993: fig. 12: 1–4; Matthiae 2006: fig. 22: 4–8; Matthiae 2007: figs 25, 26; Mazzoni 1991: fig. 6: 20–23; Saraqib: Suleiman and Gritsenko 1986: fig. 1: 1–2; Mastuma, str. VIII–IX: Wakita 2009: figs 3.7: 7, 3.8: 1–3, sq. 15Gc, layers c–g; Tsuneki 2009: fig. 3.21: 1–6; Qarqur: Dornemann 2008: str. 14, fig. 3: 33–35, str. 13, fig. 1: 5, 7, 9–10, fig. 2: 4–8; str. 12, fig. 6: 11–25, 26–31; Zalaquiyate: al-Maqdissi 1987: figs 3: 4, 4: 2; Sh'airat: al-Maqdissi 1995: fig. 57: 4; Moumassakhin: Bounni and al-Maqdissi 1992: fig. 5: 1; Braemer 2002: pl. VI: 40; Umm el-Marra, EBIVB, Pd. IV, Acropolis East: Schwartz *et al.* 2000: fig. 4: 2–3; Khan Sheikhoun: du Mesnil du Buisson 1932: pl. XXXVI: 16, 39–46?, 65; Masin: du Mesnil du Buisson 1935b: pl. XLIX: 24; Qatna: Op. J, Morandi Bonacossi 2008: figs 9, 12, 14, 15, 18; Selenkahiye: Schwartz 2001: pl. 5A.27:e; Dnebi, Tomb 3: du Mesnil du Buisson 1930: pl. XXXIII; Ansari-Aleppo: Suleiman and Gritsenko 1986: fig. 3: 1; Munbatah: de Maigret 1974: fig. 14: 147–152; 'Acharneh: Cooper 2006: figs 12: 3, 18: 1–2, 5, 22: 1–6; Qal'at er-Rus, Sukas: Ehrich 1939: pl. XXI, fig. XX; Simiriyān: Braidwood 1940: fig. 20.

Euphrates, but is absent in the Amuq (see Fig. 11: B). It is attested neither in Braidwood's publication, nor in the ceramic assemblage of the TAP excavations. It is unclear whether the absence of these important late EBIVB markers is the result of chronological or geographical factors. That is, it is uncertain whether Tell Tayinat was abandoned prior to the increase of these fossil types in inland Syria, or whether their absence was a result of a continuation of the trend towards local differences in the Amuq assemblage.

In general, jars in EBIVB Syria continue some of the common EBIVA jar forms, with short or tall flaring necks and rounded or externally thickened rims (Ebla: Mazzoni 2002: pl. XLI: 107–109; Sala

2012: fig. 9: 5, 9–10; fig. 10: 2–4; Tell Afis: Felli and Merluzzi 2008: fig. 4: 9–11; Qarqur: Dornemann 2008, Str. 14, fig. 4: 17–19, 25–26, Str. 13, fig. 1: 11–12, 17–18, fig. 2: 13–14, 18–21; Str. 12: fig. 1: 3–4; Munbatah: de Maigret 1974: fig. 10: 101, 103, fig. 12: 120–123, fig. 13: 133–141). This trend is also observable in the common EBIVB jar forms in the Amuq. Similar jar forms with painted bands are known throughout the EBIVB, and occur either with or without the wavy incised reserved-paint pattern observed in small numbers at Tayinat (see Fig. 12: A). Furthermore, the vertical drippy paint observed in both jars and goblet forms in the Amuq is known from jar or pitcher forms at other sites, in both the

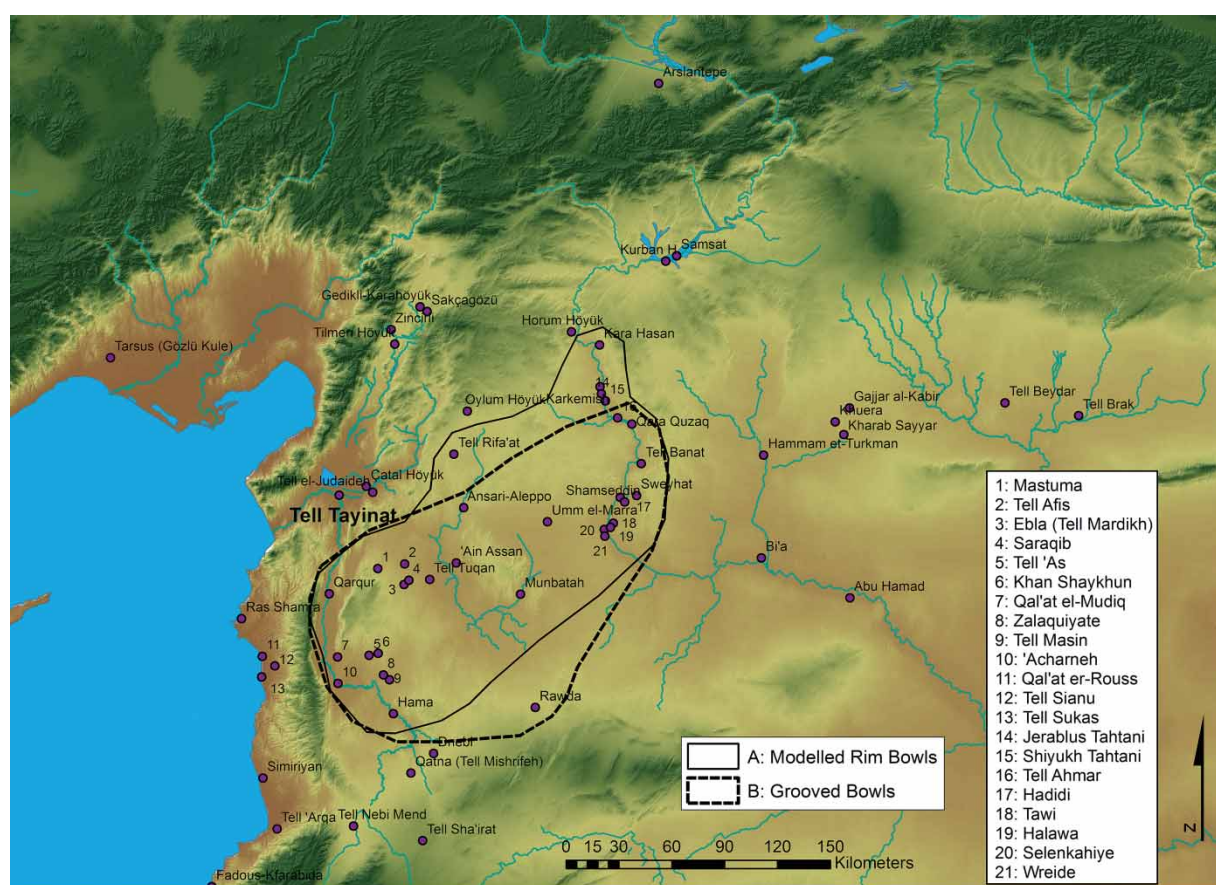


Figure 11 Distribution of bowl types in western Syria.

Modelled rim bowls: Ebla: Matthiae 1993: fig. 12: 12; Matthiae 1995: fig. 13: 9; Matthiae 2006: fig. 6: 7; Sala 2012: fig. 8: 27–29; Mazzoni 1985: fig. 6: 7, 9–13, 15–16, 22; Pinnock 2009: fig. 4: 8; Tell Afis: Felli and Merluzzi 2008: fig. 5: 6; Hama J2–J1: Fugmann 1958: figs 98, 103; Khan Sheikhoun: du Mesnil du Buisson 1932: pl. XXXVI; Saraqib: Suleiman and Gritsenko 1986: fig. 1: 10; Munbatah: de Maigret 1974: fig. 6: 28–32; Umm el Marra, Tomb 1: Schwartz *et al.* 2003: fig. 23: 3, and in Tomb 7; Schwartz *et al.* 2012: fig. 9: 10–11; Tell Rifa'at: Matthers 1981: fig. 208: 3–7; for discussion of Euphrates types, see Porter 1999; Sconzo 2014. **Vertical grooved rim bowls:** Ebla, Sector T: Matthiae 1993: fig. 12: 9, 13–15; Archaic Palace: Matthiae 1995: fig. 13: 1, 4; Temple of the Rock Ph. IId: Matthiae 2007: fig. 27; Tell Tuqan Ph. 4A: Peyronel 2008: fig. 21: 1–3, 5; Tell Afis, Area E: Felli and Merluzzi 2008: figs 4: 7, 5: 4; Mazzoni 2002: pl. XLIV: 123; Qarqur EBIV Latest: Dornemann 2008: figs 5: 29–32, 6: 2; Dornemann 2003: fig. 198: 36, 40–42; Mastuma N. Trench Str. IX: Wakita 2009: fig. 3.8: 8, square 15Gc, layers c–g; Tsuneki 2009: fig. 3.19: 3–4; Hama, J1: Fugmann 1958: fig. 103; Saraqib: Suleiman and Gritsenko 1986: fig. 1: 4; Khan Sheikhoun: du Mesnil du Buisson 1932: pl. XXXVI; for discussion of Euphrates types, see Porter 1999; 2007; Sconzo 2014.

EBIVA and EBIVB (see Fig. 12: B). In addition, small, narrow-necked globular bottles with painted bands similar to those seen at Tell Tayinat are a long-lived phenomenon in the EBIV in inland north-western Syria, and are observed at a number of sites (see Fig. 12: C). However, as with bowls, a number of forms that are common in the EBIVB throughout north-western inland Syria are not found in the Amuq, including large grooved rim storage jars (Mazzoni 2002: 77; Sala 2012: 73, see Fig. 12: D).

SWW is also an important feature of the Amuq assemblage, forming a significant component of the EBIVB ceramic assemblage. This ware type may be originally at home in the Amuq, as it appears in this area earlier than its appearance elsewhere, and is more frequent here than at almost all other sites (see Fig. 13: B). At Ebla, SWW is only represented by a few fragments in the EBIVA, occurring mainly in the EBIVB, where it becomes relatively frequent (Matthiae 1976: 201; Mazzoni 1985: 9). Descriptions

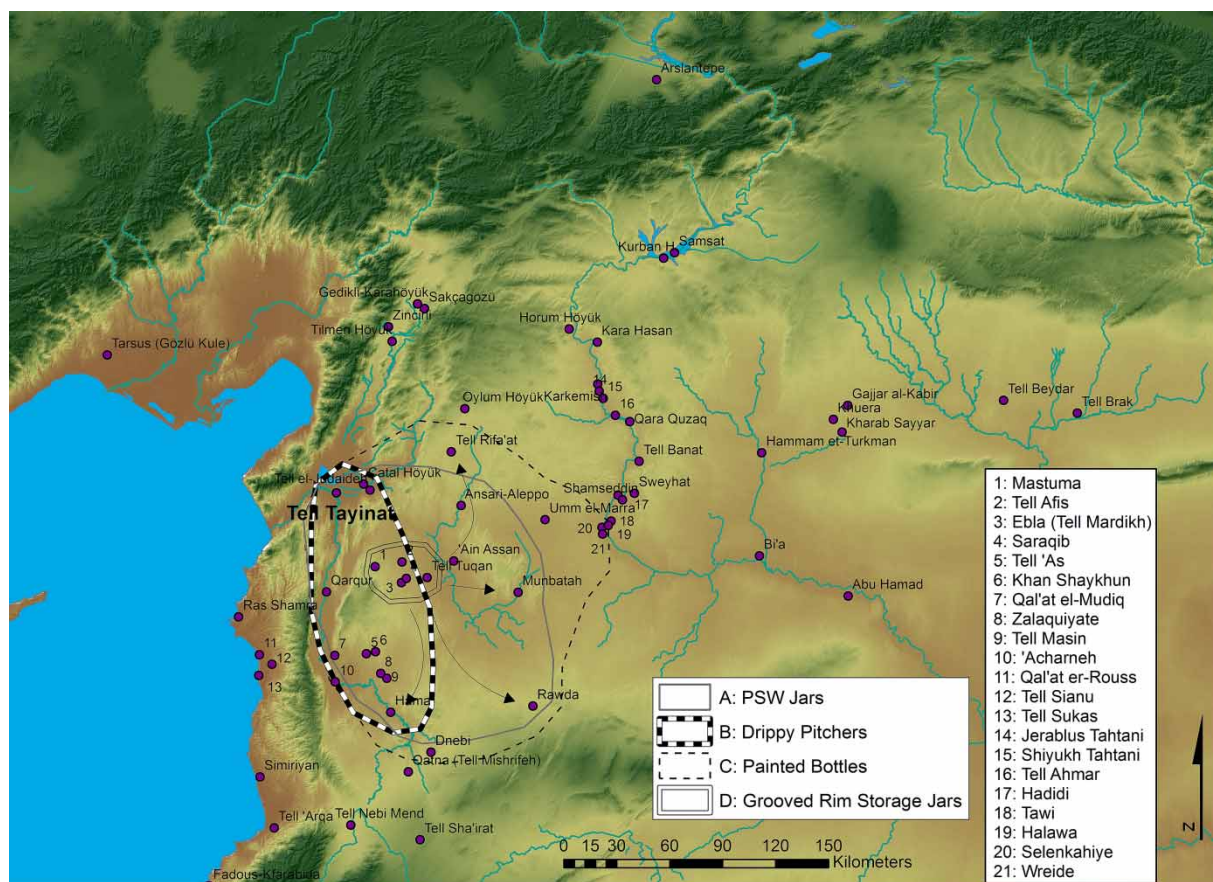


Figure 12 Distribution of jar types in western Syria.

Painted Simple Ware Jars: Ebla, Temple of the Rock: Matthiae 2007: fig. 26; Rawda: Boudier 2007b: pl. 39: 549; Tell Afis, Felli and Merluzzi 2008: fig. 5: 10; Qarqur: Dornemann 2008: fig. 2: 14; Mastuma, Str. IX: Wakita 2009: fig. 3.8: 19; Hama, J5–J2: Fugmann 1958: figs 74, 85, 93, 98; Saraqib: Suleiman and Gritsenko 1986: figs 1: 17, 2: 1–2, 3: 5; Zalaquiyate: al-Maqdissi 1987: figs 4: 1, 3: 3; Tell Masin: du Mesnil du Buisson 1935b: pl. XLIX: 13; 'Ain Assan, Tomb 3: al-Maqdissi 2006: fig. 8; Tell Tuqan, Area P, Phase 4: Peyronel 2008: fig. 20: 8; Ansari-Aleppo: Suleiman and Gritsenko 1986: fig. 3: 5. **Drippy Pitchers:** Ebla: Sala 2012: fig. 12: 18; Mazzoni 1991: fig. 6: 1, 3; Mazzoni 1985: fig. 3: 1, 3; Matthiae 2007: fig. 25; Qarqur, Str. 14–13: Dornemann 2008: 82, figs 5: 16–17, 2: 17, 24–26; Hama: Fugmann 1958: fig. 64; Selenkahiye: Schwartz 2001: fig. 5B.39A: 5. **Globular Painted Bottle:** Ebla: Mazzoni 1985: fig. 3: 6–8; Umm el-Marra, Tomb 1: Schwartz *et al.* 2003: fig. 23: 10; Rawda: Boudier 2007b: pl. 83: 884; Qarqur: Dornemann 2008: figs 2: 12, 4: 28; Mastuma: Wakita 2009: fig. 3.7: 4; Hama, J6–J1: Fugmann 1958: figs 74, 75, 85, 93, 98; Tell Masin: du Mesnil du Buisson 1935b: pl. XLIX: 30–31; 'Ain Assan, Tomb III: al-Maqdissi 2006: fig. 7; Dnebi, Tomb 1 and Tomb 3: du Mesnil du Buisson 1930: pl. XXXIII; Zalaquiyate: al-Maqdissi 1987: fig. 1: 10–14; Saraqib: Suleiman and Gritsenko 1986: fig. 2: 4–6; Selenkahiye: Schwartz 2001: fig. 4A: 13A: 7. **Grooved Rim Storage Jars:** Ebla: Mazzoni 1985: fig. 4: 2–4; also Marchetti 2013: figs 7.23: 34, 7.24: 35–37, 7.26: 13; 7.28: 27, 7.29: 28–29, 31–32, 7.32: 31, 33–34, 7.33: 37; Sala 2012: fig. 14: 10–11; Rawda: Castel *et al.* 2008: fig. 18; Tell Tuqan, Area P, Ph. 4A–B: Peyronel 2008: fig. 21: 15; Hama, J5: Fugmann 1958: fig. 75; Mastuma: layers c–g; Tsuneki 2009: fig. 3.20: 8–9; Munbatah; de Maigret 1974: fig. 10: 89–90; Afis: Mazzoni 2003: 186; Tell Rifa'at: Matthiae 1978: fig. 10: 52. See also D'Andrea and Vacca 2013.

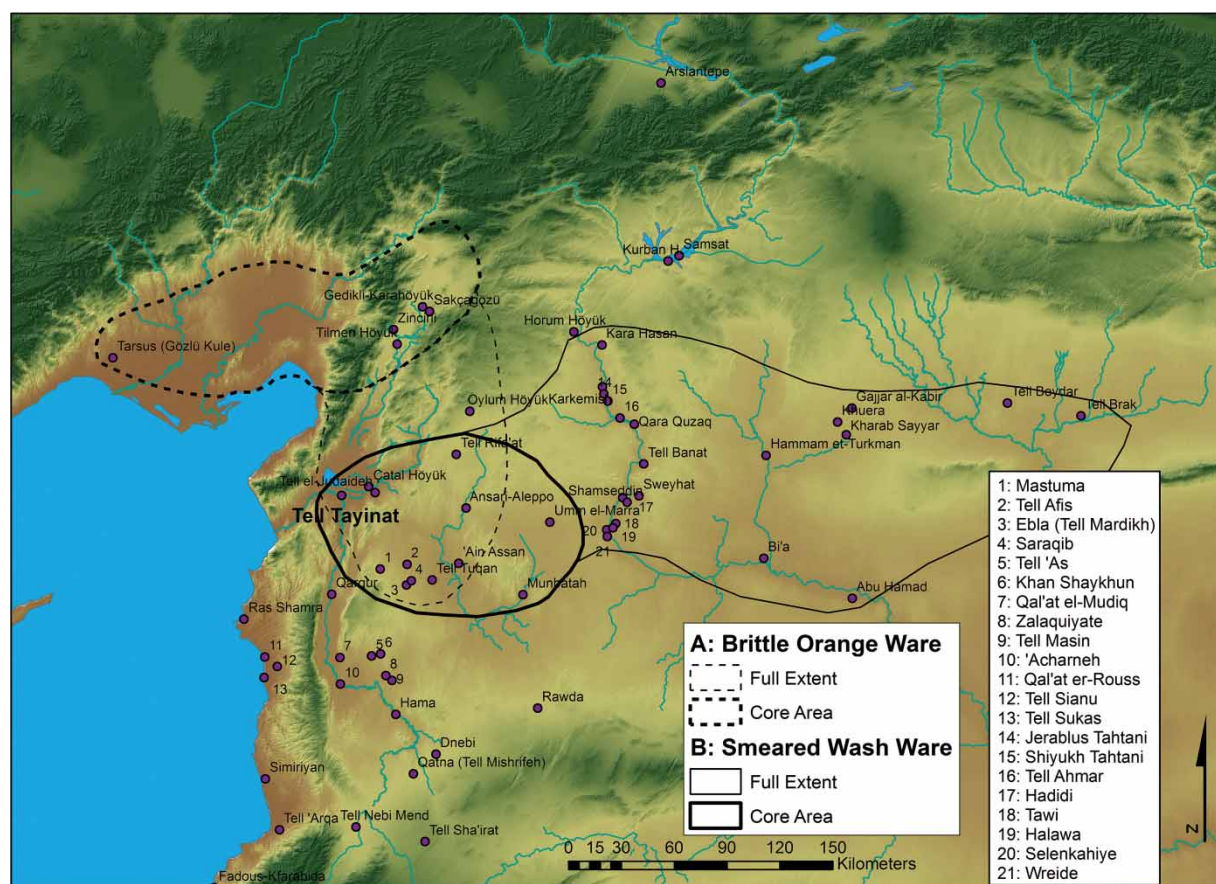


Figure 13 Distribution of Smeared Wash Ware and Brittle Orange Ware.

Smeared Wash Ware: Arslantepe: Conti and Persiani 1993: 368, fig. 11: 9; Kara Hasan, Carchemish: Woolley 1914: 89, fig. b, 3; Sweyhat, Tomb 2: Zettler 1997: 53, Appendix 3.2, 63: o; Selenkahiye: Schwartz 2001: pl. 5A.26d, f, area 13, level 5; Abu Hamad: Al-Khalaf and Meyer 1993/94: 199–200; Falb 2005: 230–32, Taf. 37: 1.4a–b, Falb *et al.* 2005: Abb. 29: 1; Hammam et-Turkman: Curvers 1988: 382; Khuera: Kühne 1976: 96; Gajjar al-Kabir: Rova 2014, 192; Kharab Sayyar: Falb 2009: 385, Taf. 69: 5; Beydar: Rova 2014: 193, n.37; Tell Brak: Oates *et al.* 2001: 163. In general, however, at these sites, very few sherds of this ware are present, and are rarely illustrated. **Brittle Orange Ware:** Zincirli: Von Luschan 1943: 38–41, Taf. 15d–ad, Taf. 16 a–d; Tilmen Höyük: Bell 2007; Gedikli-Karahöyük: Alkim 1979; Duru 2006; Cilician Plain: Steadman 1994: 98–99, fig. 7: 1–5; Sakçagözü: Du Plat Taylor *et al.* 1950; Qoueiq, Period H: Mellaart 1981: 159; Kahramanmaraş Region: Carter 1995: 334; Tell Brak: Fielden 1977: 249, fig. XIII: 13; Ebla: Mazzoni 2013: 92, n.8, fig. 5.27; Tarsus: Goldman 1956: 360–61.

of Eblaite SWW seem to suggest that it is of the Amuq type (i.e. Sala 2012: ‘ovoid jugs (red/brown/black washed, hand-made and highly fired)’, 58). It also appears in small amounts in EBIVB contexts at Tell Tuqan, Mastuma, Tell Afis and Umm el-Marra Tomb 7 (Felli and Merluzzi 2008: 99; Peyronel 2008: 37, 2011: 90; Schwartz *et al.* 2012: 163; Tsuneki 2009: 80, fig. 3.23: 5). It is also present in surface collections at a number of other sites in the Jabbul Plain (Maxwell-Hyslop *et al.* 1942: 27) and at two sites in the area of Tell Rifa’at (Matthers 1978: 136). Although it is rarely present at sites on the coast, Braidwood also suggested it was present at Simiriyān (1940: 217). One of the few sites that is described as having a significant amount of SWW is the site of Munbatah, where it forms 18% of the ceramic

assemblage (de Maigret 1974: 255, 262–63). However, beyond these examples, SWW is comparatively rare (see Falb 2009: 383–87; Rova 1989; 2014). At other sites further to the east, such as Tell Khuera and Tell Brak, etc., the so-called ‘Combed Wash Ware’, or *Wellenware*, that is often grouped with SWW is a separate phenomenon, and thus far no examples of this type have been found in the Amuq (Falb 2009: 209–10; Rova 2014). It is unclear how the ‘Ozan Ware’ of the Elbistan Plain fits into these groups, although both Rova and Falb suggest greater links to SWW (Brown 1967; Falb 2009: 210; Rova 1989: 158; Rova 2014: 192).

As Falb (2009: 324) has pointed out, the distribution of SWW is primarily limited to a discrete area in north-western Syria, not extending even as far south

as Hama and not much further north than the Syrian-Turkish border. Although small numbers of more easterly examples have been found, Falb's technological investigations suggest that these are chemically and petrographically similar to other eastern wares, such as Combed Wash Ware and SW, and are likely local imitations rather than imports (Falb 2009: 305–6). In contrast, examples of this ware from Ebla were determined to be chemically distinct, and are characterized by greater quantities of alteration products, notably serpentine, compared with easterly ware types (Falb 2009: 317–18; Taf. 46–48). It is unclear whether examples from Ebla are local productions of SWW or are actual imports; Falb's petrographic descriptions and plates are entirely consistent with an origin in the Amuq (2009: Taf. 59: 2–3, 60: 1). In contrast, recent descriptions of EBA petro-fabric groups from Ebla, which are dominated by basalt, limestone, and quartz, do not feature serpentine or other alteration products commonly associated with the Amuq (Santarelli 2013: 358).

The primary forms of necked jars and hole-mouth jars that are observed in CW are also attested at other sites throughout inland north-western Syria. Globular necked jars with similar forms to those observed at Tell Tayinat are attested, but are comparatively uncommon (see Fig. 14: A). Hole-mouth jars are much more common beginning in the EBIVA, and are often globular, with an externally thickened lip (see Fig. 14: B). Examples of hole-mouth cooking pots with upturned rims like those at Tayinat are rare, but are attested at Qarqur and Qatna (Dornemann 2008: fig. 4: 34; Morandi Bonacossi 2008: fig. 9, fig. 14; Besana *et al.* 2008, fig. 3: 5). Bowl forms are less common in CWs, but do occur elsewhere. The most common of these forms is a wide basin-like bowl with an externally thickened rim and ledge handles protruding halfway down the body (see Fig. 14: C), although this particular type is not attested in the Amuq.

The Tell Tayinat EBIVB assemblage also displays some, although generally fewer, parallels to the coastal assemblages. At Tell Arqa, for example, in the latest Early Bronze Age levels, there are comparatively few parallels to the Amuq assemblage, although they do exist in small numbers. Conical cups occur at Tell Arqa, but occur predominantly in local fabrics and within local decorative traditions (i.e. vertical burnish rather than corrugation; Thalmann 2006: figs 40 and 46: type G1). Also frequent are 'mug' forms, which occur in very small numbers in the Amuq Phase J assemblage (Thalmann 2006: fig. 47; see also Tarsus: Goldman 1956: fig. 274: #455, 456;

Tell 'As Tomb II: du Mesnil du Buisson 1932: pl. XXXIX, where these mug forms are also attested). Other northerly coastal sites such as Ras Shamra Level IIIA3–2, Qal'at er-Rus and Tell Sukas have somewhat greater connections to the Amuq than are observed at Tell Arqa, but publication of the EBA remains from these sites remains sparsely illustrated (Ehrich 1939; Courtois 1962a, 1962b; de Contenson 1969; Oldenburg 1991; see also Sianu: al-Maqdissi 1993: figs 6–8). At Ras Shamra, similarities to the Amuq include the occurrence of SW goblets, as well as the long lifespan of RBBW, but notably absent are white-on-black painted goblets and SWW (de Contenson 1969). The coastal sites, furthermore, all display high quantities of Levantine 'Combed Ware', which is attested very infrequently in the Amuq (Courtois 1962b; de Contenson 1969; Thalmann 2006; Thalmann and Sowada 2014).

There are also comparatively few examples that demonstrate connections between the Amuq and areas further to the north, suggesting that the Taurus Mountains represented a comparatively impervious barrier to communication during this period. The primary connection to the north occurs in the form of BOW, with its core distribution in the Islahiye Region around sites such as Zincirli, Gedikli-Karahöyük, and Tilmen Höyük, and connections to Tarsus (see discussion above and Fig. 13, A). This connection is more prominent in the EBIII–EBIVA, however, and BOW is very infrequently attested in the EBIVB in the Amuq.

The issue of ceramic 'provinces' has often been discussed with regard to the 3rd-millennium assemblages of Syria (Carter and Parker 1995; Jamieson 1993; Kühne 1976; Mazzoni 1985, 2000; Rova 1996; Sala 2012; Thissen 1989). This concept is best approached as a heuristic tool for examining the distribution of particular ceramic 'wares' or types and temporal fluctuations in inter-regional interactions, rather than assuming a necessary link between these 'provinces' and either cultural or political entities. Furthermore, it is necessary to note that the boundaries of these ceramic provinces are likely both fuzzy and fluid, and have the potential to change quite dramatically with the addition of new archaeological data. Rather than treating these provinces as distinct cultural zones, it may be best to instead view them in terms of a mosaic of different overlapping distributions of particular kinds of material culture, whose overall arrangement can inform us more about interaction than about separation or distinction (see Figs 10–14).

The problems associated with defining distinct borders between ceramic areas are well illustrated by



Figure 14 Distribution of Coarse Ware Types in western Syria.

Globular Necked Jars: Ebla: Sala 2012: fig. 10: 14; Rawda: Boudier 2007a: pl. III: 43–44; Tell Afis: Mazzoni 1998: figs 16: 17, 17, 18: 14, Felli and Merluzzi 2008: figs 6: 3, 7: 6; Mastuma: Wakita 2009: fig. 3.7: 5; Tsuneki 2009: 78, fig. 3.22: 3; Hama, J6–J4, J1: Fugmann 1958: figs 64, 74, 85, 103; Munbatah: de Maigret 1974: fig. 5: 18–24; Qatna: Besana *et al.* 2008: fig. 3: 1–3. **Hole-mouth Jars:** Ebla: Mazzoni 1985: fig. 5: 6–8; Marchetti 2013: figs 7.22: 27–28, 7.25: 9, 7.27: 20–21; Sala 2012: fig. 10: 13; Tell Afis: Mazzoni 2002: 79; Felli and Merluzzi 2008: fig. 4: 12–13; Rawda: Boudier 2007a: pl. III: 41; Qarqur, Str. 14–13: Dornemann 2008: 82, figs 2: 22, 4: 36–37; Hama, J8–J3: Fugmann 1958: figs 58, 62, 93; Munbatah: de Maigret 1974: fig. 4: 8, 10; Tell Tuqan: Peyronel 2011: fig. 29: 18; Qatna: Besana *et al.* 2008: figs 2: 2, 3: 5; Mastuma: Tsuneki 2009: fig. 3.22: 2. **Ledge Handled Coarse Bowls:** Ebla: Sala 2012: 73; Marchetti 2013: figs 7.22: 25; 7.25: 8, 7.27: 18–19; Tell Afis: Mazzoni 2002: pl. XLIV: 128–129; Hama: Fugmann 1958: figs 65, 85, 93, 103; Khan Sheikhoun: du Mesnil du Buisson 1932: pl. XXXVI; Ras Shamra: Courtois 1962b: fig. 19; Qatna: Morandi Bonacossi 2008: fig. 12, op. J 23; Mastuma: Wakita 2009: Str. VIII, fig. 3.7: 18; Tsuneki 2009: fig. 3.22: 1.

later interpretations of Mazzoni's definition of a western Syrian ceramic province stretching eastward to the Euphrates, and an eastern region beginning at the Euphrates in the west and stretching eastward to encompass the Jezirah (Mazzoni 1985: 10). The concept of the Euphrates as a distinctive boundary, with different affinities between the east and west banks of the river has been criticized on the grounds that there are much greater similarities between the two banks than there are differences (Dornemann 1987; Schwartz 1987; see also Rova 1996: 24–25). The conception and treatment of such ceramic zones as encompassing distinct regions with clear boundaries that involve significant changes in material culture has contributed to their perceived inutility.

In many cases, the whole of western Syria has been treated as belonging to the same ceramic 'province', often referred to as the 'caliciform' province (Carter and Parker 1995: 100; Rova 1996: 24). Today, this might be better be called the 'inland western Syrian' ceramic area, as the term 'Caliciform Ware' has become less common and less favoured in recent years (Mazzoni 2002: 75 n. 68; Welton and Cooper 2014). This change in terminology reflects the recognition of the fact that in the core area in which this ware type occurs, it is hard to define the typological boundaries and parameters of a 'Caliciform Ware'. The goblet forms typically associated with this ware are rather integrated into a broader ceramic ware tradition that forms a larger ware type, and quite

probably several ware types. Mazzoni, viewing the situation from site of Ebla, also drew attention to the variability within this broader geographical area, suggesting the existence of a 'coastal' assemblage (stretching from Simiriyan to the Amuq) and the existence of a 'north-central' assemblage (stretching inland from Homs to the west bank of the Euphrates, 1985: 10). Her north-central province was further divided into two sub-regions, a central and a northern region, with Ebla essentially serving as both a border and a meeting place between the two traditions.

Our increased knowledge of sites along the coast now suggests that the 'coastal' assemblage should likely not be treated as a single entity, but rather is characterized by a fairly high degree of regional variability. Sites to the south of Mazzoni's coastal region (i.e. sites like Byblos, Tyre, etc.) demonstrate greater links to the southern Levant and to inland southern Syria, while sites along the central Levantine coast (i.e. Tell 'Arqa, Fadous-Kfarabida) display a relatively unique assemblage that does not demonstrate close ties elsewhere (Thalmann 2006: 130–31; Genz 2010). Many of the general characteristics that Mazzoni originally attributed to the 'coastal' province were drawn from the assemblages of Ras Shamra and the Amuq, and do not seem to be more broadly applicable to other coastal sites. For example, the appearance of RBBW along the coast currently appears limited to Ras Shamra, and the long duration of RBBW is particularly characteristic of the Amuq. Levantine Combed Wares are one of the rare ware types that is characteristic of a wide area of the coastal region (see Thalmann and Sowada 2014), and appear at Ras Shamra, but are very rare in the region of the Amuq. Furthermore, SW, PSW and SWW are comparatively rare at most coastal sites, and are comparatively foreign to the coastal ceramic traditions (Ehrich 1939: 78; Oldenburg 1991: 56; Thalmann 2006: 118–19, 130–31). Even at Ras Shamra, which tends to demonstrate the clearest ties to the inland assemblages, PSW, and SWW do not occur (de Contenson 1963: 40; 1982: 97–98) and are more characteristic of the Amuq region and inland western Syria.

In contrast to many of the other sites in the region, the Amuq demonstrates very few ceramic connections to the Euphrates region. In the EBIVA and the period contemporary with Ebla Palace G, many of the western Syrian sites, and in particular Ebla, begin to show more evidence for Euphrates connections. In some cases, this has been implied to indicate Ebla's political control of the region during the period of Palace G, as suggested by textual sources (Milano 1995; Archi and Biga 2003). However, it seems clear

that the ceramic influences between the regions are bi-directional. Examples of western Syrian types (e.g. corrugated goblets, teapots, trefoil mouth pitchers) appear in the Euphrates most frequently in this period, and types that appear to originate in the Euphrates region begin to move west and appear in Western Syria in greater numbers (Mazzoni 2002: 77–78; Sconzo 2014). The Amuq does not seem to be drawn into this sphere of interaction to the same degree as the areas to the south (in particular Ebla), and forms with connections to the Euphrates are rare to absent in the EBIVA (Phase I, although see Braidwood and Braidwood 1960: fig. 312: 15–16, fig. 314: 2), a feature that continues into EBIVB (Phase J, although see Braidwood and Braidwood 1960: fig. 348).

After the height of interaction during the late EBIVA (contemporary to Ebla Palace G), the connections between Western Syria and the Euphrates appear to decrease temporarily in the EBIVB. Sala suggests the existence of a 'ceramic frontier' between the two regions at this time (2012: 78). While there does continue to be some overlap in forms between the two regions, these connections tend to occur in forms that continue from the EBIVA, and individual forms may begin to take on divergent trajectories in each area. New forms that begin to appear in the EBIVB, such as goblets and other forms occurring in PSW, do not appear to cross between the regions, suggesting that there is decreasing contact during this period. Forms that had begun to appear in the Euphrates region during the early EBIVB period, do, however, begin to expand into inland western Syria toward the very end of the 3rd millennium, during the EBIV–MBI transitional period. This is visible in the appearance in the west of forms such as multiple grooved rim bowls and grooved rim jars, which become ubiquitous throughout both western Syria and the Euphrates region. This suggests renewed contacts between the two regions after a brief period of decreased interaction.

The preceding discussion reveals that it is possible to learn a great deal about inter-regional interaction from the kinds of distribution maps of particular ceramic types illustrated in Figs 10–14. The Amuq is demonstrated to be loosely integrated into the larger region of inland western Syria, with comparatively close ties observed in certain aspects of the ceramic assemblage, and more distant relations in others. However, these illustrations also inform us about the limitations of current knowledge and approaches. The distribution maps clearly demonstrate the sensitivity of ceramic 'provinces' and their boundaries, when based on

small numbers of distinctive ceramic types, to factors such as functional variations in excavated assemblages and poor geographic representation of sites dating to particular periods.

Conclusion

Overall, we can observe that many of Braidwood's conclusions about the Phase J assemblage have held true, even with the addition of a much larger assemblage. The larger assemblage, however, does allow the observation of more subtle changes over time, something not accessible with Braidwood's smaller sample size.

One notable feature of the assemblage that was not stressed by Braidwood is that there is a distinct typological divide between SW and PSW on the one hand, and SWW on the other. While SW displays a wide variety of forms, both it and PSW are dominated by forms associated with drinking activities (particularly goblets and conical cups). SWW, on the other hand, is dominated by bowl and jar forms, and generally occurs in a very limited and recurring range of forms and sub-forms. These two wares share some of their common bowl and jar forms, including medium-sized bowls with simple, out-turned or externally thickened rims and jars, with tall or short flaring necks and externally thickened rims. Other bowl and jar forms, however, are distinct to either one ware or the other and occur exclusively in only one of the two ware types. Braidwood originally suggested that SWW might represent a 'cheap' local imitation of BOW (Braidwood and Braidwood 1960: 416, n.7). Presumably this link was based on the general similarity in the surface colours and treatments observed between the two ware types, but the typological assemblages of these wares also display notable similarities. Both BOW and SWW display an emphasis on jar forms, and particularly jars with distinct shoulders and highly flaring necks.

The prevalence of ceramic forms in the EBIV associated with consumption of liquids, presumably alcoholic, has been noted numerous times in the past (Batiuk 2013; Bunimovitz and Greenberg 2004; Mazzoni 1994). While the SW and PSW assemblages suggest an orientation towards drinking activities, the SWW assemblage suggests a greater concern with the consumption of food. The presence of the large platter-bowls that occur in SWW is notable, because of the trend away from concern with communal consumption of food in the EBIV Southern Levant, where the disappearance of large platters that were common in the EBIII has been identified as a significant change in social behaviour (Bunimovitz and

Greenberg 2004: 21, 27). The frequency of these large platter-bowls in Amuq Phase J decreases somewhat over time, while the occurrence of medium-sized bowls (presumably representing individual portion-sizes) increases significantly. This suggests a trend towards decreasing concern with communal food consumption, while consumption of beverages continued to be of social importance throughout the period.

The trend away from the smaller conical cups towards the larger goblet forms, which could have held greater quantities, suggests a trend towards the consumption of larger serving sizes of alcoholic beverages. However, the continued frequency of conical cup forms in the Amuq suggests the existence of two (or more) serving sizes, which were considered appropriate for different beverages, societal groups, or occasions. The frequent occurrence of miniature goblets at Ebla in the EBIVA (Mazzoni 1994: fig. 1) suggests a similar concern with serving size during the use of Palace G (although the goblets themselves demonstrated quite high variability in volume; Mazzoni 1994: 250), but their decreased frequency in the EBIVB period suggests that this concern did not continue into this later period, as it did in the Amuq.

Despite the transit corridor to the north through Kara Su river valley, communication with northern regions remained at relatively low levels. The data obtained by the TAP investigations suggest almost no evidence of northward-facing connections during the EBIVB period. Even Braidwood's data suggested a substantial decrease in BOW during this period. The reasons for this low level of communication with areas to the north are unclear, but almost no sites occupied during the EBA have been found in the northern portion of the Amuq Valley (Dodd *et al.* 2011).

Rather, the Amuq appears to have existed primarily within a sphere of interaction that incorporated inland Northern Syria and particularly the Orontes Valley. Even so, the Amuq, given the form of pottery types that circulated among a number of sites in this region, seems to have been comparatively isolated from sustained direct contact with these areas (Graff 2006; Mazzoni 2003). Instead, the Amuq examples represent local interpretations of these forms, either as the result of intentional choice, or of only passing familiarity with the fashions in vogue further to the south.

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