

## Mozan/Urkish in the Late Chalcolithic Period

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### 1. Introduction

In 2005, for the first time Late Chalcolithic ceramics were excavated in stratified contexts in Mozan. While occasionally coarse, poorly fired chaff tempered ceramics had been seen on the surface of the site, they were never found in any large quantities and usually were body sherds. Because of the nuances in our data we had not anticipated the extent and complexity of the Late Chalcolithic evidence now being excavated in Mozan; when poorly fired coarse ceramics with large amounts of lithic or chaff temper were found out of context we could explain their presence through the experience of finding in later contexts such coarse pottery. For example, the Khabur period tombs belonging to poorer status individuals contained coarse pottery, fired at a low temperature and included much chaff. The shapes of these vessels were not the typical Khabur forms that we have come to connect at Urkish with this time period. We interpreted this type of production as household based, for a specific purpose (funerary ceramics) produced by non-craft specialists. Consequently, the occasional poorly fired coarse fabrics found in non-stratified contexts were attributed to such non-specialist production activities in the Khabur period. In a site with a long term commitment to the excavations it is clear that there are many nuances in the interconnection of chronology, technology, and function stemming from a wide variety of cultural, economic and societal factors. The extent of the new stratified data was surprising but more so given the relatively high elevation at which the sherds and cylinder seal impressions were found. The discovery of a large number of ceramics and some cylinder seal impressions leads us now to fundamental new conclusions regarding the founding of the Temple Terrace and the early focus of the site around its monumental religious architecture.<sup>1</sup> Mozan at this point can be seen as part of a regional pattern whereby Late Chalcolithic polities were spread across the Khabur plains. Tell Brak was a major center even before numerous connections with the south occurred; Hamoukar and Leilan were centers in the eastern portion

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1 See article by G. Buccellati in this volume.

of the region. Mozan now should be inserted into a framework of Late Chalcolithic 3 (Early Middle Uruk is another term used for this period in Brak) regional sites that have a strong local culture with some southern influence.<sup>2</sup>

## 2. The Contexts

Late Chalcolithic ceramics were excavated in Mozan from a variety of contexts that are, at this point, all connected with the complex focal highpoint of the mound, the Temple BA complex with its terrace and revetment wall (Fig. 1). Wherever we excavate on top of, behind, and in front of the revetment wall we find Late Chalcolithic ceramics. In excavation unit J1 the sherds came from just below the revetment wall and immediately in front of it (Fig. 1a). In unit J3 they came from two different contexts. The first is immediately below the top surface of the early third millennium glacis: it is here that sealings were also found along with the sherds. The second consisted of stratified deposits just behind the revetment wall.

These contexts have one aspect in common: they are open spaces that are not directly connected with any specific use area, whether indoors or outdoors. Hence the clustering of ceramics and sealings may reflect accidental deposition episodes, and the patterns that emerge with regard to function are not as meaningful as one might wish, though they certainly retain their full relevance for the chronological issue. It is important to note, however, that the seal impressions were in some cases on large sealings, most with little damage on the surface and none indicating that they had been subject to repeated dumping. In other words, they were close to the original moment of discard.<sup>3</sup>

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2 It is a pleasure to dedicate this article to Jan-Waalke Meyer who is our neighbor in Chuera and with whom we have had very stimulating discussions both in Mozan and Chuera ranging from ceramics to architecture and especially the urban landscape and its interface with the environment at both our sites. The SAR chronology is used throughout this paper, Rothman 2001.

3 I wish to thank Salam Al-Kuntar and Clemens Reichel for discussing with me our Late Chalcolithic ceramics on two visits to Mozan/Urkes; on those occasions they shared their insights concerning Late Chalcolithic ceramics and their studies on the Hamoukar material. One of the Hamoukar team, Khaled Abu Jayab studied some of our LC collections and walked over the site to spot other areas with LC ceramics, I would like to thank him for this and also for his thoughts on the Mozan LC pottery. Most importantly I would like to thank the principal excavators of the Late Chalcolithic material, Rasha El-Endari in J1 and James Wallace in J3 for all their invaluable assistance. William Orange was very helpful in finding the photographs at a point when they were not yet in-

### 3. The Ceramics: General Description

Ceramics from the Late Chalcolithic period were predominantly of a coarse chaff tempered variety and a numerically less important series of finer ware shapes. The coarse ceramics are primarily made of a heavy clay that fires to a red-brown color. Much vegetal temper has been added, but is not well mixed into the clay in the formation of the medium and large vessels. Two types of vegetal temper are seen in the burned out spaces of the original temper: long narrow gaps that are the shape of chaff and small sub-round holes of carbonized vegetal matter. Most sherds give evidence of the longer, thinner type as the main tempering material. Finer shapes have sub-round vegetal temper reduced to tiny pieces. In some of the coarse wares a number of types of lithic temper were added (Fig. 2). Most prevalent are white nodules that are sometimes as large as pebbles. Some of these nodules are undoubtedly calcite which, especially when near the surface, can “explode” with the heat of firing. Several of the white smaller inclusions appear to be shell. Gray to gray-white crystals (quartz) and small black inclusions (in most cases feldspar) are also frequent.

The mineral inclusions have been identified as part of a large on-going research project on the Urkesh/Mozan ceramics. The aim of the project is to examine the clay and inclusions in a large number of ceramics, from all periods represented at the site. The methodology worked out during this project (begun in 2003) involves cutting a number of sherd sections that are then scanned on-site and later analyzed through image analysis software to identify and quantify inclusions, clay type and the firing spectrum of the ceramic fabric. The color analysis obtained through the sherd scans have been calibrated by using electron microprobe analysis to produce element maps Fig. 3.<sup>4</sup>

The firing of the Late Chalcolithic coarse ware ceramics is low to medium and many shapes have a wide carbon core so that only a thin band of the red-brown color can be seen along the lining of the exterior and interior

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serted into the Urkesh Global Record. A description of the sherds and their context can be found online in the html Urkesh Global Record ([www.arkesh.org](http://www.arkesh.org)). I depended heavily on the descriptions Federico Buccellati made in the Urkesh Global Record for the section here on the Late Chalcolithic cylinder seal impressions from J3.

- 4 The software was developed by Robert Cossio and Giacomo Chiari of the Getty Conservation Institute. The color analysis was carried out by Marianna Nikolaidou of the Cotsen Institute of Archaeology, UCLA. The electron microprobe element maps were made by Ellery Frahm, of the University of Minnesota – Twin Cities. For a preliminary report on this project see Frahm / Nikolaidou / Kelly-Buccellati, 2008, 8–12. The sherd scans and element maps can be found in color on the Urkesh website.

surfaces. (Fig. 4). Burnishing, never frequent, is more common on the exterior of jars but most shapes have wet smoothed exterior and at least the upper portion of interior surfaces. Many plates and platters, on the other hand, are rough on both the exterior and interior surfaces although even here the interior tends to be smoother than the exterior. This must be directly related to their function, discussed below. Mastering potting techniques was a challenge for the potters, as seen by a number of factors: in the proper mixing of the clay (many shapes are not well levigated), the crazing of the surface of some vessels from thermal shock indicating a lack of temperature control and the firing clouds due not only from mistakes in temperature control but also kiln stacking.

A few examples of other wares are present, especially a highly burnished black ware that can sometimes be gray or brown found in jar shapes.<sup>5</sup> The inclusions comprise both chaff temper and in some cases mineral temper. Some features have a small number of coarse gray burnished bowls from Late Chalcolithic 2 mixed into the later LC3 deposit; no LC2 features have been excavated thus far.

In the category of coarse chaff tempered pottery the most common shapes are plates and platters (eg. Fig. 13:18–19, Fig. 15:14,16), hammer rim bowls<sup>6</sup> (eg. Fig. 13:12, Fig. 15:15), casseroles (eg. Fig. 14:6 is probably a casserole even though the carination is not preserved) and medium jars with restricted necks eg. Fig. 15:9, Fig. 12:3).<sup>7</sup> All of these shapes are typical for the LC3 period with some of the specific types starting in LC3 but continuing into LC4. Included in the Mozan data are a number of indications of function. Jars and bowls have in some cases use-wear evidence on the interior of the rims. These include nicks and some traces of scraping as if the handles or edges of utensils used for stirring, mixing and retrieving the contents of the vessels have left these post-firing marks. In addition to this evidence of use-ware, a number of jars and casseroles have traces of a secondary burning on the exterior portion of the upper surface of the rim but not on the interior edge, indicating the use of a lid. (Fig. 5). This type of secondary firing pattern is common in Urkesh on cooking vessels throughout the third millennium. Several lid fragments were found in our Late Chalcolithic deposits including one in feature 31 with a deep incised line on the top (Fig. 6 and 13:16). In addition casseroles often have secondary firing patterns both on the exterior of the rim and on the outside of the carination

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5 It is possible that these vessels were imported from the Keban region, Gülçur 2000.

6 The term hammer rim for bowl rim shapes is used here as a variation of the term hammerhead rim or hammerhead bowls.

7 In all the individual sherd drawings the scale is indicated by a horizontal line at 5cm along on the vertical axis.

but not on the upper body of the vessel (Fig 7). This must be due to the placement of the vessels near a hot fire but not inside the fire directly. Furthermore while there is no evidence in our corpus of jars being placed directly in the fire, some plates and bowls do have indications of secondary burning both on the interior and exterior (Fig. 10).

Plates, platters and hammer rim bowls were formed in two parts employing two different techniques, and joined half way down the body. The lower part of these shapes is rough with many straw impressions often in a circular pattern; they have no clear trace of matting or basketry. It appears that they were made in a mold which was constructed of fiber or that the rough exterior was plant wiped in a circular fashion at the end of the molding process. The rim and upper part of the body can be handmade but more often are wheel made on a slow wheel and attached to the lower portion through a pinching method at the join. The result is a wide depression under the rim and a bulge on the upper body (Fig. 8). In some cases any other traces of the join were erased by scraping. Many of the open forms as well as the closed forms have a thick slip; this to some extent masks the forming techniques. The exterior colors are predominantly red-brown but can be brown or gray. The surface is usually smoothed, but as mentioned above, bowls tend to have a smoother interior than exterior, while jars and bowls could be burnished on the exterior and even some jars are burnished on the interior near the rim.

A few platters and bowls have cord impressions near the exterior of the rim. There can be one or two of these impressions (Fig. 9). These are not necessarily a decorative design but indications that cords were employed to retain this type of open shape during the drying process.<sup>8</sup> In addition some sherds have potters' marks (or "signs") which along with their decorative effect may have served an administrative purpose (Fig. 10).

Along with this large amount of coarse chaff tempered pottery we have a small number of a very different type of fine wheel-made pottery related by the choice of clay and inclusions, as well as forming and firing techniques to the subsequent early third millennium Ninevite 5 and mid third millennium Simple ware traditions.<sup>9</sup> Late Chalcolithic fine ceramics in the Amuq sites

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8 A proposal has been made that the cord impressions were the result of the bowls being carried when wet. It is difficult to imagine such large heavy vessels being carried wet. The evidence we have indicates that the cords encircled the vessels when they were quite wet given the fact that the impressions are clearly imprinted into the clay, Felli 2003, 57.

9 Although throughout our deposits and at Late Chalcolithic sites in the area to the east of the Euphrates, few of these fine ware sherds have been found, in the Amuq area, Phase F, there is a much higher concentration of this type of pottery (17–22%), Braidwood and Braidwood, 1960, 229–232.

Phase F are called Smooth-Faced Simple Ware;<sup>10</sup> this type of pottery occurs in Mozan in small shapes with thin walls, usually medium fired with no carbon core and light buff to greenish-gray in color with a buff to greenish-buff self-slip. The surface is usually wet-smoothed and they are rarely burnished even though the surface is quite smooth; they have few inclusions (Fig. 11). What temper there is consists of fine sand and small white mineral inclusions. Larger shapes can have fine chaff added but even smaller shapes have at times very small sub-round holes. More common shapes include small bowls and cups (eg. Fig. 13:1,3). Along with these occur a few pointed bases in this ware.

#### 4. The Ceramics of Unit J3

With this general presentation of the Mozan LC3 ceramics as a background, we can now take an in-depth look at three representative contexts from unit J3. In this way we can view the primary evidence without the filter of an extensive selection process.<sup>11</sup> In J3 the stratigraphic emplacement with the largest number of Late Chalcolithic ceramics came from three context types: 1) pockets in the upper surface of the Temple Terrace (Fig. 1b, features 252, 259, 260, 262), 2) an accumulation with a large number of Late Chalcolithic sherds (Fig. 1b, feature 31), and 3) defined lenses excavated in a deep sounding located just inside the revetment wall (Fig. 1c, features 57, 58, 71). For the purposes of this article examples of one important feature from each of these types of context will be discussed<sup>12</sup>.

Feature 252 was the most important of the small pockets found immediately below the surface of the Temple Terrace for the reason that, in addition to the Late Chalcolithic ceramics, we excavated in that feature a number of clay cylinder seal impressions, discussed below. The predominant ceramic shapes were hammer rim bowls, both shallow and deeper examples (Fig. 12). In the category of jars is a distinctive example with a restricted neck ending in a sharp interior ledge and in a few cases grooves on the interior of the neck (Fig. 12:3); this type is common in LC3 contexts from the surrounding area and is considered diagnostic for the period. Another small jar rim has a distinctive thick orange slip (Fig. 12:2); it is possible that this vessel was imported. Shallow and deep bowls can have cord impressions on

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10 Ibid.

11 In the three features published here some selection has been made as all the shape sherds have not been illustrated in the figures, especially in feature 31 where the sherds from the 2005 season only have been discussed.

12 The ceramics from the other Late Chalcolithic features are published online in the Urkesh Global Record ([www.arkesh.org](http://www.arkesh.org)).

the exterior (Fig. 12:9, 12). As in other Late Chalcolithic contexts at Mozan, fine ware is only minimally present. The seal impressions as well as the comparative ceramics from nearby sites indicate that the date of this feature is LC3.

Feature 31 was a thick natural accumulation (about 50 cm. deep) approximately a meter below the surface of the glacis. In it were a large number of Late Chalcolithic ceramics (Figs. 13–14) including various types of hammer rim bowls formed with the usual mixed technique (described above). In this feature also are bowls with a slightly inturned rim made in a similar technique (Fig. 13:10, 11, 14).<sup>13</sup> One example of this type of bowl (Fig. 13:10) is finer than the typical bowls of this type but nevertheless has a large amount of chaff temper. Deep bowls have either a plain or inverted rim (Fig. 13:4,5). Plates and platters are found with simple rims that can have a slight curve either to the exterior or interior (Fig. 13:18, 19). Additionally, in this feature contained small coarse ware plates (Fig. 13:6, 7). Jars usually have a red-brown slip that can have a burnished surface but two jars have a darker burnished surface (Fig. 14:11 brown and Fig. 14:6 black). One jar fragment had a handle attached to the rim (Fig. 14:8) making it useful as a pitcher; these types are common imports in LC4 sites.<sup>14</sup> One ring base (J3q58-p8) was also found.

The predominantly greenish-buff colored fine wares are minimally present in the feature. Jars can have a restricted neck (Fig. 14:1) or wide everted rims that are flat on top (Fig. 14:5). Excavated in this feature also were a number of fine ware cup rims (Fig. 13:1, 3).

In the deep sounding along the interior face of the revetment wall in J3, feature 71 was a well defined lense that contained a number of Late Chalcolithic sherds including a number of jars in the medium range (Fig. 15). Fewer shapes could be categorized as hammer rim bowls but two bowls were an unusual gray color (Fig. 15:10–11). One other gray bowl had been burnished (Fig. 15:13); all three possibly date to the LC2 period. Their presence may indicate that these bowl shapes can continue from LC2 to LC3. A pointed base was found in the feature. Among the rare fine ware sherds is a distinctive thin bowl with a slightly outward curving upper body below which is a slight carination (Fig. 15:11).

Most of the comparative material from nearby sites, discussed below, date these features to LC3 but feature 71 is probably earlier in this phase of the Late Chalcolithic than features 31 and 252; this dating accords well with their relative stratigraphic positions.

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13 This type is found also in J3f252, see Fig. 12:9–12.

14 Pearce 2000, Fig. 14. Pollock and Coursey 1995.

## 5. The Glyptics of Unit J3

In addition to the ceramics excavated in feature 252 the feature contained a number of seal impressions that can be connected with three original cylinder seals. All of the sealings were used on containers; the evidence for this includes some peg impressions and the fact that many had leather strip impressions. None appeared to be door sealings. One could be identified as sealing a narrow necked bottle rolled with a seal carved with a complex design. Many examples in the impressions were made by a seal that had an image of intertwined ribbons or possibly a snake.<sup>15</sup> The ribbons were made with the two outer edges framing a central depression and are intertwined in the “classic” fashion meaning that the pattern is one under, one over (Fig. 16). None of the impressions from feature 252 had a snake head preserved although Uruk period examples of intertwined snakes do exist.<sup>16</sup> From Mozan a later example of intertwined snakes in a confrontation scene with a horned quadruped was found in the early years of the excavation above the glacis just outside the inner city wall in K1.<sup>17</sup> In all our present impressions of the motif only the intertwined forms are preserved and it is unlikely that any other major element is present. The other two sets of rollings are figural in design and similar in style including figures carved with a full body and clearly defined contours of the early Middle Uruk type; the composition shows each figure discretely in space and in the case of the reclining animal scene arranged so that the largest figure is at the bottom of the composition with smaller elements placed around.

The second set of seal impressions shows this reclining horned animal facing left with possibly a vessel above and an unclear head of a second horned animal above his hindquarters (Fig.17).<sup>18</sup> In front of the large reclining animal is another unclear element.

The third group of seal impressions was made by a seal with a complex seal design. On one sealing (J3.14) traces of three rollings of the same seal can be seen (Figs. 18–20). The seal was rolled in three parallel rollings extending from the outer edge down to the base of the sealing, a method typical for later Mesopotamian sealings (Fig. 20). The reverse includes the impression of a narrow necked bottle with a curved rim. Extant portions of the

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15 The examples of this design are J3.15-2, J3.15-3, J3.17, J3q328.4, J3q328.5. J3.15-1 has a similar motif but may have been rolled by a different seal.

16 Delougaz and Kantor, 1996, Pl. 141:D, E from Choga Mish; Amiet, 1961, Pl. 14bis:H from Susa.

17 Buccellati and Kelly-Buccellati, 1988, Fig. 34 and Ill. 32. This volume and nearly all the Mozan publications can be found online at [www.urkesh.org/electronic-library](http://www.urkesh.org/electronic-library).

18 The examples of this design are J3.16, J3.18, and J3q328.3.

preserved design includes two figures, possibly nude and walking left in what appears to be a procession scene. The best preserved figure holds a large standard consisting in a long pole with a half-oval top filled with a cross-hatched pattern filled with three vertical bars and an unclear number of horizontal bars.<sup>19</sup> Below the outstretched arm holding the standard are two short vertically placed objects one with a bulge near the top and the other with a short crossbar at the top. Behind this figure is a second similarly carved figure, probably also holding a standard since what appears to be the bottom of the upright portion is shown. A third partial figure appears in front of the standard.

Cylinder seal impressions in the north are rare from the Middle Uruk period but have been found in Brak (both in CH<sup>20</sup> and HS1<sup>21</sup>) and in Sheikh Hassan<sup>22</sup>. A procession scene from the Middle Uruk period was excavated in Brak HS1 and the iconography is closest to our example both in time and space.<sup>23</sup> In addition, from Sarafabad a design showing figures walking in a single file holding long poles with decorative elements on top is close in motif and date (Middle Uruk) to ours.<sup>24</sup>

## 6. Dating and Regional Comparative Evidence

While many forms have a wider distribution, the comparative material for this article has been drawn from excavated nearby sites in the Khabur region.<sup>25</sup> The comparanda indicate that the chronological position of the features in J3 is centered on the LC3 period, at a time when a strong local

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19 A similar motif is present in the Choga Mish corpus, but is interpreted spatially as behind two animals and identified as a tree, Delougaz / Kantor 1996. See also Rova 1994, Figs. 171, 173 from Susa.

20 Oates 1985, Pl. 30:a.

21 Matthews / Matthews / McDonald 1994.

22 Boese 1995, 140 fig. 8.

23 Matthews / Matthews / McDonald 1994, Fig. 4:4.

24 Wright / Miller / Redding 1980, Fig. 6:8. For a comprehensive study of Uruk and Jamdat Nasr seals and sealings see Rova 1994; later examples of the procession motif are more common in the south, for examples including a building see in Rova 1994, Figs. 120, 567, 665, 722, 750, 751, 901; for procession scenes without a building present see Figs. 570, 628, 767, 768, 818.

25 For recent studies of the LC3 ceramics with comparative material from north-eastern Syria and south-eastern Anatolia see Felli 2000 and 2003, Rova 1999–2000, Brustolon / Rova 2007, Pearce 2000. A recent review of the data and theoretical questions surrounding the Uruk impact on the north can be found in Algaze 2008.

culture was uniting the whole region while on selective sites some southern cultural characteristics are found.<sup>26</sup> The ceramics in this Mozan Late Chalcolithic 3 corpus have parallels with important nearby sites such as Brak, Leilan<sup>27</sup> and Hamoukar<sup>28</sup>. At Brak while some of these ceramics were excavated earlier in CH, the most complete sequence was found in TW. In TW, mainly excavated between 1991 and 1993<sup>29</sup>, the trench comprised 16 building levels dating from 3500–2900BC. Levels 14–17 interest us most because these contained chaff tempered and fine pottery related to our corpus. In addition levels 14–16 have a few examples of southern pottery which seems also to be the case for Mozan. The subsequent excavations of G. Emberling in the same area unearthed part of a nitched building dating to TW level 16.<sup>30</sup> In HS1, excavated by R. Matthews, especially in level 6, they discovered similar coarse and fine vessels.<sup>31</sup> It is clear that Brak, already a regional center, had a more widespread inventory of southern cultural characteristics as exhibited by the varied southern inventory excavated at the site in TW 14–17.<sup>32</sup> This inventory included the earliest bevel rim bowls found at the site, a numerical tablet, geometric tokens, and 2 pictographic docketts.<sup>33</sup> While at Mozan we have few indications of the presence of southern pottery in the features excavated thus far,<sup>34</sup> the early Middle Uruk seal impressions found in J3f252 indicate some southern influence (direct or indirect) in this time period at Mozan (discussed below).<sup>35</sup>

It may be helpful at this point to note the types of ceramics that are not so far present, or minimally present, in the Late Chalcolithic ceramics

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26 No material for C14 analysis has been found thus far in the Mozan Late Chalcolithic strata.

27 Schwartz 1988; Brustolon / Rova 2007.

28 Gibson et al. 2002.

29 Oates / Oates 1993 and 1997.

30 Emberling 1999, 6–8.

31 Felli 2000 and 2003.

32 Oates / Oates 1997.

33 The Oates note that these are “significantly before the context of early tablets at Uruk itself.” *Ibid.*, 291.

34 Fig.14:8, J3q59-p8 described on chart for Figs. 13 and 14; Fig. 14:6 may be an import from the Keban region.

35 From the intricacy of the complex seal design and from the frequency of the entwined pattern seal impressions one could possibly argue that the feature 252 deposit should be dated to LC4. However the lack in Mozan of any clear parallels for southern ceramics that were beginning in the LC4 period in our region and the consistency of the ceramics from feature 252 with the other LC 3 deposits excavated to date lead us to date the feature 252 also to LC3.

excavated in Mozan. So far we have found minimal painted and no reserve slip decoration, no hole mouth jars, no fine pouring rim cups, no Coba bowls, few bowls with an interior sloping ledge rim, no gray beaded rim bowls, and little gray ware in general. This is equally true of the Uruk Gray ware category of Gut, so characteristic for her Uruk A at Nineveh.<sup>36</sup> The lack of these typical types is a powerful negative argument for the dating already clear from the comparanda, that is the features in J3 are to be dated to LC3, and despite the presence of some earlier types in feature 71, probably should date toward the later part of this phase since some of types found in J3 did continue into LC4 (eg. the fine bowl from J3f71 Fig. 21:11).<sup>37</sup>

## 7. Conclusions

A number of significant issues are raised by this new Mozan material and that from related sites. One of them is the question of the sharp dichotomy in ceramic production techniques between the coarser and finer ceramics. If we consider the technical information and praxis basic to the production of these two categories of vessels, their differences are impressive. Matson, in his technical study of the Amuq ceramics, characterized the position of Smooth-Faced Simple ware as forming “a distinctive group that indicates marked advances in ceramic techniques.”<sup>38</sup> The skillful use of the wheel, the clays selected, as well as inclusions, firing, and size of vessels produced in this very different potting tradition lead us to ask a fundamental question – why was there no transfer of knowledge within the period between potters producing the coarse wares and those making the finer pottery?<sup>39</sup>

Also connected with the previous question are considerations regarding function. Given the fact that the coarse pottery is so prevalent and the fact that the Mozan assemblage clearly shows use-related activities (from burning patterns to use-wear on jar and bowl rims) it is apparent that the coarse ware vessels were central to cooking, serving and eating functions in Urkesh. On the other hand what were the fine vessels used for? The majority of these vessels are small open forms and therefore could contain only modest

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36 Gut 1995, 248–251.

37 This continuity in some types between LC3 and LC4 contributes to the difficulty in dating unstratified survey material (Brustolon / Rova 2007) and excavated features for which the stratigraphy is not clear.

38 Braidwood / Braidwood, 1960, 230. See also Felli 2000, 417–418.

39 Felli has suggested that the fine ware production evolved out of the Late Ubaid fine ware tradition with the possible evolution of the carinated bowl from the Late Ubaid carinated beakers, Felli 2003, 73–74. For the relationship of fine wares from the Ubaid period see also Mazzoni 1999, 104.

amounts and would not have been ideal for shipping.<sup>40</sup> Their scarcity in the Mozan corpus (a pattern prevalent in this time period in south-eastern Anatolia and north-eastern Syria) may be explained with reference to the situation obtaining at the moment of discard (did the bulk of the material originate in service quarters with cooking installations?) but it may also point to explanations involving theories of status and trade. In the Amuq region there was a higher percentage of the fine wares in the ceramic inventory of Amuq F than in the east (17–22% of the inventory in the Amuq)<sup>41</sup>. It is possible that in the exchange of goods through trade in the Late Chalcolithic period these finer ceramics themselves constituted a major commodity and were valued as elite serving and eating vessels.

This new evidence raises other questions regarding the role of gender in craft production and is closely linked to problems of knowledge-based transfers, or lack of such transfers. What factors facilitate such transfers and what impedes them? If the finer ceramics are products of a production cycle well advanced, then we must ask who was making them, where were they primarily being made and why was there not a more wholesale crossover of the technology. Given the wider distribution in the Amuq sites, the place of production should be sought in that area and its vicinity. The fact that the coarse bowls and plates are partly made on a wheel would seem to indicate that at least a portion of the technology was understood by potters in both traditions. One way to seek the answer to these questions is to look at their archaeological context to determine if the production of coarse ware ceramics is service related or household based and therefore possibly connected to the work of a specific group or groups.<sup>42</sup> Concerning our evidence for gender related activities we know that in the later Jamdat Nasr seals women are shown in pottery production scenes. While we at this point have no evidence, it could be speculated that earlier women were also involved in this same activity. The technologically more advanced fine ceramics then may be connected with male production activities. Evidence for female pottery production in the time of the Urkesh king Tupkish is seen in a seal impression showing a woman in her workshop making a large ceramic vessel with vessels arranged on shelves beside her.<sup>43</sup> Craft production and the administration of activities involving the transfer of goods are closely linked by the fact that both utilize graphic representations to further identify individuals: potters' marks in the case of craft production and seals and their impressions on goods in the case of administrators. A co-linkage can be conceived bet-

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40 It is usually thought that small vessels could contain precious substances but these open forms would not have been ideal in this regard.

41 Braidwood / Braidwood 1960, 229–232.

42 These groups may be based on ethnicity, gender or socio-economic factors.

43 Buccellati / Kelly-Buccellati 1996, Fig. 9c.

ween the graphic design and some specific aspect of the activity (“signs” on vessels indicating content or capacity and seals rolled on container closings).

The presence in Mozan of complex designs with symbolically charged motifs on cylinder seal impressions found within areas containing predominantly a local craft tradition in ceramic production can be considered in a number of different ways. From the presence of cylinder seal impressions in the J3f252 cache we can conclude that the introduction of cylinder seal use, or at least knowledge of cylinder seal use, took place within a context that had few other traces of southern influence, in this case both in Mozan and also in Brak during the late LC3 period.<sup>44</sup> What immediate development occurred in Urkesh is at this point not clear since we have no evidence for LC4. However at Brak the excavations in TW (levels 14–17) and HS1 show a similar pattern as the one found at Mozan in LC3. The introduction of cylinder seals occurred at a time when local pottery production was very strong and evidence of non-local ceramics weak. At Brak TW, the later strata contained large amounts of Uruk style pottery along with the continued use of cylinder seals indicating a continuity there that is not presently found in Mozan. From our limited soundings in J1, J2, and J4 (Fig. 1d) we do not see at this point evidence of a subsequent phase containing large amounts of Uruk related ceramics.

In looking at the wider picture it is apparent that the Uruk culture had a differential impact on polities in the north.<sup>45</sup> For various reasons some sites were more receptive to southern influence. Viewing Urkesh through the window of this new data we see no indication of a selective adoption of southern cultural practices; that is, Urkesh was not in the process of acculturation in the LC3 period; what we have thus far in the excavated evidence is not a transitional stage with some southern influence followed by an LC4 stage with many more indications of a southern cultural presence. Rather in Mozan we have a suggestion of the awareness of southern cultural practices but no indication of their use. This knowledge at Mozan could have been filtered not necessarily through a long distance trade network, but rather a more localized distribution of goods, even those ultimately acquired from a distance in a down-the-line type of trade system. In this view the Mozan cylinder seal

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44 Felli, 2000, 416.

45 In an article on the regional variation during LC3 and LC4 Helwing 2000 emphasized those variations resulting from the differential Uruk impact in the diverse geographical areas. There is a vast literature on the Uruk impact on the north most recently discussed by Algaze (2008) with an extensive bibliography. The focus of this paper is that Mozan, at present, exhibits a much more casual, and probably not direct contact with the south ; here the importance of the local and regional character of the evidence from our recent excavations is emphasized.

impressions could have been part of a distribution pattern of exotic goods transshipped from the south via local polities, of which Tell Brak is the most obvious candidate since it too has cylinder seal impressions, so scarce in the north during this period. Whether or not the administrators who received these containers in Urkesh knew, or cared, where they originated is an open question. In the typical down-the-line trading system, the ultimate origin of the goods is usually unknown.<sup>46</sup>

In a different and perhaps more convincing scenario, the Mozan container sealings could have originated locally, though not necessarily at Urkesh itself. If there is indeed, in LC3, a Temple Terrace the same proportions as in the third millennium, Urkesh may well have been one of the main polities in the area and could have received containers from many sources. One of these sources may have been a local administration employing administrative technology transferred from the south. In this case the goods shipped may not necessarily have originated outside of the zone but rather that the local administration controlling the shipment to Urkesh was influenced by administrative tools extensively used in the south. The amount of trade among local polities, in the Khabur region in this case, has to be considered. Distances are not great in the Khabur region and there are no substantial geographical barriers to inhibit travel; from the surface of the Temple Terrace in Mozan, where the Late Chalcolithic ceramics and cylinder seal impressions were found, one can see the Jebel Sinjar to the east of Brak, the Kaukab volcano at the confluence of the tributaries forming the Khabur River, the Jebel Abd el-Aziz to the south and west of Beydar, and the much closer Mardin Pass which is the main trade route in this part of the Khabur region to the resource rich Taurus mountains<sup>47</sup>. From Mozan, Chagar Bazar is clearly visible on most days. To the east, toward Leilan, there are also no physical barriers to travel. In addition to the land being quite flat in the Jezirah, water was readily available north of the confluence of the Khabur. Consequently an essentially local trade and associated cultural exchanges could have formed a portion of the wealth base and facilitated the transfer of knowledge within the region. While on the local level trade would have had few natural barriers, interregional trading dynamics flowed along natural routes of communication: along the major rivers and their tributaries and through the Mardin pass. No matter where the trade goods originated, trade in the Jezirah probably traveled on long established routes in this essentially flat and water-rich environment.

In considering the more general picture it must be emphasized that while there are different nuances from site to site and region to region, the overall impact of the local culture is one of homogenization over a wide area of

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46 M.L. Smith 2009.

47 See the article by F. Buccellati this volume.

Syro-Anatolia. From the ceramic inventory it is apparent that this region exhibits a remarkable unity in shapes and potting techniques within the chaff-faced tradition, especially in the widespread use of basic shapes for cooking, serving and eating in the form of hammer rim bowls, plates and casseroles. The number and quantitative importance of hammer rim bowls and of casseroles in a variety of different contexts and over a relatively wide geographical area gives us a glimpse of common cultural activities such as feasting. Added to this is the possibility of a widespread practice involving the differential serving of individuals with a special social status indicated by the use of fine ware. In the LC3 period the Jazirah, and areas immediately bordering it to the north, are a large culturally unified zone based on common approaches to craft specialization and the consistent use of a basic ceramic inventory for similar activities. That is not to say that in northern Syro-Mesopotamia cultural differences did not exist from site to site, on the contrary they do exist within this wider cultural horizon. We can point to Urkesh as an example: Urkesh in the Late Chalcolithic 3 period was a regionally significant center, in all likelihood already based on its being a religious center with its high monumental terrace acting as a focal point for the entire surrounding landscape.<sup>48</sup>

Given that wherever we excavate below the third millennium surface of the Temple Terrace as well as in front of the revetment wall we discover LC3 contexts, it seems likely that the terrace was constructed in LC3 or before. The reasons why we may even think of LC2 as the period of the initial construction of the monumental terrace at Urkesh are essentially two: in several LC3 deposits near the wall we have ceramics mixed in dating to the LC2 period. Their presence may indicate an earlier stage to the terrace. The second reason has a more regional character. Monumental architecture, constructed previous to late LC3 is found in Hammam et-Turkman<sup>49</sup>, possibly the earliest phase of the Eye Temple at Brak<sup>50</sup> and Hacinebi.<sup>51</sup> The monumental terrace in Mozan presupposes the imagination to envision such a massive undertaking, the perceived need for such a structure, the organizational know-how to muster resources in terms of materials and labor, the economic base to support such a construction, and specialized technology and specialized craftsman/technicians to operationalize such a project. The fact that all these factors were available and in service at such an early period indicates that at Urkesh and in specific sites in the wider Syro-Anatolian region there already existed a knowledge base for the mechanisms

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48 G. Buccellati this volume.

49 Meijer 1988.

50 Oates / Oates 1997.

51 Stein et al. 1996.

of architectural techniques as well as the social, political and economic infrastructure necessary to build and maintain such large-scale projects.

Do we see at Mozan the necessary presuppositions for an early urban development? Clearly the local environment with its savanna-like vegetation and its high rainfall pattern contributed favorably to the possibility of intensive local agricultural development. Added to this is its geographical position in the plain just south of the major trade route along the Mardin Pass leading into the nearby resource-rich Tur-Abdin sector of the Anatolian highlands. It appears entirely possible that the construction of a high terrace dominating the surrounding plain and thereby giving a structure to all the surrounding landscape visible from this terrace (and the distinct possibility that this terrace was the base for a major temple) evolved from an urban base with an articulated social, political and economic structure as its underpinning.

### Bibliography

Algaze, G.

2008 *Ancient Mesopotamia at the Dawn of Civilization: The Evolution of an Urban Landscape*. Chicago.

Amiet, P.

1961 *La Glyptique Mesopotamienne Archaique*. Paris.

Boese, J.

1995 *Ausgrabungen in Tell Sheikh Hassan I Vorläufige Berichte über die Grabungskampagnen 1984–1990 und 1992–1994*. SVA 5. Saarbrücken.

Braidwood, R.J. and L. S. Braidwood

1960 *Excavations in the Plain of Antioch I The Earlier Assemblages Phases A–J*. OIP 61. Chicago.

Brustolon, A / Rova, E.

2007 *The Late Chalcolithic Period in the Tell Leilan Region: A Report on the Ceramic Material of the 1995 Survey*. *Kaskal* 4.

Buccellati, G. / Kelly-Buccellati, M.

1988 *Mozan I. The Soundings of the First Two Seasons*. *BiblMes* 20. Malibu.

1996 *The Royal Storehouse of Urkesh: The Glyptic Evidence from the Southwest Wing*. *AfO* 42/43, 1–32.

2009 *The Great Temple Terrace at Urkesh and the Lions of Tish-atal*, in: Wilhem, G. (ed.), *General Studies and Excavations at Nuzi 11/2 in Honor of David I. Owen on the Occation of his 65<sup>th</sup> Birthday*. *SCCNH* 18, Bethesda, 33–70.

Delougaz, P. / Kantor, H.

- 1996 *Choga Mish I: The First Five Seasons of Excavations, 1961–1971*, edited by A. Alizadeh. OIP 101. Chicago.

Emberling, G. et al.

- 1999 Excavations at Tell Brak 1998: Preliminary Report: Excavations. *Iraq LXI*, 1–15.

Felli, C.

- 2000 Middle Uruk Pottery from Area HS 1, Tell Brak. Aspects of Cultural Continuity and Change, in: Matthiae, P. et al. (eds.), *Proceedings of the First International Congress on the Archaeology of the Ancient Near East, Rome, May 18<sup>th</sup>–23<sup>rd</sup> 1998*, Rome, 411–420.

- 2003 Developing Complexity Early to Mid Fourth-millennium Investigations: the Northern Middle Uruk Period, in: Matthews, R. (ed.), *Excavations at Tell Brak, Vol. 4: Exploring an Upper Mesopotamian Regional Center, 1994–1996. BSAI Vol. 4*, London, 53–95.

Frahm, E. / Nikloaidou, M. / Kelly-Buccellati, M.

- 2008 Using Image Analysis Software to Correlate Sherd Scans and X-Ray Element Maps in the Laboratory. *SAS Bulletin* 31(2), 8–12.

Frangipane, M.

- 1993 Local Components in the Development of Centralized Societies in Syro-Anatolian Regions, in: Frangipane, M. et al. (eds.), *Between the Rivers and Over the Mountains: Archaeologica Anatolica et Mesopotamica, Alba Palmieri Dedicata*, Rome, 133–161.

- 2000 The Late Chalcolithic/EB I Sequence at Arslantepe, Chronological and Cultural Remarks from a Frontier Site, in: Marro / Hauptmann (eds.) 2000, 439–471.

Gibson, McGuire, et al.

- 2002 First Season of Syrian-American Investigations at Hamoukar, Hassekeh Province. *Iraq* 64, 45–68.

Gülçur, S.

- 2000 Norşuntepe: die chalcolitische Keramik (Elazig/Ostanatolien), in: Marro / Hauptmann (eds.) 2000, 375–418.

Helwing, B.

- 2000 Regional Variation in the Composition of Late Chalcolithic Pottery Assemblages, in: Marro / Hauptmann (eds.) 2000, 145–164.

Marro, C. / Hauptmann, H. (eds.)

- 2000 *Chronologies des Pays du Caucase et de l'Euphrate aux IV–III millénaires*. Varia Anatolica 11. Paris.

Matthews, R. / Matthews, W. / McDonald, H.

- 1994 Excavations at Tell Brak, 1994. *Iraq* 56, 177–194.

- Mazzoni, S.  
 1999 Tell Afis and its Region in the Late Chalcolithic Period. *AAAS XLIII*, 97–117.
- Meijer, D.J.W.  
 1988 Tell: Architecture and Stratigraphy, in: van Loon, M. (ed.), *Hammam et-Turkman Report on the University of Amsterdam's 1981–84 Excavations in Syria*. Istanbul, 69–127.
- Oates, D. / Oates, J.  
 1993 Excavations at Tell Brak 1992–93. *Iraq* 55, 155–199.
- Oates, J. / Oates, D.  
 1997 An Open Gate: Cities of the Fourth Millennium BC (Tell Brak 1997). *Cambridge Archaeological Journal* 7(2), 287–307.
- Pearce, J.  
 2000 The Late Chalcolithic Sequence at Hacinebi Tepe, Turkey, in: Marro / Hauptmann (eds.) 2000, 115–144.
- Pollock, S. / Coursey, C.  
 1995 Ceramics from Hacinebi Tepe: Chronology and Connections. *Anatolica XXI*, 101–141.
- Rothman, M.S.  
 2001 *Uruk Mesopotamia and its Neighbors: Cross-Cultural Interactions in the Era of State Formation*. Santa Fe.
- Elena Rova,  
 1999–2000 A Tentative Synchronisation of the Local Late Chalcolithic Ceramic Horizons of Northern Syro-Mesopotamia. *Mesopotamia XXXIV–XXXV*, 175–199.
- Schwartz, G.  
 1988 *A Ceramic Chronology from Tell Leilan, Operation 1*. Yale Tell Leilan Research 1. New Haven.
- Smith, M.  
 2009 The Subsistence and Symbolism of Long-Distance Exchange, Paper Presented at the Society for American Archaeology Annual Meeting Atlanta in the Symposium “Interaction and Domains in South Asia and the Old World: Papers in Honor of Gregory L. Possehl”.
- Stein, G.J. et al.  
 1996 Uruk Colonies and Anatolian Communities: An Interim Report on the 1992–1993 Excavations at Hacinebi, Turkey. *AJA* 100, 205–260.
- Wright, H.T. / Miller, T.N. / Redding, R.  
 1980 Time and Process in an Uruk Rural Center, in: *Colloques internationaux du CNRS, L'Archeologie de L'Iraq*, Paris, 265–284.

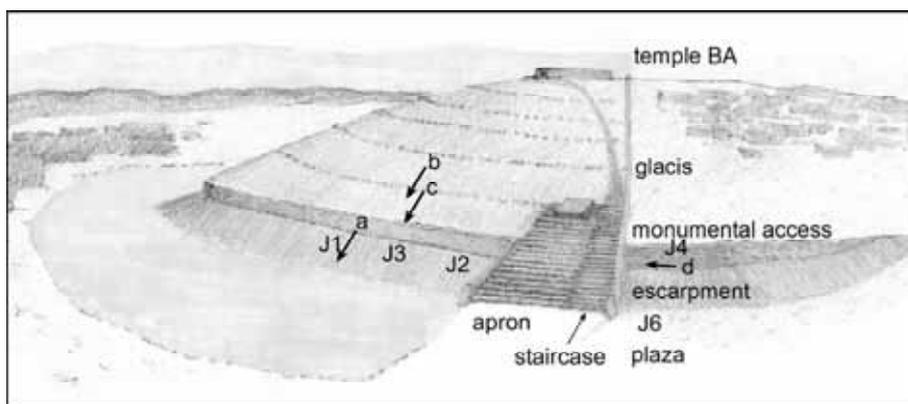


Fig. 1 Temple Terrace with contacts of Late Chalcolithic features indicated. Reconstruction by P. Pesaresi.

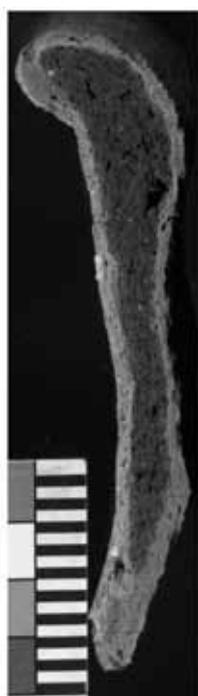


Fig. 2 Scanned section of platter rim J3 q67-p3, feature 31. Photo number V20q1022.

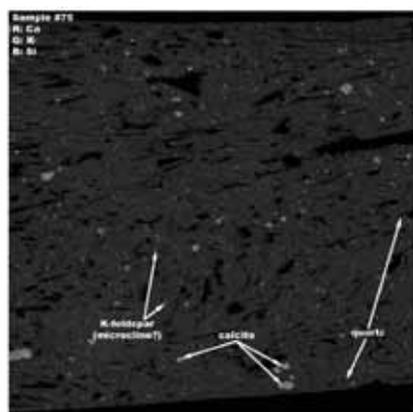


Fig. 3 Element map of Late Chalcolithic sherd, J 1 feature 196.

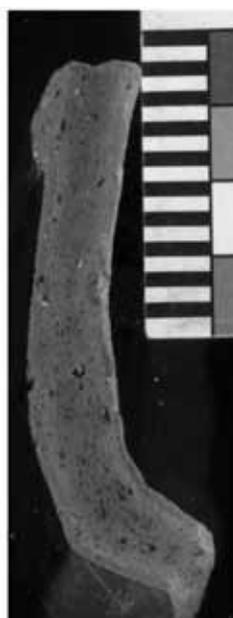


Fig. 4 Carbon core of J3q290-p1, feature 31. Photo number V20q0303.

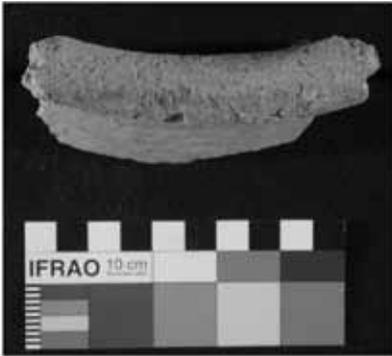


Fig. 5 Burning traces on rim of J3q119-p14, feature 71 (see drawing Fig. 13:17). Photo number V20d2121.

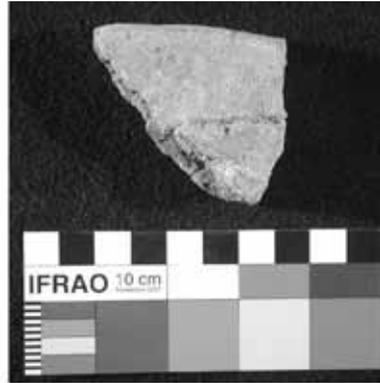


Fig. 6 Lid sherd with deeply incised potter's mark on top surface, J3q66-p15 (see drawing Fig. 13:6). Photo number V20d2117.



Fig. 7 Casserole with exterior burning at carination J3q123-p1, feature 73. Photo number V22d5008.



Fig. 8 Rough lower portion and smoothed upper portion of J3q328-p3, feature 252 (see drawing Fig. 15:14) Photo number V20d2109.



Fig. 9 Platter with cord impression on exterior near rim, J3q367-p2 feature 252 (see drawing Fig. 12:12). Photo number V20d2148.



Fig. 10 Potter's mark on platter J3q367-p13, feature 252 Photo number V20d2133.

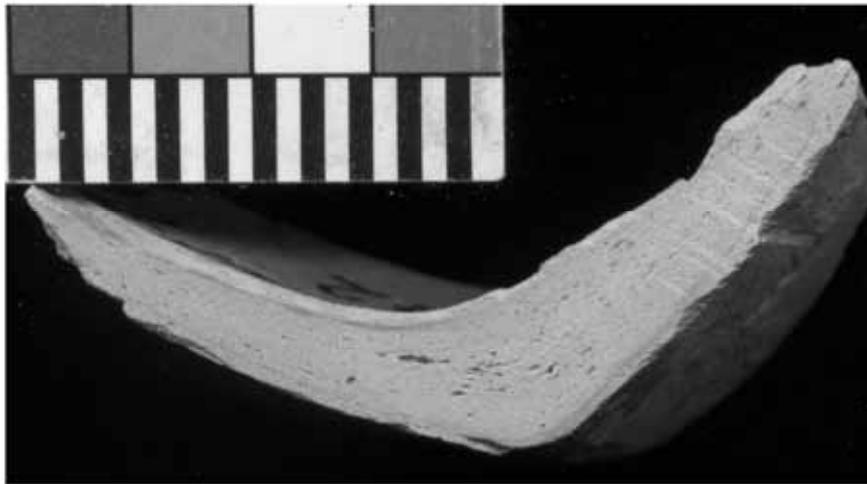


Fig. 11 Scanned section of fine ware body sherd J3q367-p70.1, feature 252. Photo number V20q1048.

## Description of Illustrated Pottery, Figure 12

1: Lot number; 2: Component number; 3: Feature; 4: Shape; 5: Firing; 6: Carbon Core; 7: Vegetal Inclusions; 8: Mineral Inclusions; 9: Surface Treatment, Interior; 10: Surface Treatment, Exterior; 11: Notes

**12.1**; 1: q367; 2: p16; 3: f252; 4: Small jar or bowl; 5: Medium; 7: Chaff; 8: Small white and black inclusions; 9: Wet Smoothed; 10: Wet Smoothed; 11: Thick slip, light brown. **12.2**; 1: q367; 2: p11; 3: f252; 4: Small jar; 5: Medium; 6: No; 7: Some chaff; 8: Large to small black inclusions; 9: Wet Smoothed over rim down to the constricted neck of the jar; 10: Wet Smoothed; 11: Thick orange slip; may be an import. **12.3**; 1: q367; 2: p20; 3: f252; 4: Jar with sharp interior ledge, pointed rim with exterior thickening; 5: Medium; 6: Wide; 7: Chaff; 8: Small to medium white and black inclusions; 9: Left coarse; 10: Left coarse; 11: Thick slip but surfaces coarse in texture. At least one ridge inside neck; Brustolon/Rova Fig 4:3 (LC3-4), Felli 2000 Fig. 1:12 (LC3), Schwartz 1988: Fig. 60:5 (Period V). **12.4**; 1: q337; 2: p01; 3: f252; 4: Jar; 5: Medium to low fire; 6: darker buff core; 7: None; 8: Small white and gray inclusions; 9: Very well smoothed; 11: Fine ware, slipped, flat rim with some wheelmarks on top, surface has "soapy" feeling. **12.5**; 1: q367; 2: p01; 3: f252; 4: Jar with slight groove on top of rim; 5: Medium; 6: Medium to narrow; 7: Much chaff in section and surface but less on interior surface; 8: Medium black pebbles; 9: Wet Smoothed; 10: Wet Smoothed; 11: Thick slip. **12.6**; 1: q367; 2: p15; 3: f252; 4: Small jar or casserole; 5: Medium; 6: 7: Small chaff; 8: Large dark gray inclusions; 9: Coarse surface texture; 10: Wet Smoothed; 11: Slipped on exterior only, secondarily fired on part of the rim and exterior. **12.7**; 1: q328; 2: p2; 3: f252; 4: Hammer rim bowl; 5: Medium; 6: Wide; 7: Chaff; 8: Small white inclusions; 9: Somewhat Smoothed but texture quite coarse; 10: Somewhat Smoothed smoother toward the top of the bowl, overall texture coarse; 11: Thick slip, firing cloud on exterior (orange, bright orange, brown), 2 cord impressions on upper body parallel to rim, heavy clay, not well levigated; Brustolon/Rova Fig. 4:8 (LC4). **12.8**; 1: q367; 2: p08; 3: f252; 4: Hammer rim bowl; 5: Medium; 6: Wide; 7: Much chaff; 8: Medium to large Calcite pebbles on surface and in section; 9: Wet Smoothed; 10: Wet Smoothed; 11: Craze on both interior and exterior, color variation of gray and bright orange on rim, slipped. **12.9**; 1: q328; 2: p07; 3: f252; 4: Hammer rim bowl with flat rim with interior thickening; 5: Medium; 6: Wide; 7: Much chaff; 8: Large white and black inclusions; 11: Red-brown slip, crazed interior, heavy clay, not well levigated, one cord impression on exterior near rim; Schwartz 1988 Fig. 52:8 (Period IV). **12.10**; 1: q328; 2: p04; 3: f252; 4: Hammer rim bowl; 5: Medium to low; 6: Yes but not in thickest part near the base; 7: Some chaff; 8: Large black pebbles; 9: Wet Smoothed, better smoothed on interior; 10: Wet Smoothed; Notes: Thick slip, secondarily fired on upper portion of interior, rim and upper part of exterior; Brustolon/Rova Fig. 4:8 (LC4). **12.11**; 1: q367; 2: p13; 3: f252; 4: Hammer rim bowl with interior thickened rim, deep; 5: Medium; 6: Yes; 7: Chaff; 8: Small and large white and black inclusions; Notes: Portion of a potter's mark made by a deep incised line on exterior. Slipped, crazed on interior, secondarily fired on lower portion of exterior; Felli 2003 Fig. 4.22:8 level HS1 5 (LC3), Schwartz 1988 Fig. 52:6 (Period IV). **12.12**; 1: q367; 2: p02; 3: f252; 4: Hammer rim bowl with interior thickened rim, deep; 5: Medium to high; 6: Yes; 7: Much small and medium chaff; 8: Medium white inclusions; 9: Somewhat burnished; 10: Burnishing especially seen at top of rim; Notes: Brown slip, two cord impressions on exterior of upper body, heavy clay not well levigated; Felli 2003 Fig. 4.18:16 HS1 level 6 (LC3).

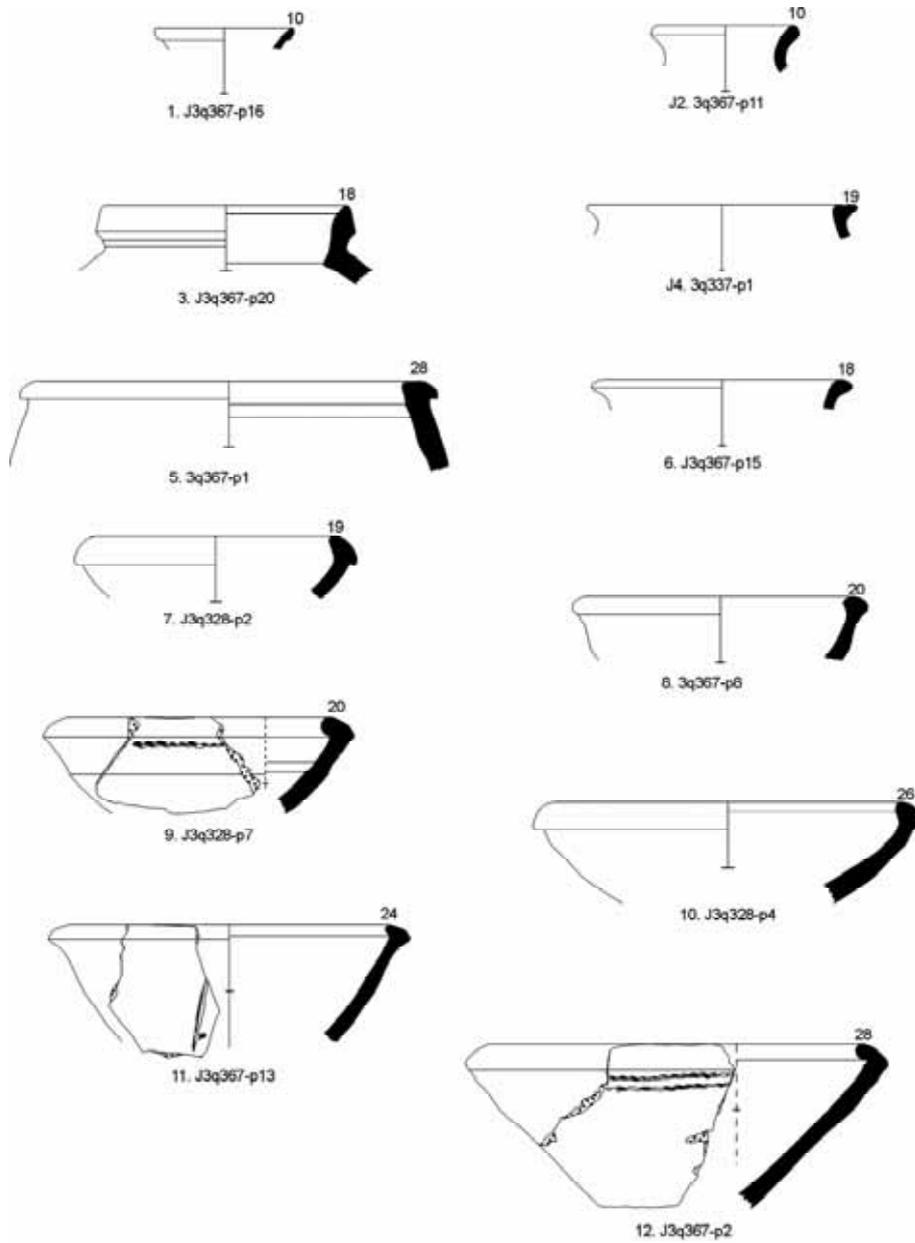


Fig. 12 Ceramics from feature 252.  
 The scale in all sherd drawings from Mozan is indicated  
 by a horizontal line at 5cm along the vertical axis.

### Description of Illustrated Pottery, Figure 13

1: Lot number; 2: Component number; 3: Feature; 4: Shape; 5: Firing; 6: Carbon Core; 7: Vegetal Inclusions; 8: Mineral Inclusions; 9: Surface Treatment, Interior; 10: Surface Treatment, Exterior; 11: Color, Exterior; 12: Notes

**13.1**; 1: J3q59; 2: p03; 3: f31; 4: Small bowl/cup; 5: Low; 6: No; 7: Small amount of fine chaff; 8: Fine white; 9: Wet smoothed; 10: Wet smoothed; 11: 10YR8/3 Very Pale Brown; 12: Fine ware, buff-white clay that is well levigated, thin walled; Felli 2003 Fig. 4. 21:18–19 (level 6). **13.2**; 1: J3q66; 2: p01; 3: f31; 4: Small bowl; 5: Medium; 6: Gray-brown; 7: Fine chaff; 8: Small white inclusions; 9: Wet smoothed; 10: Wet smoothed; 12: Thick brown-red slip. **13.3**; 1: J3q59; 2: p04; 3: f31; 4: Small bowl/cup; 5: Medium; 6: No; 7: Small amount of fine chaff; 8: Small white inclusions; 9: Wet smoothed; 10: Wet smoothed; 11: 5Y8/5 Pale Yellow; 12: Fine ware, light greenish; Brustolon/ Rova 2007 Fig. 5: 1 (Late Fourth millennium). **13.4**; 1: J3q67; 2: p01; 3: f31; 4: Bowl; 5: Medium; 6: No; 7: Fine chaff; 8: Many small and some large white inclusions; 9: Wet smoothed but texture still coarse; 10: Wet smoothed but texture still coarse; 11: 2.5Y8/3 Pale Yellow; 12: Fine ware, gray-white clay, yellowish-buff slip on exterior. **13.5**; 1: J3q66; 2: p11; 3: f31; 4: Bowl; 5: Medium; 6: No; 7: Visible carbonized chaff; 8: Gray and small white; 9: Wet smoothed; 10: Wet smoothed; 11: 2.5YR7/3 Pink; 12: Made in a similar technique to hammer rim bowls, trace of join on exterior of body; Felli 2003 Fig. 4. 18: 16 level 6. **13.6**; 1: J3q66; 2: p02; 3: f31; 4: Small bowl; 5: Medium to low; 6: No; 7: Chaff; 8: White inclusions; 9: Wet smoothed; 10: Burnished; 11: Brown; 12: Brown slip, clay not well levigated, especially for such a small shape. **13.7**; 1: J3q66; 2: p03; 3: f31; 4: Small plate; 5: Medium to low; 6: Yes; 7: Chaff; 8: Dark gray and white inclusions; 9: Wet smoothed; 10: Wet smoothed; 11: 5YR6/3 Light Reddish Brown; 12: Slipped, interior light orange, exterior and half of rim brown probably due to firing. **13.8**; 1: J3q66; 2: p16; 3: f31; 4: Bowl; 5: Medium; 6: Tan; 7: Chaff; 8: Gray and white inclusions; 11: 2.5YR7/3 Pink. **13.9**; 1: J3q66; 2: p07; 3: f31; 4: Hammer rim bowl; 5: Medium to low; 6: Yes; 7: Chaff; 8: White and dark gray; 11: 5YR6/4 Light Reddish Brown; 12: Thick brown slip. **13.10**; 1: J3q59; 2: p01; 3: f31; 4: Bowl; 5: Medium; 6: No; 8: white and gray inclusions; 10: Wet smoothed; 11: 10YR8/3 Very Pale Brown; 12: Buff-white clay, thin walled, rim similar to hammer rim bowls but this bowl is finer but not as fine as the usual fine ware bowls. **13.11**; 1: J3q67; 2: p03; 3: f31; 4: Bowl; 5: Medium to high; 6: Wide and black; 7: Fine chaff; 8: Large dark inclusions; 11: 2.5YR5/4 Reddish Brown; 12: Secondarily burnt on top and exterior, made in two parts: top wheelmade and bottom mold made, scraped lower exterior; Felli 2003 Fig. 4. 22:8 level 5. **13.12**; 1: J3q67; 2: p04; 3: f31; 4: Hammer rim bowl; 5: Medium; 7: Much carbonized chaff; 8: Few; 9: Thick slip, somewhat wet-smoothed; 10: Thick slip wet smoothed and finer surface texture than interior; 12: Poorly levigated clay, groove between two parts of the vessel. **13.13**; 1: J3q66; 2: p06; 3: f31; 4: Hammer rim bowl; 5: Medium; 6: Narrow and only located near interior surface; 7: Fine chaff; 8: Large white and gray inclusions; 9: Somewhat smoothed; 10: Somewhat smoothed; 11: 5YR7/6 Reddish Yellow; 12: Thin orange slip; Felli 2003 Fig. 17: 11 (level 6). **13.14**; 1: J3q66; 2: p08; 3: f31; 4: Hammer rim bowl; 5: Medium; 7: Medium chaff; 8: Medium white and gray inclusions; 9: Interior is smoother than exterior; 10: Somewhat smoothed; 11: 5YR6/4 Light Reddish Brown; 12: Thick orange-brown slip; Felli 2003 Fig. 4. 22: 8 (level 5), Schwartz 1988 Fig. 57:3 (Period V). **13.15**; 1: J3q67; 2: p02; 3: f31; 4: Hammer rim bowl; 5: Medium; 7: Much chaff; 8: Small pebbles; 9: Wet smoothed; 10: Wet smoothed; 11: 2.5YR7/3 Pink; 12: Thick slip, strong wheelmarks on exterior. **13.16**; 1: J3q66; 2: p15; 3: f31; 4: Lid; 5: Medium; 6: Thick; 7: Much chaff; 8: Gray and white inclusions; 11: 2.5YR6/4 Light Reddish Brown; 12: Heavy clay; deep incised lines on exterior. **13.17**; 1: J3q66; 2: p14; 3: f31; 4: Bowl; 5: Medium; 7: Chaff; 8: white and gray inclusions; 9: Wet smoothed; 10: Wet smoothed; 11: 5YR 6/4 Light Reddish Brown; 12: Traces of use ware along interior of rim. medium white inclusions. **13.18**; 1: J3q62; 2: p01; 3: f31; 4: Large bowl; 5: Medium; 6: Light gray; 7: Chaff; 8: Small and medium white inclusions; 9: Wet smoothed inside and over the rim; 10: Wet smoothed; 12: Thick light orange-brown slip, wheelmarks on interior and exterior. **13.19**; 1: J3q58; 2: p01; 3: f31; 4: Platter; 5: Medium; 6: No; 7: dense of both large and small types; 8: Gray, small; 9: Self slipped but surface texture coarse; 10: Lower part scraped, self slipped but surface texture coarse, much chaff on exterior; 11: 5YR7/6 Reddish Yellow; 12: Heavy clay, exterior of top of rim secondarily fired. Made in two pieces with thickening where joined, small cord impression at the join, Handmade above join; Felli 2003 Fig. 4. 18: 12 (level 6).

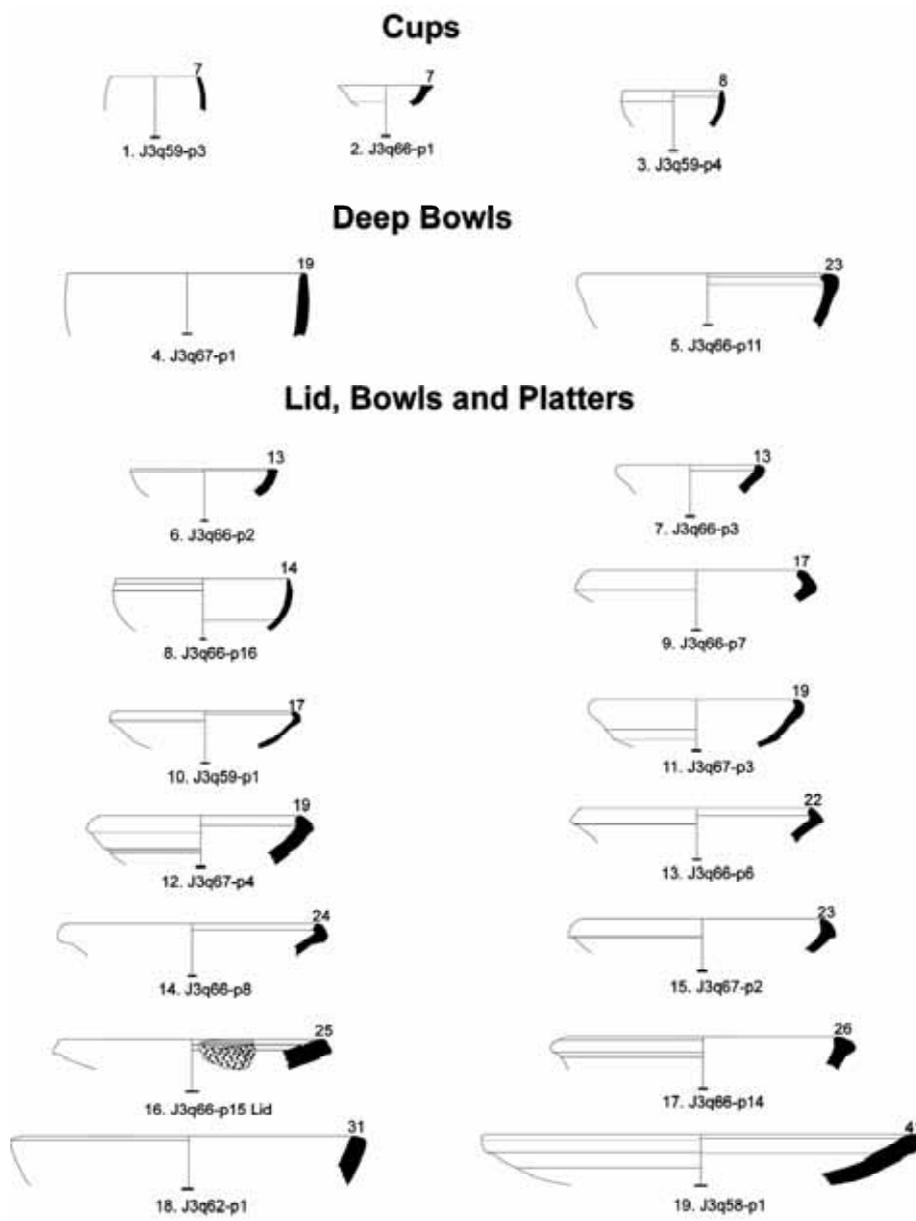


Fig. 13 Cups and bowls from J3, feature 31.

### Description of Illustrated Pottery, Figure 14

1: Lot number; 2: Component number; 3: Feature; 4: Shape; 5: Firing; 6: Carbon Core; 7: Vegetal Inclusions; 8: Mineral Inclusions; 9: Surface Treatment, Interior; 10: Surface Treatment, Exterior; 11: Color, Exterior; 12: Notes

**14.1**; 1: J3q66; 2: p17; 3: f31; 4: Small jar; 5: Medium; 6: Yes; 7: Fine chaff; 8: Large white inclusions; 11: 2.5YR7/4 Pink; 12: Fine ware, gray-buff color; Felli 2003 Fig. 23: 18 (level 5). **14.2**; 1: J3q59; 2: p06; 3: f31; 4: Jar; 5: Medium; 7: Fine chaff; 9: Wet smoothed inside jar and over the rim; 10: Wet smoothed; 11: 10YR7/3 Very Pale Brown; 12: Buff color slip. **14.3**; 1: J3q66; 2: p09; 3: f31; 4: Jar; 5: Medium to low; 6: Yes; 7: Fine chaff; 8: Gray inclusions; 11: 10YR7/3 Very Pale Brown; 12: Gray exterior, poorly levigated clay, secondarily burnt on rim maybe an indication that it is a casserole. **14.4**; 1: J3q58; 2: p06; 3: f31; 4: Jar or "casserole"; 5: Medium; 6: No; 8: Some mica, large dark gray inclusions; 9: Burnished inside rim and upper body; 10: Burnished; 11: 2.5YR6/3 Light Reddish Brown. **14.5**; 1: J3q59; 2: p02; 3: f31; Jar with flaring rim; 5: Medium; 8: Small dark inclusions; 11: 2.5YR8/3 Pale Yellow; 12: Similar rim to Felli 2003 Fig. 4.20: 8 (level 6). **14.6**; 1: J3q66; 2: p13; 3: f31; 4: Jar or "casserole"; 5: Medium to low; 6: Wide; 7: Much chaff; 8: Dark gray-black inclusions; 9: Burnished; 10: More finely burnished on exterior than interior; 11: Very dark gray; Jet black on both exterior and interior. **14.7**; 1: J3q58; 2: p05; 3: f31; 4: Jar; 5: Medium; 7: Fine chaff; 8: Much white and dark temper, white is in crystalline form, some red-brown inclusions; 9: Thick slip; 10: Thick slip, heavily burnished; 12: Heavy clay. **14.8**; 1: J3q67; 2: p05; 3: f31; 4: Pitcher?; 6: Narrow and only located near interior surface; 8: Large gray and white inclusions; 9: Coarse; 10: Coarse; 12: Handle coming off rim, buff clay. May be an import but decoration of handle not present in the sherd. Rova 1999–2000 Fig. 5: 3, 5. **14.9**; 1: J3q59; 2: p09; 3: f31; 4: Jar; 5: Medium-Low; 7: Large holes of burnt chaff with some carbonized chaff preserved; 8: Few white and gray inclusions; 9: Coarse surface texture but somewhat smoothed; 10: Coarse surface texture but better smoothed than interior; 11: 5YR6/4 Light Reddish Brown; 12: Thick slip. **14.10**; 1: J3q58; 2: p02; 3: f31; 4: Jar; 5: Medium, rim shows Firing: cloud; 7: Chaff; 8: Small pebbles; 9: Thick slip, burnished?; 10: Thick slip, heavily burnished on exterior and over rim; 11: Red-brown; 12: Traces of a slow wheel. **Not illustrated**; J3q59; 2: p08; 3: f31; 4: Ring base; 5: Medium; 6: Yes; 7: Fine chaff; 8: Fine white; Surface Treatment, Interior: Wet smoothed gray brown; 10: Burnished; 11: Dark brown; 12: Not Illustrated. May be an import; Felli 2000 p. 414.

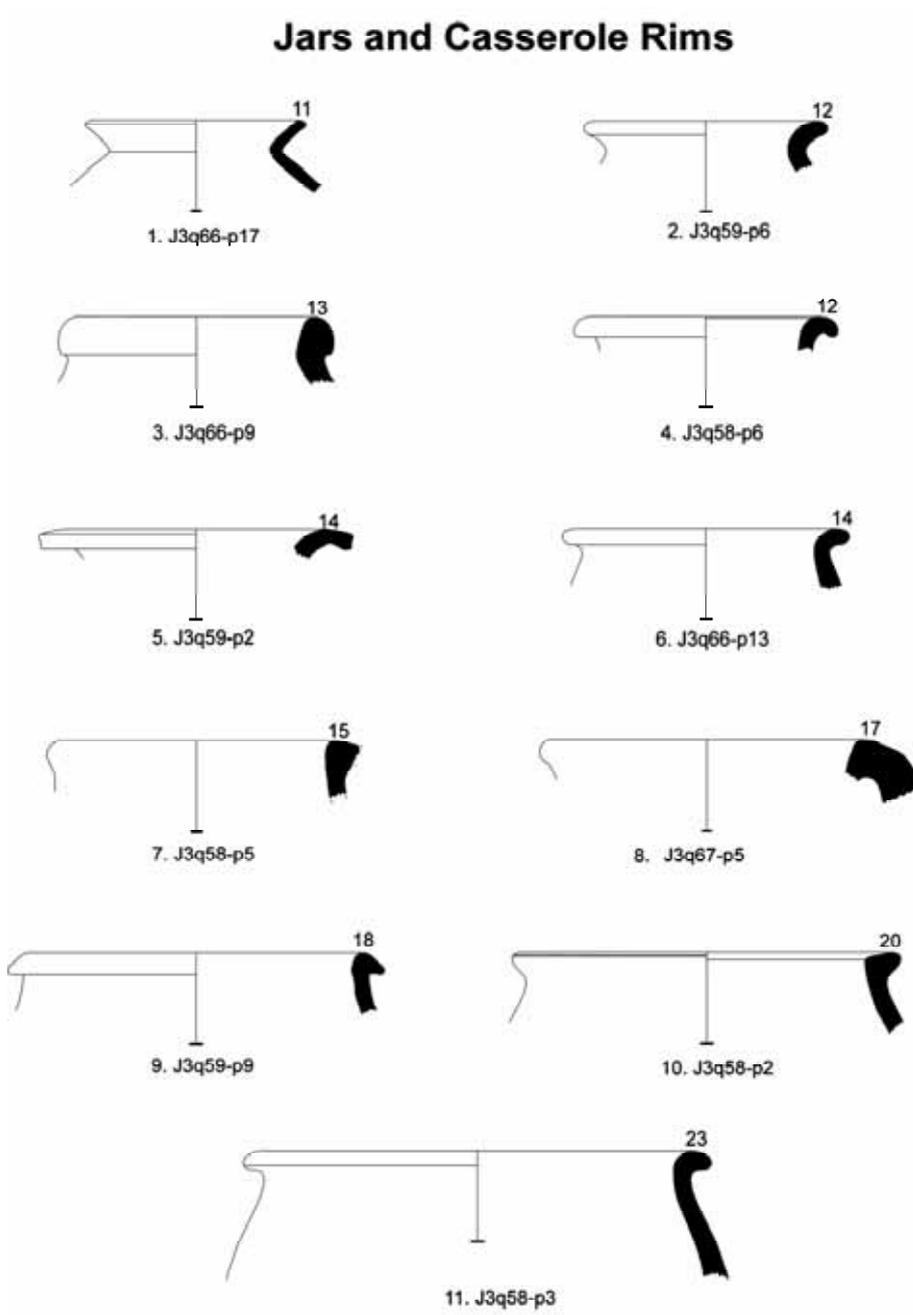


Fig. 14 Jars from J3, feature 31 with descriptive chart.

### Description of Illustrated Pottery, Figure 15

1: Lot number; 2: Component number; 3: Feature; 4: Shape; 5: Firing; 6: Carbon Core; 7: Vegetal Inclusions; 8: Mineral Inclusions; 9: Surface Treatment, Interior; 10: Surface Treatment, Exterior; 11: Color, Exterior; 12: Notes

**15.1**; 1: J3q119; 2: p07; 3: f71; 4: Jar; 5: Medium; 6: No; 7: Much chaff; 8: Large dark gray inclusions; 9: 10YR 6/3 Pale Brown; 11: 10YR6/3 Pale Brown; 12: Unusual pale brown color. **15.2**; 1: J3q119; 2: p04; 3: f71; 4: Jar; 5: Medium; 6: Wide; 7: Much chaff; 8: Many white inclusions both on interior and exterior, some dark gray inclusions; 11: 5YR7/4 Pink. **15.3**; 1: J3q119; 2: p16; 3: f71; 4: Jar; 5: Medium to low; 6: Yes; 7: Much chaff and carbonized chaff; 8: Medium white and gray inclusions; 9: Wet smoothed; 10: Wet smoothed; 11: 5YR7/4 Pink; 12: Similar to Felli 2003 Fig. 4. 17: 7 and Fig. 4. 20: 4,12, Level 6 but Brak HSI examples have a sharper restriction at the neck. **15.4**; 1: J3q119; 2: p01; 3: f71; 4: Jar; 5: Medium; 6: No; 8: White inclusions; 11: 5Y8/6 Pale Yellow; 12: Fine ware; Felli 2003 Fig. 4. 21: 27–8 level 6. **15.5**; 1: J3q119; 2: p06; 3: f71; 4: Jar; 5: Medium to low; 6: Yes; 7: Much carbonized chaff; 8: White and dark gray inclusions; 11: 5Y8/3 Pale Yellow; 12: Felli 2003 Fig. 4. 21: 23, level 6. **15.6**; 1: J3q119; 2: p05; 3: f71; 4: Jar; 5: Medium; 6: No; 7: Chaff; 8: Small white and dark gray with some large gray inclusions; 9: Coarse; 10: Somewhat wet smoothed; 11: 5YR7/6 Reddish Yellow. **15.7**; 1: J3q119; 2: p09; 3: f71; 4: casserole; 5: Medium; 7: Fine chaff; 8: Small dark gray inclusions; 11: 7.5YR5/3 Brown; 12: Secondarily fired on rim and exterior body; for a similar shape in fine ware see Felli 2003 Fig. 4. 21: 17, level 6. **15.8**; 1: J3q119; 2: p14; 3: f71; 4: Jar or casserole; 5: Medium; 6: Yes; 7: Much chaff; 8: Many white and dark gray inclusions; 11: 5YR7/4 Pink; 12: Secondarily fired on exterior of rim and body. **15.9**; 1: J3q119; 2: p12; 3: f71; 4: Jar with sharp interior ledge and pointed rim with exterior thickening; 5: Medium; 6: Wide; 7: Chaff; 8: Gray inclusions; 11: 10YR7/3 Very Pale Brown; 12: Poorly levigated clay, some hint of ribbing inside rim; Brustolon/ Rova Fig 4: 3, Fig. 6: 5 (LC3–4), Felli 2000 Fig. 1: 12 (LC3), Felli 2003 Fig. 4. 20: 1–3, level 6; Gut 1995, No. 816 (Gawra B). **15.10**; 1: J3q119; 2: p17; 3: f71; 4: Small bowl; 5: Medium; 6: Wide; 7: Chaff; 8: Many white inclusions; 9: Somewhat wet smoothed; 10: Wet smoothed; 11: Gray-white exterior and red-orange interior; 12: Poorly levigated clay; Felli 2003 Fig. 4. 18: 15, level 6. **15.11**; 1: J3q119; 2: p02; 3: f71; 4: Small bowl; 5: Medium; 6: No; 8: Sand and small white inclusions; 11: 5YR7/6 Reddish Yellow; 12: Carinated bowl typical for this period with rims that are both curving inward or outward, as this example. Fine ware, greenish buff clay; Felli 2003 Fig. 4. 23: 13 level 5. Fig. 4. 24: 11, level 4. A chaff tempered type from TW 16 Oates and Oates 1993, fig. 51: 24. **15.12**; 1: J3q119; 2: p13; 3: f71; 4: Bowl; 5: Medium to low; 6: Yes; 7: Chaff; 8: Large white and gray inclusions, brown inclusions may be crushed sherds; 11: 7.5YR6/1 Gray; 12: Poorly levigated clay, unusual gray color. **15.13**; 1: J3q119; 2: p03; 3: f71; 4: Bowl; 5: Medium to low; 6: Narrow; 7: Chaff; 8: Small white and dark gray inclusions; ; 10: Burnished; 11: 7.5YR5/1 Gray; 12: Poorly levigated clay, unusual gray color. **15.14**; 1: J3q119; 2: p15; 3: f71; 4: Shallow hammer rim bowl; 5: Medium; 6: Wide; 7: Much chaff; 9: Coarse; 10: Coarse; 11: 5YR5/3 Reddish Brown; 12: Poorly levigated; Felli 2003 Fig. 4. 6, level 6 with smaller rim diameter, Gut 1995. No. 853. **15.15**; 1: J3q119; 2: p11; 3: f71; 4: Hammer rim bowl; 5: Medium; 7: Large chaff and some carbonized chaff; 8: Large dark gray inclusions; 11: 5YR6/4 Light Reddish Brown; 12: Felli 2003 Fig. 4. 17: 11, level 6. **15.16**; 1: J3q119; 2: p10; 3: f71; 4: Plate; 5: Medium; 6: Narrow; 7: Much chaff; 8: Large white and gray inclusions; 11: 5YR7/4 Pink; 12: Use-wear marks on outer edge of rim; Felli 2003 Fig. 4. 22: 13, level 5.

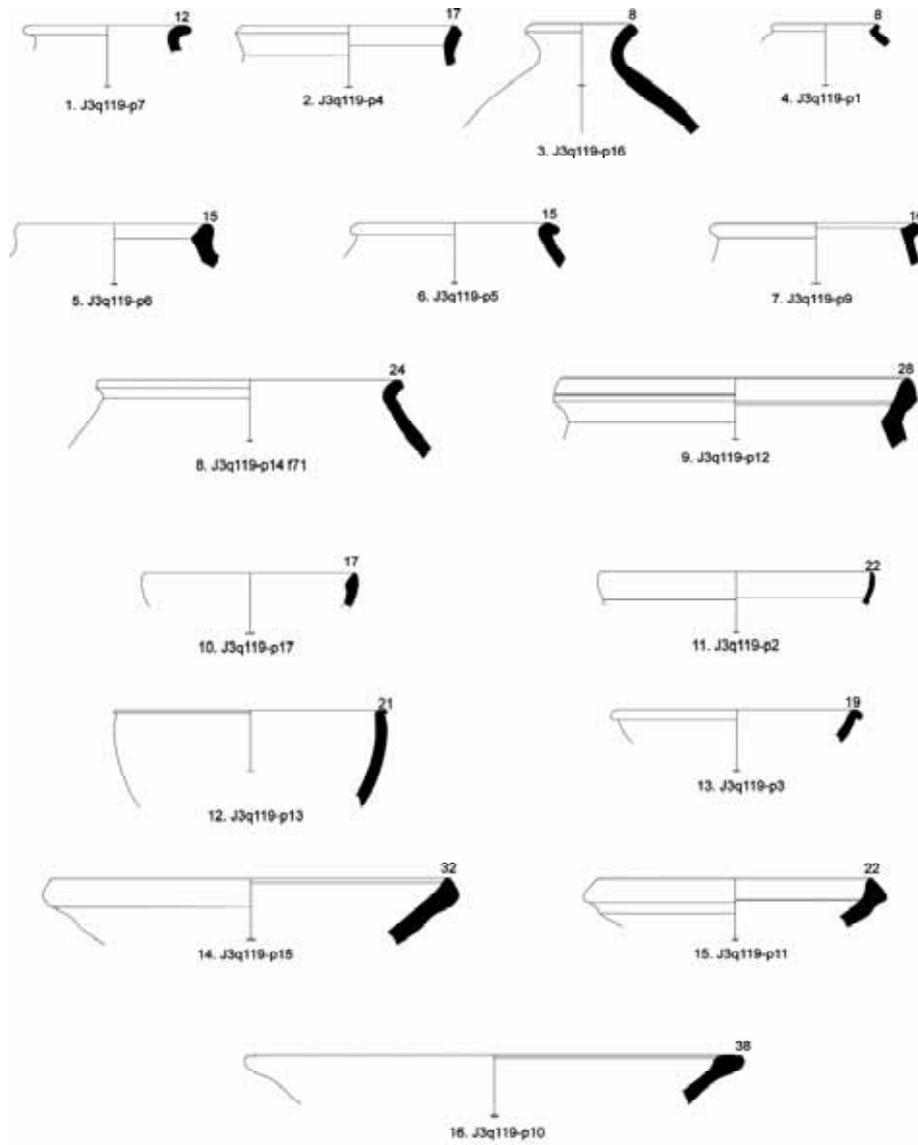


Fig. 15 Ceramics from J3, feature 71.

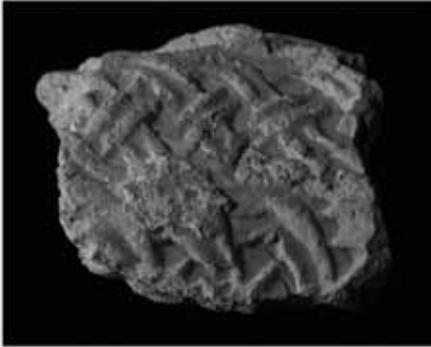


Fig. 16 Cylinder seal impression of a ribbon or snake (J3q328.4).



Fig. 17 Seal impression of a reclining animal (J3.16).

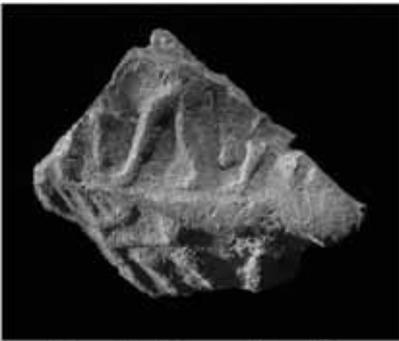


Fig. 18 Impression of a procession scene (J3.14).

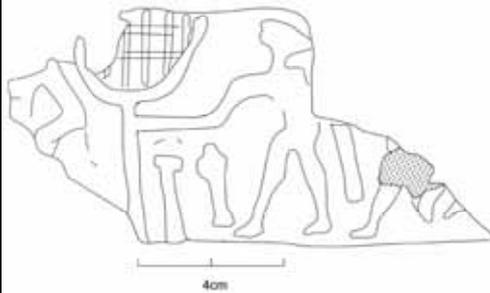


Fig. 19 Composite of procession scene (J3.14 and J3.19).

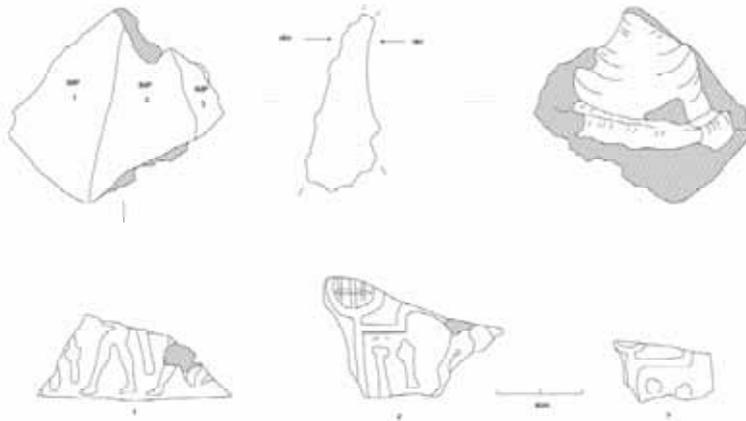


Fig. 20 Reverse of complex seal with procession scene (J3.14).