

Analysis of Specialized Iron Age Wares at Kaman-Kalehöyük

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INTRODUCTION

During the Iron Age, after the collapse of the Hittite Empire, groups in central Anatolia reorganized and developed new forms of political economy (Yakar 2006). As yet, the nature of these inland political economies, their scale, and their interactions are poorly understood. The relative importance of trade vs. emulation among polities provides one means to evaluate both the nature of local political economic structures and the relationships between polities in central Anatolia. In this paper we explore the ceramic evidence for the changes in types and scale of interaction during the Iron Age at the site of Kaman-Kalehöyük (Figure 1a). Kaman is one of several sites currently being excavated that were continuously occupied through this political and economic transition; it is situated between the major Anatolian Iron Age polities (Phrygia and Urartu), providing a measure of the power of local vs. non-local political economies. Ceramics, as one of the most ubiquitous items of material culture that was both locally made and traded, provide a useful avenue for investigating how Kaman-Kalehöyük interacted with its neighbors in the Iron Age.

In this paper, we analyze 342 ceramic samples and 28 local sediments to characterize the ceramic assemblage in terms of local, regional, and extra-regional ceramic production. Following a brief summary of the results for this data set, we focus on specific wares that are relatively rare at Kaman: Black Wares (including Lustrous Black Fine Ware (LBFW)), Grey Ware, and Micaceous Wares (includes Black, buff, brown and Grey wares). The presence of these wares at other sites in central Anatolia make them potentially useful both as chronological markers and for evaluating the extent to which emulation vs. exchange was important at Kaman. While both emulation and exchange reveal the geographic scope of Kaman's interaction sphere,

only exchange of (closed) ceramic vessels indicates the possibility of exchange of other goods as well.

BACKGROUND

Historical Context

Genz (2003) recently reviewed the transition from the Late Bronze Age (LBA) to the Iron Age in central Anatolia. After the collapse of the Hittite Empire smaller regional polities emerged (Sams 1995). To the west, at Gordion, there is evidence of at least two in-migrating populations, while further east there is evidence of cultural continuity despite political and economic disintegration (Voigt and Henrickson 2000). For example, at the former Hittite capital of Boğazköy, recent evidence suggests continuity between LBA and the Early Iron Age (EIA) populations, albeit with substantial changes as centralized control waned (Genz 2003). The standardized wheelmade ceramics that were ubiquitous within the Hittite Empire gave way to handmade, highly variable forms with very different firing techniques.

At Gordion, the Phrygian state emerged by the end of the Early Iron Age (Sams 1995). The distribution of language/inscriptions, monuments, and ceramics have all been variously used to define the territory of the Phrygian state (*e.g.* DeVries 2000; Summers 1994). While its area of influence is thought to be extensive, its actual political boundaries remain difficult to define within west central Anatolia.

East of Ankara, in the region of the Kızılırmak – or the heart of what had been Hittite territory – sites like Kaman-Kalehöyük, Boğazköy, and Alişar provide most of our evidence for the Iron Age political and economic developments. As noted above, only recently has Iron Age settlement been identified at Boğazköy. Alişar Höyük was excavated in the late 1920s and

early 1930s (*e.g.*, von der Osten 1937), and while its ceramics stylistically define the Iron Age in this region we have little understanding of the nature of the Iron Age occupation at the site. Kaman therefore provides a relatively rare view of the Iron Age dynamics, and one venue for understanding how this central region articulated with better known regions to the west, east, and south.

Ceramics

In this study, we focus on three different wares, providing discrete lines of evidence for patterns of interaction in and around Kaman. The ubiquity of ceramics, as well as their preservation, makes them an obvious choice for analysis and a useful archaeological proxy for evaluating interaction. While they provide only one ‘slice’ through the range of interactions in any society, ceramics are particularly useful in that they can provide two types of provenance: a production provenance relating to the geographic origin of their clays, and a cultural provenance based on their stylistic features (including specialized forms and technologies). Together geographic and stylistic provenance contribute direct evidence of interaction through the movement of ceramics from production location to find location, and more indirect evidence of interaction through the identification of the ‘home’ of the decorative and/or technological styles of the ceramics. In addition, different wares within an assemblage represent different functions and meanings, and can therefore provide multiple strands of evidence for understanding specific types of interaction within a society and between societies. Ultimately, comparison with other material systems should provide a more in depth understanding of the complexity of interaction at Kaman-Kalehöyük.

Black Wares

The three types of wares discussed here have different functions and distributions in central Turkey. Black Wares in this context are vessels fired in a reducing (oxygen depleted) atmosphere, creating both black surfaces and black cores in the vessel. This general category subsumes a range of types, including EIA handmade, cooking pots, and a variety of wheelmade black slipped and burnished wares.

Black Wares display a range of decorative styles: slipping, burnishing, incising, and impressing (and combinations of these, *e.g.*, AIA 3230). Incision ranges from simple parallel lines (from poor to well executed) to herring bone and geometric parallel line patterns (Figure 3a₃). Black Wares from Gordion provide a comparable range of incised decoration (Henrickson *et al.* 2002; Sams 1994). In one Kaman sample, a vessel has incised facets (*cf.* Gordion where they are often molded). Molded decoration is not common but includes ridges and molded vertical scallops.

Black burnished wares are common in Anatolian ceramic traditions, found variously in the Chalcolithic, Early Bronze Age, and Early Iron Age in handmade forms. In the Middle and Late Iron Age Black Wares are commonly slipped and often at least partially wheelmade. In addition to fine wares, some cooking pots are found with matte black (or blackened) surfaces and are included in this category here (4 samples; Table 5)

A variety of studies have been conducted investigating the nature of the finish on Black Wares. Shiraishi and Nakai (2006) used several techniques to determine that both slipped and unslipped black wares occur at Kaman, but the surfaces of both types were ‘blackened’ through the addition of fine organics at the end of the firing process (introducing carbon directly into the surface).

In 2002, Henrickson and colleagues undertook an NAA analysis of what had been called “Black Polished Ware” from the Iron Age Gordion in order to understand how it was produced (Henrickson *et al.* 2002). They concluded that “Black Polished Ware” included both wheel thrown and molded forms (faceted), which were subsequently slipped with a sintered slip, and fired below 800°C in reducing conditions. In reduction firing the sintering temperature is lowered, especially useful when dealing with high calcium clays that otherwise deteriorate at higher firing temperatures. The surfaces show no evidence of burnishing or polishing – hence the renaming of the ware to reflect the true finish technology: “Lustrous Black Fine Ware” (LBFW). For closed vessels, only the exterior is ‘lustrous’ with a shiny black slip. The relative rarity and technological complexity of this ware suggests it was likely made for elites (*ca.* 1-2% of the assemblage at Gordion). These

can co-occur with a small number of very similar grey slipped wares (Sams 1994).

Some of the wares from Kaman-Kalehöyük, based on visual inspection, reveal a comparable slipping technology (see also Shiraishi and Nakai 2006). However, some vessels show evidence of both slipping and burnishing.

The range of LBFW forms Henrickson and colleagues (2002) report for Gordion include “drinking vessels for wine (bowls) and beer (goblets) and appear to be skeumorphs of bronze vessel types known from Gordion” (Henrickson *et al.* 2002; spouted small pots, goblets, bowls, trefoil jugs, and so forth). While most are commonly table wares they can also include some small to medium jars. At Kaman, the range of forms for “Black Polished Ware” is comparable to Gordion, with bowls (12.2%), jugs (16.7%), and small pots/jars (11.1%) being the most identifiable forms (Matsumura 2005: 345). In the sample analyzed here, the range of forms appears to be similar, however the samples are from small incomplete sherds and the sample size is limited.

At Gordion, LBFW appears mainly from 800-500 BC or in YHSS 5-6 (Henrickson *et al.* 2002). At Kaman, the Iron Age reduction fired wares are first found in IId1-3 (after 1200 BC), but do not become common (ca. 20%) until IId6-IIc1 (after 800 BC; Matsumura 2005: 224). Within this larger group, “Black Polished Wares” also follow this trajectory. Matsumura (2000) suggests that reduction fired wares, in general, are imported until the Late Iron Age (IIa), when the proportion of reduction fired wares in the assemblage increases to over 20% (Matsumura 2001).

The extent to which LBFW production is focused at one, a few, or many sites has been unclear. While best known from Gordion, LBFW is also found at a number of sites in central Anatolia. Based on our observations, LBFW is present in very low frequencies at most central Anatolian middle and late Iron Age sites (from Dorylaion [Eskişehir] to Boğazköy and Kerkenes). The typological range and abundance of LBFW at these sites is not well known, as little of it has been published. In general, the forms and production technology appear to be similar (sintered slip, see Henrickson *et al.* 2002). While the data from Kaman alone cannot answer this question, they do provide an indication of the nature of Black

Ware production and distribution, and elite interaction in central Anatolia.

Grey Wares

At Kaman Grey Wares are first found in period IId (pre 800 BC), but are most common in period IIa (800 BC - 4th c BC; Matsumura 2000). Matsumura (2001: 107) suggests that local production of Grey Ware begins by period IIa. As a subset of Grey Wares, “Plumbeous Ware” is most common prior to IIa (IIc2-3 EIA). At Gordion, Grey Wares first appear at the beginning of YHSS 6, or the Early Phrygian Period (950 BC?) and continue into the Hellenistic Period (Henrickson 1994).

The Iron Age Grey Wares are widely distributed in western inland Anatolia, and are particularly abundant at sites in Eskişehir and Ankara provinces (*e.g.*, Dorylaion and Gordion). They also occur further east in Kırşehir, Nevşehir, and Niğde provinces (Mellaart 1955: 117; Dupré 1983: 82; Summers 1994: 241-52). According to Bahar (1999), Grey Ware can also occur at inland sites to the south, in the Beyşehir Basin. Kaman appears to be near the eastern boundary of Grey Ware occurrence.

Grey Wares, like Black Wares, include several variants: a common ware with generally utilitarian forms and a fine ware with slipped and/or highly polished finish. Matsumura (2000) divided Kaman Grey Wares into two groups: one that is grey throughout and the other which has a grey surface and brown core. A recent analysis of Grey Wares from Kaman (Matsunaga and Nakai 2004) confirms that these two groups were fired under different conditions (one step reduction and two step oxidation and reduction).

Grey Ware forms at Kaman are predominantly utilitarian and include two types of carinated bowls and mostly neckless or wide mouth jars with some one-handed jugs (Matsumura 2005: 336, 345-346). At Gordion, Grey Wares also encompass a wide range of fairly standardized forms, also including utilitarian jars and bowls. At both sites, a small percentage is finely slipped or polished, comparable to fine Black Wares.

Micaceous Wares

Micaceous Wares are defined by the presence of a slipped or self-slipped surface which has a ‘sheen’ – attributed to the orientation of mica platelets in the

slip. In some instances, particularly when the surface is grey, it takes on a metallic looking appearance (Matsumura 2005). At Kaman, Matsumura has called these “Plumbeous Ware” (2000). Previous analysis of the surface of “Plumbeous Ware” by Matsunaga and Nakai (2000) using X-Ray diffraction revealed a concentration of mica at the surface. Micaceous Wares include a range of buff and Grey Ware fabrics, creating some overlap in the discussion of the Grey Wares (*op. cit.*).

Micaceous Wares seem to have two, somewhat overlapping characteristics: one based on this aesthetic metallic finish and the other relating to the thermal properties of micaceous wares and their use as cooking vessels. According to Matsumura (2005), the grey forms of these Micaceous surfaces are known both from LBA sites near Boğazköy and from the Early Iron Age Gordion, where there is also a fine ware with a ‘golden sheen’ (Gunter 2006; Sams 1994). “Plumbeous Ware”, unlike Grey Ware, dates primarily to the Early Iron Age. However, both Middle and Late Iron Age examples are present here.

The range of forms represented in our sample is predominant bowls (round, incurved, and carinated) and jar and pot rims, both small and large. The jar and pot rims were either ledge rims or flat rims. Closed forms and fine table wares are rare.

Summary

Together, these three wares provide complementary lines of evidence for assessing the extent to which Kaman was extensively engaged in extra-regional exchange networks, broad information networks (emulation), or more localized regional production. Over the course of the Iron Age, Grey Wares and “Black Polished Wares” increase, while “Plumbeous Ware” declines (Matsumura 2005: 401). More broadly, other Iron Age wares, like Alişar IV types, also provide a measure of interaction, either as direct exchange or more indirect emulation during the Early to Early-Middle Iron Age. The basic question addressed here for each of these wares is the extent to which each was either locally produced or imported.

Geology

The complex local geology is dominated by granite

and monzonite uplands in the area immediately around the site and extending to the east (Fig. 1b). To the west, schist, quartzite, and marble bodies occur in the vicinity of the town of Kaman, beyond which ophiolitic lithologies dominate. Between the various uplands, relatively recent fine grain terrestrial sediments occur, and these are in turn partially buried by alluvial deposits derived from the surrounding rock.

METHODS

Ceramic samples from Kaman-Kalehöyük were collected over three years (2004-2006; Table 2). In the first year, a range of the Iron Age samples (mainly decorated) were taken from across the Iron Age contexts at the site (mostly pits; Grave and Kealhofer 2006). In the second year the three main Iron Age subperiods were sampled (IId, IIc, IIa), and in the third year, specific wares were sampled including Black Wares, Grey Wares, Micaceous Wares, and a selection of ceramics thought to be non-local. Samples were recorded in the field (photographed and described) and then shipped to the University of New England (NSW, Australia), where they were prepared for NAA (soaked to remove salts, surface cleaned, sampled, crushed, and weighed). Prepared samples were submitted to Becquerel Laboratories, Canada, for NAA at the McMaster University reactor.

In addition to ceramic sampling, soil samples were collected from around the surrounding region based on geological maps and visual identification of lithological variability (Figure 1b). Sediment sampling was the primary basis for identifying the range of geochemical variability in the region in order to identify local ceramic production. Soil samples were sieved on site for subsequent analysis by NAA.

The NAA data from both the ceramics and the sediments were interpreted using Principal Components Analysis and Canonical Variates Analysis to identify and evaluate compositional groups (see Grave *et al.* 2008). Statistical interpretation involves iteratively removing outlying samples from the dataset until a coherent set of core groups are identified. In this analysis, nine iterations were necessary to define a likely set of local core groups. Sediment samples fell within these core groups,

supporting their identification as locally produced. Only outliers in the first two iterations were considered to be non-local in origin, with the remaining outlying groups (from 3-9) considered as local variants.

Sediment data were corrected in relation to the local ceramic group data. Sediment multivariate centroids were centered over the ceramic multivariate centroids for combined analysis. Fourteen of the 28 sediments were removed from further analysis, as not relevant for defining the local clay signatures.

RESULTS

Sediments (n=14)

Groups derived from the NAA results are provided in Table 1. Table 2 lists the context information and sample descriptions.

The sediments formed two general groups in multivariate analysis, reflecting the local geology (Figure 1b). The core ceramic dataset matched these two general groups. Local Group 1 is found west of the site, following a trajectory to the northwest (red symbols in Figure 1b). Surface soils and mined clay samples from a schist-ophiolite transition create gradual changes in geochemistry from southeast to northwest along a geochemical gradient (subgroups 1, 1.1, 1.2). This Local Group 1 yielded relatively high calcium and chromium values. To the east Local Group 2, represents clay fractions sorted from the granitic uplands. The group closest to the site (2.1), including mud-brick wash from the site itself, is most distant from the uplands. Other subgroups, spread further afield, are closer to the granite and monzonite uplands and include more poorly sorted sediments.

Ceramics (n=342)

The ceramics from Kaman-Kalehöyük can be grouped into 24 local and non-local groups based on their geochemistry in relation to the sediment samples from the Kaman region: 11 local groups (n=285) and 13 non-local (n=57). The two largest local groups (Local Group 1 and Local Group 2) account for 265 of the samples and include specific subgroups as well as more dispersed samples (Figure 2a and 2b). Jars and bowls of various

sizes dominate the total assemblage, however specific forms were often difficult to identify from fragmentary sherd material. The color range of fabrics was highly variable. While various shades of buff wares were most common, both grey and black wares were also present (Table 2).

The ceramics from Local Group 1 (1, 1.1, 1.2) correlate with a sediment sample trajectory towards the northwest (see Figure 1b). The ceramics from Local Group 2 (2, 2.1, 2.15, 2.16, 2.5), as noted, fall around Kaman and (mainly) to the east. While Group 1 falls closest to the site, Group 2 ceramics are the most abundant, matching monzonitic samples mainly to the north and east. Group 1 is the most compositionally variable of the local groups, mirroring the lithological variety in the watersheds contributing sediments into the floodplain from southwest to northwest.

Within the local groups, Groups 1, 2 and 2.1 are the most abundant in the sample. Each of these includes the full range of forms in the assemblage, and each fabric appears to be used throughout the Iron Age (and later in the case of 2.1). Many of the subgroups and smaller groups are associated with Black Wares discussed further below.

Aside from these Black Ware groups, the two other local groups are 2.15 and 2.16. Group 2.15 includes two sherds that appear to be from the same jar, while 2.16 is composed of 3 jar sherds with brown line decoration (one on red background) and one large Grey Ware bowl ('sheen'; see Grey Ware section below).

The remaining groups fall outside the distribution of sediment samples and are considered as possible or likely non-local (Groups 5, 5.4, 5.5, 5.6, 10, 10.9, 11, 12, 13; n=57; Figure 3b and 3c-f). One group is relatively distant within the statistical analysis, while most of the other groups are statistically closer to the core local groups. These groups, however, are arranged along different compositional trajectories with no local sediment matches, and therefore are interpreted as non-local (Figure 2a).

Group 5.5 is the largest and the most diverse of the non-local groups and includes a range of fine polychrome decoration, fine hatched decoration, panel polychrome with a bird, cooking pots, as well as both Black and Grey Wares (Figure 3e). Group 5.6, on the other hand is stylistically homogeneous; all (jar) samples with brown

hatched triangles (Figure 3f). Group 5.4 includes an unusual set of fiber tempered fabrics and is attributed to the EIA. Groups 10, 10.9 and 13 are arguably the most exotic based on their geochemistry (Figure 3g). Stylistically, only one of the sherds is clearly exotic (AIA 2175, Group 10, Figure 3g). Group 11 is composed entirely of Grey Ware which has a (self) slipped finish with a 'sheen'.

The distribution of fabrics reveals that painted buff and/or brown wares were the most common non-local wares (n=43; Table 3). Both Black and Grey imports are relatively limited, with Black being slightly more common (n=17 for Black and n=5 for Grey Ware). The frequency of Black imports is somewhat less than the overall frequency of Black Wares in the assemblage (15% vs. 20%). The same is true of Grey Wares which are ca. 20% of the overall assemblage but only 10% of the imports¹⁾.

Forms

Because the majority of the samples were taken from small sherds, specific form identification is often difficult. General form shapes (*e.g.*, jar, jug, and bowl) could be determined on the basis of interior and exterior surface treatment, rim and/or base characteristics, and sherd thickness and curvature (Tables 4a and 4b).

Not surprisingly, a range of jar types of different sizes (likely including some jugs and pots) dominate the assemblage (n=164). Bowls are next most common (n=62), and pots a distant third (n=23). Jugs, basins, and plates are also present in low numbers (defined by rim shapes). For the three largest local groups (1, 2, and 2.1) there is no unique relationship between form and geochemical group: they contain proportionally similar forms with the exception of pots (cooking pots). Group 2 and 2.1 contain all but one of the 16 cooking pots (Group 2.5 has the other). The fabrics from this region may therefore be preferred for cooking wares. Cooking pots are evenly distributed between 2 and 2.1, showing no preference for immediately local clays. Cooking pots also

occur in two non-local fabric groups: Group 5.5 and 11.

In non-local groups, the distribution of forms is comparable to that for the total assemblage: jars are the most abundant form, with bowls second. The diversity and long chronological range of samples in Group 5.5 suggests a long term exchange partner (or region). In terms of wares, buff and brown wares are the most common non-local wares, with Grey and Black Ware non-local forms less common (ca. 10% and 15% respectively).

Black Wares (Lustrous Black Fine Ware [LBFW] and Black burnished) (n=75)

The surface treatments for the Black Wares are summarized in Table 5. "Black polished" or LBFW is the most frequent surface finish, with some earlier forms being burnished. However, combinations of burnishing and 'polishing', burnishing and incising, and 'polish' and incising are also common through the assemblage.

Black Ware forms are equally dominated by bowls and small to medium jars (Table 6). Jugs are also relatively common (including trefoil forms). Except for the four cooking pots, the majority of Black Wares are fine to medium fine table wares. The imported Black Wares include only bowls and a trefoil jug. As with the overall assemblage, there is no unique association between a specific form and a geochemical group.

Black Wares occur in 15 of the 24 geochemical groups identified at Kaman (13 local, and 2 non-local [5 & 5.5]). Among the local groups, Black Wares occur in all the local geochemical groups except 2.15 (n=2) and 2.16 (n=4) (Figure 2c). If the Black Wares are isolated and analyzed as a single sub-assemblage, subgroups within the larger Local Groups appear (Groups 1.1, 1.2, 2.2, 2.5, 3, 4, 6, 7, 8 and 9), with Black Wares also present in Groups 1 and 2. This is a surprisingly large number of groups. These groups represent either the diffuse production of Black Wares across the region around Kaman, or the use of a large number of very specific clay sources by Kaman potters.

In terms of abundance, Group 3 has the most Black Wares (n=15), with Group 2 next (n=10) (Table 5). This does not follow the general distribution of local ceramics, suggesting that Black Ware production, not surprisingly, preferentially uses different clay. Whether this choice

¹⁾ Note these percentages are from the AIA sample, not the overall IA assemblage at Kaman. While they may not match the site assemblage frequencies, the difference between the local and imported remains significant.

reflects a preference for specific clay chemistry (more calcareous) or texture is unclear.

Matsumura's (2005) analysis of Kaman's Iron Age ceramics suggests that reduction fired wares were rare in the Early Iron Age, increasing through the MIA and most common in the LIA. In this assemblage, among the groups consisting of only Black Wares, Group 6 is all from the EIA and includes handmade and burnished sherds with some incised decoration. Most of the other Black Wares (slipped/polished) concentrate in Phase IIa associations (Middle and Late Iron Age).

Grey Wares (n=66)

The Grey Ware in this assemblage is commonly slipped or self-slipped and often additionally burnished or smoothed; a few also have simple incised lines or grooves. In many cases this slip leads to a silvery micaceous 'sheen' on the exposed surfaces (jar exterior, bowl and pot interior and exterior; see Micaceous Wares below). The thickness of this slip is quite variable.

The range of forms present in Grey Wares mirrors the form distribution in the larger assemblage, with jars most common, bowls second, and pots third (Table 7). However, bowls and pots are relatively more common among the Grey Ware. Many of the pots are cooking pots with abundant evidence of use.

Grey Wares occur in a restricted range of local groups (Table 7). Nearly half of all Grey Wares occur in Group 2, with the second largest group from 2.1 (adjacent to the site). Most cooking vessels are found in Group 2 and 2.1 (and exotic group 5.5). The Grey Ware forms in Group 1 are all small jars, storage jars (ledge rim) or finely slipped bowls, and show no evidence of being used for cooking. As noted above, Group 2 and 2.1 fabrics appear to be preferentially chosen for cooking wares (bowls and pots).

The small number of non-local Grey Wares from Kaman follows the same pattern as the Local Group 1 Grey Wares: they are bowls, small jars, and storage jars, with no clear evidence that they were used for cooking (Groups 5.5 and 11). In this case, these metallic imitations may be more popular imports than cooking pots.

Micaceous Wares (n=36)

Micaceous Wares are a more amorphous group of

wares, including a full range from Black (cooking pots) to Grey, Brown and Buff (Table 8a). This discussion therefore includes some samples presented in previous sections on the Black and Grey Wares.

Pots are the most abundant form of Micaceous Wares sampled. Bowls are next most common, with both incurved and carinated shapes. Only three other sherds, possible basin, jar and an unidentified form were noted. In this assemblage, at least 50% of the Micaceous Wares were described as cooking wares.

While Micaceous Wares are present in all the main local groups (1, 2, 2.1), like the Grey Wares, they are most abundant in Group 2 and 2.1. This supports their role as primarily cooking wares. Two different non-local groups include Micaceous Wares (5.5 and 11); both of the Group 5.5 samples are cooking pots (brown), and the Group 11 sample may be as well. One of the Group 1 samples (buff) also appears to be a cooking pot, while the other sample is too small to identify.

In sum, cooking/serving vessels dominate the Micaceous assemblage, particularly pots and bowls of medium and large sizes, and most are locally produced.

DISCUSSION

To return to the question raised in the Introduction, how specialized ceramics from Kaman can inform us about the nature of interaction during the Iron Age in central Anatolia, the results of this analysis contribute several key lines of evidence.

First, the local range of sources for the Iron Age Kaman ceramics is large. One interpretation would be that many villages in the Kaman hinterland were producing ceramics that were exchanged with the inhabitants of Kaman (and/or around the region); suggesting a locally dispersed pattern of production. Or, if production was centralized, Kaman potters were using an exceptionally wide range of clay sources. However, clays from sources next to the site (2.1), were rarely used.

Non-local ceramics comprise ca. 15% of the sampled assemblage, distributed among eight different fabrics. While this percentage is not high, the diversity indicates either a broad network of contemporary exchange or a sequence of different sources over time.

The dominance of jars in the non-local assemblage suggests that they served as containers to import other goods. Given the non-standardized nature of these vessels, this exchange is likely to represent an informal network of regional interaction.

Turning to the specialized wares, the Black Wares provide a different picture of interaction. The Black Wares from the EIA are all handmade and often burnished, representing a distinct technological tradition; unlike the later Black Wares, most of these EIA examples are imported from a single source not represented later. This pattern suggests a break in exchange relationships at the end of the EIA, as well as a redefinition of status representation in terms of emulation in the Middle Iron Age.

After the EIA, the Black Ware assemblage parallels the overall assemblage, where a large number of local fabrics are represented. The pattern of production for Black Wares, however, does not match that of the larger assemblage (*e.g.*, Group 3 is most common rather than Group 2). This is likely to relate to clay characteristics. The presence of more than 10 different types of local fabrics for the Black Wares suggests that production units were relatively small and were not centrally controlled or distributed. In addition, this diversity and variability may also represent the presence of a society where more groups had access to elite wares.

The relative abundance of Black Ware here, as at Gordion, suggests that there is a broad regional set of cultural understandings about how status is represented particularly in the Middle and Late Iron Age. Given the limited number of non-local Black Wares, this cultural framework is expressed through emulation rather than frequent exchange. This emulation is not restricted to form, but includes the reproduction of the rather sophisticated LBFW technology. This might suggest significant interaction (beyond exchange) by the Middle Iron Age. Interestingly, unlike the pattern in the larger assemblage, the non-local Black Wares are all tablewares (bowls and jugs), highlighting the value of elite display.

Summers (1994) suggested that the distribution of Grey Wares in central Anatolia maps the distribution of the Phrygian state. He also suggested that Kaman represents the eastern edge of this state based on the relatively common presence of Grey Wares. While the abundance of Grey Wares is actually quite low

relative to contemporary sites in the west, like Gordion or Dorylaion, they are not uncommon at both Kaman and Boğazköy (Genz 2003). However, at Kaman the Grey Wares, unlike further west, are restricted to a small range of forms, about half of which are related to cooking vessels. This limited range, not only in forms but in function, suggests Grey Wares had a significantly different meaning at Kaman. They are not the ubiquitous standardized wares typical of Gordion (Henrickson 1994), but are selectively produced for specific functions (food preparation/serving related?). That their presence at Kaman represents Phrygian political control seems unlikely (see also Matsumura 2001: 107). As with the Black Wares, however, emulation of particular and selected complex behaviors is clearly present.

If we return to the question of local vs. imported for the Grey Ware, it is immediately apparent that nearly all of the Grey Ware is locally made. Less than 10% are imported (2 bowls, 2 jars, 2 pots). Following the overall site chronology for reduction fired wares, imported Grey Ware was never significant, but emulation became important by the Middle Iron Age with nearly 20% of the assemblage Grey and/or Black Ware (Matsumura 2005).

Turning to the last ware analyzed, Micaceous Wares are dominated by local cooking forms (pots and bowls). About 10% are non-local (Groups 5.5 and 11), and they appear to be cooking vessels as well. The Micaceous Ware from this assemblage appears to be a local technological specialization focused mainly on cook wares.

Of the assemblage analyzed, about 15% of the total was non-local. Just under one-third of this group included Black Wares (including EIA handmade), while less than 10% were Grey Ware. Buff ware forms were the most abundant imported types. For non-local forms, closed vessels were much more abundant than open vessels, indicating that imported goods were likely more important than imported ceramics/table wares.

While the painted buff wares (Brown on Buff, Polychromes, Alişar IV and III) were not part of this discussion, they present several potentially different patterns. The decorative styles present on the Buff Wares are common over a larger region of central and south coastal Anatolia, carrying further east, in particular, than the Black and Grey Ware discussed here (Bahar 1999; Genz 2003; Hansen and Postgate 1999). The

painted buff wares while also dominantly local, with emulations of many styles, also seem to be the most frequently imported of the specific wares. This suggests a different network and pattern of interaction than seen with the Black Ware, potentially related to movement of contained goods. It may also be chronologically constrained to the Early Iron Age. Further work is necessary to understand these patterns.

In sum, one of the striking patterns at Kaman is the diversity of fabrics and wares. This pattern could be interpreted as a relatively dense and intense intra-regional exchange of goods, within a larger inter-regional exchange of ideas. Emulation was much more important for status display than imported forms, which were dominated by closed vessels. There is little evidence for standardized production or a highly stratified society. This region looks substantially different from Gordion, where standardized wares became common again by the Middle Iron Age.

CONCLUSION

Kaman-Kalehöyük ceramics provide a view of the Iron Age interaction within the Kızılırmak region of central Anatolia. Inhabitants of the site appear to be working in a densely regionally interactive environment, with links more than 100 km east and west and south. The lack of standardization, seen at contemporary sites like Gordion, suggests that the local elites were not incorporated in a large political entity, but were competing within relatively fluid political and economic networks. At Kaman, ceramic styles were imported more than ceramic vessels, with imported vessels often used for importing goods. These networks seem to have shifted from east to west at the end of the Early Iron Age, as they do at both coastal and inland sites across Anatolia.

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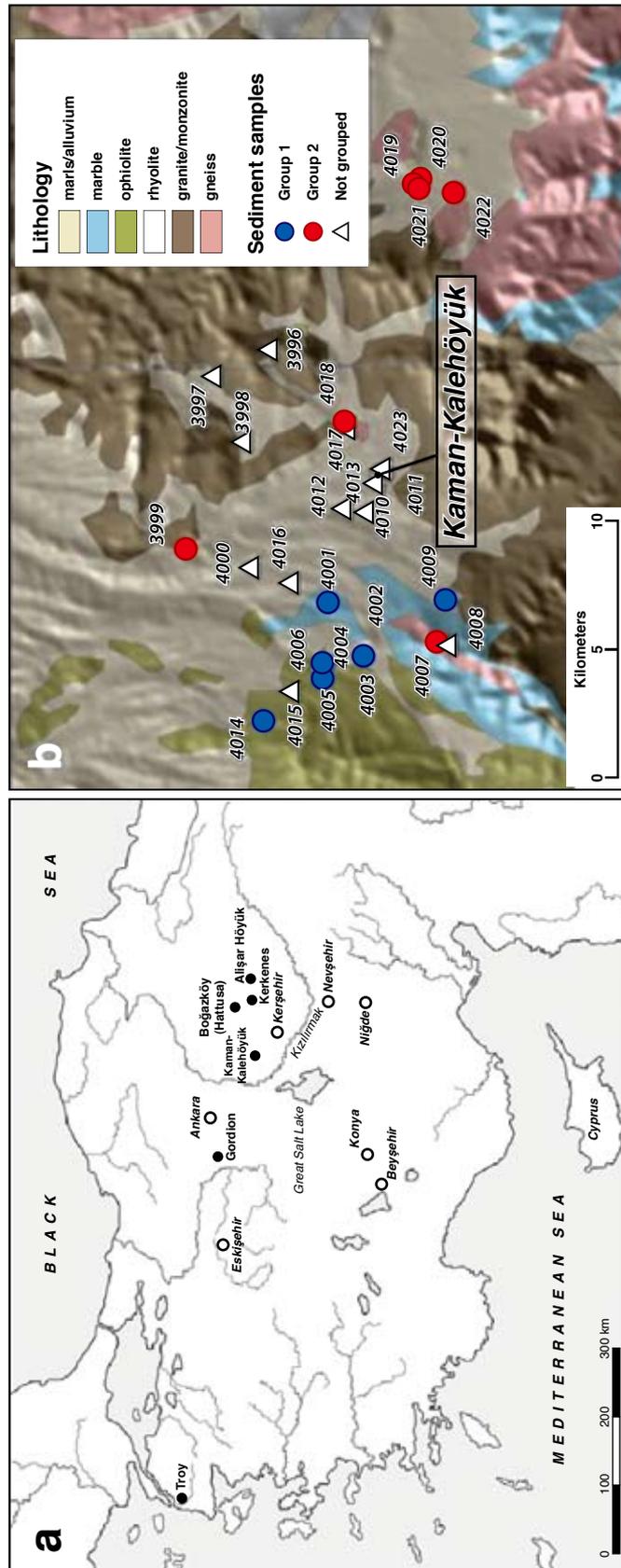


Fig. 1 a) Map of Turkey showing location of Kaman-Kalehöyük, other major archaeological sites in the vicinity and centers of provinces discussed in the text; b) map of local geology around Kaman showing soil sample locations classified into two major compositional distinctions (Local 1, Local 2), coded by lithology and NAA compositional groups. Geology from Maden Tetkik ve Arama Genel Müdürlüğü (2002).

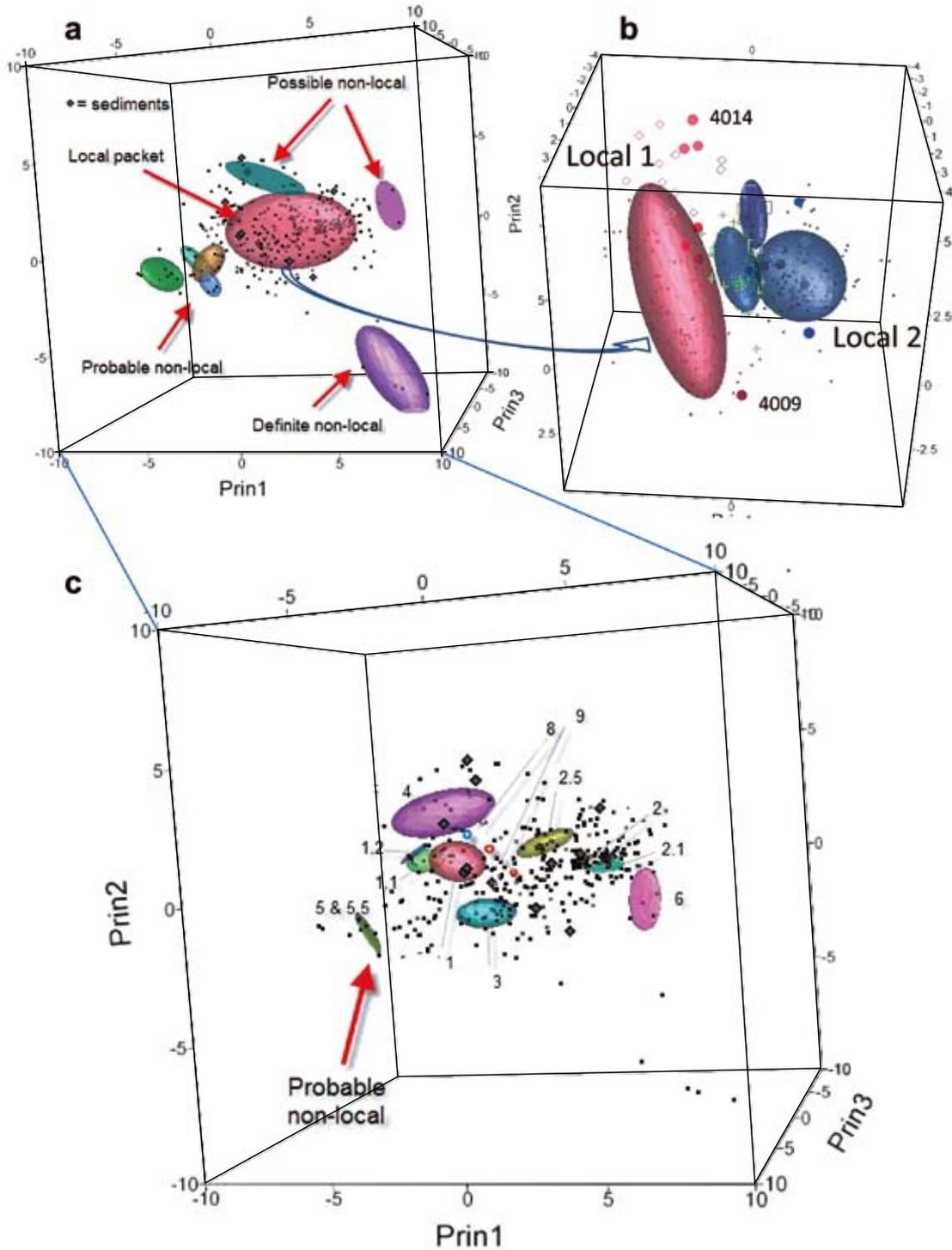


Fig. 2 Principal Components analysis of Kaman-Kalehöyük (KK) ceramics and sediments dataset showing: a) identification of local ceramic compositions based on correlation with local sediments (local packet), definite non-local samples based on distance from local packet, and probable and possible non-local wares based on degree of compositional separation from local packet; b) break out of local packet showing major distinction between local sediments and associated ceramic samples (Local 1, Local 2); and c) same PCA projection as for Fig. 3a but with Black and Grey Wares tagged by KK compositional group. Note this projection indicates that only KK5 and KK5.5 are probable non-local with Black Wares of KK6 possibly non-local.



Fig. 3 Typologies of local and non-local wares identified in the dataset by compositional group: a) Local Black Groups: KK1: 1 (aia 508), 2 (aia 3239), KK 1.1: 3 (aia 3233), 4 (aia 3220); KK 2: 5 (aia 3230), 6 (aia 3234), KK2.1: 7 (aia 3232), 8 (aia 3254); KK2.5: 9 (aia 3229), 10 (aia 3253), KK3: 11 (aia 2205), 12 (aia 3244), 13 (aia 3228); KK4: 14 (aia 672), 15 (aia 2144), KK 7: 16 (aia 2131), KK8: 17 (aia 2172), 18 (aia 2167); KK9: 19 (aia 2168), 20 (aia 2193). b) Possible non-local: KK6: 1 (aia 2140), 2 (aia 2137), 3 (aia 2141), 4 (aia 2142), 5 (aia 2143). c) Probable non-local: KK5: 1 (aia 2133), 2 (aia 2198), 3 (aia 2160), 4 (aia 2158), 5 (aia 2132), 6 (aia 636), 7 (aia 591), 8 (aia 638), 9 (aia 2221). d) KK5.4: 1 (aia 546), 2 (aia 2139), 3 (aia 669), 4 (aia 2146), 5 (aia 2197), 6 (aia 2150). e) KK 5.5: 1 (aia 3226), 2 (aia 2157), 3 (aia 658), 4 (aia 537), 5 (aia 555), 6 (aia 674), 7 (aia 3255), 8 (aia 2201), 9 (aia 3257), 10 (aia 3288), 11 (aia 2138), 12 (aia 3300). f) KK5.6: 1 (aia 600), 2 (aia 577), 3 (aia 616), 4 (aia 564), 5 (aia 663). g) Definite non-local: KK10: 1 (aia 2175), 2 (aia 522), 3 (aia 623), 4 (aia 547), 5 (aia 535), 6 (outlier of this group: aia 554); KK10.9: 7, singleton outlier (aia 652).

Table 1 NAA results for the Kaman ceramic sample organized by compositional groups and subsets giving group identification, number of samples in each group, average value and % coefficient of variation (C.V.). Elements reported as parts per million (ppm) unless otherwise indicated.

	1 (n=81)		1.1 (n=7)		1.2 (n=3)		2 (n=116)		2.1 (n=46)		2.15 (n=2)	
	Avg	CV	Avg	CV	Avg	CV	Avg	CV	Avg	CV	Avg	CV
As	71.84	77.82	117.57	65.68	373.00	15.73	97.76	56.45	89.11	68.18	30.50	30.14
Ba	541.36	38.70	414.29	30.62	396.67	36.47	721.98	21.49	645.00	17.74	365.00	13.56
Ca%	8.78	29.94	10.00	0.00	4.07	10.24	4.20	24.93	4.53	37.28	2.30	12.30
Ce	57.46	27.06	37.14	9.64	37.00	2.70	108.44	13.74	82.26	17.70	75.50	0.94
Co	20.13	36.36	29.29	7.56	35.00	2.86	18.65	12.89	21.30	19.86	39.00	3.63
Cr	196.72	62.68	390.86	12.52	297.67	0.85	145.37	22.80	166.62	24.45	404.00	2.80
Cs	7.60	55.35	4.57	3.51	4.93	1.17	9.12	13.72	8.01	12.58	6.80	2.08
Eu	1.06	16.09	0.98	12.40	1.10	9.09	1.56	13.38	1.33	14.66	1.45	14.63
Fe%	4.19	23.54	4.33	3.99	5.23	3.16	4.79	12.11	4.92	6.91	6.67	1.38
Hf	3.73	21.96	2.53	10.64	2.63	7.91	6.77	15.95	5.45	16.68	5.25	6.73
K%	2.81	43.52	1.93	13.29	2.33	19.79	3.01	26.68	3.03	32.14	2.60	21.76
La	32.19	27.43	21.91	6.80	22.80	2.32	60.20	12.37	45.54	18.00	38.80	5.83
Lu	0.31	14.25	0.21	8.02	0.23	8.92	0.40	13.48	0.37	12.81	0.41	3.45
Na%	0.87	35.87	0.86	13.90	0.71	1.41	1.35	16.65	1.03	26.83	0.82	0.87
Nd	25.56	21.70	19.57	17.42	20.33	2.84	40.71	14.11	32.70	15.46	34.50	6.15
Rb	96.65	25.20	58.43	14.62	76.67	2.72	118.39	13.83	107.13	15.29	105.00	6.73
Sb	1.71	57.31	0.83	9.12	0.77	7.53	2.88	54.38	3.35	108.46	0.70	0.00
Sc	15.19	30.01	15.81	5.51	17.80	3.13	15.68	13.45	17.97	14.53	23.95	0.30
Sm	4.61	17.23	3.59	4.70	3.84	1.82	7.59	12.35	6.29	12.55	6.18	3.66
Ta	0.90	54.48	0.67	71.80	0.27	173.21	1.56	34.46	1.30	30.11	1.70	33.28
Tb	0.66	47.26	0.37	126.01	0.23	173.21	0.94	25.56	0.85	34.07	0.80	17.68
Th	13.27	38.58	7.06	7.17	7.20	2.78	26.90	16.76	18.19	29.47	11.00	0.00
U	3.07	33.15	2.81	50.52	5.63	25.99	4.85	31.55	3.58	29.31	2.20	6.43
Yb	1.99	13.97	1.51	4.56	1.83	3.15	2.48	16.62	2.34	14.66	2.70	10.48
Zn	94.16	26.83	76.57	18.41	93.33	6.28	97.56	20.08	98.67	22.35	130.00	10.88

	2.16 (n=4)		2.2 (n=1)		2.5 (n=5)		3 (n=15)		4 (n=5)		5 (n=9)	
	Avg	CV	Avg	CV	Avg	CV	Avg	CV	Avg	CV	Avg	CV
As	58.50	41.06	64.00		75.00	27.24	144.33	91.69	71.60	71.67	159.56	68.09
Ba	732.50	17.53	1000.00		684.00	24.26	483.33	49.40	500.00	19.80	721.11	28.98
Ca%	3.03	27.04	1.80		3.24	20.66	10.67	13.62	3.90	29.68	2.98	71.10
Ce	70.75	10.66	78.00		80.80	9.95	56.67	9.80	37.60	23.98	24.89	30.69
Co	29.75	3.22	15.00		22.60	14.54	15.20	21.99	22.60	5.05	14.44	34.81
Cr	222.75	9.43	67.60		149.80	11.41	113.67	80.09	100.78	38.56	164.78	17.87
Cs	8.15	6.13	8.10		7.20	5.64	7.79	28.05	5.96	32.29	8.64	28.41
Eu	1.45	6.90	1.20		1.40	7.14	0.96	10.63	0.99	14.98	0.34	32.50
Fe%	5.97	2.64	4.59		4.94	8.85	3.98	8.63	6.15	10.50	5.55	14.03
Hf	5.28	8.10	4.80		5.88	23.21	3.15	21.68	2.98	18.89	2.89	12.41
K%	3.45	12.63	3.40		3.28	27.22	3.12	17.81	1.84	75.56	2.14	48.36
La	38.63	7.03	47.10		44.62	16.60	32.15	9.44	20.70	26.03	17.11	18.12
Lu	0.45	8.63	0.38		0.41	21.02	0.30	12.65	0.43	19.39	0.16	17.59
Na%	1.46	42.04	1.30		0.97	15.50	0.68	16.52	1.02	37.40	0.16	30.11
Nd	34.75	5.93	31.00		35.20	11.26	25.80	10.17	18.00	24.85	12.78	22.06
Rb	115.00	8.70	120.00		106.20	13.75	97.20	10.88	59.80	32.63	67.22	13.28
Sb	0.78	6.45	1.20		1.86	93.25	2.19	25.57	1.88	28.99	9.72	21.65
Sc	23.88	6.71	13.10		17.88	8.70	13.72	14.39	26.54	11.68	28.92	24.77
Sm	6.64	1.16	6.12		6.16	4.75	4.60	6.36	3.89	19.60	1.51	23.71
Ta	1.38	72.33	1.70		1.42	27.90	0.68	59.66	0.34	137.32	0.67	64.08
Tb	0.90	20.29	0.70		0.98	32.59	0.61	33.68	0.78	14.04	0.09	300.00
Th	12.50	8.00	22.20		17.44	30.79	14.43	13.29	8.88	38.93	11.33	14.63
U	1.98	32.91	3.10		3.58	32.36	4.55	23.20	1.88	36.74	3.87	31.25
Yb	3.05	6.83	2.20		2.52	18.49	1.91	9.24	2.80	19.07	0.99	8.76
Zn	93.25	36.35	85.00		99.20	15.18	101.00	15.65	137.60	30.65	128.89	15.25

	5.4 (n=7)		5.5 (n=13)		5.6 (n=5)		6 (n=5)		7 (n=1)		8 (n=2)	
	Avg	CV	Avg	CV	Avg	CV	Avg	CV	Avg	CV	Avg	CV
As	128.00	34.09	95.62	46.74	70.20	64.26	133.20	44.49	40.00		253.00	15.09
Ba	1090.00	18.89	768.46	43.59	512.00	37.91	736.00	8.13	430.00		445.00	30.19
Ca%	5.76	26.66	4.66	52.12	10.68	13.28	1.52	9.76	10.00		5.40	68.09
Ce	37.29	14.17	44.46	18.29	29.80	9.00	126.60	4.20	77.00		54.50	11.68
Co	8.47	34.40	19.31	45.12	25.00	10.95	14.20	7.71	9.50		26.00	32.64
Cr	120.57	8.33	141.08	12.95	185.80	18.94	104.22	8.47	82.90		324.00	15.71
Cs	9.44	7.97	8.68	16.15	19.80	28.44	11.80	7.09	16.00		5.85	10.88
Eu	0.54	17.01	0.73	19.60	0.63	12.87	1.72	4.86	1.10		1.15	18.45
Fe%	5.59	8.60	5.07	9.33	4.44	8.47	4.07	4.61	3.90		5.87	10.97
Hf	4.36	10.17	4.18	19.70	2.12	5.17	7.40	6.04	3.60		3.85	12.86
K%	2.30	21.15	1.98	42.13	2.32	27.33	4.06	62.03	4.00		2.35	39.12
La	28.00	12.03	28.78	17.59	17.28	11.42	66.60	5.04	41.40		30.10	5.17
Lu	0.23	5.89	0.22	15.07	0.26	7.46	0.38	5.26	0.34		0.37	5.81
Na%	0.29	32.23	0.41	36.92	0.34	6.03	1.60	5.84	0.44		0.57	111.65
Nd	14.14	11.85	19.46	24.07	13.80	9.45	45.60	8.85	27.00		25.50	13.86
Rb	76.43	7.62	79.38	15.09	86.80	16.52	190.00	7.44	130.00		86.00	23.02
Sb	7.17	8.85	8.32	23.98	5.22	19.13	1.22	15.77	3.90		0.95	22.33
Sc	16.31	10.43	22.56	16.50	23.30	7.43	10.28	4.36	12.70		19.85	7.48
Sm	2.37	15.91	3.12	19.76	2.56	0.98	8.27	5.30	5.50		4.86	13.54
Ta	1.03	24.28	0.68	56.21	0.30	137.44	1.72	20.72	1.90		0.85	24.96
Tb	0.13	172.25	0.23	158.61	0.30	137.44	0.88	9.51	1.00		0.65	32.64
Th	15.57	9.71	16.05	17.73	11.80	17.37	36.52	8.18	23.10		10.50	6.73
U	3.39	33.17	3.92	22.55	1.78	29.03	5.64	8.18	4.70		2.75	18.00
Yb	1.37	10.06	1.38	14.73	1.62	10.14	2.26	8.04	2.00		2.25	3.14
Zn	117.29	15.13	101.92	27.91	85.80	23.43	100.60	9.02	260.00		110.00	12.86

	9 (n=2)		10 (n=7)		10.9 (n=1)		11 (n=3)		12 (n=3)		13 (n=1)	
	Avg	CV	Avg	CV	Avg	CV	Avg	CV	Avg	CV	Avg	CV
As	109.00	36.33	68.40	51.55	77.00		191.33	41.97	68.67	49.97		281.00
Ba	600.00	4.71	534.00	15.92	510.00		660.00	6.06	656.67	11.02		650.00
Ca%	3.50	8.08	4.64	50.99	0.50		1.27	4.56	2.70	9.80		2.80
Ce	76.50	8.32	144.60	15.74	181.00		80.00	17.32	149.00	8.25		64.00
Co	18.50	3.82	8.38	40.26	1.80		40.67	7.10	18.00	11.11		20.00
Cr	136.50	0.52	48.36	85.61	5.60		451.67	36.54	115.67	5.76		192.00
Cs	7.45	8.54	30.20	54.28	95.70		14.00	7.14	9.60	17.05		9.50
Eu	1.20	11.79	1.06	22.55	1.10		1.73	3.33	1.90	21.05		1.30
Fe%	5.20	3.68	2.63	28.22	1.71		5.12	13.08	5.23	6.15		5.01
Hf	5.25	41.75	8.40	15.99	8.00		5.80	20.90	9.27	7.19		4.50
K%	1.10	141.42	5.72	24.02	5.20		2.17	11.62	3.03	86.99		3.30
La	43.90	7.41	89.88	22.95	120.00		47.47	11.41	79.37	10.62		37.50
Lu	0.35	4.04	0.34	18.42	0.22		0.42	8.58	0.54	3.88		0.37
Na%	0.80	15.12	1.07	37.13	0.15		0.40	41.31	1.72	5.54		0.41
Nd	27.50	2.57	37.40	14.84	50.00		38.33	8.39	55.33	4.55		29.00
Rb	91.00	13.99	296.00	36.90	290.00		86.67	14.10	116.67	13.09		84.00
Sb	4.70	30.09	5.72	23.30	19.50		22.47	9.08	1.27	4.56		53.20
Sc	19.45	9.09	6.									

Table 2 List of samples analyzed

NAA group	AIA #	Date	Area	Grid	PI	Context	Registration #	Ware	Form	Decoration	Period Attributed
1	508	030707	N-XVI	XXXV-52(11)	24	R 346	03001083	black	jar	burnished	LIA
2.1	509	030707	N-XVI	XXXV-52(11)	24	R346	03001084	brown	jar	polished	LIA
2	510	030707	N-XVI	XXXV-52(11)	24	R346	03001085	buff	jar	micaceous	LIA
2	511	030707	N-XVI	XXXV-52(11)	24	R346	03001086		jar	streaky slip/paint	LIA
2	512	030714	N-XVI	XXXIV-52(9)	29	R 347	03001087		jar	Alisar IV style	
2	513	030714	N-XVI	XXXIV-52(9)	29	R 347	03001088		bowl - carinated	micaceous slip	
1	514	030714	N-XVI	XXXIV-52(9)	29	R 347	03001089	grey	jar	fine	
1	515	030728	N-XVI	XXXV-52(11)	26	R346	03001090		jar	red band decoration	
1	516	030728	N-XVI	XXXV-52(11)	26	R 346	03001091		jar	incised line decoration (3)	
2	517	030728	N-XVI	XXXV-52(11)	26	R 346	03001092		jar	brown on white	
2	518	030728	N-XVI	XXXV-53(12)	25	R346	03001093		jar	brown bands on polished surface	
1	519	030728	N-XVI	XXXV-53(12)	25	R 346	03001094	grey	bowl - carinated	micaceous slip	
3	520	030728	N-XVI	XXXV-53(12)	25	R 346	03001095	black	jar	burnished - ridges	
2	521	030728	N-XVI	XXXV-53(12)	25	R 346	03001096	grey	jar	micaceous slip	
10	522	030728	N-XVI	XXXV-53(12)	25	R346	03001097		jar	plum' ware slip	
1	523	030728	N-XVI	XXXV-53(12)	25	R 346	03001098	buff	jar/jug	fine	
3	524	030707	N-XVI	XXXV-52(11)	24	R 346	03001099	black	jar	polished	
2.1	525	030707	N-XVI	XXXV-52(11)	24	R 346	03001100		jar	red slip - Thin	
2	526	030707	N-XVI	XXXV-52(11)	24	R 346	03001101		jar	red band (fugitive)	
1	527	030714	N-XXXIII	XXXIII-52(91)	1		03001102		jar	polychrome - hatched	
1	528	030715	N-XXXI	XLIV-51(82)	17		03001103		jar	brown on white	
1	529	030619	N-XVI	XXXV-53(12)	20		03001104	buff	jar	fine line hatched	
2.16	530	030709	N-XVI	XXXV-52(11)	24	R 346	03001105		jar	brown on white hatched	
2	531	030919	S-LVIII	LV-48(91)	21	P 7467	03001106		jar		
2	532	030716	N-XV	XXXVI-53(6)	39		03001107		jar	brown line on red	
2	533	030716	N-XV	XXXVI-53(6)	39		03001108	grey	jar	brown line on white (red)	
2	534	030626	N-XVI	XXXIV-53(10)	30		03001109		jar	white w/bands, strip burnished neck	
10	535	030715	N-XXXIII	XXXIII-52(91)	2		03001110	buff	jar	brown on white	
1	536	030701	N-XIII-XXV	XLII/XLII-53(TT/58)	32	P 2620	03001111		jar rim	brown on white	
5.5	537	030702	N-XXXIII	XXXIII-52(91)	1		03001112		platter?	polychrome?	
1	538	030903	N-XVI	XXXV-52(11)	32		03001113		jar	checkerboard, polychrome	
1	540	030707	N-XVI	XXXV-53(12)	22		03001115		jar rim	brown lines on white	
2.1	541	030822	N-XVI	XXXIV-52(9)	47		03001116	red	jar neck	brown on white	
2	542	030722	N-XXXI	XLV-51(84)	20		03001117		jar	brown on red, curvilinear	
2	543	030625	N-XXXI	XLV-50(83)	8	R341	03001118		jar	brown on red, curvilinear	
1	544	030723	N-XV	XXXVII-52(7)	61		03001119		jar	brown on white	
2	545	030903	N-XVI	XXXV-53(12)	32		03001120		jar	brown on white	
5.4	546	030722	N-XXXI	XLV-51(84)	20		03001121		jar shoulder	brown on white	
10	547	030709	N-XXXIII	XXXIII-53(92)	1		03001122		jar	brown on white	
2	548	030812	S-LVIII	LVI-48(93)	23		03001123		jar	brown on white - circles	
1	549	030617	N-V	XXXVI-55(0)			03001124		jar neck	polychrome	
1	550	030627	N-XXV-XXVI	XLIII-XLIV-52(59/61)	13	P 1877	03001125		jar	brown on white	
1	551	030715	N-XXXIII	XXXIII-52(91)	2		03001126		jar	brown on white	
2	552	030625	N-VII	XXXIII-54(S)	2		03001127		jar	brown on white circles	
2	553	030708	N-XV	XXXVII-52(7)	59	P2624	03001128		jar	brown lines on white	
10.9	554	030711	N-XXV-II	XLII-53/54(58/AA)	2	P 2628	03001129		bowl rim	brown lines on rim and interior	
5.5	555	030711	N-XXV-II	XLII-53/54(58/AA)	2	P 2628	03001130		jar	hatched triangles	
1	556	030711	N-XXV-II	XLII-53/54(58/AA)	2	P 2628	03001131		jar	red lines and circles	
2.15	557	030919	N-XV-XVI	XXXVI/XXXV-53(6/12)	16		03001132		jar rim & neck - stor	brown hatched	
2	558	030701	N-XIII-XXV	XLII/XLII-53(TT/58)	32	P 2620	03001133		jar	brown on white, red zone	
1	559	030618	N-XXXI	XLIV-50(81)	4		03001134		jar	brown on white, red zone	
2	560	030723	N-XV	XXXVII-52(7)	63	P 2636	03001135		jar	brown circles on white	
2	561	030625	N-XXXI	XLV-50(83)	8	R 341	03001136		jar	brown on white- thick line	
2	562	030718	N-XXXI	XLV-51(84)	17		03001137		jar	bichrome on white	
2	563	030707	N-VII	XXXII-55(R)	49	W41W42W283	03001138		jar	red bands on buff	
5.6	564	030701	N-X	XXVI-55(34)	2		03001139		jar	brown hatched on white	
	565	030716	N-XV	XXXVI-53(6)	39		03001140				
2.15	567	030722	N-XVI	XXXV-53(12)	23	R 346	03001142		jar	hatched triangles	
1	568	030708	N-XVI	XXXV-52(11)	24		03001143		bowl rim	brown lines on white	
2.1	569	030718	N-XXXI	XLIV-51(82)	18	R 343	03001144		rim	ribbed; brown lines on white	
2	570	030617	N-XXXI	XLIV-50(81)	4		03001145	red	jar	brown curved lines on red	
1	571	030711	N-XV	XXXVII-52(7)	61		03001146	red	jar	brown zigzag on red	
1	572	030721	N-XVI	XXXV-52(11)	25		03001147	buff	bowl rim		
2.1	573	030704	N-XVI	XXXV-53(12)	22		03001148		jar	fine line hatched and checkered	
2	574	030807	N-XVI	XXXIV-52(9)	39	P 2661	03001149		jar neck	fine line brown hatching on white	
2	575	030918	N-XV	XXXVI-52(5)	58		03001150		jar	zones - brown on buff - pendant lines	
1	576	030724	N-XXXI	XLIV-51(82)	19	R 343	03001151		jar rim	brown on white	
5.6	577	030903	N-XV-XVI	XVI/XXXV-52/53(5/11-6)	11		03001152	buff	jar	brown hatched, red line on buff	
2.1	578	030704	N-XXXII	XLII-51(86)	1		03001153		jar	brown on white	
2.1	579	030716	N-XVI	XXXIV-52(9)	32	P 2631	03001154	buff	jar	brown on buff	
1	580	030820	N-XVI	XXXV-52(11)	32		03001155	buff	jar	burnished; brown on buff	
1	581	030917	N-XXXII	XLII-50(85)	7	W4	03001156		jar	polychrome	
2	582	030717	N-XVI	XXXIV-52(9)	28	R 346	03001157		jar shoulder	brown herring bone and hatch-elaborate	
2	583	030729	N-XXXI	XLV-50(83)	13	H 240	03001158	red	jar rim	red burnished, brown decoration	BA?
1	584	030923	N-XXXII	XLIII-51(88)	13		03001159		jar	molded; painted rec, brown, white, figure	
2.16	585	030708	N-XVI	XXXV-52(11)	24		03001160		jar	burned - brown line?	
2	586	030820	N-XVI	XXXV-52(11)	32		03001161		jar	fine brown hatched	

Table 2, continued

NAA group	MIA #	Date	Area	Grid	Pl	Context	Registration #	Ware	Form	Decoration	Period Attributed
1	587	030820	N-XVI	XXXV-52(11)	32		0300162		jar	brown line and zigzag	
2.1	588	030923	N-XXXII	XLIII-51(88)	13		0300163		jar	green glazed	Seljuk
2.1	589	030909	N-XV-XVI	XVI/XXXV-52/53(5/11-6)	11		0300164		jar	brown hatched on burnished buff	
2	590	030923	N-XVI	XXXV-52(11)	40		0300165		jar	crude brown on red burnished	
5	591	030902	N-XV-XVI	XXXVI/XXXV-53(6/12)	9	P 2683	0300166		jar	brown hatched and checkered	
	592	030826	N-XVI	XXXV-53(12)	30		0300167				
1	593	030731	N-VIII	XXXI-55(yy)	46	P 2647	0300168		jar carinated	red triangles on white	
2	594	030813	N-XVI	XXXV-52(11)	30		0300169		jar spout?	red and brown lines on white	
1	595	030716	N-XVI	XXXIV-52(9)	32	P 2631	0300170		rim-	fine white & brown line	
2	596	030729	N-XXXI	XLV-50(83)	14		0300171		jar shoulder & hand	polychrome	
2	597	030805	N-XVI	XXXIV-52(9)	33		0300172		jar	brown on buff	
2	598	030618	N-XXXI	XLIV-50(81)	4		0300173		jar	red and brown on white	
	599	030808	N-XXXII	XLII-50(85)	1		0300174				
5.6	600	030729	N-XXXIII	XXXII-53(90)	1		0300175		jar	red and brown checkerboard on white	
1	601	030722	N-XXXIII	XXXIII-53(92)	3		0300176		jar rim	molded knob; brown on white	
2	602	030722	N-XVI	XXXV-53(12)	23	R 346	0300177		jar	red line and zigzag on white	
	603	030722	N-XVI	XXXV-53(12)	23	R 346	0300178				
	604	030722	N-XVI	XXXV-53(12)	23		0300179				
1	605	030722	N-XXXI	XLV-51(84)	20		0300217		jar	brown lines on red	
2	606	030716	N-XXXI	XLV-51(84)	16		0300218		jar lid?	red curved lines and zigzag on white	
2	607	030822	N-XV	XXXVI-52(5)	57		0300182		jar rim	brown on white	
2.16	608	030806	XXV-II	XLII 53(58) XLII 54 (AA)	23		0300183		jar neck	brown on red	
1	609	030827	N-XVI	XXXV-53(12)	30		0300184		jar neck	hatched geometrics, brown on white	
1	610	030827	N-XVI	XXXIV-52(9)	48		0300185		jar	brown solid and hatched triangles on white	
1	611	030811	N-VIII	XXX-54(UU)	14		0300186		jar	red ridges, burnished	
2	612	030716	N-XV	XXXVI-52(5)	53		0300187		jar	brown circles on white	
	613	030729	N-XVI	XXXV-52(11)	24		0300188				
2	614	030707	N-VII	XXXII-55(R)	49	R 283 W41/W42	0300189		jar	fine brown herringbone and hatch on white	
1	615	030804	N-XVI	XXXIV-52(9)	33		0300190		jar rim	brown on white	
5.6	616	030821	N-XXXII	XLII-50(85)	3	R 356	0300191		jar	brown hatched triangles on white	
1	617	030918	N-XXXII	XLII-51(86)	12		0300192	white	jar neck	brown on white, modeled;	
2	618	030808	N-XVI	XXXIV-52(9)	37		0300193		jar	brown on red	
2	619	030721	N-XXXI	XLV-51(84)	18		0300194		jar	brown circles and curved lines on red	
2	620	030901	N-XIII	XLI-52(SS)		Cleaning	0300195		jar	red and brown on white	
2	621	030812	N-XXXIII	XXXIII-52(91)	4		0300196		jar?	brown on white	
1	622	030909	N-XXXII	XLIII-51(88)	12		0300197		jar	brown thin lines on white	
10	623	030725	N-IX	XXVIII-55(30)	15		0300198		jar	brown on white	
2.1	624	030729	N-XXXI	XLV-50(83)	14		0300199		jar rim	brown band on white	
1	625	030729	N-XXXI	XLV-50(83)	14		0300200		jar	fine brown circles on white	
	626	030729	N-XXXI	XLV-50(83)	14		0300201				
	627	030825	N-XVI	XXXV-53(12)	30		0300202				
2.1	628	030820	N-XXXII	XLII-50(85)	3		0300203		jar handle	glazed: clear and cream	Seljuk
	629	030627	N-XXXI	XLIV-51(82)	14		0300204				
1	630	030911	N-XV	XXXVI-53(6)	42		0300205		jar	brown line on white	
2.1	631	030922	N-XXXII	XLIII-51(88)	13		0300206		jar	glazed: green	Seljuk
1	632	030226	N-XXXI	XLIV-51(82)	13		0300207		handle	brown circles on buff	
2	633	030822	N-XV	XXXVI-53(6)	41		0300208		jar	wide brown lines, some curved brown hatching and lines on buff	
2	634	030822	N-XV	XXXVI-53(6)	41		0300209		jar	polychrome red band brown hatch	
1	635	030823	N-XXXII	XLIII-51(88)	3		0300210		jar rim - lug?	brown hatched triangles, red band, red infilled triangles	
5	636	030823	N-XXXII	XLIII-51(88)	3		0300211		jar	red burnished, white paint	
1	637	030716	N-XV	XXXVI-53(6)	39		0300212		jug spout?		
5	638	030721	N-XXXIII	XXXIII-53(92)	3		0300213		jar	brown lines and zigzag on buff	
2	646	91????	N-XVIII	XXXIX-57(20)	2		KL91-P79 91001954		Rhodian	polychrome - imitation Rhodian	
	647	900710	S-XIII	LXVIII-55(RR)	7		90001396				
1	648	900712	S-XIII	LXIX-54(SS)	7		90001409		jar rim	brown lines - Greek?	
1	649	900729	N-XIX	XXXVII-57(24)	4	P 705	90001397		jar neck	polychrome	
2.1	650	900623	S-XIV	LXVIII-56(q)	5	II?	90001398		bowl/cup rim	purple exterior, brown on white interior - dots	
	651	890908	N-VI	XXXIV-55(18)			89002120				
13	652	890711	S-XIV	LXVIII-57(r)	2a		89002121		jar rim & neck	brown on white zigzags and lines	
1	653	910826	N-XVIII	XXXVIII-57(18)	3		91001955	buff	jar	bichrome on buff - black and brown	
	654	900709	S-XVII	LXXI-55(TT)	4		90001399				
1	655	900709	S-XXXI	LXXI-56(xx)	5		90001400		bowl rim	orange and brown dots	
	656	910819					91001956				
1	657		S-XXII	LXV-52(g)		R. 17 Kopic	KL89-P357 89002122			brown on white - hatched and triangles	
5.5	658	930825	N-XIV	XXXIX-52(3)	14-a		93001089		jar	polychrome checkerboard	
	659	930804	N-XXIII	XLII-56(49)	4		93001090				

Table 2, continued

NAA group	AIA #	Date	Area	Grid	PI	Context	Registration #	Ware	Form	Decoration	Period Attributed
	660	860805	N-VI	XXXV-55(P)	13 k		8600808				
2.1	661	900623	S-XIV	LXIX-57(t)	3 (2)		90001401		bowl	exterior plum, interior polychrome	
1	662	920808	N-XXIII	XLIII-56(51)	6 & 2		92002914	buff	bowl	brown dots on buff	
5.6	663	900809	S-LII	L-52(69)	14	R. 44	94001661	buff	jar/jug	brown on buff - large hatched triangles	
2.1	664	900821	N-VI	XXXV-55(P)	48		90001402		jar		EIA - 2D?
2.1	665	900828	N-VI	XXXIV-55(N)	52		90001403		jar	fiber temper	EIA
5.4	666	900721	N-VI	XXXIV-55(N)	49		90001404		jar with handle	fiber temper	EIA
2.1	667	900903	N-VI	XXXIV-55(N)	52		90001405		jar	panel decoration	EIA
1	668	900721	N-VI	XXXIV-55(N)	49	P 402	90001406		jar	bands; fiber temper	EIA
5.4	669	900719	N-VI	XXXIV-55(N)	49		90001407		jar	brown line; fiber temper	EIA
2	670	880623	N-IV	XXXVIII-55(F)	29		KL88-1011 88000498		jar	brown on white - lines and zigzags - Gordian style	
1	671	970721	N-XXIX	XLVII-50(75)	13	No.5	97001476		jar	brown on white - horses	
4	672	980710	N-XXVI	XLV-52(63)	11		98001434	black	jar - storage	burnished	
2.1	673	960830	S-XXVII	LVII-53(hh)	9	P 599	96001536		jar	brown line on buff	
5.5	674	85		LXX-44	surface		85000002		jar	polychrome - figure?	IIC
5.5	675	960826	N-XXIX	XLVII-50(75)	11	No.29	96001406			fine brown decoration, hatched geometrics, tondo; drill hole	
3	2124	860726	N-III	XLI-54(C)	12		86000780	BLACK	handle	polished	IA
4	2125	860806	N-V	XXXVII-54(K)	6		86000781	BLACK	handle	polished	IA
3	2126	860711	N-VI	XXXIV-55(N)	10		86000782	BLACK	handle	polished	IA
2.5	2127	860718	N-VI	XXXV-54(O)	15		86000783	BLACK	handle	polished	IA
4	2128	860811	N-V	XXXVII-55(L)	14		86000784	BLACK	handle	polished	IA
3	2129	860721	N-VI	XXXV-55(P)	14		86000785	BLACK	handle	polished	IA
3	2130	860724	N-III	XLI-54/55(C/D)	9		86000786	BLACK		polished	IA
7	2131	860813	N-III	XL-54(A)	15		86000787	BLACK	handle		IA
5	2132	860719	N-VI	XXXV-55(P)	4	P 75	86000788	BLACK	handle		IA
5	2133	860813	N-III	XL-54(A)	11		86000789	BLACK	handle		IA
1	2134	860730	N-V	XXXVII-55(L)	15		86000790	BLACK	rim - handle		IA
1	2135	860730	N-III	XL-55(B)	5		86000791	BLACK		(grey?)	IA
2.2	2136	900712	N-VII	XXXIII-54(S)	9a		KL90-M330 90000907	BLACK	bowl rim	burnished, incised	2D
6	2137	90	N-VI	XXXIV-54(M)			KL90-M17 90000908	LACK/BROW	bowl rim	burnished, hatched, incised	2D
5.5	2138	90	N-VI	XXXIV-54(M)			KL90-M14 90000909	BROWN/RED	jar rim	polished, impressed triangles	2D
5.4	2139	890908	N-VI	XXXIV-55(N)	48		KL89-M394 89001571	GREY/RED	bowl rim	exterior impressed herringbone	2D
6	2140	900801	N-VI	XXXIV-54(M)	50b/51a		KL90-M10 90000910	BLACK	bowl rim	burnished and incised	2D
6	2141	900801	N-VI	XXXIV-54(M)	50b/51a		KL90-M10 90000911	BLACK	jar/pot rim	burnished	2D
6	2142	900901	N-VI	XXXIV-54(M)	51a		90000912	BLACK	body	handmade	2D
6	2143	900801	N-VI	XXXIV-54(M)	50b		90000913	BLACK	jar	groty	2D
4	2144	870907	N-IV	XXXVIII-54(E)	28e		87001042	BLACK	bowl rim	incised lines on exterior	2D
2	2145	930817	N-VII	XXXIII-54(S)	15		KL93-M68 93001088	BUFF	jar	burnished	2D
5.4	2146	900713	N-I	XLV-54(GG)	14		KL90-M276 90000914	BUFF/RED	jar	brown lines	2D
2.1	2147	9207??	N-VI	XXXIV-54(M)	54		KL92-M58 92001505	BUFF	jar	brown bands	2D
2.1	2148	920707	N-VI	XXXV-55(P)	50		KL92-M500 92001506	BUFF/RED	jar	brown bands rim and neck	2D
1	2149	9208??	N-VI	XXXIV-54(N)		İd Sur Kaldırma	KL92-M103 92001507	BUFF	bowl/basin rim		2D
5.4	2150	920902	N-VII	XXXII-55(R)	12b		KL92-M10 92001508	BUFF/RED	jar	self slipped	2D
1	2151	920724	N-VI	XXXV-54(O)	57		KL92-M131 92001509	BUFF	jar rim	smoothed	2D
2.1	2152	920707	N-VI	XXXV-55(P)	50		KL92-M309 92001510	BUFF	jar	cream slip brown bands	2D
1	2153	900808	N-VI	XXXV-54(O)	53a		KL90-M93 90000915	BUFF	jar rim		2D
2.1	2154	920805	N-VII	XXXIII-55(T)	12a		KL92-M47 92001511	BUFF	jar	black slip on rim	2D
2.1	2155	890814	N-VI	XXXV-54(O)	49		89001572	BUFF	jar rim	fugitive brown band?	2D
2	2156	860804	N-V	XXXVI-54(I)	7		86000792	BLACK	jug	polished	IA
5.5	2157	870731	N-IV	XXXVIII-54(E)		P119	87001043	BLACK	rim - carinated	polished	IA
5	2158	890804	N-I	XLIV-54(EE)			89001573	BLACK	juglet rim	polished	IA
2.5	2159	880607	N-IV	XXXIX-54(G)	24		88001348	BLACK	saucer? Rim	polished	IA
5	2160	870624	N-III	XL-55(B)	20		87001044	BLACK	bowl rim	polished	IA
3	2161	870825	N-III	XLI-54(C)	30a		87001045	BLACK	juglet trefoil rim	polished	IA
2	2162	970807	N-III	XLI-55(D)	75b		97001980	BLACK	body		IA
2	2163	970808	N-III	XLI-55(D)	74a		97001978	BLACK	body		IA
2	2164	970812	N-III	XL-54(A)	56	P 1731	97001989	BLACK	body		IA
2	2165	970806	N-III	XLI-55(D)	94b		97001975	BLACK	body		IA
1	2166	970818	N-XV-XVI	XXXVI/XXXV-52(5/11)		P1757	97001983	BLACK	jug rim		IA
8	2167	970813	N-XV	XXXVII-53(8)	9		97001982	BLACK	bowl - flat base		IA
9	2168	970819	N-XXV	XLIII-53(60)	4		97001981	BLACK	body	polished	IA
2.5	2169	870821	N-IV	XXXVIII-54(E)	19		87001046	BLACK	bowl - shallow		IA
3	2170	870720	N-IV	XXXIX-54(G)	15		87001047	BLACK	base - flat		IA
4	2171	860703	N-IV	XXXIX-54(G)	1		86000793	BLACK	body	grooved	IA
8	2172	860812	N-V	XXXVI-54(I)	17	R7, R8	86000794	BLACK	body - carinated		IA
1	2173	900711	N-VI-VII	XXXIII/XXXIV-54(S/M)	7	P375	90000916	BUFF	jar w/handles		IIC
2	2174	040903	S-LVI	LII-49(86)	19	P755	04000434	BUFF	jar w/strap handle		IIC
10	2175	040908	N-XV	XXXVI-52(5)	47		04000638	BUFF	jar	brown on cream	IIC
2	2176	960820	N-XXIX/XXX	XLVII/XLVIII-50(75/77)	5		96001501	BUFF	jar	brown legs on cream	IIC
2	2177	960820	S-LIV	LVIII-50(77)	16	P519	KL96-3037 96001531	BUFF	jar	brown on cream	IIC
1	2181	920707	S-XXXII	LVI-50(A)		P287	92001502	BUFF	jar	brown on red?	IIC
2.1	2182	920713	S-XXXIV	LIV-50(I)	7		92001504	BUFF	jar	brown on cream	IIC

Table 2, continued

NAA group	AIA #	Date	Area	Grid	PI	Context	Registration #	Ware	Form	Decoration	Period Attributed
2	2183	040906	N- XVIII	XXXIX-56(19)		cleaning	0400622	BUFF	jar	brown on cream	IIC
1	2184	040726	N- XXVIII-XXX	XLIX-51/52(80/71)		P1708 NO-2	0400599	BUFF	jar	molded, raised ridge	IIC
1	2185	040813	N-XXXI	XLV-51(84)	25		0300384	BUFF	jar	bichrome - two ridges	IIC
2	2186	880904	N-VI	XXXIV-54(M)		P270	KL88-1391 88001349	GREY	bowl - carinated		IIA 6-II
2	2187	880623	N-VI	XXXV-54(O)	38		KL88-1432 88001350	GREY	bowl - carinated	metallic finish	IIA 6-II
2.1	2188		N-III	XL-54(A)		P153	KL87-3781 87001048	GREY	bowl/basin carinate	self slipped	IIA 6-II
2.1	2189	890626	N-VI	XXXIV-55(N)		H20	KL89-M163 89001574	GREY	jar? Rim	metallic finish	IIA 6-II
2.1	2190		N-VI	XXXIV-55(N)	17		KL88-1400 88001351	GREY	wl/basin - lug handle		IIA 6-II
2	2191		N-VI	XXXIV-54(M)	31 b		KL88-1374 88001352	GREY	bowl - shallow	metallic finish	IIA 6-II
2.1	2192		N-V	XXXVI-54(I)	14	P1342	86000795	GREY	wl - shallow carinated		IIA 6-II
9	2193		N-V	XXXVII-54(K)		P132	KL87-3220 87001049	BLACK	bowl - carinated	metallic finish	IIA 6-II
12	2194		N-IV	XXXVII-55(F)		P274	KL88-7230 88001353	BROWN	bowl - carinated	fugitive white?	IIA 6-II
2	2195		N-V	XXXVII-55(L)	26		KL87-3337 87001050	BLACK	bowl - carinated	polished	IIA 6-II
2	2196		N-VI	XXXV-55(P)	22		KL88-1443 88001354	BROWN	bowl - carinated	micaceous	IIA 6-II
5.4	2197	890724	N-VI	XXXV-55(P)	38		KL89-M187 89001575	BROWN	bowl - carinated	interior black	IIA 6-II
5	2198	870707	N-V	XXXVII-55(L)		P109	KL87-3226 87001051	BLACK	bowl - carinated	polished?	IIA 6-II
2	2199		N-VI	XXXV-55(P)	13		86000796	GREY	jar rim		IIA 3-5
2	2200		N-III	XL-55(B)	27	P182	KL87-3758 87001052	BUFF	jar rim		IIA 3-5
5.5	2201		N-VI	XXXIV-54(M)	5	P1381	86000797	BUFF/RED	jar rim		IIA 3-5
1	2202		N-III	XL-54(A)	20		KL87-3787 87001053	GREY	jar rim		IIA 3-5
3	2203		N-III	XLI-54(C)	31 a		KL87-3720 87001054	BLACK/GREY	jar rim	polished	IIA 3-5
2	2204	890905	N-II	XLIII-55(DD)	19		KL89- M429 89001576	BLACK/GREY	jar rim	polished	IIA 3-5
3	2205		N-IV	XXXIX-55(H)	14		KL87-7415 87001055	BLACK/GREY	jar rim	polished	IIA 3-5
1	2206		N-IV	XXXVIII-55(F)		P147	KL87- P60 87001056	BUFF	plate	brown bands interior and exterior	IIA 1-2
1	2207	88????	N-IV/V	XXXVII/XXXVIII-54(K/H)		P128 section	KL88- P464 88001355	BUFF	plate	orange interior brown exterior bands	IIA 1-2
1	2208		N-IV	XXXIX-54(G)	15		KL87- P63 87001057	BUFF	bowl - shallow	interior orange bands exterior brown bands on cream	IIA 3-5
2.1	2209		N-III	XL-55(B)		P146	KL87- P19 87001058	BUFF	plate	orange slip interior brown lines	IIA 3-5
1	2210	920716	N-XII	XLVIII-55(NN)	5		KL92- P44 92001512	BUFF	saucer	polychrome curvilinear brown lines	
1	2211		N-IV	XXXIX-55(H)	16		KL87- P83 87001059	BUFF	bowl	polychrome (brown, orange, white)	IIA?
2.1	2212		N-VI	XXXIV-55(N)	20		KL88- P302 88001356	BUFF	jar rim	brown interior band	IIA?
1	2213		N-IV	XXXIX-55(H)	18		KL87-3435 87001060	GREY	jar rim		IIA 6-II
1	2214		N-V	XXXVII-55(L)	7		KL86-1313 86000798	BUFF	jar rim	mend hole	?
2.1	2215		N-III	XL-55(B)	10		86000799	GREY	jar		?
2	2216		N-V	XXXVII-54(K)	20		KL86-1262 86000800				
	2217		N-VI	XXXV-54(O)	7c		86000801	GREY	pot		?
1	2218		N-IV	XXXIX-55(H)	3	P172 P188	KL87-3858 86001061	ORANGE	bowl	burnished	BA?
2	2219		N-V	XXXVI-54(I)	12		KL86-1324 86000802	IGHT BROW	plate/shallow bowl	burnished	BA?
1	2220		N-V	XXXVII-55(L)	9		KL86-1418 86000803	BUFF	bowl - shallow	orange rim band, mend hole	BA?
5	2221		N-IV	XXXIX-55(H)	11		KL86-1207 86000804	ORANGE	bowl		BA?
12	2222		N-IV	XXXVIII-54(E)	25 a		KL87-3613 87001062	PALE BROWN	bowl/plate - shallow		BA?
2	2223		N-III	XLI-55(D)	24		KL87-3646 87001063	BUFF	bowl -shallow	self slip, bands on exterior	BA?
1.2	3217	880802	N-IV	XXXVIII-54(E)	36 d		KL88-1478 88001444	BLACK	jar rim closed	polished	
1.2	3218		N-V	XXXVII-55(L)	19		KL87-3874 87001199	BLACK	bowl rim	polished	
3	3219	910722	N-XVI	XXXIV-53(10)	2		KL91-M142 90001974	BLACK	jar body	polished with ribbed exterior	
1.1	3220	860722	N-III	XLI-55(D)	10		KL86-1425 86000855	BLACK	jar body	burnished incised	
2.1	3222		N-VI	XXXV-54(O)	12 - 2 ?		KL86-1418 86000854	BLACK	jug	polished & burnished	
3	3223		N-V	XXXVII-55(L)		P177	KL87-3408 87001200	BLACK	rim	polished & burnished	
3	3224		N-VI	XXXV-55(P)		P-1629 P-1066 P-685	KL87-3866 87001201	BLACK	jug rim & strainer	burnished incised	
1.1	3225		N-VI	XXXV-55(P)	6 e		KL86-1345 86000658	BLACK	bowl rim	polished, horizontal lug handle	
5.5	3226		N-V	XXXVII-54(K)	7 h		KL86-1320 86000633	BLACK	rim	polished	
2	3227	900813	N-II	XLII-54(AA)		P437	KL90-M135 90001425	BLACK	bowl rim	polished	
3	3228	900807	N-I			Cleaning	KL90-M440 90001426	BLACK	jar/pot body	polished herringbone incised	
2.5	3229	910717	N-XVIII	XXXVIII-56(17)	1		KL91-M128 91001975	BLACK	jar/pot body	polished faceted	
2	3230	900719	S-XVII	LXXI-55(PP)		P173	KL90-3007 90000675	BLACK	bowl rim (skyphos)	burnished; interior pattern	
1.1	3231		N-V	XXXVII-54(K)	10		KL86-1401 86000714	BLACK	bowl rim	burnished, horizontal loop handle	

Table 2, continued

NAA group	AIA #	Date	Area	Grid	PI	Context	Registration #	Ware	Form	Decoration	Period Attributed
2.1	3232		N-III	XLI-54(C)	9		KL86-1427 8600853	BLACK	jar body	polished scalloped (molded)	
1.1	3233		N-4/II	XLIII/XLIV-55(FF/DD)			KL91-M176 91001977	BLACK	jar body	polished geometric incised parallel lines	
2	3234	860121	N-III	XLI-54(C)	10		KL86-1522 8600852	BLACK	jar body	burnished incised parallel lines, slipped hatched lines	
1.1	3235		N-IV	XXXVIII-54(E)		P174	KL87-3635 87001302	BLACK	bowl rim	burnished	
1.2	3236	910801	N-II	XLIII-55(DD)			KL91-M307 91001976	BLACK	bowl rim	very fine polish	
1.1	3237		N-VI	XXXV-55(P)	13-L		KL86-1339 8600652	BLACK	bowl rim	burnished	
1.1	3238	86????	N-VI	XXXV-54(O)	17		8600858	BLACK	jug rim	vertical strap handle, burnished	
1	3239	900625	N-VI/VII			Section	KL90-M374 9000427	BLACK	rim	(burnished &) polished	
1	3240		N-III	XL-55(B)		P-146	KL87-3880 87001203	BLACK	jar neck closed	(burnished &) polished	
3	3241		N-V	XXXVII-54(K)	37 C		KL87-3205 87001204	BLACK	bowl rim	polished	
2	3242		N-VI	XXXV-55(P)	36		KL88-1459 8800445	BUFF	pot rim	cooking pot, micaceous	
2	3243	900711	N-I	XLV-54(GG)	13		KL90-M272 9000428	GREY	pot rim	incised neck, micaceous	
2.1	3244		N-VI	XXXIV-55(N)	18		KL88-1401 8800447	GREY	pot rim	micaceous, cooking?	
2	3245		N-VI	XXXV-55(P)		P-81	KL86-1405 8600718	GREY	pot rim	micaceous, cooking?	
2.1	3246	920731	N-XII	XLIX-54(OO)		P-687	KL92-M690 92002915	BUFF/GREY	pot rim	micaceous, cooking?	
2	3247		N-IV	XXXIX-54(G)	16		KL87-3523 87001205	GREY	pot rim	micaceous, cooking?	
2	3248		N-III	XL-54(A)	32-b		KL87-3815 87001206	BUFF	pot rim	micaceous, cooking?	
2	3249		N-V	XXXVI-55(J)	12		KL86-1396 8600709	BUFF	pot rim	micaceous, cooking?	
2.1	3250		N-VI	XXXV-55(P)	32		KL88-1453 8800446	GREY	pot rim	micaceous, cooking?	
2.1	3251		N-IV	XXXIX-54(G)		P-186	KL87-3588 87001207	BLACK	pot rim	micaceous, cooking? incised lines	
2.1	3252		N-IV	XXXVIII-54(E)	13		KL87-3599 87001208	BLACK	pot rim	micaceous, cooking?	
2.5	3253		N-III	XLI-54/55-C/D	9a		KL86-1101 8600375	BLACK	pot rim	micaceous, cooking?	
2.1	3254		N-VI	XXXV-55(P)		P-79	KL86-1365 8600678	BLACK/BUFF	pot rim	micaceous, cooking?	
5.5	3255		N-IV	XXXIX-54(G)	9		KL86-1186 8600499	BROWN	pot rim	micaceous, cooking?	
2	3256		N-IV	XXXIX-54(G)		P-123	KL87-3577 87001209	BROWN	pot rim	micaceous, cooking? Exterior ridges	
5.5	3257		N-IV	XXXIX-54(G)	10		KL86-1184 8600497	BROWN	pot rim	micaceous, cooking?	
2	3258	900808	N-II	XLII-54(AA)	11		KL90-M129 9000429	BROWN	pot rim	micaceous, cooking?	
2.1	3259		N-V	XXXVII-55(L)	19		KL87-3292 87001210	BROWN	pot rim	micaceous, cooking?	
2	3260		N-IV	XXXVIII-55(F)	12		KL86-1199 8600512	BROWN	basin rim	scalloped, horizontal lug handle, micaceous	
1	3261		N-VI	XXXV-54(O)		P-76	KL86-1357 8600670	BUFF	pot rim open	scalloped, lug handle, micaceous slip	
2	3262		N-V	XXXVI-55(J)	16 a		KL87-3854 87000961	GREY/PINK	bowl rim	flat base, micaceous slip	
2	3263		N-IV	XXXVIII-55(F)		P-68	KL87-3482 87001211	BUFF	bowl rim	cream slip	
2	3264	900820	N-II	XLII-54(AA)		P-444	KL90-M136 9000430	BROWN	pot rim	mica	
2	3265	900827	N-II	XLIII-54(CC)		P-460	KL90-M166 9000431	BROWN	bowl rim	cream slip exterior	
2	3266		N-V	XXXVI-54(I)	12		KL86-1316 8600629	BROWN/GREY	pot rim	cream slip exterior (sheen)	
2	3267		N-V	XXXVII-54(K)	32 b		KL87-3173 87001212	BUFF	pot rim	mica	
2	3268		N-III	XL-54(A)		P-107	KL87-3846 87001213	BUFF	jar rim	cream slip sheen	
2	3269		N-VI	XXXV-55(P)		P-79	KL86-1364 8600677	BUFF	jar rim	mica slip	
2	3270		N-III	XL-54(A)		P-107	KL87-3045 87001214	BUFF	bowl rim	slip inside and out	
2	3271		N-VI	XXXV-54(O)	37		KL88-1428 8800428	BUFF	bowl rim	slip inside and out	
11	3272		N-III	XLI-55(D)	16		KL86-1111 8600385	GREY	jar rim	slip light	
2	3273		N-VI	XXXIV-55(N)	28		KL88-1410 8800449	BUFF	bowl rim	sheen inside and out	
2	3274		N-V	XXXVII-55(L)	25		KL87-3330 87001215	BUFF	bowl rim	mica interior and exterior	
2	3275		N-V	XXXVII-54(K)	24		KL87-3741 87001216	BUFF	jar rim	mica fabric	
2	3276		N-V	XXXVII-55(L)		P-109	KL87-3369 87001217	BROWN	bowl rim	mica	
2	3277		N-IV	XXXIX-54(G)	20 a		KL87-3534 87001218	GREY	jar rim	strap handle, silvery	
1	3278		N-IV	XXXVIII-55(F)	17		KL87-3470 87001219	GREY	jar rim	silvery	
2.1	3279		N-IV	XXXVIII-54(E)		R28	KL88-1470 8800450	GREY	bowl rim	mica	
1	3280		N-V	XXXVI-55(J)		p-127	KL87-5313 87001220	GREY	bowl rim	sheen?	
2	3281		N-IV	XXXVIII-55(F)		P-111	KL87-3486 87001221	GREY	bowl rim	silver sheen	
2	3282		N-V	XXXVII-55(L)		P-160	KL87-3376 87001222	GREY	jar rim	silver sheen	
11	3283		N-IV	XXXIX-54(G)		P-123	KL87-3573 87001223	GREY	jar rim	silver sheen, with mica	
2.16	3284		N-IV	XXXIX-54(G)	10		KL87-3236 8600549	GREY	bowl rim	silver sheen inside & out	

Table 2, continued

NAA group	AIA #	Date	Area	Grid	PI	Context	Registration #	Ware	Form	Decoration	Period Attributed
2	3285		N-VI	XXXVI-55(J)	19		KL88-1402 88001451	GREY	jar rim	silver sheen outside	
2	3286		N-IV	XXXIX-55(H)		P-188	KL87-3457 87001224	GREY	jar rim	silver sheen outside	
2.1	3287	890721	N-VII	XXXIII-54(S)	6-b		KL89-M412 89000669	GREY	bowl rim	silver sheen inside & out, handle horizontal	
5.5	3288		N-VI	XXXV-55(P)	25		KL88-1447 88001452	GREY	bowl rim	silver sheen inside & out	
2	3289		N-IV	XXXIX-54(G)	15		KL87-3516 87001225	GREY	bowl rim	silver sheen inside & out	
2	3290		N-V	XXXVI-55(J)	18		KL87-3092 87001226	GREY	bowl rim	silver sheen inside & out	
2	3291		N-V	XXXVI-54(I)	21		KL87-3029 87001227	GREY	bowl rim	silver sheen inside & out	
2	3292	860809	N-VI	XXXV-55(P)	13		86000856	GREY	jar rim	silver sheen inside & out	
1	3293	880604	N-IV	XXXVIII-55(F)	21		KL88-1195 88001455	GREY/BUFF	bowl rim	silver sheen inside & out	
1	3294	890719	N-VII	XXXIII-54(S)	5		KL89-M334 89000668	GREY	bowl rim	silver sheen inside & out	
2	3295		N-V	XXXVII-55(L)	18		KL87-3284 87001228	GREY	jar rim	silver sheen inside & out	
2	3296	860812	N-V	XXXVII-55(L)	15		86000857	GREY	pot rim	sheen?	
2.1	3297		N-V	XXXVII-55(L)	22		KL87-3317 87001229	GREY/BROWN	jar rim	silver sheen inside & out	
2	3298		N-V	XXXVII-54(K)	27		KL87-3260 87001230	GREY/BROWN	jar rim	silver sheen outside	
2	3299		N-IV	XXXIX-54(G)	13		KL87-3509 87001231	GREY/BROWN	jar rim	silver sheen outside	
5.5	3300		N-III	XL-54(A)	15		KL86-1116 86000851	GREY	pot rim	silver sheen outside	
2	3301		N-IV	XXXVIII-55(F)	24		KL88-1205 88001453	GREY	bowl rim	sheen inside and out	
2.1	3303		N-V	XXXVII-54/55(L-K)		P-167	KL87-3398 87001232	GREY	bowl rim	sheen inside and out?	
1	3304		N-V	XXXVI-55(J)	20		KL87-3096 87001233	GREY	jar rim	sheen on rim and exterior	
1	3305	900711	N-I	XLV-54(GG)	13		KL90-M270 90001432	GREY	jar rim	sheen on rim and exterior	
11	3306	900719	N-I	XLIV-55(FF)	7		KL90-M213 90001422	GREY	jar rim	sheen on rim and exterior	
2	3307		N-V	XXXVII-55(L)	26		KL87-3338 87001234	GREY	jar rim closed	sheen on rim and exterior	
2	3308		N-V	XXXVI-55(J)		P-104	KL87-3128 87001235	GREY	jar rim	sheen on rim and exterior	
2.1	3309		N-V	XXXVII-54(K)	34-c		KL87-3185 87001236	GREY	bowl rim	sheen inside and out	
2	3310		N-V	XXXVII-54(K)	37-a		KL87-3301 87001237	GREY	bowl rim	sheen inside and out	
2.1	3311		N-V	XXXVII-55(L)	19		KL87-3290 87001238	GREY	bowl rim	sheen inside and out? Burnished	
2	3312		N-VI	XXXIV55(N)	23		KL88-1408 87001239	GREY	bowl rim	sheen inside and out? Burnished	
2	3314		N-I	XLIV-55(FF)	2		KL86-1011 86000286	GREY	bowl rim	mica (sheen inside and out?) sheen on inside and out; scraped	
2	3315		N-XII	XLIX-54(OO)		P-163	KL92-M694 92002916	GREY	bowl rim		
2	3316		N-V	XXXVII-54(K)	28-30		KL87-3856 87001239	GREY	jar rim	sheen on outside, mica	
1	3317	010716	N-XXIII	XLIII-56(51)	77		01000107	BUFF	jug rim, neck handl	red burnished	BA
1	3318	020725	S-L	LIII-54(63)			02000245	BUFF	jug rim, neck	red burnished	BA
1	3319	020913	N-XXIX	XLVI-50(73)	58		02000514	BUFF	jug base, body and neck	cream (fired) burnished	BA

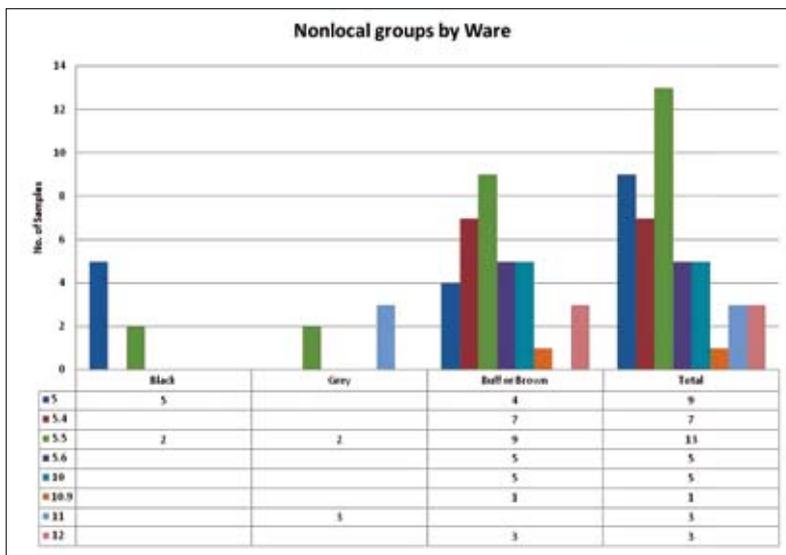


Table 3

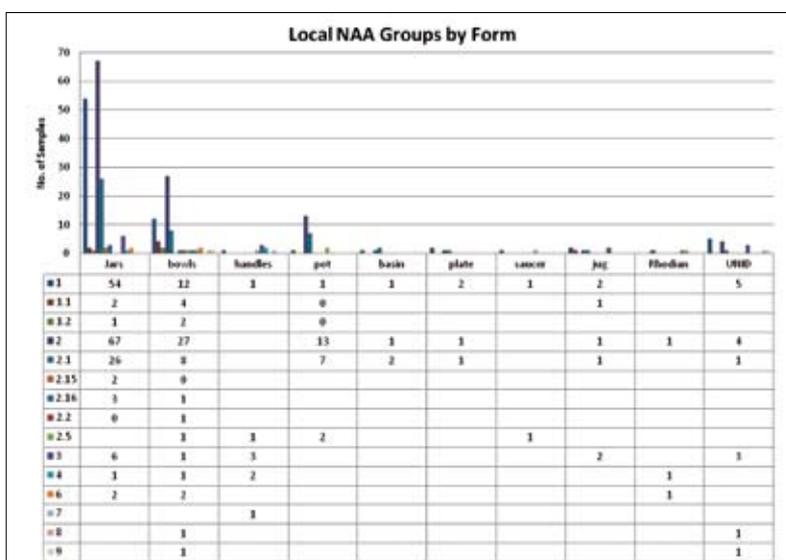


Table 4a

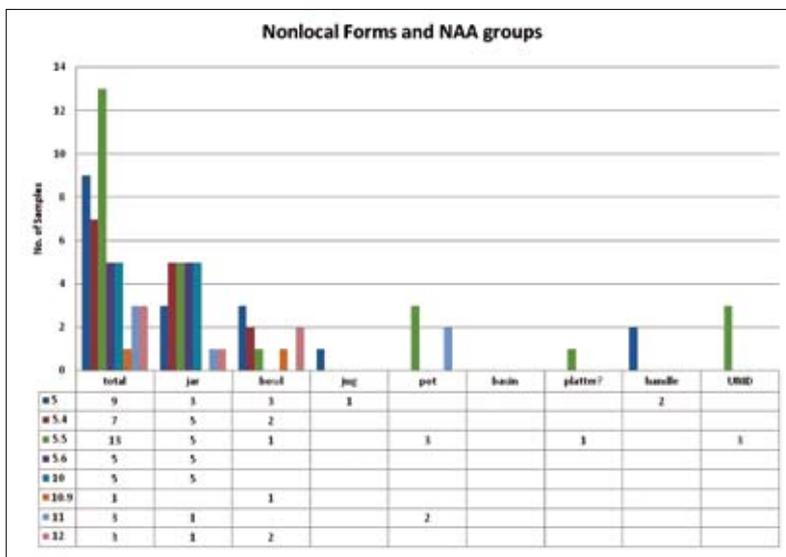


Table 4b

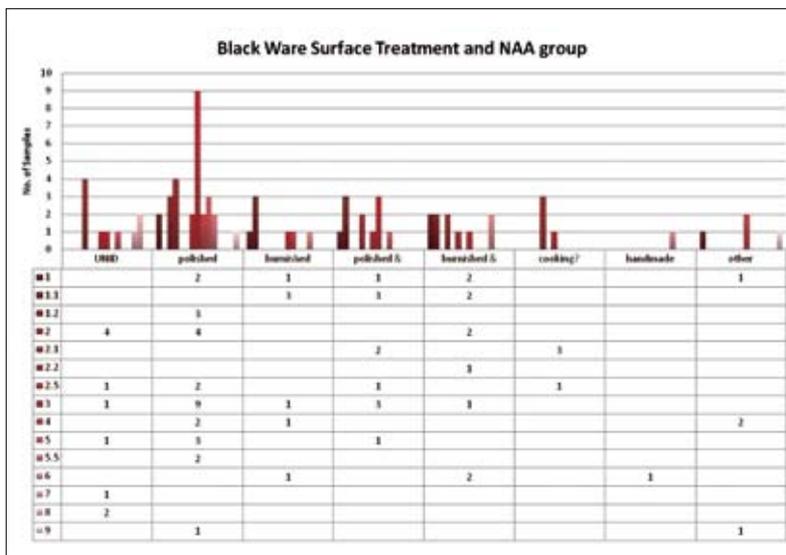


Table 5

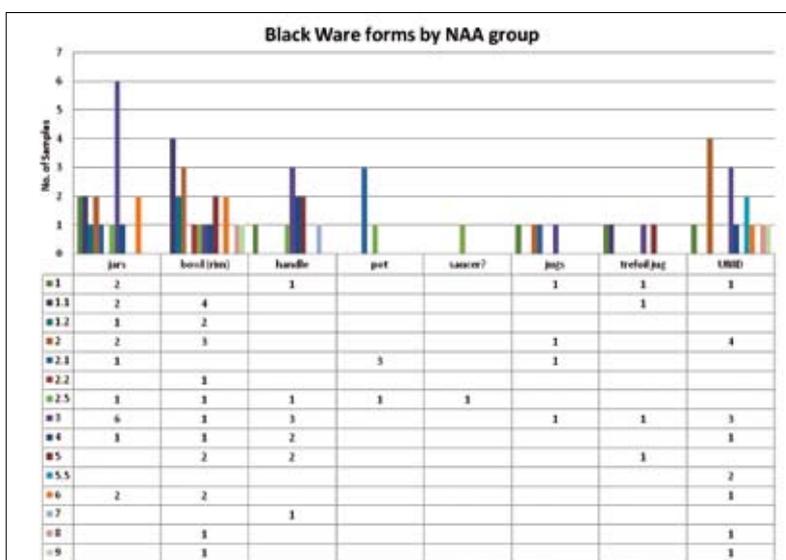


Table 6

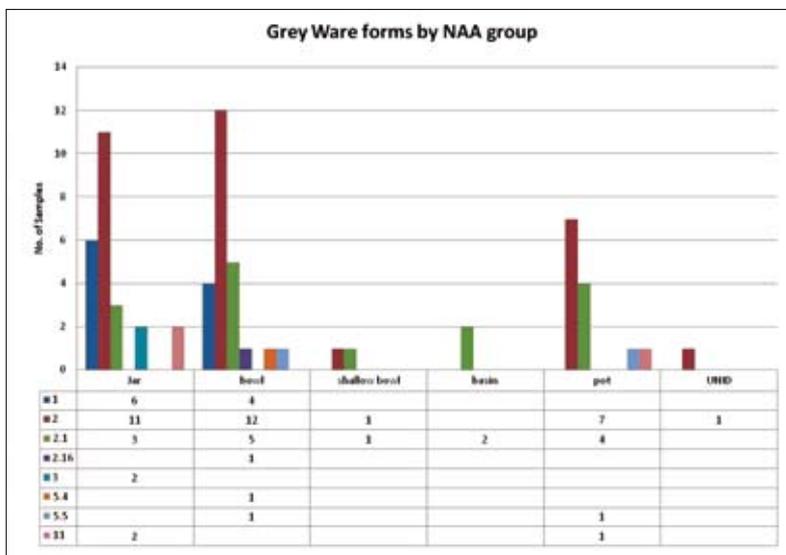


Table 7

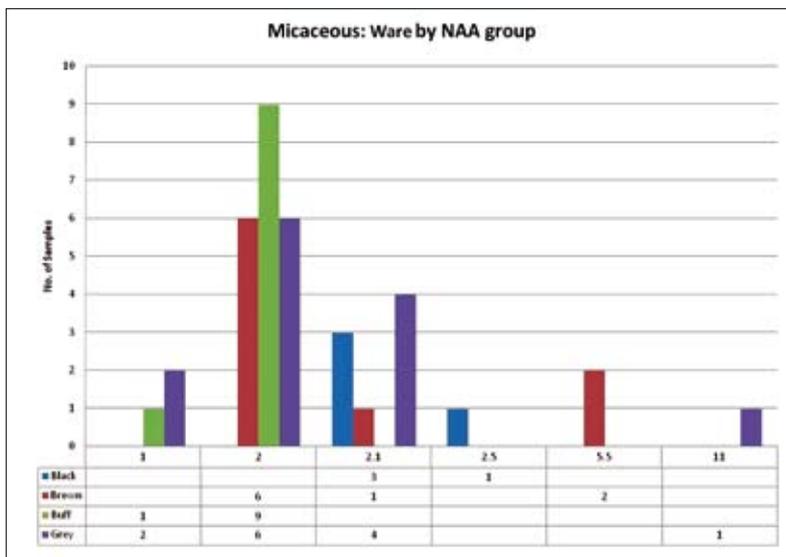


Table 8a

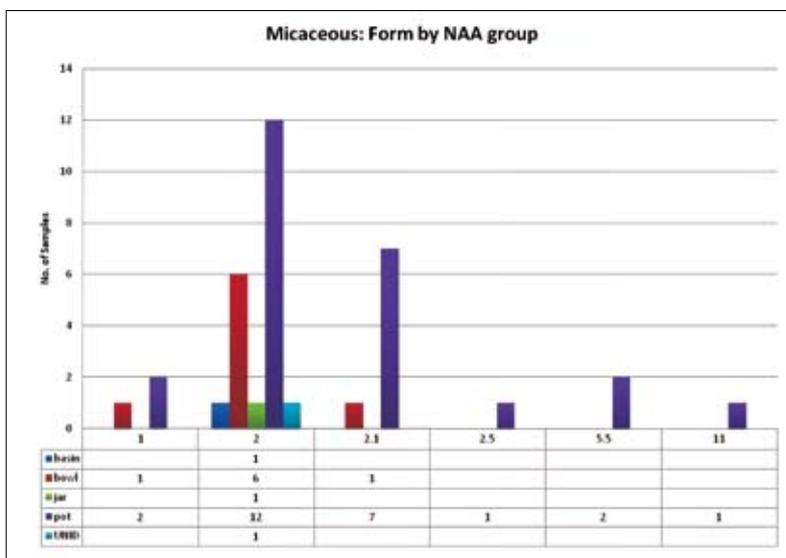


Table 8b

