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OF ANCIENT CIVILIZATIONS*




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KURA ARAXES CULTURE AREAS AND THE LATE 4TH AND EARLY 3RD MILLENNIA BC POTTERY FROM VELI SEVIN'S SURVEYS IN MALATYA AND ELAZIĞ, TURKEY

Mitchell S. Rothman*

ABSTRACT – *The Kura Araxes, a cultural tradition of the late 4th and 3rd millennia BC, has recently become a focus of international archaeological research. It was first discovered in the mountains of the Taurus and the South Caucasus. From near the beginning of the tradition evidence suggests that populations bearing some of its hallmarks, black-burnished, handmade pottery and a ritual of the hearth, spread out over a wide region of the Taurus, Zagros, and Caucasus Mountains, and as far south as the area of the Sea of Galilee in the southern Levant. Recent research has questioned whether the simple narrative of a discreet homeland and unassimilated migrants fairly describes the ancient reality. One of the key dependent variables used to trace the prehistory of the Kura Araxes cultural tradition is pottery. This article discusses the cultural meaning and interpretive use of pottery, but also the limits of pottery style alone to reconstruct prehistory. It adds previously unpublished material from Veli Sevin's surveys in Malatya and Elazığ provinces to the larger database for study of the Kura Araxes.*

KEYWORDS: Kura Araxes/Early Transcaucasian, pottery analysis, ethnicity and culture, Sevin surveys.

RIASSUNTO – La cultura Kura-Araxes, sviluppatasi nel IV e III millennio a.C., è stata recentemente oggetto di numerose ricerche archeologiche e di attenzione internazionale. Questa cultura è stata dapprima scoperta nelle montagne del Tauro e del Caucaso meridionale. Ma da una fase molto antica della sua affermazione le evidenze suggeriscono che popolazioni portatrici di alcuni dei suoi tratti più caratteristici, la ceramica rosso-nera brunita fatta a mano e rituali legati al focolare, si sono diffuse su un'ampia area che va dal Tauro alle montagne del Caucaso, ai monti Zagros e, a sud, fino alla regione del Mar di Galilea nel Levante meridionale. Ricerche recenti hanno messo in questione la narrazione semplicistica di un luogo di origine ben definito e di "migranti" poco assimilati, che sembra non descrivere adeguatamente la realtà antica. Una delle variabili-chiave usate per descrivere la preistoria della tradizione culturale Kura-Araxes è la ceramica. Questo articolo discute il significato culturale e l'uso interpretativo che è stato fatto della ceramica, ma anche i limiti dell'usare gli stili ceramici da soli per ricostruire la preistoria. Inoltre aggiunge materiali inediti dalla ricognizione di Veli Sevin nelle province di Malatya ed Elazığ all'ampio data-base esistente per lo studio dei gruppi Kura-Araxes.

PAROLE-CHIAVE – *Kura-Araxes/transcaucasico antico, analisi ceramica, etnicità e cultura, ricognizione Sevin.*

INTRODUCTION

The period from the late 4th into early 3rd millennia BC in the Near East was a revolutionary time in human (pre-) history. In the lowlands of southern

Mesopotamia state-level societies evolved and solidified in this period. Partially as a result of that fundamental societal restructuring southern Mesopotamian states established the first "international" trading network, the Uruk expansion

(Algaze 1993). It was created to guarantee a flow of raw materials and goods for these societies' economic needs and their desire for exotic goods to signify newly created social statuses and political authority. In the steppes, piedmont, and hills of northern Mesopotamia and the western Zagros a trajectory toward centralization and social restructuring was occurring at the same time. This restructuring may have been influenced or even catalyzed by contact with the south, but at sites like Arslantepe (Frangipane 1997*a*, 1997*b*; Frangipane ed. 2010), Tell Brak (Oates, Oates 1997, 1994; Oates *et alii* in preparation), Hacinebi (Stein 2001, 1998; Stein ed. 1999), and Tepe Gawra (Rothman 2002) local conditions and pre-existing social structures were the critical factors determining their societal evolution.

With the collapse of the Iron Curtain, another culture area has come into the scholarly spotlight, the South Caucasus. Whereas Greater Mesopotamia has been the laboratory for the study of dynamic societal change in resource-poor, open alluvial and steppe land environments, the Kura Araxes (also called Early Transcaucasian, Karaz, Pulus, Shengavitian, and in the southern Levant Khirbet Kerak) is becoming a new laboratory for analyzing the nature of contemporaneous, resource-rich mountain environments adjoining Mesopotamia to the north and east.

For some time researchers have known that the evolutionary trajectory of the mountains was different than either the south or the north of Greater Mesopotamia both in the scale of societies and in the kinds of environmental conditions to which they responded. But exactly how are they different? If the north was influenced

by the south, was the South Caucasus influenced by the Mesopotamian north, or perhaps the north Caucasus (Maikop) cultures (Kohl 2007; Lyonnet 2007), or was the South Caucasus itself a core cultural area spreading its influence over a wide area of the Taurus and Zagros Mountains and beyond? Admittedly, we are near the beginning of sorting out these issues. As late as 2005, Smith (2005: 258, 260) wrote, "we do not have a clear understanding of what the Kura-Araxes actually is.[...] To date, we know frustratingly little about the social world of Kura-Araxes [...] communities."

THE KURA ARAXES

So, what is the Kura Araxes? Is it a time period, a culture, a horizon, a phenomenon? The Kura Araxes has been identified largely based on a corpus of handmade, black burnished pottery (Kushnareva 1993, 1997; Sagona 1984; Munchaev 1975; Burney, Lang 1971; Piotrosky 1949*a*, 1949*b*) and a ritual of the hearth (Sagona 1998; Rothman, Simonyan n.d.). These seem to indicate a cultural homogeneity both in the supposed homeland of Armenia, Azerbaijan, Georgia, and northeastern Turkey (Sagona 1984) and among groups of migrants in a huge diaspora extending across the Taurus Mountain front (Batiuk, Rothman 2007; Rothman 2003*a*, 2006; Sagona 1994), and southwest into the Amuq and the Galilee (Greenberg, Goren 2009; Batiuk 2005), southeast into the Zagros Mountains around Lake Urmia to the Kangavar Valley (Rothman 2011), across the bottom of the Caspian Sea (Fahimi 2006), as well as north into Daghestan and the North Caucasus (Kohl 2007) (fig. 1).

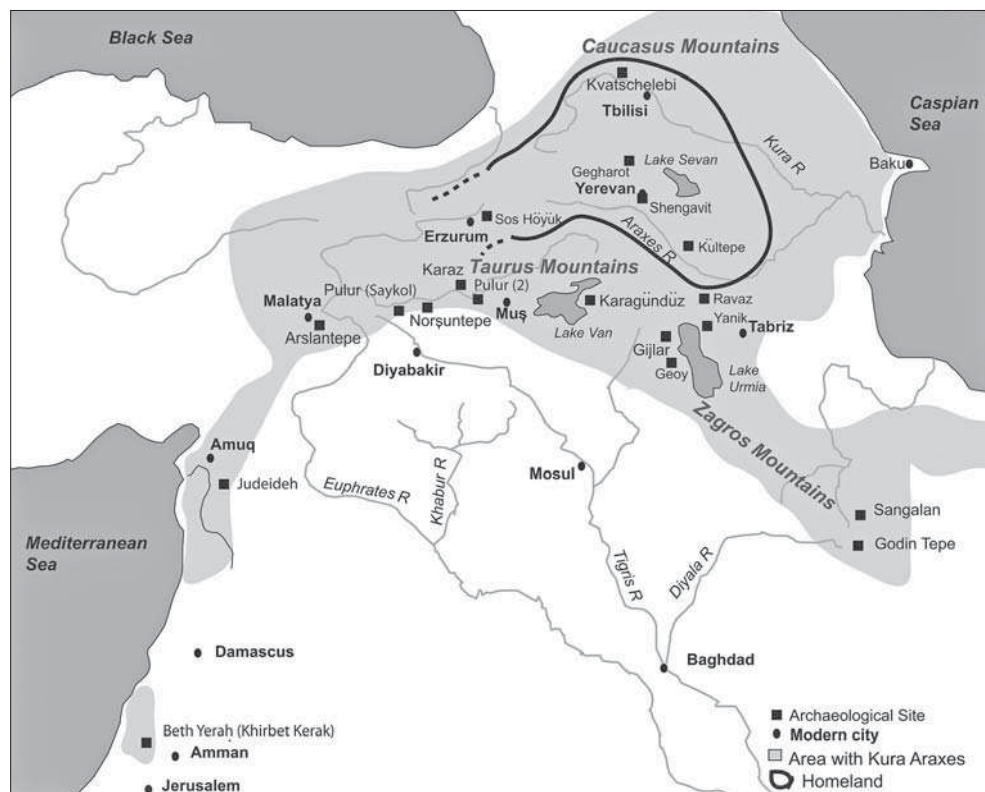


Fig. 1 – Distribution of Kura Araxes (Early Transcaucasian sites).

These cultural elements have lead most researchers to see these societies as distinct and separate from the groups that surrounded them or among whom they lived, and the development of Kura Araxes people not as indigenous to where they lived, but always based on their supposed departure from a distant homeland. This rather static view was possible, because up until now we also have tended to conflate the entire millennium or more that we associate with the Kura Araxes as if it were one single cultural manifestation, rather than an evolving series of distinct societies.

On what do we agree? Various studies (Sagona 1984, and Palumbi 2008 being the most comprehensive) show that the Kura Araxes pottery is largely limited to

mountainous regions, with the possible exception of the material from the Amuq, southern Levant, and arguably the lower elevation part of Malatya near Arslantepe. Rarely does this type of pottery appear far from the shadow of mountains. As I have argued elsewhere (Rothman n.d.), the adaptation of human populations to these various natural conditions and their broader cultural structures and behaviors in the end will be the best way to define particular societies within the Kura Araxes tradition, and further, to define societies and their geo-political expressions (polities). The Kura Araxes populations within this broad mountainous environment are quite variable in their material remains, including pottery

style, architecture, rituals, mortuary practices, and technologies (Palumbi 2008).

Further, far from being an isolated culture area, the South Caucasus and its adjoining mountain environments were fairly open, and populations there showed a great degree of mobility for millennia. A quick look at the time before the appearance of the Kura Araxes pottery is instructive. Following the Neolithic period, the Chalcolithic of the South Caucasus suggests that there was a close connection to chaff-faced pottery of northern Mesopotamia, and even the earliest black burnished wares in the Upper Euphrates may have been related more closely to the central Anatolian highlands than to the South Caucasus (Sagona n.d.; Frangipane, Palumbi 2007; Akgül 2012). The earlier 5th and 4th millennia at Areni (Areshian *et alii* 2012) and Godezor (personal observation) in Armenia are related at least by pottery style and manufacture to the Zagros and to north Mesopotamian 'Ubaid styles and Late Chalcolithic material. Marro (2007: 92) argues that the chaff-faced wares and other signs of connection with northern Mesopotamia were most evident in the valleys of the Euphrates and Kura rivers, the Karabakh steppe, and Sürmeli plains. She notes that "they are located next to high mountain ranges, but climatewise they are closer to the Lowlands beyond the Oriental Taurus than to the greater Highlands". Smith and Badalyan (Smith *et alii* 2009) divide the Kura Araxes tradition in Armenia into three style zones. The latter two, Shresh-Mokhra Blur and Karnut-Shengavit, they claim were actually contemporaneous, but reflected different groups, one on the lower broad plain of the Ararat Valley and the other in the hills and plateau above the plain stretching from modern Yerevan to-

ward Sevan Lake (there actually is no current comprehensive survey of the Lake Sevan area). The third chronologically distinct area is to the far north of Armenia, including areas where chaff-faced wares are found (Simonyan, personal communication). What is clear is that the culture areas we tend to define – in some ways I think they are overly influenced by modern political borders – do not follow simple, discrete patterns. Since they do not seem to be centrally organized, they have many possible variations.

This may lead to one of the interesting contrasts of the Kura Araxes with north Mesopotamia; in the latter sub-region commonalities in pottery do seem to correlate with culture areas. For example, in the LC2 (early 4th millennium BC) in northern Mesopotamia one culture area defined by pottery and architectural style encompasses the eastern Assyrian steppes and the piedmont extending up into the foothills of the Taurus Mountains. Included in this same area are sites like Tepe Gawra, Tell Brak, Norşuntepe, Tepecik, and the somewhat earlier Değirmen-tepe (Rothman 2002). Marro concludes that these northern Mesopotamian highland populations may have been replaced by Kura Araxes ones after the period of the Uruk expansion. I am not sure her conclusion in that regard is correct, but frankly we do not yet have enough data to say for certain. My equally hypothetical view is that we are not so much talking about discreet populations, each with its own material artifact styles, but various kinds of admixtures, as Frangipane (Frangipane, Palumbi 2007) notes for Arslantepe VIB1. Rothman and Kozbe (1997) also observed admixtures of local Chalcolithic and Kura Araxes techniques in Muş Valley west of Lake Van for the

early 3rd millennium BC. Although excavators at Godin IV found only Kura Araxes pottery, I do not believe that the Godin VI population throughout the Kangavar Valley simply disappeared (Rothman 2011). Probably each case, that is each different geographical area, has a distinctly different story in relation to the Kura Araxes.

In other words, I think we who are studying the Kura Araxes need to be clear to discuss each culture area separately, and not assume that every occurrence of hand-made, black burnished ware represents a single migration event from the South Caucasus. The very early date of such wares at Arslantepe and their differences from contemporaneous South Caucasian types reinforces this idea (see below). We also need to leave open the likelihood that there is much more mobility in the areas where Kura Araxes material existed than in Mesopotamia (see below).

Nor, if we can locate concentrations of Kura Araxes pottery at one time, do these areas necessarily remain the same. In Northern Mesopotamia, for example, by the early third millennium, the area around Gawra was incorporated into the Ninevite V style area, and Norşuntepe became a site first with Plain Simple and early Reserved Slip wares and then with a large percentage of Kura Araxes pottery style and then a painted ware tradition with some Kura Araxes designs (see below); this is based on the admittedly small published sample plus what Palumbi (2008) was able to see. For example, changes in the architecture at Norşuntepe (Palumbi 2008) most likely correlate with a sequence of cultural changes. Again, the re-orientation of the societies of Mesopotamia after the end of the Uruk culture into smaller cultural areas typified

by Plain Simple Ware, Ninevite V ware, Scarlet ware, etc. show how the geographical boundaries of culture areas can shift through time. Sometimes such style evidence followed migration or trade routes rather than encompassing broad geographical areas (Rothman, Fuensanta 2003).

What then is the homeland (Palumbi 2008; Sagona n.d.), what is the migrant diaspora, and what is the connection between the two (Rothman 2003*a*, 2006)? Why migrate in the first place? An older suggestion about the push for out-migration (Burney and Lang 1971) was overpopulation. Areshian (2007) notes such an increase in population in the area of the Ararat Plain. A more recent suggestion was that these migrants were opportunistic. They were bearers of technologies of wine making (Batiuk 2013), metallurgy (Kohl 2007), and pastoral products (Frangipane, Palumbi 2007) (mostly the better quality wool for weaving: Anthony 2007). These products would be in demand for trade to the south by societies into which they had migrated (Rothman 2003*a*, 2011). While possibly true, neither theory fully explains what the many waves of migration, and perhaps movements back to the “homeland” as well mean. This I called ripples in the stream (Rothman 2003*a*). Nor are we sure that all the black burnished pottery represents actual people (see below). These migrants are represented by a multiplicity of small sites, often at the edges of developing local cultures in polities like the one centered at Arslantepe in Malatya (Frangipane 1997*a*, 1997*b*; Frangipane ed. 2010, Di Nocera 2005). Still, that there was a migratory process is to me most clearly evidenced by the pattern of the appearance of the Kura Araxes styled pottery first as

a small percentage of the total corpus at central sites and then as newly founded sites with exclusively Kura Araxes pottery across the Taurus front (Batiuk, Rothman 2007; Rothman 2003*a*) and down into the southern Levant. It is also evidenced by the stages in the movement of migrants down the Murat River valley, first into the highlands and then blending with local populations in the Muş Valley bottom (Rothman 2003*a*, 2006; Rothman, Kozbe 1997). Although I and others first saw them as nomadic pastoralists, I now believe they are better described as small clans, perhaps of transhumants, but certainly as both settled and mobile populations who stay for enough time to leave mounded remains. They are analogous in my opinion to the modern Romani (Rothman n.d.).

What is increasingly clear to me is that that the Kura Araxes is a cultural tradition, a cultural umbrella that certain, often mobile populations maintained over a long period of time as part of their identity, even as they adopted new cultures (Rothman n.d.). The makers of this pottery were no doubt aware of the more advanced potting techniques of those around them with fast wheels and kilns, but chose to maintain an older technology that remains largely unchanged at least in terms of techno-forming, clay choice, and tempering (Iserlis *et alii* 2009). They retained this traditional kind of pottery technology, and to some degree a mobile nature. For Beth Yerah in the south Levant, the type site of Khirbet Kerak, Paz (2012) describes the houses of Kura Araxes pottery-using people as looking very temporary, as if they were not fully settled and ready to move. In a modern analogy, the Kura Araxes population resembles the behaviors of ethnicities in cultures often far from their na-

tive origin. The activities of their everyday life resemble those of the people among whom they live. But whether because of tradition, competition with the natives of the place to which they migrate, or some sort of occupational specialization that defines them as a distinct group, they retain some key elements of that cultural tradition. From Turks in modern Germany, to Italian- or Irish-Americans, to the Romani throughout Europe and the Middle East (Rothman n.d.) this is an ethnic pattern repeated over and over by migrants into new and often heterarchical, complex societies. Frangipane (Frangipane, Palumbi 2007) suggests that this was the case at Arslantepe at the height of its temple-palace institutions in the later 4th millennium BC. Certainly, there is a kind of cultural dissonance at early 3rd millennium BC at Norşuntepe. The pottery that dominated the site fits into the Kura Araxes tradition, but the “palace” (Hauptmann 1976) with its multiple square rooms, second floor and large storage spaces matches nothing in the South Caucasus or Erzurum. Assuming we can use a single architectural form as evidence, it suggests a political organization more like those of Greater Mesopotamia than that of the mountains.

Our problem then is to make some sense of the different streams within the Kura Araxes cultural tradition, and what they tell us about the development of societies in which Kura Araxes pottery making people lived, and what their patterns of movement were. First, are we talking about the same time, (see Table 1)? For example, Palumbi (2008, Tab. 3.2) discusses a period from 3500 to 2900 BC. In Badalyan and Smith’s nomenclature (Smith *et alii* 2009), this is EBI (Kura Araxes 1), the first half of the time when

Date BC cal	Sagona	Badalyan /Smith	Conti Persiani	Malatya	Elazığ	Erzurum	Muş	Ararat/Aragats	Western Iran
3500				Arsilantepe VII	Tepecik Norguntepe Taşkun Mevkii Korucutepe III	Sos Höyük		Shengavit Gegharot Mokhra Blur	Godin Yanik
3400								EBI	
3300	Kura Araks I	EB Kura Araxes I I		VIA		Va			
3200					Level 3		Highland		IX-XI
3100			Period 1						
3000				VI B1					EBI
2900	Kura Araks II				XXVI	Vb			
2800					XXV XXIV Hiatus		Valley bottom ?	Early	EBII
2700		EBII Kura Araxes II	Period 2		XIX	Vc		Middle	VIII-III
2600	Kura Araks III				XIII				IV:1
2500				VI D1		LV-LXXVII			III
2400			Period 3					Late	EBII

Table 1 – After Palombi (2008), Sagona (2000, 1984), Conti and Persiani (1993), Rothman (2011), Rothman and Simonyan n.d., Smith *et al.* (2009), Voigt (1980).

Kura Araxes material is evident. Tepecik, Korucutepe, Tel Afis Late Chalcolithic, the first phase of Gegharot, Mokhra Blur (Smith *et alii* 2009; personal observation) fit into this time period. Yet, all of Shengavit, Godin IV, Beth Yerah (Khirbet Kerak), most of Yanik Tepe (I would argue), were not even occupied until after the time Palumbi analyzes, (so 2900-2500 BC or EB II/ Kura Araxes II¹ in Badalyan and Smith's scheme). The change-over in the western zone to Karababa painted wares never happened in the South Caucasus. The local Kura Araxes styles elaborated from earlier black burnished forms. Sagona's (2000) idea that the cultural tradition continued until certainly the end of third millennium BC in the "homeland" makes sense in terms of general pottery manufacture and style, but not adaptation to

environment and organization; the Middle Bronze populations were not settled farmer/herders, but more mobile and militaristic groups (Smith 2005).

Broadly, as I discussed above, one cannot assume that people who made and used Kura Araxes pottery were economically the same. For example, Frangipane (Frangipane, Palumbi 2007) speaks of the increase in sheep goat at Arslantepe in VIA as being an effect of the presence people using the Kura Araxes tradition. The assumption is that the Kura Araxes folk are all sheep/goat pastoralists. However, the good data we have from the South Caucasus shows that cattle bones constituted a large proportion of animal remains (for Şengavit, admittedly later, Pamela Crabtree, interim report). Bahşaliev (1997) sees an increase in

¹ I would argue that we should abandon both Chalcolithic and Bronze Age nomenclatures. They are used so differently from region to region that they make no sense.

sheep and goat at the end of the Kura Araxes. Therefore, why should the pastoralists necessarily be from Kura Araxes populations?

How then do we measure migrant or culture area patterns? Certainly, all the discussion has centered on pottery style and manufacture. So, that is a place to start. But what does style and manufacture actually mean?

THE MEANING OF POTTERY STYLE

The meaning of pottery style in particular is a source of great ambivalence to archaeologists. While most (e.g. Palumbi 2008), including myself, quote Carol Kramer's dictum, "pots are not people," we then go about in effect saying that pottery style and manufacturing techniques *are* closely related to cultural groups. Our very definition of the Kura Araxes has been largely based on pottery style. Yet when we compare, for example the cultural aspect of ritual emplacements at Shengavit in the South Caucasus and Pular (Sakyol) in the Altinova, the ritual emplacements are amazingly similar but the pottery they use is Kura Araxes, that pottery is very different in shape and design at the two sites (Simonyan, Rothman n.d.).

Part of the problem is that we do not remember where Kramer's dictum came from or what the cultural source of pottery style is. Kramer (1977) was writing near the beginning of arguments about the New Archaeology. At the time, the dominant archaeological paradigm was one of diffusion. Therefore, the local culture was typified by its cultural traits; that is, its artifact types, and the appearance of those types elsewhere necessarily indicated migration or cultural 'intrusion'. Neither

trade nor emulation of style was considered. In this light, pots equaling people eliminated the idea that local development was possible if "foreign" artifacts from "more advanced" societies were present. Complex cultural patterns like the emulation of southern Mesopotamian pottery styles in the Late Chalcolithic pottery of northern Mesopotamia (Helwing 1999) were largely inexplicable. This dichotomy was therefore at the heart of the debates over the Uruk south as the dominant core of its hypothesized, extensive world system (see articles in Rothman ed. 2001). Further study shows that migrations did happen (Anthony 1990; Rothman 2003a), and that it and inter-cultural contact produced complex patterns of style distribution, affecting all parties in the interchange. This is certainly what we are dealing with in regard to the Kura Araxes cultural tradition. We are also likely dealing with domestic pottery production; that is, each household made its own pottery. Standardization of pottery manufacture is present when there was mass production or even specialist production at a smaller scale (Blackman *et alii* 1993; London 1991). As I will argue below, there is little standardization in Kura Araxes pottery at any period or any place.

One way to look at pottery style is as a kind of language or linguistic dialect, which like style is a clear representation of symbols of identity (Rothman 2001, n.d.). Studies show that linguistic commonalities arise because of the frequency with which people interact and based on who teaches them their language. Over time, these commonalities increase in contrast to other speakers, creating dialects based on geography or other groupings like clans in kinship societies, or in modern societies class or race. Again, the Early

Bronze Age pottery in northern Mesopotamia reflected the relationship between a balkanized political structure and pottery style (Rothman, Fuensanta 2003), yet there were within each area flows of other sorts of pottery styles that overlapped (LeBeau 2000).

Through studies of modern potters in non-industrial economies, we can see this principle at work. The functions of pots often fall into the same categories: jugs or jars for liquids, drinking cups or mugs, eating bowls (for the Kura Araxes, small eating pots: Rothman 2011), preparation bowls, cooking pots, utilitarian vessels, for mixing, and storage vessels. These functions can be determined by a ratio of volume to shape (Henrickson, McDonald 1983) and by other elements such as thickness of the walls, and sometimes tempering. For example, one of the major changes in the 3rd millennium BC Early Bronze Plain, Simple Ware tradition was the addition of stone grit rather than chaff to the clay fabric for cooking pots (Algaze 1990). At Shengavit if one sees heavy quartz or perhaps calcite intrusions in the temper, one knows it is cooking pot ware before, even looking at the shape, firing temperature, crackling, or other signs of burning on the surfaces. So, within each functional category "the social dimension, as represented by the source of learning, has been evaluated as a main cause of pottery variation, both with respect to style and techno-form" (Ali 2005; see also Arnold 1993, 1989). Communication (teaching) among potters is a critical factor. Each group of potters tends to have a clear model of how to make pottery and what stylistic elements of form and design to add to it. Kramer (1997) reports the trouble of a left-handed potter in Rajasthan. Unable to exactly mirror the forms

made by the right-handed potters, his product was considered inferior, and the other, almost universally right-handed potters, tried to convince him to become right-handed. This illustrates the conservatism of most village potters. "Few Rajasthan potters are interested in experimentation for its own sake, and most queried on the subject seemed disinclined to either work with new clays or attempt to process familiar clays in new ways (for example, by levigating, seasoning, adding temper, or pre-heating leather-hard pots in cold or damp weather)" (Kramer 1997: 52-53).

The nature of pottery as an economic good, rather than as a product for home use affects the degree of standardization as well. London (1991: 200) reports that in Paradijon, the Philippines, pottery is made and sold in markets. In effect professional (specialized) potters produce a very standardized product acceptable in a market of subsistence farmers. Because markets happen only once a week, however, they will use amateurs to complete some vessels introducing variations.

The kind of local production in which various elements of style are added by local teachers is evident in the Kura Araxes tradition. As Sagona had noticed in his 1984 publication, and as others looking at the Kura Araxes case continue to affirm, "interpretation [is] further exacerbated by the distinct regional variants of this 'cultural-historical community.' This pronounced regional diversity [...] may, of course, also be explained in part chronologically and suggest that this "culture" (or perhaps better, 'phenomenon' or 'bloc of cultures') was quite heterogeneous, never representing a single unity or polity" (Kohl 2007: 89). Further, those styles changed over time locally and regionally.

We do not have an up-to-date catalogue of such period by period and place by place pottery style *within* the period when Kura Araxes pottery was being made and used. Whether one could actually do such a catalog from current sources is questionable, but in the end it will be necessary to solve a whole series of analytical questions.

Again, as far as we can tell, Kura Araxes traditional pottery was made by households and was not very technically standardized. Certainly, it is hand-made and not slow or fast wheel turned. Also, it appears to be pit-fired and not kiln-fired. Mass production or specialized production for exchange of pottery seems very unlikely.

Pottery style represents identity in that the teachers pass on their particular, local style and techniques, but unfortunately, it is not that simple. Why should people who had belonged to groups producing chaff-faced wares, Plain Simple Wares, or other traditions switch to the seemingly less sophisticated, certainly more domestically produced pottery style? As Winter (1980) asks in regard to the Assyrian style horse breastplate at Hasanlu, why should local populations be receptive to foreign styles? Palumbi (2008) may be right in citing the political uncertainty in the early 3rd millennium BC. He certainly is right that trade and emulation are part of the answer. But, how do we distinguish one from another? Stein (2010: 37) points to the complexity of regional patterns of adoption of Ubaid styles; “the differences between the constituent local parts of an interaction sphere are as important as the small number of overarching similarities that link them. In fact, local variation is the factor that actually generates the interaction sphere in the first place.” Adoption of

styles assumes that, like the Hasanlu breastplate, there is a cultural meaning attached to it. In that case, the local warlords at Hasanlu wanted to reflect a kind of military fierceness represented by the perception of the dominant military power of the time, the Assyrians. The potters at Hassek Höyük (Helwing 1999) certainly wanted to reflect for the newly developing local leaders the status of southern Mesopotamians by reproducing copies of Uruk forms using local clays and techniques. In colonial systems, like the British Raj in India, the adoption of many British institutions and styles lasted long after the British were gone. However, the adoption of Kura Araxes styles up to 80% at Norşuntepe (Palumbi 2008) cannot simply be trade, nor, contrary to his assertion can one ignore the real possibility that pots in this case do equal actual people whose identity was marked by the Kura Araxes pottery styles. This is especially true when they come from architectural plans like the round buildings with square adjoining rooms at Norşuntepe XXIV (Hauptmann 1982, Plate 34) or in mudbrick and wattle and daub buildings with ritual hearths at Norşuntepe XVIII (Hauptmann 1982, Plate 29). These are very typical of what one would find in Armenian sites like Shengavit and in the uplands of Shida Kartli. But, even if it were adoption of a “foreign style,” what role did Kura Araxes groups play? Was the need to integrate various populations symbolically represented in pottery style? Status and influence certainly played a role. Will modern Europeans ever adopt Romani styles as their primary ones when the Romani are clearly of lower status? Did the Romans adopt the styles of their colonies in Britannia?

In his 1984 book, Sagona attempted to

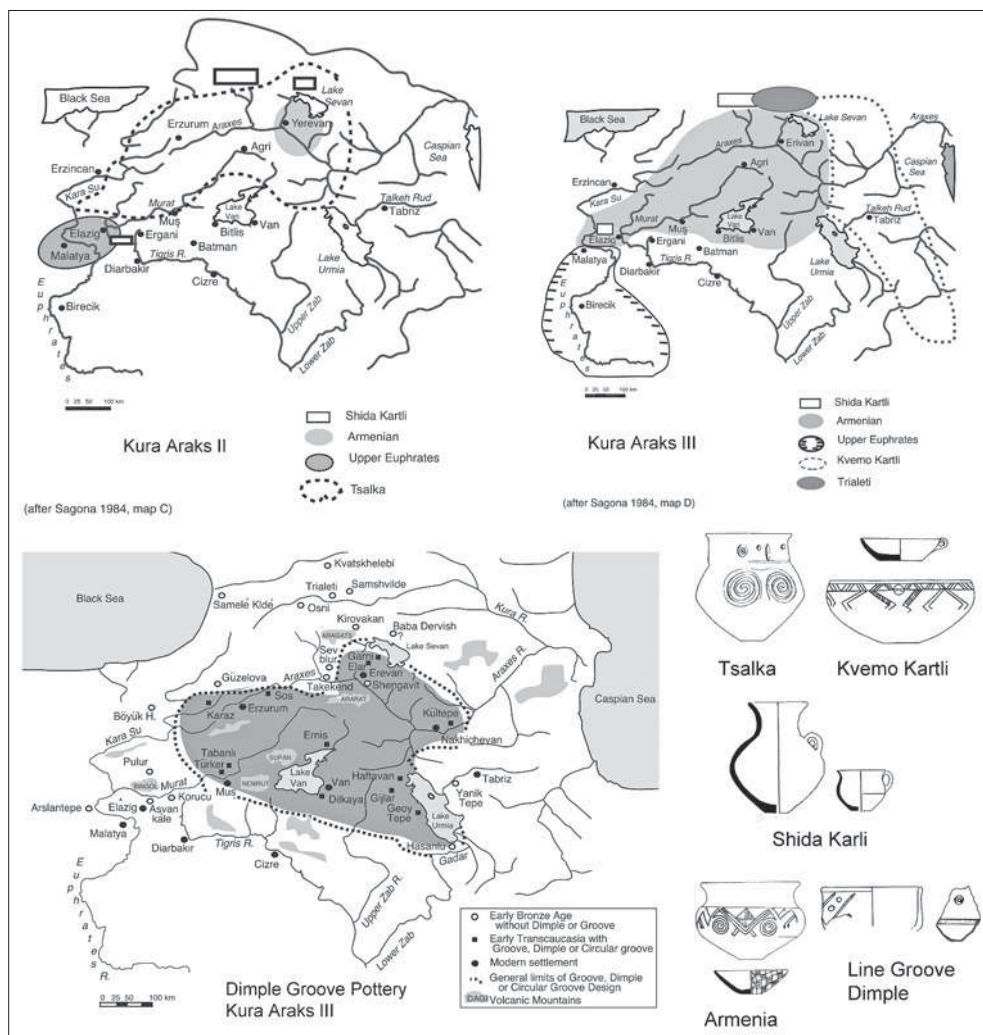


Fig. 2 – Distribution of Pottery Style Groups.

match the differing style groups within the Kura Araxes cultural tradition with geographical zones (fig. 2). In his Kura Araks II period, the Tsalka material, most identifiable because of raised as opposed to incised designs, had the greatest geographical distribution including much of northern Taurus massif to the Murat River (recent excavations at Karagündüz east of Lake Van expand the area: personal ob-

servation). The Armenian style covers much of the same area in the Kura Araks III period, according to his mapping. Malatya and Elâziğ tend to fall outside both the Tsalka and Armenian areas in what Sagona calls the Upper Euphrates style group. The complexity of trying to associate a single style sub-group with an area is apparent in my later analysis of one very particular design element, the so-called

Dimple and Line or Line and Groove. I encountered this motive, often on a gray as opposed to a black surface, in Muş (Rothman, Kozbe 1997). When I mapped the distribution of dimple and line motif, it crossed the Tsalka and Armenian subgroup distributions identified by Sagona, but it was not identical to either (Rothman 2003*b*; a note on my article: the line and dimple actually does extend somewhat further north, as I erroneously did not include Samshvilde (see Palumbi 2008, figs 5.7, 5.8) and west at Aşvan Kale (Sagona 1994: fig 113, 3-6). I attributed the design to groups living in the same area as the Iron Age Urartians later would. This I explained as indicating an adaptation to less optimal mountain environmental niche than one would find in Maltaya and parts of Elâziğ (the Altınova) to its west and in Solduz and other valleys south and west of Lake Urmia to its east.

In general the complex distribution patterns of Kura Araxes pottery styles indicate that pottery style is a dependent variable. Although there are distinct variables that are clearly symbolic, the associations of particular variables with particular areas or times are not so easy to make. One of the classic distinctions in design within the Kura Araxes tradition is between raised and incised designs, yet at Gegharot in the Armenian uplands both raised and incised designs were evidenced in its final stages (Hayrapetyan 2008). Broadly raised designs, which look like applique, are actually made by putting on a very thick slip then removing all but the design with perhaps a wooden stick or rounded bone; incised ones are cut into the surface. All the variables described below are a kind of mix and match system, which makes mapping a given design set on a particular geographical area very difficult.

Because we cannot map discreet areas with exclusively one or another subgroup of Kura Araxes traditional styles may be an indicator of various kinds of mobility (Rothman 2003*a*). Perhaps, we need to speak of directional vectors rather than areas. So, pottery style can serve best as validation of cultural patterns based on cultural patterns in particular places. Those cultural patterns consist of organizational structures generated in response to local environmental and human conditions: production and trading systems, the forms of control and group cooperation, identity (ethnicity in a real sense), ideologies, geographical and polity scale, and yes, population movements. Pottery style should also correlate with other cultural symbols, such as house layout, mortuary practice, etc., as Palumbi (2008) suggests.

Characteristics of Pottery Style and Function

What then should we be looking for to identify the variation that we can correlate to particular population groups or trading partners within interaction spheres? This would include different environmental zones and geographically defined societies/polities as well as immigrant groups coming from these different culture areas. But, as Stein (quoted above) suggests, a focus on local systems is the place to start.

One characteristic that is most often mentioned is color, particularly red-black color contrast (Palumbi 2008) (actually black (outside)-red (inside)). Color did seem to be an important factor for the ancients. At Arslantepe, some of the offering stands (fruitstands) used at Arslantepe for rituals were the typically buff in color, but

some were intentionally blackened on the outside (Frangipane, Palumbi 2007). The so-called Royal Tomb dug into the rubble of the last temple/palace buildings of the 4th millennium BC also had both Upper Euphrates Early Bronze Age and Kura Araxes artifact types (Frangipane, Palumbi 2007). Greenberg (2007) proposes that Khirbet Kerak manifestations of the tradition fall into three color groups. The red-black forms were the most traditional shapes, red slipped ones represented new functions or new styles, and gray/brown ones were for the pottery of the kitchen. A very similar red-slipped, undecorated ware appeared at Yanik Tepe west of (the former) Lake Urmia in Square MC, level 6 (personal observation at the University of Pennsylvania Museum), which Summers (n.d.) dates to EBIII (roughly Sagona's Kura Araks III). Yet, this same symbol set does not seem to hold everywhere in the Kura Araxes cultural tradition. My own studies of pottery from Kura Araxes levels at Godin Tepe (Rothman 2011), in Muş (Rothman, Kozbe 1997), and at Shengavit indicate that there are a great variety of colors, of which red-black is a minority at those sites. At Shengavit and Karagündüz east of Lake Van (personal observation), where there is red inside, it is often painted red before firing. This technique is used for vessels from vats and large pithoi to smaller bowls and even utilitarian wares. Still, at Shengavit there were pots that were intentionally made with highly burnished red exteriors. These were often decorated and my initial impression is that they were eating vessels. So, color is one characteristic, but it is far from universal in its application and thus unlikely to have a universal meaning.

The fabrication is another important variable. Hayrapetyan (2008) classifies

the different fabrics from dense and homogeneous to porous based on different kinds and percentages of tempering materials. In a less formal way, differences are apparent. At Godin, the great majority of the Kura Araxes pottery was quite crude with a single slab (coiling is much less popular than slab construction), usually heavy with grog (ground up pottery) and then thickly slipped (fig. 3A). At Shengavit, of the pottery I have so far seen a very common construction technique is to take two slabs of different colored clay with different tempering, pushing them together, shaping them, and often finishing off the rim by a swipe of the thumb or a flat tool or else pinching them into a sharper rim (fig. 3B). This is the normal way to make red-black ware at Shengavit. Iserlis confirms this pattern from x-ray studies (personal communication). Beth Shean (fig. 3C) has the same technique. At Yanik Tepe, a variety of techniques were used: a finer core with gray slip (fig. 3D), chaff faced cores with thick slips, almost slabs (fig. 3E), a similar form with scoring on the core to anchor the slip (fig. 3G), and dense mineral cores (fig. 3H). The red-slipped ware (fig. 3F) has an unusually consistent dense core and the slip was very fine. Some similar patterns exist in our sample from Malatya-Elâziğ (see below). Most often, except on large pots or pithoi – contrary to Frangipane (Frangipane, Palumbi 2007) there are pithoi in the South Caucasus – these pots are not slipped. At the same time, petrographic analysis of clays and tempering from far away Beth Yerah (Khirbet Kerak) in the southern Levant, and Kura Araxes sites of the 4th and 3rd millennia (Iserlis 2009; Iserlis *et alii* 2010) indicate a common tradition of pottery manufacture existed that spanned hundreds of years and as many kilometers. Iserlis points to the fact

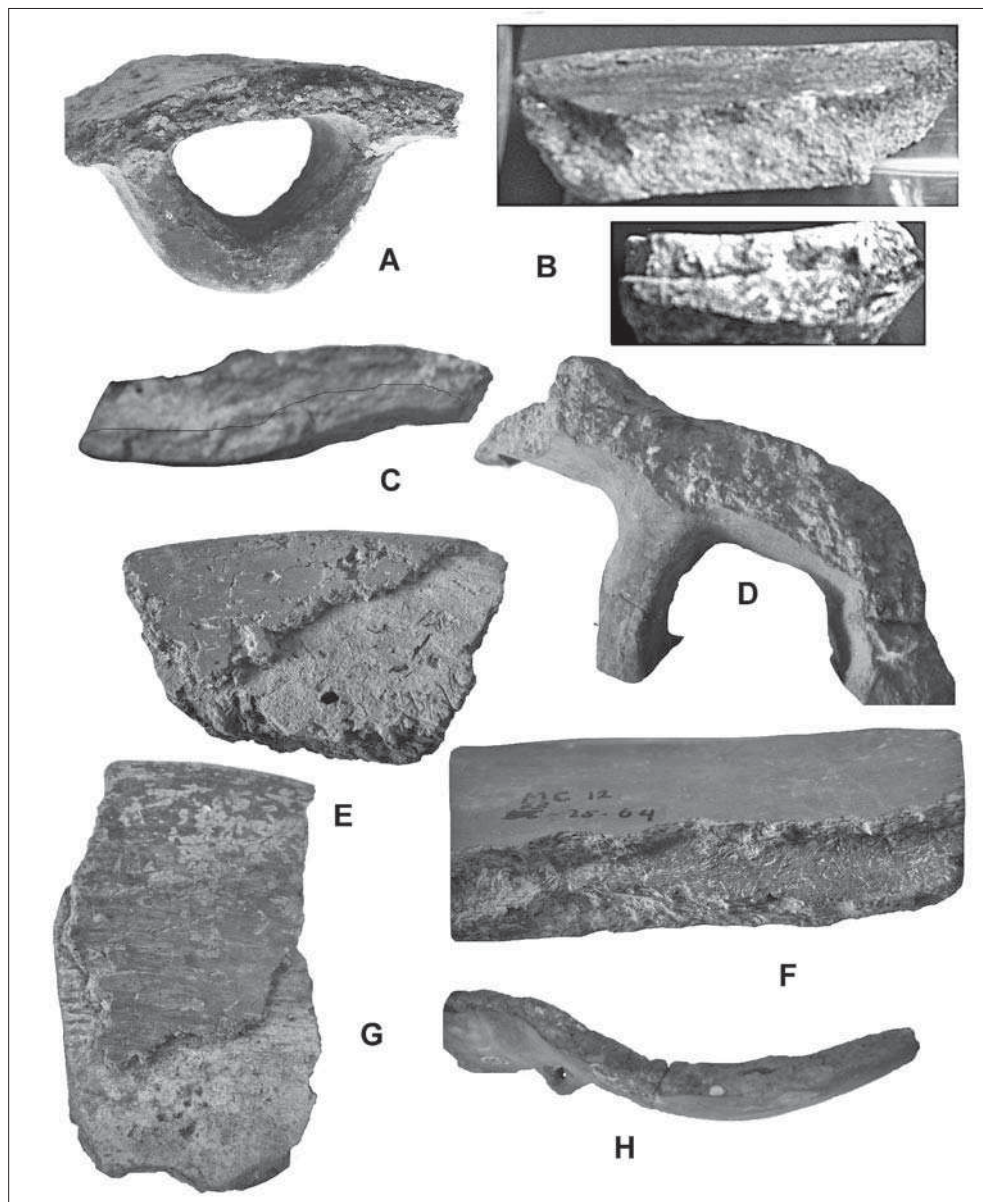


Fig. 3 – Cores of Kura Araxes Pottery: A. Godin tepe; B. Shengavit Red Black; C. Beth Shean Red Black; D. Yanik Tepe gray jar (63-25-01); E. Yanik thick slip (23-25-60); F. Yanik Red-slipped (63-25-64); G. Yanik Tepe thick slip (63-25-41); H. Yanik Tepe cooking pot ware (63-25-02).

that except for some cooking pots, the populations who made Khirbet Kerak wares and those who made the local Early Bronze III pottery used different clay

sources. What is clear is that despite being a seemingly simple technology, potters were able to vary tempering and clay sources to achieve rather specific results.

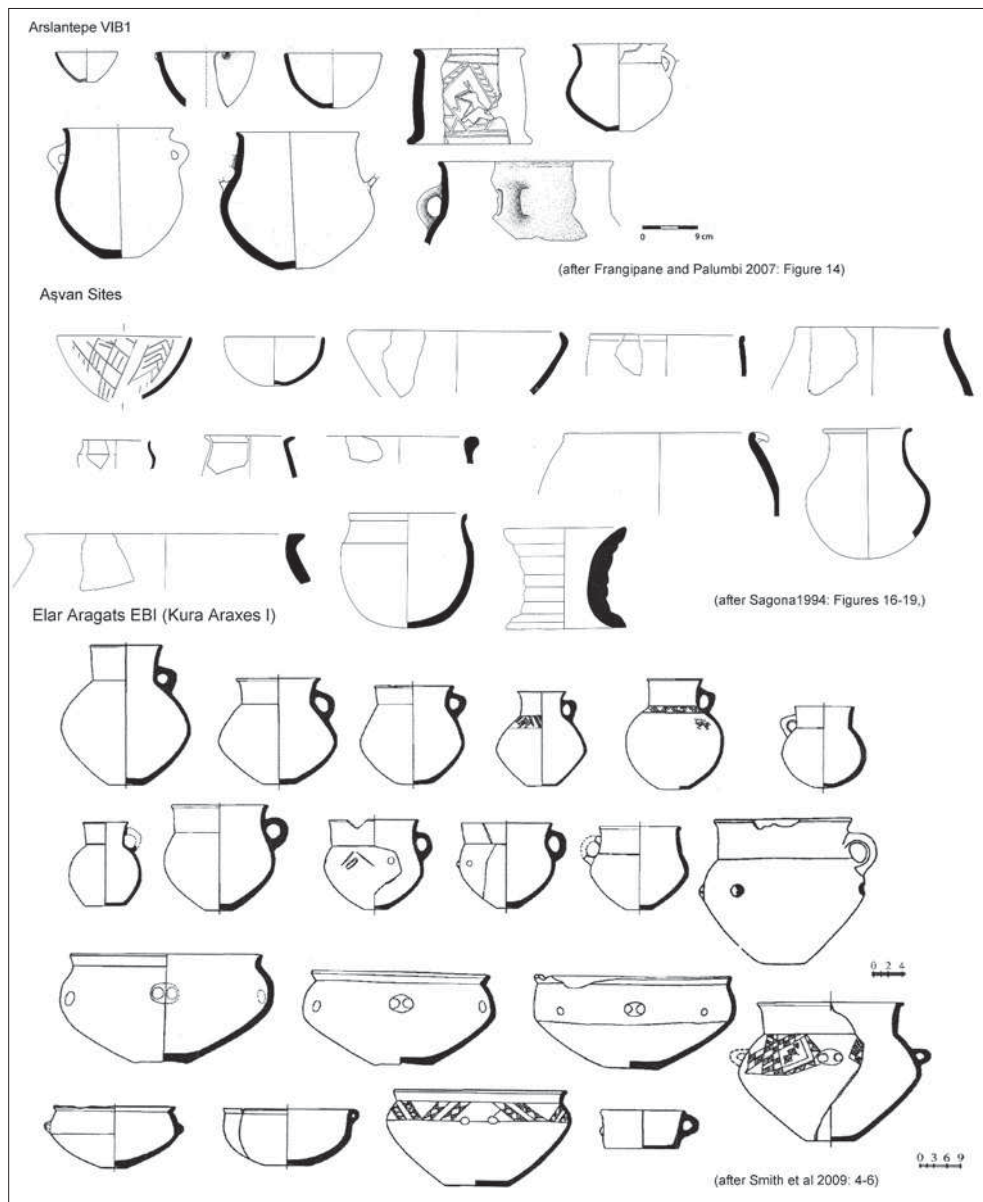


Fig. 4a – Kura Araxes shapes from Arslantepe (after Frangipane and 2007, Figure 4; Aşvan Sites (after Sagona 1994, Figures 16-19; Natsagora Cemetery, Georgia (after Puturidze and Rova 2012, Figure 10).

Another element is shape (fig. 4a, b where 4a are mostly pre 2900 BC or Kura Araxes I, 4b are all post 2900 Kura Araxes II). Within the functional categories list-

ed above, a degree of overall similarity is evident, yet a significant variation existed. Some common profiles are typical of the Kura Araxes tradition. One such

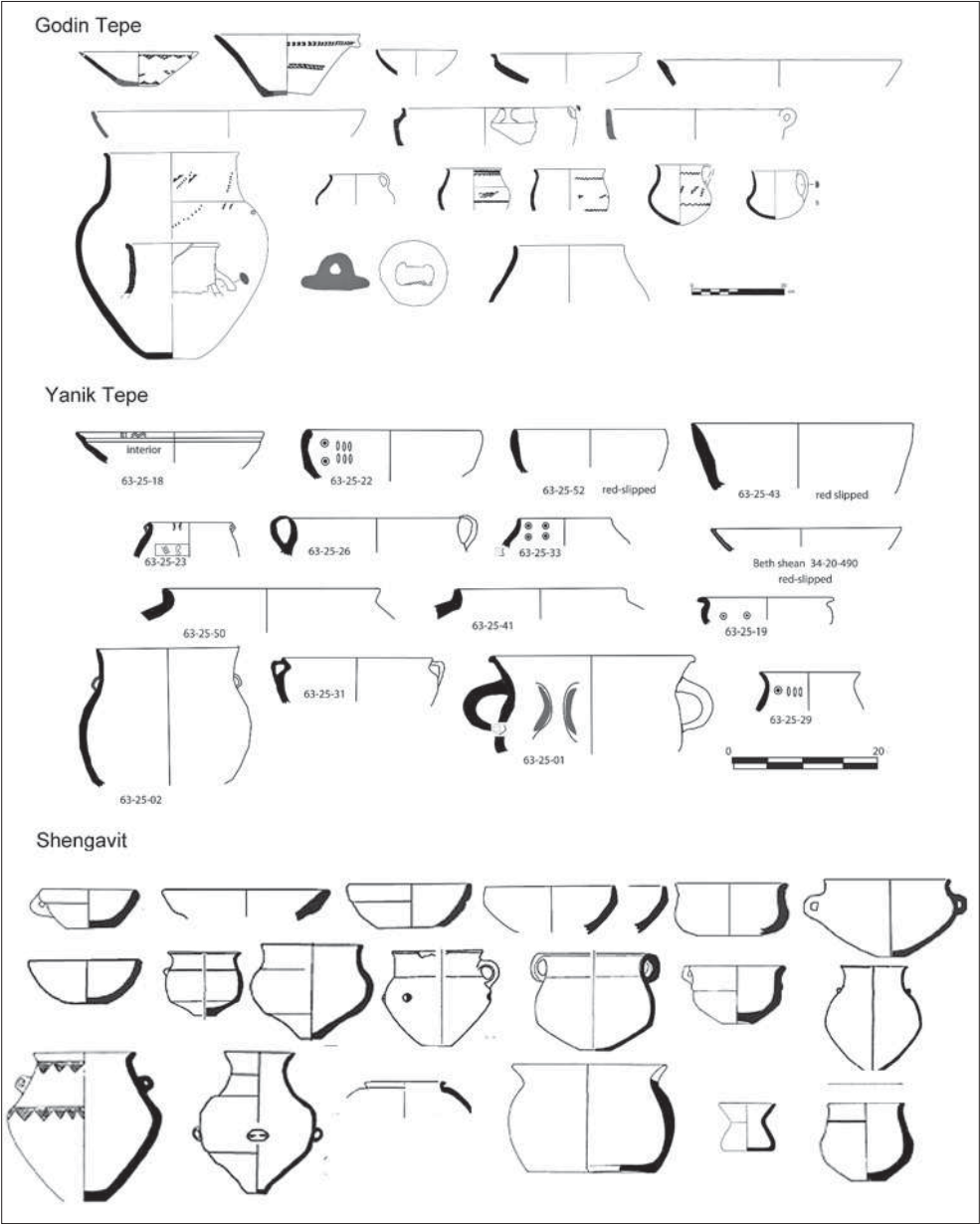


Fig. 4b – Kura Araxes shapes from Godin (after Rothman 2011, Figure 5.56-5.61); Yanik Tepe (from University of Pennsylvania Museum); Shengavit.

profile is the sinuous or s-shaped pots. The typical Elar Shengavit, post 3000 BC jar profile (fig. 4b) is this sinuous shape with two carinations on the side (Smith *et alii*

2009). Although no formal study of its distribution has been done, my impression is that the form is most common in Armenia, but it also appeared at Godin

Tepe (Rothman 2011, fig. 5.59, fig. 4b). Bowls with flat rims are also common. As one would expect for handmade, household-produced pottery there is a very broad variation in features such as rim shape. So-called Nachičevan handles are another feature that appears across the entire geographical range of the Kura Araxes tradition. Figure 4a and b provides a very general impression of some of the shapes from different areas and phases of the Kura Araxes tradition. These figures do not represent a comprehensive catalogue, but do give an indication of both the similarities and subtle differences of this variable. Most critical for questions of migration is the fact that many of these shapes are less evident in Plain Simple or Reserved slip wares common in areas to which Kura Araxes populations migrated; therefore, they represent at least a separate pottery making tradition and likely peoples of different identities.

A final element that Kura Araxes potters had to work with was design, or the lack of design. Both are to me important and were conscious choices by potters (fig. 5a, b). At Godin, a large percentage of Kura Araxes pottery was decorated by incising and adding lime in the cuts. When the site appears to have been incorporated into the Awan polity (Potts 1999: 92f) in Godin III:6, a small percentage of black ware continued to be made, all undecorated (Henrickson 2011). I have suggested to Summers, who is publishing Yanik Tepe, that its square building phase with undecorated black pottery may be the parallel to Godin III:6. This puts both in the period from 2600-2400 BC cal; or in other words, the traditional end of the period in which the Kura Araxes adaptation was common (for an opinion that the tra-

dition continued in the South Caucasus see Sagona 2000). The most familiar designs are the incised and raised designs (fig. 5a, b). Some common themes existed, such as ladders, often in running patterns around the pot, and a double swirl in the Tsalka Tradition at Karaz (Rothman 2011, fig. 5.5), at Garni (Palumbi 2008, fig. 5, 29), and at Yanik (see fig. 4a). That same swirl pattern is found in metal pins, often in cemeteries with other indicators of the Kura Araxes tradition (Puturidze, Rova 2012; Palumbi 2008, fig. 4.3). As Figure 5a and b, which is only a sample of various designs, illustrates, these designs are often very variable. Designs were not that common in the Malatya plain, and as I will discuss below, in the mountainous stretches of Elâzığ province until painted pottery re-emerged near the end of the time the Kura Araxes tradition was practiced. The time lines for such transitions do not seem to be the same in the Taurus, Zagros, North Caucasus and throughout the South Caucasus; hence, the idea of a Kura Araxes period is a difficult concept to support. Nonetheless, design "is an aspect which marks a major difference [from Arslantepe VIB1] with the tradition and the function of the Kura Araxes ware, which is among very few media chosen for the artistic and decorative expression of the Transcaucasian communities and for transmitting symbols, messages, and values belonging to that culture" (Frangipane 2007: 241-242).

As I wrote and Smith is quoted above, given the lack of finely dated, well published material on the Kura Araxes tradition, even in its putative homeland, we are at the beginning of the pursuit of the core cultural meanings of the Kura Araxes cultural tradition. What then can the new



Fig. 5a – Kura Araxes Pottery Design from Yanik Tepe (at University of Pennsylvania Museum), Godin Tepe (after Rothman 2011, Figure 5.49).

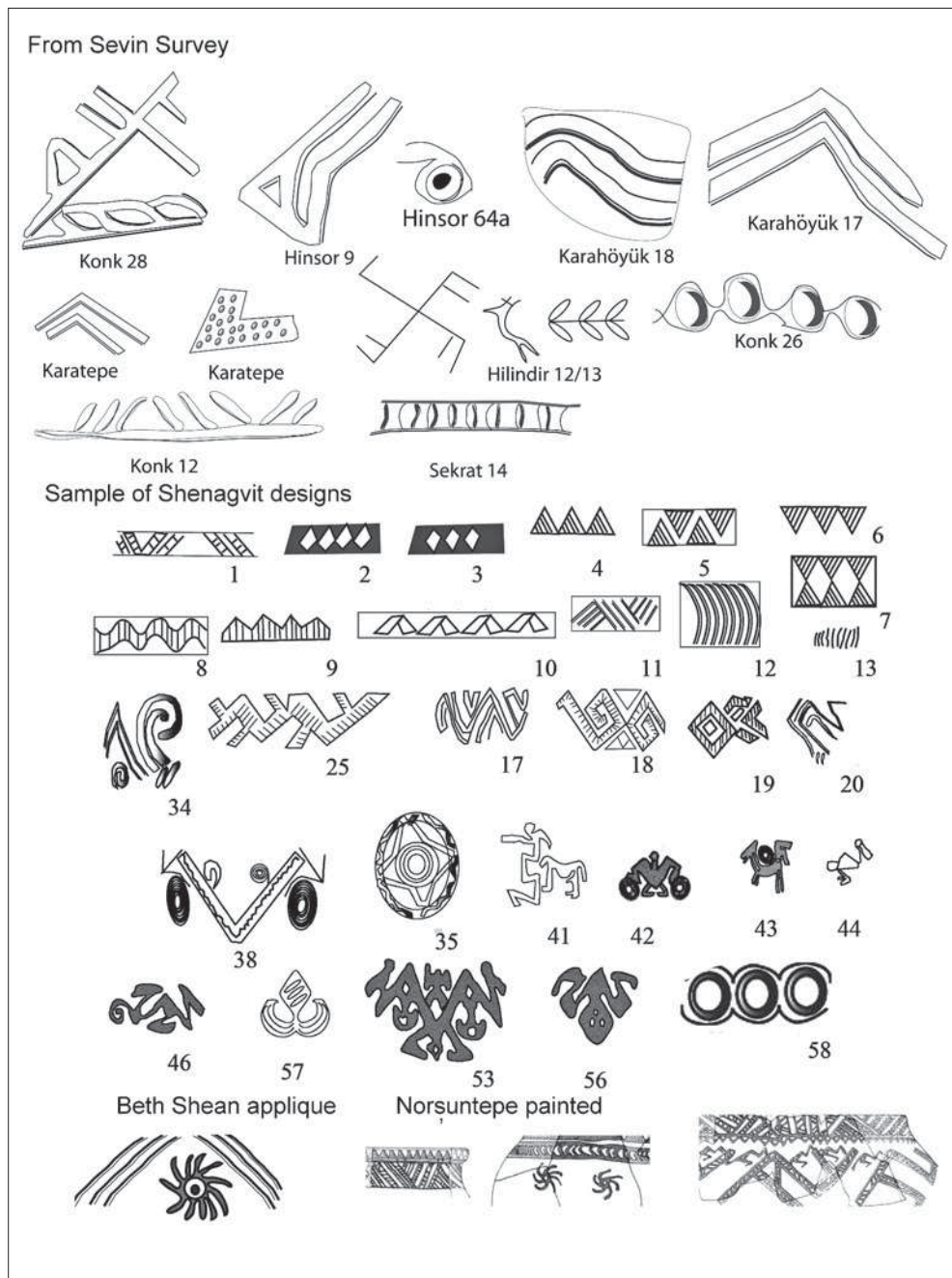


Fig. 5b – Kura Araxes Pottery Design from Sevin Survey, Shengavit, Beth Shean (University of Pennsylvania Museum), Norsuntepe painted (after Hauptmann 1982, Plates 50 and 51).

material from Sevin's survey add to this ever more complicated picture?

VELI SEVIN'S SURVEYS

Veli Sevin conducted a series of surveys in 1985, 1986, and 1987 along the highland areas west of Bingöl along the road to Elâziğ by the Murat River, around the area that mostly was already under the Keban Dam lake, and then across the highland plains of Elâziğ toward the Euphrates (Firat) River south of the Atatürk Dam lake and ultimately west of the Karababa Dam lake (Sevin 1986, 1987, 1988) (fig. 6). This area is north of Arslantepe across the southward bend of Euphrates River and south of the Aşvan sites (Sagona 1994) and Pulur (Sakyol) (Koşay 1976) in the area of the Keban dam; that is, Norşuntepe, Tepecik, and Korucutepe, and others toward Lake Hazar. In Sagona's map, most of this area would be in the Upper Euphrates zone. These surveys covered a very large area of often large, multi-period mounds. The number of potsherds collected for any given period in Sevin's survey is relatively small for any given period, and therefore no statistics for

any given site would be meaningful. We lack information on the size and occasionally the location of some surveyed sites.

In the summer of 2005 Elif Denel, currently the Director of ARIT, Ankara, and I spent five weeks at Yilyüz Üniversitesi in Van examining the pottery related to the late 4th and early 3rd millennium Kura Araxes tradition and sampling some for petrographic analysis (see Appendix 1 and below). At the time our goal was primarily to look for comparative material to trace Kura Araxes movements. However, as I argued above, we might better start by looking at the area as an environmentally coherent, bounded sub-region with Arslantepe to its south, Erzurum to its north, and Bingöl, Solhan, and Muş to its east.

This area is bracketed by mountains ranging from 300 to 3000 meters in height to the north and east. Transport across the area to the east is fairly limited; the most frequented routes in the present and probably in the past were along the Murat River. The river itself is not navigable in an easterly direction, although rafts do frequently traverse the Murat River to its intersection with the Euphrates



Fig. 6 – Map of sites in the area investigated by V. Sevin.

River to the west (Wagstaff 1973). Geologically, the area of Aşvan is divided into distinct zones including the Upper Floodplain of the Murat, the Village Plain (best for agriculture), Fringing Hills (stony hills averaging an incline of 15%), and Undulating Upland Basins of low rolling hills where Taşkun Mevkii and Taşkun Kale are located. The waters of the Upland Basins feed the Village Plain (Wagstaff 1973). Similar geological zone are repeated in Sevin's survey area with the addition of some higher mountain zones to the east in which no sites are evident, although high elevation areas were probably not surveyed by Sevin nor earlier on by Burney (1958), who worked on a bicycle. Wagstaff (1973) likens the area to the highland plateau of Central Anatolia.

The climate in this region is quite variable (Wagstaff 1973). Over the past half century the area received about 443 mm of precipitation annually. The amount, however, varies by about 17.8 percent over a span of years, suggesting the possibility of frequent crop failure. Within the year climate comes "alternatively under the influence of cold, east Anatolian winter and the hot Mesopotamian summer regime" (Whallon 1979:5). The average summer temperature is 27°C, and in the winter 9 days of every month the temperatures on average are below 0°C. Snow, which is a key factor in explaining cultural behavior in the Taurus region (Rothman 2000), covers much of the area from November to April to a depth of 0.58 meters. The average number of days with snow are 30-40 and with rain 75-100 annually (Whallon 1979).

The vegetation profile of this broader area west of the mountains and north of the open plains of northern Mesopotamia falls with the area of oak-juniper forest.

The most common trees are oaks (*Quercus* sp.), maples (*Acer* sp.), juniper (*Juniperus oxycedrus*), hackberry (*Celtis tournefortii*), ash (*Fraxinus rotundifolia*), almond (*Amygdalus* sp.) and East Indian mastic (*Pistacia khinjuk*) (van Zeist 1972:16). Poplar (*Populus tremuloides*) and ash increase at the higher elevations. Today, much of what must have been extensive forestland is much reduced. Rowton (1967) believes that it was during the 3rd millennium that much of the deforestation occurred. Wild fruits that grow in the area include grapes, pear, pistachio, and walnuts.

This area also has rich sources of copper, most prominently the Ergani Maden, but also smaller deposits near modern Harput, Sivrice, and Palu, where a number of early sites clustered (fig. 6). A silver-lead mine is now under the Keban Dam lake (Whallon 1979:9).

Political Development in the Survey Area

For the late 4th and early to mid-3rd millennia BC, this area of Elaziğ and Malatya is characterized by relatively small sites. Of the three sites whose size is listed in Sevin's publications, Tilenzit was 2.6 hectares, Kovenk 3 hectares, and Poyraz 0.2 hectares at their maximum. The first two were over 10 meters high. Whether a feature of modern transport or an ancient reality, sites tend to cluster (fig. 6). One cluster is near modern Palu, the biggest is around the Keban Dam and Lake Hazar (the Altınova), and the third is in the area between modern Aşvan and Elaziğ. Conti and Persiani (1993) distinguish the Aşvan and Altınova as the two poles of settlement with connector sites. Palu should be added as another.

The area near Arslantepe would be a fourth, but I agree with Conti and Persiani (1993: 393) that the area around Arslantepe is culturally distinct (see Çalışkan 2005 for pottery study of Sevin's material). I will be concentrating on the Elâziğ sites.

The most fully documented survey is the one conducted by Whallon in the Altınova (fig. 7). As well done as this survey was, there are clearly problems with the assignment of some pottery types to their dates, as Whallon himself admits. For example, his figure 8 "Late Chalcolithic" pottery looks very much like the Kura Araxes pottery one would find in the early 3rd millennium farther east. However, there is not enough detail in the publication to revise it, so the following analysis remains somewhat speculative. Nonetheless, using Rank-Size and Gravity models Lupton (1996) found changes in the underlying polity structures in this area over time. Before the appearance of the Kura Araxes in the late 5th and early 4th millennia, Lupton's calculations indicate very low political integration of the sites in the survey area. For the projected population size, the open plain offered much more arable land than its residents needed. Despite this, the period in question is one in which there was much interaction across the mountainous north. This is the time, referenced above, when the pottery was very much like LC1 and 2 wares from northern Mesopotamia. This represented the end of the 'Ubaid Period and the beginning of what would be the Early Uruk (LC 1 and 2) in the south. Archaeologists in the North Caucasus found examples of these same wares copied or traded. The latter is possible to know, because neutron activation analysis studies confirm that a wide area of exchange in

this same style of pottery existed (Rothman, Blackman 2003). In the later 4th millennium, the so-called Contact Period, population declined, and the degree of connectedness (integration) continued to be low. The early 3rd millennium, however, saw a very different organization. Lupton notes both an increase in population size (the number of sites and their size), and a Rank-Size analysis number typical of a more integrated settlement system. He describes it as "pooling" (Lupton 1996: 83). There were population clusters, and physical spaces were created between them. In making sense of this analysis, one must take into account that *within* the early 3rd millennium Norşuntepe saw considerable change from a site dominated by square buildings and Plain Simple Wares to buildings that would be at home in contemporaneous Armenia and Georgia with a majority of Kura Araxes wares and then to the time of the "palace" when both local painted wares often with Kura Araxes tradition designs (fig. 5*b*) and traditional Kura Araxes wares were used. The numbers of sites in the Keban occupied during LC, EB I/II, and EBIII phases paint a picture of population shifts (Tab. 2). A total of 14 sites are attributed to the Late Chalcolithic, 35

<i>Category</i>	<i>No.</i>
Total number of sites	51
LC total	14
LC only	1
LC and EB I/II	13
EB I/II total	35
EB I/II only	15
EBIII total	14
EB I/II and III only	7
LC, EB I/II, EBIII	6

Table 2 – Keban survey counts (from Whallon 1979, table 8)

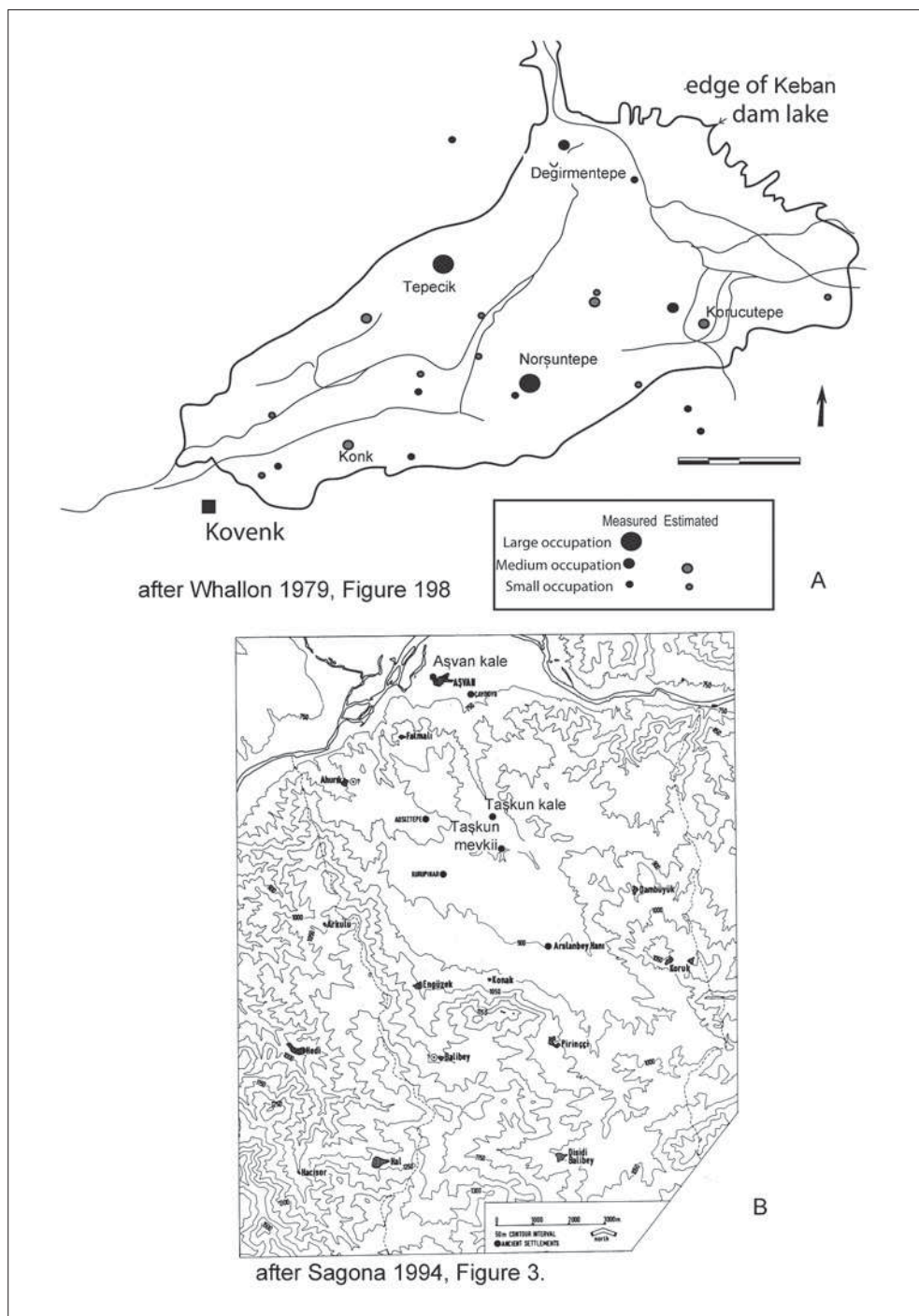


Fig. 7 – Site Distribution in the Keban and Aşvan survey area (after Whallon 1979, Figure 198; after Sagona 1994, Figure 3.)

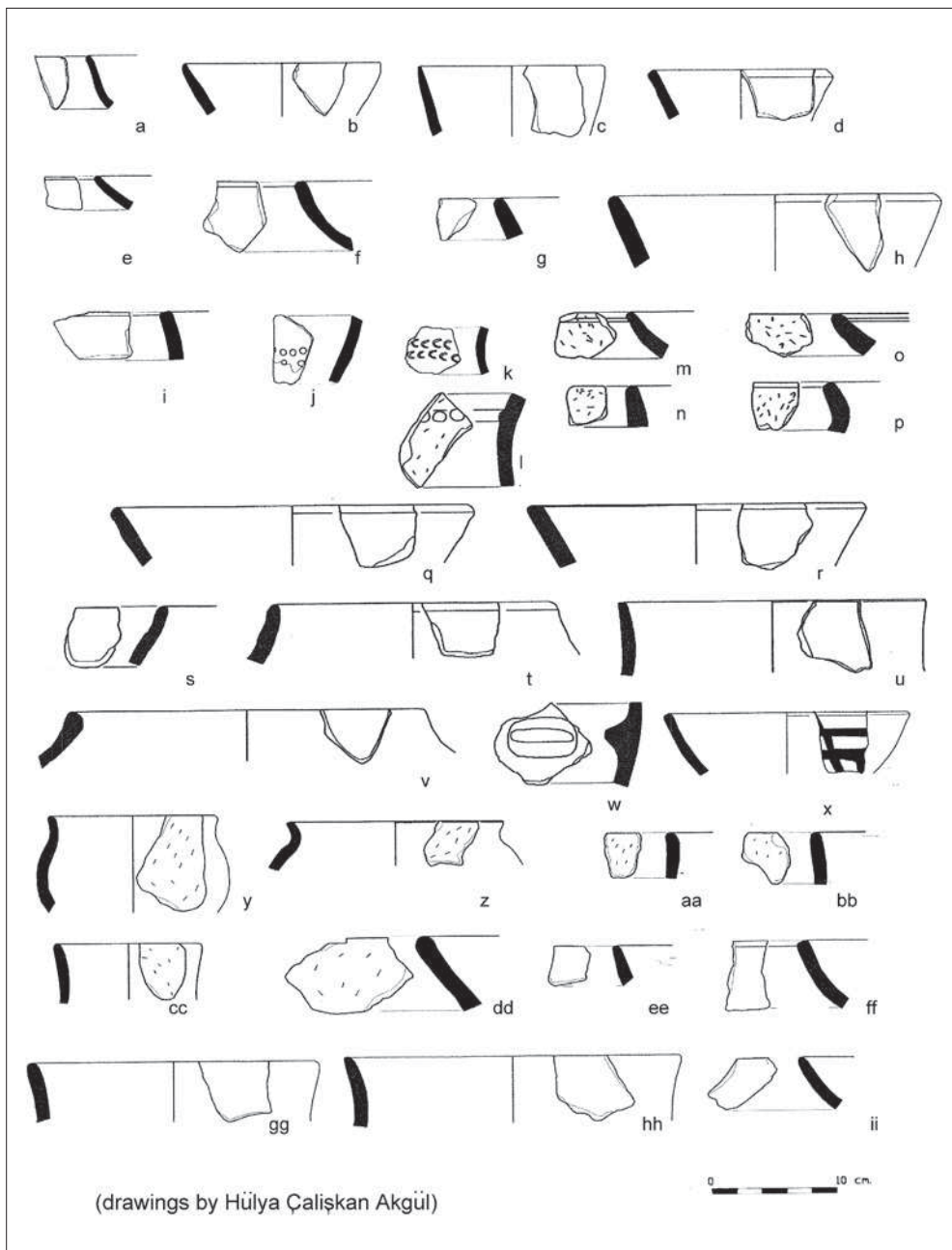


Fig. 8 – Chalcolithic potsherds from Sevin Survey (Malatya sites): a. Kilisetepe 55, b. Kilisetepe 51, c. Kilisetepe 47, d. Barsikkale 9, e. Kilisetepe 52, f. Maltepe AE 1, g. Maltepe AE 1, h. Maltepe VS1, i. Maltepe AE3, j. Maltepe AE 3, k. Karahöyük 47, l. Giriktepe 7, m. Üyücek 11, n. Karababa 42, o. Üyücek 29, p. Maltepe AE5, q. Kızıluşağı 33, r. Hasikli 22, s. Maltepe VS2, t. Kilisetepe 21, u. Hasikli 1, v. Kilisetepe 21, w. Kilisetepe 69, x. Maltepe 6, y. Kızıluşağı 6, z. Kilisetepe 17, aa. Kızıluşağı 25, bb. Kızıluşağı 3, cc. Üyücek 12, dd. Hasikli 28, ee. Nalihasan 4, ff. Kilisetepe 54, gg. Maltepe AE5, hh. Hasikli 2, ii. Kilisetepe 66.

sites are attributed to the Early Bronze I/II, and 14 to the Early Bronze III (Tab. 2). All but one LC site has Early Bronze I/II on top, although 22 Early Bronze I/II sites were first established in that period. This can be interpreted to indicate the increase in population Lupton suggests, as well as the likelihood that some of this increase represents new occupants who are associated with the Kura Araxes tradition.

One of the major problems we have in interpreting the material here is a very confused and confusing chronological system. What is Late Chalcolithic in the Taurus and Mesopotamia is Early Bronze 1 in the South Caucasus. While Godin and Yanik Tepe are transitioning to a time after Kura Araxes pottery was used from 2600-2400 BC, other areas are at the height of Kura Araxes occupation. Sagona's Kura Araks I-III scheme (1984) does not fit Smith and Badalyan's Kura Araxes I and II scheme (Smith *et alii* 2009). What exactly EB I is versus II or III across the whole region is probably too confused to salvage.

This and other factors make the case of the areas surveyed by Sevin far from simple to interpret. I am basically dividing the time into Late Chalcolithic (LC) to mean the Northern Mesopotamian material in the later part of the 4th millennium BC and Early Bronze (EB) to mean the first four centuries of the 3rd millennium BC. As I wrote above, there are clearly periods of change within each, but since I can only paint a picture of the survey area with a broad brush, this realistically is what I can hope to do.

In that survey, ten of the thirty sites with early 3rd millennium BC strata in the survey (Table 3) sat on top of strata with Late Chalcolithic pottery. The LC wares were clearly distinguishable from the lat-

Site	LC	EB	KA
Çinaz	10	3	1
Cip	4	4	1
Çuhadar	0	5	0
Dilektepe	0	4 (EB/KA?)	24
Erenzit	0	0	2
Fethiye	0	0	8
Gökçe	2	4	23
Gülümtepe	0	0	4
Hilindir	0	4?	0
Hinsor	0	7	48
Hoşmat	2	3	7
Isaköy	0	2	0
Karahöyük	1?	0	16
Kilise-tepe	4	0	18
Kızılaşağı	5	0	4
Könk	3	4	16
Kövenk	0	1?	13
Maltepe	2	0	1
Pınartepe	1?	9	22
Pirincik	0	13 (EB/KA)+9	23
Poyraz	0	3 (EB/KA)+8	28
Sekerat	2	1	4
Tadim	0	2	5
Tanrıvermi	0	1	1
Tigram Köyü	0	3	2
Tilenzit	1	2	2
Üyücek	2	2	3

Table 3 – Counts of potsherds by period.

er wares by the predominance of chaff tempering and color. Some forms continued (compare fig. 8 to 9, 10, and 11). Perhaps, because they were exposed to the elements, the Kura Araxes ware and what I believe are variants of Plain Simple Wares were rather crude. Palumbi (2008: 276) may be right that we need a new designation, what he calls Monochrome Burnished pottery. His defined group is somewhat limited, apparently leaving out smaller black burnished wares, but Sevin's survey material, the material from

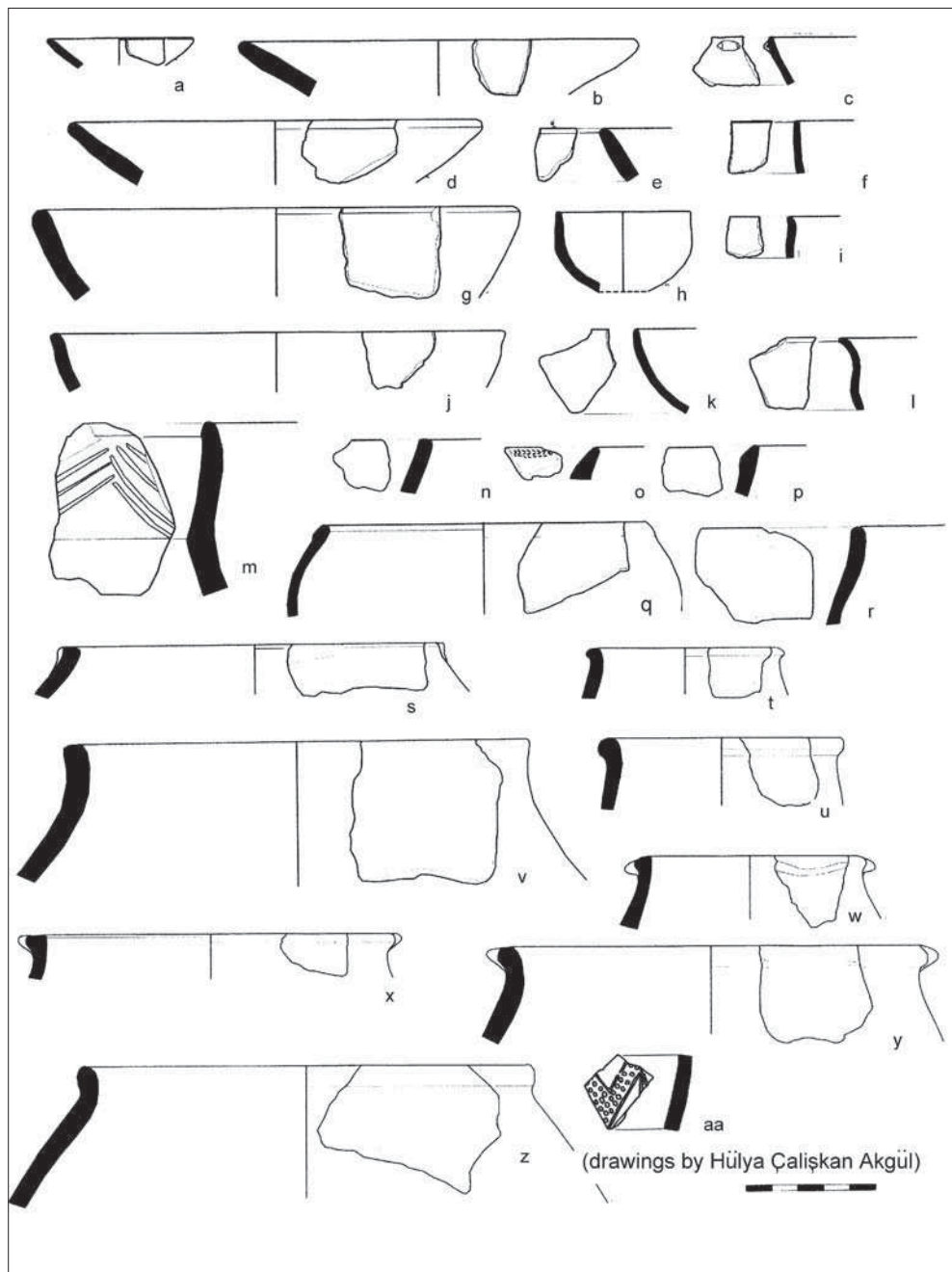


Fig. 9 – Kura Araxes potsherds from Sevin survey, contrasting color sherds (Malatya sites): a. Fethiye 7, b. Kilisetepe 63, c. Kilistepe 4, d. Kilisetepe 22, e. Üyücek 8, f. Kilisetepe 25, g. Kilisetepe 59, h. Kilisetepe 8, i. Kilisetepe 26, j. Kızıluşağı 5, k. Kilisetepe 13, l. Kilisetepe 10, m. Karahöyük 17, n. Kızıluşağı 10, o. Fethiye 4, p. Fethiye 33, q. Karahöyük 8, r. Höyükköy 1, s. Karahöyük 13, t. Karahöyük 15, u. Karahöyük 10, v. Kilisetepe 9, w. Karahöyük 14, x. Kilisetepe 3, y. Karahöyük 19, z. Karahöyük 20, aa. Karahöyük 27.

Aşvan sites (Sagona 1994), and the Keban (Whallon 1979) seem to fit a common set of types, mostly distinctive from many South Caucasian and Khirbet Kerak and even Arslantepe material. Except for the color, it was often hard for me to distinguish the EB (Plain Simple Ware) from the Kura Araxes. Reserved slip and Maltya/Elâziğ or Karababa painted wares are an exception to this. Features like a triangle rim on pots, often cooking vessels, is a common feature of the Plain Simple Wares (Algaze 1990), but occurred frequently in our sample, often but not always on Kura Araxes pots. This feature also occurs at Shengavit in the putative homeland (personal observation). No sites were entirely represented by typical Kura Araxes types. Vessels in the category of small (eating?) pots (fig. 9*m*) were the finest made ones. The great majority of the pots were undecorated, and the few that were had raised designs (fig. 5*b*), except Hilindir, which did not have Kura Araxes shapes or surface treatment.

There are certainly similarities as well as differences in shape. Are they very localized or part of a broader pattern in terms of their techno-form? A petrographic analysis of a sample of potsherds revealed a number of patterns (Schwartz *et alii* 2009). The minerals employed for tempering and elements of the clays themselves indicate that often the clays were mined near river banks. According to Schwartz *et alii* (2009) Karahöyük 18 and Pınartepe 7 had such similar inclusions. His team speculated that the clays could have been from the same source, but these two sites are the farthest apart in the Sevin survey. Both are near the Murat River, but one is in the plain west of the Euphrates and the other is an area near passes through higher mountains. Using the

course fraction, the samples could be divided into 4 basic groups (see Tab. 4). Whereas these groups are statistically valid, their meaning is less clear. They do not correlate with techno-form, in that construction with two separate and distinct slabs occurs in each group, as do forms with a single slab core and slips (Tab. 4). Groupings 1, 2, and 4, cross the area of the Sevin's surveys. In the end, the analysis indicates that there is tremendous variability in the creation of clay bodies for pottery making, and elements of clay sourcing and tempering material is more similar to other local sites than to ones from, for example, the South Caucasus. In fact, "sample mineralogy seems to correlate more strongly with site origin than with culture" (Schwartz *et alii* 2009: 148). In other words, people living at the sites are producing all sorts of wares with the same mineral base. As mentioned above, pottery making seems to be domestic.

Overall, the picture that emerges from Sevin's data and related material is of an area isolated from its adjoining regions, but more connected to the South Caucasus than to Northern Mesopotamia. Still, they are not so closely connected as measured by similarities of pottery decoration and form, but with both similar and different kinds of forming techniques of the fabric. Even when, as Lupton's (1996) measurements suggest, there is pooling, the size of the pool is rather small. Connections to the world outside of the mountainous region were limited, as Conti, Persiani (1993). Perhaps its interaction spheres were more directed to the mountains north and east. I find it hard to believe that somehow Kura Araxes interrupted such connection, especially with the Mesopotamian world. In a

Site number	Culture	Description fabric
<i>Group 1</i>		
Hinsor 32	KA	Monochrome
Hinsor 8	KA	Monochrome core with thick slip
Karahöyük 11	KA	Monochrome with thick slip
Kilisetepe 6	KA	Monochrome dense
Könk 11	KA	Bicolor slabs
Kövenk 8	KA	Bi-color red black slabs
Pınartepe 27	KA	Monochrome with thick slip
<i>Group 2</i>		
Karahöyük 14	KA	Bi-color dense
Könk 14	KA	Bicolor slabs exterior thin
Könk 28	KA	Dense high fired with over-fired slip
Kilisetepe 10	KA	Monochrome
<i>Group 3</i>		
Picirik 10	KA	Monochrome
Picirik 19	KA	monochrome
<i>Group 4</i>		
Karahöyük 8	KA	Bicolor red black slabs
Karahöyük 18	KA	Bichrome dense
Kilisetepe 47	LC	Monochrome single layer
Kövenk 32	KA	Bicolor
Pınartepe 18	KA	Monochrome core with thick slip
Pınartepe 21	KA	Bicolor red black slabs
Tilenzit 25	EB	Bicolor slabs
Tilenzit 27	KA	Dense monochrome core thick slip
Pınartepe 28	KA	Monochrome thin slip
<i>Remainder</i>		
Dilektepe 25	KA	Monochrome gray thin slips
Hinsor 17	KA	monochrome with thick
Hinsor 2	KA	Dense monochrome with thick slip
Karahöyük 13	KA	Even thick core with slips
Karahöyük 17	KA	Bichrome biase black
Karahöyük 21	KA	Bi-color red black slabs
Kiziluşağı 6	LC	Dense gray slabs
Kiziluşağı 7	KA	Dense gray two slabs
Könk 10	KA	Dense red brown chunky grit
Könk 33	EB	Even dense well fired
Kövenk 9	KA	Gray bichrome gray black slabs
Picirik 45	KA	Bi-color slabs
Pınartepe 10	KA	Dense crumbly slip and burnish
Pınartepe 5	KA	Crumbly core thin slip
Sekrat 14	LC	Black core thin slip
Tigram Köy 11	EB	Monochrome

Table 4 – Mineralogical groups and basic fabric.

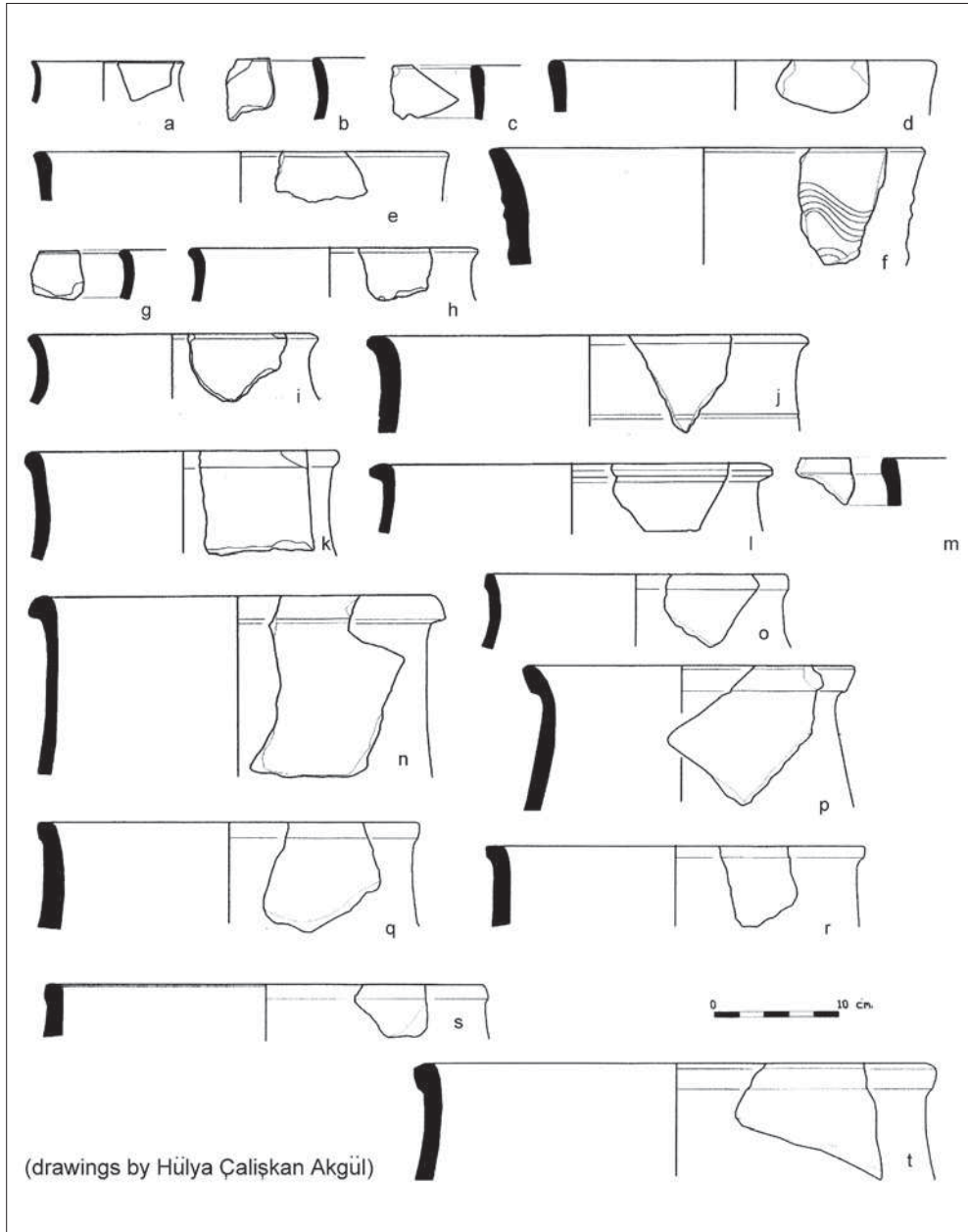


Fig. 10 – Kura Araxes potsherds from Sevin survey, contrasting color sherds (Malatya sites): a. Kilisetepe 11, b. Üyücek 4, c. Üyücek 5, d. Üyücek 10, e. Fethiye 6, f. Karahöyük 18, g. Karahöyük48, h. Isaköy 12, i. Kilisetepe 15, j. Hasıklı 6, k. Fethiye 3, l. Karahöyük 11, m. Üyücek 3, n. Isaköy 10, o. Fethiye 5, p. Fethiye 8, q. Karahöyük 12, r. Karahöyük 38, s. Üyücek 1, t. Karahöyük 21.



Fig. 11 – Kura Araxes potsherds from Sevin survey, color sherds (Malatya sites): contrasting color: a. Kili-setepe 20, b. Karahöyük 9, c. Hasikli 24, d. Fethiye 9, e. Kilisetepe 18, f. Karababa 5, g. Kilisetepe 18, h. Kızıluşağı 7, black color: i. Fethiye 42, j. Fethiye 10, k. Kilisetepe 19, brown ware: l. Üyücek 13, m. Kili-setepe 61, n. Kilisetepe 60, o. Hasikli 8, p. Kızıluşağı 2, q. Maltepe VS 4, r. Kızıluşağı 11, buff: s. Kale 1, 3, t. Kilisetepe 44, u. Hasikli 18, v. Kilisetepe 62, gray: x. Kilisetepe 6, y. Kilisetepe 1, z. Dilek Tepe 68 (Elâ-zığ).

balkanized Mesopotamian landscape, local areas are likely to become more isolated and focus on local, subsistence strategies. We are likely to see new populations whose identity is connected to the mountains emphasizing those strategies. A broad coherent picture is unlikely to emerge. Rather very particular local manifestations would dominate. This open, de-centralized organization presents good opportunities for frequently migrating small clans to find a place in this landscape. Whether that landscape was so attractive because the migrants had technologies or skills to offer will depend on detailed excavations, which the current political situation in Turkey may prevent for a time. That is how I hypothesize that a picture just beginning to emerge of the ancient reality might be understood.

CONCLUSION

The analysis presented here cannot sustain a real conclusion. We have many more questions than our data provides clear answers. The size of the sample from the Sevin surveys also limits what we can safely say about the sites mentioned here. Certainly, no pottery analysis is going to be able to paint a clear enough picture of what was happening through time in this area.

Still, the area of ancient Elaziğ and northern Malatya is very likely a marginal zone. There is little in the variation in pottery or in settlement patterns to suggest that a more central, integrating organization had developed there in the latest 4th and early 3rd millennia BC. Even at the end of the Early Bronze Age, when the palace was built at Norşuntepe and connections with lower elevation Malatya

seem to increase (Conti, Persiani 1993), the size of polities seems small indeed. There were small zones of development, like the one in the Keban Dam lake area and the plains to its southwest, the one in the Aşvan area, one along the Euphrates, and one west of the city of Elaziğ. The increase of sites with black burnished pottery, many of which can be attributed to the early third millennium BC suggests cultural contact with the South Caucasus, and probably the presence of people making that Kura Araxes pottery. However, by the same token, the similarities with Malatya sites, including Arslantepe in ceramics hints at the likelihood that some of these people were already adapted to the more optimal lowland environments west of the high mountains. They could have come from Malatya as readily as from the lands between the Kura and Araxes Rivers. Overall, I think we need to concentrate more on a series of areas within the umbrella of the Kura Araxes cultural tradition: (1) the South Caucasus into Erzurum, (2) Iran east and south of (former) Lake Urmia, (3) the Taurus zone from the western side of Urmia to the eastern part of Elaziğ, (4) the area of Malatya near the Euphrates, including Arslantepe, and (5) the Amuq and Khirbet Kerak. There will be all sorts of variations within these areas, but clearly the trajectory of Arslantepe and Shengavit, Mokhra Blur, and Gegharot, for example, are very different over time.

What we need now is a much more precise typology based on more well excavated sites with radiocarbon dates from secure proveniences. We need more data. Given the subtle and extensive variations, we need more information than the normal presentation in book form can provide. Given the ubiq-

uitous presence of clouds of internet data, we should encourage scholars to share more information on their pottery's manufacturing, shapes, functions, and style. We did for Godin Tepe. Anyone can go to <https://tspace.library.utoronto.ca/handle/1807/26556> and download the full data set for Godin IV pottery, as well as fieldnotes, catalogs, and many pictures. We plan to do the same for Shangavit with every diagnostic potsherd from a reliable provenience typed and measured, along with a color photograph front and back of pottery from each locus. All non-diagnostics will be classified as fine, utility, or cooking ware, and counted. I had proposed an Early Transcaucasian web archive and even set it up, but when I asked the people who had wanted to participate to contribute, I received little. Probably a site-by-site series of web archives would be more practical.

We also need a new chronological nomenclature to unite the Early Bronze and Kura Araxes sequences. We need new studies of the ancient environments and comparative work on animal husbandry and crop choice. We need measures of

complexity that probably are not ones applied to Mesopotamia.

A few decades ago, the Uruk and related cultures of the North and East were similarly unexplained. There is hope that these cultures of the mountains will be better understood in the decades to come.

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APPENDIX 1

1= site; 2=province, 3=pot no.; 4=body part; 5=shape; 6=exterior surface treatment 1; 7=exterior surface treatment 2; 8=interior surface treatment 1; 9=interior surface treatment 2; 10=exterior color; 11=interior color; 12=core color; 13=additional comments; 14=shape (figure, letter); 15= exterior/interior slip?; 16= temper; 17= Handmade (HM) or Wheel made (WM); 18=firing (L)ow, (M)edium, (H)igh; 9 body thickness (mm.); 20= other thickness (rim, base); 21= circumference (centimeters); 22=period/ group LC= Late Chalcolithic (4th millennium BC), KA= Kura Araxes (/Early Transcaucasian), EB, Early Bronze); 23= sampled for petrography.

10-12 Munsell equivalents: light red (10R7/6), red (7.5R5/8), light brown (10YR7/3, 6/2, 5YR 8/2), buff (7.5YR8/3); red brown (2.5YR 5/4), brown (7.5YR 5/4), black (N2.5), dark gray (N4), gray (N6).

1	2	3	4	5	6	7	8	9	10	11	12	13	14	14	15	16	17	18	19	20	21	22
Çınaz	Elazığ	001	rim body	bowl	smoothed				gray	light brown	gray		088	y/y	quartz grit chaff	HM	L	7.20	9.70	24.00	LC	
Çınaz	Elazığ	003	rim and body	bowl	smoothed		smoothed		gray	gray	light brown		10q	y/y	fine grit and chaff	HM	L	8.60	5.30	24.00	KA	
Çınaz	Elazığ	018	rim body	bowl					buff	buff	dark gray		08f	y/y	quartz grit chaff	HM	LC	10.80	9.30	34.00	LC	
Çınaz	Elazığ	035	rim body	bowl	smoothed	reserve slip band	smoothed	slight angle to right	light brown	light brown	gray brown		09j	y/y	quartz small to medium sized and chaff	WM	M	9.90	19.90	33.00	EB	
Çınaz	Elazığ	036	rim body	hole mouth bowl	wet smoothed	reserve slip	wet smoothed	line a rim	light red	buff	buff		09h	n/n	basalt and quartz fine grit	WM	M	10.20	8.30	16.00	EB	y
Çınaz	Elazığ	059	rim body	bowl					light brown	light brown	dark gray		08x	y/y	chaff little basalt	SWM	L	12.90	9.80	38.00	LC	
Çınaz	Elazığ	069	rim body	hole mouth bowl					light brown	light brown	light brown		09q	y/y	quartz fine grit and chaff	HM	L	6.10	4.80	18.00	LC	
Çınaz	Elazığ	070	Rim	jar	light burnish		chaff faced		burned brown	buff	buff		08u	y/y	Chaff	HM	L	10.0	8.60	18.00	LC	
Çınaz	Elazığ	071	rim body	bowl					light brown	light brown	brown		08d	y/y	quartz grit little chaff	HM	L	7.60	5.80	8.00	LC	
Çınaz	Elazığ	074	rim neck	flaring rim jar	smoothing				red brown	red	red		08x	y/y	quartz very fine grit chaff	HM	L	11.30	10.70	23.00	LC	
Çınaz	Elazığ	079	rim and body	bowl				beveled rim	buff	buff	black		08b	y/y	basalt grit chaff	HM	LM	10.70	8.90	22.00	LC	
Çınaz	Elazığ	091	rim body	bowl					light brown	light brown	brown		08h	y/y	basalt grit chaff	HM	L	14.40	12.50	30.00	LC	
Çınaz	Elazığ	094	rim neck	flare rim jar	smoothing				light brown	light brown	brown		08z	y/y	quartz grit and chaff	HM	L	10.00	7.80	10.00	LC	y
Çınaz	Elazığ	095	rim body	bowl	reserved slip	groove under rim			buff	buff	light brown		10g?	y/n	quartz grit little chaff	HM	M	9.90	19.70	34.00	EB	y
Cip	Elazığ	001	base	large jar?	burnished				black	brown	dark gray		11e	y/y	chaff grit	HM	L	13.00	17.10	19.00	KA	
Cip	Elazığ	003	rim neck shoulder	collared jar	smoothed			line under rim	red	brown	black		10p	y/y	chaff grit	HM	L	10.80	11.30	12.00	LC/KA	
Cip	Elazığ	004	rim body	tail open jar	lightly burnished		red		red	red	brown	rail rim 15.5 mm	10q	y/y	chaff	HM	L	16.40	18.30	28.00	LC/EB	
Cip	Elazığ	006	rim neck	jar	burnished				buff	light brown	dark gray		10o	y/y	chaff and grit	HM	L	9.40	7.80	15.00	LC	
Cip	Elazığ	007	rim neck	jar	burnish		burnish		red	light red	red brown	short blunt rim	09n	y/y	quartz small sized and chaff	HM	L	16.70	15.00	21.00	EB	

Cup	Ellaiḡ	008	rim neck	open jar	smoothed		smoothed		red	light red	brown	short neck	09h	y/y	quartz and basalt fine grit chaff	HM	L	15.00	14.90	24.00	EB	
Cup	Ellaiḡ	010	rim neck	jar	smoothed		smoothed		buff	light brown	dark gray		10q	y/y	quartz grit chaff	HM	L	8.90	9.20	21.00	LC	
Cup	Ellaiḡ	012	rim body	open bowl	smoothed		smoothed	triangle lug 20.3 mm	red	red	dark gray		09y	y/y	quartz grit grit little chaff	HM	L	6.20	7.20	26.00	EB	
Cup	Ellaiḡ	014	rim neck shoulder	jar				chaff faced	light red	light red	black		08hh	y/y	quartz chaff and quartz	HM	L	9.30	7.60	16.00	LC	
Cahadar	Ellaiḡ?	009	rim body	hole mouth bowl	smoothed		smoothed		red	light red	brown		09z	y/y	quartz fine grit/sand grit/sand little chaff	HM	L	11.30	9.90	20.00	EB	
Cahadar	Ellaiḡ?	011	rim neck body	short neck jar					buff	light brown	dark gray		09z	y/y	quartz grit/sand grit/sand little chaff	HM	L	12.30	9.50	17.00	EB	
Cahadar	Ellaiḡ?	016	rim shoulder	open jar	smoothed		smoothed	short sticky neck 12.5mm	light red	light red	red brown		10i	y/y	quartz grit fine chaff	HM	L	10.20	13.40	20.00	EB	
Cahadar	Ellaiḡ?	022	rim body	bowl					buff	light brown	dark gray		11h?	y/y	grit and chaff	HM	L	10.10	8.80	32.00	EB	
Cahadar	Ellaiḡ?	023	rim body	cooking pot				triangle lug 32.8 mm	light brown	dark gray	black	interior top same as ext	09y	y/y	sand and chaff	HM	LM	11.40	11.80	22.00	EB	
Dick Tepe	Ellaiḡ	025	rim neck body	deep open jar	smoothed		smoothed	carination	long neck	gray	gray	dark gray	10k	y/y	quartz chaff	HM	LM	6.40	5.00	17.00	KA	
Dick Tepe	Ellaiḡ	026	rim neck body	tall jar	smoothed		smoothed		black	light red	black		10h	y/y	quartz grit and chaff	HM	L	5.10	6.40	18.00	KA	
Dick Tepe	Ellaiḡ	027	rim and body	hole mouthed bowl	burnished		burnished		black	light red	black		09q	y/y	quartz grit chaff	HM	L	17.30	9.00	30.00	KA	
Dick Tepe	Ellaiḡ	028	rim neck	jar	burnished		burnished		gray	gray	gray		10i	y/y	quartz fine grit & little chaff	HM	L	5.90	5.51	18.00	KA	
Dick Tepe	Ellaiḡ	029	rim neck body	long neck bowl	rim burnished		smoothed	ext rim same as int	black	buff	black		09h	y/y	chaff fine grit fine grit chaff	HM	L	15.80	7.30	20.00	KA	
Dick Tepe	Ellaiḡ	034	rim neck	carinated jar	burnished		burnished	rim pinkish gray	dark gray	light brown	dark gray	buff	09b	y/y	quartz fine grit fine grit chaff	HM	LM	8.70	7.10	20.00	KA	
Dick Tepe	Ellaiḡ	035	rim body	jar	burnish		burnish		gray	light brown	gray		10j	y/y	chaff san	HM	L	7.30	6.60	15.00	KA	
Dick Tepe	Ellaiḡ	036	rim and neck	jar	burnished		burnished		gray	gray	gray		10b	y/y	quartz fine grit	HM	LM	5.30	4.30	12.00	KA	
Dick Tepe	Ellaiḡ	037	rim neck	flaring rim jar					dark gray	light brown	light brown		09h	y/y	quartz grit and chaff	HM	L	11.70	12.60	22.00	KA	
Dick Tepe	Ellaiḡ	038	rim body	jar	burnish		burnish	ext light red brown	black	light brown	red brown	brown	10d	y/y	grit little chaff	HM	L	10.50	9.90	28.00	KA	
Dick Tepe	Ellaiḡ	039	rim and body	shallow bowl	smoothed		smoothed		black	brown	black		11h	y/y	grit and chaff	HM	L	9.20	8.30	13.00	KA	
Dick Tepe	Ellaiḡ	040	rim and neck	jar	hard burnished		smoothed		black	red	red		09h	y/y	basalt and quartz fine grit	HM	LM	5.00	5.00	12.00	KA	
Dick Tepe	Ellaiḡ	041	rim body	shallow bowl	rim pink		burnished	rim color same as int	black	buff	black		09b	y/y	quartz grit and chaff	HM	LM	8.90	10.80	28.00	KA	
Dick Tepe	Ellaiḡ	042	rim neck	jar					black	light brown	brown		10i	y/y?	quartz grit	HM	L	11.60	9.10	21.00	KA	
Dick Tepe	Ellaiḡ	043	rim neck	jar	smoothed		smoothed	ext rim same as int	black	light brown	light brown		09h	y/y	basalt & quartz fine grit & some chaff	HM	L	6.90	7.90	20.00	KA	

Diak Tepe	Eloziḡ	044	rim neck body	small jar						light brown	buff	dark gray		11p	y/y	quartz fine grit chaff	HM	L	6.50	8.10	14.00	K/A
Diak Tepe	Eloziḡ	045	rim and neck	jar	burnished		smoothed			light brown	light red	black		11n	y/y	quartz grit chaff	HM	L	13.40	18.00	26.00	K/A
Diak Tepe	Eloziḡ	047	rim and neck	jar	smoothed					red	red	black		09z	y/y	grit and chaff	HM	L	10.00	14.20	22.00	EB/K/A
Diak Tepe	Eloziḡ	051	rim	Storage jar	Light burnish					Gray	Gray	Gray		11v	y/n	?	HM	L	20.00	18.00	38	K/A
Diak Tepe	Eloziḡ	053	rim body	bowl	burnished		smoothed			light brown	light brown	dark brown		09k	y/y	quartz grit chaff	HM	L	15.00	10.70	24.00	K/EB
Diak Tepe	Eloziḡ	055	rim neck	flaring jar	burnished					red	light red	dark gray		10r	y/y	chaff and grit	HM	L	15.30	9.40	16.00	K/EB
Diak Tepe	Eloziḡ	059	rim body	storage jar	burnished				rim rim 21mm	light red	light red	brown		10q	y/y	grit and chaff	HM	L	8.70	18.30	31.00	K/A
Diak Tepe	Eloziḡ	067	rim neck	jar	burnished					red	red	black		10p	y/y	quartz grit chaff	HM	L	7.10	6.80	26.00	EB/K/A
Diak Tepe	Eloziḡ	068	lid	lid	smoothed				depression middle	light brown	light red	dark gray		11aa	y/n	chaff grit	HM	L	14.70	14.60	30.00	K/A
Diak Tepe	Eloziḡ	069	rim and body	bowl	burnished		burnished			light brown	light red	dark gray		10e	y/y	quartz fine grit & some chaff	HM	LM	10.60	9.80	30.00	K/A
Diak Tepe	Eloziḡ	071	rim body	cooking pot	burnish				triangle rim 29.1 mm	red	red	dark gray		09w	y/y	grit and chaff	HM	L	10.10	15.50	18.00	K/A/EB
Diak Tepe	Eloziḡ	072	handle	jug					32.90 w x 65.4 l	buff	buff	dark gray		?	y/y	grit and chaff	HM	L	16.50	0.00	0.00	K/A
Diak Tepe	Eloziḡ	078	lid	lid					burned exterior	black	brown	black		11aa	y/y	sand and chaff	HM	L	18.40	16.80	36.00	K/A
Diak Tepe	Eloziḡ	084	rim neck body	jar	burnished					black	black	black		09m	y/y	quartz grit & some chaff	HM	M	5.90	5.10	18.00	K/A
Diak Tepe	Eloziḡ	A	rim body	hole mouth bowl	painted					red brown	red	light brown		11n	n/y	chaff and quartz and basalt grit	HM	L	5.70	6.70	12.00	EB/K/A
Edemiti Koya	Malaya	001	rim neck body	curvated jar	burnished		burnished			gray	brown	gray			y/y	fine quartz grit chaff	HM	L	9.90	7.80	20.00	EB
Erenzanti	Malaya	001	rim & shoulder	tail bowl	light burnished		burnished	ext rim same as int		gray	light brown	gray		?	y/y	fine quartz white powder (lime?)	HM	M	10.30	8.10	20.00	K/A
Erenzanti	Malaya	003	rim and shoulder	jar	burnished		burnished			black	red	black		09v	y/y	quartz grit and some chaff	HM	M	13.00	9.40	18.00	K/A
Fethaye Bayram T	Malaya	001	base	jar?	smoothed					black	buff	black			y/n	quartz grit	HM	L	11.30	12.30	18.00	K/A
Fethaye Bayram T	Malaya	004	rim & body	bowl	burnished		burnished	angled wing design		black	light brown	black		09b	y/y	quartz grit & sand & grit?	HM	L	14.40	6.10	8.00	K/A
Fethaye Bayram T	Malaya	006	rim body	tail bowl	smoothed		smoothed			dark gray	light brown	light brown		10e	y/y	quartz grit	HM	M	8.50	11.80	23.00	K/A
Fethaye Bayram T	Malaya	007	rim body	bowl	burnished		burnished			red brown	black	dark gray		09a	y/y	quartz fine grit	HM	M	6.00	4.60	13.00	K/A
Fethaye Bayram T	Malaya	033	rim body	bowl	burnished			rim int color		black	red brown	black		?	y/y	quartz and basalt grit	HM	LM	10.30	7.90	20.00	K/A
Fethaye Bayram T	Malaya	003	rim neck	jar	burnished					gray	light brown	gray		10k	y/y	quartz grit little chaff	HM	L	10.60	14.70	25.00	K/A
Fethaye Bayram T																						y

Feilaye Bayram T	005	rim neck	jar	burnished	2 color rim		rim	black	light brown	red brown	light red brown	10b	y/y	quartz fine grit and chaff	HM	M	7.40	8.40	24.00	KA	
Feilaye Bayram T	008	rim body	collar jar	line burnished	groove under rim			black	light brown	black	greenish material in core	10p	y/n	quartz grit	HM	L	12.00	9.80	22.00	KA	
Gokce	059	rim body	hole mouth	gritty surface				light red	red	black			y/y	grt large chaff	HM	L	12.70	11.60	16.00	LC	
Gokce	069	rim	flaring rim jar					light brown	light brown	black			y/y	quartz basalt grit chaff	HM	L	9.90	8.00	24.00	LC	
Gokce	002	rim neck	jar	burnished	rim pink		ext rim same as int.	black	buff	black		10b	y/y	fine quartz and some chaff	HM	L	8.70	7.60	22.00	KA	
Gokce	003	rim and body	bowl	rim very pale br	10YR 8/3	burnished	ext rim same as int.	black	light brown	black		09k	y/y	fine quartz grit and some chaff	HM	L	11.40	9.60	28.00	KA	
Gokce	005	rim neck	jar	burnished	2 colors black	smoothed		buff	light red	light red		10j	y/y	quartz grit & some chaff	HM	L	8.70	8.50	26.00	EB	
Gokce	009	rim and neck	flaring	burnished	notified black			red brown	light brown	black	groove under rim	11n	y/y	grt and grit and chaff	HM	L	12.00	11.00	30.00	KA	
Gokce	010	rim neck	flaring rim jar	burnished	burnished	burnished		black	light red	black		10b	y/y	grt and chaff	HM	L	17.60	19.20	36.00	KA	
Gokce	012	rim neck shoulder	jar	rim light red	10R 6/6		ext rim same as int.	black	light red	black		10j	y/y	fine quartz grit and low chaff	HM	L	8.00	8.10	28.00	KA	
Gokce	014	rim neck	jar	burnished	rim light red	smoothed	ext rim same as int.	black	light red	light red		11s	y/y	quartz grit chaff	HM	L	10.50	8.70	32.00	KA	
Gokce	018	base body	jar				ext rim same as int.	light red	light red	black		11b	y/y	grt and chaff	HM	L	48.00	26.20	26.00	KA	
Gokce	025	rim neck	jar	rim pink	5.7YR 8/3	burnished	ext rim same as int.	gray	buff	black	squared rim groove under rim	11n	y/y	chaff and	HM	L	15.90	16.30	22.00	EB KA	
Gokce	034	rim and neck	jar	burnished		burnished		red	red brown	red		10q	y/y	grt and chaff	HM	L	10.80	11.00	20.00	KA	
Gokce	035	rim body	bowl	burnished	burnished	burnished		light red	red	black		09k	y/y	quartz grit and chaff	HM	LM	8.70	8.90	18.00	KA	
Gokce	037	rim and neck	jar	burnished				red	light brown	dark gray	rail rim 22.1	11n	y/y	grt and chaff	HM	L	20.30	24.80	20.00	KA	
Gokce	051	rim and neck	cooking pot	smoothed	smoothed	smoothed		light brown	light brown	black	triangle rim 17.4	09y	y/y	quartz fine grit chaff	HM	L	8.50	8.70	18.00	EB KA	
Gokce	052	rim neck	jar	smoothed				light red	light red	black		09z	y/y	quartz and basalt fine grit and low chaff	HM	LM	7.60	10.00	22.00	KA	
Gokce	054	rim and body	cooking pot					red	red	red	triangle lug 25.8	09y	y/y	quartz grit and chaff	HM	L	12.50	12.50	24.00	KA	
Gokce	055	rim neck	jar	burnished				red	red	black		10b	y/y	quartz grit and chaff	HM	L	11.00	8.40	22.00	KA	
Gokce	059	rim neck	flaring jar	smoothed				red	red	black		09z	y/y	chaff and	HM	L	13.50	11.40	20.00	EB KA	
Gokce	060	rim and body	cooking pot	smoothed				light red	light red	black	triangle rim 34.4	11x	y/y	grt and chaff	HM	L	12.90	13.70	30.00	KA	
Gokce	062	rim body	cooking pot	smoothed				buff	buff	black	triangle lug 28.5	09k	y/y	grt & chaff	HM	L	13.20	12.10	28.00	KA	
Gokce	063	rim body	bowl					dark gray	light brown	light brown		09i	y/y	quartz fine grit and chaff	HM	L	11.10	8.90	26.00	KA	
Gokce	064	rim neck	flaring rim jar					light brown	light brown	black		10n	y/y	quartz fine grit & low chaff	HM	L	9.50	8.40	34.00	KA	

		065	lid	lid	burnished		smoothed		black	light rim light red	black	groove under rim	11aa	y/y	chaff and grit quartz and basalt grit & some chaff	HM	L	25.30	10.30	21.00	KA
Gökçe	Gökçe	066	rim neck	jar	burnished		burnished		light red	light red	red gray		10p	y/y		HM	M	7.10	8.60	30.00	KA
		067	rim neck	jar	smoothed		smoothed		light red	light red	dark gray	rail rim 23.8	10q	y/y	grit and chaff	HM	L	22.20	23.90	50.00	KA
		070	rim and neck	jar	smoothed				light	light	black	squared rim	10q	y/y	big grit and chaff	HM	L	14.20	15.10	24.00	KA
		071	rim and body	hole mouthed bowl	burned				light red	light red	dark brown		09u	y/y	quartz grit and little chaff	HM	L	11.90	11.40	24.00	KA
		071	rim & body	hole mouth bowl				badly eroded	light red	light red	brown		?	y/y	basalt and quartz grit	HM	M	12.20	11.80	33.00	KA
		001	rim neck	jar	smoothed				black	red brown	black		09z	y/y	grit and chaff	HM	LM	16.90	15.00	40.00	KA
		010	rim and neck	jar	burnished		burnished	square flaring rim	black	light red	black		10p	y/y	quartz grit and chaff	HM	L	7.10	8.40	14.00	KA
		011	rim neck	jar	burnished?		smoothed	color on ext	brown	light brown	dark gray		10q	y/y	grit and chaff	HM	L	9.20	14.30	30.00	KA
		023	rim neck body	carinated jar	burnish		burnish	rail rim 14.8 mm rim dark yellow brown	black	black	black	brown mottling	09m	y/y	quartz grit and chaff	HM	LM	8.40	5.50	12.00	KA
		001	rim body	bowl	smoothed				light brown	light brown	black			y/y	quartz fine grit chaff	HM	L	9.20	7.70	25.00	LC?
		006	rim and neck	jar	burnished			rim colored interior	black	red	black	ext incised groove		y/y	quartz grit	HM	M	15.50	18.00	38.00	EB
		008	rim and neck	jar					light brown	light brown	light brown			y/y	quartz and basalt	HM	L	8.90	24.00	22.00	LC
		011	rim	jar	smoothing marks		smoothing marks		light red	light red	dark gray	EH folded rim	10p	y/y	chaff	WM?	M	7.80	12.30	24.00	EB/KA?
		012	body	bowl?	medium burnish		washed	running angles same as 13	light red	light red	light red	cover-fired	-	y/y	quartz grit chaff	HM	M	19.80	0.00	0.00	EB/KA?
		036?	base	storage jar?	pattern burnished				light red	light red	brown		?	y/y	basalt medium grit	HM	L	29.60	16.10	25.00	EB?
		013	body	storage bowl jar	washed		washed	cross hatch	light red	light red	light red	overfired	-	y/y	quartz small grit chaff	HM	M	19.60	0.00	0.00	EB?
		001	rim and body	bowl	line burnished		line burnished smoothed on top		gray	light brown	black		09h	y/y	quartz grit and chaff	HM	L	7.30	5.30	16.00	KA
		002	rim and neck	jar	burnished			rim diff color than body	black	black red	black	clay mica	11m	y/y	quartz fine grit	HM	L	9.10	6.90	22.00	KA
		003	rim and body	bowl?	smoothed			rim same as interior	black	light brown	black		10d	y/y	quartz fine grit and chaff	HM	LM	11.00	12.30	18.00	KA
		004	rim body	jar or hole mouth	burnished				black	buff	black		10p	y/y	quartz fine grit chaff	HM	L	11.20	9.70	20.00	KA
		005	rim and neck	jar	highly burnished			groove under rim	black	brown	black		10p	y/y	quartz fine grit and chaff	HM	LM	10.50	7.60	10.00	KA
		006	rim shoulder	small mouth jar bowl	smoothed		modifed color		black	buff	black		09f	y/y	quartz fine grit chaff	HM	L	8.10	7.20	20.00	KA
		007	body and rim	jar bowl	light burnish			rim same as int	dark gray	buff	black	ext mottling same as rim	09k	y/y	quartz grit and chaff	HM	LM	15.50	9.50	24.00	KA

Hinsor	Elkag	009	body	jar	burnished	mixed dgn freen rim pale red				dark gray	light brown	black		--	y/y	quartz grit chaff	HM	M	11.70	0.00	0.00	KA
Hinsor	Elkag	008	rim and neck	jar	lightly burnished					black	light brown	light brown		09u	y/y	quartz grit and chaff	HM	LM	8.10	12.70	18.00	KA
Hinsor	Elkag	010	rim neck	jar	burnished		smoothed near rim			black	buff	black		10i	y/y	quartz grit chaff	HM	L	12.30	7.90	13.00	KA
Hinsor	Elkag	011	rim and body	tail bowl	lightly burnished	groove under rim	lightly burnished			black	light brown	light brown		09z	y/y	fine quartz grit and chaff	HM	M	9.10	9.00	20.00	KA
Hinsor	Elkag	012	rim neck	flair rim bowl			burnished			black	red	black		11i	y/y	basalt fine grit	HM	M	15.70	8.50	22.00	KA
Hinsor	Elkag	013	rim and body	hole mouth bowl	light burnish	rim light red br	light burnish			black	light brown	black		10e	y/y	quartz and basalt grit and chaff	HM	L	11.20	9.40	16.00	KA
Hinsor	Elkag	015	rim and neck	jar	light burnish		mottled color			black	light brown	black		10j	y/y	basalt grit and chaff	HM	LM	15.40	8.60	26.00	KA
Hinsor	Elkag	016	rim body	bowl						red brown	red	black		10m	y/y	quartz grit chaff	HM	L	10.50	8.90	30.00	KA
Hinsor	Elkag	017	rim neck body	collar jar	smoothed		mottled dark gray unven smoothing			brown	brown	black		09z	y/y	quartz grit and chaff	HM	L	8.20	6.70	20.00	KA
Hinsor	Elkag	018	rim neck	jar	burnished	line under rim				red	buff	dark gray		09z	y/y	quartz and basalt grit and chaff	HM	M	9.40	8.50	16.00	KA
Hinsor	Elkag	019	rim and neck	jar	v lightly smooth					light brown	light brown	dark gray		10q	y/y	quartz and basalt grit and chaff	HM	L	20.70	16.20	31.00	KA
Hinsor	Elkag	020	rim neck	long necked jar	groove under rim	burnished	smoothed			red brown	light red	dark gray		10p	y/y	quartz grit chaff	HM	L	10.00	7.90	25.00	KA
Hinsor	Elkag	021	rim and body	bowl	lightly smoothed		light smooth			light brown	buff	dark gray		10t	y/y	chaff and quartz grit	HM	L	16.20	18.00	28.00	KA
Hinsor	Elkag	022	rim and body	bowl	smoothed		smoothed			gray	gray	gray		09e	y/y	sand and chaff	HM	L	9.10	7.30	12.00	KA
Hinsor	Elkag	023	rim & neck and body	jar	burnished		smoothed			buff	light brown	dark brown		11n	y/y	basalt grit and chaff	HM	L	12.70	13.70	31.00	KA
Hinsor	Elkag	024	rim and body	hole mouth bowl	lightly smoothed		lightly smoothed			light red	light red	brown		09g	y/y	chaff and quartz grit	HM	L	12.40	14.40	22.00	KA
Hinsor	Elkag	027	body	?	smoothed					dark gray	light brown	dark gray		--	y/y	quartz and basalt grit-chaff	HM	L	10.10	0.00	0.00	KA
Hinsor	Elkag	028	base	jar	smoothed					black	black	black		11b	y/y	quartz fine grit and chaff	HM	L	14.30	25.60	16.00	KA
Hinsor	Elkag	029	base	jar	burnished					black	black	black		11b	y/y	quartz fine grit and chaff	HM	L	13.40	20.60	16.00	KA
Hinsor	Elkag	030	body	?	reserve slip	downward like	smoothed			light brown	light brown	light brown		--	y/y	basalt fine grit	HM	M	14.80	0.00	0.00	EB
Hinsor	Elkag	031	rim and body	hole mouthed bowl	smoothed					black	black	black		09m	y/y	quartz grit and chaff	HM	M	8.00	6.30	16.00	KA
Hinsor	Elkag	032	rim	neck	body		smoothed			black	light brown	black		10a	y/y	quartz grit and chaff	HM	LM	8.50	7.90	18.00	KA
Hinsor	Elkag	033	rim neck body rim neck	jar	smoothed		smoothed top			dark gray	buff	dark gray		10p	y/y	quartz grit and chaff	HM	L	14.70	19.50	42.00	KA
Hinsor	Elkag	034	rim neck	jar	smoothed	outturned rim				light brown	light brown	gray		10j	y/y	quartz grit chaff	HM	L	10.00	9.50	12.00	KA

Hinsor	Elazığ	035	rim body	hole mouth bowl	smoothed					burn marks	light brown	light brown	dark gray			09z	y/y	quartz and basalt grit	HM	L	15.60	12.20	32.00	KA
Hinsor	Elazığ	037	rim and shoulder	hole mouth jar	lightly smoothed						red	red	red gray			10k	y/y	quartz and basalt grit and chaff	HM	L	7.00	7.80	14.00	KA
Hinsor	Elazığ	039	base	jar	smoothed						red brown	gray	red brown			11e	y/y	quartz & basalt grit	HM	L	14.60	22.80	15.00	KA
Hinsor	Elazığ	040a	andiron	andiron	badly burnished						light red	light red	dark gray			--	y/y	sand chaff	HM	L	27.70	28.20	45.00	KA
Hinsor	Elazığ	040	rim and shoulder	jar	smoothed					squared rim 15.5	light brown	light brown	dark gray			10e	y/y	quartz and basalt grit	HM	L	11.00	12.70	28.00	EB
Hinsor	Elazığ	042	rim body	collared jar	smoothed						light brown	light brown	dark gray			09z	y/y	quartz small grit chaff	HM	L	9.70	7.40	14.00	KA
Hinsor	Elazığ	050	rim body handle	small bowl	groove under rim						red brown	red brown	red brown			11z	y/y	quartz fine grit chaff	HM	L	7.80	5.80	8.00	EB
Hinsor	Elazığ	051	rim body	bowl	smoothed						light brown	light brown	light brown			11z	y/y	quartz small grit chaff	HM	L	7.40	5.60	11.00	EB
Hinsor	Elazığ	052	rim neck	jar	burnish						red brown	red	dark gray			11v	y/y	sand chaff	HM	M	9.20	15.40	36.00	KA
Hinsor	Elazığ	054	rim and neck	jar	lightly smoothed						buff	light brown	dark gray			09u	y/y	large grit some chaff	HM	L	12.00	9.40	29.00	EB
Hinsor	Elazığ	056	lid	lid	smoothed						light brown	buff	brown			11aa	y/y	fine quartz grit and some chaff	HM	L	15.30	10.60	18.00	KA
Hinsor	Elazığ	059	rim body	bowl	burnished						red brown	buff	dark gray			09d	y/y	quartz grit chaff	HM	L	10.80	10.30	24.00	EB
Hinsor	Elazığ	063	rim and body	bowl	line burnished					rim same as interior	brown	light red	light red			09f	y/y	quartz grit and chaff	HM	L	10.40	9.10	26.00	KA
Hinsor	Elazığ	064	lid	lid	lightly burnished						black	light red	black			11aa	y/y	quartz grit and chaff	HM	L	17.40	9.30	26.00	KA
Hinsor	Elazığ	064A	lid	lid	untreated						light red	red	dark gray			11aa	y/y	quartz grit chaff	HM	L	18.10	0.00	0.00	KA
Hinsor	Elazığ	065	rim body	bowl	burnish						pale brown	light brown	dark gray			09g	y/y	grit and chaff	HM	L	15.50	10.40	30.00	KA
Hinsor	Elazığ	066	rim body	hole mouth bowl	slight line burni						buff	light brown	light brown			09z	y/y	basalt various	HM	L	10.30	10.00	43.00	KA
Hinsor	Elazığ	067	lid	lid	burnished lightly						gray	black	black			11aa	y/y	quartz fine grit chaff	HM	L	10.90	10.10	26.00	KA
Hinsor	Elazığ	068	lid	lid	burnished						light brown	light brown	light brown			11aa	y/y	small grit little chaff	HM	LM	16.80	11.00	42.00	KA
Hinsor	Elazığ	069	lid	lid	lightly smoothed						light brown	light brown	black			11aa	y/y	quartz and basalt grit	HM	L	13.80	7.70	28.00	KA
Hinsor	Elazığ	070	rim and body	bowl	burnished						red	red	black			09e	y/y	chaff and basalt grit	HM	L	10.60	8.80	20.00	KA
Hinsor	Elazığ	074	rim neck	large jar							brown	light brown	dark gray			10b	y/y	large quartz grit	HM	L	20.70	18.80	42.00	EB
Hinsor	Elazığ	077	rim and shoulder	jar	lightly smoothed						light brown	light brown	light brown			09v	y/y	quartz and basalt sand	HM	M	11.30	13.30	25.00	EB1,C2
Hoşnabat	Elazığ	034	rim body	hole mouth bowl	reserve slip						buff	gray	buff			--	y/y	basalt and quartz fine grit	WM	MH	12.20	16.10	28.00	EB

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Kara Höyük	Malaya	019	rim body	cooking pot	smoothed		smoothed		smoothed		black	light brown	dark gray	triangle lug 24.4	09y	y/y	quartz, basalt grit little chaff	HM	L	14.90	11.20	32.00	KA	
Kara Höyük	Malaya	020	rim and body	hole mouth jar	pattern burnished					black	light brown	black			09z	y/y	quartz grit	HM	L	13.70	16.90	42.00	KA	
Kara Höyük	Malaya	021	rim & shoulder	tail jar	burnished				burnished	black	red	black	rail rim		10t	y/y	basalt and quartz grit some chaff	HM	LM	12.20	17.30	26.00	KA	y
Kara Höyük	Malaya	027	body	?	burnished			postulate white		red	light brown	black			09aa	y/y	quartz grit	HM	M	11.90	0.00	0.00	KA	
Kara Höyük	Malaya	038	rim & neck	open jar	burnished					black	red	black	rail rim		10t	y/y	quartz grit and some chaff	HM	L	12.50	15.60	39.00	KA	
Kara Höyük	Malaya	B	body	bowl?	incised horseshoe					buff	buff	light brown			--	n/n	basalt and quartz grit	HM	L	7.60	0.00	0.00	LC?	
Kilise Tepe	Malaya	001	rim & body	cooking pot						gray	gray	dark gray	triangle lug 24		11y	y/y	quartz grit little chaff	HM	M	7.60	9.40	18.00	KA	
Kilise Tepe	Malaya	003	rim body	cooking pot	line burnish				triangle lug 25.1mm	black	light brown	light brown			09x	y/y	quartz grit	HM	M	9.90	9.70	24.00	KA	
Kilise Tepe	Malaya	004	rim body	bowl	burnished			pierced handle		red	black	brown			08c	y/y	quartz and basalt	HM	LM	4.60	3.70	14.00	LC	
Kilise Tepe	Malaya	006	rim body	cooking pot	smoothed				triangle lug	light brown	gray	dark gray	mica clay		11x	y/y	quartz grit and sand	HM	M	7.20	9.70	22.80	KA	y
Kilise Tepe	Malaya	008	Rim and body	bowl	burnished					black	light red	black			09h	y/y	fine grit	HM	M	6.60	4.10	9.00	KA	y
Kilise Tepe	Malaya	009	rim & shoulder	tail jar	ext rim diff col			rim light gray		black	light brown	red			09p	y/y	basalt grit w a little quartz	HM	M	14.30	17.10	30.00	KA	
Kilise Tepe	Malaya	010	rim body	jar	light burnished				burn marks exterior	gray	gray	black			09l	y/y	quartz fine to medium	HM	HM	6.00	4.60	20.00	KA	y
Kilise Tepe	Malaya	011	rim neck	jar	burnished					black	light brown	black			10a	y/y	quartz fine grit	HM	M	4.90	3.90	14.00	KA	
Kilise Tepe	Malaya	012	rim neck	jar	smoothed					light brown	light gray	dark gray	folded rim		--	y/y	sand	HM	L	5.70	9.50	20.00	KA	
Kilise Tepe	Malaya	015	rim neck	jar	smoothed					black	light brown	light brown	flaring rim		10i	y/y	quartz grit	HM	LM	8.70	10.70	24.00	KA	
Kilise Tepe	Malaya	018	base	jar	burnished					black	light brown	light brown			11g	y/n	quartz and basalt	HM	L	12.70	17.10	19.00	KA	
Kilise Tepe	Malaya	020	base	bowl	rough					light red	red	light red			--	y/y	quartz little	HM	M	6.50	14.10	6.00	KA	
Kilise Tepe	Malaya	021	rim body	hole mouth	rim color int					gray	light brown	gray			08t	y/y	basalt grit sand and chaff	HM	LM	13.20	10.20	14.00	LC	
Kilise Tepe	Malaya	022	rim body	bowl	rim color from in					black	light brown	black			09d	y/y	basalt fine grit	HM	LM	13.20	10.60	36.00	KA	
Kilise Tepe	Malaya	024	rim body	bowl	rim color of int					dark gray	buff	brown			--	y/y	quartz	HM	L	8.70	8.00	16.00	KA	
Kilise Tepe	Malaya	025	rim body	bowl	tan patina					black	black	black			09f	y/y	quartz grit chaff	HM	M	5.50	4.10	16.00	KA	
Kilise Tepe	Malaya	026	rim neck	jar	burnish			rim color int		black	buff	black			--	y/y	basalt fine grit	HM	LM	4.90	5.10	13.00	KA	
Kilise Tepe	Malaya	047	rim body	bowl	chaff faced					buff	buff	gray			--	n/y	chaff	HM	M	8.40	4.20	12.00	LC	y
Kilise Tepe	Malaya	051	rim body	bowl						buff	buff	dark gray			08b	y/y	sand chaff	HM	L	7.90	5.90	15.00	LC	
Kilise Tepe	Malaya	052	rim body	bowl	chaff faced					light brown	light brown	light brown			--	y/y	chaff and quartz grit	HM	LM	6.80	5.40	16.00	LC	

	Malaya	059	rim body	bowel	smoothed		smoothed	rim light red	smoothed	rim color of the interior	dark gray	buff	dark gray	09g	y/y	HM	LM	17.30	14.10	35.00	KA
Kilise Tepe	Malaya	061	rim and body	hole unsathed bowl							buff	black		11m	y/y	HM	LM	13.50	6.80	28.00	KA
Kilise Tepe	Malaya	063	rim body	shallow bowl						red brown	black	black		--	y/y	HM	L	13.13	8.00	37.00	KA
Kilise Tepe	Malaya	066	rim and body	chaff faced bowl							buff	light brown		--	y/y	HM	L	9.20	5.40	12.00	LC
Kilise Tepe	Malaya	A	body lug handle	jar?						lug 17.5 x 55	buff	light brown		--	y/n	HM	L	12.40	0.00	0.00	LC?
Kizilisugai	Malaya	002	rim and shoulder	jar							brown	red brown		11p	y/y	HM	M	12.90	18.10	28.00	LC
Kizilisugai	Malaya	005	rim & body	smoothed						rim color of the interior	black	light red		--	y/y	HM	LM	10.50	9.00	22.00	KA
Kizilisugai	Malaya	006	rim and body	jar							light brown	black		--	y/y	HM	M	9.70	5.50	9.00	LC
Kizilisugai	Malaya	007	rim & body	line burnished							black	black		11h	y/y	HM	LM	12.00	9.50	34.00	KA
Kizilisugai	Malaya	010	rim and body	smoothed						rim same as int	black	red		09n	y/y	HM	LM	11.40	9.90	12.00	KA
Kizilisugai	Malaya	011	rim and shoulder	smoothed							light brown	black		11e	y/y	HM	L	10.90	7.50	16.00	LC
Kizilisugai	Malaya	027	rim neck	jar							brown	brown		--	y/y	HM	L	9.70	14.10	16.00	LC
Kizilisugai	Malaya	033	rim body	bowel							light gray	black		08q	y/y	HM	L	9.40	9.30	24.00	LC
Konk	Elazığ	002	lid	smoothed							gray	dark gray		11a	y/y	HM	L	17.90	8.70	28.00	KA
Konk	Elazığ	003A	rim body	deep bowl							red	light brown		11m	y/y	HM	LM	10.70	8.40	24.00	KA
Konk	Elazığ	006	rim-base	pot stand						thick 13.1	black	black		11bb	y/y	HM	LM	21.40	12.40	20.00	EB3?
Konk	Elazığ	005	rim body	jar						carinated	black	light brown		09m	y/y	HM?	M	10.10	6.80	14.00	EB3?
Konk	Elazığ	007	rim body	bowel							red	gray		09p	y/y	HM	L	12.70	10.40	26.00	KA
Konk	Elazığ	008	rim and body	small hole mouth jar						red mottling at rim	dark gray	dark gray		--	y/y	WM	M	9.60	4.00	10.00	KA
Konk	Elazığ	009	rim body	open jar						notting	brown	red		10q	y/y	HM	M	17.50	13.50	22.00	KA
Konk	Elazığ	010	rim body	hole mouth jar						triangle lug 23.3mm	light red	light red		09y	y/y	HM	M	8.20	9.00	14.00	KA
Konk	Elazığ	011	rim body	deep bowl						groove under flair rim	gray	red brown		09q	y/y	WM	MH	6.10	3.90	17.00	KA
Konk	Elazığ	012	Body	cooking pot							dark gray	red brown		--	y/n	HM	LM	20.40	0.00	0.00	KA
Konk	Elazığ	013	rim body	hole mouth jar						possible lug	brown	brown		08g	y/y	HM	M	10.10	8.60	20.00	KA

Kövk	Elaçığ	014	Rim shoulder	jar	burnished	2 grooves	burnished		dark gray	brown	dark		118b	y/y	chaff basalt grit	HM?	M	15.80	9.60	13.00	KA	y
Kövk	Elaçığ	015	rim	hole mouth jar					light brown	light brown	dark gray		09p	y/y	chaff basalt	HM	LM	10.30	11.60	12.00	KA	
Kövk	Elaçığ	018	rim body	bottle jar					brown	red	red		09d	y/y	chaff sand	HM	L	12.90	10.30	17.00	EB	
Kövk	Elaçığ	019	rim body	bowl	groove under aqua	square rim			red	red	brown		09j	y/y	quartz basalt grit	HM	LM	9.70	9.60	22.00	KA	
Kövk	Elaçığ	025	body	jar	horseshoe shaped	fingerprint			red	red	black			y/y	chaff quartz sand	HM	L	14.70	0.00	0.00	LC	
Kövk	Elaçığ	026	rim body	tail bowl	finger impressed	handle 17.9 x 10.3			red	red	gray		09g	y/y	quartz grit chaff	HM	L	11.10	13.10	51.00	EB	
Kövk	Elaçığ	027	rim body	hole mouth jar	burnished	teardrop lug	burnished		brown	light brown	dark gray		09q	y/y	basalt pieces	HM?	M	9.20	4.00	10.00	KA	
Kövk	Elaçığ	028	body	?	burnished	raised decoration			red brown	red brown	dark gray		--	y/y	basalt medium	HM	L	22.90	0.00	0.00	KA	y
Kövk	Elaçığ	033	body	?	paint thick lines	& chevron in red		Karababa triangle lug 29.3	buff	buff	buff		--	y/y	quartz grit	WM	MH	5.70	0.00	0.00	EB	y
Kövk	Elaçığ	034	rim body	hole mouth jar	burnished		burnished		brown	brown	brown		09w	y/y	chaff basalt	HM	LM	9.70	12.70	28.00	KA	
Kövk	Elaçığ	035	rim body	tail bowl					light brown	buff	black		09d	y/y	quartz grit chaff	HM	L	15.60	13.10	45.00	LC	
Kövk	Elaçığ	036	rim body	tail bowl					light brown	light red	black		10r	y/y	quartz large grit	HM	L	14.70	13.80	37.00	LC	
Kövk	Elaçığ	037	body	bowl?	burnished	thickened ridge	burnished	handle 10.6 thick	dark gray	brown	dark			y/y	chaff small grit	HM	M	12.20	0.00	0.00	KA	y
Kövk	Elaçığ	002	body	?	reserved slip	thick lines	wet smoothed	slip pale yellow	light brown	gray	gray	light brown slab constr	--	y/y	quartz basalt fine grit	HM	L	12.30	0.00	0.00	KA	
Kövk	Elaçığ	004	rim and body	bowl	smoothed				dark gray	light brown	black		09k	y/y	sand and chaff and green	HM	LM	10.70	6.60	18.00	KA	
Kövk	Elaçığ	005	rim and neck	jar	burnished		burnished on top	int modified black-ft red	black	light red	black		10i	y/y	quartz grit sand	HM	M	7.00	6.70	18.00	KA	
Kövk	Elaçığ	006	rim & body	jar	burnished		burnished on top	int modified black/brown	black	brown	black		09m	y/y	chaff and sand	HM	MH	7.30	4.40	17.00	KA	y
Kövk	Elaçığ	008	rim neck	small jar	highly burnished	rim int color	highly burnished	groove inner rim	black	red	black		09n	y/y	rim grit & other grit;	HM	M	10.00	3.60	10.00	KA	y
Kövk	Elaçığ	009	rim and body	hole mouth bowl	highly burnished		smoothed	int modified bt reddish	black	red brown	black	groove under rim	10k	y/y	chaff cliff; gr stuff	HM	M	10.00	6.00	24.00	KA	y
Kövk	Elaçığ	010	rim & body	bowl					black	light red	black	thin rail rim	09v	y/y	basalt & other angular stone; chaff	HM	L	18.20	10.70	34.00	KA	
Kövk	Elaçığ	026	rim & body	cooking pot	smoothed				light red	light red	black	triangle rim 27.2	11x	y/y	quartz grit and chaff	HM	M	9.70	8.70	24.00	KA	y
Kövk	Elaçığ	027	rim and neck	jar	light burnished		smoothed		dark gray	red brown	black		10i	y/y	basalt grit and light chaff	HM	LM	7.10	8.00	14.00	KA	

Kovenk	Elazığ	028	rim & body	bowl	burnished			black	black	black		09g	y/y	basalt grit chaff and grit	HM	M	10.40	7.90	28.00	KA	
Kovenk	Elazığ	029	rim and neck	jar	smoothed			dark gray	light red	black		10q	y/y	quartz grit and chaff	HM	L	12.90	15.60	16.00	KA	
Kovenk	Elazığ	030	rim and neck	jar	burnished	burnished	3 groove lines	black	red	brown		09v	y/y	chaff and quartz grit	HM	L	9.40	11.20	14.00	KA	
Kovenk	Elazığ	031	rim & neck	jar	3 groove lines	under rim		black	light brown	black		10j	y/y	quartz grit and some chaff	HM	LM	9.80	7.40	15.00	KA	
Kovenk	Elazığ	032	rim and neck	jar	3 groove lines	below rim		black	buff	black		10i	y/y	quartz and basalt grit and chaff	HM	L	15.40	12.20	30.00	EB/KA	y
Maltepe	Malatya	001	rim and body	bowl	red pat intersect	lines reddish brown	chaff faced	light brown	light brown	light brown		08f	y/y	very fine basalt and quartz grit	HM	M	7.90	7.00	28.00	LC	
Maltepe	Malatya	008	rim and body	bowl				light brown	light brown	light brown			y/y	fine basalt grit and chaff	HM	M	11.00	9.60	14.00	LC	
Maltepe	Malatya	009	rim body	small bowl	burnished	burnished		red brown	buff	brown			y/y	quartz and basalt grit	HM	L	6.30	6.50	12.00	KA	
Pınar Tepe	Elazığ	004	rim neck	bottle jar	smoothed			dark gray	light brown	light brown		10h	y/y	quartz fine to med grit	HM	LM	4.60	6.60	11.00	KA	
Pınar Tepe	Elazığ	005	rim neck	jar	burnished			black	light brown	light brown		10p	y/y	quartz and basalt grit little chaff	HM	L	14.50	14.20	32.00	KA	y
Pınar Tepe	Elazığ	007	rim shoulder	bottle jar	burnished	alternate color	flaring rim	black	rim light gray	black	groove under rim	09i	y/y	quartz and basalt grit	HM	M	7.80	8.70	15.00	KA	y
Pınar Tepe	Elazığ	008	rim body	shallow bowl	2 colors	burnished	int black	rim gray	light brown	dark gray		09e	y/y	basalt and quartz grit	HM	M	16.20	7.40	23.00	KA	
Pınar Tepe	Elazığ	010	rim body	small bowl	burnished			black	black	black		09i	y/y	quartz fine grit chaff	HM	M	9.00	6.00	10.00	KA	y
Pınar Tepe	Elazığ	011	rim body	shallow bowl	light burnish			dark gray	dark gray	dark gray		09d	y/y	quartz basalt grit and chaff	HM	M	10.60	6.00	30.00	KA	
Pınar Tepe	Elazığ	013	rim & shoulder	open jar	line burnished		pale brown	black	brown	black	rim light brown	09j	y/y	large quartz and basalt grit	HM	L	13.60	12.30	41.00	KA	
Pınar Tepe	Elazığ	014	rim body	bowl	pattern burnished			black	red	red		09d	y/y	basalt and basalt grit	HM	M	10.60	10.50	4.00	KA	
Pınar Tepe	Elazığ	015	rim body	bowl	burnished	2nd color rim		black	buff	red brown		09g	y/y	quartz and basalt grit little chaff	HM	L	12.50	9.40	28.00	KA	
Pınar Tepe	Elazığ	017	rim shoulder	open jar	burnished		groove under rim ext	brown	light brown	brown		10p	y/y	chaff quartz grit	HM	M	12.90	14.00	51.00	KA	
Pınar Tepe	Elazığ	018	rim body	carinated jar	burnished	smoothed		gray	gray	gray		09m	y/y	quartz and basalt grit	HM	MH	6.80	7.90	13.00	KA	y
Pınar Tepe	Elazığ	019	rim body	small jar	smoothed			light brown	light brown	black		09v	y/y	quartz and chaff	HM	L	11.20	10.80	6.00	EB?	
Pınar Tepe	Elazığ	020	rim	small jar	pattern burnished		carination under rim	black	gray	brown		09u	y/y	basalt fine	HM	M	6.80	7.30	12.00	KA	
Pınar Tepe	Elazığ	021	rim shoulder	jar	highly burnished	differe color rim	triangle lug	black	buff	light brown	lug 22.5 wide	09y	y/y	quartz and basalt grit	HM	M	9.30	12.10	21.00	KA	y
Pınar Tepe	Elazığ	023	rim body	cooking pot	smoothed		triangle lug 21	brown	brown	brown		09y	y/y	quartz grit chaff	HM	L	7.00	9.00	16.00	EB/KA	

Pour Type	Elazığ	024	base	?	burnished			black	brown	brown	black	11a	y/y	basalt & fine quartz grit	HM	M	4.70	0.00	4.00	KA
Pour Type	Elazığ	025	rim body	cooking pot	smoothed		triangle lug 19.5	black	light brown	light brown	black	09y	y/y	quartz & basalt grit	HM	L	8.70	11.00	11.00	KA
Pour Type	Elazığ	026	rim	cooking pot	light burnish		triangle lug 24.7	black	buff	light brown	black	09y	y/n	basalt and quartz grit vague chaff	HM	L	14.00	13.10	12.00	KA
Pour Type	Elazığ	027	rim body	cooking pot	light burnish		triangle lug 31	light brown	light brown	light brown	black	09y	y/y	sand quartz grit	HM	L	11.10	16.20	30.00	KA
Pour Type	Elazığ	028	rim neck	tail jar	highly burnished		groove under ext rim	black	red brown	red brown	black	09p	y/y	quartz fine grit	HM	M	8.30	7.00	18.00	KA
Pour Type	Elazığ	042	rim neck	jar				buff	light brown	light brown	buff	09i	y/y	chaff small and large grit	HM	L	8.30	8.70	14.00	EB
Pour Type	Elazığ	043	rim	pot stand	light burnishing		bottom rim 20.1c1c 13	light brown	light brown	light brown	light brown	11bb	y/y	basalt quartz grit chaff	HM	L	22.30	20.50	18.00	KA
Pour Type	Elazığ	047	rim and neck	jar	burnished			red brown	light brown	light brown	red brown	09t	y/y	small grit and chaff	HM	L	8.40	5.00	14.00	EB
Pour Type	Elazığ	058	rim neck	jar	smoothed			light brown	light brown	light brown	light brown	09z	y/y	quartz and basalt	HM	L	9.80	17.80	24.00	EB
Pour Type	Elazığ	065	rim neck	hole mouth bowl			triangle lug 21	red	buff	light brown	red	09y	y/y	quartz and basalt fine chaff	HM	M	8.90	12.30	26.00	EB
Pour Type	Elazığ	066	lid	lid	smoothed		interior ridge	light brown	light brown	dark gray	light brown	11aa	y/y	quartz basalt grit chaff	HM	L	18.60	21.30	33.00	EB?
Pour Type	Elazığ	068	rim body	shallow bowl	light burnish			light brown	light brown	black	black	--	y/y	basalt & fine quartz grit	HM	M	9.40	8.10	32.00	EB
Pour Type	Elazığ	069	rim and neck	jar	smoothed			light red	light red	black	black	--	y/y	quartz and basalt and some fine chaff	HM	LM	10.60	9.00	24.00	LC?
Pour Type	Elazığ	072	rim shoulder	jar	reserved slip			light brown	buff	light brown	light brown	10k	y/y	basalt and quartz fine grit	WM	MH	12.90	11.00	18.00	EB
Pour Type	Elazığ	074	rim neck	open jar?	smoothed			red brown	light brown	red brown	red brown	10j	y/y	quartz & basalt grit chaff	HM	L	20.30	15.20	22.00	EB
Pour Type	Elazığ	075	rim body	cooking pot	light burnish		triangle lug 26.7	dark gray	red brown	red	red gray	09y	y/y	basalt and quartz grit fine chaff	HM	M	8.00	11.60	22.00	KA
Pincirk	Elazığ	001	rim body	hole mouth bowl	smoothed			buff	light brown	gray	gray	--	y/y	basalt grit	HM	M	8.90	10.10	27.00	KA
Pincirk	Elazığ	002	lid	lid				light brown	black	dark gray	dark gray	09o	y/y	quartz & basalt grit little chaff	HM	L	14.50	11.80	35.00	KA
Pincirk	Elazığ	003	rim body	bowl			ext over rim into int	light brown	dark gray	dark gray	micaceous clay	09d	y/y	quartz fine grit and chaff	HM	L	5.80	6.20	19.00	EB
Pincirk	Elazığ	004	rim and body	hole mouthed bowl			rim int color	light red	gray	black	light brown	09t	y/y	quartz and	HM	LM	8.80	10.60	29.00	KA
Pincirk	Elazığ	005	rim shoulder	jar	burnished		rim ext color	black	light brown	light brown	light brown	09z	y/y	quartz and basalt fine grit	HM	M	12.60	11.20	32.00	KA
Pincirk	Elazığ	006	rim and body	open jar				gray	gray	black	black	09q	y/y	quartz and basalt fine grit	HM	L	10.50	9.10	0.00	KA

Pincirk	Elazığ	007	rim & shoulder	jar	burnished					dark gray	light brown	black		10i	y/y	quartz grit and chaff	HM	M	8.90	9.00	28.00	KA
Pincirk	Elazığ	008	rim & body	hole mouth bowl	burnished					black	black	black	thick slip interior	09q	y/y	basalt & quartz grit	HM	M	13.10	9.70	30.00	KA
Pincirk	Elazığ	009	rim & shoulder	jar	burnished	burnished				dark gray	red brown	red		10q	y/y	quartz grit	HM	M	8.80	11.10	18.00	KA
Pincirk	Elazığ	010	rim & shoulder	open jar	burnished	burnished	mottled red black			light red	red brown	red brown		09i	y/y	quartz and basalt grit	HM	M	11.60	9.20	10.00	KA
Pincirk	Elazığ	011	rim neck	deep bowl	burnished	burnished	red rim			dark gray	light brown	dark gray		11n	y/y	quartz grit little chaff	HM	LM	14.30	13.80	23.00	KA
Pincirk	Elazığ	012	rim & body	hole mouth bowl	2 color	smoothed				black	light brown	light brown	light brown	09n	y/y	quartz grit	HM	M	9.80	9.30	25.00	KA
Pincirk	Elazığ	013	rim neck	cooking pot						black	light brown	black		10k	y/y	basalt & fine quartz grit and chaff	HM	L	18.40	19.40	33.00	KA
Pincirk	Elazığ	014	base	jar?	light burnish					black	light brown	black	ring base	11e	y/y	quartz fine grit and chaff	HM	L	16.60	26.80	20.00	KA
Pincirk	Elazığ	015	rim body	bowl	smoothed/burnished	smoothed				light brown	red	dark gray		09q	y/y	chaff and grit	HM	L	13.10	7.20	13.00	EB
Pincirk	Elazığ	016	rim		burnished	burnished				red brown	dark gray	dark		09i	y/y	quartz fine grit	HM	MH	8.60	7.50	10.00	EB/KA
Pincirk	Elazığ	017	rim & body	tall jar	burnish marks	burnish marks	marks of former lug			light brown	light brown	dark gray		10n	y/y	basalt grit	HM	LM	22.90	16.40	36.00	KA
Pincirk	Elazığ	018	rim & shoulder	jar						light brown	light brown	light brown		10b	y/y	basalt & quartz	HM	M	13.20	19.60	42.00	EB
Pincirk	Elazığ	019	rim and neck	bowl	burnished	burnished	carinated			black	black	black		11l	y/y	quartz	HM	M	7.70	8.80	26.00	KA
Pincirk	Elazığ	020	rim & shoulder	jar	smoothed					light brown	red	red		09y	y/y	quartz and chaff	HM	L	10.50	11.10	25.00	EB
Pincirk	Elazığ	022	rim and neck	jar						buff	gray	black		09i	y/y	quartz and basalt grit and chaff	HM	L	13.80	10.70	18.00	KA
Pincirk	Elazığ	024	rim body	jar	smoothing					light brown	light brown	light brown		09t	y/y	quartz very fine grit/sand chaff	HM	L	7.80	7.60	14.00	KA
Pincirk	Elazığ	028	rim & body	hole mouth bowl	burnished	smoothed	mottled			dark gray	light brown	dark gray		09z	y/y	quartz grit	HM	M	6.00	12.40	20.00	EB
Pincirk	Elazığ	028	rim body	hole mouth						light brown	light brown	yellow brown		09z	y/y	very fine quartz grit and little chaff	HM	L	7.70	9.70	14.00	EB
Pincirk	Elazığ	029	rim & body	deep bowl	smoothed					light red	light brown	red		09i	y/y	quartz grit and chaff	HM	M	8.60	9.20	14.00	EB
Pincirk	Elazığ	029	rim body	hole mouthed jar	burnished	smoothed	exterior rim			red brown	red brown	red brown		09z	y/y	quartz and basalt grit	HM	L	6.90	8.40	20.00	EB
Pincirk	Elazığ	030	rim and neck	flaring jar						light brown	buff	dark gray		11ee	y/y	chaff and basalt grit	HM	LM	9.80	6.80	18.00	EB
Pincirk	Elazığ	031	lid	lid	burnished					light brown	light brown	light brown	micaceous clay	11aa	y/y	basalt & quartz grit little chaff	HM	L	24.70	22.40	24.00	KA
Pincirk	Elazığ	032	rim & body	shallow bowl	painted?	burnished				red	light red	dark gray		11l	y/y	quartz fine grain	HM	M	6.30	9.40	15.00	KA
Pincirk	Elazığ	033	rim & shoulder	jar	smoothed	smoothed				light red	light gray	light gray		09z	y/y	basalt and chaff	HM?	L	17.30	11.20	26.00	EB/KA

Poyraz	014	rim and body	jar	smoothed					dark gray	brown	dark gray	roll rim 18.6 mm	10h	y/y	quartz basalt med grit chaff	HM	L	16.00	14.50	28.00	KA
Poyraz	015	rim neck	jar	high burnish	rim gray	smoothed			black	buff	black		10h	y/y	quartz fine grit and chaff	HM	L	7.80	10.60	26.00	KA
Poyraz	016	rim neck	jar						black	light brown buff	black		10j	y/y	grit and chaff	HM	L	13.80	14.60	32.00	KA
Poyraz	017	rim neck	jar	burnished					black	buff	black	groove under rim	10k	y/y	sand and chaff	HM	L	8.80	8.70	22.00	KA
Poyraz	018	rim and shoulder	hole mouthed jar	burnished	top rim pink			int color top of rim	dark gray	buff	dark gray		09h	y/y	quartz fine grit chaff	HM	M	10.30	8.60	26.00	KA
Poyraz	019	rim neck	jar	smoothed					gray	light red	gray	groove under rim	10q	y/y	quartz chaff	HM	L	16.70	17.90	36.00	KA
Poyraz	020	rim neck	jar	burnished					black	buff	black	squared rim	10k	y/y	grit and chaff	HM	L	11.70	14.30	18.00	KA
Poyraz	021	rim and neck	jar	smoothed					black	buff	black	groove under rim	10j	y/y	quartz fine grit and chaff	HM	LM	11.10	7.60	23.00	KA
Poyraz	022	rim body	bowl					slip reddish brown	black	buff	dark gray	red brown slip? paint?	09f	y/y	quartz grit chaff	HM	L	15.10	11.70	42.00	KA
Poyraz	023	rim neck	jar	burnished					black	light brown	black		10p	y/y	quartz grit chaff	HM	L	10.70	6.80	18.00	KA
Poyraz	024	rim and neck	jar	smoothed					light red	light red	black	roll rim 22.4	10h	y/y	quartz grit chaff	HM	L	18.70	23.10	40.00	EB/KA
Poyraz	025	rim neck	jar	smoothed					light red	light red	black		10q	y/y	basalt grit and chaff	HM	L	15.80	16.50	28.00	EB/KA
Poyraz	028	rim neck body	jar	burnished		burnished			black	black	black	carinated	09m	y/y	quartz fine grit	HM	M	6.70	3.90	18.00	KA
Poyraz	032	rim and neck	jar	smoothing					black	black	black		09h	y/y	fine quartz grit and chaff	HM	LM	9.20	8.40	20.00	KA
Poyraz	034	rim and body	bowl						buff	buff	gray	groove under rim	09h	y/y	fine quartz chaff	HM	LM	7.40	5.10	10.00	EB
Poyraz	035	rim & neck	jar						buff	buff	black		10q	y/y	quartz grit chaff	HM	M	11.00	10.00	16.00	KA
Poyraz	037	rim body	bowl						light brown	gray	light brown		--	y/y	quartz grit	HM	LM	7.20	10.50	22.00	EB/KA
Poyraz	038	rim neck	jar	burnished		burnished			light brown	buff	dark gray	groove under rim	10p	y/y	quartz fine grit sand chaff	HM	M	9.00	8.90	16.00	EB/KA
Poyraz	039	rim body	crude bowl	smoothed				int rim brown	red brown	dark gray	dark gray	pestle?	09e	y/y	quartz and basalt fine rit chaff	HM	L	32.20	23.50	31.00	EB/KA
Poyraz	042	rim & shoulder	jar	burnished		burnished			light red	light red	light red	short rim no neck	11ce	y/y	quartz grit chaff	HM	M	7.90	7.70	18.00	EB?
Poyraz	047	rim body	deep bowl/jar	high burnished		smoothed			black	light brown	black	groove under rim	09h	y/y	quartz grit chaff	HM	L	6.30	6.30	20.00	KA
Poyraz	048	rim body	bowl	burnish		burnish			black	black	black		09a	y/y	quartz basalt fine grit & some chaff	HM	L	9.60	6.10	18.00	KA
Poyraz	050	rim and neck	jar	burnished					black	light red	light red		09h	y/y	quartz fine grit	HM	L	11.00	7.50	18.00	KA
Poyraz	051	rim neck	jar	smoothed					buff	buff	light brown	roll rim 14.4 mm	10s	y/y	quartz and basalt grit	HM	LM	12.20	16.90	26.00	KA
Poyraz	054	rim body	bowl	burnish		smoothed			gray	red brown	gray		09g	y/y	sand chaff	HM	LM	13.20	10.00	19.00	EB/KA

Poyraz	055	rim neck	jar	burnished		smoothed top int		buff	light red	light red			09z	y/y	quartz grit and chaff	HM	M	8.00	11.90	16.00	EB/KA
Poyraz	058	rim body	cooking pot					gray	gray	dark gray	triangle lug 41.2	11x	y/n		basalt and quartz grit chaff	HM	LM	10.70	10.90	24.00	KA
Poyraz	059	rim body	cooking pot					gray	light brown	yellow brown	triangle lug 34 rim	11x	y/y		quartz and basalt grit chaff	HM	L	9.30	82.00	24.00	KA
Poyraz	060	rim body	cooking pot					black	buff	black	triangle lug 27.9	09y	y/y		quartz grit and chaff	HM	L	9.50	13.50	30.00	KA
Poyraz	061	piece of rim & neck	jar	smoothed				light red	light red	black	rim rim	09x	y/y		grit and chaff	HM	L	22.50	24.70	0.00	EB/KA
Poyraz	064	rim body	cooking pot	rim pink		5YR 7/3	top of rim same as int	black	buff	black	triangle lug 29.4	--	y/y		quartz grit and chaff	HM	L	10.80	14.20	24.00	KA
Sekant	Elazığ	rim neck shoulder	jar					light brown	light brown	light brown		10j	y/y		quartz and grit	HM	L	7.50	12.80	13.00	KA
Sekant	Elazığ	base body	jar?	smoothed				dark gray	dark gray	brown		10h	y/y		basalt and fine-med chaff	HM	L	14.30	11.80	12.00	KA
Sekant	Elazığ	rim body	bowl				paint int red	dark gray	buff	light brown		09g	y/y		basalt quartz grit chaff	HM	L	11.30	8.80	20.00	KA
Sekant	Elazığ	body	?	smoothed	reserve slip	smoothed		light brown	buff	buff		--	y/y		basalt and quartz fine grit	WM	M	6.00	0.00	0.00	EB
Sekant	Elazığ	rim body band	open bowl jar	smoothed	raised band		int 2 colors	buff	light brown	black	bottom black	09e	y/y		chaff and quartz grit	HM	L	12.70	9.10	30.00	LC
Sekant	Elazığ	rim neck	jar	burnish				black	red brown	red brown		10i	y/y		quartz grit chaff	HM	L	9.40	12.00	13.00	KA
Sekant	Elazığ	rim neck	jar					light brown	light brown	black		10a	y/y		chaff	HM	L	10.90	8.00	25.00	LC
Tadim	Elazığ	lid	lid					buff	light brown	red brown		11aa	y/y		large grit chaff	HM	L	13.70	9.30	16.00	EB/KA
Tadim	Elazığ	rim neck	squat jar				body ext black N4/ top int 2.5YR 3/3	light brown	light brown	dark gray		09e	y/y		quartz grit chaff	HM	L	8.50	8.30	18.00	EB
Tadim	Elazığ	rim neck shoulder	jar	burnished		smoothed		dark gray	light brown	dark gray	small raised line rim	10a	y/y		quartz grit	HM	L	13.60	9.30	21.00	KA
Tadim	Elazığ	rim neck shoulder	jar	burnished				dark gray	red brown	dark gray	squared rim	10k	y/y		basalt grit chaff	HM	LM	8.00	7.80	27.00	KA
Tadim	Elazığ	rim neck	jar					dark gray	light brown	dark gray		09x	y/y		quartz grit chaff	HM	L	15.70	10.00	40.00	KA
Tadim	Elazığ	rim neck	jar	burnish			brown rim 5YR 3/4	dark gray	light brown	dark gray		10h	y/y		quartz grit and chaff	LM	L	5.20	6.60	10.00	KA
Tadim	Elazığ	int neck	jar					dark gray	light brown	light brown		10i	y/y		quartz grit chaff	HM	L	9.70	14.50	29.00	KA
Tamı Vernis	Elazığ	rim neck	jar					light brown	light brown	dark gray		11n	y/y		quartz fine grit	HM	LM	10.80	8.60	22.00	EB
Tamı Vernis	Elazığ	body rim	tall bowl jar	smoothed			micaceous clay	light brown	dark gray	dark gray	top rim same ext	09x	y/y		basal fine grit some chaff	HM	M	9.90	6.40	24.00	KA
Tigant Key	Elazığ	rim body	bowl	burnished		smoothed		black	dark gray	black		09j	y/y		quartz and basalt fine grit	HM	LM	9.00	7.40	16.00	KA
Tigant Key	Elazığ	rim neck	jar	burnished pink			ext rim same as int	black	buff	light brown		--	y/n		quartz and basalt fine grit	HM	M	5.60	10.50	20.00	EB
Tigant Key	Elazığ	rim neck body	jar	highly burnished				black	gray	black		09i	y/y		basalt fine grit	HM	M	5.80	3.80	8.00	KA
Tigant Key	Elazığ	rim body	tall bowl	reserved slip	angled lines left	smoothed		light brown	light brown	light brown		09h	y/y		basalt fine grit	WM	MH	4.00	5.90	10.00	EB

Tigam Key	Elazığ	011	rim body handle	cooking pot	smoothed	smoothed	very light burnish	smoothed	smoothed		light red	light red	brown	log handle 30.8	11x	y/y	quartz grit and some chaff	HM	L	5.40	12.20	17.00	EB	y
Tilenzi	Elazığ	004	rim	hole mouth bowl	smoothed	smoothed		smoothed	smoothed		dark gray	light brown	light brown		091	y/y	quartz fine grit	HM	L	9.10	7.50	30.00	KA	
Tilenzi	Elazığ	005	rim body	hole mouth bowl	light burnish	chaff facing		smoothed	smoothed		gray	light red	red / gray	potter's mark? angle	--	y/y	chaff fine quartz grit	HM	L	16.70	16.70	20.00	LC	
Tilenzi	Elazığ	024	rim	Open bowl	smoothed	very light burnish		smoothed	smoothed	cermination very regular differential coloring	gray	gray	gray	makers mark angle	09m	y/n	quartz fine grit	HM?	L	8.70	5.20	10.00	EB	
Tilenzi	Elazığ	025	rim body	open jar	burnished	chaff marks		smoothed	smoothed	swallowing	light brown	brown	brown	mark angle	09	y/y	quartz chaff sand	HM	M	11.80	8.60	20.00	EB	y
Tilenzi	Elazığ	027	rim shoulder	jar	burnished	bleached color		burnished	burnished	wash paddle slow wheel	brown	red	dark brown	potter's mark arrow	10q	y/y	quartz small grit chaff	HM	M	10.90	8.80	20.00	KA	y
Yücek	Malaya	002	rim body	bowl	chaff acid			chaff acid			light brown	light brown	light brown			y/y	quartz and basalt grit	SWM	LM	6.00	5.80	8.00	LC	
Yücek	Malaya	003	rim & neck	jar	burnished		rim light red			rim same as int	black	light red	black		--	y/y	basalt and quartz grit	HM	L	10.00	10.90	22.00	EB	
Yücek	Malaya	004	rim and neck	jar							black	buff	light brown		--	y/y	fine basalt and	HM	M	3.90	7.70	13.00	EB	
Yücek	Malaya	005	rim & body	bowl	burnished		rim same as int	burnished	burnished	additional line below rim	black	light red	black	buff	10c	y/y	quartz fine grit	HM	M	6.00	9.70	0.00	KA	
Yücek	Malaya	008	rim and body	bowl							light red	black	black		09c	y/y	fine quartz grit	HM	L	10.80	9.20	18.00	KA	
Yücek	Malaya	010	rim & body	tail bowl	smoothed			smoothed			black	light brown	black		10d	y/y	quartz grit	HM	LM	9.80	14.90	32.00	KA	
Yücek	Malaya	012	rim body	bowl	smoothed			smoothed			red	buff	black		08cc	y/y	chaff and quartz grit	HM	L	7.70	7.90	9.00	LC/EB	
Yankitepe	Urmia	profile	rim body	cooking pot	lightly burnished		lightly burnished		slipped		gray	gray	gray	line filled designs		y/y	obsidian	HM	m	11.40	16.82	22.00	KA	
Yankitepe	Urmia	63-25-01	rim body handle	utilitarian jar	light burnish		light burnish		none		gray	gray	gray			y/y	grog calcite grit	HM	lm	11.14	10.60	32.00	KA	
Yankitepe	Urmia	63-25-03	body	cooking jar	light burnish		light burnish		none	Cooking pot	buff to black	black	black			y/y	Quartz calcite grit	HM	L	16.90		0.00	KA	
Yankitepe	Urmia	63-25-06	body	cooking pot	light burnish		incised design	incised design	none		brown	light brown	black	two slabs		n/n	calcite grit	HM	l	10.40		0.00	KA	
Yankitepe	Urmia	63-25-08	body	utilitarian jar	wet smoothed			wet smoothed	none		gray	gray	black			y/y	grit	HM	lm	6.10		0.00	KA	
Yankitepe	Urmia	63-25-10	body	utilitarian jar	light burnish			light burnish	none		gray	black	black			n/n	calcite grit	HM	m	6.60		0.00	KA	
Yankitepe	Urmia	63-25-13	body	fine jar/pot	good burnish		incised design	incised design	none slab		black	light brown	black			y/n	grit	HM	m	7.30		0.00	KA	
Yankitepe	Urmia	63-25-16	body	utilitarian pot	none		incised designs	incised designs	none		brown	brown	black	very gritty surface		y/y	grog grit	HM	m	7.20		0.00	KA	
Yankitepe	Urmia	63-25-16	rim body handle	utilitarian jar	light burnish		incised design	incised design	smoothed		black to brown	brown	black			y/y	calcite chaff	HM	m	10.30	7.70	26.00	KA	
Yankitepe	Urmia	63-25-16	body	fine ware	light burnish		incised design	incised design	line burnish		black	black	black			y/n	fine quartz	HM	m	5.70		0.00	KA	
Yankitepe	Urmia	63-25-17	body handle	utilitarian bowl	smoothed		wet smoothed	burnished	burnished	bowl	red brown	red	red	some sign of chaff		y/y	other grit	wm	m	11.20	5.80	0.00	KA	
Yankitepe	Urmia	63-25-18	rim body	utilitarian bowl	wet smoothed			smoothed	smoothed		light brown	gray	dark brown	design on interior rim		y/y	obsidian calcite	HM	lm	8.90	6.10	28.00	KA	
Yankitepe	Urmia	63-25-19	rim body	fine pot	burnished		incised design	burnished	burnished		black	black	black			y/y	calcite/grit	HM	lm	9.10	7.00	20.00	KA	
Yankitepe	Urmia	63-25-21	body	fine ware	light burnish		incised design	scraped	scraped		black	black	black			y/y	quartz stone grit	HM	mh	7.90		0.00	KA	

Yamketepe	Urmia	63-25-22	rim neck	utilitarian cup	burnished	incised design	burnished	smoothed	top	burnished	gray	buff	light red	red brown	flange incisions from rim		n/n	calcite grit chaff	HM	m	13.00	8.30	26.00	KA
Yamketepe	Urmia	63-25-23	rim body handle		none		none	smoothed	smoothed	gray	buff	buff	buff	red	flange incisions from rim		y/n	grit chaff	HM	l	5.00	5.00	12.00	KA
Yamketepe	Urmia	63-25-24	body	utilitarian pot	wet smoothed	incised design	burnished	smoothed	top	burnished	black	light brown	buff	buff			y/n	quartz and black grit	HM	lm	8.60		0.00	KA
Yamketepe	Urmia	63-25-25	rim neck	fine pot	burnished	incised design	burnished	burnished	line	burnished	black	black	black	black	slabs visible		y/y	grit	HM	m	7.10	5.30	26.00	KA
Yamketepe	Urmia	63-25-26	body	fine pot	burnished	designs	none	none	top	burnished	black	black	black	black			y/y	grit	HM	lm	4.70		0.00	KA
Yamketepe	Urmia	63-25-27	rim neck	fine pot	burnished		burnished	burnished	top	burnished	gray	gray	gray	gray	incised designs		y/y	obsidian	HM	m	6.30	5.80	22.00	KA
Yamketepe	Urmia	63-25-28	rim body	fine pot	high burnish	incised	burnished	burnished	line	burnished	black	black	black	black			y/n	calcite grit	HM	m	5.50	5.20	14.00	KA
Yamketepe	Urmia	63-25-29	rim body handle	cook pot	wet smoothed		burnished	burnished	line	burnished	brown	brown	black	black			y/y	quartz stone grit	HM	l	12.90	70.00	22.00	KA
Yamketepe	Urmia	63-25-31	body	small pot	burnished	incised design	burnished	smoothed	smoothed	burnished	gray	gray	gray	buff			y/n	grit	HM	m	4.90		0.00	KA
Yamketepe	Urmia	63-25-32	rim neck	fine pot	burnished	incised	burnished	smoothed	smoothed	burnished	gray	gray	gray	gray			y/y	obsidian	HM	m	5.20	5.40	13.00	KA
Yamketepe	Urmia	63-25-33	body lug	utilitarian pot	light burnish	incised design	none	none	top	burnished	black	black	buff	black			n/y	calcite grit	HM	l	15.60		0.00	KA
Yamketepe	Urmia	63-25-41	rim body	cook pot	chaff faced		burnished	burnished	top	burnished	light brown	light brown	black	buff			y/y	chaff	HM	l	20.60	14.30	29.00	KA
Yamketepe	Urmia	63-25-43	rim body	cook pot	light burnish		burnished	burnished	top	burnished	brown	brown	red	buff	large slabs thick slips		y/y	black grit	HM	m	17.10	9.90	34.00	KA
Yamketepe	Urmia	63-25-50	rim body	cook pot	red		burnished	burnished	top	burnished	red	red	red	red			y/y	chaff grit	HM	l	16.00	8.50	35.00	KA
Yamketepe	Urmia	63-25-52	rim body	fine bowl	smoothed		burnished	burnished	top	burnished	red	red	red	black			y/y	light grit	HM	m	9.30	5.30	22.00	KA
Yamketepe	Urmia	63-25-60	rim body	lid	none		burnished	burnished	top	burnished	red	red	red	black			y/y	calcite grit	HM	l	14.00		23.00	KA
Yamketepe	Urmia	63-25-64	rim body	utilitarian bowl	burnished		burnished	burnished	top	burnished	red	red	red	black			y/y	grit	HM	m	13.90	11.50	42.00	KA

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