CHAPTER 5: The Early Bronze Age pottery Descriptive and comparative analysis

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1. Introduction

As part of the research design utilized at Korucutepe a thorough analysis of all the pottery was undertaken. This entailed the collection of all the ceramic material from the site in the various areas and levels in small quantities called lots. The precise location of each lot was noted and its contents set aside in the sherd yard. Each lot was then sorted according to ware and rim types, and the total number of sherds was counted for each type. These ware and rim types were established in the first season with subsequent additions and refinements made during the other seasons. This process was a long and laborious one, consuming many hours of field work, since over 150,000 sherds were excavated, analyzed and counted during the three seasons. It is on the basis of this analysis that we are now able to have a clearer picture of both the ceramic development at the site and also of the relationship of the ceramics to the stratigraphy on the site; the results are much better defined and more precise than it would have been possible with earlier collecting methods. When the excavation was started (1968) very little of this type of collection and analysis had been done on Near Eastern sites – making our experience both more challenging and interesting.

2. Early Bronze ware types

There were several different types of wares used at Korucutepe during the Early Bronze II period (Phases C-D; this and the following description are based on notes kindly supplied to me by Maurits van Loon, which he made during J. Kalsbeek's examination of the Korucutepe pottery;

The writer was responsible for establishing the typology of shapes and wares as well as the ground rules for the gathering and cataloguing of the material. During each season the field staff collaborated with patience and dedication, and to all involved I wish to express here my gratitude. I would also like to thank William Shelby and Linda Williams, both graduate students at the University of California at Los Angeles, who worked on the Korucutepe pottery in Los Angeles, particularly William Shelby who aided me in the preparation of the rim catalogs which were used for all the pottery at Korucutepe. Most of all, I am deeply indebted to Professor Maurits van Loon for his unfailing support, encouragement and guidance over the span of three seasons and three continents. It is only through his ability for farsighted planning, smooth coordination and effective organization that a major project like this one was brought to such a successful issue. It has been a privilege for me to be associated with him.

see also Kalsbeek 1974). The principal ware is handmade, low fired, and tempered with chaff and some large grits. The exterior has a slip which has been burnished and is usually of a black color but at times shading to brown and red (for percentages of these wares in the various Early Bronze levels see Kelly-Buccellati 1973; Kelly-Buccellati and Elster 1973). In addition, some vessels were black outside and red to brown inside. There is a coarser and a finer variety to this fabric also. (Kalsbeek noted that the thick-walled vessels must have needed a large amount of fuel to bake.) All of these characteristics are the same for pottery produced in the third millennium from the Caucasus to Syria/Palestine and associated with a culture called the Early Transcaucasian culture (Burney and Lang 1972: 43-85; Kelly-Buccellati 1974b).

Kalsbeek examined the large relief-decorated vessels from O-P 17 (pls. 124, 125). These were made by building up horizontal bands of clay. The interior of the body walls contained a large amount of chaff. The slip was a thick layer of the same clay which either came from the river banks well purified or was intentionally purified. Another indication of the construction technique was noted by Kalsbeek on a sherd from which the burnished surface was flaked off. On this sherd coil marks were visible, indicating that a basket was used. This technique is not unusual in the Early Trans-Caucasian pottery (see Dzhavakhishvili and Glonti 1962: 62; Dzhaparidze 1961: fig. 8:1 for Zguderi example).

Sherds were found which were smooth around all the broken edges; they were used as loamers to smooth the outside of vessels. These sherds were generally associated with private houses and may indicate, according to Kalsbeek, that the pottery was made at home.

A red painted ware with a cream-buff ground was found in small quantities in addition to the burnished ware; it is fired at a medium temperature and generally has a smooth, soapy surface. This painted ware had much black sand in it as a temper which is similar to the present sand along the Murat River (the example examined by Kalsbeek was Catalog no. 1161).

In addition to this locally made pottery a small amount of imported pottery was found. It was made from a greasy (slippery) clay found in its natural state; this clay has little iron and much feldspar in it. The nature of this greasy clay makes it shrink badly and therefore it needs to be dried slowly indoors. It also must be baked and cooled slowly; the whole process probably took about two weeks. The vessels are fired at close to the melting point of the clay and therefore are almost vitrified. One type of imported ware, coming from north Syria-north Mesopotamia ('Akkadian ware'), is wheelmade with a fine grit temper and has a color shading from gray to orange. The exterior had corrugated effects (for parallels see Speiser 1932-33: 253-254; Mallowan 1947: 29-31; 1966: 91; Moortgat 1965: 46-48; Hauptmann 1969-70: 53-54; Prag 1970: 78-79; Reade 1971: 98-100; Kühne 1976: 66). The other type of imported ware is associated with the simple ware found in the Amuq Phases I-J (Braidwood and Braidwood 1960: 406-413, 435-442). It is wheelmade, tempered with small grits and buff in color. The exterior also has corrugated effects.

During the Early Bronze III period (Phases E-F) the burnished wares continued to be the most numerous, however, a new type of painted ware was used. This ware had red or black paint on a cream to orange ground. The reddish color was caused by the presence of iron in the clay – the more highly fired it is the redder it becomes. The clay was also tempered with lime grits.

A coarse unburnished ware, usually dark orange with chaff or grit temper, was found in this period (this ware was previously called cream-slipped ware because of the frequent presence of a soapy cream-colored exterior which is due to a scum or bloom appearing on the surface; see Kelly-Buccellati 1974a).

During his examination of the Early Bronze pottery at Korucutepe, Kalsbeek concluded that

all the burnished pottery had originally been black and had turned red or brown in a secondary fire (Van Loon 1973: 364). This may be true in the particular situation of the burned pottery in the O-P 17 house but does not negate that elsewhere the situation may have been different, i.e., that red or brown were the original colors, for several reasons.

- (1) Great quantities of both red and brown as well as black pottery were found in all areas and all EB levels of Korucutepe. If the red and brown pottery was produced by accidental secondary firing then they should have been confined to rooms or areas which had burned and this was not the case.
- (2) Statistical considerations bring to light definite distributional patterns over the entire site which cannot be explained on the basis of accidental factors. In a statistical study of the Early Bronze sherd material from Korucutepe it was found that in EB II levels (Phases C-D) 27% of red burnished sherds were found inside rooms and 73% were associated with outside areas, while 23% of brown burnished sherds were associated with inside areas and 77% with outside areas; in the EB III period (Phases E-F) 42% of the red burnished came from inside and 58% from outside areas while 63% of the brown burnished pottery was found inside rooms with 37% from outside areas (Kelly-Buccellati and Elster 1973: 203-204). The sherds analyzed for this study included those from O-P 17 as well as other EB squares which had not been burned. This pattern of percentile distribution would appear to indicate in both EB II and EB III that red and brown burnished pottery was intentionally produced and was used both inside and outside the houses.
- (3) Further statistical analysis shows a differentiation through time of the way in which pottery types are associated with types of living areas. When a chi-square test was done on the quantity of all the different EB wares to determine whether they revealed random or non-random patterns, it was seen that in EB II levels both red burnished and brown burnished pottery types were associated in a non-random manner with inside rooms or houses. In EB III levels, on the other hand, while brown burnished pottery was still associated with the inside of rooms or houses, red burnished pottery was associated in a non-random manner with outside areas. If the pottery had all originally been black and only turned color in secondary, accidental firings, then the red and brown burnished sherds should always have been associated with the inside of rooms (where the fire would have presumably been hotter) and not changed association, as in fact happens. In addition to this evidence the study showed that black burnished sherds were associated in a non-random manner in EB II with outside areas while in EB III the distribution was random. Again, if the color depended on a secondary circumstance there would be no reason for the change in pattern distribution.
- (4) The last reason is based on the nature of Early Trans-Caucasian pottery in general. The earliest Early Transcaucasian pottery is not found at Korucutepe but has a long history in the Caucasus best exemplified by excavated sites in Georgia. This early material comes from Didube, Kiketi, Samshvilde and is probably to be found at Khramis Diddi Gora now being excavated by Dzhavakhishvili and Kiguradze. The majority of this pottery is black outside and red to red-brown inside (a type of ware still in use at Korucutepe but found only in small percentages; the so-called Khirbet Kerak pottery in Syria and Palestina is an example of this same ware but again is later than the Caucasian evidence). In the Caucasian sites black burnished pottery predominates but red and red-brown burnished also is found, and as is the case at Korucutepe they are not necessarily associated with burned levels or areas. It is clear that the Early Transcaucasian potters and their customers delighted in this colorful pottery and exactly the contrast between black and red was a major part of this whether in the same vessel or in a number of vessels placed around their hearths.

3. Early Bronze pottery shapes

The Korucutepe pottery is fairly homogeneous in the periods represented in the excavated areas of the mound – EB II (Phases C-D) and EB III (Phases E-F). In both periods handmade burnished wares in simple shapes, characterized by recessed necks and the predominance of pot-shaped forms (those in which the height is approximately equivalent to the rim diameter) are the most common. Within this overall picture differences however are discernible.

Rim sherds with the recessed neck (types A and B – jars; types C and N – bowls or pots; see pl. 112) are 41% of the total in EB II and 24% during EB III (see pl. 113A). The next most popular types in EB II are rim type R, I, and E in that order; all were 5% or over of the total EB II rim sherds. During EB III the next most frequent types after the recessed neck (rail rim) types are E, M, D, and R. Type D occurs on jars or pots which often also had fluting on the body, while type R (and pl. 126B) is a type of incurving bowl which increased in its percentage of the total during EB IIIA (Phase E) and was important in EB IIIB (Phase F, pl. 113K-N). It can be seen from pl. 113A that while during EB II there is one predominant type (the recessed neck) in EB III there was a more evenly distributed range of types. In both periods flat bases were the most common ones found but especially in EB II a base with a central concave indentation ('dimple') was important (pl. 126D).

There is a difference in the type of decoration used between EB II and EB III also. In EB II the predominant type of decoration is relief with some incised designs, whereas during the EB III period fluted decoration comes into use. The types of painted pottery made in EB II and EB III are also different (see below).

Lugs had both a practical and a decorative use in Early Transcaucasian pottery. A very common type is a triangular lug attached to the rim while others on the neck and even on the body are not infrequent (Catalog nos. 114B, 119K, 119M). Spouts occur rarely (nos. 119J, 119L).

Because of the nature of deposition at Korucutepe and the subsequent history of the mound many of the whole vessels came from mixed contexts (these vessels have a question mark after the date in the catalog). One of these is no. 114B discussed above; while no exact parallel can be found in the Keban and elsewhere, a very similar shape comes from Geoy K1 (Burton-Brown 1951; fig. 8:346) and Amiranis Gora Graves 24, 27, and 45 (Chubinishvili 1963: fig. 11:6, 9, 1, respectively). A similar shape with slightly squatter proportions is found at Armavir Blur (Kuftin 1943: fig. 50:2896), Ozni (Krupnov 1964: fig. 4:1), and Khizanaant Gora level E (Kikvidze 1972: fig. 11:4). Thus, this general type is early both in the Geoy Tepe and the Khizanaant Gora levels. Khizanaant Gora is a well stratified site with two levels below the level contemporary with Kvatskhelebi C1 which had one C14 date of 2810 ± 90. While this single date may give the impression that level C1 is earlier than it may turn out to be, at least the very close relationships, both physical (Khizanaant Gora is 2 km from Kvatskhelebi and in a similar ecological position) and through comparison in the pottery, indicate an early date for the type. The fact that the type is dated early in the Early Transcaucasian culture in the Caucasus does not mean that it is also early in the Keban; it will be interesting to see if it occurs in EB I levels of other Keban Region sites. Catalog no. 116E came also from a mixed context but has no parallels elsewhere to help date it.

A large number of vessels was found in a burned house excavated in O-P 17. The types represented in this house are shown in Catalog nos. 114C, F, G, 115A, C, D, F and 118A, B, and the large jars are illustrated on pls. 124, 125. Other examples of the same types include five bowls (pl. 123B, C, E), 1 pot (pl. 126E), 1 lid, 2 measure vessels (pl. 123F), and 3 pot stands (pl. 127G).

The total number of vessels recovered therefore is 24. Plate 12 shows their individual find spots, the numbers of which can be found under the heading *Find spot* in the tables (pp. 75-85) in § 7 and in the captions to pls. 123–127. While we have neither other houses with such preservation of whole vessels to compare with this one at Korucutepe, nor published examples from other sites in the Keban Region, we do know from a representative study of houses in Kvatskhelebi C1 that they contained a minimum of 12 and a maximum of 34 vessels (Dzhavakhishvili and Glonti 1962; Kelly-Buccellati 1974b). Three of the Korucutepe vessels from this house are tentatively called dippers or measure vessels. One of them may have had a flat base (114F) while two others are pointed (114G). The contents of 114G is ½ liter. Altogether on the site six of these pointed base vessels of a similar shape were found.

The probable function of some other vessels found at Korucutepe can also be seen. For instance 114A was probably used as a sieve. Sherds of a straight-sided bowl from O 11 (3) had strainer holes in the bottom and may have been used for a similar purpose.

A globular vessel was found *in situ* inside the andiron on the floor of the house in O-P 17 (Catalog no. 115D). Perhaps this type of lug handle helped to support the vessel inside the andiron (see pl. 12). In the Caucasus, where a clover-leaf type hearth is the typical shape from the earliest phase of the Early Transcaucasian culture, lugs would also have been useful in steadying the vessel on the hearth.

Lids at Korucutepe are usually undecorated, with a depression around a central handle. This type has a number of examples at Korucutepe with different kinds of handles and in various sizes (117A-D and pl. 127A). In addition to examples from other sites in the Keban Region and in Pulur and Karaz, both located near Erzurum, similar lids came from Igdir (Kuftin 1943: fig. 37), Kultepe in Nakhichevan (Abibullaev 1959: fig. 10:3), Elar (Kuftin 1943: fig. 38:6), and from the Georgian sites of Beshtasheni (ibid.: fig. 38:3-5), Kvatskhelebi (Dzhavakhishvili and Glonti 1962: pl. IV:134), Kulbakebi (Dzhaparidze 1961: fig. 3:4), and Amiranis Gora (Chubinishvili 1963: fig. 7:2).

One vessel (117F) has an oval shape while another may have an oval base (114F). Oval vessels are not common in Early Transcaucasian sites but have a longer history of use in the Caucasus (first known from Imeris Gora levels 8 and 7 dated to around 5000 B.C., personal communication from Thomas Kiguradze). Large platters (117G, H) also are not common. The latter example was found above the EB II (Phase D) levels of square N 11 in a context where these were mixed with a large amount of LB II (Phase J) material. However, the fact that it was made in the orange-buff coarse ware, which is a common type in EB IIIA (Phase E) levels, and also that there were other EB IIIA finds in this material (see ch. 1, § 5.4), indicates that its date is in all probability EB IIIA.

As stated in § 2, two kinds of imported wares are recovered in the Early Bronze levels: a grey to orange ware found in north Syria and northern Mesopotamia ('Akkadian ware') and a buff ware found in the Amuq Phases I-J (simple ware). The shapes at Korucutepe were mostly goblets (117I, pl. 113E-J) and miniature jars (119A, pls. 113B-D, 127H-I; for comparative material see Speiser 1932-33: pls. LIII, no. 4; LIV, no. 4; Mallowan 1937: pl. XIX, no. 4; 1947: pl. XXXIX, no. 3; Moortgat 1960: figs. 38, 40; Prag 1970: figs. 7.37, 8.45; Kühne 1976: figs. 14, 29). The presence of this pottery at Korucutepe as well as other sites in the Keban (see Hauptmann 1969-70: 53-54; Esin 1970: 168) indicates a widespread contact between the Keban and areas to the south and west. Our evidence from these ceramics, which occur in small numbers, seems to indicate, however, that the trade was not intense – at least in the items contained inside these vessels or even in the vessels themselves.

A number of pottery stands were found. They seem to have been plainer in the EB II levels

(Phases C-D) and were more heavily decorated in EB III but the quantity is not sufficient to be certain of this. One example of a tall stand was found dating to EB IIIA (Phase E, 118G). This is the closest example we have to the tall stands from Syria at Hama (Fugmann 1958: fig. 496:4A872, decorated) and the Amuq Phase H (Braidwood and Braidwood 1960: fig. 282:13, decorated) and from Garni in Armenia (Khanzadian 1969: fig. 54, undecorated).

The group of miniature vessels excavated contains a variety of forms including flat bowl shapes and examples on a high footed base (pl. 127J-M). A number of similar miniature vessels were also found at Güzelova (Koşay and Vary 1967: pl. XX). Some of them (119C-G) may have been made to be used as crucibles but there was no trace of metal inside to confirm this.

4. Early Bronze relief and incised decorations

Relief decoration is the characteristic type of decoration in EB II (Phases C-D, especially Phase C). To obtain this effect the vessel was first incised in the pattern desired; then the incision was filled with either a piece of straw or some substance which would expand under heat. The vessel was then covered with a thick slip which adhered to the raised portion of the design. Where sherds had been broken showing a section of the relief a hollow beneath the raised portion was observed (Van Loon and Buccellati 1970: 90).

Three large relief-decorated jars all with a similar pattern were found in the burned house in O 17 (pls. 123G, 124, 125). The central portion contains a quartered lozenge sometimes having a ladder pattern along the edges (see pl. 123G). Two sides of the lozenge are extended down and then upward terminating again in a ladder pattern (pls. 123G, 124B). In some cases the bottom of the lozenge was connected to a pendent crescent (pls. 120F, 124A). This design is commonly found both in the Keban (Esin 1970: pl. 12:10; Ertem 1972: pl. 42:3) and in the Caucasus (e.g., Kuftin 1943: pl. XXV:1; a large pin with a head in this shape was found at Shulaveri in Georgia – personal communication from Kiguradze). Sherds with parts of the lozenge pattern were also found in other excavation squares (pl. 120A-C). Perhaps connected with this design are the relief patterns in pl. 120D, E but these may, on the other hand, be parts of other patterns. This lozenge pattern is often connected in the Early Transcaucasian relief designs with a stylized bird or M-shaped design (Kuftin 1943: pl. XXV:1; Sardarian 1967: pl. LII:2; Koşay and Vary 1964: pl. XVII:P.596A). In addition to this pattern stylized birds and quadrupeds flank the lozenge pattern (pl. 125B). Minor details can also be incised onto these relief patterns.

In EB III (Phase E) incised and fluted decoration appears among the Korucutepe sherds and whole vessels. The fluted decoration on a large pot (Catalog no. 115G, pl. 126F) was probably done with a large comb as was the other fluted decoration. The overlapping chevron design is also found in the painted pottery. Large incised designs on the body of vessels were done with a sharp comb-like tool (pl. 122A). Lids often had incised decoration in a wide outer band, while stands were decorated with fluting on the body (Catalog no. 118F).

5. Early Bronze painted pottery

Along with the predominant burnished wares found in the EB II levels (Phases C-D) was a painted ware characterized by red painted designs on a cream-buff ground. (This type of painted pottery is called EB I at Norşun Tepe, see Hauptmann 1972: pl. 73:1, 2 and pp. 114-115). The designs are placed in bands around the neck of larger vessels and around the neck and rim of the smaller ones. Sometimes isolated designs are found on the upper body.

The motifs included a diagonally placed ladder pattern (pls. 128A:4, B:6, 129A:2). Running, solid triangles (pls. 128A, 129A:3) as well as triangles filled with lines between two horizontal lines are frequent (pls. 121C, 128A:1-2, B:1). They are often made with uneven lines giving the design a hasty effect (pls. 121B, 129A:3). An exceptional piece shows a sunburst with curving rays (pls. 121D, 128B:7; see also Hauptmann 1972: pl. 73:1). A rim sherd with the two types of triangles near the rim had horned animals below (pls. 121B, 129A:3, 141:5). The animal has an hourglass-shaped body with schematically rendered head, legs and tail. The impression that most horned animals are more naturalistically rendered is confirmed by the depiction of two other horned animals, probably goats (pl. 121C, F). These last two sherds are from the same vessel. Curved lines with pendant triangles (pls. 121A, 129A:5) and bands with reserved sections (pl. 121G) are also found.

The painted pottery dated to the EB IIIA strata (Phase E) is handmade, sand-tempered, well baked with either a cream slip or a naturally cream surface ('bloom'). The designs are in black or red paint and are placed on and in a wide band around the rim. Solid triangular designs continue from the previous period but these and all the other designs are drawn with greater care now. These triangles are often found now on top of and over the outside face of the rim (pl. 129A:4, B:4). Overlapping chevrons (pls. 122C, 129A:4), some cross-hatched (pls. 122D, E, 129A:1), are very popular. One highly stylized bird-shaped design (pl. 129B:2) was found and possibly one sherd with a horned animal (pl. 122B) can be dated to this period.

6. Conclusion: eastern Anatolia and the Early Transcaucasian culture

The Early Transcaucasian culture, of which the Early Bronze levels at Korucutepe are an integral part, extended geographically in a wide arc around the large drainage basin of the Tigris and Euphrates (see, e.g., Burney and Lang 1971: 43-85). It is thus associated principally with the mountainous region extending from northwestern Iran, through the Caucasus, westward across Anatolia and down into Syria and Palestine. To refer to this whole mountainous region I am proposing the term "Outer Fertile Crescent" framing as it does the main areas of the Fertile Crescent proper. The Early Transcaucasian culture is the only one known from the ancient Near East, either in prehistory or in historical times, to have corresponded in its diffusion with the geographical area thus defined. Later cultures such as that of the Hurrians, Hittites, or Urartians only influenced parts of this vast geographical region and thus cannot be compared in this respect with the Early Transcaucasian spread. It goes without saying that this unity is to be understood purely in cultural, and not in political terms. Chronologically too the extent of the Early Transcaucasian culture is impressive. The earliest C14 dates we have indicate that it began in the Caucasus region at the end of the fourth or the beginning of the third millennium, lasted the whole of the third millennium, finally ending somewhere around 1800 B.C. This makes it one of the longest lived cultures in the ancient Near East.

The material evidence from this prehistoric culture does not essentially differ in type throughout its cultural sphere. The evidence mainly consists of burnished pottery (decorated and undecorated), architecture in the form of private houses, obsidian tools and metallurgical implements such as crucibles, nozzles, and molds along with the tools and weapons made of metal – although these metallurgical implements and metal objects are never found in great quantity outside the Transcaucasian area itself. In addition eastern Anatolia, Syria, and Palestine have yielded a number of portable hearths or hearth stands with anthropomorphic decoration. These are imitations of both stationary and portable hearths and stands found in Transcaucasian houses as the central feature

of the main room. In light of the fact that separate religious buildings, differing appreciably in plan from private houses, have never been found for this culture (the postulated example from Beth Yerah [Maisler (Mazar) et al. 1952:228] probably being a granary), the conclusion is likely that they were the center of worship within the culture. Other than these classes of evidence we have little material remaining from this culture.

It is naturally not to be expected that all areas at all times during the third millennium manifested the same aspects of this cultural phenomenon. To summarize briefly this complicated question: the culture began in the Caucasus, probably evolving gradually from an indigenous neolithic culture found in modern Georgia, Armenia and Azerbaijan.² From this center the evidence indicates that it spread in every geographically viable direction. Northward some sites on the northern slopes of the Caucasus show evidence of contact with the Early Transcaucasian culture. South and east there are Early Transcaucasian sites in northwestern Iran found on both sides of Lake Urmia and extending down to the region of Hamadan. To the west it was strong in eastern Anatolia (including the Keban area), had some influence in the region of Malatya – although at present this is not very well known - and at least had contacts with the cultures in central Anatolia. More is known about its spread into Syria and Palestine, where the Early Transcaucasian influence was short in time but intensive in impact. The spread into each of these areas occurred at different times and was accomplished in widely varying patterns. Thus different stages of development are exhibited at the beginning of the Early Transcaucasian culture in the various areas, while the subsequent history, in those areas where the culture continued to develop, was the result of local conditions apparently little affected by the original starting point.

One of these sub-patterns of cultural interrelationships can be seen in eastern Anatolia and the Keban area. Eastern Anatolia is contiguous to the area of modern Armenia where the earliest stage of the Early Transcaucasian culture is found. There are several sites in eastern Anatolia which have decorated ceramic types close to the early Caucasian examples. Included among them are Karaz, Güzelova, Pulur, Sakyol, and Taşkun Mevkii. Eastern Anatolia is also geographically close to the area of northwestern Iran. It is not suprising therefore that an analysis of the ceramic types from eastern Anatolia, which are shared with one or more other regions in the next chronological stage of development, shows that they are close both to Armenia and to northwestern Iran. Even more characteristic of this second stage of development in Eastern Anatolia is the fact that about three-fourths of the types are unique to that area. This follows the general cultural pattern within the Early Transcaucasian culture whereby ceramic types are borrowed in the earliest phase of the culture and then develop indigenously thereafter.

In addition eastern Anatolia has ceramic types in common with both Syria and Palestine where this type of pottery is called Khirbet Kerak ware. It was introduced into Syria and Palestine from eastern Anatolia but originally had come from the Caucasus. In both Syria and Palestine this type of pottery was produced alongside the already well-established wheelmade ceramics. This is the only area where such a pattern occurred since in both eastern Anatolia and north-western Iran the Early Transcaucasian burnished wares were the only ceramics produced locally. There were, however, other types of ceramics imported into Eastern Anatolia – that is the two types of high-fired, thin-walled pottery imported from north Syria and northern Mesopotamia (see above). Numerically, however, these were a minor element in the ceramic inventory. In

² This whole culture is discussed with full documentation in my forthcoming book *The Outer Fertile Crescent* in the Third Millennium B.C.

addition to pottery imported, 'Canaanean' blades were found in Early Bronze levels in the Keban region.

The influence of the Early Transcaucasian culture on central Anatolia also follows a unique pattern. It is contemporary with the 'Copper Age' in central Anatolia but, in contrast with the ceramic evidence elsewhere, the amount of Early Transcaucasian burnished ware and its imitations is slight within the total ceramic inventory. Therefore it appears that the contact between the two cultures was not one of direct migration or even cultural diffusion as it was in other areas, but was simply the result of trading contacts.

When the diverse cultural patterns assumed by the Early Transcaucasian culture in the different geographical areas are examined, it is clear that the mechanisms which were utilized to effect this spread were as complex and varied as the culture itself. Thus a single explanation, such as the migration theory, cannot cover all the varied geographical and chronological aspects of the problem and is too simplistic. The evidence shows that in the various regions and at specific times widely different forces were at work to enhance and further the spread of the Early Transcaucasian culture. Concentrating on eastern Anatolia alone, we can see that one of the factors must have been the availability of raw materials such as copper for shipment both east to Transcaucasia (and possibly from there along the northwestern Iranian trade route to Mesopotamia) and west to central Anatolia. From the ceramic evidence we can see that the trade in the southwesterly direction was not unidirectional since ointments and other trade goods must have been shipped into the Keban in the small high-fired vessels we find imported there. The 'Canaanean' sickle blades too must have been trade items. Other payment for goods could have come in the form of perishable commodities. One of these may have been textiles which were so important in the Old Assyrian trading network - probably the late successor to a trading complex established by the Early Transcaucasian culture.

7. Catalog

I. Vessel types. The numbers are those of the drawings on pls. 114-119.

No.	Vessel type	Registration no. KRC	Locus Find spot	Phase	Description	Comparison
114A	Small deep bowl*	70-75	K 12 unstratified 3	C? (see ch. 1, § 4)	Black burnished Recessed neck Holes in the base indicate that it was used as a sieve Scale: 1:2	_
114B	Small deep bowl	69-335	J 11 [7](11) 11	C? (see ch. 1, § 4)	Black burnished Recessed neck Pierced lug handle Scale: 1:2 Photo: pl. 123A	Norşun-Tepe similar to Hauptmann 1972; pl. 72:6

^{*} We have called vessels with an outside rim diameter of less than 15 cm 'small', between 15 and 30 cm 'medium', and more than 30 cm 'large'. Vessels of which the height measures less than \(\frac{1}{2}\) of the diameter are called 'bowl', between \(\frac{1}{2}\) and \(\frac{1}{2}\) times the diameter 'pot', and more than \(\frac{1}{2}\) times the diameter 'jar'.

No.	Vessel type	Registration no. KRC	Locus Find spot	Phase	Description	Comparison
114C	Small deep bowl	70-360	O 17 [13](5) 38	C Stratum LIV	Mottled burnished Recessed neck Scale: 1:2	Norşun-Tepe Hauptmann 1971: pl. 11:2 Tepecik Esin 1970: pl. 13:1
114C		70-343 (not illus.)	P 17 [13] (5) 12	C Stratum LIV	Red burnished	
114C		69-356 (not illus.)	N 12 [2](3B) 28	D Stratum LXXIII	Mottled burnished	
114D	Small deep bowl	70-80	O 12 7 7	D Stratum LXXVI	Black burnished Recessed neck Scale: 1:2	Tepecik Esin 1972, pl. 105:5 Könk Burney 1958, nos. 192, 196-7 Hankendi Ibid., no. 195 Tadim Ibid., no. 193 Hinsor Ibid., no. 194
114D	Small deep bowl	70-524 (not illus.)	O 12 [14](10) 64	D Stratum LXXIII	Mottled burnished	
114E	Small deep bowl	69-364	N 12 [2](3B) 38	D Stratum LXXIII	Mottled burnished Recessed neck Scale: 1:2	-
114F	Small pot	70-399	O 17 [13](5) 39	C Stratum LIV	Red burnished Oval ? base Long recessed neck. Dipper or measure? Scale: 1:2	Sakyol (Pulur) Koşay 1971, pl. 77. Shape is similar but Korucutepe example is smaller Pulur Koşay 1964, pl. XXXVI: p. 229
114G	Small pot	70-361		C Stratum LIV	Mottled burnished Recessed neck Dipper or measure? Contains ½ liter Scale: 1:2 Photo: pl. 123F	-

No.	Vessel type	Registration no. KRC	Locus Find spot	Phase	Description	Comparison
114G		70-367 (not illus.)	P 17 [13](5) 11	C Stratum LIV	Red burnished	
114G		70-503 (not illus.)	P 17 [13](5) 19	C Stratum LIV	Mottled burnished	
115A	Medium deep bowl	70-496	P 17 [13](5) 13	C Stratum LIV	Red burnished Scale: 1:4	_
		70-402 (not illus.)	O 17 [13](3) 40	E? (mixed Phases E/I level)	Black burnished	
115B	Medium deep bowl	68-392	O 11 SW (4) 60	D Stratum LXXIV	Black burnished Scale: 1:4	_
115C	Medium deep bowl	69-355	N 12 [2](3B) 27	D Stratum LXXIII	Black burnished Recessed neck Scale: 1:4 Photo: pl. 123D	
115C		70-541 (not illus.)	P 17 [13](5) 17b	C Stratum LIV	Mottled burnished	
115D	Medium deep bowl	70-362	O 17 [13](5) 21	C Stratum LIV	Red, wet smoothed. 2 lug handles Scale: 1:4	Norsun-Tepe Hauptmann 1972, pl. 72:9 monochrome painted; without lugs)
115E	Medium pot	70-401	O 17 [12](4) 33	E Strata LXXVIII- LXXX	Mottled burnished 2 triangular lugs at rim Scale: 1:4	
115F	Medium deep bowl	70-504	P 17 [13](5) 17a	C Stratum LIV	Red burnished Recessed neck Scale: 1:4	
115G	Medium pot	70-455	O 16 [2](7-6) 23	E Strata LXXXIII- LXXXV	Black burnished Fluted decoration Scale: 1:4 Photo: pl. 126F	Tepecik Esin 1972, pl. 105:1 similar decoration

No.	Vessel type	Registration no. KRC	Locus Find spot	Phase	Description	Comparison
115G	Medium pot	70-544 (not illus.)	O 14[1](2) 38	E Stratum LXXXI	Black burnished Norşun-Tepe without decoration Hauptmann pl. 74:7 (with decoration)	
115H	Medium pot	70-469	P 14 [5](3) 6	E Strata LXXVIII- LXXX	Black burnished Recessed neck Scale: 1:4	_
115H	Medium pot	70-545 (not illus.)	P 17 [13](5) 14	C Stratum LIV	Red burnished	
116A	Medium shallow bowl	69-427	N 11 [3](6) 68	D Stratum LXXIII	Red burnished Vestigial lug handle (not shown) Fine ware Scale: 1:2	_
116A		69-357 (not illus.)	N 12 [2](3B) 29	D Stratum LXXIII	Buff wet smoothed	
116 A		69-369 (not illus.)	N 12 [2](3B) 46	D Stratum LXXIII	Black burnished	
116A		70-157 (not illus.)	O 12 [8](7) 20	D Stratum LXXVI	Mottled burnished	
116A		70-247 (not illus.)	O 18 [8](3) 17	C? (CXVII house dug into XLVIII ff)	Black burnished	
116B	Small shallow bowl	69-246	N 12 2 4	D?	Black burnished Scale: 1:2	Norşun-Tepe Hauptmann 1971, pl. 10:4
116B		69-360 (not illus.)	N 12 [2](3B) 34	D Stratum LXXIII	Buff wet smoothed	
116B		70-499 (not illus.)	O 12 [7](10) 69	D Stratum LXXIII	Black burnished	
116B	٠	70-464 (not illus.)	O 12 [11](6) 54	D Stratum LXXVII	Black burnished	

No. Vessel type		Registration no. KRC	Locus Find spot	Phase	Description	Comparison
116B		70-466 (not illus.)	O 12 [11](6) 56	D Stratum LXXVII	Black burnished	
116C	Small shallow bowl	70-174	O 12 [7](10) 24	D Stratum LXXIII	Brown burnished Fine grits Recessed neck Scale: 1:2	_
116C		70-393 (not illus.)	P 17 [15](5) 31	C Stratum LIV	Black burnished	
116C		70-109 (not illus.)	O 12 [7](8) 13	D Stratum LXXV	Black burnished	
116C		70-482 (not illus.)	O 12 [11](8) 58	D Stratum LXXV	Mottled burnished	
116D	Small shallow bowl	70-185	O 16 [4](10) 17	E Stratum LXXVIII	Black burnished Fine ware Fingerhold-type handle Scale: 1:2 cf. Photo: pl. 126A	Tepecik Esin 1970, pl. 13:7 Liz Burney 1958, no. 159 Godin Young 1969, fig. 11:7
116D		69-361 (not illus.)	N 12 [2](3B) 36	D Stratum LXXIII	Black burnished	
116D		69-365 (not illus.)	N 12 [2](3B) 40	D Stratum LXXIII	Red burnished	
116D		69-447 (not illus.)	N 12 [2](3B) 35	D Stratum LXXIII	Buff burnished	
116D		69-350 (not illus.)	N 12 [2](3) 47	D Stratum LXXIV	Mottled wet smoothe	d
116D		70-498 (not illus.)	O 12 [7](9) 68	D Stratum LXXIV	Black burnished	
116D		70-108 (not illus.)	O 12 7 12	D Stratum LXXVI	Black burnished	

No.	Vessel type	Registration no. KRC	Locus Find spot	Phase	Description	Comparison
117G	Platter	70-407	O 15 [4](6) 20	E Stratum LXXXVI	Orange-brown wet-smoothed Streaked exterior Scale: 1:4	_
117H	Platter	69-42	N 11 [4] pit AN 25	E? (see ch. 1, § 5.4)	Handmade coarse, chaff-tempered orange-buff, finger-streaked ware with "rope-ornament" type decoration Scale: 1:4	
117I	Goblet		N 12 [2](3) —	D Strata LXXIII- LXXIV	Gray-orange slip Very fine grit Highly fired Wheelmade Heavy wheel pattern on exterior Scale: 1:4	(see text)
118A	Stand	70-370	P 17 [13](5) 22	C Stratum LIV	Mottled burnished Scale: 1:4 Norşun-Tep Hauptmann pl. 75:5 Tepecik Esin 1972, p Amuq, Phas Braidwood a Braidwood a fig. 306:2	
118A		70-364 (not illus.)	O 17 [13](5) 18	C Stratum LIV	Red burnished	
118A		70-365 (not illus.)	O 17 [13](5) 25	C Stratum LIV	Mottled burnished	
118A		69-275 (not illus.)	N 12 [2](3B) 17	D Stratum LXXIII	Brown burnished	
118A		69-318 (not illus.)	N 12 [2](3B) 19	D Stratum LXXIII	Buff burnished	
118A		70-166 (not illus.)	O 12 [7](10) 21	D Stratum LXXIII	Mottled burnished	

No.	Vessel type			Locus Phase I Find spot		Comparison
118A		70-175 (not illus.)	O 12 [7](10) 23	D Stratum LXXIII	Mottled burnished	
118A		70-525 (not illus.)	O 12 [14](10) 65	D Stratum LXXIII	Mottled burnished	
118A		70-527 (not illus.)	O 12 [16](10) 67	D Stratum LXXIII	Mottled burnished	
118A		70-205 (not illus.)	O 12 [8](9) 25	D Stratum LXXIV	Brown burnished	
118A		70-495 (not illus.)	O 12 [11](9) 63	D Stratum LXXIV	Mottled burnished	
118 A		70-212 (not illus.)	O 13 [5](4) 17	E Stratum LXXVIII	Mottled burnished	
118A		68-527 (not illus.)	O 12 surface	D/E? (mixed Phases D-L	Red slipped	
118B	Stand	70-403	P 17 [13](5) 15	C Stratum LIV	Red burnished Scale: 1:4	_
118B		68-270 (not illus.)	O 11 SE (4) 29	D Stratum LXXIV	Red burnished	
118B		70-462 (not illus.)	O 12 [11](6) 52	D Stratum LXXVII	Black burnished	
118B		70-463 (not illus.)	O 12 [11](6) 53	D Stratum LXXVII	Black burnished	
118B		70-60 (not illus.)	O 12 [7](6) 6	D Stratum LXXVII	Black burnished	
118B		70-211 (not illus.)	O 13 [5](4) 16	E Stratum LXXVIII	Mottled burnished	

No.	Vessel type	Registration no. KRC	Locus Find spot	Phase	Description	Comparison
118C	Stand	70-458	O 12 [11](6) 37	D Stratum LXXVII	Black burnished exterior: red-black mottled interior Double depression on exterior Scale: 1:4 Photo: pl. 127E	
118D	Stand	69-172	N 11 [3](6) 48	D Stratum LXXIII	Buff-red, wet- smoothed incised design near rim and base Scale: 1:4 Photo: pl. 127F	
118E	Stand	70-58	O 16 4 4	E?	Black burnished Horizontal ridges near rim and base Scale: 1:4	-
118F	Stand	70-86	O 15 [4](5) 14	E Stratum LXXXVII	Black burnished Fine ware Horizontal ridges around center Scale: 1:4	
118G	Tall stand	70-484	O 14 6 30	E Stratum LXXXIII	Black slipped Scale: 1:4	_
119A	Miniature vessel	69-319	N 12 [2](3B) 39	D Stratum LXXIII	Dark gray slip Very fine clay Highly fired Wheelmade Scale: 1:2 Photo: pl. 127I	(see text)
119B	Miniature vessel	70-214	O 17 5 34	E Stratum LXXIX	Mottled exterior Scale: 1:2	Güzelova Koşay 1967, pl. XX: G. 401, G. 398
119C	Miniature vessel	70-28	O 13 [5](2) 7	E Strata LXXXI- LXXXII	Handmade Rough Crucible? Scale: 1:2	(see text)
119C	Miniature vessel	69-448 (not illus.)	N 12 [3](4) 54	D Stratum LXXIV	Not perforated	

The Early Bronze Age pottery

No.	Vessel type	Registration no. KRC	Locus Find spot	Phase	Description	Comparison
119D	Miniature vessel	68-429	O 10 West surface 28	D?	Red Rough exterior Unbaked Scale: 1:2 cf. Photo: pl. 127J, L (KRC 69-188, 2 views	(see text)
119E	Miniature vessel	70-447	O 12 [12](8) 46	D Stratum LXXV	Mottled rough exterior Incised lines on exterior Scale: 1:2 Photo: pl. 127M	(see text)
119F	Miniature vessel	68-498	O 11 SE (5) 88	D Stratum LXXIII	Brown Rough exterior Scale: 1:2	(see text)
119G	Miniature vessel	70-424	N 14 [4](10) 17	E Stratum LXXXII	Buff Rough exterior Scale: 1:2	(see text)
119H	Miniature vessel	70-104	O 12 [7](8) 9	D Stratum LXXV	Clay receptable on base, baked Gray, coarse exterior Scale: 1:2	Pulur Koşay 1964, pl. XXXIX: P. 16
119H		70-106 (not illus.)	O 12 [7](8) 10	D Stratum LXXV	Red unburnished	
1191	Miniature vessel	70-107	O 12 [7](8) 11	D Stratum LXXV	Clay receptacle on base, baked Red, coarse exterior Scale: 1:2 Photo: pl. 127K	Güzelova Koşay 1967, pl. XVIII: G. 147

II-V. Feature sherd drawings.

			Locus	Stratum	Phase
II.	Plate 119	J	N 12 [6](2)	LXXIV	D
	Phase D	K	O 12 [8](9)	LXXIV	D
	Spouts and lugs	L	O 11 SW (5)	LXXIII	D
		M	N 11 [3](7)	LXXII	D
Ш.	Plate 120	Α	O 11 SE (5)	LXXIII	D
	EB II (Phases C-D)	В	O 11 SE (5)	LXXIII	D
	Relief-decorated burnished pottery	C	O 12 [16](10)	LXXIII	D
		D	K 12	_	C ?*
		E	J 11 [7](10)	(CXI)	C ?*
		F	N 12 [1](3)	LXXV	D
IV.	Plate 121	Α	K 12 [3B](6)	(CXXII)	C ?*
	EB II (Phases C-D)	В	O 12 [17](10)	LXXIII	D
	Painted designs	C	O 12 [17](10)	LXXIII	D
		D	N 11 [3](7)	LXXII	D
		E	K 12 [3D](12)	(CXVII)	C ?*
		F	O 12 [17](10)	LXXIII	D
		G	K 12 [3](9)	(CXXI)	C ?*
٧.	Plate 122	Α	O 14		E ?
	EB III (Phases E-F)	В	P 15 pit E		E ?
	Incised and painted designs	C	O 16 [2](7)	LXXXIII	E
		D	O 16 [4](5)	LXXXVII	E
		E	P 14 [6](5)	LXXXVII	E

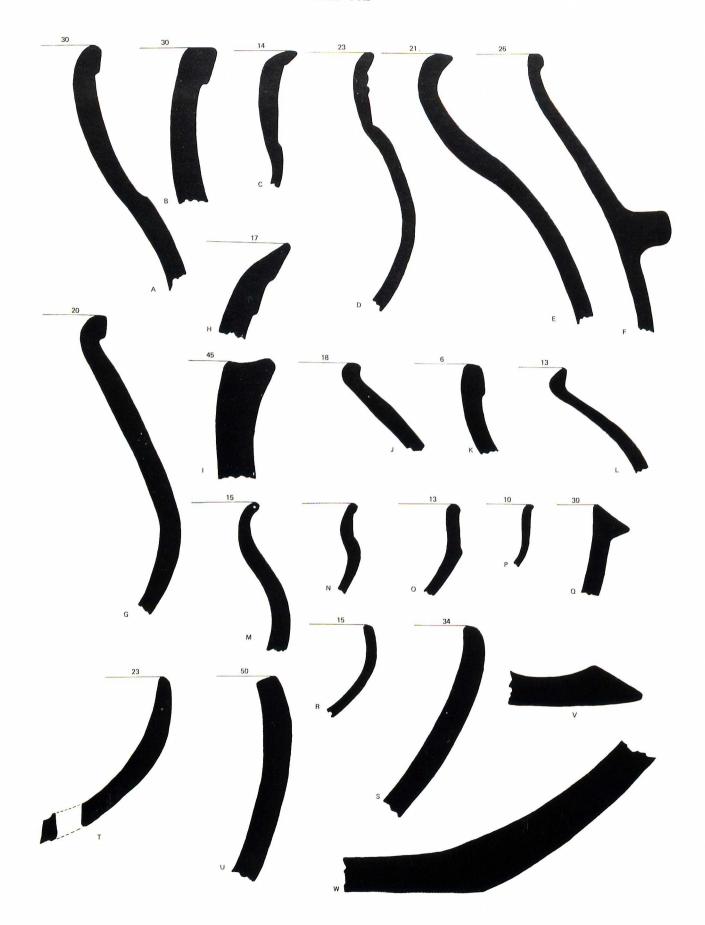
^{*} See ch. 1, § 4.

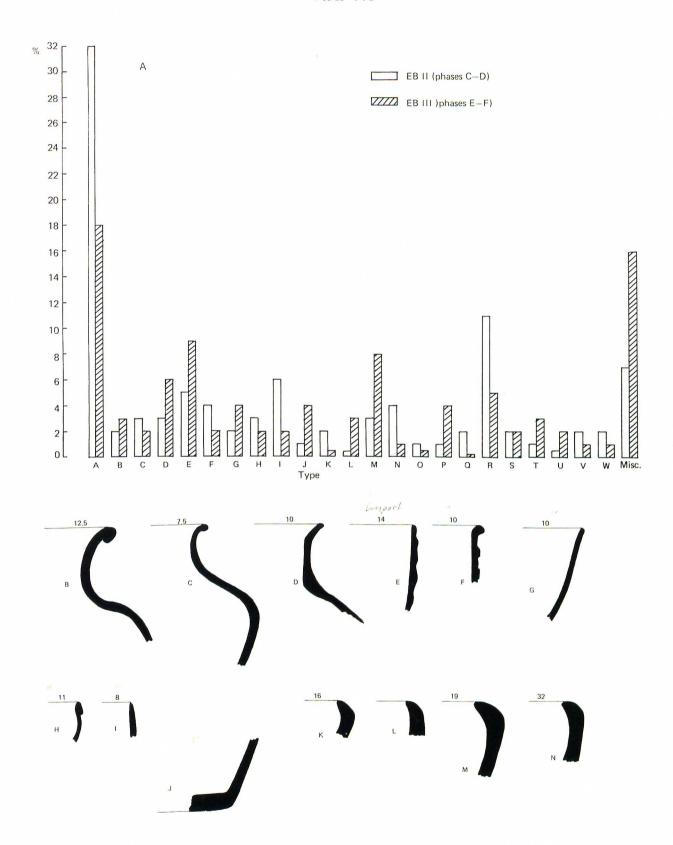
VI-XV. Vessel type photographs.

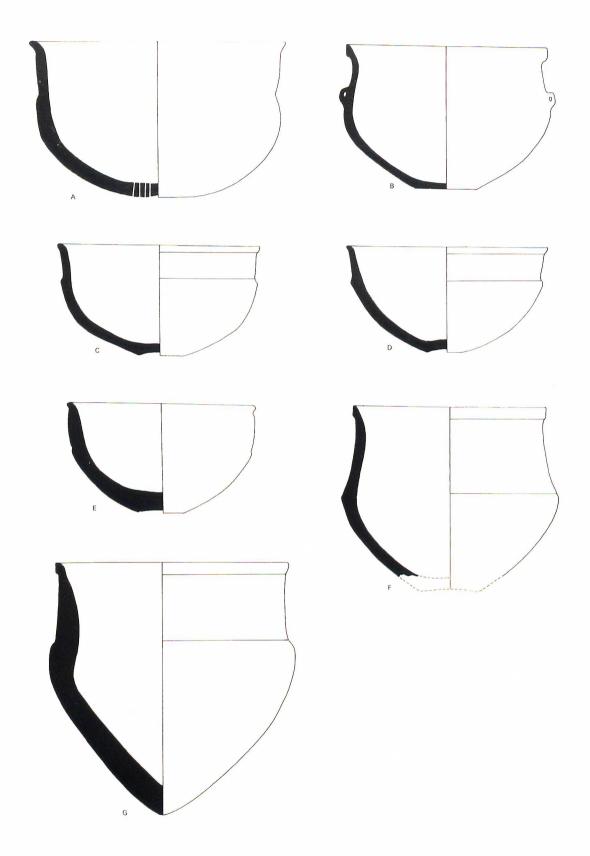
		KRC no.	Locus	Find spot	Stratum	Phas			
√I.	Plate 123. E	EB II. Burnished ve	ssels						
	A	69-335	J 11 [7](11)	11	(CXI)	C ?			
	В	70-496	P 17 [13](5)	13	LIV	C			
	С	70-363	O 17 [13](5)	16	LIV	C			
	D	69-355	N 12 [2](3b)	27	LXXIII	D			
	E	70-542	P 17 [13](5)	34	LIV	C			
	F	70-361	O 17 [13](5)	37	LIV	_C 			
ΊΙ.	Plate 123. I	EB IIA. Black burn	nished storage jar from O-P	17 house					
	G	70-537	O 17 [13](5)	14	LIV				
III.	Plate 124. 1	Detail of relief deco	oration on jar in pl. 123G wit	h lozenge and per	ndent crescent design				
	A	70-537	O 17 [13](5)	14	LIV				
X.	Plate 124. I	EB IIA. Relief-deco	orated jar containing barley f	from O-P 17					
	В	70-536	O 17 [13](5)	15	LIV				
Χ.	Plate 125. I	Black burnished rel	ief-decorated jar (A) with or	ne sherd with a b	ird design enlarged in (B				
	A B	70-539 70-539	O 17 [13](5)	24	LIV	C 			
ζI.	Plate 126. I	EB II. Bowls (A-C) and a circular concave ('di	imple') base (D)					
	A	69-363	N 12 [2](3b)	37	LXXIII	D			
	В	70-467	O 12 [11](6)	57	LXXVII	D			
	С	69-247	N 12 2	5		D ?			
	D	70-477	O 17 [13](5)	31	LIV	C			
XII.	Plate 126. EB IIA. Vessel from O-P 17 (E)								
	EB IIIA. Details of fluted decoration (F)								
	E	70-543	P 17 [13](5)	24	LIV	C			
	F	70-455	O 16 [2](7-6)	23	LXXXIII-LXXXV	_E 			
XIII.	Plate 127. 1	EB. Burnished lid t	ypes						
	A	69-340	N 12 [2](3)	15	LXXIV	D			
	В	70-449	O 12 [11](8)	50	LXXV	D			
	С	69-348	N 12 3	44	LXXV	D			
	D	70-449	O 12 [11](8)	50	LXXV	D			
XIV.	Plate 127. 1	EB. Decorated and	undecorated stands						
	E	70-458	O 12 [11](6)	37	LXXVII	D			
	F	69-172	N 11 [3](6)	48	LXXIII	D			
	G	70-325	O 17 [13](5)	32	LIV	C			
XV.	Plate 127.	EB IIB. Imported v	essels (H-I) and miniature	vessel types (J-M	(r)				
	Н	not reg.	O 11 SW-SE (5-4)		LXXIII-LXXIV	D			
	I	69-319	N 12 [2](3b)	39	LXXIII	D			
	J	69-188	N 11 [4](3)	53	LXXIV	D			
	K	70-107	O 12 7	11	LXXV	D			
		69-188	N 11 [4](3)	53	LXXIV	D			
	L	09-100	11 11 17007						

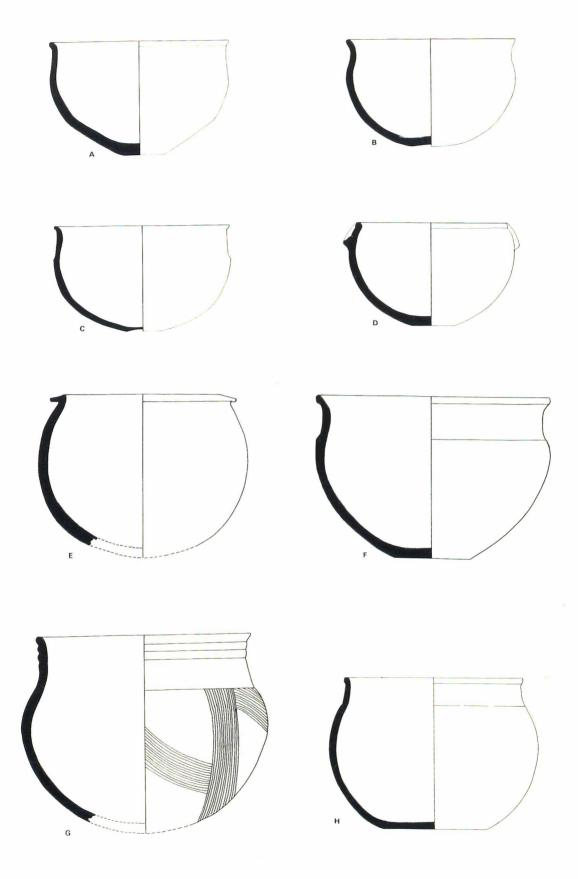
XVI-XVII. Painted sherd photographs.

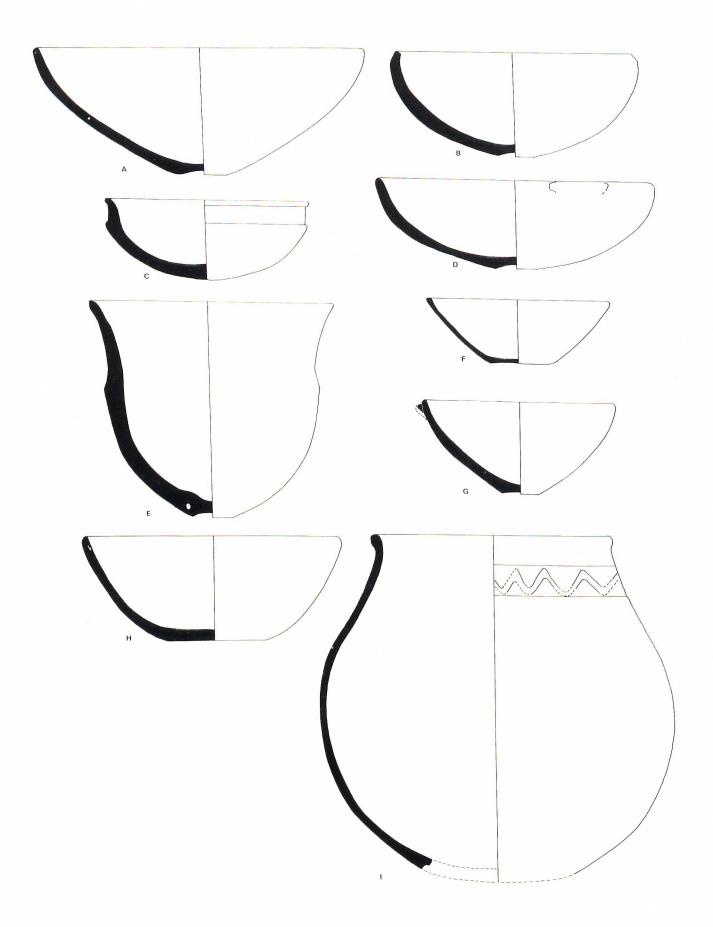
			Locus	Stratum	Phase
XVI.	Plate 128A	1	K 12 [3A](6)	(CXXII)	C ?*
	EB II	2	K 12 [3A](6)	(CXXII)	C ?*
	Painted designs	3	J 11 [3](8)	(CXII)	C ?*
		4	K 12 [3D](10)	(CXX)	C ?*
		5	K 12 [3B](6)	(CXXII)	C ?*
		6	K 12 [3A](6)	(CXXII)	C ?*
	(* See ch. 1, § 4)	7	K 12 [3B](5)	(CXXII)	C ?*
	Plate 128B	1	N 11 [3](7)	LXXII	
	EB II	2	N 12 [1](2)	LXXV	D
	Painted designs	3	N 12 [1](3)	LXXV	D
		4	N 11 [3](5)	LXXIV	D
		5	N 12 [1](3)	LXXV	D
		6	N 12 [4](4b)	LXXIII	D
		7	N 11 [3](7)	LXXII	D
XVII.	Plate 129A	1	P 14 [6](5)	LXXXVII	
	EB II/III	2	O 12 7	LXXVI	D
	Painted designs	3	O 12 [17](10)	LXXIII	D
		4	P 14 3	LXXXVIII	E
		5	K 12 [3A](5)	(CXXII)	C ?
	Plate 129B	1	O 15 [4](6)	LXXXVI	Е
	EB III	2	O 13 [5](4)	LXXVIII	E
	Painted designs	3	O 16 [4](5)	LXXXVII	E
		4	O 13 [5](2)	LXXXI	E
		5	O 16 [2](7)	LXXXIII	Е
		6	O 13 [5](3)	LXXX	E

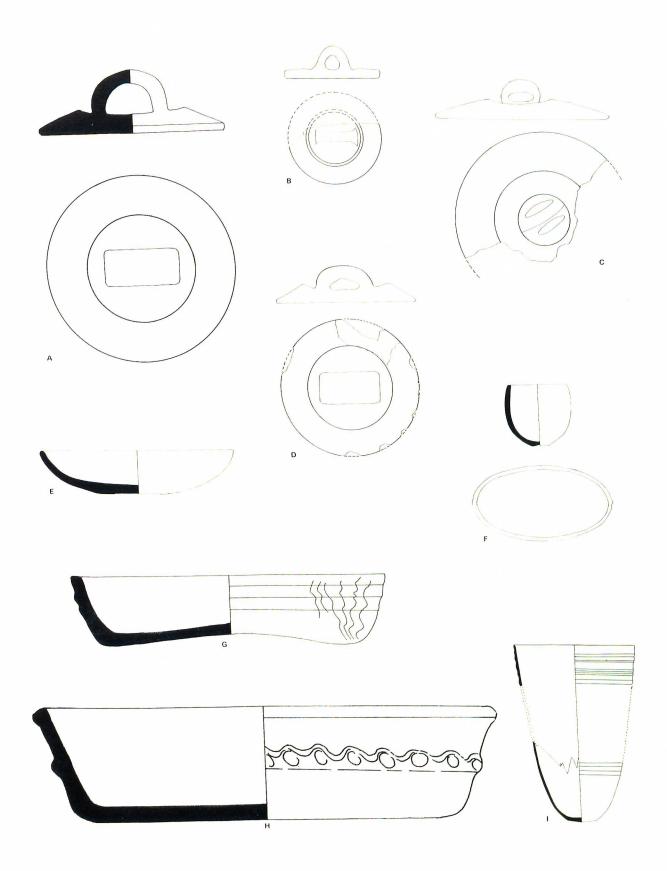


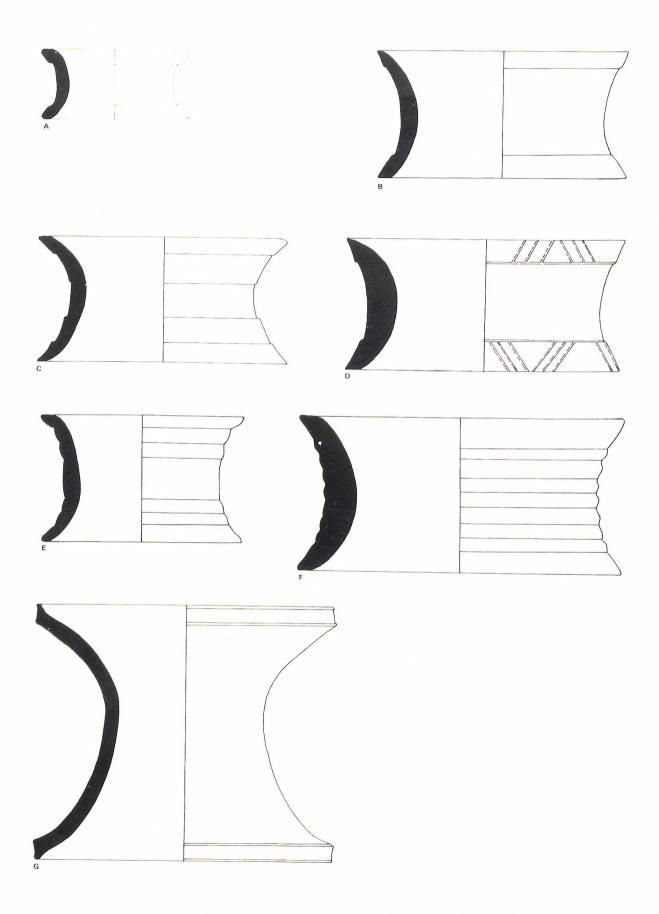


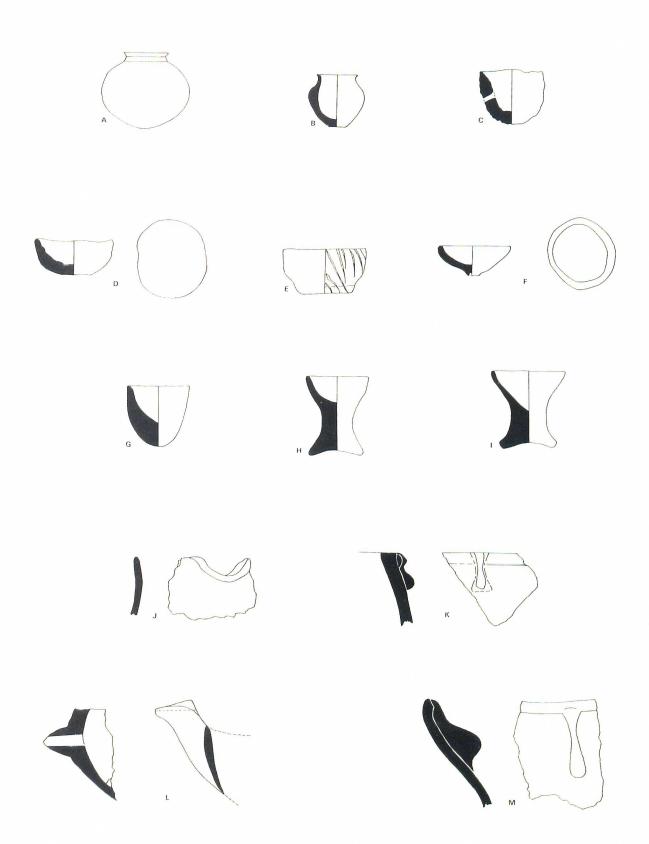


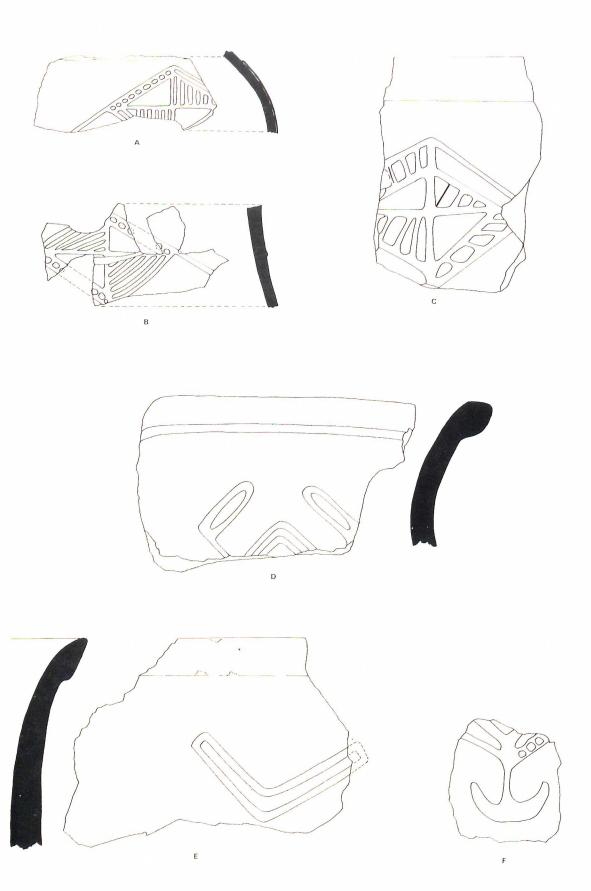




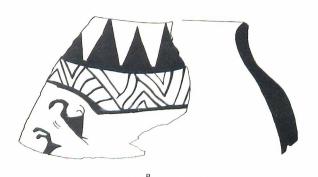


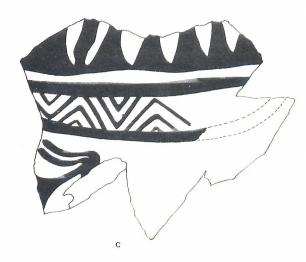


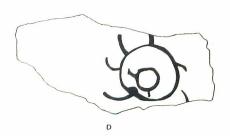










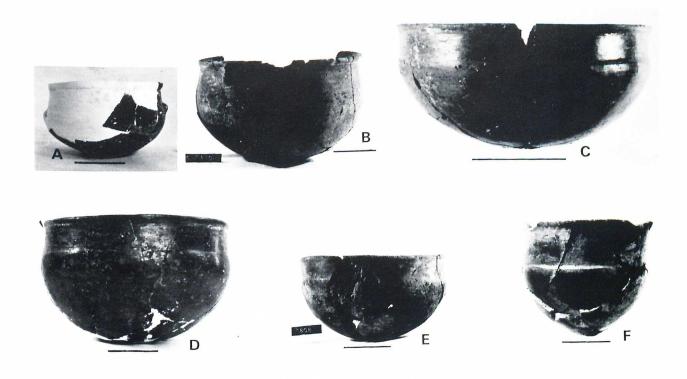


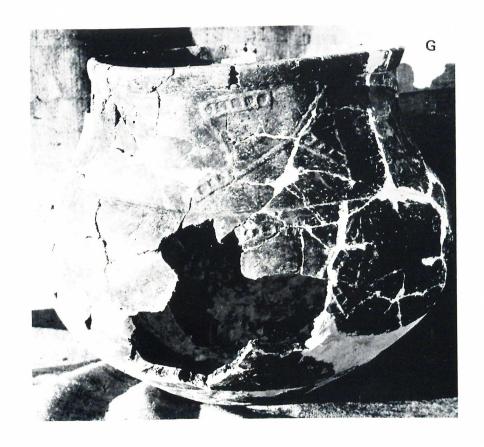


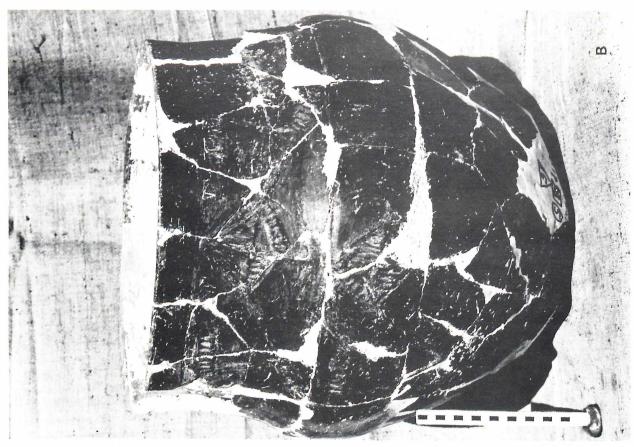








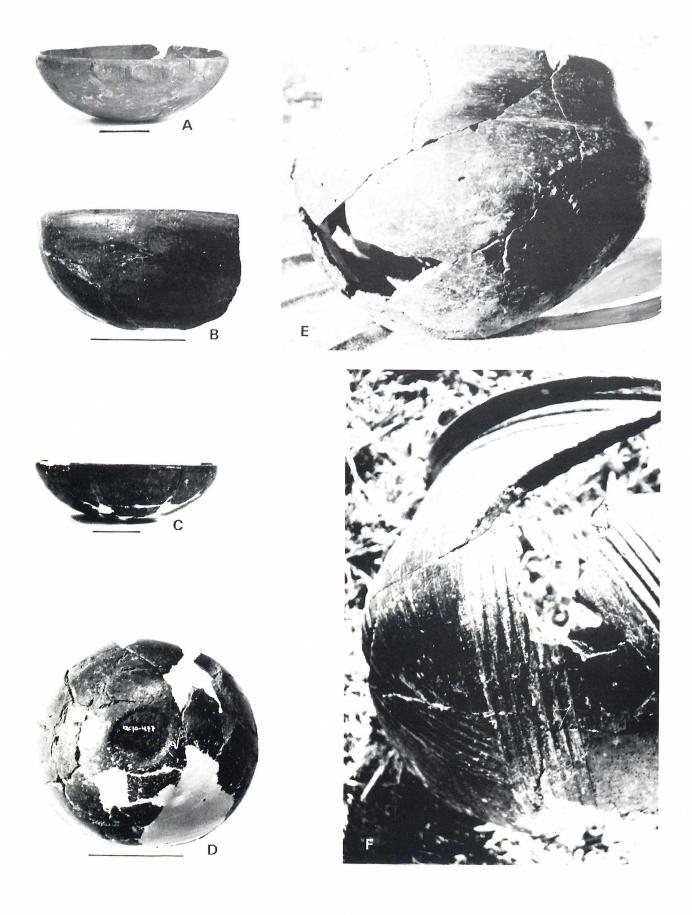




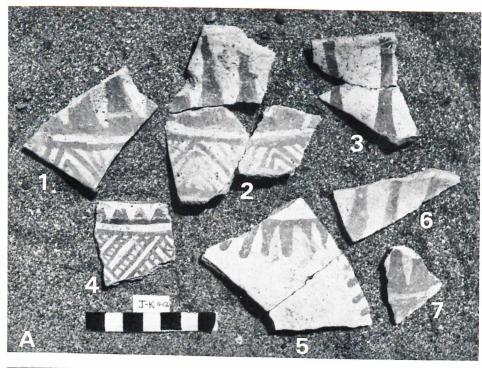


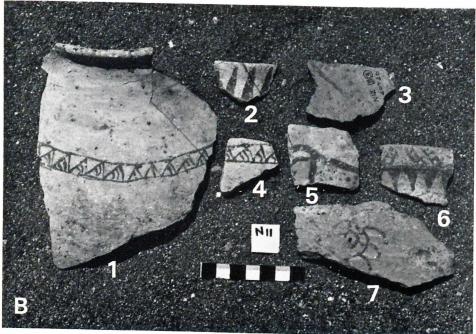


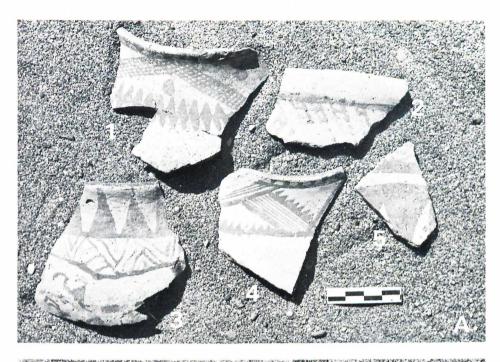














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Korucutepe

Final Report on the Excavations of the Universities of Chicago, California (Los Angeles) and Amsterdam in the Keban Reservoir, Eastern Anatolia 1968–1970

Volume 2

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1978

NORTH-HOLLAND PUBLISHING COMPANY - AMSTERDAM · NEW YORK · OXFORD

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Library of Congress Catalog Card Number: 74-83722 North-Holland ISBN: 07204 0531 9

Publishers:

NORTH-HOLLAND PUBLISHING COMPANY – AMSTERDAM/NEW YORK/OXFORD

Distributors for the U.S.A. and Canada: ELSEVIER/NORTH-HOLLAND INC., 52 VANDERBILT AVENUE, NEW YORK, N.Y. 10017

NG 5080 K85 L8-2

75.497-2

PRINTED IN THE NETHERLANDS

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