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NORTHERN ANATOLIA BEFORE CLASSICAL TIMES

By C. A. BURNEY

THAT part of northern Anatolia known in Greek and Roman times as Bithynia and Paphlagonia comprises a number of high ridges running from west to east, through which the rivers break their way in their tortuous courses down to the Black Sea. The region discussed in this article in fact comprises Paphlagonia, the eastern half of Bithynia and part of Phrygia, from the lower Sakarya to the mouth of the Halys ; but, since these names do not apply to the Bronze Age, the whole will be termed northern Anatolia. As far south as the crest of the main ridge bounding the Anatolian plateau along its north side the land has a maritime climate quite different from that of either the plateau or the Mediterranean coast : rainfall is abundant, even at times in the summer ; deciduous forests cover these north-facing slopes, right to the top. Sinop provides the best natural harbour on this coast. The change to the steppe country of the plateau is abrupt. The highest ridges on the plateau, especially near Bolu, are pine-clad ; but otherwise the country is treeless, save for willows and poplars marking the course of a stream. There is no extensive plain anywhere in the middle of this mountainous country, the only plains being on the periphery of the region : that of Eskişehir is on the plateau, but the other three plains—those of Adapazarı and Düzçe in the west, and the Bafra plain at the mouth of the Kızılırmak—are nearly at sea level.

Conforming with the physical structure of this part of Anatolia, the natural roads run from west to east rather than north to south. Where the rivers cut their way down from the plateau they have formed gorges, which are barriers, not natural highways. Such is the valley of the Sakarya for most of its course from not far downstream from Gordion till its emergence into the plain of Adapazarı ; so also is the Kızılırmak valley below Kargı. It is notorious that to this day both these rivers obstruct rather than assist the traveller. But along many rivers where they flow across the plateau travel is easy : such is the Porsuk valley, from Eskişehir eastwards, and the upper reaches of the Gökirmak, near Daday. Three natural east-west routes in northern Anatolia are marked by traces of ancient occupation. First, there is the route from Eskişehir eastwards to Gordion, and thence via Polatlı and the Ankara Suyu and Mamak valleys to the Halys (Kızılırmak) and the Hittite homeland on its right bank : this route leads westward from Eskişehir to Demirci Hüyük, Bozhüyük and westward to the Troad, either via Bursa or, less direct, via Bilecik to the Sakarya, and thence by an easy gap to İznik and the Sea of Marmara ; it leads also by another route south-west to Kütahya and beyond, to the province centred round Beycesultan. Second, there is a good route, still followed by a continuous road, from Bolu eastwards, through Gerede Çerkeş, Ilgaz and Tosya, to the Kızılırmak, from Kurşunlu following the valley of the Devrez ; but, instead of continuing down the Kızılırmak

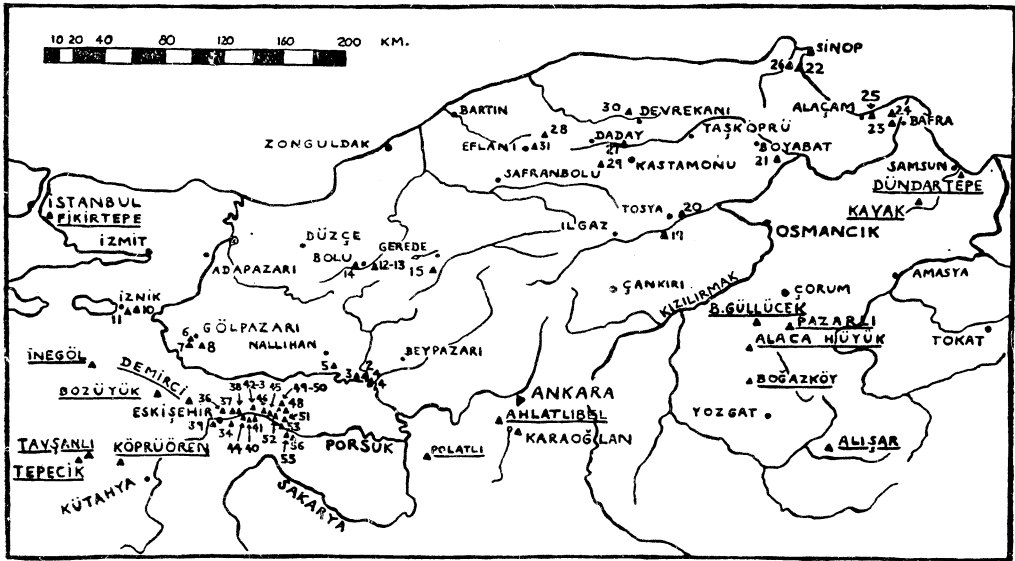
valley—along which, beyond Kargı, there is still no road—this route goes up the valley to Osmancık, and thence either south to Çorum and the country round Alaca or east to Merzifon and Amasya, whence there is a route down to Samsun. Third, the Gökirmak provides a route east from the Daday district to its confluence with the Kızılırmak: the modern road continues via Vezirköprü to Amasya, and probably in ancient times did likewise; the ancient occupation evident in the neighbourhood of Eflani and Safranbolu was more probably along a westward extension of the Gökirmak route than connected with any road following the Araç valley. There is sure evidence of connections between Bolu and the west, but the precise continuation westward of the second route is not yet clear; likewise uncertain is the extension of the third route west from Safranbolu. Communication between the delta of the Yeşilirmak, east of Samsun, and that of the Kızılırmak, as far as Alaçam, is easy; but there is no natural route along the mountainous coast west of Alaçam to Sinop, which is also shut off from the interior by a high range; indeed, travel along much of the Black Sea coast cannot have been at all easy.

The distribution of pre-Classical sites in northern Anatolia is rather as one would expect. The densest concentration is in the one plain that is on the plateau, that of Eskişehir; there are a few sites near Çayırhan and Gölpazarı, on no main route; but sites near Iznik are on a natural road to the Sea of Marmara. The road from Bolu as far east as Kargı is marked, at intervals, by mounds, small sites and tumuli. None of these sites is in forest country, but several of those near Eflani and round Kastamonu are up in the hills, very close to pine forests. İmren Tepe, near Devrekani, overlooking the present road from Kastamonu to İnebolu, doubtless commanded the same route in antiquity. Two sites in the hills south of Sinop seem isolated. But the three mounds found in the Bafra plain belong to the same province as Dündartepe. The complete absence of pre-Hellenistic remains in the plains of Düzçe and Adapazarı suggests that these were then so marshy as to be uninhabitable.

The nature of these sites varies with the terrain. All save one of the sites found in the Eskişehir plain are *höyüks*, though several exclusively Early Bronze Age mounds are small and low. This is also true of most sites found in the hilly central part of northern Anatolia, though several are on hilltops, doubtless for defence, and are therefore less conspicuous as *höyüks* from a distance. The impossibility of finding flat or hilltop sites, except with information of their whereabouts, in the time available, makes it certain that other undiscovered sites must exist; moreover, many villages up in the hills were probably built of wood, as nowadays, unlike the stone-built villages in the Taurus, and have therefore left no trace. In flat plains, however, this does not apply: for instance, in the Eskişehir plain mounds are conspicuous, and few sites can have escaped notice.

Changes in population can only be guessed at by surface material from ancient sites. As generally in Anatolia, sites of the Third Millennium are more numerous than those of the Second Millennium. Exclusively Iron Age sites are rare, and those with no trace of Early Bronze Age occupation

uncommon. Population in the Eskişehir area was more concentrated in the Second Millennium than before, for the sites are fewer but larger than those of the Early Bronze Age ; quite possibly the present population of this plain, excluding Eskişehir, is less than in the Bronze Age. Sites with Early Bronze Age pottery occur scattered across the region from İznik to the lower Gökirmak valley ; but evidence of Second Millennium occupation is remarkably scanty, save for some sites round Kastamonu. In the districts of Eflani, Ilgaz and Şabanözü there seems to have been a considerable increase of population in the Iron Age ; the tumuli along the middle route, from Gerecede to Ilgaz, show the importance of this road in that period. By contrast, the coastal region from Bafra to Sinop clearly shows quite heavy occupation in the Third Millennium, especially the first half, but less in later periods : İkiz Tepe illustrates this best, for the Middle Bronze Age material found on that extensive site, though not



CHALCOLITHIC AND EARLY BRONZE AGE SITES

The administrative district (*kaza*) in which each site is situated is indicated in brackets.

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|-------------------------------------|---|
| 2. Sarılar (Nallıhan). | 29. Tepecik (Kastamonu). |
| 3. Akyar (Nallıhan). | 30. İmren Tepe (Devrekani). |
| 4. "Hüyük Tepe" (Nallıhan). | 31. Ören Hüyük (Eflani). |
| 5. "Eski Tepe" (Nallıhan). | 34. Karaca Hüyük (Eskişehir). |
| 6. Yassı Hüyük (Gölpazarı). | 36. Yapağıöyük (Eskişehir). |
| 7. Kursunlu (Gölpazarı). | 37. Alyamak Hüyük (Eskişehir). |
| 8. Türkmen (Gölpazarı). | 38. Dudu Hüyük (Eskişehir). |
| 10. Karadın (İznik). | 39. "Çiftlik Hüyük" (Eskişehir). |
| 11. Gülüstan, alias Üyücek (İznik). | 40. "Kuşuk Hüyük" (Eskişehir). |
| 12. Deymen Çiftlik I (Bolu). | 41. Kara Hüyük (Eskişehir). |
| 13. Deymen Çiftlik II (Bolu). | 42. Kızılay Hüyüğü (Eskişehir). |
| 14. "Asker Hüyük" (Bolu). | 43. "Kuşuk Kızılay Hüyüğü" (Eskişehir). |
| 15. Halaşlar (Gerecede). | 44. Ağa Pınar (Eskişehir). |
| 19. Taşkınar (Tosya). | 45. Alpu II (Eskişehir). |
| 20. Zincirli (Tosya). | 46. Alpu III (Eskişehir). |
| 21. Uluköy Çay (Boyabat). | 48. "Doğancı Hüyük II" (Eskişehir). |
| 22. Demirci (Sinop). | 49. Çerkes Çukurhisar II (Eskişehir). |
| 23. Kuşcular (Bafra). | 50. Çerkes Çukurhisar (Eskişehir). |
| 24. İkiz Tepe (Bafra). | 51. "Yeni Yol Hüyüğü" (Eskişehir). |
| 25. Gökçe Boğaz (Alaçam). | 52. Alpu (Eskişehir). |
| 26. Maltepe (Sinop). | 53. "Köprübaşı Hüyüğü" (Eskişehir). |
| 27. Maltepe (Kastamonu). | 55. "Porsuk Hüyük I" (Eskişehir). |
| 28. Çengelli (Daday). | 56. "Porsuk Hüyük II" (Eskişehir). |

inconsiderable, is small in quantity compared with the black burnished pottery characteristic of the earlier period. It is still quite uncertain why the population in this fertile area should thus have declined, as it undoubtedly did; there are no definite surface indications of Late Bronze Age occupation along this stretch of the coast, and Iron Age remains seem confined to the immediate vicinity of Sinop, where there are tumuli. The sites in the hilly country north and west of Kastamonu suggest that that rugged terrain has not been more intensively settled since the Iron Age, except perhaps in Roman times. Population in the Eflani district was clearly greater in the Iron Age than today.

Within northern Anatolia there are two distinct cultural provinces in the Third Millennium, both extending well beyond the region under discussion. One is the coastal area from Bafra to Sinop, although there is no natural route by land along the coast; the sites between Alaçam and Bafra belong to the same province as Dündartepe, Tekeköy and Kavak. The sites in the middle of northern Anatolia belong to no clearly homogeneous province, if only because of the geography of the area. The second province is the plain of Eskişehir, with which may be associated Demirci Hüyük and other sites at least as far as İnegöl, mounds near the source of the Sakarya and, to the north, a few sites on or near the middle reaches of that river.

The first of the two cultural provinces just mentioned provides the earliest material from northern Anatolia, except for one or two sherds from the Eskişehir region and the earliest level at Demirci Hüyük. The outstanding site is İkiz Tepe, near Bafra, but the neighbouring Kuşcular, Gökce Boğaz near Alaçam and Maltepe near Sinop are also important. The pottery is remarkably uniform in appearance, being black or dark grey, burnished on both sides or, with jars, on the outside only, the core varying from black to red. These sites, especially the first three, clearly belong to the same group as Dündartepe, Tekeköy and Kaledoroğu (Kavak) to the east, and form the province mentioned above.¹ The finer sherds tend to have a highly burnished black slip outside, a red core and a plain or slightly burnished inside; one decorated sherd (fig. 1) has incised chevrons outside and a white painted linear pattern inside; some sherds have rough incised lines scratched after firing (fig. 2). The identity of the sites west of Bafra with those near Samsun is apparent in the use of white painted lines (figs. 3-6); the use of lines and dots (fig. 7) is reminiscent of the combination of dots within lines, whose Danubian character has been observed by Prof. Childe²; dots were also used alone (fig. 8). Another similarity is the taste for knobs and other protuberances (figs. 9-19), singly or in groups or rows, as handles or purely ornamental.³ Yet another connection is afforded by carinated profiles

¹ Özgüç, *Türk Tarih Kongresi* (1943), pp. 393-419; and in *Belleten* IX (1945), pp. 361-400.

² W. Lamb, *Iraq* XI, Part 2 (1949), p. 197.

³ *T.T.K.* (1943), pls. V, 10 and 12; VI, 1 and 3; VII, 4 and 6; IX, 1, 2, 4, 6; X, 10. *Belleten* IX, pl. LXIII, 8; LXV, 2; LXIX, 5.

(figs. 20–22) and rim fragments of jars with tall, straight-sided, slightly inverted necks ⁴ (fig. 2).

The dating of this homogeneous class of pottery to the Late Chalcolithic period of central Anatolia, contemporary with the Early Bronze Age of Troy I, rather than to the following period of the Early Bronze Age, formerly called the Copper Age, is all the more certain when comparison is made with the Late Chalcolithic pottery of Büyük Güllücek,⁵ Pazarlı,⁶ Alaca⁷ and, to a lesser extent, Alışar.⁸ The absence of fruitstands in no wise undermines this dating, since they are not an invariable feature of central Anatolian Late Chalcolithic sites.⁹ Pedestal bases occur (fig. 23). Generally there seems to be less variety in decoration and knobs and handles in the Bafra area than at Büyük Güllücek, though excavation might show this not to be so ; but the same shapes and decoration and similar knobs and handles (fig. 24) are apparent.¹⁰ The proportion of decorated to plain sherds is small in both areas. The potters at the sites west of Bafra were capable of making the finest wares when required.¹¹ At Maltepe, near Sinop, occurs the same black burnished ware (fig. 25) ; a peculiarity of this site is a very light grey burnished ware, whose resemblance to a certain class of pottery from Mersin ¹² must be fortuitous : most probably this is simply a local variation on the black and dark grey burnished ware. The furthest westward extension of this black burnished ware seems to be at Imren Tepe, one such sherd being now in the Kastamonu Museum ; no other black burnished pottery was found there by the writer. Dr. Lamb has remarked on the Western influence evident in certain features of the pottery of the Samsun area, and in the cemetery at Tekeköy, which compares with Yortan ¹³ : such influence can have come along the coast only by sea ; to this day there is no road along the coast between Sinop and Bartın. Certainly the external relations most apparent from the pottery of the Bafra and Sinop areas are those with the Halys region and its northward extension to Samsun.

Evidence of occupation in the Bafra area belonging to the next period, contemporary with Troy II and formerly called the Copper Age, is hard to distinguish from the preceding Late Chalcolithic material, though the small amount of pottery with highly burnished red slip found there (fig. 26) can probably be attributed to this period, as well as a few plain red ware sherds. How late the black burnished Late Chalcolithic pottery continued in use in this part only excavation can show : certainly the culture of the

⁴ *Belleten* IX, pl. LXVII, 4 ; LXVIII, 1.

⁵ H. Koşay and M. Akok, *Belleten* XII (1948), pp. 479–84, pls. LXXXIX–XCV, C–CI, CIII–CVII.

⁶ *Belleten* III (1939), pls. VI–VIII.

⁷ H. Koşay and M. Akok, *A. J. A.* LI (1947), pp. 152–3, pls. XXXIII–XXXIV.

⁸ H. Von der Osten, *Alışar Hüyük (Seasons of 1930–2)*, Part I (1937), figs. 83, 84, etc.

⁹ *Iraq* XI, Part 2, p. 190.

¹⁰ *Belleten* XII, figs. 19, 20, 29, 40, 43, 47 (pl. XCI et seqq.).

¹¹ e.g. figs. 3 and 34.

¹² Mersin levels XIV–XIII : J. Garstang, *Prehistoric Mersin* (1953), pp. 166 and 199 (no. 15, etc.), where comparison is made with grey burnished Uruk ware.

¹³ *Iraq* XI, Part 2, pp. 192–5.

period contemporary with Troy II followed the Late Chalcolithic without any interruption, as in the Halys region¹⁴; and there is a bowl of Troy II-V form from Kuşcular¹⁵ (fig. 27).

Demirci Hüyük, near Sinop,¹⁶ is a small mound on a hill, a site chiefly remarkable for the fact that its culture shows hardly any resemblance to that of the Samsun-Bafra region, nor even to Maltepe, three miles away. A jar fragment from the earliest level is grey, burnished and with incised rectilinear and curvilinear decoration, with rows of dots, the inside being bone-burnished and jet-black. This is quite distinct from the black and dark grey burnished Late Chalcolithic ware of Maltepe, İkiz Tepe, etc. The next level has red burnished and other wares, and shapes, with parallels at Yortan and Troy I and II.¹⁷ One parallel with Troy II, thumb-impressions below the rim, found also at Kumtepe Ib, may be of small significance.¹⁸ There is only one link with the Halys region, provided by a red burnished, knobbed handle, resembling earlier specimens from Büyük Güllücek¹⁹ and Alaca²⁰ of the Late Chalcolithic period, from which it seems to be a survival. The completely different character of the pottery of Demirci from that of Maltepe, İkiz Tepe, etc., and its affinities with the west, can surely only be construed as the result of migration from the west by sea.

In discussing the origins of the Early Bronze Age culture of the other Demirci Hüyük, west of Eskişehir, Prof. Bittel emphasized²¹ the connections of Level IV, which alone has some characteristics not found in all the other levels, with the Chalcolithic culture of Alışar, but more especially with Troy I. Similarities to the latter and to Kumtepe Ib, such as cooking-pots with heavy legs²² may be of small importance (figs. 39-40). More significant is the use of plastic decoration, in the form of circles²³ and small vertical knobs or ridges just below the rim, a feature found at sites near Eskişehir (figs. 41-43), in Troy I,²⁴ in the Late Chalcolithic pottery of the Halys-Samsun province²⁵ and at Hüyücek²⁶ near İzmir. The early origin of this Demirci culture is confirmed by a Chalcolithic sherd from Çukurhisar, with red painted chevrons.²⁷ Slightly knobbed handles from

¹⁴ *A.H.* II, pp. 89 and 164 (ref. in *Iraq* XI, Part 2, p. 191).

¹⁵ Blegen, *Troy*, Vol. I, pls. 372-374, Vol. II, pls. 62-63, etc. (Type A2).

¹⁶ Excavated by Prof. E. Akurgal and Prof. Budde: the former kindly allowed me to look at the Demirci pottery in the University of Ankara.

¹⁷ *Troy*, Vol. I (Plates), Types C25 and C27. Perhaps *ibid.* (Text), pp. 378, 403.

¹⁸ *Ibid.* (Plates), pl. 414 (10).

¹⁹ H. Koşay, in a brief guide, *Alaca Hüyük* (frontispiece).

²⁰ *Belleten* XII, pl. C, fig. 37.

²¹ K. Bittel and H. Otto, *Demirci Hüyük* (Berlin, 1939), pp. 28-30.

²² *Troy*, Vol. I, pls. 233, 235 (29), 242 (19-23), etc.

²³ *Ibid.*, Vol. I, pls. 245 (28-29), 389, 390. Vol. II, pls. 170 (11), 244 (23), 247 (36 and 48).

²⁴ *Troy*, Vol. I, pl. 223b (Type C17).

²⁵ Perhaps of western origin: here it takes the form of a knob. *T.T.K.* (1943), pl. IX, 1. But cf. E.B. forms, *Alışar Hüyük* (1930-2), Part I, fig. 178.

²⁶ *Belleten* XIV (1950), pl. XLVIII, 22.

²⁷ See J. Mellart's forthcoming article "Some Prehistoric Sites in N.W. Anatolia" (*Istanbuler Forschungen*, 1955).

a site near Eskişehir (fig. 44) have parallels at Alışar²⁸ and, less close, at Ömerköy,²⁹ in the south-west, both Chalcolithic. From another mound in the Porsuk plain comes a sherd that reinforces our knowledge of the connections of the Eskişehir region with the west: this is a fragment of a box (fig. 45), similar to some found at Demirci,³⁰ with a crude incised representation of the sun with rays; its importance lies in the discovery of the same pattern at Fikirtepe,³¹ on the east side of the Bosphorus, in a context considerably earlier than the beginning of Troy I. A fragment of a fruitstand found at Tavşanlı, west of Eskişehir, shows connections with the early Chalcolithic of Alışar and with Kumtepe Ib.³² This may possibly mean that links with central Anatolia in the Chalcolithic period were stronger than the available evidence suggests. J. Mellart remarks on the striking difference between the Chalcolithic pottery of south-western Anatolia and that of Kumtepe.³³ This makes it probable that, as Prof. Bittel suggested,³⁴ the Early Bronze Age pottery of the Eskişehir province had its origins primarily in the west. Though resemblances to Kusura A are discernible, these do not affect the question of origins.

From these origins there began to develop, during the early Third Millennium, a distinct culture, contemporary with Troy I and the Late Chalcolithic of the Halys, but decidedly Early Bronze Age rather than Chalcolithic in character. The distinction of Level IV from the later levels at Demirci consists in the absence of the red burnished ware so common in this region in subsequent periods of the Early Bronze Age, of hemispherical bowls and notched handles³⁵: this means that most of the Early Bronze Age pottery found in this province is later than Demirci IV and Troy I, a dating confirmed by the stratification of the mound at İnegöl, where pottery of the Demirci culture, with the typical high loop-handles, overlies material comparable with Troy I.³⁶ The outstanding fact obtained by the excavations at Demirci is the continuity of ceramic types through all four levels, making classification into sub-periods of Third Millennium pottery found by surface exploration in this region impossible: in general, black and brown is followed by red-brown and later by red as surface colour. A bright red burnished slip is the commonest, and bowls similar in shape to those of Troy IV and V are numerous,³⁷ so that it is quite likely that most of the Early Bronze Age material here dates

²⁸ *Alışar Hüyük* (1930-2), fig. 83 (1 and 2).

²⁹ I am indebted to J. Mellart for this information. Cf. one from Hüyükcek (*Belleten* XIV, pl. XLVIII, 23).

³⁰ *Demirci Hüyük*, pl. 10 (2 and 5).

³¹ Information kindly supplied by Prof. Bittel.

³² *Belleten* X (1946), pl. LXXVII, 4. But pottery recently collected from this very rich site shows that this fruitstand is almost certainly of Late Bronze Age date, with close parallels at Beycesultan III-I.

³³ *A.S.* IV, p. 189. Mellart also comments on the fact that the Kumtepe pottery, still unpublished, includes fruitstands of Alışar type.

³⁴ *Demirci Hüyük*, pp. 28-30.

³⁵ *Ibid.*

³⁶ See J. Mellart's forthcoming article (*Istanbuler Forschungen*, 1955).

³⁷ *Troy*, Vol. II, pls. 177 (15), 182 (6), 251 (7) (Types A11 and A21).

to the period of Troy IV and V, when there may well have been an increase in population. The relative scarcity of dark burnished wares in the plain east of Eskişehir may be due to the accidents of surface exploration, the earlier levels being concealed. The most typical shapes in this province are deep bowls with flaring rim (figs. 46-54), many having a carinated shoulder, shallower bowls with flaring rim (figs. 55-58), shallow bowls or cups with a single high loop-handle attached to the rim³⁸ and jars with a small handle on the shoulder (figs. 59-63).

The relations of the Eskişehir province with parts of Anatolia other than the north are discernible not so much from general shapes as from types of handle and other details. Twisted, notched and ribbed handles occur at Demirci, and shallow bowls with one high loop-handle.³⁹ The twisted handle has a very wide distribution, being found at a number of sites in the south-west, including Kusura A and B,⁴⁰ at Polatlı, in Phase I,⁴¹ at Ahlatlıbel⁴² and in the Eskişehir plain (fig. 64). If this may be a south-west Anatolian feature, a more definite characteristic of that region, the fluted bowl, found at Kusura B⁴³ and elsewhere, has not been found in the Eskişehir region, though it occurs at Polatlı, in Phase I.⁴⁴ The origin of bowls or cups with a single high loop-handle, sometimes twisted, usually attached to the rim only, perhaps the most distinctive feature of this cultural province, is not necessarily to be sought in the Ankara region, merely because there—at Karaoğlan,⁴⁵ Eti Yokuşu⁴⁶ and Ahlatlıbel⁴⁷—they reached their most exaggerated form. Such high loop-handles occur at Polatlı,⁴⁸ where they continue in the Second Millennium, at many sites in the Eskişehir plain (figs. 65-70), at Demirci,⁴⁹ at Kusura B,⁵⁰ elsewhere in the south-west and in the Konya plain: it seems probable that this form of handle developed first in the area between Eskişehir and Polatlı; it was found at five sites in the Porsuk plain, being particularly characteristic of the mounds near Alpu, twenty-five miles east of Eskişehir. Ribbed strap-handles occur at Demirci⁵¹ and Kusura B.⁵² Coarse ware cooking-pots with abortive crescent-shaped handles occur at Polatlı, in the plain

³⁸ *Demirci Hüyük*, especially pl. 8 (6, 10, 22) and pl. II (5 and 6).

³⁹ *Ibid.*, pl. 13 (9); pls. 7 (12) and 8 (5); pl. 13 (8); pl. 13 (19) and fig. 3 (p. 15), nos. 5, 6, 12.

⁴⁰ W. Lamb, *Archaeologia* Vol. 86, p. 20; Vol. 87, pp. 238 (no. 4), 241 (7A and 8), 243, also pl. LXXXIII, 15.

⁴¹ Seton Lloyd, *A.S. I*, p. 41 (b), no. 10; p. 43, 18; p. 47 (Groups 30-34), nos. 1, 2, II. See pottery chart (fig. 5, p. 33).

⁴² *T.T.* (1934), p. 25.

⁴³ *Archaeologia* Vol. 86, p. 20.

⁴⁴ *A.S. I*, Group 29 (pp. 33 and 47, nos. 6-17).

⁴⁵ *T.T.K.* (1943), illustrations to article by R. O. Arık, fig. 10. But especially pottery in Ankara Museum.

⁴⁶ S. A. Kansu, *Eti Yokuşu Hafriyatı* (1937), p. 67.

⁴⁷ *T.T.* (1934), pp. 47 and 54.

⁴⁸ *A.S. I*, p. 38 (Group 5), p. 40 (Group 7), p. 47 (Groups 30-34, no. 11).

⁴⁹ *Demirci Hüyük*, pls. 13 and 19; fig. 3 (p. 15), nos. 5, 6, 12.

⁵⁰ *Archaeologia* Vol. 87, p. 238, no. 4; pl. LXXXIII, 5, 6, 7.

⁵¹ *Demirci Hüyük*, pls. 8 and 13.

⁵² *Archaeologia* Vol. 87, p. 239, no. 4.

east of Eskişehir and at Demirci and Çukurhisar, west of that town.⁵³ Perhaps the most significant type is the notched handle, found at Demirci (Levels III-I),⁵⁴ at two sites in the plain east of Eskişehir (figs. 71-72) and at Ahlatlıbel⁵⁵; but it also occurs at Kusura A,⁵⁶ roughly contemporary with Demirci IV, where it was not found. Possibly this may point to a south-western origin, though too little of Demirci IV was excavated for certainty on this matter. The *omphalos* base is rare in the Eskişehir province (fig. 73), and, despite its occurrence in Troy II and IV,⁵⁷ it seems characteristic of the Ankara region, including Polatlı⁵⁸; it is also found at Alaca in the Early Bronze Age period subsequent to the Late Chalcolithic.⁵⁹ A small bowl with a knob on its carination (fig. 74) is reminiscent of Ahlatlıbel. Plastic decoration in circles and curves, and imitating metal vessels, not uncommon in the plain east of Eskişehir (figs. 75-78), seems to be a feature of western Anatolia (Troy I-IV,⁶⁰ Kusura⁶¹ and elsewhere), though also found at Alaca.⁶² A sherd of black ware with incised lines and dots (fig. 79) may possibly show a parallel with Troy IV.⁶³

These connections with other cultural provinces in the Third Millennium must not be over-emphasized, for the pottery of the Eskişehir province constitutes one of the distinct Early Bronze Age groups of Anatolia.⁶⁴ The extent of this cultural province was much greater than might hitherto have been supposed, though the quality of the pottery found in the Demirci area and the Porsuk plain, the thickly populated heart of this province, is, as one would expect, higher than that found at outlying sites to the north. Prof. Bittel has said⁶⁵ that this province, which stretches as far east as Polatlı, extends south-east to the headwaters of the Sakarya, but that its limits to the south-west are uncertain. That sites in or near the Sakarya valley, in the districts of Çayırhan, Gölpazarı and İznik, should show strong affinities with the Eskişehir region is not surprising: parallels are provided by handles of various types, and a mound near Çayırhan produced a bowl with horizontally set handle (fig. 80), similar to one from Karayavşan, south-east of Polatlı. The handles of Demirci-Eskişehir plain type are ribbed (figs. 81-83), twisted

⁵³ A.S. I, pp. 42-3 (Group 22). *Demirci Hüyük*, pl. II (14) and fig. 3 (4).

⁵⁴ Its absence from Level IV may be misleading, since little of this stratum could be excavated.

⁵⁵ T.T. (1934), pp. 47 and 54.

⁵⁶ *Archaeologia* Vol. 86, p. 15 (no. 1).

⁵⁷ *Troy*, Vol. I, pl. 414 (41 and 42); Vol. II, pl. 180 (2 and 3).

⁵⁸ A.S. I, p. 47: Groups 28-9 (2, 4, 5, 16); Groups 30-4 (II).

⁵⁹ H. Koşay, *Ausgrabungen von Alaca Hüyük* (1936), pl. LXXI (p. 95).

⁶⁰ See footnote 23.

⁶¹ *Archaeologia* Vol. 87, pp. 236, 241, etc. Grooved decoration is particularly common.

⁶² H. Koşay, *Les Fouilles d'Alaca Hüyük* (1935), pl. CXXI (754, 758).

⁶³ From a site near Alpu: cf. *Troy*, Vol. II, pls. 173 (1) and 245 (6); perhaps cf. *Archaeologia* Vol. 87, p. 242 (7).

⁶⁴ *Troy*, Vol. II, pl. 251 (Type A21).

⁶⁵ *Demirci Hüyük*, pp. 28-30.

(fig. 84), triangular ⁶⁶ (figs. 85–86), abortive crescent-shaped (figs. 87–88) and high loop-handles ⁶⁷ (fig. 89). Another parallel is afforded by bowls with flaring rim (figs. 90–91), of Troy IV–V type,⁶⁸ especially common at Yassı Hüyük (Gölpazarı). Other bowls (figs. 92–95), plastic decoration (figs. 96–97) and a small vertical rib near the rim ⁶⁹ (fig. 98) also provide comparative material: one bowl has an obvious imitation of a metal handle (fig. 97), rather like Type C5 of Troy II–V.

Surface finds from the region extending from Bolu in the west to İmren Tepe, on the Kastamonu–İnebolu road, are sufficient to suggest, though they cannot absolutely prove, that, as in the Middle Bronze Age, contacts were primarily with the south-west (i.e. the Eskişehir region). The most distinctive form at sites near Kastamonu, Daday and Eflani is a sharply carinated bowl with slightly flaring rim, some probably with a handle, varying greatly in size (figs. 99–101: cf. also figs. 102–103): this form may be compared with one from Demirci (Eskişehir),⁷⁰ though there is admittedly a parallel at Alaca.⁷¹ But the best comparison is with Troy IV and V.⁷² From İmren Tepe, twenty miles north of Kastamonu, comes one black burnished sherd suggesting contact with the Late Chalcolithic culture of the Bafra-Samsun province. A handle with two knobs in the middle (fig. 104), also from İmren Tepe, is not decisive, since it has a parallel both at Demirci ⁷³ and at Alaca ⁷⁴; from the same site comes a twisted handle (fig. 105). But the distribution of fragments with a distinctive decoration on the outside, just below the rim, is more significant: this comprises a continuous band of semi-circles, in relief, not to be equated with the “cable” band found all over Anatolia. This distinctive decoration occurs at Polatlı,⁷⁵ at a site just outside Eskişehir (fig. 106), near Bolu (fig. 107) and at two other sites, in the Kastamonu and Eflani districts respectively (figs. 108–109); it also occurs at Kumtepe IA and at Maltepe, near Sivas ⁷⁶; sherds from the Bafra area are shown for comparison (figs. 110–112). Although this argument from surface material found in the country north and west of Kastamonu cannot of itself be absolutely conclusive, unless more sites are found, the geography of this part of Anatolia is such as to make links with the south-west, with the Eskişehir province and perhaps even the Troad, likely to have surpassed in importance any connections with the Halys-Samsun province. The discovery of a face-urn at Bolu ⁷⁷ makes it certain that the influence of

⁶⁶ See also K. Kökten, *D.T.C.F.D.* (1951), pl. XII.

⁶⁷ *Ibid.*, pls. X and XIIa.

⁶⁸ *Troy*, Vol. II, pls. 182 (6), 177 (15), 251 (7) (Types A11 and A21).

⁶⁹ *Demirci Hüyük*, *passim*: also sherds from other sites in this province. Side-spouts are another feature in common (cf. *Demirci Hüyük*, pls. 6 (12) and 7).

⁷⁰ *Ibid.*, pl. II (7).

⁷¹ *Ausgrabungen*, pl. XCIV.

⁷² *Troy*, Vol. II, pl. 180 (27, 28, 30, 32) (Type A33); also pl. 259.

⁷³ *Demirci Hüyük*, pl. 7 (2).

⁷⁴ *Fouilles*, pl. LXXXV (205).

⁷⁵ *A.S. I*, p. 43, fig. 10 (nos. 3 and 10).

⁷⁶ T. Özgüç, *Bulleten XI* (1947), pl. CXXVIII, fig. 70.

⁷⁷ *Bulleten VIII*, pl. XLIX, 4.

Troy II-V reached at least thus far into northern Anatolia, though by a route which has no known prehistoric sites over a great distance.⁷⁸ But a wheelmade bowl of Troy II-V form (Type A2) (fig. 113) was found at Gülüstan, just west of İznik. There are also, from sites near Bolu and Kastamonu, bowl rims of Troy IV-V form⁷⁹ (figs. 114-114A). These western connections add weight to the theory that the Halys region had little influence on the central part of northern Anatolia in the Third Millennium. A final comment is necessary on the date of the earliest occupation found in the heart of northern Anatolia (i.e. excluding the Eskişehir, Ankara and Samsun-Bafra areas): the opinion has been expressed⁸⁰ that certain sherds from a burial-mound at Tepe Delik, near Taşköprü, may be Neolithic; since, however, there is not a trace of Neolithic occupation in the whole of northern Anatolia, and considering the wide variety of wares found in isolated areas, this theory is hardly plausible. The finer black burnished wares, though unevenly fired, may surely be compared with those of Dündartepe, etc., and assigned to the Late Chalcolithic or the immediately subsequent period. At all other sites, except İmren Tepe, in the whole country from Kastamonu to Bolu, there is no definite evidence of occupation earlier than Troy IV. But, as shown above, there are parallels with Troy IV and V from several sites in this region. Probably, therefore, it was in that period that the culture of the Demirci-Hüyük-Eskişehir province spread north-eastward.

Owing to the comparative paucity of Second Millennium material over much of northern Anatolia, the Middle and Late Bronze Age pottery is treated for the region as a whole, cultural provinces being less distinguishable than in the Third Millennium.

The only form characteristic of the Middle Bronze Age in northern Anatolia is the "bead-rim" bowl,⁸¹ usually of red or red-brown burnished ware and wheelmade, with carination. This bowl occurs commonly in the Eskişehir plain⁸² (figs. 115-124), and at İkiz Tepe and Kuşcular (figs. 125-128), near Bafra; examples were found in the areas of Daday (fig. 129, probably very early), Kastamonu (figs. 130-131), Eflani (fig. 132, also early) and Ilgaz (figs. 133-134). The "bead-rim" bowl, though occurring in the Halys province,⁸³ was possibly a product of western and southern Anatolia, being found at Troy Vd and VI,⁸⁴ Kusura C,⁸⁵ in the upper

⁷⁸ i.e. across the plains of Adapazarı and Düzce. Nor do there seem to be any mounds near the Sakarya between Geyve and Osmaneli.

⁷⁹ *Troy*, Vol. II, pl. 181 (2) (Type A11).

⁸⁰ M. V. Seton Williams, *Iraq X*, Part 1 (1948), p. 46.

⁸¹ Also called the bowl with moulded rim (*A.S.* I, pp. 36-7, Group 2).

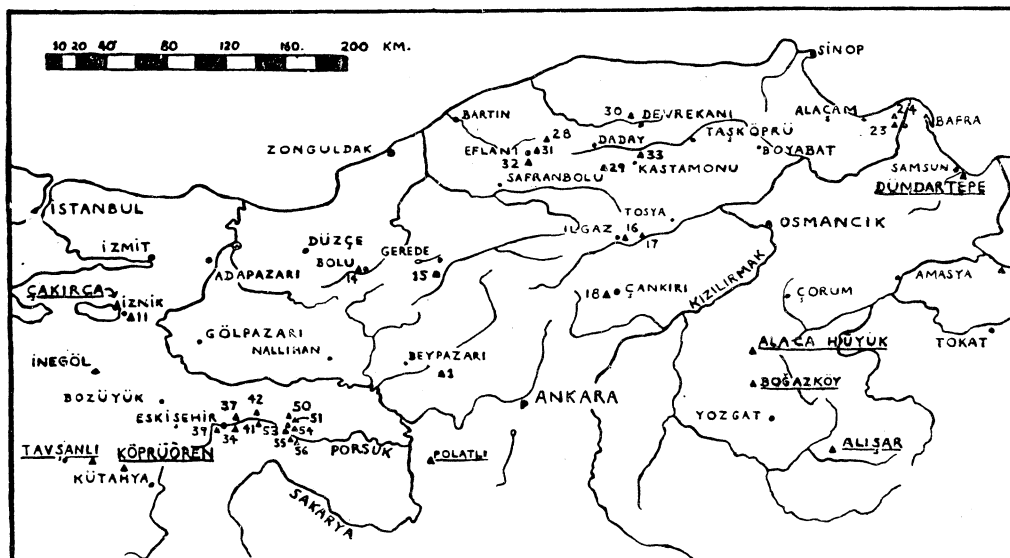
⁸² Especially at Kara Hüyük and Çerkes Çukurhisar, both near Alpu.

⁸³ *Ausgrabungen*, pl. XXXVIII; *Belleten* III, pl. XII; T. Özgüç, *Kultepe Kazısı Raporu* (1948): pl. XLVI (209-12) and pls. LXIX and LXX (471, 476, 479, 481-2). Bittel-Naumann, *Boğazköy-Hattusa* (1952), fig. 31A (39).

⁸⁴ *Troy*, Vol. II, pl. 257 (17 and 18); Vol. III (Text), p. 47; Vol. III (Plates), pls. 312 (1), 423 (1), 439 (9). cf. Types A23 and A56.

⁸⁵ *Archaeologia* Vol. 86, p. 25 (no. 3); Vol. 87, p. 247 (no. 3).

Meander valley,⁸⁶ the Konya plain and Cilicia⁸⁷; near Karaman it is much the commonest Middle Bronze Age form; it is very common at Polatlı,⁸⁸ in both Middle and Late Bronze Age. But discoveries this year (1955) by the writer, in Tokat Vilayet and near Zara, east of Sivas, show that here too the "bead-rim" bowl is the most typical Second Millennium



MIDDLE AND LATE BRONZE AGE SITES

- | | |
|-------------------------------------|--|
| 1. Karaboğaz (Ayaş). | 32. Semercitepe (Eflani). |
| 11. Gülistan, alias Üyücek (İznik). | 33. "Taşköprü Yolu Hüyük" (Kastamonu). |
| 14. "Asker Hüyük" (Bolu). | 34. Karaca Hüyük (Eskişehir). |
| 15. Halaşlar (Gerede). | 37. Alyamak Hüyük (Eskişehir). |
| 16. Salman Hüyük (İlgaz). | 39. "Çiftlik Hüyük" (Eskişehir). |
| 17. "Km. 208 Tepe" (İlgaz). | 41. Kara Hüyük (Eskişehir). |
| 18. Dümeli (Çankırı). | 42. Kızılay Hüyüğü (Eskişehir). |
| 23. Kuşcular (Bafra). | 50. Çerkes Çukurhisar (Eskişehir). |
| 24. İkiz Tepe (Bafra). | 51. "Yeni Yol Hüyüğü" (Eskişehir). |
| 28. Cengelli (Daday). | 53. "Köprübaşı Hüyüğü" (Eskişehir). |
| 29. Tepecik (Kastamonu). | 54. Yeşildon (Eskişehir). |
| 30. İmren Tepe (Devrekani). | 55. "Porsuk Hüyük I" (Eskişehir). |
| 31. Ören Hüyük (Eflani). | 56. "Porsuk Hüyük II" (Eskişehir). |

form. Indeed, it seems general in Anatolia, and a similar form occurs at Geoy Tepe.⁸⁹ Some of the examples found in the region covered by this article may have had ring-bases, found in the more metallic varieties of "bead-rim" bowl common in south-western Anatolia, particularly at Beycesultan. One "bead-rim" from the Eskişehir plain had traces of a metallic handle, of south-west Anatolian type (fig. 115). The occurrence of the "bead-rim" bowl at Dündartepe,⁹⁰ as well as in the Halys province, suggests, but does not prove, that the large quantity of such bowls at İkiz Tepe reached the Bafra area by the same route as the Late Chalco-

⁸⁶ e.g. from Çivril (material in the British Institute of Archaeology at Ankara). But more especially from Beycesultan (*A.S. V*, p. 63, fig. 10).

⁸⁷ *Prehistoric Mersin*, p. 227, fig. 146 (nos. 2, 10, 11).

⁸⁸ *A.S. I*, pp. 36-7 (Group 2).

⁸⁹ T. Burton-Brown, *Excavations in Azerbaijan 1948*, fig. 27.

⁹⁰ *T.T.K.* (1943), pl. VIII (1, 7, 11).

lithic pottery ; that they date at İkiz Tepe to the Middle rather than the Late Bronze Age seems probable, because, though many of these sherds are plain or with very slightly burnished slip, the complete absence of the plain-ware dishes typical of the Late Bronze Age in much of Anatolia, particularly of regions in contact with the Hittites, makes it unlikely that these "bead-rim" bowls in the Bafra area represent an archaic survival into the Late Bronze Age. They are, however, inferior in finish to the highly burnished specimens from southern and western Anatolia. It is, moreover, in the south-west, and also at Kültepe, that the undoubtedly metallic origin of the "bead-rim" bowl is most apparent.⁹¹ It therefore seems likely that the burnished "bead-rim" bowls found near Ilgaz and Kastamonu, early in appearance and superior in finish to those from the Bafra district, derive from the south-west, probably via the Eskişehir plain.

A light grey Minyan sherd from a mound near Eskişehir must be an import from the neighbouring north-west Anatolian province (fig. 135) : this is the easternmost known occurrence of Minyan ware in Anatolia. A late Third Millennium form, perhaps a prototype of Minyan shapes, occurs near Eskişehir (fig. 47).⁹²

Two beak-spouts were found at Çerkes Çukurhisar, a primarily Second Millennium site near Alpu, in the plain east of Eskişehir.

Evidence of the affinities of one part of northern Anatolia in the middle of the Second Millennium is provided by a fragment of a bowl with vertical rib from rim to carination (fig. 136), from a site near Gerede, east of Bolu, a form found at Polatlı, Troy VI and Bayraklı⁹³ : at Polatlı it was found in Level 25, dated to just before the Hittite Empire.

Late Bronze Age material in northern Anatolia seems remarkably scanty. Plain wheel-made red or buff ware bowls, of the type most found in the Hittite homeland, do not occur in south-western Anatolia, but are found, for example, near Karaman and all over the Konya plain, a region under Hittite control, in Cilicia⁹⁴ and in the Hittite homeland.⁹⁵ Similar plain bowls, some with a band of red paint along the rim, occur at Kara Hüyük (figs. 137-140), the great mound in the middle of the Porsuk plain, twenty miles east of Eskişehir, and at other sites in this plain (figs. 141-145). This suggests that this province, if not under the control of the Hittites, was in close contact with them.⁹⁶ One thing at least is certain : the thickly populated Porsuk plain was a rich and important area, of which Kara Hüyük, from its size and position, may well have been the

⁹¹ A sherd from Yassı Hüyük (Çivril) illustrates this well. Also bowls from Beycesultan (A.S. V, p. 63, fig. 10).

⁹² *Troy*, Vol. III, pl. 444 (8) : Types A93 and A96. It seems probable that the shapes termed Minyan developed first in western Anatolia.

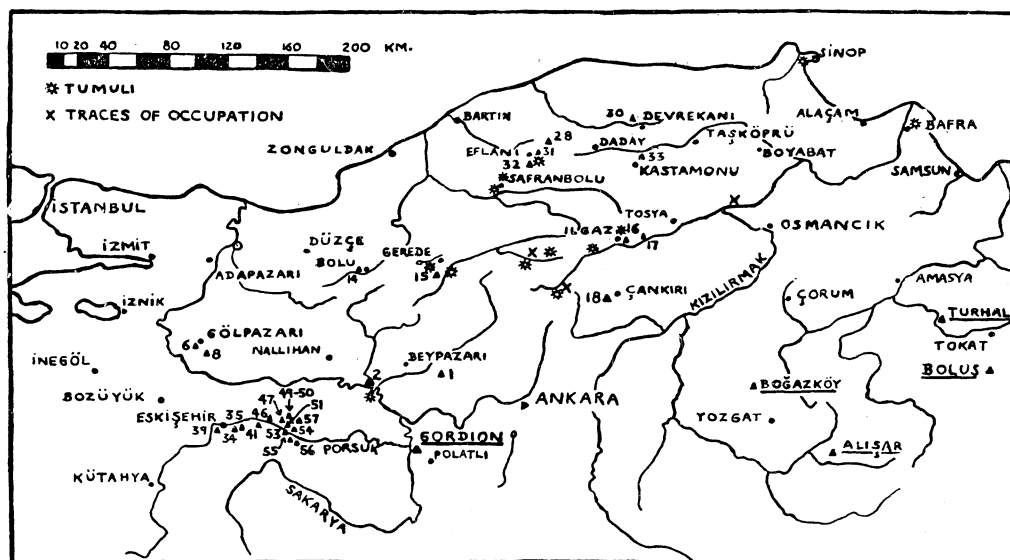
⁹³ A.S. I, pp. 50-1 (Group 39), and p. 59. See also : *Troy*, Vol. III, pl. 439 (II) ; *D.T.C.F.D.* VIII (1950), pl. VIIla ; Beycesultan level IV (unpublished).

⁹⁴ *Prehistoric Mersin*, p. 247, fig. 156 (nos. 10, 13) ; p. 249, fig. 157 (1, 2, 5, 6, 7).

⁹⁵ Bittel-Naumann, *Boğazköy-Hattusa*, p. 109 (nos. 6, 7, 34, etc.). H. Koşay, *Ausgrabungen*, pl. XLIII, figs. 3 and 4.

⁹⁶ A conclusion in no wise conflicting with our present knowledge of Second Millennium historical geography.

capital during the Second Millennium. To the north-east, a few fragments of bowls similar to those occurring in regions in contact with the Hittites were found near Kastamonu, and probably also near Eflani (figs. 146-148), though survival of this type into the Iron Age cannot be ruled out: the precise division between Late Bronze Age and Iron Age material remains



IRON AGE SITES

The administrative district (*kaza*) in which each site is situated is indicated in brackets.

- | | |
|--|---------------------------------------|
| 1. Karaboğaz (Ayaş). | 34. Karaca Hüyük (Eskişehir). |
| 2. Sarılar (Nallıhan). | 35. Yassı Hüyük (Eskişehir). |
| 6. Yassı Hüyük (Gölpazarı). | 39. "Çiftlik Hüyük" (Eskişehir). |
| 8. Türkmen (Gölpazarı). | 41. Kara Hüyük (Eskişehir). |
| 14. "Asker Hüyük" (Bolu). | 46. Alpu III (Eskişehir). |
| 15. Halaşlar (Gerede). | 47. Doğançlı Hüyük (Eskişehir). |
| 16. Salman Hüyük (Ilgaz). | 49. Çerkes Çukurhisar II (Eskişehir). |
| 17. "Km. 208 Tepe" (Ilgaz). | 50. Çerkes Çukurhisar (Eskişehir). |
| 18. Dümeli (Çankırı). | 51. "Yeni Yol Hüyüğü" (Eskişehir). |
| 28. Çengelli (Daday). | 53. "Köprübaşı Hüyüğü" (Eskişehir). |
| 30. İmren Tepe (Devrekani). | 54. Yeşildon (Eskişehir). |
| 31. Ören Hüyük (Eflani). | 55. "Porsuk Hüyük I" (Eskişehir). |
| 32. Semercitepe (Eflani). | 56. "Porsuk Hüyük II" (Eskişehir). |
| 33. "Taşköprü Yolu Hüyük" (Kastamonu). | 57. Bozan (Eskişehir). |

far from certain. At Salman Hüyük, near Ilgaz, was found a jar-neck with the "off-white" burnished slip usually associated with the Hittite homeland (fig. 149). A strainer-spout, such as occurs at Polatlı,⁹⁷ Boğazköy⁹⁸ and Alaca,⁹⁹ was found near Eskişehir (fig. 150). A fragment of a bowl with loop-handle set along the rim, almost certainly a variant of a widespread Second Millennium type,¹⁰⁰ occurs in the Gerede district (fig. 151). Although the plain bowl probably derived from the Hittite homeland, nevertheless it seems to have reached the Kastamonu region

⁹⁷ A.S. I, p. 50, fig. 12, no. 12: note comparison with Alışar.

⁹⁸ K. Bittel, *Boğazköy: Die Kleinfunde der Grabungen 1906-12* (Leipzig, 1937), pl. 31, no. 21.

⁹⁹ Fouilles, pl. XXIX (75).

¹⁰⁰ e.g. at Polatlı: A.S. I, p. 40 (Group 8).

not direct from the Halys but via the area between Polatlı and Eskişehir, particularly the Porsuk plain. This theory is supported by the complete absence of such Late Bronze Age bowls along the Black Sea coast near Bafra, the easiest route, via Samsun, from the Halys.

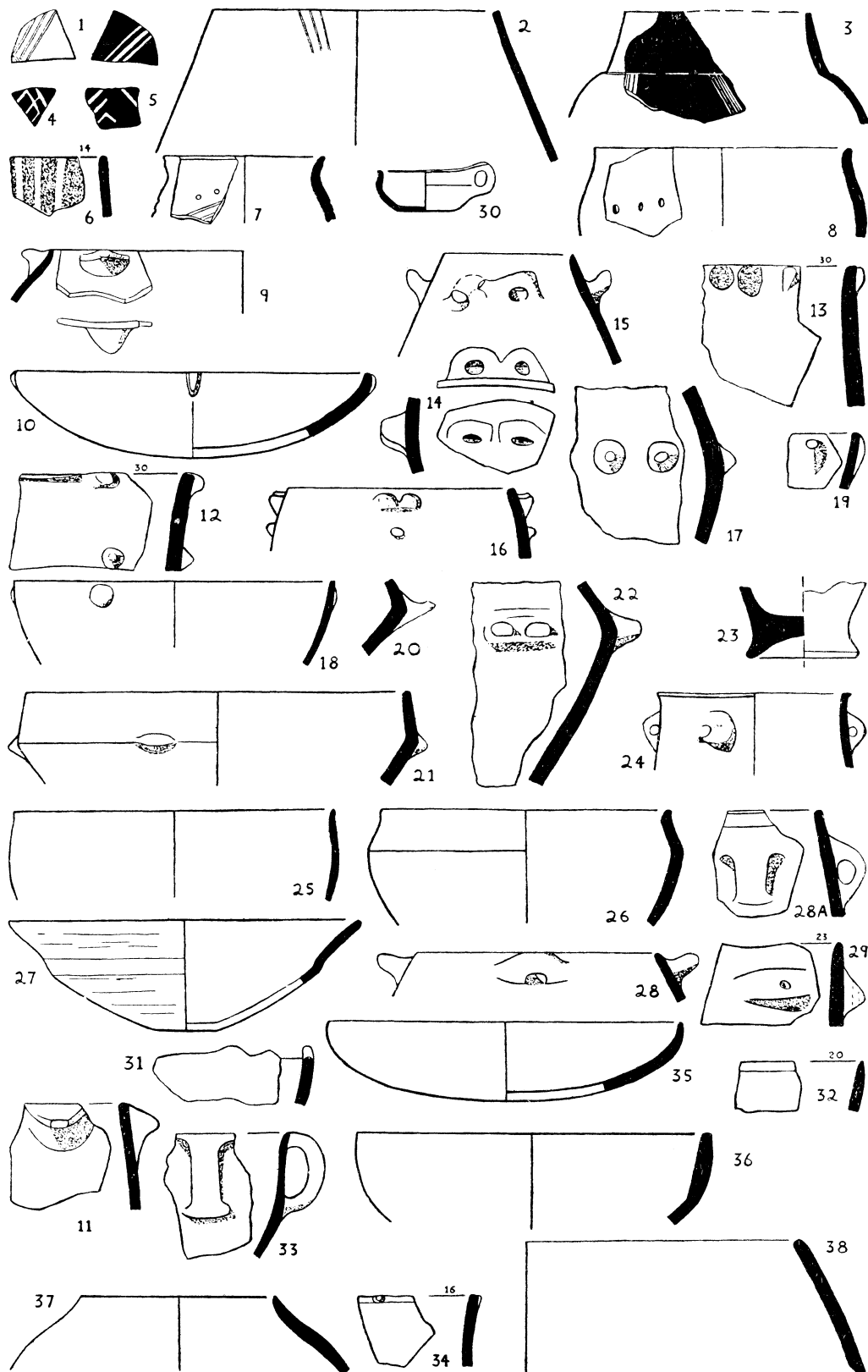
This discussion of the affinities of the Bronze Age cultures in northern Anatolia suggests that the same trend continued from Late Chalcolithic till Late Bronze Age times. This was the dominance of influences from the south-west and the west as far north-eastward as the country around Kastamonu : only the coast, from Sinop eastwards to Bafra and Samsun, looked always to the Halys.

Detailed study of the Iron Age material is being reserved for a later article, covering a wider area of northern Turkey.

ACKNOWLEDGMENTS

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C. A. B.



PROVENANCE AND DESCRIPTION OF FIGURED SPECIMENS.

All are $\frac{1}{4}$

LATE CHALCOLITHIC (BAFRA-SINOP REGION)

N.B.—All sherds are handmade

- | | | |
|-----|-------------------|---|
| 1. | Kuşcular . . . | Black ware, black burnished slip, incised chevrons (outside), white-painted decoration (inside). |
| 2. | „ . . . | Black ware, black burnished slip (outside), with incised lines, scratched after firing. |
| 3. | Gökçe Boğaz . . . | Black and red ware, black burnished slip (outside) with decoration in white paint, probably chevrons and vertical bands ; inside plain red. Jar neck. |
| 4. | Kuşcular . . . | Black ware, black burnished slip (outside), with white-painted decoration ; grey burnished slip inside. |
| 5. | „ . . . | Dark grey ware, black burnished slip (outside), with white-painted decoration ; inside plain. |
| 6. | „ . . . | Black ware, grey burnished slip (outside), with white-painted decoration ; light grey burnished slip (inside). |
| 7. | İkiz Tepe . . . | Grey ware, pinkish-brown slip, slightly burnished, with incised decoration outside. |
| 8. | Gökçe Boğaz . . . | Grey ware, buff-brown slip, unevenly burnished, with decoration of incised dots outside. |
| 9. | İkiz Tepe . . . | Red ware, black burnished slip (outside), inside plain. Knob-handle. |
| 10. | „ . . . | Red ware, dark grey and brown slip, slightly burnished. Knob-handle. |
| 11. | „ . . . | Reddish-grey ware, red-brown burnished slip (outside), plain grey slip (inside). Knob-handle. |
| 12. | „ . . . | Grey ware, brownish-black slip, slightly burnished. |
| 13. | „ . . . | Rather coarse blackish-brown ware, straw-tempered, dark grey burnished slip. Knobs along rim. |
| 14. | „ . . . | Dull red ware, plain black slip (outside), inside plain. Handle with two deep finger-grips. |
| 15. | Gökçe Boğaz . . . | Black-and-red ware, black burnished slip (outside) ; red slip, slightly burnished (inside). Double loop-handle. |
| 16. | „ . . . | Reddish-grey ware, plain grey (outside), plain red (inside). Three knobs as decoration. |
| 17. | „ . . . | Grey ware, mottled black and grey burnished slip (outside) ; pinkish-brown slip (inside). Two knobs on shoulder of pot. |

18. Gökçe Boğaz . . . Grey ware, rather mottled black and grey burnished slip, buff burnished along the top (outside) ; plain red-brown slip (inside). Slight knob.
19. İkiz Tepe . . . Black ware, plain black slip (outside), plain red slip (inside). Knob-"handle".
20. Kuşcular . . . Black ware, black burnished slip (outside), dark grey burnished slip (inside). Carinated handled " box " (broken off at corner).
21. İkiz Tepe . . . Black ware, black burnished slip. Knob-handle on carination.
22. „ . . . Black and brown ware, black burnished slip (outside), plain brown (inside). Double-knobbed handle.
23. „ . . . Black ware, brown slip, burnished outside. Pedestal base.
24. Maltepe (Sinop) . . . Reddish-grey ware, black burnished slip (outside), grey burnished slip (inside).
25. „ . . . Reddish-grey ware, black—very dark grey burnished slip.
26. Gökçe Boğaz . . . Red ware, highly burnished red slip. Slightly carinated bowl. *E.B. (post-Late Chalcolithic)*.
27. Kuşcular . . . Red ware, outside polished, inside plain. Wheel-made ?
28. İkiz Tepe . . . Grey ware, black burnished slip (outside), red-brown burnished slip (inside). Loop-handled jar.
- 28A. Kuşcular . . . Plain reddish-grey ware, very slightly polished outside. Strap-handled jar.
29. İkiz Tepe . . . Red ware, dark red burnished slip. Lug-handle.
30. „ . . . Red ware, red burnished slip. Small cup.
31. „ . . . Plain brownish-red ware. Wavy rim.
32. „ . . . Red ware, black burnished slip (outside), with red-brown burnished slip along the top, and inside.
33. Gökçe Boğaz . . . Black ware, mottled red, brown and black burnished slip (outside), inside plain.
34. Kuşcular . . . Greyish-brown ware, black and brown burnished slip. Small protuberance from rim.
35. İkiz Tepe. . . Black ware, red burnished slip (outside), black and brown slip, highly burnished, inside. *E.B. (post-Late Chalcolithic)*.
36. „ . . . Black ware, black burnished slip.
37. Kuşcular . . . Black ware, streaky black and grey burnished slip (outside), inside plain. Hole-mouth jar.
38. „ . . . Plain black ware, slightly polished outside. Hole-mouth jar.

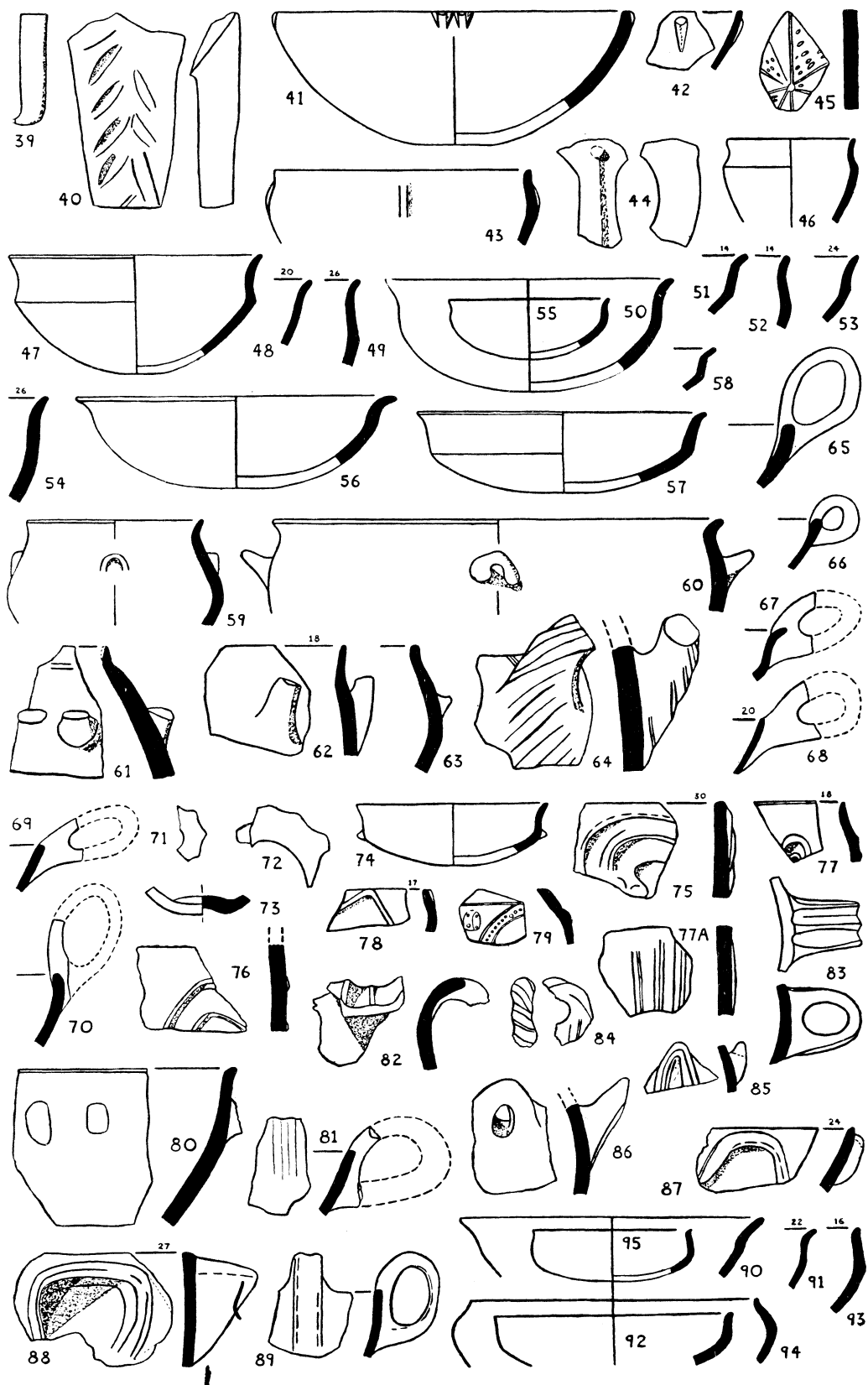
EARLY BRONZE AGE (PORSUK PLAIN)

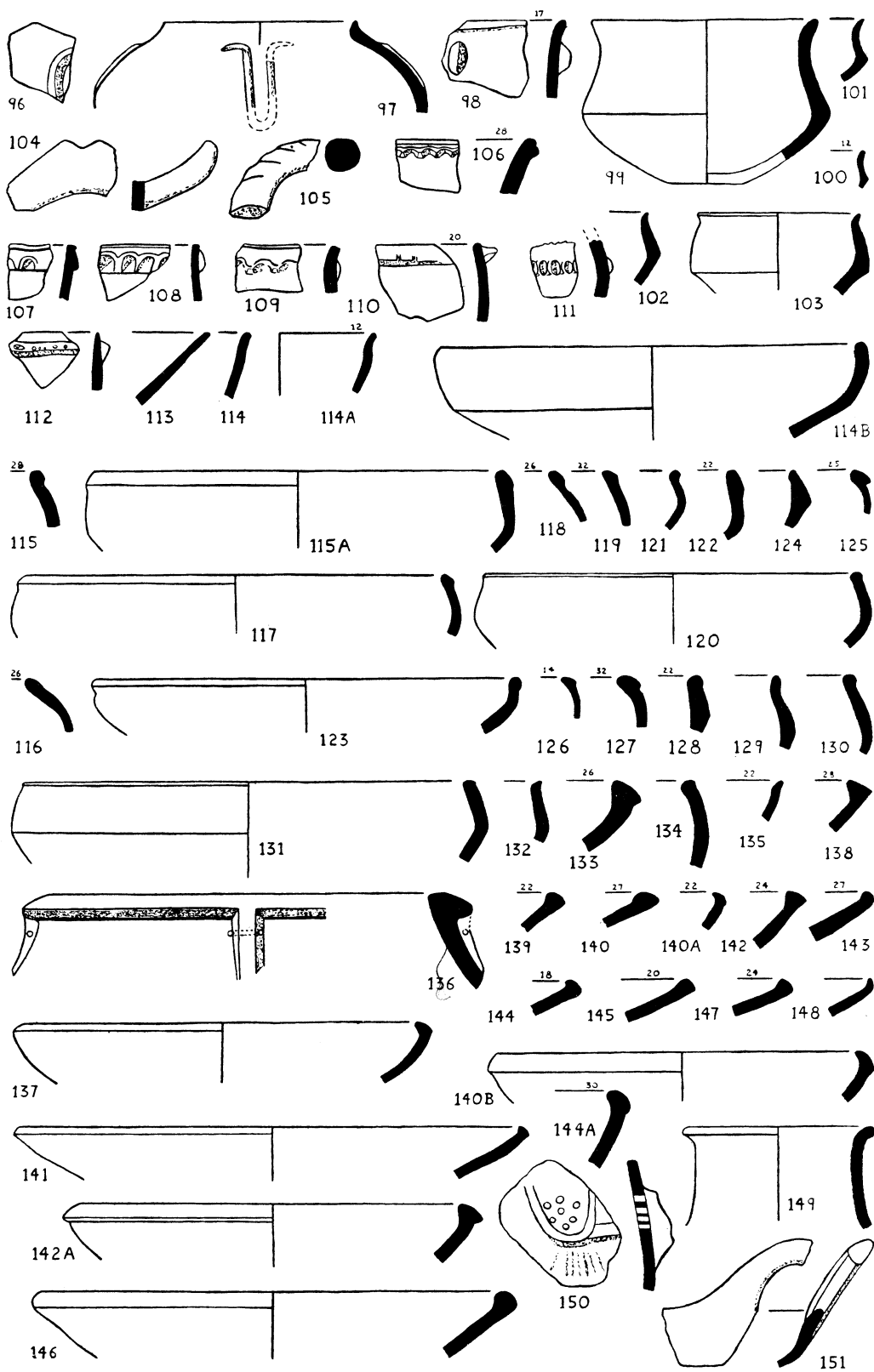
39. Yapağıöyük . . Plain reddish-grey ware. Cooking-pot leg.
40. Alyamak Hüyük . Coarse, plain reddish-grey ware. Cooking-pot leg with incised decoration.
41. Yapağıöyük . . Red ware, brownish-red burnished slip. A pair of knobs below rim.
42. "Çiftlik Hüyük" . Reddish-grey ware, red burnished slip. One vertical knob below rim.
43. "Küçük Hüyük" . Red ware, red slip, burnished outside. Vertical ridge below rim.
44. Dudu Hüyük . . Grey ware, red burnished slip. Knobbed handle.
45. Alyamak Hüyük . Red ware, red burnished slip. "Box" with incised sun pattern, *Chalcolithic (pre-Troy I)*.
46. Karaca Hüyük . . Red ware, plain except for band of red burnished slip round and below rim. *Late E.B.*
47. Yapağıöyük . . Plain, rough-surfaced buff ware.
48. „ . Red-brown ware, red-brown burnished slip.
49. Alyamak Hüyük . Light red ware, red burnished slip.
50. „ . Buff ware, red burnished slip.
51. „ . Light red ware, red burnished slip.
52. Ağa Pınar . . Red ware, red and black burnished slip (outside), red burnished slip (inside).
53. Alpu III . . Grey ware, red burnished slip.
54. "Köprübaşı Hüyüğü" . Grey ware, buff burnished slip.
55. Yapağıöyük . . Buff ware, red burnished slip.
56. Alyamak Hüyük . Light reddish-grey ware, dark grey burnished slip (outside), red burnished slip (inside).
57. „ . Red ware, red burnished slip (streaky outside).
58. „ . Light greenish-grey ware, brown wash, slightly polished.
59. Yapağıöyük . . Light red ware, red burnished slip (outside, and 1 cm. below rim on inside), inside plain. Jar with false handle on shoulder.
60. Alyamak Hüyük . Buff ware, red burnished slip. Handled jar.
61. „ . Reddish-buff ware, red burnished slip (outside, and 2.5 cms. below rim inside); buff slip, slightly burnished, inside. Handled jar.
62. „ . Buff ware, buff burnished slip. Handled jar.
63. Kara Hüyük . . Grey ware, red burnished slip. Handled jar. *Perhaps very early Second Millennium.*
64. Alyamak Hüyük . Coarse light reddish-buff ware, red wash (outside), inside plain. Twisted handle.
65. "Doğancı Hüyük II" . Light red ware, red wash, slightly polished. Bowl with high loop-handle.
66. „ . Reddish-grey ware, red burnished slip. Bowl with high loop-handle.
67. Ağa Pınar . . Buff ware, red burnished slip. Bowl with high loop-handle.

68. Alpu II . . . Red ware, red burnished slip. Bowl with high loop-handle.
69. " Porsuk Hüyük II " Reddish-grey ware, reddish-grey burnished slip. Bowl with high loop-handle.
70. „ . Grey ware, red burnished slip. Bowl with high loop-handle.
71. " Köprübaşı Hüyüğü " Buff ware, red burnished slip. Notched handle.
72. " Porsuk Hüyük II " . Plain dark reddish-grey ware. Notched handle.
73. Alyamak Hüyük . Red ware, red burnished slip. *Omphalos* base.
74. Çerkes Çukurhisar . Red ware, red burnished slip. Bowl with knob on carination.
75. " Doğancı Hüyük II " Reddish-grey ware, red burnished slip (outside), inside plain. Relief decoration.
76. " Porsuk Hüyük II " Reddish-grey ware, slightly polished. Relief decoration.
77. Dudu Hüyük . Red ware, streaky red and red-brown burnished slip. Relief decoration.
- 77A. „ . Reddish-grey ware, red-brown and grey slip, slightly burnished (outside), inside plain. Relief decoration.
78. „ . Red ware, red burnished slip. Triangular "metallic" false handle.
79. Çerkes Çukurhisar . Plain black ware, very slightly polished outside.

EARLY BRONZE AGE (ÇAYIRHAN, GÖLPAZARI AND İZNIK AREAS).

80. Akyar . . . Greyish-buff ware, red burnished slip. Bowl with horizontal handle.
81. Sarılar . . . Red ware, red burnished slip (outside), reddish-buff slip (inside). Ribbed high loop-handle.
82. „ . Grey ware, red burnished slip (outside), buff burnished slip (inside). Ribbed handle.
83. Akyar . . . Grey ware, buff burnished slip. Ribbed handle.
84. " Hüyük Tepe " . Red ware, red burnished slip. Twisted handle.
85. Sarılar . . . Buff ware, red burnished slip. Small triangular handle.
86. „ . Red ware, dark red wash. Loop-handle.
87. Kursunlu . . . Buff ware, red burnished slip. Abortive crescent-shaped handle.
88. " Küçük Kızılay Hü " Plain, rather coarse dark grey ware. Cooking-pot with crescent-shaped handle.
89. Gülüstan . . . Red ware, red slip, burnished outside. High loop-handle.
90. Yassı Hüyük . . . Red ware, red burnished slip.
91. Gülüstan . . . Buff ware, dark red burnished slip.
92. Sarılar . . . Red ware, red burnished slip.
93. Akyar . . . Red ware, red burnished slip.
94. „ . . . Reddish-buff ware, red wash, polished.
95. „ . . . Red ware, red burnished slip.





96. Akyar Red ware, red burnished slip. Relief decoration.
 97. "Hüyük Tepe" . . Red ware, red slip, burnished outside. Jar with
 "metallic" handle in relief.
 98. Sarılar Grey ware, brown burnished slip.

EARLY BRONZE AGE (BOLU-KASTAMONU REGION, ETC.)

99. Maltepe (Kastamonu) Red ware, light red slip, very slightly burnished
 (blackened outside, below carination).
 Carinated bowl. Turned on slow wheel?
 100. Çengelli Red ware, red burnished slip. Carinated bowl.
 101. Tepecik Gritty black and red ware, red and brown
 burnished slip. Carinated bowl.
 102. Ören Hüyük . . Red ware, red burnished slip. Carinated bowl.
 Late E.B.
 103. " Red ware, red burnished slip. Carinated bowl.
 Late E.B.
 104. İmren Tepe . . Red ware, red burnished slip. Handle with two
 knobs.
 105. " Plain light red ware. Twisted handle.
 106. "Çiftlik Hüyük" . Reddish-grey ware, red wash outside, inside
 plain. Relief band.
 107. Büyük Su (Deymen Çif). Grey ware, red burnished slip. Relief band.
 108. Tepecik Brown ware, plain outside, slightly burnished
 brown slip (inside). Relief band.
 109. Ören Hüyük . . Red-brown ware, red-brown burnished slip.
 Relief band.
 110. İkiz Tepe Plain light red ware. Serrated relief band.
 111. Gökçe Boğaz . . Black ware, plain black slip, reddish outside.
 Band of ridges and grooves.
 112. " Reddish-grey ware, plain dull red slip (outside),
 red-brown burnished slip (inside). Crudely
 notched relief band.
 113. Gülüstan Plain red ware, slightly polished. Wheelmade.
 114. Büyük Su (Deymen Çif). Grey ware, red slip, slightly burnished.
 114A. Maltepe (Kastamonu) Red ware, red burnished slip.
 114B. " " Red ware, red burnished slip (outside, above
 carination), otherwise plain. Carinated bowl.

SECOND MILLENNIUM (PROBABLY ALL MIDDLE BRONZE AGE)

All sherds wheelmade (unless otherwise stated)

115. Kara Hüyük . . Light reddish-grey ware, brownish-red burnished
 slip. Traces of "metallic" handle.
 115A. " Light red ware, reddish-buff burnished slip.
 116. " Grey ware, pink burnished slip.
 117. " Light red ware, light red slip, slightly burnished
 (outside), inside plain.
 118. " Grey ware, reddish-grey burnished slip.

119. Çerkes Çukurhısar . Light reddish-buff ware, red and buff burnished slip.
120. „ „ . Light reddish-grey ware, reddish-buff burnished slip.
121. „ „ . Light red ware, reddish-buff burnished slip.
122. „ „ . Light red ware, red burnished slip (outside), reddish-buff slip slightly burnished (inside).
123. „ „ . Red ware, red burnished slip (outside and round rim), inside plain.
124. „ „ . Red ware, streaky red-brown burnished slip (outside), streaky red burnished slip (inside).
125. İkiz Tepe . . Red ware, red slip, slightly burnished (outside), inside plain.
126. „ . . Red ware, red burnished slip (outside), inside plain.
127. „ . . Red ware, plain buff slip (outside), inside plain.
128. Kuşcular . . Red-brown ware, red-brown burnished slip.
129. Çengelli . . Plain red ware, traces of red wash (outside), inside plain. *Perhaps late E.B.*
130. Tepecik . . Brown ware, red-brown burnished slip. Hand-made.
131. „ . . Red-brown gritty ware, red burnished slip (outside), buff burnished slip (inside). Hand-made.
132. Semercitepe . . Red ware, red burnished slip.
133. Salman Hüyük . . Red ware, darkish red slip. *Probably Late Bronze Age.*
134. “ Km 208 Hüyük ” . Greyish-brown ware, dark brown burnished slip (outside), inside plain.
135. Alyamak Hüyük . Grey Minyan ware, light grey burnished slip.
136. Halaşlar . . Red ware, buff and red wash. Bowl with pierced vertical rib from rim to carination.

LATE BRONZE AGE

All sherds are wheelmade

137. Kara Hüyük . . Plain reddish-buff ware, red painted band along rim (outside).
138. „ . . Plain light reddish-buff ware, polished on rim.
139. „ . . Plain reddish-buff ware.
140. „ . . Buff ware, thin buff slip, slightly burnished.
- 140A. „ . . Plain light red ware, red painted band round rim.
- 140B. Alyamak Hüyük . Plain buff ware.
141. Karaca Hüyük . Plain light red ware.
142. „ . Red ware, red burnished slip (outside).
- 142A. „ . Plain, rather gritty light red ware, traces of dark red band on rim.
143. “ Köprübaşı Hüyüğü ” Plain buff ware.
144. „ „ Plain buff ware.
- 144A. “ Porsuk Hüyük I ” . Plain light red ware.
145. Yeşildon . . Plain light red ware.

146. Tepecik . . . Plain red ware. Pronounced wheel-marks.
 147. " Taşköprü Yolu Hü " Plain red ware.
 148. Semercitepe . . . Plain buff ware, red painted burnished band
 along rim (outside).
 149. Salman Hüyük . . . Red ware, " off-white " burnished slip (outside),
 inside plain. Jar neck.
 150. Karaca Hüyük . . . Light red ware, buff wash (outside), inside plain.
 Strainer-spout.
 151. Halaşlar . . . Grey ware, lightish brown burnished slip. Bowl
 with loop-handle along rim.