

ŞEVKET AZİZ KANSU



HAMİT ZÜBEYR KOŞAY



KILIÇ KÖKTEN

This volume of the Neolithic in Turkey is dedicated to *Şevket Aziz Kansu, Hamit Zübeyr Koşay* and to *Kılıç Kökten* pioneers of prehistoric research in Turkey with devoted boundless energy.

Bu cilt, Türkiye tarihöncesi araştırmalarına,
tükenmek bilmeyen enerjileriyle öncülük eden
Şevket Aziz Kansu, Hamit Zübeyr Koşay ve *Kılıç Kökten*'e
ithaf edilmiştir.

THE NEOLITHIC IN TURKEY

NEW EXCAVATIONS & NEW RESEARCH

Edited by:

MEHMET ÖZDOĞAN

NEZİH BAŞGELEN

PETER KUNIHOLM

**NORTHWESTERN TURKEY
AND ISTANBUL**



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Pasifik Ofset, Cihangir Mah. Güvercin Cad. No: 3/1
Baha İş Merkezi A Blok Haramidere, Avclar / İstanbul
Tel.: 0 212 412 17 00 / Sertifika No: 12027

ISBN: 978-605-396-231-1

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Sertifika No: 10459

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Yeniçarşı Cad. No: 16/A, Galatasaray, İstanbul
Tel.: 0 212 249 92 26 Fax: 0 212 244 31 64
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Neolithic Sites in the Marmara Region

Fikirtepe, Pendik, Yarımburgaz, Toptepe, Hoca Çeşme, and Aşağı Pınar

Mehmet ÖZDOĞAN

A PRELUDE

This paper will be an overview of the work carried out by our team on the Neolithic cultures of Northwestern Turkey since 1980, primarily presenting a conspectus of the results of excavations at Yarımburgaz, Toptepe, Hoca Çeşme, and Aşağı Pınar in Eastern Thrace, and Fikirtepe and Pendik on the Anatolian side of the Sea of Marmara. Our interest on the Neolithic cultures of this region had been provoked primarily by the geographic location of this region on the most likely land route connecting the Anatolian - Neareastern cultural sphere with that of Europe through the Balkans. At the time when our research project began, the debate on the origins of the Neolithic way of life in Europe was at its climax; the conventional diffusionist view of Neareastern origins was being fiercely attacked and superseded by autochthonous development models¹. During those years, Neolithic studies were focused on two distinct regions, on the so-called "Fertile Crescent" region of the Near East and on Southeastern Europe including mainland Greece; however, Neolithic research in Anatolia, the interim region between the Fertile Crescent and Southeastern Europe, was almost at a standstill. Lack of new, concrete archaeological evidence from the interim zone had its consequences; the debate on the origins of Neolithic in Europe inevitably remained based on hypothetical assumptions. In this respect, the Marmara Region, the shortest land-route between the Anatolian Plateau and the Balkans was almost devoid of Pre-Bronze Age archaeological data. The initial drive of our work was to fill in this lacuna in knowledge by procuring new, concrete evidence from this region. We were almost assured at that time that even a simple surface survey in this previously unexplored region would yield data that would resolve the problem, either recovering material of Anatolian origins or not. It is now over 30 years since we began working in this region, conducting not only surface surveys but also undertaking a number of excavations, some small scale, some extensive, and our work has been complemented by taking other colleagues into the field. It became clear that our initial research design was based on an over-simplistic set of assumptions and that the real picture was far more complex and multifarious. Thus, as more evidence became available over time, our point of view on the neolithization process of this region also changed and became elaborated (Özdoğan 1985, 1989, 1996a, 2006a, 2008, 2010, 2011a, 2011b; Özdoğan and Gatsov 1998) though it still is far from being conclusive. Nevertheless, new questions have replaced the earlier simplistic ones, evincing that the process of neolithization was not an instantaneous, linear event, but of long duration, going through a diversity of trajectories, many taking place simultaneously. At present, there is so much inflow of new evidence that it will eventually take some more time before it all sinks in; here, with

1 For a conspectus on changing trends and relevant literature, see Özdoğan 1996a, 1997, 2007a.

this paper, along with presenting the primary evidence, a conspectus of our present stand on viewing the emergence and the development of the Neolithic way of life in the region around the Sea of Marmara will be presented.

INTRODUCTION

Chronology and Terminology

One of the drawbacks of working in or around the Marmara Region is deciding on chronological denominations; terms such as “Neolithic” have totally different implications in the Balkans and in Anatolia. As all the other papers in these volumes are on Anatolia, and because most of what will be presented in this paper from Thrace has closer connections to the Bulgarian sequence, therefore necessitating the use of the Bulgarian chronological terms, in order to prevent confusion the reader should keep in mind what these terms mean in the sense of Anatolian chronology. Thus, the following synchronisations will be used in this paper:

Anatolian Terminology

Aceramic and Early Pottery Neolithic
 Middle Pottery Neolithic
 Late Pottery Neolithic - Early Chalcolithic
 Middle Chalcolithic (Early)
 Middle Chalcolithic (Late)

Balkan Terminology

Mesolithic / Epi-Paleolithic
 Monochrome / Pre-Karanovo
 Early Neolithic (Karanovo I-II)
 Middle Neolithic (Karanovo III-IV)
 Late Neolithic (Karanovo IV-V)

Environmental Setting (Figs. 1-2)

Northwestern Turkey comprises two distinct geographic units, Eastern Thrace and Anatolia, separated by the Sea of Marmara and the two long but narrow water channels, the Dardanelles and Bosphorus. Among these, Eastern Thrace, an extension of Southeastern Europe, is a peninsula where the Aegean and the Black Sea come close to each other. Thus, in the terminology of cultural geography, the region around the Sea of Marmara is the point where Anatolian, Aegean, Balkan, and Black Sea/Pontic cultures meet with each other, providing easy contact among distant cultural entities. However, in spite of its propitious location, even a simple look at the evidence is enough to indicate the fluctuating position of this region between these macro-cultural zones, acting as a bridge for or a barrier to transmitting ideas, commodities, or migrant groups, occasionally being totally or partially dominated by one, or even acting as a buffer-zone totally detached from all others (French 1986; Özdoğan 2006b, 2008a). Accordingly, the role played by this region is far more complex and diversified than the picture seen by looking at a map. Likewise, the Sea of Marmara, conventionally considered as the narrow neck of the maritime route between the Black Sea and the Aegean - Mediterranean cultural spheres is a labile system that went through radical changes during the Holocene (Özdoğan 2003a; Algan et al. 2009, 2011). At present the two narrow and shallow straits –the Dardanelles and the Bosphorus on either end of the Sea of Marmara– besides being the sea route, also control the water exchange

between the brackish Black Sea marine environment and the saline Aegean, thus playing a decisive role in defining the marine ecology. This is an extremely unstable system, sensitive to changes in global sea levels, to fresh water discharge from the rivers running into the Black Sea, and to local tectonics. Even a slight fluctuation in any of the aforementioned conditions will have exaggerated consequences all over the system, as the amount and the direction of water passing through the straits will change. In case of more drastic changes taking place, one or both of the straits will be blocked by becoming dry land.

The Sea of Marmara will attain fresh to brackish lacustrine conditions and even at times will be connected to the Caspian through the now silted-in Manyıncı channel. It should not be overlooked that in the early stages of the Neolithic period the level of the Marmara was still much lower than at present (Fig. 2); even if some saline water might have begun penetrating through the Dardanelles, lacustrine conditions prevailed until the end of the Neolithic period. This also implies rapidly changing coastal environments and an extensive coastal shelf exposed as land-surface on its southern part between Bandırma and Gemlik. The intrusion of saline waters from the Aegean must have continued at an increased pace inundating the shelf areas before reaching its present level as late as 5500 BC. The water flow from the Bosphorus became active sometime around the late 8th or early 7th millennium. Likewise the valley floors of the streams that were deeply incised during the Late Pleistocene to conform with the low sea levels were also inundated by the rise in sea levels, forming inlets and gulfs that filled in only by the Early Bronze Age. In this respect, changes that took place in the course of the Meriç/Maritsa/Evros river stand as the most significant case; it seems evident that beyond its relatively narrow opening near Enez (classical Ainos), the Aegean extended inland as a large gulf almost up to the present Turkish-Bulgarian frontier.

Apart from problems related to marine conditions, Northwestern Turkey comprises a number of ecological units each presenting distinct environmental conditions; among those the Gelibolu Peninsula by the Dardanelles stands as the most apparent unit, being detached from the rest of Thrace by a very narrow isthmus but running parallel to the Anatolian coastline. In Eastern Thrace, ranges of the densely forested Istranca Mountains, providing a rich and diversified habitat, are also the source of various rocks and minerals including copper, gold, and iron. The geology of the Istranca Mountains is rather complex, raised and eroded through several tectonic facies. Even though barely reaching 1000 m at their highest peak, as they extend parallel to the Black Sea coast line, they constitute a natural and a cultural barrier between the marine environment and the endemic steppe of inner Thrace. Inner Thrace, a penplain, drained by the Ergene and its tributaries, is deficient in raw materials with the possible exception of clay. The drainage system merges with the Meriç/Maritsa/Evros to the west, the area of the Early Holocene gulf later turning into wetlands; due to lack of research, defining the paleocoastline of this ancient gulf is rather problematic. The Ganos and Yenice Mountains constitute the southern border of the Ergene Basin, running along the Aegean and Marmara between Enez and Tekirdağ. Both ranges provide a rich source for raw materials such as basalt, lacking in other parts of Eastern Thrace but essential for prehistoric cultures; significant in this region is the recovery of two Neolithic workshops, Hamaylıtarla and Fener Karadutlar, specialized on the production of polished axes, the so-called celts – the only documented tool of its sort in Turkey (Özbek and Erol 2001).

As noted above, the Istranca and Ganos ranges are rich in minerals as well as in various forms of rock; however, fine flint and chert occur only around the Bosphorus, mainly as rolled pebbles of secondary deposition; thus, in other parts of Eastern Thrace, unless procured as an import, the chipped stone industry is either of poor quality chert or quartzite. In spite of the extensive presence of copper in the Istranca massif, there is no indication of its exploitation during the Neolithic occupation layers of Aşağı Pınar, the Neolithic site nearest to the sources. On the other hand, malachite has been extensively used and worked at Aşağı Pınar, particularly by Layers 4 and 3. There is no indication at other sites of malachite's being traded.

The Anatolian side of the Sea of Marmara is much more diversified; east of the Bosphorus is a peninsula extending up to the deltaic plain of the Sakarya River, presenting an extremely complex geological formation, along with sedimentary beds rich in sources of flint, also with various igneous outcrops. The southern parts of the Marmara are marked by active neo-tectonics; various depressions along the fault-lines on the eastern part of the region have become lakes, some such as Sapanca and İznik surviving to the present. Others including İnegöl and Yenişehir have silted in through time, turning into alluvial plains. The Uludağ massif, rising to the height of 2500 m, on the east and the Kazdağlan on the west are separated by the large plain of Bandırma that is occupied by two lakes, Ulubat (Apoloyont) and Manyas. Compared to Eastern Thrace, the Anatolian side of the Marmara is far richer in all sorts of rocks and minerals, including flint, metamorphic and igneous rocks, and copper.

History of Research

Even though systematic work focused primary on the Neolithic period in Northwestern Turkey² had a rather late start, the twin sites of Fikirtepe and Pendik are among the earliest recorded and extensively published Neolithic sites in Turkey. Both were noted in 1907 by an engineer working for the construction of the Baghdad railway (Arne 1922; Janse 1925; Özdoğan 1983b); excavations took place at Fikirtepe from 1952 to 1954 (Bittel 1960, 1970) and at Pendik, first by Kansu in 1961 (Kansu 1963, 1972), then in 1981 and 1992 by the İstanbul Archaeology Museums (Harmankaya 1982; Pasinli et al. 1994); nevertheless, the chronological position of the Fikirtepe culture was highly debated and even considered as an incipient stage of the Early Bronze Age until being securely fixed in the stratigraphic sequence of Ilıpınar. Even though the region had always been considered as a land bridge between Asia and Europe, Ş. A. Kansu is to be acknowledged as the first archaeologist taking to the field to find the evidence of this contact; he conducted small-scale soundings at Tuzla, Pendik, Fikirtepe, Yarımburgaz, Şerefli Çiftlik and Çardakaltı (Kansu 1963, 1972). Somewhat later, a more intensive and systematic surface reconnaissance was undertaken by Cullberg and soon after that by D. H. French on the Anatolian side, along with the recovery of Neolithic sites including Ilıpınar (at that time called Ilıcapınar), and Menteşe and Barçın (at that time called Yenişehir II), laying down the outline of cultural sequence with the initial description of the pottery assemblages (Cullberg 1965; French 1967). Since then up to the commencement of our project, there have been

2 For an extensive narrative on the history of research and references see French 1967; Özdoğan 1983a, 1996b, 2007b.

only some chance finds, the most significant being the recovery of Ağaçlı by M. Korfmann in 1973 (Gatsov and Özdoğan 1994).

Our project was initiated in 1979 as a modest undertaking in the region of İstanbul and developed in the following years, from 1980 on, first as extensive surface surveys, then short-term excavations, and from 1993 up to the present as a major undertaking at Aşağı Pınar in Eastern Thrace. Even though the entire region was within the areal coverage of our surface survey program, work has been more intensive in the Edirne and Kırklareli provinces and also at Gelibolu Peninsula. Restricted areas were covered along the coastal zones of İstanbul. Çan and Yenice districts of Çanakkale Province, Manyas, Gönen, İvrindi, and Balıkesir plains of Balıkesir Province were also partially surveyed. Even though numerous sites were recovered, lack of comparative stratigraphic material was a major drawback in evaluating the finds; besides vague comparisons with the assemblages of distant areas and intuitive guesses, our assessment had to be limited to comparison with the Fikirtepe material and to the Karanovo sequence of Bulgaria.

Our rescue excavations at Yanımburgaz Cave in 1986 provided for the first time a stratified sequence with absolute dates, also revealing a hitherto unknown assemblage that later came to be known as the Yanımburgaz culture (Özdoğan and Koyunlu 1986; Özdoğan et al. 1991). As the archaeological deposits had previously been much disturbed, secure contexts were in a rather limited area, initially laying some doubt as to the validity of the sequence; it was only after the commencement of the Ilıpınar excavations, revealing the same chronological order as at Yanımburgaz, though in further detail, the basis of the pre-history of the Eastern Marmara region could be firmly established. Our next rescue excavation took place in 1989 at what had remained at the base of the almost totally destroyed mound of Töptepe on the northern coast of the Sea of Marmara (Özdoğan and Özbaşaran-Dede 1990; Özdoğan et al. 1991), making it possible to define a local variant of the Karanovo IV culture, that was later understood to be widespread in the southern parts of Eastern Thrace with affinities to the Paradimi culture in Western Thrace. Our excavations at Hoca Çeşme at Enez from 1990 to 1993 revealed for the first time the cultural assemblages of Karanovo I and II type in Eastern Thrace, also giving the initial indications of the presence of a monochrome phase pre-dating the Karanovo I culture (Özdoğan 1998, 2003b). Aşağı Pınar in Eastern Thrace, under excavation since 1993 in collaboration with the German Archaeological Institute, Berlin, with Hermann Parzinger, is at present not only the most extensively documented Neolithic site in Eastern Thrace but already the reference point for most of the Balkans, revealing an uninterrupted sequence covering the entire span of the Neolithic period (Karul et al. 2003; Parzinger et al. 1999).

Parallel to our undertakings in Eastern Thrace, work on the Neolithic has also gained pace on the Anatolian side of the Sea of Marmara (see papers in this volume); Dutch excavations at Ilıpınar, initiated in 1987, have revealed the framework of a cultural sequence from the Early Neolithic to Middle Chalcolithic, which has been further elaborated by the excavations at Menteşe and later by the ongoing work at Barcın Höyük, taking the earliest beginnings of the Neolithic way of life almost half a millennium earlier than our previous assumptions. The work undertaken by the Dutch teams have also provided ample evidence on the past environmental conditions and the changing subsistence patterns of the region. Excavations at Aktopraklık, to the west of Bursa, since 2004, have not only provided data

complementing what has been revealed from the Dutch excavations at sites east of Bursa, but more significantly have made it possible to correlate the Neolithic cultures of the Aegean littoral, exposed by the more recent undertakings at sites such as Uğurlu, Gürpınar, and Coşkuntepe, with those of the Eastern Marmara.

While excavations at Hoca Çeşme and Aşağı Pınar have been providing links with the rest of the Balkans, making it possible to place littoral areas along the Aegean and the Sea of Marmara into the picture of neolithization, extensive surveys carried out by Turan Efe in the upper Sakarya Basin have helped correlate the Marmara Region with the Central Anatolian Plateau. In this respect, Efe's excavations at Orman Fidanlığı from 1992 to 1994 have provided evidence to link Ilıpınar level VI and Yanmburgaz 2-3 with the high plateau further to the East. Also of significance, early sites recovered by Efe yielded distinct examples of the Fikirtepe culture and some others with white on red painted pottery in the Hacilar style. Among the sites recovered, Fındık Kayabaşı and Kes Kaya stand out as the most prolific ones (Efe 1989, 1990, 1995, 2000, 2001, 2005). On the other hand, onset of Neolithic excavations in the region around İzmir (see Özdoğan et al. 2012) has clearly demonstrated the maritime expansion of the Neolithic way of life along the Aegean coastline towards Thrace, thus making it possible to place the basal Hoca Çeşme assemblage in a cultural context.

Salvage operations at Yenikapı, extensively presented in this volume, have provided the missing link in correlating the cultural sequence with the changes in environmental conditions, in particular with the changes that took place in the sea levels. Prior to the excavations at Yenikapı, the presence of wooden artefacts in Neolithic assemblages was mostly guesswork, tangible examples being restricted to a few items from basal Çatalhöyük and the submerged sites along the Israeli coast.

It would thus be fair to note that our knowledge of the Neolithic cultures of Northwestern Turkey has substantially increased during the last few decades, making it possible, if not to draw a conclusive picture, at least to define the proper questions to be addressed. However, there are still hundreds of kilometres where no Neolithic excavations have ever taken place between the Marmara Region and other parts of Anatolia and also of the Aegean; in this respect to the east of the Bosphorus region, up to the Caucasian border, no Neolithic sites are known along the Black Sea's southern littoral. The beginning and the end of the Neolithic era in Northwestern Turkey are still poorly understood; when and how the Neolithic way of life arrived in the Marmara Region is still far from clear; there are some unattested finds suggesting that it might have arrived either during or at the very end of the Pre-Pottery / Aceramic phase. Likewise, the end of the Balkan Neolithic period, actually corresponding to the middle phases of the Middle Chalcolithic period of Central Anatolia, is a poorly understood happening. As will be further discussed below, occupational history in every excavated site in the region seems to have been interrupted at about 4800/4600 BC, following the Töptepe cultural stage, for no apparent reason. Even though it is far beyond the concern of this paper, cultural discontinuity after the end of the Töptepe culture, marked as a hiatus of about 1500 years in the region, is difficult to explain in the present state of our knowledge. Considering the pace of ongoing research, however, there are reasons to anticipate that these and other questions will be resolved in time.

THE EVIDENCE

Fikirtepe (Figs. 3-18)

Fikirtepe, the type-site of the culture of that name is located within the urban area of İstanbul, on the Asian side, **ca. 800 m south of Haydarpaşa railway station**. It is now totally engulfed by the modern city of İstanbul. The site is on terrain gently sloping towards the bank of Kurbağalıdere Stream, a perennial river, at present flowing into Moda Bay (Fig. 3). The evidence that has now become available at Yenikapı makes it possible to make assumptions about the paleotopography of the Fikirtepe region during the Neolithic period, Moda Bay being a lagoon forming an inlet penetrating as far as the borders of Fikirtepe hill. Likewise, within easy reach of the prehistoric settlement there must have been two other lagoons, one at present-day Haydarpaşa Bay and the other in the place of today's Üsküdar Place³, the coastline still being some kilometers away.

Even though the site has been known, as noted above, since 1907⁴ the 1952-1954 excavations by K. Bittel and H. Çambel, exposing some 480 m², stands as the primary source in understanding the site (Bittel 1960, 1970). The areal coverage of the settlement is not clear; two combined trenches (IV and V) extending 80 m and another (H I) about 60 m apart, implies that the settlement must have covered a considerable area, an area not less than 200x80 m (Fig. 4). The depth of the archaeological deposit varies from a meter to a meter and half; even though no detectable layering had been noted, the material had been collected by relative depth from the surface, which made it possible to discern “upper” and “lower” horizons while processing the material. Nevertheless, as will be noted in further detail below, it is now clear that the entire fill belonged to a single cultural horizon that gradually changed through time.

The settlement consists of simple wattle and daub huts, circular or ovoid in plan with slightly sunken floors; at least five huts were encountered, none being totally excavated. The approximate width of the huts seems to be around 5 m; of the six burials recovered, four of them are under the huts (Fig. 5) some having bone spoons (Fig. 14) and/or rectangular vessels as burial gifts.

Fikirtepe pottery is mostly in shades of dull reddish brown or black, though there are some that are reddish, jet black, or light grey; the ware in general can be considered as coarse with grit temper, though the surfaces are well-evened and burnished (Figs. 6-13). Heavy horizontal lugs, occasionally pierced, fine incised decoration depicting simple geometric designs such as checkerboard patterns or triangles with cross-hatching characterize Fikirtepe pottery. There are no absolute dates available from the site, but on the basis of available C14 dates from Yenikapı⁵, Ilıpınar, Menteşe, and Barcın revealing material analogous to that of Fikirtepe, the settlement must cover the time range between 6400 and 5800 BC. The early stages (Fig. 12), denominated as the Archaic Fikirtepe or the Pendik Phase (Özdoğan 1997: fig. 5) are characterized by hole-mouth jars with simple profiles, predominantly in dark shades of black or brown; exaggerated large lugs are common; there are

3 As at Yenikapı, Üsküdar Place –the other end of the tube crossing the Bosphorus– has been extensively excavated, revealing the presence of a lagoonal lake of exceptionally rich habitat; the lagoon seems to have been filled in and built over in Early Antiquity. Among other remains, well-preserved remains of a Byzantine church have been exposed (Karagöz 2007; Kızıltan 2010; Meriç 2010).

4 Early finds collected in 1907 both from Fikirtepe and Pendik are now in the Stockholm Museum.

5 See editor's addendum to the Yenikapı paper in this volume.

some large, ovoid platters, some with one of the narrow ends open; these vessels differ in ware from the rest having chaff temper and unburnished surfaces in brick-red colour. Rectangular vessels on short feet, the so-called cult tables, are significantly represented. Decoration is rare and, where present, consists of simple incised lines. There are a few sherds, considerably coarser than others, with nail-impressed decoration. As noted above, there is no marked division within the Fikirtepe assemblage, but a very gradual change is apparent in the pottery assemblage towards the end of the sequence; the material recovered in the upper horizon, denominated as Classical Fikirtepe (Fig. 13) is defined by the presence of bowls, occasionally oval, with 'S' curved profiles. Besides the heavy lugs, there are also some tubular lugs. Four-footed rectangular vessels are more common. Though not common, there are some fine wares either of well-levigated clay or with smaller grit temper; among these some have a black slip and surfaces finished with finer burnishing. During this phase red slipped or surfaced wares begin to appear, one decorated with linear motifs made by dot-impressions (Fig. 11). Incised decorated vessels are more common in this phase and the designs tend to be more complex.

In spite of the paucity of small finds, Fikirtepe has yielded a rich assemblage of chipped stone, 2157 in total. Most of them are from different types of local flint, though some fine textured brownish coloured ones might have been imports from the Southern Marmara region. There are also 41 pieces of obsidian, all black in colour, semi-translucent with light greyish or greenish hue; provenience analysis carried out on some of them revealed Central Anatolian and unknown sources (Bigazzi et al. 1993); however, neither matched any of the likely Aegean or Carpathian sources. Even though most of the obsidian pieces are small bladelets, the presence of chipping debris and a blade core indicates that the obsidian was procured not as finished products but as cores.

The lithic assemblage can be defined as mixture of flake and blade industry analogous notably to those of other sites of the Fikirtepe culture (Gatsov 2003, 2009); however, obsidian is relatively more common at Pendik and particularly at sites in the district of Bursa, such as Ilipinar, Menteşe, and Barçın. There is an extensive presence of bullet-cores at the inland sites of the Fikirtepe culture; however, this particular core type is much less marked at the site of Fikirtepe where most of the blade cores (Fig. 15) are multi-directional, cylindrical, or prismatic. On the other hand, among the retouched tools of Fikirtepe, various round scrapers, keeled scrapers, and end scrapers on big blades are most distinctive (Figs. 16, 18). Blades (Fig. 17), ranging from large to medium sized to small, number 514, 33 of which are of obsidian, mostly with light use-wear along the sides, a few with steep side retouch. There are also 22 geometrics, mostly on blade segments, but some with side-blow and/or retouched edges. Significant among the stone tools, there are numerous spherical shaped hammer stones, mostly of flint, with battering marks.

Among the other artefacts, bone polishers, awls, spatulas, and spoons (Fig. 14), almost all of high quality workmanship, are most representative; among the odd specimens there is a bone harpoon and horn hammers. Fine groundstone and clay objects are exceedingly rare and primarily confined to a few small celts, sling missiles, and drilled objects.

No botanical remains have been recovered, but there is a vast collection of bones and molluscs revealing a mixed subsistence pattern along with domesticates, based on hunting, open-sea fishing, and mollusc collecting (Röhrs and Herre 1961; Boessneck and von den Driesch 1979); recent evidence also implies the use of dairy products (Evershed et al. 2008).

Pendik⁶ (Figs. 14, 19-29)

Pendik is a flat site located on a low, flat terrace near the present coastline of the Sea of Marmara, south of Istanbul; the site recovered during the construction of the Baghdad railway in 1907 is cut into two parts by that railway. Later in 1961 Ş. A. Kansu conducted some test soundings along the railway trench.

A small-scale rescue excavation by S. Harmankaya and M. Özdoğan took place in an area of 150 m² on the western end of the site (Harmankaya 1982; Özdoğan 1983b). A more extensive rescue operation was undertaken by the İstanbul Archaeological Museums in 1992 (Pasinli et al. 1994)⁷; as of the present, only the material of the 1981 excavations has been studied.

The site is near a channel of an intermittent stream and a fresh water spring on the east side of the site; defining the coastline of the Neolithic period is rather difficult, as it seems possible that the so-called “Princes’ Islands” might still have been connected with the mainland at that time. Estimating the areal coverage of the site is also not possible; concentration of surface finds extends over an area of about 300x200 m, but there is clear evidence that through time the settlement shifted its location, at least partially; the 1981 excavations were conducted on the western borders of the site, revealing only deposits of the Archaic Fikirtepe Phase, while Kansu’s soundings by the railway had, besides sherds of the Archaic and Classical Phases, a horned handle (Özdoğan 1983b: fig. 5.18) typical of a still later period, possibly of the Yarımburgaz 2-3 period. Likewise, the 1992 excavations, working further in the western section of the site, recovered a Chalcolithic cemetery overlying the building remains of the Classical Fikirtepe stage with some painted pottery analogous to that of Aktopraklık B. Surface collecting in the southern part of the site, the area between the railway trench and the sea, yielded a much higher concentration of micro blades, reminiscent of the Ağaçlı culture, but this area unfortunately has been built over without further documentation. There is also a Byzantine building by the spring.

The architectural remains of Pendik are similar to those recovered at Fikirtepe, consisting of round and oval wattle and daub huts with semi-sunken floors. During the 1981 excavations the burned remains of four huts had been recovered (Figs. 21, 23); the huts were in rather close proximity to each other; however, it was not clear whether or not they were contemporary. One of the huts had several renewal floorings and two fire places dug into the soil. Two of the huts had tightly contracted burials below their floorings with no apparent burial gifts (Fig. 22). There seems to have been a ditch encircling the site, though it has been observed only on the westernmost section of the excavated area (Fig. 24).

The pottery (Fig. 25), small finds (Figs. 14, 26-27) and the faunal remains so far studied are almost identical to those of Fikirtepe; the only exceptional find is a large clay figurine of a woman in a dress from the 1992 excavations (Fig. 29); unfortunately, its context is unclear. Considering the paucity of clay human figurines from Fikirtepe, it is possible to surmise that it might have been from the Chalcolithic horizon with the painted pottery.

6 See especially Özdoğan 1983, 1997; Pasinli et al. 1994.

7 The site is now almost completely built over; in 2012 the İstanbul Archaeological Museums undertook a new rescue operation along the railway trench as the railway system was renovated by adding one more track.

The Cave of Yarımburgaz (Figs. 30-50)

The Cave of Yarımburgaz, located 22 km to the west of İstanbul is on the left bank of Sazlıdere Stream flowing into the Küçük Çekmece lagoon (Fig. 30). Since it was first documented in 1869 by Abdullah Bey, the cave has been the scene of the scholarly interest of geologists, art historians, and archaeologists; however, the first recording of prehistoric pottery was from the small test soundings of Ş. A. Kansu in 1964-1965 (Kansu 1972). The cultural sequence was established only by the 1986 excavations (Fig. 32) (Özdoğan and Koyunlu 1986). Along with its assemblages of the Neolithic and Chalcolithic periods, as well as well-stratified deposits of the basal Paleolithic period, the cave provided ample evidence of environmental conditions from the Middle Pleistocene to the Late Holocene.

Yarımburgaz Cave consists of two distinct units, the upper chamber and the lower gallery with a natural ramp between them (Fig. 31). Early Holocene cultural deposits have been almost completely scraped off by the construction activities of the Hellenistic through Late Byzantine period; moreover, following Kansu's work, most of the remaining archaeological deposits have been extensively dug by treasure hunters and other destructive agencies. However, the Middle Pleistocene layers were saved by the thick cover of breccia layers totally sealing them. Accordingly, with the exception of small sections by the cave walls, stratified deposits of Neolithic and Chalcolithic occupation layers were preserved only in the large sinkhole in the main chamber of the upper cave. The pottery collected from the disturbed deposits was sorted out by comparing it with recovered stratified deposits in the sinkhole. The sinkhole almost in the centre of the Upper Cave, as revealed by our trenches A 40, A 29, and A 19, is about 16 m, wide, covering the entire width of the chamber (Figs. 31, 33-34). When exactly the sinkhole was formed is not clear, but as it cuts through both the Middle Pleistocene layers (Layers 8-16) and the overlying marine sand deposits, it must have been active at a wet period sometime during the Late Paleolithic and then filled up (Layers 7-6). There are no archaeological finds from Layer 8; a single date from one of the upper parts of the fill BP 24510±240 (Beta 42732/ETH-7670) confirms our interpretation. Layer 7 is a laminated formation consisting of numerous thin layers, seemingly Aeolian deposits that accumulated in the sinkhole; a few flakes, one with a prepared platform, were recovered in Layer 7. There are three dates from Layer 7, two from its earlier deposits BP 11840±100 (Beta 42733/ETH-7671) and BP 9190±100 (GrN 15531) and one date from the upper part yielding BP 7640±90 (GrN 15533). Layer 6 is a thick black peat-like deposit, apparently formed under anoxic conditions signifying the presence of a bog or a pond within the blocked depression of the sinkhole. A few undiagnostic flakes and a ground-stone implement, seemingly a pick (Fig. 35), are the only archaeological finds; a single C14 date places this Layer 6 at BP 8110±320 (GrN 15532).

The upper 120 cm of the fill in the sinkhole, Layers 5-2 (Figs. 33-34), belong to the prehistoric period⁸, Layer 1 revealing material from Hellenistic to Late Byzantine. Even though there was a clearly defined stratification in the depression, evidently it was not continuous as clearly marked by the changes in the soil matrices of different layers. In this respect, the most apparent difference was between Layers 5 and 4, implying a drastic change in environmental conditions and of course a hiatus in time. There was also a clear surface separating Layer 4 from Layer 3; accordingly, it was evident even during the excavation that the

8 For a detailed description of Yarımburgaz pottery with drawings, see Özdoğan et al. 1991.

cultural deposition in the cave represented a sequence in stratigraphic order, however lacking interim stages⁹. The separating line between Layers 2 and 3 was less apparent (Fig. 36).

The earliest pottery-yielding layer is Layer 5, a thin layer consisting of crumbly hard concretions, almost like a limonite, evidently formed during a rapid drying of the lacustrine environment in the sinkhole by evaporation. Pottery found embedded in this layer consisted mostly of undiagnostic monochrome sherds, some having a dull reddish colour, but mostly in dark tones; there are few lugs, and impressed and lightly incised sherds (Fig. 37). Layer 4 is a thick deposit formed by whatever fell or was thrown into the remaining depression of the old sinkhole; even though two distinct soil horizons, marked by a slight change in colour were noted during the excavation, the material could not be collected accordingly. There is a single C14 date from the upper part of Layer 4 yielding BP 7330±60 (GrN 15529) that seems to be two hundred years too early compared with other sites yielding the Yarmburgaz 4 type of pottery¹⁰.

The pottery assemblage of Yarmburgaz 4 differs notably from others with its elegant decoration, reminiscent of textile patterns (Figs. 37-42). The paste usually has a small grit temper, surfaces are evened and burnished; the quality of burnishing varies considerably from dull to fine, but never lustrous as in the wares of Layer 3. Surface colours are mostly in tones of brown, varying from greyish brown to reddish-brown, rather rarely are there orange or black-surfaced sherds. The repertoire of vessel shapes is rather limited: besides semi-globular bowls, globular bowls and jars with short necks are common. Decoration either covers most of the body or is restricted to the upper parts of the body, including the neck. Even though decoration is exclusively executed with deep and broad motifs, there is a considerable variety of techniques employed, such as grooving, incising, impressing, and stroke impressions as in the so-called *Furchenstich* technique of decoration¹¹. The designs display complex geometric patterns, occasionally bordered with grooved parallel lines. The ratio of decorated sherds at Yarmburgaz is much higher than at other sites, suggesting that the cave might have been used for ceremonial purposes rather than habitation; absence of other small finds also supports this view. Among the finds of this layer, noteworthy and worth mentioning are the types of bone tools such as toggle pins of excellent workmanship (Figs. 43-44). Also of interest is the total absence of figurines and other symbolic items.

The pottery of Layer 3 is mostly of fine paste, thin sided, finished with a lustrous burnish; soft hammer pounding seems to have been used particularly in shaping thin walled vessels. The dominant surface colour is black or dark grey, though reddish brown, light gray, or brown are also common (Figs. 45-49). There is a greater variety in shapes; vertical strap

9 At the time of our work, in 1986, the pottery assemblages of Yarmburgaz had not been recorded at any other site with the exception of the mixed deposits of basal Demircihöyük; thus their chronological order, especially in relation to the Fikirtepe culture was met with certain scepticism; the onset of excavations at Ilipınar not only validated the Yarmburgaz sequence but also filled in the missing interim stages.

10 The early dates might be due to the fact that the Yarmburgaz samples for dating were of wood-charcoal.

11 Prior to the excavations at Yarmburgaz, in Anatolia, the *Furchenstich* technique was noted only on a few sherds from the early levels of Alişar; now it is understood to be a common practice in Central and Western Anatolian Early-Middle Chalcolithic assemblages as revealed by the finds from sites such as Gelveri (Özdoğan 2006a) and Orman Fidanlığı (Efe 2001).

handles and slightly carinated vessels are also present. Decoration is mostly restricted to the upper part of the vessels, but there are exceptions, particularly those with curvilinear motifs. Designs are either by deep incisions or dot impressions, mainly depicting a linear pattern; more rarely, there are curvilinear lines. A characteristic feature of the designs is the lines ending with punctuated impressions, reminiscent of the “*Notenkopf*” decoration of the Early Linear wares of the Danubian Basin (Fig. 49). Also of interest are vertical bands with dot-impressions framed with incised lines resembling the so-called “*Winckelband*” design of the Early Linear cultures. Layer 2 seems to be a direct continuation of the preceding horizon; together with finely burnished wares, there are also significant amounts of coarse wares finished by wet-smoothing. The fine, thin-bodied black wares of Layer 3 are no longer present; the fine ware of this horizon is more thick-sided, but with well-evened surfaces, hard burnished and in tones of dark grey to black. Vessels of this phase are notably larger, particularly open bowls with carinated profiles. Decoration is rare and usually in linear geometric patterns confined along the rim of bowls. The small find assemblage is rather restricted in both Layers 2 and 3 and consists mainly of a few awls, celts, and fragments of ground stone. The extensive presence of molluscs in Layer 3 suggests that after Layer 4, the cave was more of a habitation place (Meriç et al. 1988).

Layer 0 is a hypothetical phase encountered only in the Lower Cave in a deposit preserved by the cave wall, characterized by the pottery of Toptepe type (Özdoğan et al. 1991). The upper part of the prehistoric deposit in the Upper Cave had been scraped by the building activities of Hellenistic to Byzantine periods; accordingly, the terminal stage or stages following Layer 2 were not recovered. In the mixed deposits, there were also a few typical sherds datable to the Karanovo IV - Toptepe horizon such as horned handles (Figs. 49-50). As no sherds have been recovered anywhere at Yanmburgaz that can be of a date later than Toptepe, we assume that there was a long hiatus in the use of the cave until the Hellenistic period¹².

Toptepe (Figs. 51-58)

Toptepe, situated about 60 km west of İstanbul directly on a promontory by the coast, was the largest mound along the Sea of Marmara; it was almost totally destroyed without documentation in 1989, leaving behind a small part of its core, about 15x20 m and 4,5 m high (Fig. 51) (Özdoğan and Özbaşaran-Dede 1990). The latest preserved archaeological deposit in the uppermost part of what was left had pits of Early Karanovo VI with Gumelnitsa types of finds; the rest of the deposit revealed sequential development of a variant of the Karanovo IV culture that has since come to be known as the Toptepe culture. Characterized by its highly micaceous paste, greyish surface colours, tall-necked, carinated jars, vertical handles, and light incised decoration mostly depicting rows of wavy lines, Toptepe pottery is easy to distinguish from other contemporary wares (Figs. 55-56). The earliest excavated horizon, Layer 5, has revealed the remains of a burned house with a sealed context (Fig. 52); among finds in the building, a large anthropomorphic vessel, adorned with painted decoration, is of significance (Figs. 53-54) (Özdoğan and Dede 1998). It is of interest that, as at Hoca Çeşme and Yanmburgaz, collecting and storing molluscs was a significant part

12 The dates of the three wall paintings, deep in the lower gallery, all depicting boats (Özdoğan and Koyunlu 1986: 6-7) are questionable, though once claimed to be of the Bronze Age.

of the subsistence pattern of Toptepe (Figs. 51, 58). The chronological position of the Toptepe culture has been secured through the sequence at Aşağı Pınar where Toptepe pottery has been recovered in Layers 4 and 3 together with Karanovo IV material. At Aşağı Pınar, typical pottery of Toptepe type constitutes about 20% of the assemblage. Bone tools of Toptepe are also similar to that of Aşağı Pınar. It is worth noting the presence of an example of the so-called “festooned-bone” objects at Toptepe (Fig. 57); on the other hand, Toptepe lacks the lithic and malachite finds, distinctive of Aşağı Pınar Layer 3. Seven C14 dates from Toptepe, BP 6410±180 (HD 13591-13339), BP 6290±25 (GrN 16476), BP 6220±70 (GrN-18743), BP 6200±50 (GrN-18741), BP 6160±70 (GrN-18740), BP 6155±40 (HD 13589-13321), BP 6095±40 (HD 13590-13235), BP 6060±110 (GrN-18742) concord well with the dates of Aşağı Pınar.

Hoca Çeşme (Figs. 59-99)

Hoca Çeşme is a small mound located on a small rocky outcrop by the present-day deltaic plain of the Meriç/Maritsa/Evros River, in close proximity to the Aegean coast. A substantial fresh water spring at the foot of the hill must have been the main reason for the selection of this particular location by the Neolithic settlers. The site was recovered by the team working at the Classical site of Enez - ancient Ainos¹³. Excavations initiated in 1990 terminated in 1993, exposing about 700 m², representing roughly a third of the site (Fig. 59). The rocky outcrop protrudes as a steep-sided promontory towards the west, merging with the rolling terrain on the east (Figs. 60-61). The Neolithic settlement developed on the western end of the hill, directly on the bedrock, by partially levelling the rocky surface. As the sides of the promontory have been eroded and as it was not possible to make any soundings on the southern section of the site, it is not possible to define the extent of the areal coverage of the settlement; thus, considering the enclosure wall of Phase IV to be the northern limit of the site, the Neolithic habitation would then have covered an area of about 140x60 m. Prior to our work, the site and in particular the uppermost one meter of its fill had been much disturbed; it was also evident that some of its height was levelled by mechanical scraping and pushing the quarried deposit towards the western and northern slopes. Moreover, numerous pits dug down from Phase I, some rather deep, have much disturbed the archaeological deposits of the earlier horizons; thus, preservation of cultural deposits was best at the earliest levels, becoming totally indistinguishable towards the top. Nevertheless, in the more or less better preserved earlier deposits it became possible to distinguish seven architectural layers representing the time range from Pre-Karanovo I to the end of Karanovo I. On the other hand, pottery encountered in the mixed deposits, revealing a rich assemblage of Karanovo II, III, and Early Karanovo IV types of sherds indicated that the settlement at Hoca Çeşme lasted much longer than revealed by the seven architectural layers recovered during our excavations. The cultural sequence of Hoca Çeşme has been categorized into four distinct cultural stages, Phases I-IV, with Phase I covering the entire range of the material recovered in the mixed upper deposits (Karul 2000). We begin the discussion of the three more secure phases with Phase IV, working our way from the bottom up to Phase I.

13 We are grateful to Prof. Dr. Sait Başaran for asking for our involvement at the site and hosting our team.

Phase IV is a single architectural layer directly on the bedrock; in our central operation area some 180 m² of the rock surface was exposed revealing the remnants of this earliest horizon. The architecture of this earliest village consists of round huts made partially by carving their foundations into the surface of the rock, or by levelling the surface of the rock and filling in the depressions with gravel (Figs. 62-63). The main architectural feature is a round house, ca. 5 m in diameter; the floor of this house was sunk about 10 cm into the bedrock by cutting the surface of the rock. Following the outline of this structure, there is a line of postholes, set at 30 cm intervals, partly cut into the rock and partly secured by placing stones around the posts. In the centre of the structure there is a large circular pit, about a meter deep, also cut into the rock; the pit later was filled in up to the floor level of the house with rubble. No fire places were recorded that could be related to this building. Partial remains of other round structures have also been encountered, some renewed several times, indicating that building types were rather uniform throughout the settlement. To the north of the main structure, there is an area where the surface of the rock has been smoothed and partly polished.

The earliest settlement was surrounded by a massive stone wall, 20 m of which was fully exposed on the east, and another 40 m of which could be traced through soundings on the southeast (Figs. 63-66). Its western and southern parts have been completely eroded, leaving only some traces on the surface of the bedrock. The base of the wall sits right on the bedrock. Evidently, prior to the construction of the wall, the surface of the bedrock had been meticulously evened. Moreover, a band 1,5 m in width running parallel to the inner face of the wall was flattened and polished. The thickness of the wall is 1,2 m and in some parts it is preserved to a height of a meter. The stones used in the outer face of the wall are considerably larger than those on the inner face, the biggest one measuring over 90x70x70 cm (Fig. 66). Along the inner face of the wall, where the surface of bedrock was cleared as a band, there is a line of postholes, dug deep into the rock. We can assume that on the inner side of the wall there was also a wooden palisade, possibly extending over the stone wall as an upper structure, which must have been of wood, as there were no traces of mudbrick debris around the wall. It seems evident that the wall was constructed for defensive purposes; the fair number of sling missiles that were recovered along the wall is also in support of this view. Even though the first settlers seem to have been concerned about some sort of hostility from the outside, other than the destruction of the wall by whatever agency there is no sign of a hostile attack in the settlement.

The pottery of this phase (Figs. 67-78) is characterized by the total absence of coarse wares, and predominance of lustrously burnished, thin walled, red or black wares, mostly well fired (Bertram and Karul 2005). Most of the vessels are medium sized, and large cooking-vessels are totally absent. Deep bowls, usually with 'S' profiles, vertically placed tubular lugs, crescentic lugs, bead-rims, and flat bases are common elements of this assemblage. Most of the rims are slightly everted and thinned; in some of the necked jars the lip has been finished by shallow dimples. There are also a few, but significant zoomorphic vessels (Fig. 76; see also Özdoğan 1999: fig. 37) and applied depictions of bucrania (Figs. 77-78). Decoration is rather rare and mainly consists of fine curvilinear or vertical bands in relief. Occasionally there are some fine grooved or incised sherds.

There are three available C14 dates from Phase IV: BP 7637±43 (Bln-4609), BP 7360±35 (GrN 19779), BP 7200±180 (GrN 19355), dating this phase to around 6400-6200 BC.

Phase III, the immediate successor of Phase IV, carrying on the same tradition, consists of two architectural layers; the buildings are again round in plan and constructed in wattle and daub. A large circular structure on the Northeastern edge of the settlement separates out from the rest of the buildings (Fig. 79). The floor of this structure, which was renovated with slight changes at least three times, was neatly paved with small pebbles, and then coated, the earliest painted in red and the later ones yellowish. The massive enclosure wall was maintained during this phase, possibly with some revisions. In pottery, all wares of the previous phase continue, though they are slightly coarser and thicker. A new type of ware with a thick smeared red coating on a black surface is represented by a very few sherds; this distinct ware will increase in number in Phase II. There are also a number of red-black, or light cream-red-black mottled sherds, which will also increase during the subsequent phase. Among vessel types, the difference from Phase IV is minimal: the profiles are now slightly more carinated than having soft curves, and there is also a slight increase in necked jars. Stamped and incised decoration is also slightly more common than in the previous phase.

Available C14 dates of Phase III are: BP 7135±270 (GrN 19357), BP 6920±90 (GrN-19780), BP 6960±65 (GrN 19311), BP 6900±110 (GrN-19781), indicating a rather short duration for this period.

Phase II consists of at least three architectural layers. There is a marked change in the plan and in the construction techniques of the buildings which are now rectangular in plan with plastered walls (Özdoğan 1999: fig. 17), strongly resembling the typical houses of the Karanovo I period of Bulgaria. Domed ovens on raised platforms, round or rectangular bins, and working platforms are among the new features of this phase. In spite of these changes in architecture, the massive enclosure wall was still in use, indicating continuity in the settlement organization. In the pottery assemblage, the red and black wares of the previous phases still continue, though in lesser amounts; however, compared to the earlier phases, the fine quality of burnishing has been lost, and the sherds are notably thicker. There is an increasing amount of reddish-brown and dull black sherds. The latter occasionally have a smeared red coating. Though minimal, there are also some coarse, dull burnished sherds. In the pottery repertoire there are a number of new vessel types, including footed rectangular or triangular vessels with incised or excised decoration (Fig. 80), and tall-necked jars, occasionally with small handles. Besides the decorative elements of the preceding phase, fine fluting and intentional mottling are common. Though very few, there are also some painted sherds, some red on cream, red on black, white on black, and white on red (Fig. 81). Most of the designs are rectilinear, but there are a few with curvilinear designs. Greyish to black sherds decorated by parallel rows of incised lines and with notched or impressed fillings, comparable to Aşağı Pınar Layer 7, seem to be of this phase (Figs. 82-83).

Phase I —as noted at the beginning of this section— actually represents an extended time period defined mainly by pottery typology. Numerous pits, penetrating down to Phase II and III, all beginning from the eroded zone, indicated the presence of later occupation at the site. On the southern slope, in some restricted areas, partially preserved architectural remains revealing pottery of these later horizons was also recovered. The only clear architectural evidence of Phase I is the destruction of the enclosure wall. It is clear that the upper part of the wall was either torn down or it collapsed on its own. Following this dis-

turbance, the demolished stones of the wall were laid along its outer face so as to form a ramp (Özdoğan 1999: fig. 15).

As already noted above, no clear contexts could be defined among the deposits of Phase I; pits and the mixed deposits have revealed a wide variety of pottery, most of which could be diagnosed by comparing it with sites in the Balkans and in particular with Aşağı Pınar Layers 6 to 2. Most of the pottery is black or brown, burnished, and in general much coarser than previous phases. The presence of dark coloured, “tulip-shaped” vessels with flat bases and open plates (Fig. 84) as at Aşağı Pınar 6, evinces the presence of the Karanovo II horizon; vessels with carinated profiles, pattern-burnished (Figs. 85-86) fluted or incised decoration, and horned handles are almost identical to those of Aşağı Pınar 5-3. The pre-historic settlement at Hoca Çeşme seems to have ended during the life span of the Toptepe culture, possibly at the time of Aşağı Pınar 4.

Hoca Çeşme has revealed a rich variety of artefacts¹⁴, in particular, the bone tool industry of Phases IV and III are of excellent workmanship and of typological diversity. Among these, most numerous are the bone smoothers and various types of awls and in lesser amounts spatulas, bone spoons (Figs. 87-88), horn handles; among specific implements, there is a harpoon, hooks (Fig. 89), a crude figurine, and two needles, one with a notched-eye. The presence of bone needles is of interest. Although they are common in the Pre-Pottery Neolithic assemblages of Southeastern Turkey, the Hoca Çeşme specimens are unique for the Neolithic of Western Anatolia. Clay finds are rather rare. Among them four pintaderas (Figs. 90-92), one crescentic in shape, a decorated cylinder, two polishers, and the lower part of a figurine similar to those of Aşağı Pınar 5/6 Transition are worth mentioning. The coarse and fine ground stone assemblage comprises basalt grinders, hand stones mostly of fine basalt, fine polished celts and chisels of various metamorphic rocks, and footed rectangular vessels of basalt (Figs. 93-94). The latter, rather common at Hoca Çeşme, seem to be particular to the Northeast Aegean littoral. There are a few fragments of marble figurines, at least one in a crouched position depicting a West Anatolian type of figurine, stone amulets (Figs. 95-96), and a few beads. The chipped stone assemblage is mostly of unretouched flakes and bladelets, though there are some examples of the so-called Karanovo blades, seemingly of imported North Bulgarian flint (Fig. 97).

There is very little evidence of hunting at Hoca Çeşme, sheep and goat being more common than cattle and pigs among the domesticates (Buitenhuis 1994; Buitenhuis 1995: tab. 1). A very particular feature of the subsistence is the extensive consumption of molluscs; the slope-wash on the southern and eastern part of the mound had been compacted with shells, seemingly refuse deposition. On the other hand, within the habitation area and in particular within or around the buildings, shells are found only in pits. Pits full of shells have been recovered in almost every phase (Fig. 98), though more commonly in Phases II and I. What is more interesting is that these pits were not for used for dumping shells but were made intentionally for storing shells to be consumed later; what is peculiar is that some sort of method must have been devised to conserve sea shells. With the exception of the pits of Phase IV that were carved into the bedrock, most pits are cylindrical with vertical sides coated with a greenish coloured clay about 5 cm thick; at least two pits were found intact, about 1,5 m deep, with interim clay floorings and sealed at the rim again

14 For drawings of small finds, see Özdoğan 1999: figs. 24-26.

with a thick clay layer. The type of shells in each pit was different –sorted out according to specific species, some having *Cardium*, *Unio*, *Mytilus* or even *Solen*. What is also of interest that the bivalve ones were opened and only the part with the meat was stored. Two of the pits had also some pottery, one having an intact necked jar placed among the shells and the other half a jar fully compacted with shells (Fig. 99). In spite of extensive consumption of mollusks at Hoca Çeşme, fish bones were conspicuously absent among the faunal remains¹⁵.

Aşağı Pınar¹⁶ (Figs. 100-170)

Aşağı Pınar is located in the centre of Eastern Thrace, almost within the boundaries of the town of Kırklareli, on the southern foothills of the Istranca Mountains, near a spring of the same name. On-going excavations since 1993 exposing an area of over 4500 m² have revealed an uninterrupted sequence from 6200 to 4800 BC (Fig. 100). The present-day topography of the terrain where the site is located is almost flat with an inconspicuous inclination towards the dried-up bed of Haydardere Brook on the north; evidently the during the Neolithic period, the northern flanks of the Aşağı Pınar hill descended more steeply towards Haydardere, which must have merged with the outflow of the spring to form a small lake or swamp on the northwest. The earliest settlement was found on the northernmost part of the terrain, on a small rise overlooking the wetland but nearer to the spring, later expanding to cover the full extent of the terrain. The later part of the sequence, Layers 5-2, covering the Middle Chalcolithic period in the sense of Anatolian chronology, have been extensively published (Parzinger et al. 1999; Karul et al. 2003; Parzinger and Schwarzberg 2005; Schwarzberg 2005, 2006a); accordingly, here the main focus will be on the earliest phases of Aşağı Pınar.

Even though it is not possible to define its limits, prehistoric settlements at Aşağı Pınar are dispersed over an area of at least 200x200 m; however, whether or not the entire area was habited at any given stage is also not possible to define as in each layer the location of the settlement has considerably shifted. During the early years the central parts of the site by the Kırklareli road were exposed, revealing the architectural remains of Layers 5-1 (Fig. 101). Geophysical prospections of the 1994 season had already revealed the presence of heavily burned remains on the northern parts of the terrain where the surface yield was very limited. Preliminary soundings conducted in the 1995 season had already revealed the presence of cultural deposits preceding Layer 5, yielding material as early as Karanovo I. Since 1997 the main work of our project shifted to the northern sector, since then exposing an area of about 3000 m² (Fig. 102). Even though virgin soil has been encountered in a number of areas, as the earlier features are dug at random into the virgin soil, the beginning of habitation here is still not clearly defined. It also became evident that the paleotopography

15 We were not able to use a sieve during the excavation; nevertheless, it should be noted that fish bones are well represented at other sites such as Fikirtepe and Pendik where no sieves were used.

16 Prehistoric settlements of different cultural stages changed their location through time moving to and fro around the spring, being dispersed over a considerably large area, locally known under different names. When the site was first recovered in 1980, the area collected by the road, being next to the town slaughterhouse, was named and then published as Salhane. Later, it became clear that the tumulus cemetery that is practically on the site had already been in archaeological literature under the name of Aşağı Pınar, which is more correct (see also Karul et al. 2003).

of the terrain was somewhat different from the present and that at the time of the earliest settlement there was a small rise overlooking the stream.

As noted above, the earliest settlement phase at Aşağı Pınar, as of the 2012 excavation season, is still unclear. As the nature and stratigraphic position of certain pit-like dwellings dug into the virgin soil that seem to represent this stage need further confirmation, they will not be dealt with in this paper. The earliest definable cultural horizon is a continuum of considerable duration, changing gradually; it has been tentatively considered in two stages as Layers 8 and 7 so as to delineate the changes noted between the earliest and latest stages.

The main feature of this cultural horizon is a ditch with a complex network of subsidiary pits and channels (Figs. 103–105). Until present, a 85 m long stretch of the ditch, extending roughly east-west, slightly curving towards the stream on both ends, has been exposed. The depth of the ditch exceeds 2 m in places, its width varying between 2,5–3 m at the top and narrowing at the bottom to 20 cm. The profile of the ditch varies considerably in short distances, forming a 'V' or 'U' shape with steep sides, to stepped, to vertical, to a flat curve, eventually narrowing at its base to 20 cm (Fig. 105a). The ditch was in use for a long period of time, at least for about 200 years, renewed on several occasions, with some annexed structures, however without altering its main course. In its earliest phase, the ditch was dug into the virgin soil, which is yellowish clayey in colour, a residue of the Miocene formation of the Kırklareli region. The matrix of the virgin soil made it possible to attain a smooth, even surface as if it had been intentionally plastered; in later stages, after each renewal, its sides were replastered by a coating using the virgin soil¹⁷. Apart from subsequent revisions that are apparent in limited sections, at least three main operational phases are apparent: the earliest one, denominated as Layer 8, seems to have been V shaped throughout and has a more homogenous fill. During the second phase, considered as Layer 7 Early, the sides of the ditch have been modified several times; its vertical profile changes even over short distances; in places it is somehow connected with other ditch-like pits (Fig. 105b). At least on two occasions, the subsidiary pit-ditches are combined with each other. The deposition of this stage is also extremely varied and heterogeneous, in places consisting of alternating thin layers of ash, lime, crumbled fragments of burned mudbrick as steeply inclined patches; however, the basal deposition –where preserved– is mostly a brownish clayey fill, with lenses of ash and lime. There are also some pits, almost 3 m deep with vertical sides and as narrow as 2 m, filled with burned mudbricks, somehow associated with the ditch system. It is also evident that some of the pits had multiple phases of use; in such cases, the burned mudbrick fill belongs almost exclusively to the latest fill, the basal ones being similar to those of the ditch and comprised of laminated ash, virgin soil, lime, and brownish coloured soil, etc. During this phase of the ditch, there are occasional prepared but discontinuous surfaces, and at least on two occasions remains of hearths (Fig. 105c). In the latest phase, denominated as Layer 7 Late, the ditch has taken a shallow 'U' shape, but its flooring is not continuous and occasionally merges with the fill of the sec-

17 Actually the ditch had been first encountered in the excavation season of 1996; however, as its yellowish clayey coating led us to think that it was already the upper surface of the virgin soil, the work on this area was terminated, leaving the ditch as an shallow cavity 40 cm deep. Only in the 2010 season it became evident that the ditch had numerous floorings, all with soil extracted from the virgin soil.

ond phase. The fill of this phase is not layered and consists mostly of burned mudbrick debris, strongly contrasting with the unlaminated, clayey fill of the earlier phase.

The function of the ditch is not clear at all, but it is evident that it was neither for draining water or part of an establishment enclosing the settlement as the ditch of a palisade. Material that could be interpreted as refuse has been encountered only at the very bottom fill of the earliest phase, consisting of some animal bones and pottery of daily use. Most of the existing deposits are of Layer 7 Late, revealing almost exclusively fine pottery and figurines, and most conspicuously two unburned skull fragments; within this deposit material that could be considered as waste was either non-existent or rare. It is also of interest that the pottery sherds were mostly large fragments, seemingly intentionally broken and pieces dispersed to various parts of the ditch. The fact that the pottery assemblage is rather restricted in shape and ware, has made putting together fragments that have been dispersed rather difficult. However, sherds with distinct decoration, such as the unique polychrome decorated jar (Fig. 117; see also Özdoğan 2011c), several pieces of which were dispersed over a 20 m stretch of the ditch, could be diagnosed and reconstructed. Likewise, a figurine broken into two could be reconstructed (Fig. 135). The cross-layered depositional pattern of the fill, occasionally in patches with steep inclination, is clear evidence that there was neither still nor running water in the ditch. Moreover, undisturbed lenses of ash and lime, and the sidewalls with no trace of weathering or erosion also support this view. It thus seems as if it was roofed or somehow protected from water running in.

Both digging and maintaining such a ditch implies a considerable input of manpower and long lasting, organised labour; the selective composition of the finds is highly suggestive of a function related to cult practices and/or rituals. On the other hand, the presence of large amounts of ash, ashy lime, and burned mudbrick fragments also suggest that at least one of the functions of the ditch was to provide protection of the disposed material used in ritual ceremonies which must have involved some use of fire and burning. The two hearth remains found in the ditch also support this view. As of the 2012 season, neither ends of the ditch have yet been recovered; its easternmost exposed end seems to be sharply curving northwards and the nature of the fill in that part seems to be changing. In the west, a part of a Layer 6 building goes over the ditch –though much disturbing it– verifying its chronological place, also indicating that by Layer 6 the ditch was no longer in use. Whether or not the ditch encircled the settlement is still not clear, it more or less follows the southern border of the Layer 6 habitation, only partially overrun by the southeasternmost room of Layer 6. The 2011 season's work has revealed that the buildings of Layer 6 and 7 Late were almost in the same locations, implying that the ditch was encircling at least the latest phase of Layer 7 habitation. In the 2012 season, it became clear that the buildings of Layer 7 Early and or Layer 8 had a different orientation than the ditch; thus whether or not the earliest ditch was of Layer 8 or of Layer 7 Late is not clear. In this respect, the fact that some pits or pit-like huts of Layer 7 Early have been noted on the other side of the ditch also suggests that the location or at least the layout of the initial village was different from that of Layers 6 and 7 Late; to the south of the ditch no remnant of Layer 6 has ever been encountered. Accordingly, until the layout of Layer 7 Early settlement is properly understood and the eastern end of the ditch recovered, its place in the settlement remains an open question.

A number of C14 dates from various fills in the ditch¹⁸ places it firmly to the first quarter of the 6th millennium BC. During the recent years, ditches of various sorts have become a common component of early 6th millennium sites; among them Yabolkova in the Bulgarian part of Eastern Thrace (Leshtakov 2007) and those at Ilıpınar and Aktopraklık (see in this volume) are worth remembering.

Architecture in Layer 8 is still unattested. It is possible that some of the pit-like dwellings encountered in various parts of the eastern sector are of that phase; one of them, rather substantial, as wide as 8 m, with multiple floorings (Fig. 106), has revealed a number of artefacts including grinding stones, bone tools, and stone ornaments, suggesting that it might actually be a dwelling; however, no associated fire places have been recovered.

The main architectural feature attributable to Layer 7 Early is a multi-roomed complex extending almost straight east-west in contrast to the curvilinear alignments of Layers 7 Late and 6 (Figs. 107-108); the building comprises at least three large, rectangular rooms separated by shared walls. The building has two main rebuilding phases, though keeping its location. In contrast to the buildings of the later layers, the floorings of Layer 7 buildings are well-evened, compact, and at least in one of the renewal phases have red plastering. There is a large oven raised on a rectangular platform in at least one of the rooms. It is not yet possible to determine whether the rectangular and circular structures existed together or were of different phases.

The pottery assemblage indicates an unbroken continuum from the earliest level on to Layer 6 with gradual changes. Even though designating “layers” has been primarily based on architectural remains, throughout that time changes in the pottery assemblage can only be detected as gradual changes in ratios of wares, shapes, and of decoration. The final analysis of the pottery has not yet been completed, but it is already apparent that in Layer 7 Late, the pottery assemblage, in ware, shape, and decoration, is very similar to that of Karanovo I (Figs. 109-118). The paste is mostly well levigated, though there is always some grit. Surfaces are mostly well-evened and burnished; there is almost an equal amount of red and dark coloured wares, the latter either in tones of dark brown or blackish. Profiles of the vessels are either simple or softly-curved, occasionally carinated in the lower part of the body, almost by the base. So-called tulip-shaped goblets, short pedestals, straight-sided plates, necked jars and high-lids are common. The pottery is characterized by the painted decoration, predominantly white on red, much more seldom black on red painted. The designs are mostly linear patterns, including cross-hatched triangles and parallel lines, but there are also curvilinear designs of the so-called “spiraloid-style”, motives depicted by

18 Recently available dates from the ditch are:

MAMS-15886 ditch/middle 6886±28, Cal 1 sigma: 5788-5727 cal. BC, Cal 2 sigma: 5838-5719 cal. BC; MAMS-15888 pit-ditch/bottom 6826±26, Cal 1 sigma: 5731-5674 cal. BC, Cal 2 sigma: 5747-5646 cal. BC; MAMS-15889 ditch/middle 6806±27, Cal 1 sigma: 5718-5671 cal. BC, Cal 2 sigma: 5731-5645 cal. BC; MAMS-15890 pit-ditch/bottom 6852±27, Cal 1 sigma: 5756-5681 cal. BC, Cal 2 sigma: 5790-5667 cal. BC; MAMS-15891 pit-ditch/bottom 6734±27, Cal 1 sigma: 5663-5626 cal. BC, Cal 2 sigma: 5712-5576 cal. BC; MAMS-15892 pit-ditch/bottom 6819±26, Cal 1 sigma: 5726-5673 cal. BC, Cal 2 sigma: 5740-5646 cal. BC; MAMS-15893 ditch/middle-bottom 6865±27, Cal 1 sigma: 5769-5718 cal. BC, Cal 2 sigma: 5835-5675 cal. BC; MAMS-15894 ditch/uppermost 6842±26, Cal 1 sigma: 5742-5676 cal. BC, Cal 2 sigma: 5773-5664 cal. BC; MAMS-15895 ditch/upper 6908±27, Cal 1 sigma: 5831-5739 cal. BC, Cal 2 sigma: 5869-5725 cal. BC; MAMS-15896 ditch/bottom 6682±29, Cal 1 sigma: 5632-5565 cal. BC, Cal 2 sigma: 5657-5545 cal. BC.

white dots and more rarely black and red polychrome wares, some of which are reminiscent of the Neolithic assemblages of the Western Balkans. Besides the painted ware, incised and impress-decorated pottery is also rather common, in particular in dark coloured fine wares, with surface colours ranging from greyish brown to black (Figs. 119-122). There are also a few light cream slipped and burnished sherds. The designs are mostly depicted by incised parallel lines with dot or impressed fillings in between. The decorative designs mostly display geometric patterns such as meanders or zigzag lines, though there are some depicting a complex spiraloid pattern resembling those in paint (Fig. 123). Among the fine and thin-bodied vessels, there are also some decorated with fine groove-like fluting and more rarely pattern burnishing (Figs. 124). Thick-sided vessels, the coarse ware, are mostly in pale dark colours, surfaces wiped or finished with a dull burnish. Some of them have plastic straight or wavy bands and impressed decoration (Fig. 125).

Flat bases with mat-impressions (Figs. 126-127) stand as another marker, notably increasing towards the end of the sequence and also becoming finer with an interesting range of designs; they occur very seldom in the earlier deposits and even when they occur, mostly the mat impression is smeared over by clayey slip that occasionally chips off.

As noted previously, the difference between the earlier and later stages is mostly in relative ratios of certain characteristics, though some of the earlier wares are exceedingly micaceous and coarser (Figs. 128-131). Even though painted sherds occur all through the sequence at Aşağı Pınar, they notably increase towards the end, at the same time becoming finer. Incised and impress-decorated black coloured ware, fine grooving, and pattern burnishing occur only in the last stage.

The small finds reveal a high quality of craftsmanship but typologically are rather restricted; most common are the bone tools, including various awls, toggles, spatulas, and smoothers. Notable among fine groundstone objects are pendants and other ornamental objects of white marble (Fig. 132); in the following periods marble will be employed only for manufacturing small circular beads. Clay figurines are relatively common, either shaped as cord-like planks with schematized small breasts and facial features (Figs. 133-134) or standing with exaggeratedly large buttocks and a flat rectangular shaped body with small breasts, and facial features and arms in relief (Fig. 135). In finer specimens, the faces are triangular in shape (Fig. 136); on rare occasions there are also figurines in sitting position (Fig. 137).

At the present state of our study, it is not possible to differentiate other categories of small finds according to distinct phases; however, there seems to be consistency from Layer 7 to 6. The chipped stone industry is conspicuously poor, in number of tools, quality of raw material, and in typological variety; besides a few blade cores, a few “Karanovo blades” –seemingly imported– (Fig. 138) and small blades, some with silica sheen are the only definable tools. Bone spoons (Fig. 139), clay pintaderas (Figs. 140-141), festooned bones (Fig. 142), bone hooks, toggle-pins (Fig. 143), bracelets, and beads of *Spondylus* (Fig. 144) together with the conventional tools of the Neolithic package such as bone awls, horn handles, various grinding stones, celts, and chisels make up the material assemblage.

The transition to Layer 6 is not clear, as the upper deposits of Layer 7 have been scraped away during the intensive building activity of Layer 6; however, a cultural continuum

between the two is evident. The layout of Layer 6 had been first attested in the geomagnetic prospectations of 1994; up to the end of the 2012 season 12 rooms of this settlement, covering almost 90% of what has been revealed by geophysics, have been exposed (Figs. 144-145). The settlement consists of aligned, adjacent rectangular spaces arranged in a curvilinear pattern on the northern part of the hill overlooking the Haydardere Stream almost in the same location as the buildings of Layer 7 Late (E. Özdoğan 2011). It is evident that the settlement was set out according to a pre-designed plan and seemingly simultaneously by using shared walls. Prior to the construction, the terrain must have been levelled by scraping the remains of the uppermost level of Layer 7. The walls are of wooden posts set close to each other and reinforced by a fill of wattle and daub (Figs. 146-147). Larger rooms are as wide as 8x8 m and some have either a hanging floor or a second storey. Most of the rooms have clay benches, fire places, ovens on rectangular platforms and, at least in one room a tandoor. The contents of the rooms vary considerably, but at least half of them have numerous storage bins, rarely in organised rows, but more often in haphazard compact clusters covering most of the space (Figs. 148-149). As the entire settlement came to an end in a heavy fire and because the burned debris remained intact for some time, an exceptionally rich assemblage of finds has been recovered, including over 200 vessels (Figs. 151-155), numerous celts (Fig. 156), clay sling missiles, loom weights, etc.; it is evident that some of the vessels were either on shelves or on hanging floors. The conflagration that destroyed the building must have been rather severe and long lasting as some of the vessels have been partially deformed or melted so that they adhere to the daub. Among significant finds are a number of cult tables and pillars (Schwarzberg 2006b), unevenly distributed among the rooms (Figs. 157-159). On the other hand, it is of interest to note that no figurines were recovered. As the analysis of the material is not yet final, it is not possible to determine the number of households and the functions of each room. Even though the walls at some parts were preserved up to the height of 70 cm, no doors or passageways between the rooms could be observed. Large areas outside of the buildings were exposed; however, on either side no flooring and/or functional installations such as sheds, fireplaces, or working areas that could be interpreted as dooryards or open courtyards were recovered. Accordingly, the front line of the settlement is still unclear; its alignment suggests a frontage towards the north, with a view toward the stream, although this, considering the harsh winter conditions in the region, seems rather unlikely.

The degree of temperature during the conflagration must have been very high and of long duration, enough to melt and vitrify the mud walls. Such a fire taking place across the entire extent of the settlement, at least in a stretch over 100 m long in such homogeneity is highly suggestive of intentional burning. The fact that the burned debris remained almost untouched with no indication of natural erosion taking place also suggests that the remains of the settlement were buried after burning¹⁹.

The pottery assemblage of Layer 6 is a direct descendent of Layer 7, only coarser with a sharp decrease in red slipped, white painted sherds and an increase in grooved decoration; surface roughened wares and plastic applications also increase. On the other hand, most of

19 There is growing evidence of intentional burning and burying of buildings during the Neolithic period (see mainly Stefanovich 1997; Özdoğan and Özdoğan 1998; Verhoeven 2000; Peltenburg 2003); likewise, most of the contemporary settlements in Southern Bulgaria terminate in a similar mode, the Karanovo II building at Nova Zagora being one of the best examples.

the vessel shapes are more or less the same (Fig. 150); but bigger storage vessels, that were absent previously, occur in considerable amounts. Small finds also reflect a continuity of tradition, however, with a notable decline in the quality of workmanship and the notable absence of fine marble ornamental objects and pendants. In an overall assessment, Layer 6 of Aşağı Pınar is similar to that of Late Karanovo II of Southeastern Bulgaria; a number of C14 dates, placing Layer 6 to the time frame of 5600-5700 BC, also support this dating.

The conflagration bringing an end to settlement Layer 6 marks the beginning of a new cultural stage, not only at Aşağı Pınar, but as will be noted further below in a wider geography (E. Özdoğan in press). Layer 5 of Aşağı Pınar presents a totally different picture from Layer 6 (Karul et al. 2003; Parzinger 2005); the areal coverage of the settlement has considerably increased to cover previously uninhabited southern parts of the hill, plans and structural systems of the buildings have changed, and the pottery is almost exclusively blackish in colour, with a new repertoire of shapes and decoration reflecting the so-called "Vinča" or Vesselinovo cultural stage of the Balkans. Likewise, the cylindrical shaped figurines have replaced the flat-bodied figurines of the previous horizon (Hansen 2004). Available see for C14 dates from Layers 6 and 5 indicate a time gap of about 250-300 between them (Karul et al. 2003). In the excavation season of 2008 the remains of an interim stage, denominated as Layer 5/6 Transition have been recovered, at least partially filling in this gap. The settlement of this interim stage consists mainly of round or oval pit dwellings and a palisade wall with buttress-like indentations (Fig. 145). In spite of the apparent difference in architecture between the transitional phase and that of both Layers 6 and 5, the pottery of this interim phase between Layers 5 and 6 is of interest as it bears certain features of Layer 6 pottery but in wares characteristic of Layer 5. Figurines of this transitional stage (Figs. 160-161), depicting a standing female, are to be considered typologically as the forerunners of the cylindrical figures of Layers 5-2 (Figs. 162-163).

Even though the so-called Vinča elements (Fig. 164) begin appearing in the 5/6 Transition, becoming widespread by Layer 5, they actually become pronounced by Layer 4; the thick-sided simple and rather unelaborated wares of Layer 4 become exceedingly fine and almost lustrously burnished in Layer 4, getting finer in Layer 3 (Fig. 165). Through this stage the pottery of Aşağı Pınar (Parzinger and Schwarzberg 2005) is basically similar to that of Karanovo 3-4 of Bulgaria, but there are also some differences that will be noted below as they have certain implications upon the general cultural setting of the Marmara Region.

By Layer 3, together with the conventional wares of Karanovo IV, typical pottery of the Toptepe culture with its highly micaceous paste, light greyish surfaces finished with a dull burnish, sharply carinated shapes, and incised wavy linear decorations appears as a new component of the assemblage (Figs. 166-168). The typical pottery of Toptepe is wide spread in the southern parts of Eastern Thrace but not attested in Bulgaria; its extensive presence at Aşağı Pınar indicates that the Kırklareli region was in contact with both the Marmara littoral in the south and Bulgaria in the north.

Also in Layer 3 there are other new elements that are alien both to the Marmara Region and to Bulgaria as well; among them most significant is the abundant presence of microlithic flint tools, micro-scrapers, drills, lunates, large horn tools, and malachite beads. Where these new elements and in particular the microlithic technology originated is difficult to guess at present; but it is clear that the cultural process in this region at the threshold between

Europe and Asia was not on a simple single trajectory as previously envisaged, but far more complex and multifarious. Along with the appearance of Toptepe elements, some of the cult vessels recovered in Layer 3 (Figs. 169-170) are very much reminiscent of the contemporary anthropomorphic vessels of the Tisza region further north (Özdoğan 2008b).

Chronology of Aşağı Pınar

Below is the list of absolute dates for the sequence at Aşağı Pınar based on the summary of available C14 dates (Karul et al. 2003).

Layer 2: 4900-4700 cal. BC

Layer 3: 5080-4900 cal. BC

Layer 4: 5250-5080 cal. BC

Layer 5: 5350-5250 cal. BC

Layer 5/6 Transition: 5350-5500 (no dates from this new horizon yet, these are estimations)

Layer 6: 5750-5500 cal. BC

Layer 7: 5950-5750 cal. BC

Layer 8: 6200-6000 (no dates from this new horizon yet, these are estimations)

EASTERN THRACE DURING THE NEOLITHIC PERIOD: A Conspectus of the Evidence

After remaining as one of the least investigated regions in Turkey, over the last two decades our knowledge particularly of the Neolithic cultures of this region has considerably increased. Along with our results, as presented with this paper, substantial work conducted at Ilıpınar and ongoing excavations at Yenikapı, Barcın, Aktopraklık, Uğurlu, and at Coşkuntepe have provided ample evidence on the settlements, architecture, artefactual assemblages, burial customs, and subsistence patterns of this region during the Neolithic period; however, there are still serious lacunae in our knowledge, particularly in understanding spheres of interaction and the dynamics beyond cultural change. Accordingly, some of the following generalizations will be based on our intuitions after working in the region for almost 30 years.

In spite of all the missing links in our knowledge, there is now ample evidence sufficient to draw a general picture on the process of neolithization in Northwestern Turkey. It has been almost conventional to consider the process of neolithization as an instantaneous event; however, it is now evident that it took two thousand years after the initial appearance of Neolithic elements to the time it became fully established. It is also clear that it was a multifarious happening, taking place step-by-step and developing along different trajectories. During these two thousand years, there had been multiple incidents of endemic movements, each having its own particular pace and feature. Taking into consideration the complex nature of the neolithization process, it is obviously not possible to speak of a single "Neolithic package". The primary components of this package, such as pottery, rectangular buildings, domesticated animals, cultivated plants, ground and polished stone technologies, certain types of lithic and bone artefacts, and sedentary village life have been introduced from outside, evidently from the East; these occur in every Neolithic package,

thus easy to discern. Besides these primary components, each movement had its particulars, making it possible to trace the region of their origin (Özdoğan 2010, 2011a, 2012). Here it is worth noting that almost all components of the Neolithic packages that have reached Northwestern Turkey have their ancestral forms somewhere in the east—in the core area of neolithization—though their ratios within the assemblages may change. While some items proliferate, others become inconspicuous. There are apparently some practices such as red-painted floors that are sustained in the newly settled areas as remnants of social memory. However, what has been transmitted from the Mesolithic cultures that were already present in the Marmara Region is more difficult to recognize. Moreover, it is also clear that different modes of neolithization existed simultaneously in different parts of the region. Here, in conspectus, we shall consider the neolithization process under the following headings:

Setting of the Stage: Implying the period immediately preceding the initial appearance of Neolithic elements, which is of course contemporary with the emergence of a Neolithic way of life in the core areas of primary neolithization.

Initial Stage: The poorly-understood horizon implying the first arrival of Neolithic elements/communities.

The Monochrome Stage: Representing the time of clearly detectable establishment of settlements.

Red-Slipped and Painted Stage: The time of intensified habitation, particularly in the western parts of the region.

Final Stage: Representing the final stage of the adaptation of a Neolithic way of life to the local environment.

Setting of the Stage

Even before contemplating the beginning of the Neolithic way of life in the Marmara Region, it should not be overlooked that Neolithic elements began appearing in Northwestern Turkey three to four thousand years later than they did in the core area of primary neolithization in regions much further to the East. Keeping this in mind is of importance not only for understanding the process of neolithization in the Marmara Region, but more specifically for what lies further to the west—the Balkans and eventually the rest of Continental Europe. This large time-gap has inevitably evoked alternative explanations, such as the Neolithic way of life emerging and developing in the Balkans independent of the Neolithic of the East. This, also known as the “autochthonous model of neolithization”, and which had emerged as a reaction to the Childean diffusionist approach, after becoming popular during the last quarter of the previous century, has since been almost forgotten²⁰. Nevertheless, for the sake of clarity here we consider noting that all of what is seen with the Early Neolithic cultures of Northwestern Turkey appears fully developed, without predecessors in the region, but all of which is previously known from the core areas in the East.

When Proto-Neolithic and Early Pre-Pottery Neolithic cultures were developing in the core area, what was in the Marmara Region is not clear at all; sites revealing lithic assemblages that can with some certainty be considered Mesolithic are known from certain parts of the

20 For an overview and references on this issue, see Özdoğan 2008a, 2012.

Marmara Region. Among them, there is a concentration of sites along the coastal areas of the Black Sea, mainly located on fossil sand dunes, that have been denominated as the Ağaçlı culture (Gatsov and Özdoğan 1994) characterized by micro blades, prismatic and cylindrical double-platformed blade cores, backed bladelets, and some geometric microliths analogous to the so-called “Epi-Gravette” or Eastern Gravette tradition of the Pontic Basin. Even though not as intensive as in the Black Sea coastal strip, sites yielding more or less similar industries are also known from the Gelibolu (Gallipoli) Peninsula such as Değirmenlik Mevkii, from a number of riverine terraces along eastern parts of the Sea of Marmara such as Haramidere west of İstanbul, and İbonun Rampası near Yalova (Fig. 1). Even though isolated from others, another prolific site, Musluçeşme, has been recovered on the eastern terrace of Lake Manyas. As neither of these sites has been excavated, their dates depend only on typology; in this respect, as no pottery has been recovered in any of these sites, the arrival of pottery in this region constitutes a terminus post quem. A lithic assemblage similar to that of the Ağaçlı group is known from Dikilitaş in Bulgaria (Gatsov 1984, 2001); there are also typological similarities between the Ağaçlı group and the Mesolithic assemblages in the northern parts of the Black Sea, more specifically from the Crimea. Based on these similarities, the Ağaçlı group was previously considered as a circum-Pontic culture as no similar assemblages were known at that time between the Marmara and Mediterranean with the exception of a few sporadic finds of uncertain provenience. However, during the last few years, there has been growing evidence for the presence of Mesolithic / Epi-Paleolithic lithic assemblages in some of the Aegean Islands and in western parts of Turkey (Kaczanowska et al. 2008; Sampson 2008), connoting that the Mesolithic / Epi-Paleolithic cultures of the Mediterranean coastal areas might not be as distant as previously considered from those of the Marmara-Pontic ones. It is not possible to say how intensive the habitation was at that period. Considering that sea levels were still much lower than today, what is being recovered must be the tip of the iceberg. However, it is evident that these Mesolithic communities were mostly confined to the coastal areas, possibly subsisting on marine sources. In spite of all surface surveys, artefacts that would be suggestive of Mesolithic have not been recovered from the inner parts of Anatolia; thus it seems possible to surmise that there was a large area, almost void of habitation, between the primary core area of neolithization and the littoral areas.

The Initial Stage

The timing of initial expansion of the Neolithic way of life from its core area is still not very clear; recent evidence from the sites in the İzmir region as presented in volume 4 of this series, goes as early as the turn of the 8th to the 7th millennium BC at a time when pottery was either a very rare commodity or not even used at all. So, it is possible to surmise that already by the very end of the PPNB cultural stage of the core areas, some groups were on the move, seemingly taking with them their herds of domesticated animals. Settlements such as basal Ulucak, the so-called Aceramic Hacilar where pottery is totally absent or rare, represents the final end of this movement; among other things, red-painted floors and retouched blade tools with pressure flaking characterize these settlements. The earlier part of this stage is merely hypothetical, primarily based on the assumption that there must have been pioneering forerunners of the settlement habitations. In this respect, a naviform blade core recently recovered on a terrace by Küçük Çekmece lagoon west of İstanbul (Aydingün 2009), another naviform-like flint core and flint points retouched by

pressure flaking from Keçiçayırı in the Eskişehir region (Efe 2005) and an unpublished long blade, very likely procured from a naviform core from Yenikapı²¹ might be considered as indicators of this early, sporadic arrival of Neolithic communities. As none of these finds is from a secure context, their implications remain hypothetical.

The Monochrome Stage

Conventionally, the Early Neolithic cultures of the Balkans have been associated with white on red painted pottery; these cultures were given different names such as Sesklo, Starčevo, Karanovo, etc., partially on stylistic differences, but more in conjunction with present-day political boundaries. Whether or not there was an earlier cultural stage with monochrome pottery has been a highly debated issue in the Balkans (Stefanova 1996; Todorova 2003), these discussions remaining inconclusive, overlooking the relevant evidence from Anatolia. In Anatolia, however, extensive usage of painted pottery begins almost a thousand years after the appearance of monochrome pottery, actually by the Early Chalcolithic period in the sense of the Anatolian chronological system. Even though the link between the Anatolian painted wares such as the Hacilar style and the Sesklo - Karanovo - Starčevo group of the Balkans is a disputed issue, it should not be overlooked that the assemblages of both are characterized by the presence of similar objects such as pintaderas, bone spoons, steatopygous figurines, sling missiles, and lack of sophisticated lithic technology. These sites are contemporaneous in spite of those in the Balkans being called Early Neolithic and others in Anatolia Early Chalcolithic. Moreover, there are always some painted sherds, though rather rare. Mostly the painted decoration is made by using coloured slip in the monochrome pottery assemblages of Anatolia (Özdoğan 2009); accordingly, rejecting the presence of a cultural stage predating that of painted pottery horizon by basing the discussion on the recovery of a few painted sherds is irrelevant.

Recent evidence clearly indicates that the establishment of permanent villages in the Marmara Region took place during the monochrome phase, before the onset of the painted pottery tradition. It is also evident that during this stage there was a clear distinction between the eastern and western parts of the region, seemingly due to the arrival of two different Neolithic communities with distinct “Neolithic packages” (Özdoğan 2010), one following the land-route through the valley of the Sakarya River and the other along the Aegean littoral. In spite of the distinct difference in the composition of their assemblages, they nevertheless share the primary components of the Neolithic way of life, such as sedentarism, village life, domestic sheep, goat, cattle and pigs, cultivated plants including various cereals, pulses, pottery, ground stone technology, and the use of clay sling-missiles as weapons. Even though they are more or less contemporary, as they stand as distinct entities, and they will be considered here under different headings.

The Eastern Group

Recent work at Barcın (in this volume) has revealed that the Neolithic communities had arrived in the eastern parts of Marmara Region and established settlements by the first half of the 7th millennium BC. Even though not much is known of this basal level, it must have been the immediate predecessor of the Fikirtepe culture that will be the dominant culture

21 Personal observation.

in the Eastern Marmara region for at least half a millennium; a number of C14 dates from Menteşe, also in this volume, have indicated that by 6400 BC the characteristic features of the Fikirtepe culture were already established. As already noted, the extensive presence of sites yielding a Fikirtepe type of pottery in the Eskişehir - Afyon region indicates that the Fikirtepe culture must have come to the Marmara Region through the valley of the Sakarya River.

As also noted above, the Fikirtepe culture can arbitrarily be divided into two progressive stages: the Archaic and Classical. While the former is characterized by vessels with simple profiles, hole-mouth shapes, heavy ledge handles, and pale surface colouring, the latter is defined by vessels with 'S' curved profiles, an increase in incised decoration, more vivid surface colours including black, oval shapes, and tubular lugs, and by the occasional presence of red slipped vessels (Özdoğan 1997, 2006a, 2012).

Concerning the Fikirtepe culture in the context of the Monochrome Phase, there are a few points that need to be highlighted:

- Sites of Fikirtepe culture are widespread in the Eastern Marmara, Sakarya Valley, and in the surroundings of İstanbul without being dispersed further west in Eastern Thrace; Küçük Çekmece lagoon seems to constitute its western border²².

- All Fikirtepe sites, inland or coastal, share similar assemblages best exemplified in pottery; in every site the pottery assemblage is identical in ware, shape, and in decoration; the limited number of status objects such as bone spoons and hooks is also observable in all of the sites. Likewise, the relative scarcity of polished stone tools, particularly celts, and clay figurines can be observed at all Fikirtepe sites. On the other hand, there is a marked difference between inland and coastal sites; inland sites such as Ilıpınar, Menteşe, and Barcın have rectangular buildings and very little evidence of hunting or fishing. At the coastal sites, however, at Fikirtepe, Pendik, Yenikapı, architecture consists only of round or circular huts with semi-sunken floors, and hunting, fishing, and mollusc-collecting constitute the foundation of subsistence together with farming and animal husbandry.

The difference in burial customs between the coastal and inland sites is also remarkable. Even though there are sub-floor inhumations, exclusively in tightly contracted position, in all Fikirtepe sites, as evidenced at Ilıpınar and at Aktopraklık, inland sites also have an extramural burial-ground as a cemetery located not too distant from the settlement²³. Concerning burial customs, Yenikapı is outstanding in revealing different types of burial practices ranging from simple inhumations, to secondary burials, to cremation. Even if

22 In earlier years, prior to the commencement of large scale excavations at Hoca Çeşme and at Aşağı Pınar, due to the lack of other comparable material, all grit-tempered, dark coloured, undecorated sherds recovered at sites such as Bulgar Kaynağı in Thrace and Kaynarca at Gelibolu Peninsula were associated with the Fikirtepe culture (Özdoğan 1986). As not a single sherd reminiscent of the Fikirtepe group has been encountered either at Hoca Çeşme or at Aşağı Pınar, we now consider this association with reserve. Even if there might have been some dispersal of Fikirtepe groups in Eastern Thrace, it must be very sporadic and evidently only in its Archaic Phase.

23 At Pendik, during the rescue excavations of 1992, a number of burials were recovered immediately below the surface soil but above the level of the oval huts; however, as the material has not been analysed yet, it is not possible to determine whether or not these were sub-floor burials of totally eroded huts of a later phase of the Fikirtepe culture or whether they belonged to a prehistoric cemetery of an undetermined culture.

some of the Yenikapı burials are from the Fikirtepe - Yanmburgaz 4 transition, the presence of cremation is worth pondering as, in a region where the origins of every entity can be traced back to the core area of neolithization, cremation is unique to this region. Cremated burials are also rarely seen in the Balkans (Bachvarov 2004).

- The region where the coastal sites of the Fikirtepe culture are distributed is more or less the same as that of the preceding Ağaçlı group; thus, considering the similarities as well as the conspicuous differences between the coastal and inland sites of the Fikirtepe culture, it is possible to surmise a scenario of migrant farmers encountering indigenous populations of hunter-gatherers-fishers on their arrival in the littoral areas of the Sea of Marmara. The local groups seem to have adapted basic components of the Neolithic way of life: pottery, farming, certain objects related to status or prestige, but partially continuing to live in their conventional way in wattle and daub huts, developing a mixed economic model, agricultural products, and with domestic animals being supplementary to hunting and fishing. In this respect, the evidence of Yenikapı, where rectangular buildings are found together with wattle and daub structures, and with different types of burials occurring together, strongly suggests that there two communities might have merged to live together. In view of the ongoing debate in European prehistory on what might have happened when migrant farmers encountered local hunter gatherers, mostly implying some sort of stress among two communities and a process of acculturation, Yenikapı and other coastal sites of the Fikirtepe culture provide the basis of a new model.

- Another question worth considering is why the Fikirtepe culture stopped in the region of İstanbul without continuing into Thrace and Balkans, while other migrant farmers crossing into Europe through the Dardanelles kept on moving up to the Danube. It is possible to surmise that the Eastern Marmara is the only place on the way where the migrant farmers came into a region already densely occupied, putting an end to their momentum to migrate.

- The rich and varied chipped stone industry of the eastern monochrome group stands as an indicator of this culture, marked with micro-blades, single or double platform micro cores, as well as by a rich variety of retouched flake tools (Gatsov 2001, 2003, 2009). At first look, the lithic assemblage of the Ağaçlı group seems to be similar to that of the Fikirtepe culture; however, even though typologically they are similar, in the Ağaçlı group, blades are produced by direct percussion, whereas in the Fikirtepe group they are produced by pressure-flaking, implying the employment of two distinct technologies. Likewise, fully developed bullet-cores are much more common at inland sites of the Fikirtepe culture, again signifying the merging of two communities with diverse features. It is also worth underscoring the fact that all over Bulgaria Neolithic communities are deficient in lithic assemblages, in particular lacking all sorts of micro-blades and flake tools. Their tool-kit, with the exception of few large, irregular blades and unretouched flakes, is defined only by the so-called Karanovo blades. The same is true also for the Neolithic assemblages of Thrace, including those of Hoca Çeşme and Aşağı Pınar.

The Western Group

The appearance of Neolithic elements in the northeastern parts of the Aegean seems to have been around 6400 BC, a few hundred years later than the earliest Neolithic settlements in the Eastern Marmara. Apparently, these groups must have been following the

coastal strip, as the ancestral forms of their assemblages are well attested at sites further to the south, both from a number of excavations and from sites recorded in surface surveys. Whether or not the migrant farmers of this group penetrated inland from the coastal Aegean is not clear, as the evidence from this time period from the Balıkesir region is rather vague; however, the presence of some elements at Aktopraklık suggests that the western and eastern groups might have merged with each other at Bandırma, at the basins of Manyas and Ulubat Lakes.

What is considered here as the monochrome western group is known in Northwestern Turkey from the basal levels of Hoca Çeşme, Aşağı Pınar, as well as of Uğurlu and Coşkun-tepe. The main components of this group have been much more studied than the eastern one: that is to say those in the region of İzmir (Abay 2005; Çilingiroğlu and Abay 2005; Çilingiroğlu 2010, 2011; Derin 2011; Sağlamtimur 2011; see also papers in Vol. 4 of this series). Here we shall restrict ourselves to pointing out certain facts that are occasionally overlooked.

The pottery assemblage of this group is much finer than that of Fikirtepe, with less grit in the paste, thinner bodies and more lustrously burnished surfaces; even in its earliest stage there are some red slipped sherds, occasionally with coloured slip decoration, tubular lugs, and ring bases; there are also sherds with impressed or relief decoration (Çilingiroğlu 2010). The repertoire of vessels shapes is also different from the eastern one; the globular bodied jars with heavy horizontal ledge handles of the eastern group are replaced in the west by jars with elongated forms and by open plates. Apart from the pottery, the composition of the material assemblages of the eastern and western groups differs notably. The western assemblage comprises a rich set of fine ground stone, mainly celts, adzes, vessels, so-called ear-plugs, beads, and pendants, as well as clay stamp seals or the so-called pintaderas, and figurines, all of which are either extremely rare or totally absent in the Fikirtepe group. Figurines vary in shape. While in the earliest stage they are mostly depicted in a crouched position, later they change to an upright position, with the lower part of the body and especially the buttocks rather chubby, the upper part of the body being shaped almost as a rectangular plate with small breasts. In architecture, clay floorings with red ochre wash seem to be rather common.

On the other hand, the chipped stone industry of the western group, as noted previously, is extremely poor in quality, quantity, and typological variety. The so-called Karanovo blades –seemingly imports from much further north– stand as the only lithic objects worth noting. Hunting and fishing are less prominent in the western group than the coastal sites of Fikirtepe; however, as evidenced at Hoca Çeşme, collecting and preservation of molluscs must have been a major involvement.

In spite of the extensive presence of burials in the eastern group, neither intramural nor extramural burials have been recovered in the western group; in spite of the extent of excavated area at sites such as Aşağı Pınar, human remains are restricted to a few instances of random recovery of human bones. At Hoca Çeşme, the only human remains were a few bones recovered under a hearth of Phase III; contemporary sites in the İzmir region as well as Sesklo-Karanovo sites in the Balkans also lack human burials. Considering the origins of this culture in Central Anatolia where collective burials in special buildings is a common practice, there might still be such buildings not yet recovered in the region with we are concerned.

The settlers of this western group seem to have sustained their relation with the area of their origin, as the stylistic changes that took place in Central Anatolia are somehow reflected locally. In this respect, geometric or curvilinear incised decoration with impressed or notched fillings appears towards the last stages of this horizon, best attested at Aşağı Pınar and at Hoca Çeşme.

In spite of the differences between the western and the eastern groups, there are still some elements that are common to both, such as footed rectangular vessels usually adorned with excised or incised designs (Schwarzberg 2005, 2006), bone spoons, bone belt hooks, and bone smoothers; we surmise that they are leftovers from the time when both groups were in the core area. This group, after arriving in Northeastern Aegean, seems to have continued moving into the Balkans following the major riverine valleys, such as Meriç/Maritsa/Evros, Tunca/Tundzha/Tonzos, and Struma/Strymon, rather rapidly reaching the Danube in the north. Thus, it is justifiable to consider that the actual neolithization of the Balkans took place due to the rapid movement of this group.

Even though there are some painted sherds during this phase, there seems to be a new and much more intensive wave of immigrant farmers coming into the region, marking the end of this phase.

Red-Slipped and Painted Stage

Dominant use of red slipped pottery with white painted decoration marks the conventional Early Neolithic period of the Balkans, known under different names such as Sesklo - Karanovo II or Starčevo-Körös-Cris. Even if there is no apparent break in culture with the preceding stage, the rapid increase in the number of settlements all over the Balkans implies a massive new endemic movement coming into the region, seemingly originating from the Central Anatolian Plateau, as new elements such as relief decorated pottery, and festooned bone implements typical of Central Anatolian assemblages begin appearing in Thrace. Parallelism in pottery, particularly in designs and certain details of vessels, figurines, and cult objects, implies first an active interaction taking place on a supra-regional level all over the Balkans, and secondly that these groups are somehow related or sharing common identities. This stage marks the cultural peak of the Balkan Neolithic, lasting for about 200 years; then, as apparent at Aşağı Pınar Layer 6, at around 5600 BC, it goes into a declining stage. During this final stage there is a notable increase in storage facilities within the buildings, possibly implying deteriorating conditions in the environment and/or some sort of social stress. The quality of pottery notably declines, painted decoration becoming a rarity, fine polished stone objects and fancy ornaments almost disappear, and there is a gradual change in the style of figurines. As in every site in Bulgaria, the settlement at Aşağı Pınar Layer 6 also terminates with a conflagration marking the beginning of a new era. This phenomenon, conveniently referred to as the process of “Vinçization” is not restricted only to the Balkans, but also to the western parts of Anatolia (Efe 1990; Özdoğan 1993). However, either the mode or the reasons leading to this change have not been properly understood and there is considerable controversy on its origins. The material assemblages of the cultural stages before and after the change are so markedly different from each other that there have always been tendencies to explain migrations or change of population on a supra-regional level. In this respect, Aşağı Pınar has provided new evidence, if not enough

to solve this problem, revealing that there was an interim stage between the two extreme ends. What has been denominated as the Layer 5/6 Transition, packed between the burned debris of Layer 6 and the unburned rectangular houses of Layer 5, revealed a pottery assemblage bearing the characteristics of both Vinča-like forms and decoration on the red slipped wares of Layer 6, and black wares with grooved decoration on vessel forms typical of Layer 6. Ovoid hut-like structures taking the place of the substantial buildings of Layer 6, and the lack of elegance in pottery implies a phase of impoverishment; however, it is also evident that at least some components of one culture survived to be practiced in the next.

Final Stage: The End of the Neolithic Period

The terminal stage, covering Aşağı Pınar Layers 5-2, signifies the time of the dying out of cultural elements that had originated in Anatolia millennia previously and being replaced by those that emerged locally. The reasons behind this change are far beyond the concern of this paper, but, as previously mentioned, this time period is conventionally addressed as the Vinča period in the Balkans. The layout of the settlements has taken a new shape by free-standing, long, rectangular buildings, fully constructed of wooden posts, and wattle and daub.

The dissimilarity between the eastern and western parts of the Marmara Region is sustained in the beginning of this stage, the Yarımburgaz 4 culture developing almost completely independently of the happenings in the areas further to the west. Initial contact between the two regions seems to have begun by Aşağı Pınar Layer 3, at a time when the Toptepe culture began developing along the northern coast of the Sea of Marmara. The presence of the Toptepe type of pottery both in the western and in the eastern section, as exemplified at Hoca Çeşme, Aşağı Pınar, and Yarımburgaz, indicates the development of an interaction sphere on a supra-regional level. Likewise, the presence of “Vinča-affiliated” elements such as fine channelled or incrustated linear decoration, horn-handles of Karanovo-type, open plates with thickened inner rims at Yenikapı and in the Yarımburgaz 2-3 assemblages indicates the intrusion of western elements to the İstanbul region.

Among the assemblages of this time period, in particular of Yarımburgaz Layer 3, there are some conspicuous similarities with those of the Tisza region in the Danube Basin (Özdoğan 1989). That certain components of Yarımburgaz 3 are reminiscent of the Early Linear cultures and to the *Notenkopf* group had been considered previously as being coincidental. The recovery of the large-sized anthropomorphic vessel at Toptepe and later two more such vessels at Aşağı Pınar, together with some components of the Toptepe pottery, has reopened that possibility. As Toptepe pottery is totally absent in Karanovo IV sites of Bulgaria it is possible to surmise the connection between the İstanbul region and Hungarian Plain to be via the Black Sea coast and Danube, jumping over Bulgaria (Özdoğan 2012).

What strikes us as strange is that there is a significant gap in the cultural sequences of all excavated sites in Northwestern Turkey by the end of the Toptepe stage, at a time around 4700-4800 BC, roughly corresponding to Early Karanovo V. In Eastern Thrace, including the region around the Bosphorus, the break in settlement history lasts until the beginning of the Early Bronze Age; materials assignable to Karanovo VI - Gumelnitsa stage occurring sporadically, mainly in pits, stands as a dilemma of the 4th millennium (Özdoğan 2004), but this, too, is far beyond the concern of this paper.

ACKNOWLEDGEMENTS

Since 1979, our Project has been running with the generous support of the following funding sources: the National Geographic Society (1980–1982), INSTAP-The Institute for Aegean Prehistory (1985–1993), The Ministry of Culture, General Directorate of Museums and Antiquities (1983, 1993-), İstanbul University, Research Fund (1992-), Römisch Germanische Kommission (1993–1994), Deutsches Forschungs Gemeinschaft (1995–1999, 2010–2012), DAI Berlin (2000-), Kırklareli Provincial Directorate-İl Özel İdaresi (2012). We acknowledge our due thanks to all contributors. Line drawings in this paper are by Dr. İlknur Arı and most of the photographs by Mr. Selahattin Dereli.

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Fig. 1 - Map of the Marmara Region with major Neolithic sites.

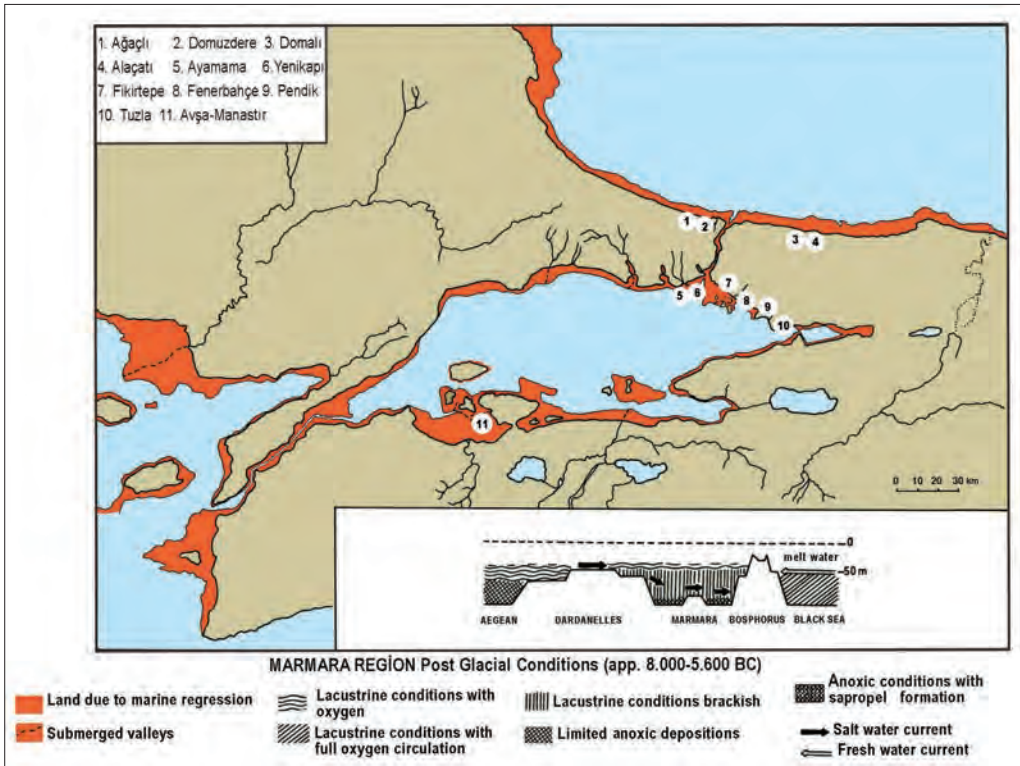


Fig. 2 - Map Holocene low-levels of the Sea of Marmara with coastal sites.



Fig. 3 - Fikirtepe from southwest during the Bittel-Çambel excavations with trenches H IV and V.

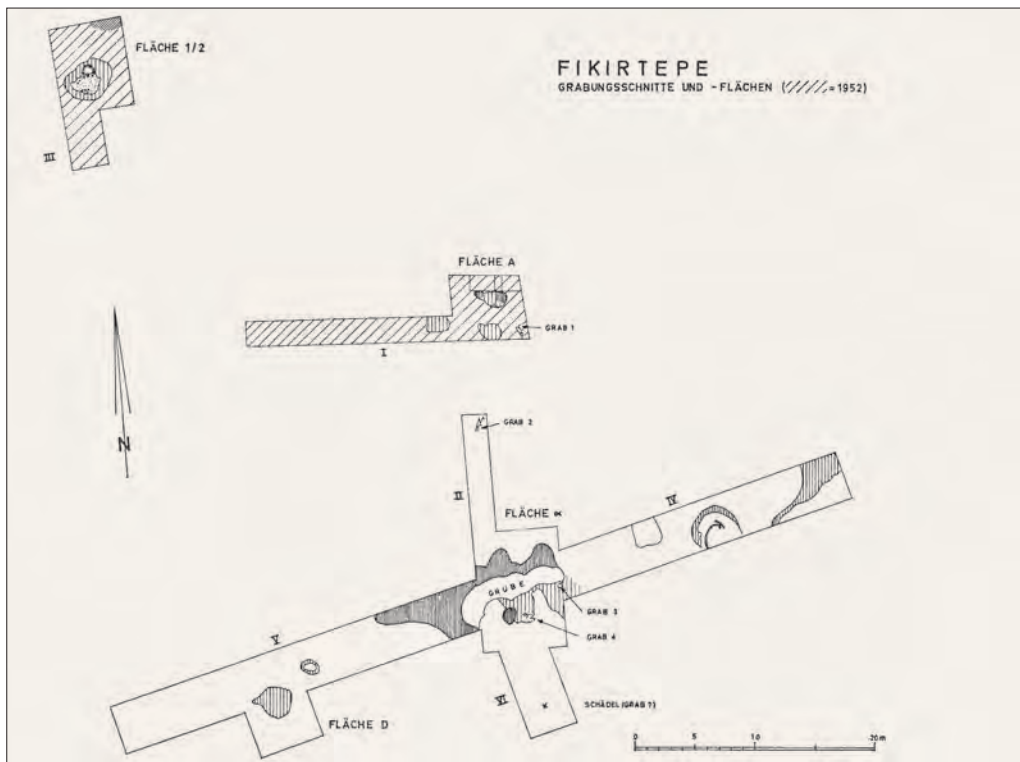


Fig. 4 - Fikirtepe, the layout of the Bittel-Çambel trenches.

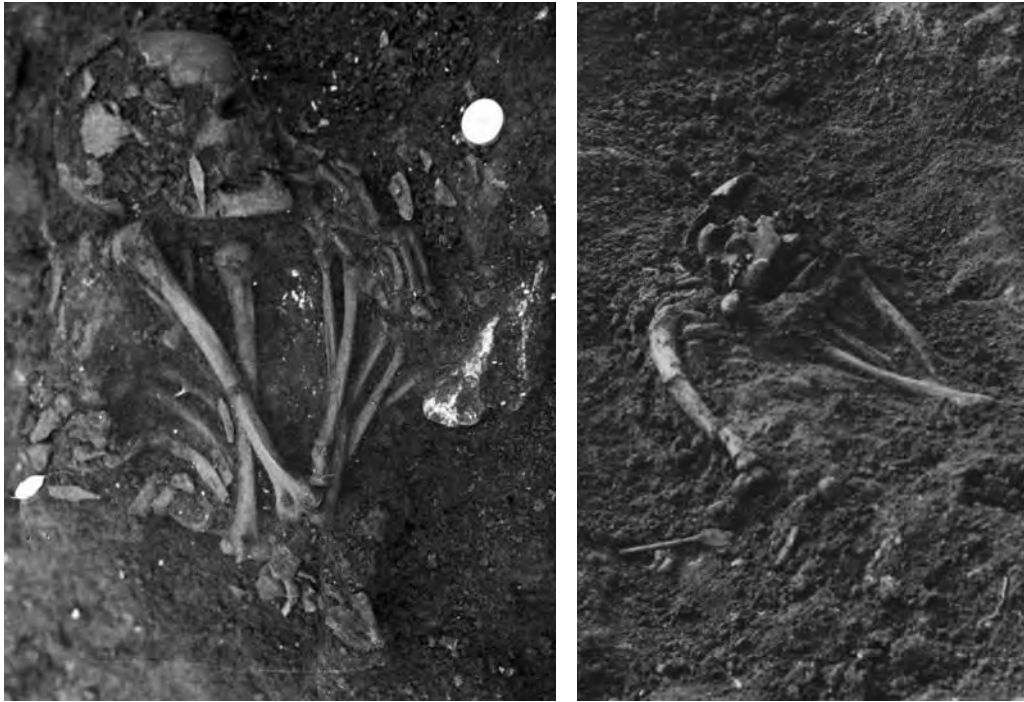


Fig. 5 - Fikirtepe, skeleton no. 3 (left) and skeleton no. 5 (right) recovered below hut 6 in trench IV.

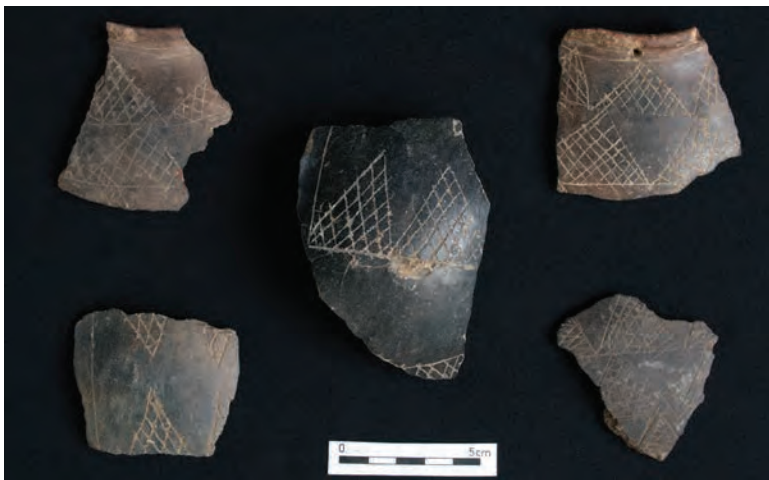


Fig. 6 - Fikirtepe, sherds typical of Fikirtepe pottery with light incised decoration.



Fig. 7 - Fikirtepe, globular jars with heavy, horizontal ledge-handles.



Fig. 8 - Fikirtepe, a rectangular vessel with incised decoration.



Fig. 9 - Fikirtepe, a rectangular vessel with incised decoration; apparently there was a handle or a figure in relief, now missing.



Fig. 10 - Fikirtepe, a unique, fine incised decorated vessel raised on a short pedestal.



Fig. 11 - Fikirtepe, a red-slipped bowl with punctuated decoration.

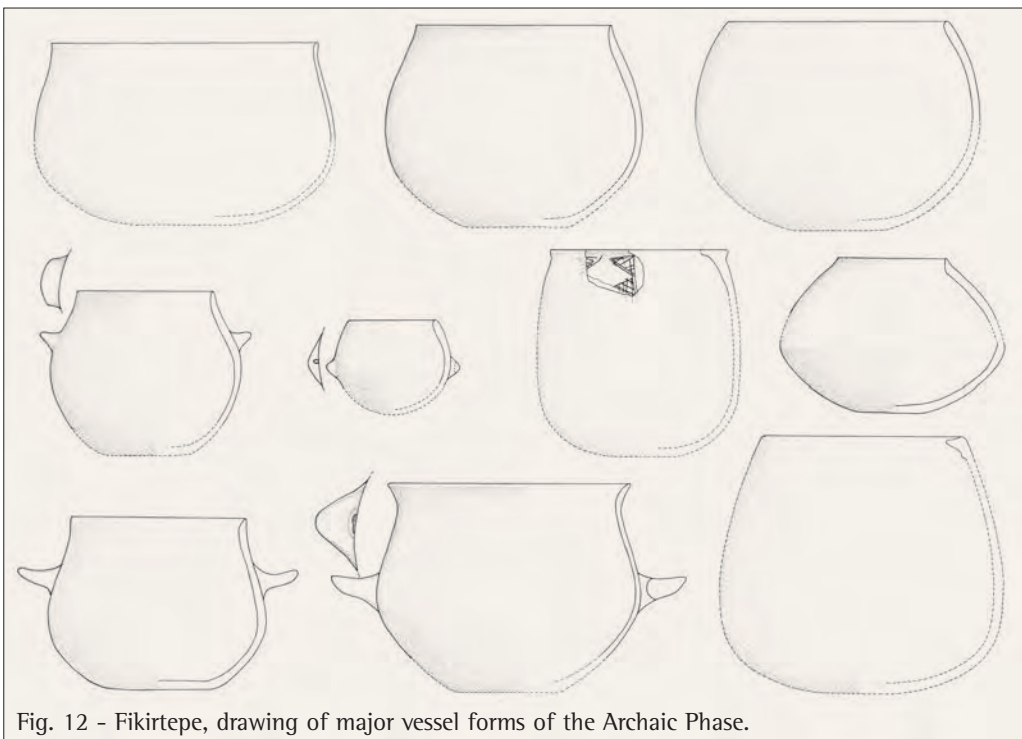


Fig. 12 - Fikirtepe, drawing of major vessel forms of the Archaic Phase.

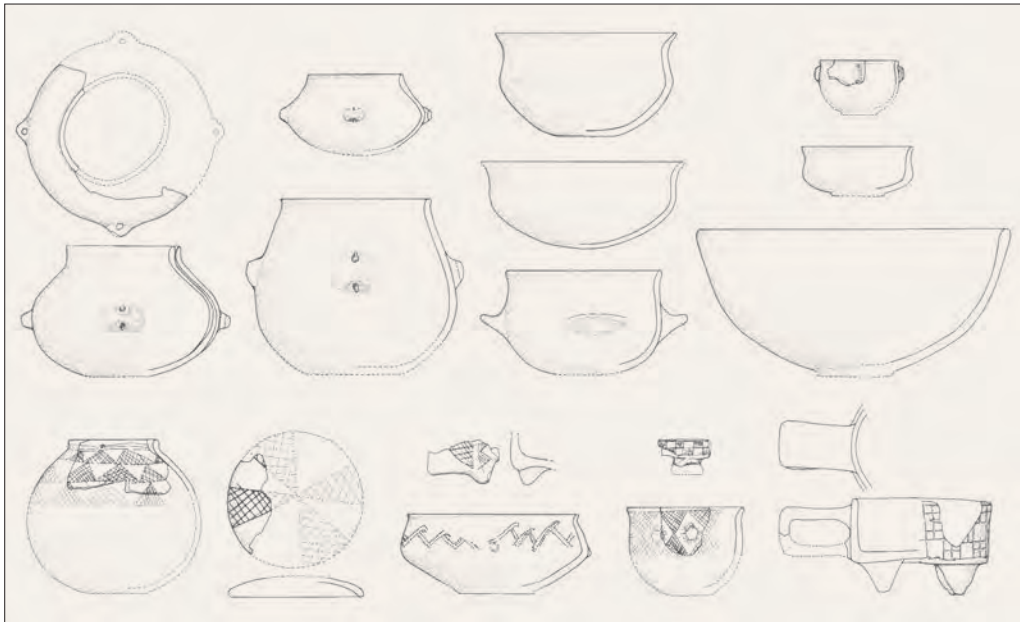


Fig. 13 - Fikirtepe, drawings of major vessel forms of the Classical Phase.



Fig. 14 - Fikirtepe and Pendik, bone spoons.

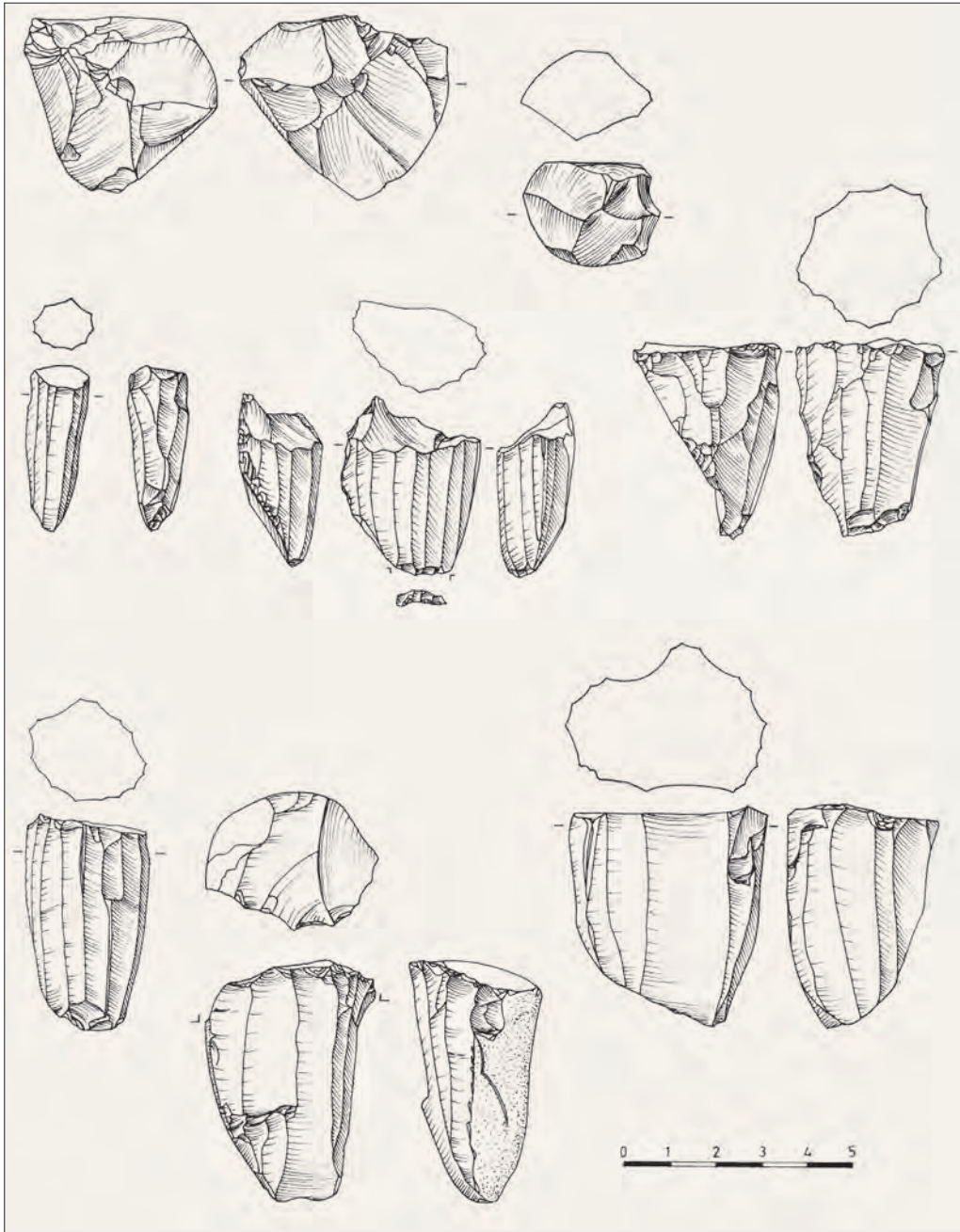


Fig. 15 -Fikirtepe, drawings of major flake and blade cores.

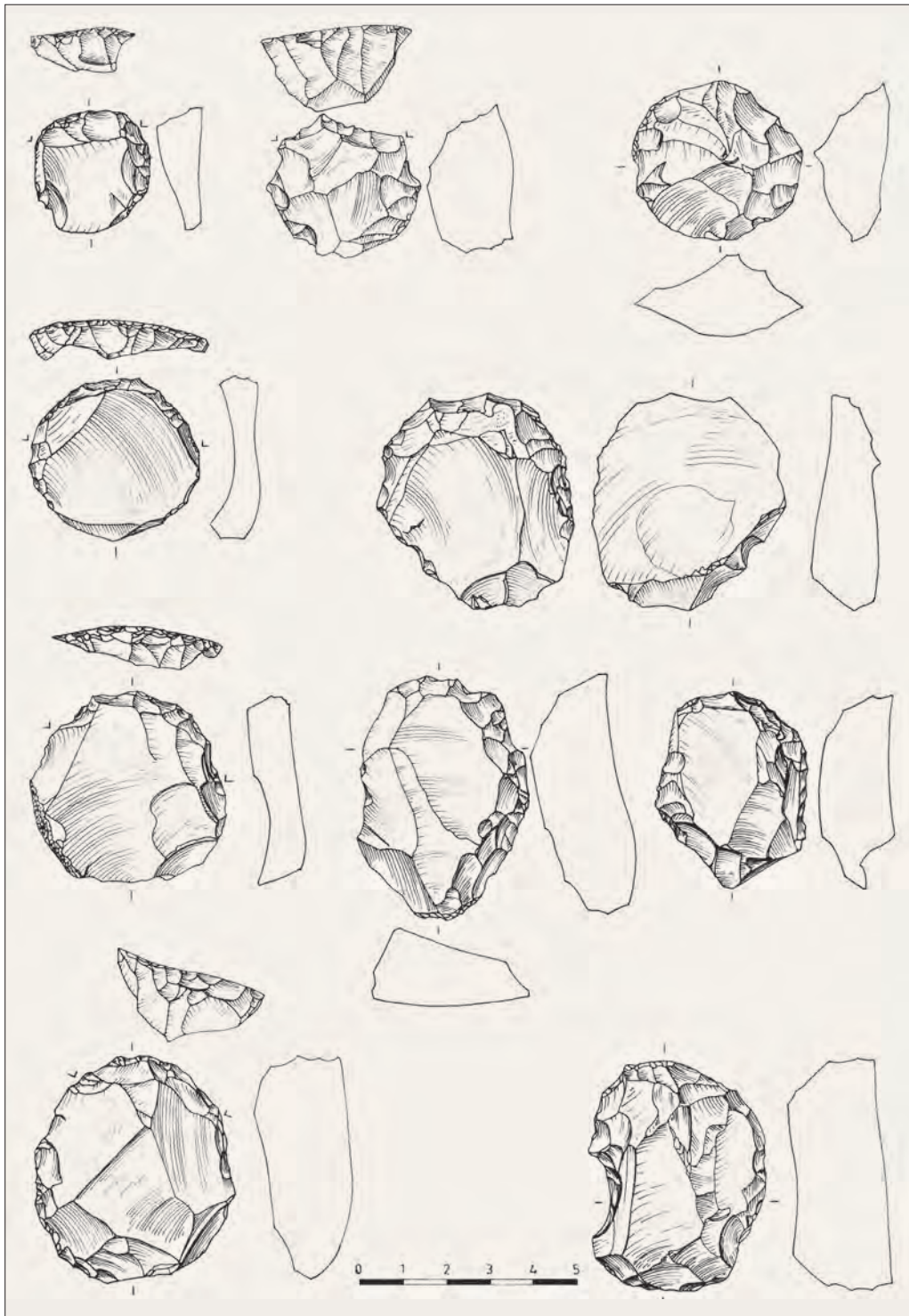


Fig. 16 - Fikirtepe, drawings of heavy-duty scrapers.



Fig. 17 - Fikirtepe, big blades.

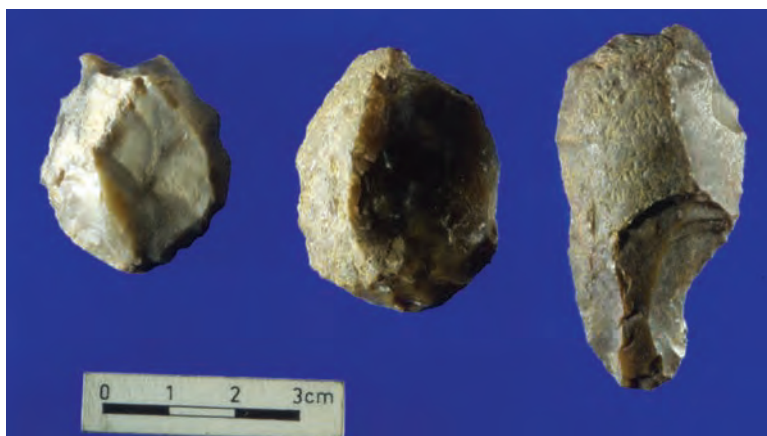


Fig. 18 - Fikirtepe, heavy-duty scrapers.



Fig. 19 - Pendik, the site in 1981, looking north from the railway trench.



Fig. 20 - Pendik, the site in 1981, looking south towards the coast.



Fig. 21 - Pendik 1981, section of one of the partially excavated huts.



Fig. 22 - Pendik 1981, the burial under the floor of the hut.



Fig. 23 - Pendik 1981, remains of a partially excavated hut in the section.



Fig. 24 - Pendik 1981, the ditch observed at the western fringes of the site.



Fig. 25 - Pendik, a vessel with anti-splash rim.

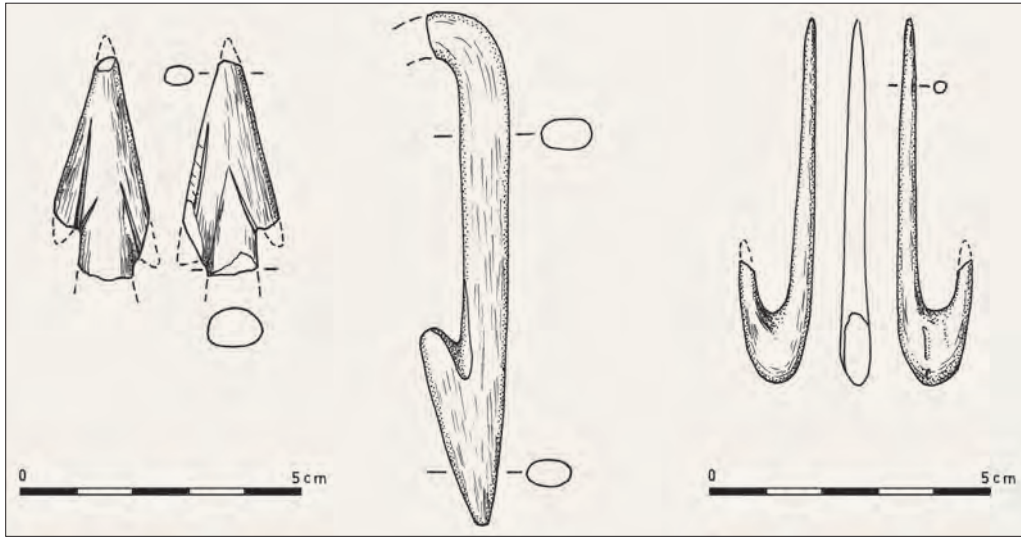


Fig. 26 - Tools for fishing, from left to right: Fikirtepe: bone harpoon; Pendik: a bone and a marble hook.



Fig. 27 - Pendik, bone spoon.



Fig. 28 - Pendik, bone belt hook.



Fig. 29 - Pendik, the clay figurine.



Fig. 30 - Yarımburgaz Caves, view from the valley of the Sazlıdere Stream.

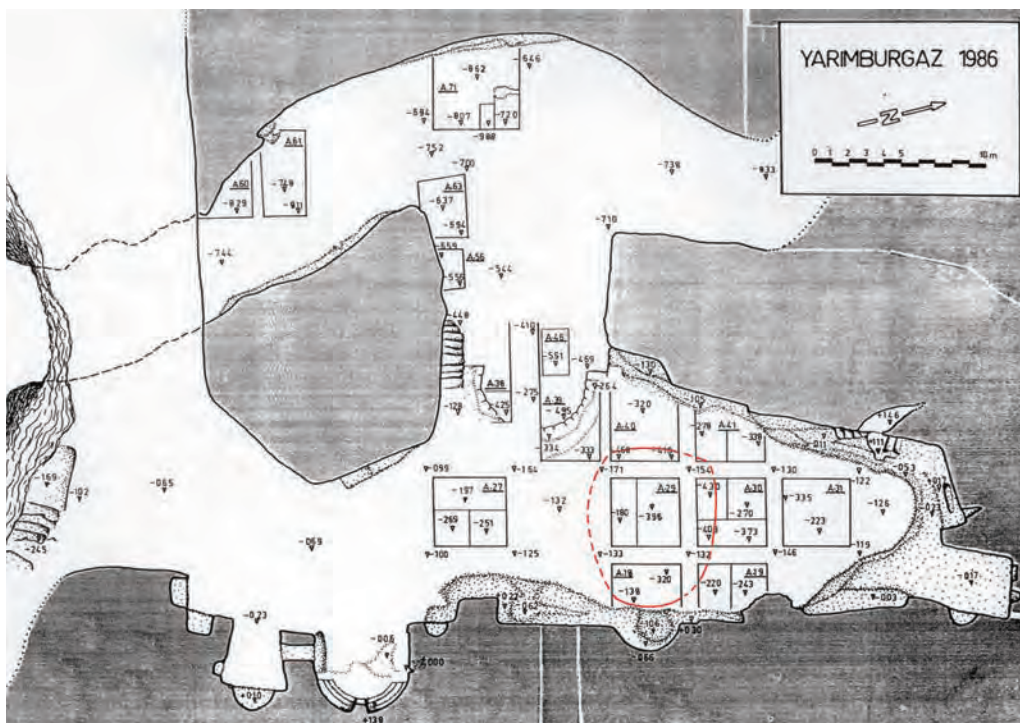


Fig. 31 - Yarımburgaz, plan of the cave with the operation areas of the 1986 rescue excavations.



Fig. 32 - Yarımburgaz, Upper Cave during the 1986 excavations.

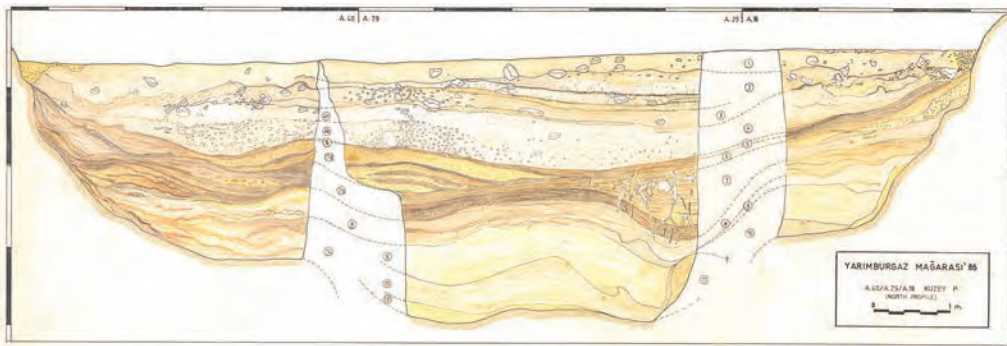


Fig. 33 - Yarımburgaz, section through trenches A18-A29-A40, drawing of the profile along the sinkhole.

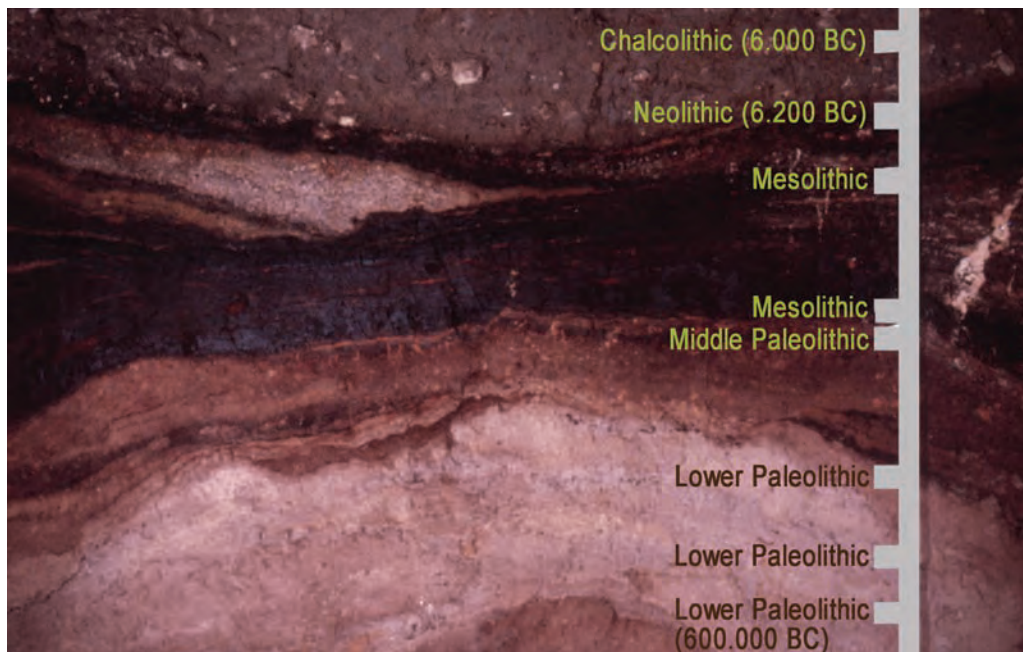


Fig. 34 - Yarımburgaz, section through trenches A18-A29-A40, with the layers marked on the profile along the sinkhole.

Fig. 35 - Yarmburgaz, the ground stone pick from Layer 6 (left: 15 cm high; right: 19 cm high).

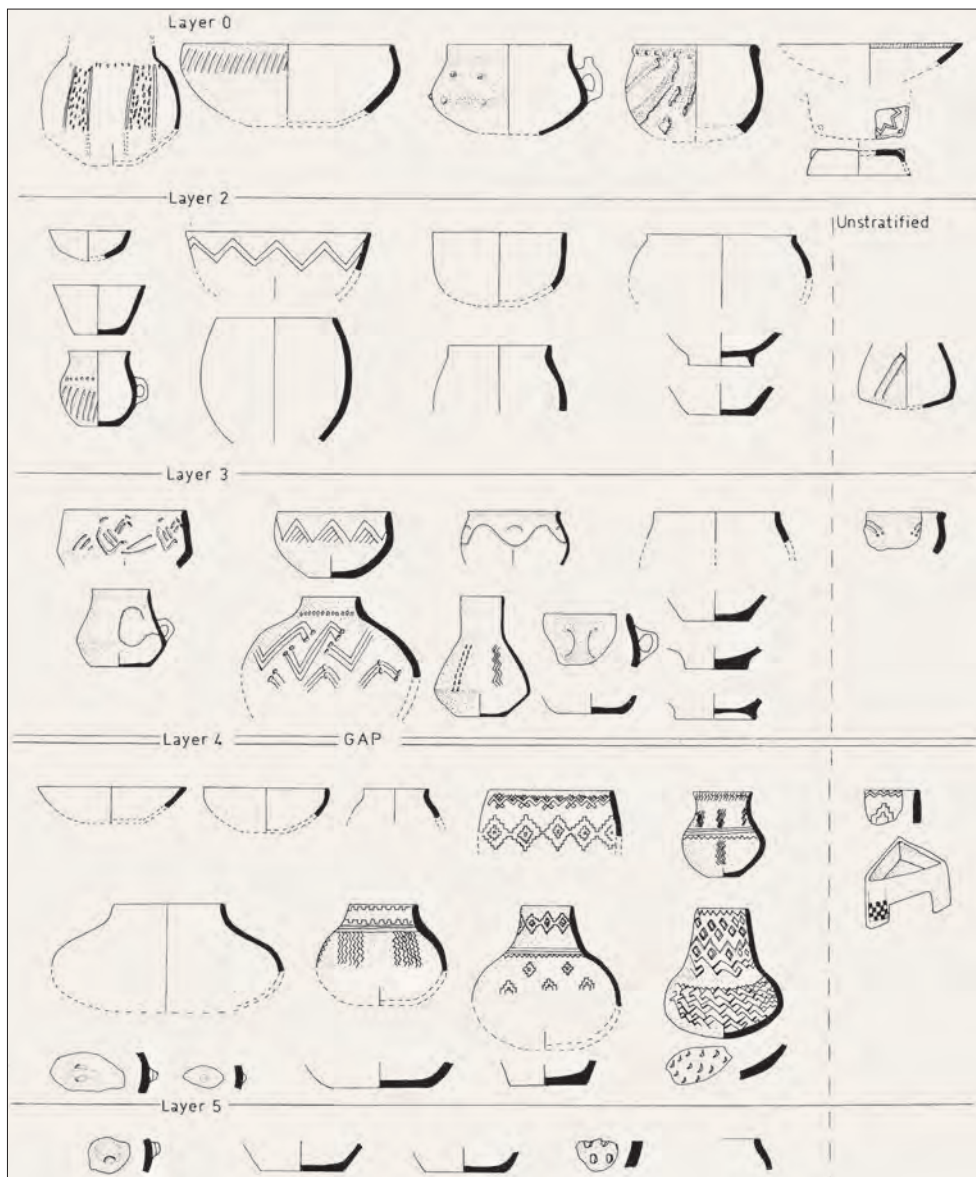


Fig. 36 - Yarmburgaz, simplified typological chart of Yarmburgaz pottery according to phases.



Fig. 37 - Yanmburgaz, sherds with impressed decoration from Layer 5 and unstratified.



Fig. 38 - Yanmburgaz, typical decorated sherds of Layer 4.



Fig. 39 - Yanmburgaz, typical decorated sherds of Layer 4.



Fig. 40 - Yanmburgaz, some sherds with odd designs, Layer 4.



Fig. 41 - Yanmburgaz, decorated jar, Layer 4.

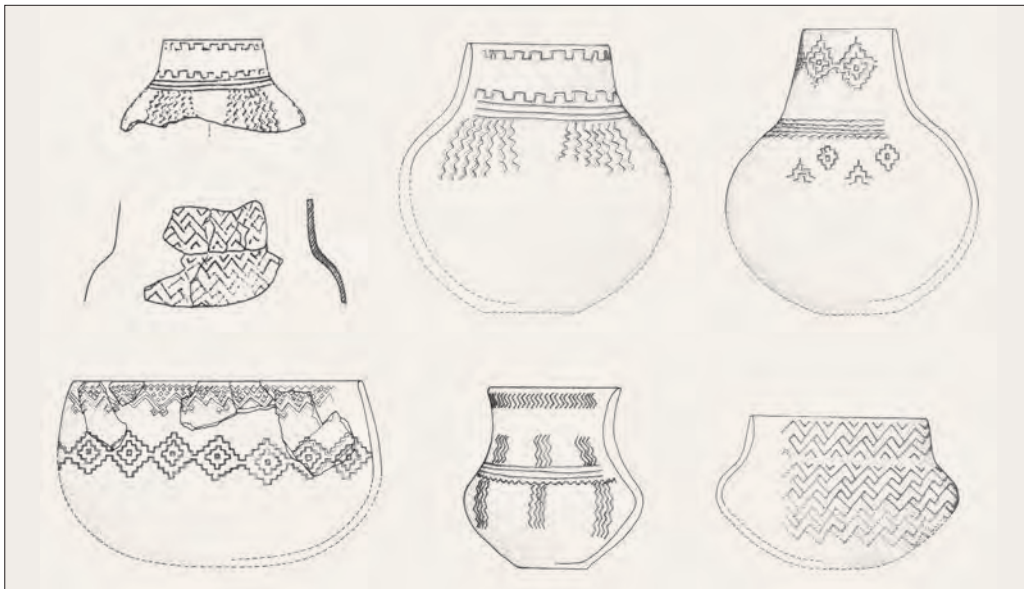


Fig. 42 - Yanmburgaz, drawings of decorated vessels, Layer 4.



Fig. 43 - Yarımburgaz, bone tools of Layer 4.



Fig. 44 - Yarımburgaz, bone tools of Layer 4.

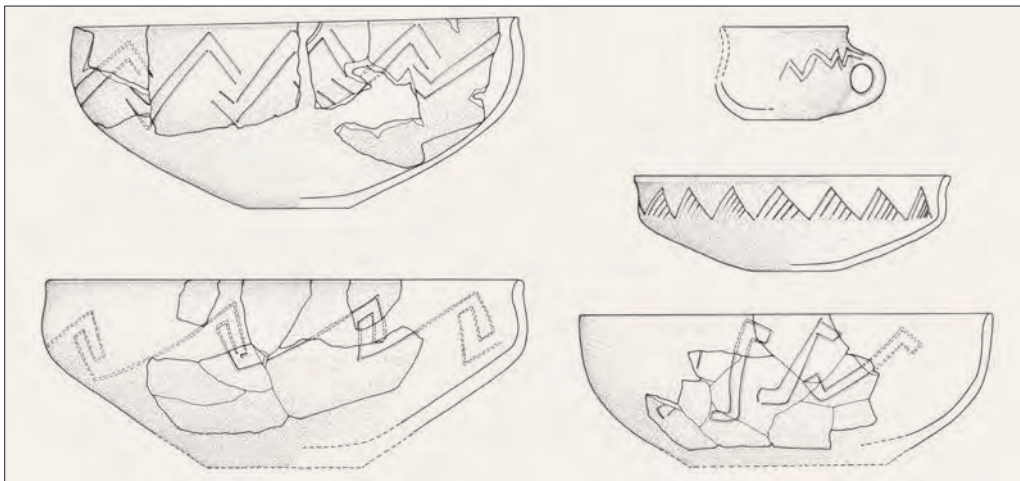


Fig. 45 - Yarımburgaz, open shapes and a jar with handle, Layer 4.



Fig. 46 - Yanmburgaz, pots with curvilinear designs, Layer 3.



Fig. 47 - Yanmburgaz, a jar with incised and impressed designs Layer 3.



Fig. 48 - Yarmburgaz, sherds with incised linear designs ending with impressed dots, Layer 3.

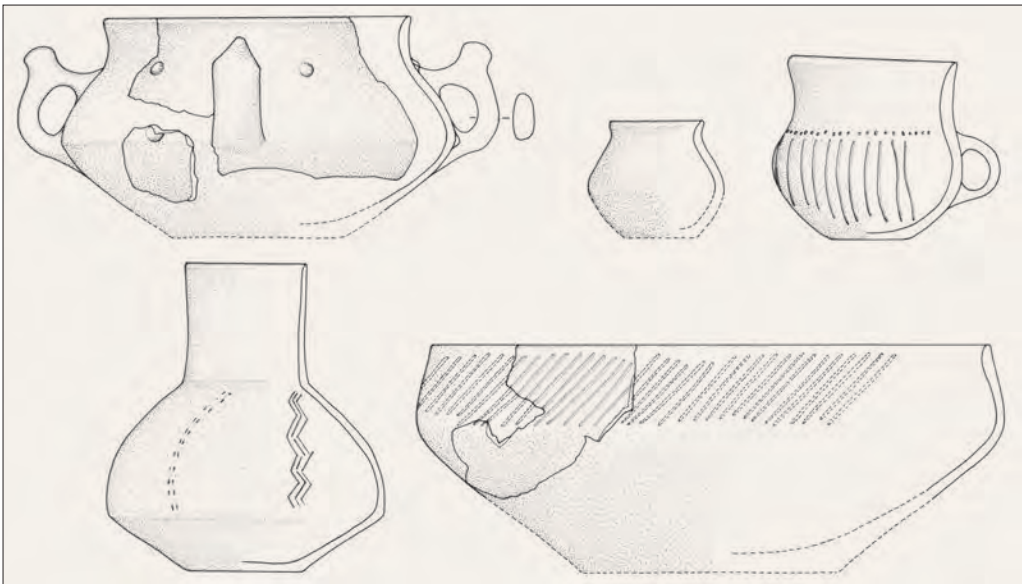


Fig. 49 - Yarmburgaz, vessels of Layer 0.



Fig. 50 - Yarmburgaz, horned handles of Layer 0.

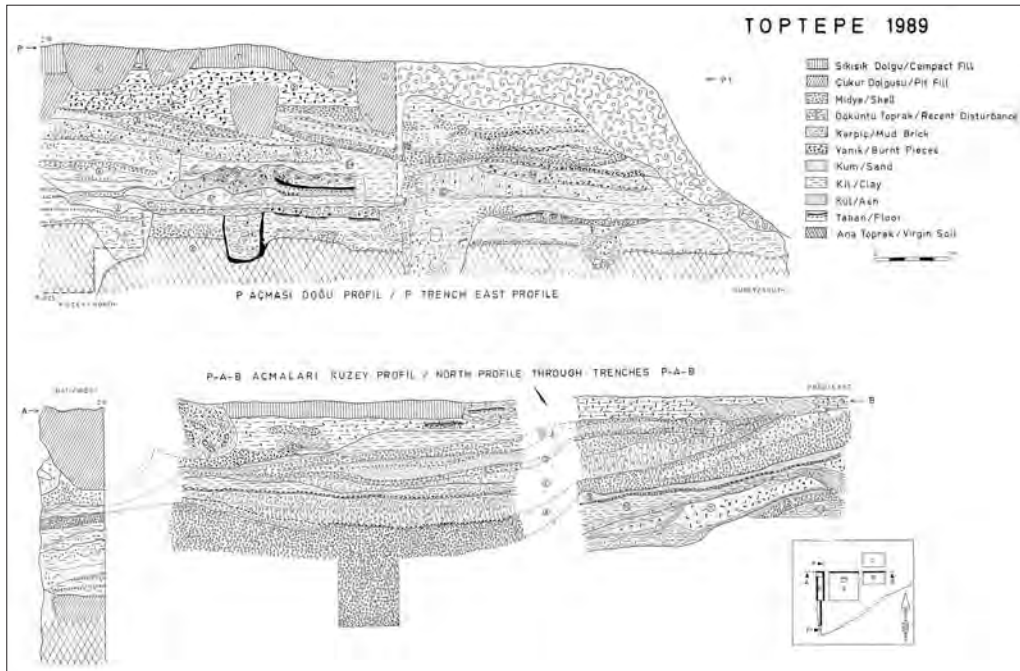


Fig. 51 - Toptepe, profile drawings of the sections through the “preserved core”.



Fig. 52 - Toptepe, the building with large oven, grinding stone, the anthropomorphic vessel, and other finds still in situ, Layer V.



Fig. 53 - Toptepe, the anthropomorphic vessel of Layer V.

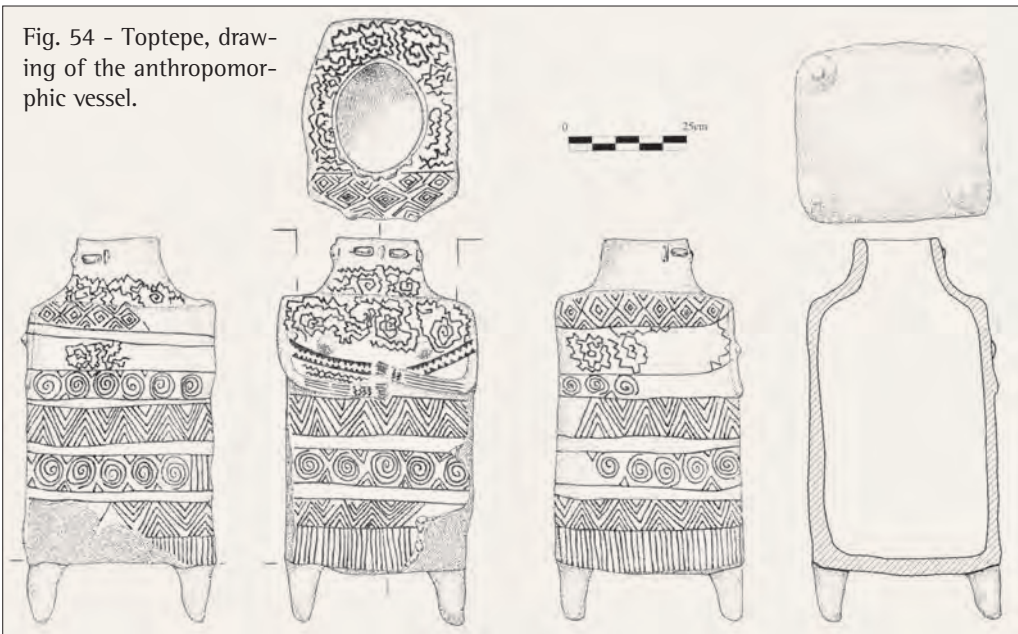


Fig. 54 - Toptepe, drawing of the anthropomorphic vessel.

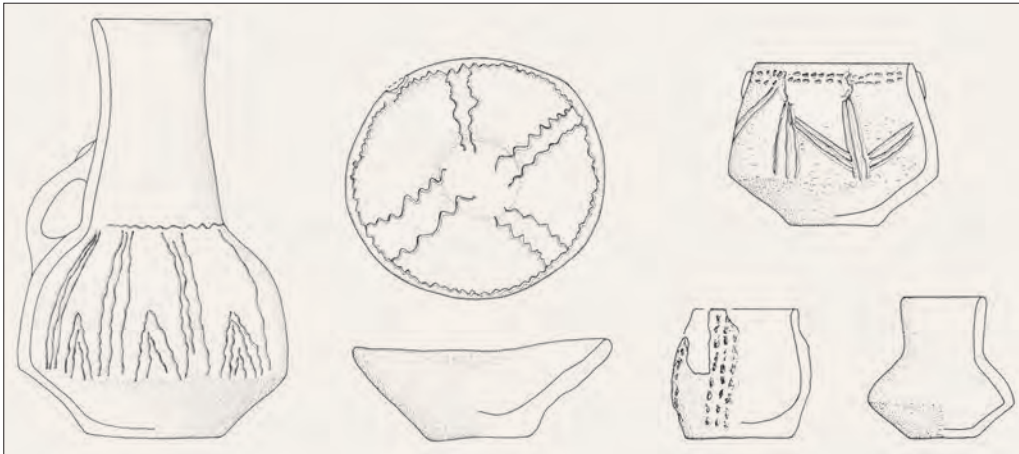


Fig. 55 - Toptepe, typical decorated vessels.



Fig. 56 - Toptepe, typical jar with wavy incised decoration.



Fig. 57 - Toptepe, bone objects.

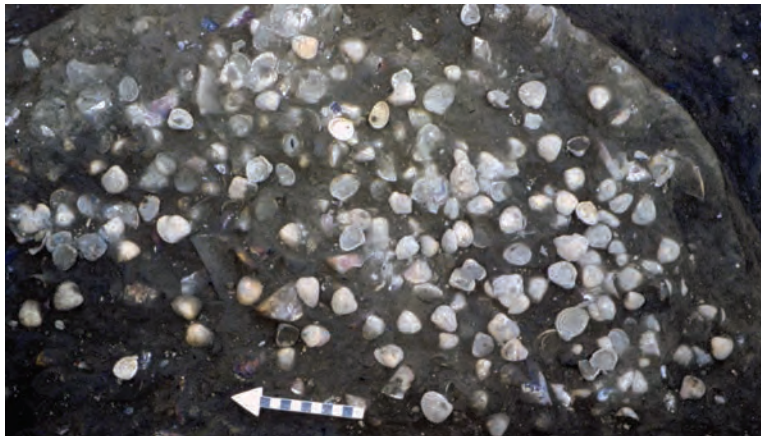


Fig. 58 - Toptepe, one of the pits with shells.

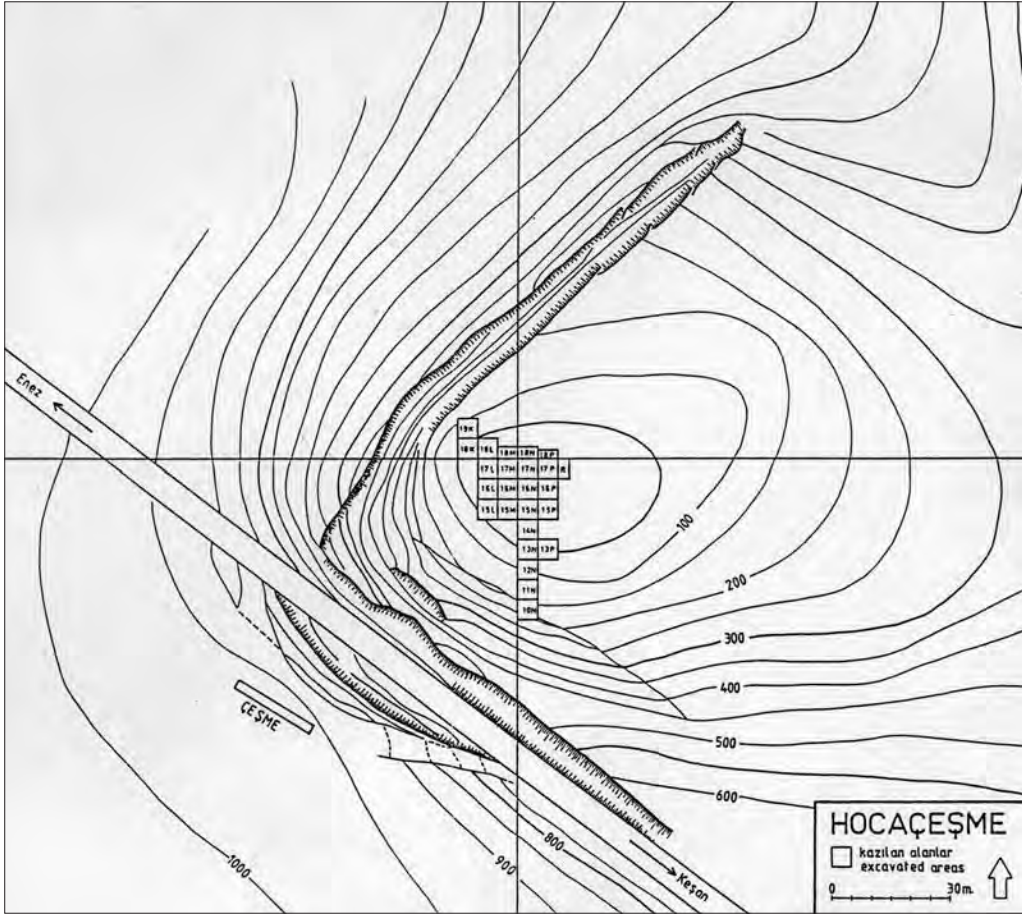


Fig. 59 - Hoca Çeşme, site plan.



Fig. 60 - Hoca Çeşme, from the east.

Fig. 61 - Hoca
Çeşme, from
the west.



Fig. 62 - Hoca
Çeşme central
area, general
view of the
exposed sur-
face of the
bedrock with
the architectur-
al remains of
Phase IV.

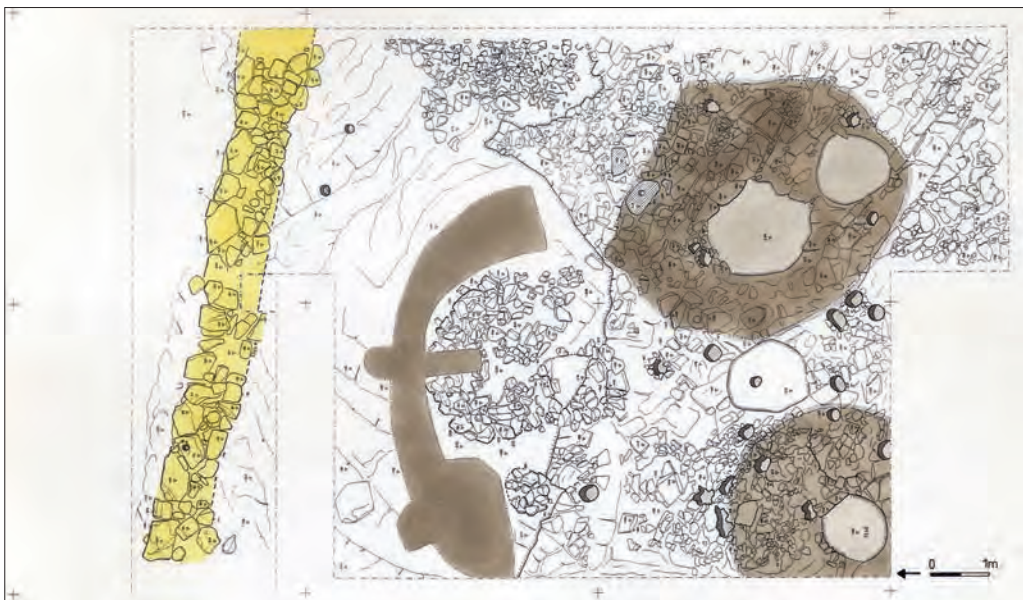


Fig. 63 - Hoca Çeşme, plan of main architectural features including the enclosure wall in Phase IV; yellow marking the enclosure wall, gray the round structures cut into the bedrock.



Fig. 64 - Hoca Çeşme, the enclosure wall in Phase IV.



Fig. 65 - Hoca Çeşme, inner face of the enclosure wall of Phase IV.



Fig. 66 - Hoca Çeşme, exterior face of the enclosure wall of Phase IV.



Fig. 67 - Hoca Çeşme, vessels of Phase IV.



Fig. 68 - Hoca Çeşme, vessels of Phase IV.



Fig. 69 - Hoca Çeşme, typical red and black burnished wares of Phase IV.



Fig. 70 - Hoca Çeşme, crescentic and tubular lugs, Phase IV.



Fig. 71 - Hoca Çeşme, elongated tubular lugs of Phase IV.



Fig. 72 - Hoca Çeşme, red slipped wares with vertical tubular lugs, Phase IV.

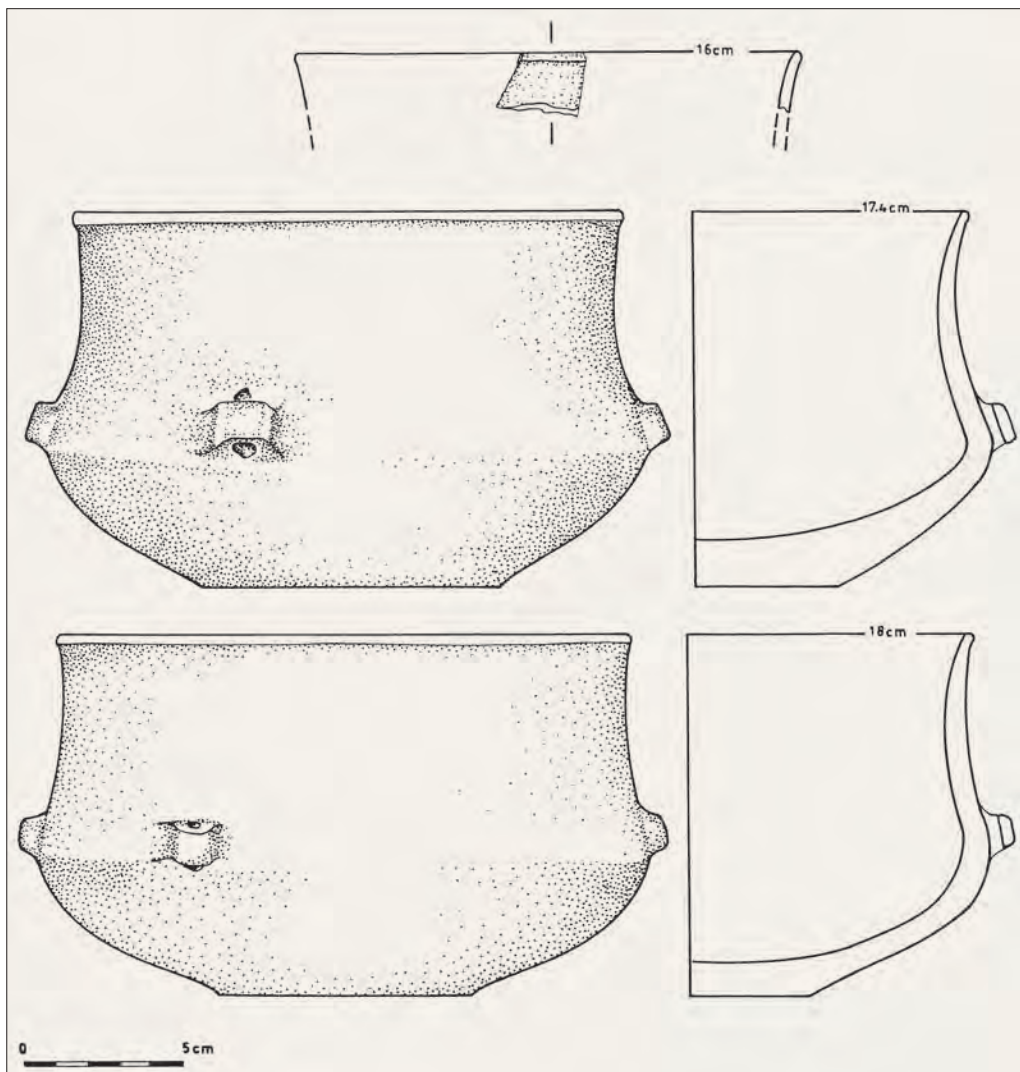


Fig. 73 - Hoca Çeşme, drawings of Phase IV vessels.

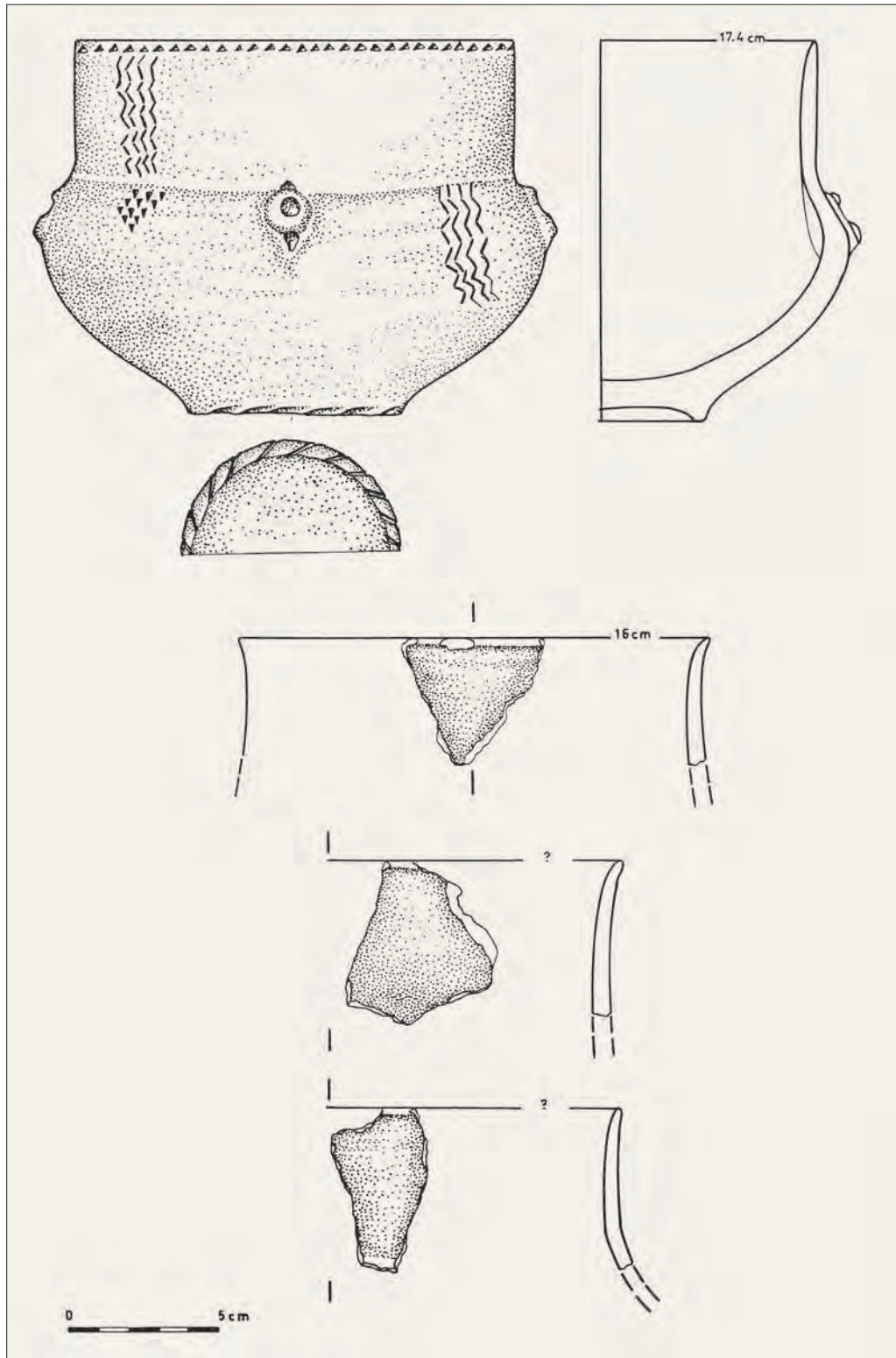


Fig. 74 - Hoca Çeşme, drawings of Phase IV vessels.

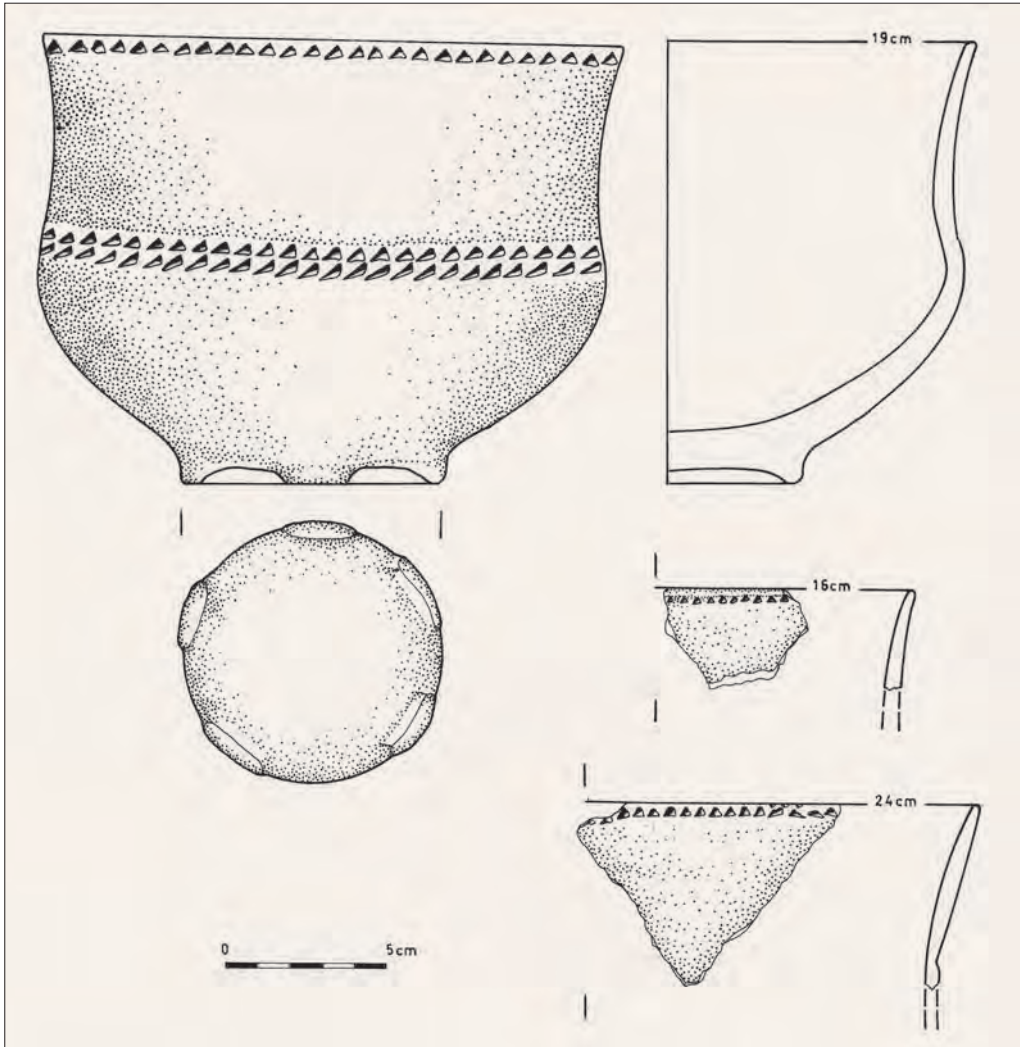


Fig. 75 - Hoca Çeşme, drawings of Phase IV vessels.



Fig. 76 - Hoca Çeşme, fragment of a bull-shaped zoomorphic vessel, Phase IV.

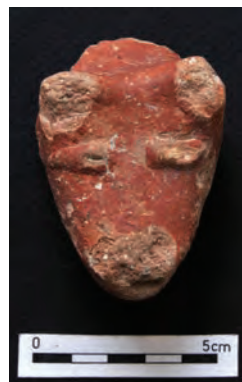


Fig. 77 - Hoca Çeşme, fragment of a bull-shaped zoomorphic vessel, Phase IV.



Fig. 78 - Hoca Çeşme, bucranium applied on a red-slipped vessel, Phase IV.

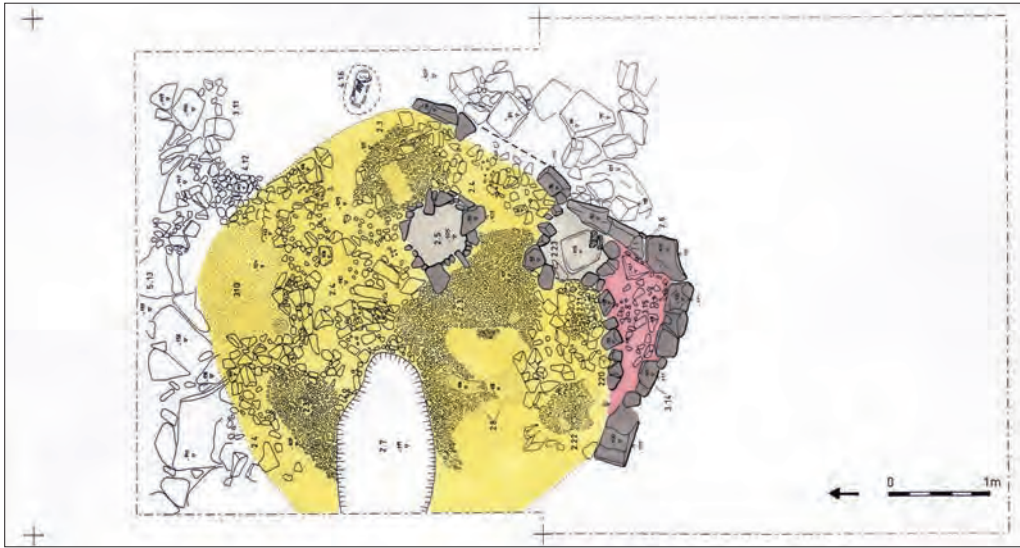


Fig. 79 - Hoca Çeşme, plan of the round building with painted floors, Phase III; the contours of the structure are marked in gray and its latest flooring in yellow. The preserved part of the early flooring with red coating is also marked.



Fig. 80 - Hoca Çeşme, footed vessels, mostly of Phase II.

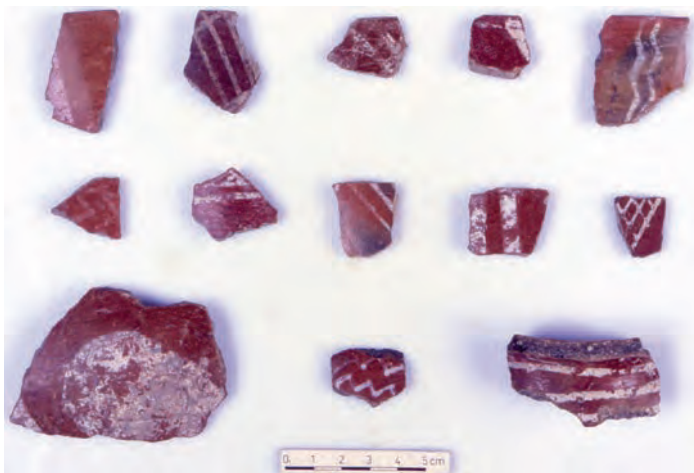


Fig. 81 - Hoca Çeşme, white on red painted sherds of Phase II.



Fig. 82 - Hoca Çeşme, incised and impress-decorated sherds attributable to Phase II.



Fig. 83 - Hoca Çeşme, incised and impress-decorated sherds attributable to Phase II.



Fig. 84 - Hoca Çeşme, Phase I early, vessels typical of the Karanovo II period.



Fig. 85 - Hoca Çeşme, pattern burnished sherds, Phase I.

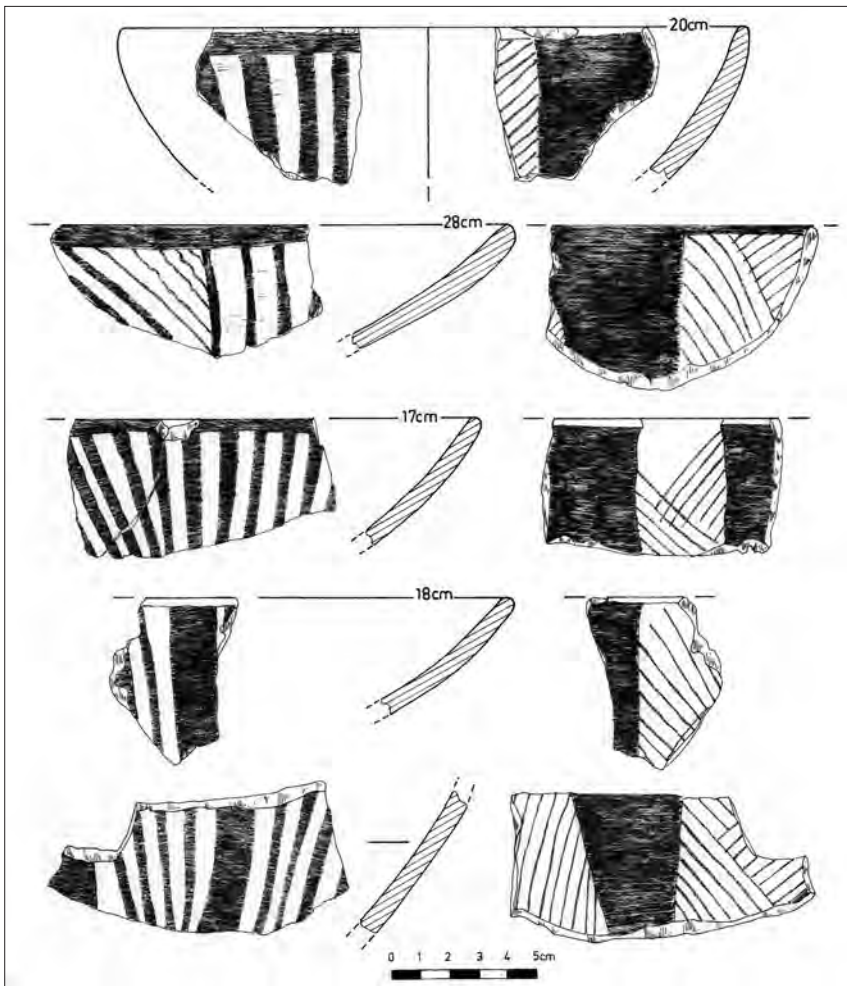


Fig. 86 - Hoca Çeşme, drawings of pattern burnished sherds, Phase I.



Fig. 87 - Hoca Çeşme, bone spatula and spoon.



Fig. 88 - Hoca Çeşme, bone spoons from various layers, mainly Phases IV and III.



Fig. 89 - Hoca Çeşme, a bone hook.



Fig. 90 - Hoca Çeşme, clay pintadera. Fig. 91 - Hoca Çeşme, clay pintadera.



Fig. 92 - Hoca Çeşme, clay pintadera.

Fig. 93 - Hoca Çeşme, footed basalt vessel with a handle.



Fig. 94 - Hoca Çeşme, footed basalt vessels.



Fig. 95 - Hoca Çeşme, stone amulets.



Fig. 96 - Hoca Çeşme, a stone amulet.



Fig. 97 - Hoca Çeşme, the so-called Karanovo blades.



Fig. 98 - Hoca Çeşme, a shell-pit with a jar in situ.



Fig. 99 - Hoca Çeşme, half vessel filled with shells found in situ in the sealed context of a shell pit.



Fig. 100 - Aşağı Pınar, plan of the site with the areas excavated.



Fig. 101 - Aşağı Pınar, the roadside exposure.



Fig. 102 - Aşağı Pınar, the northern exposure.

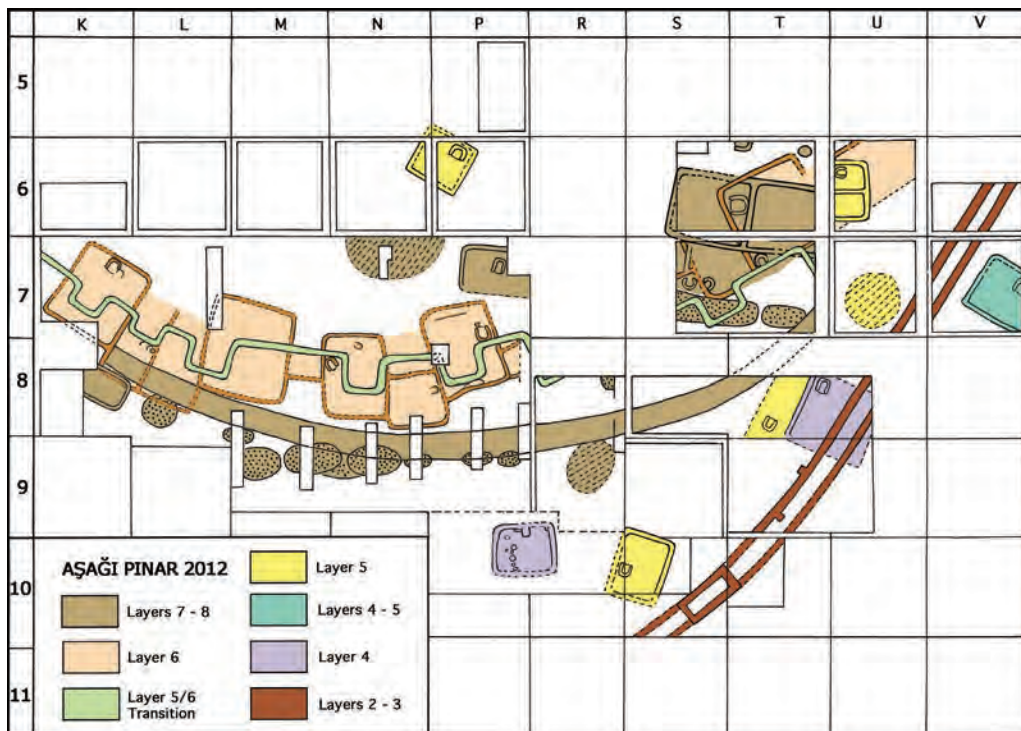


Fig. 103 - Aşağı Pınar, plan of the northern section.



Fig. 104 - Aşağı Pınar, a part of the ditch after being emptied.



Fig. 105 - Aşağı Pınar, various profiles along the ditch displaying the diversity of its fill.



Fig. 105a-c - Aşağı Pınar, sections from various parts of the ditch.



Fig. 106 - Aşağı Pınar, top view and section of ovoid structure with semi-sunken floors renewed several times, Layer 8 or 7 Early.

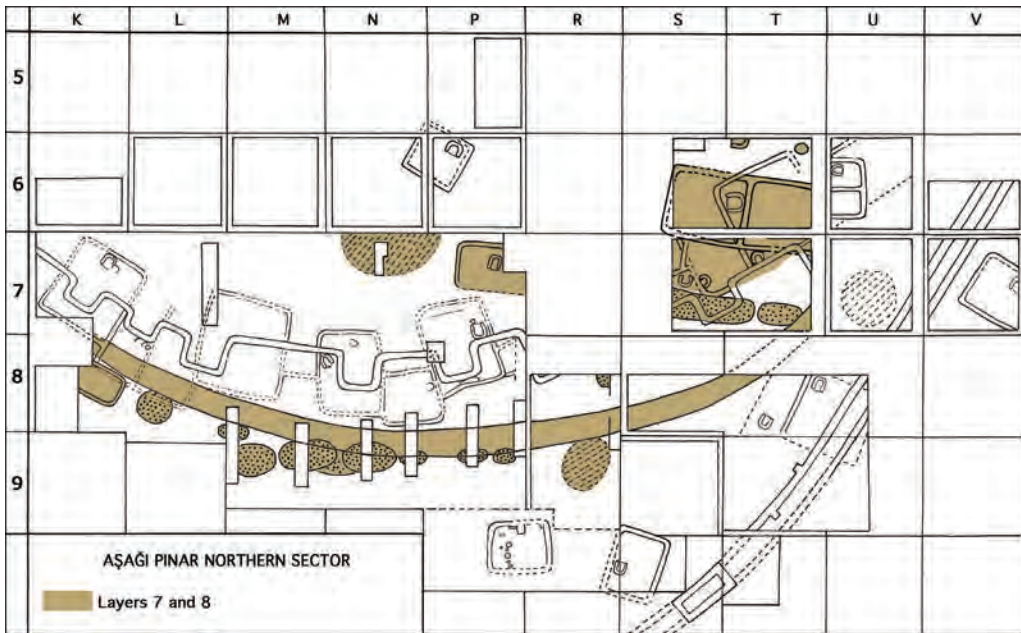


Fig. 107 - Aşağı Pınar, northern section with remains attributable to Layers 7 and 8 marked.



Fig. 108 - Aşağı Pınar, section with thick floor deposits in the building of Layer 7 Early.

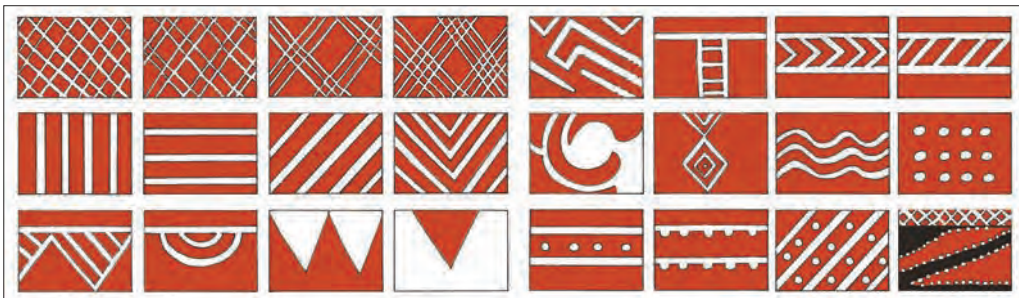


Fig. 109 - Aşağı Pınar, characteristic white on red painted decorative motifs, Layer 7 Late.



Fig. 110 - Aşağı Pınar, white on red painted sherds, Layer 7 Late.



Fig. 111 - Aşağı Pınar, white on red painted sherds, Layer 7 Late.

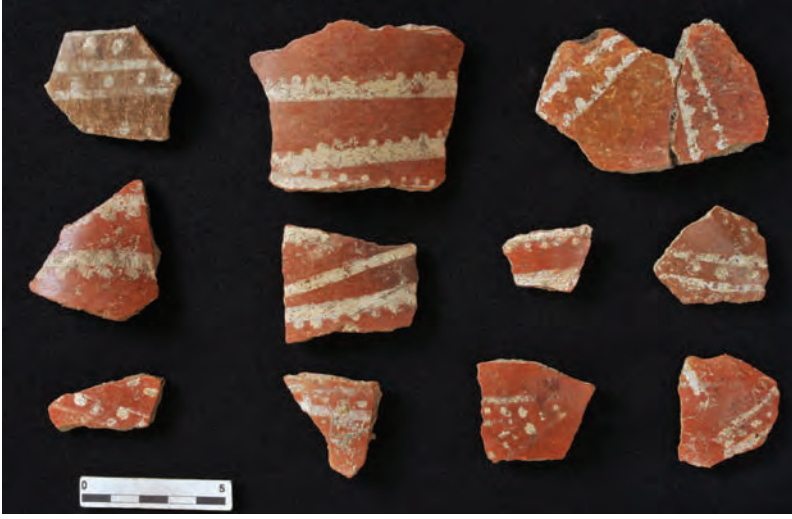


Fig. 112 - Aşağı Pınar, white on red painted sherds, Layer 7 Late.



Fig. 113 - Aşağı Pınar, white on red painted sherds, Layer 7 Late.

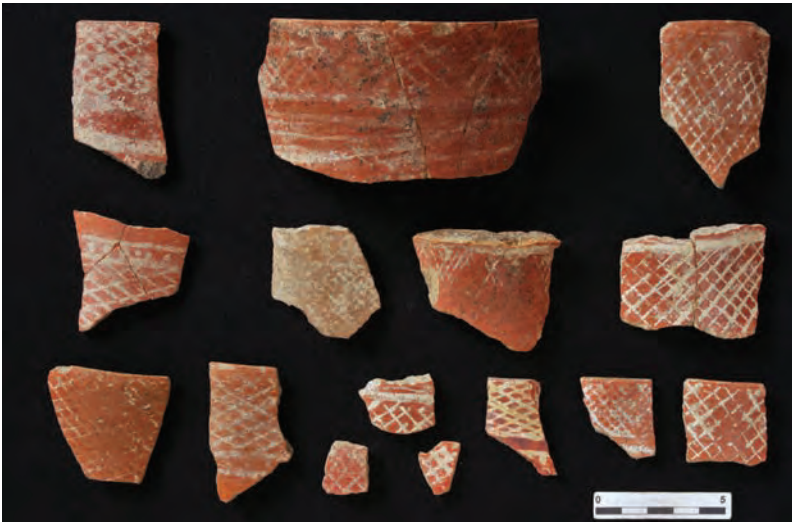


Fig. 114 - Aşağı Pınar, white on red painted sherds, Layer 7 Late.



Fig. 115 -
Aşağı Pınar,
white on red
painted
sherds, Layer
7 Late.



Fig. 116 -
Aşağı Pınar,
white on red
painted
sherds, Layer
7 Late.



Fig. 117 - Aşağı Pınar, vessel
with polychrome painted
decoration, Layer 7 Late.

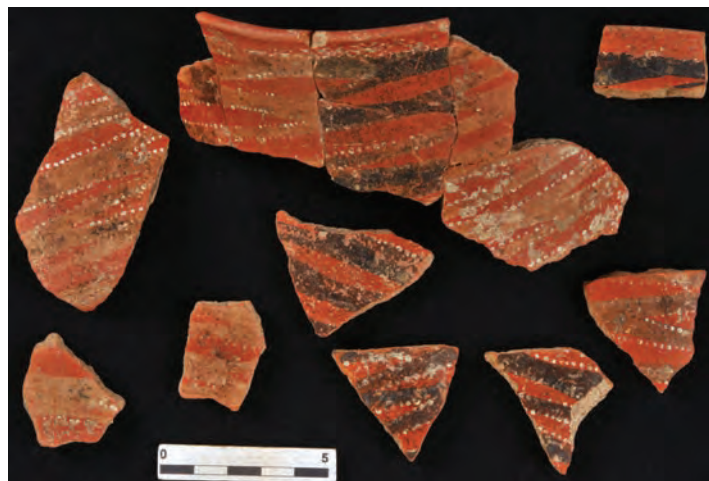




Fig. 118 - Main vessel types of Aşağı Pınar, Layers 6 and 7.



Fig. 119 - Aşağı Pınar, incised and impress-decorated sherds, Layer 7 Late.



Fig. 120 - Aşağı Pınar, incised and impress-decorated sherds, Layer 7 Late.



Fig. 121 - Aşağı Pınar, incised and impress-decorated sherds, Layer 7 Late.



Fig. 122 - Aşağı Pınar, a restored vessel incised and impressed decoration, Layer 7 Late.

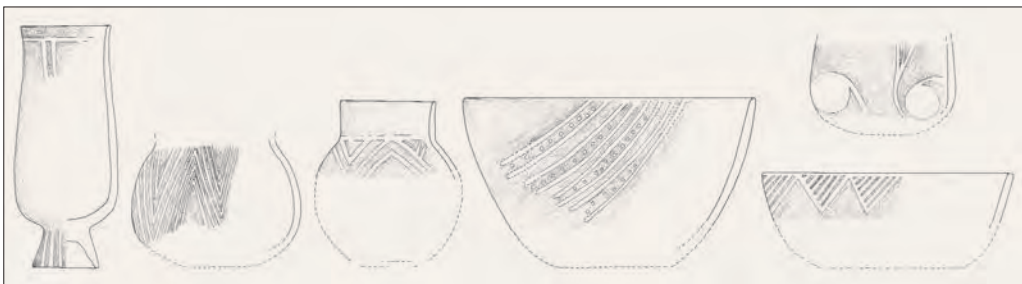


Fig. 123 - Painted vessels of Aşağı Pınar, Layer 7.



Fig. 124 -
Aşağı Pınar,
sherds with
light channel
decoration,
Layer 7 Late.



Fig. 125 -
Aşağı Pınar,
incised and
plastic band-
decorated
sherds, Layer 7.



Fig. 126 -
Aşağı Pınar,
flat bases with
mat-impres-
sions, Layers 6
and 7 Late.

Fig. 127 - Aşağı Pınar, flat bases with mat-impressions, Layers 6 and 7 Late.

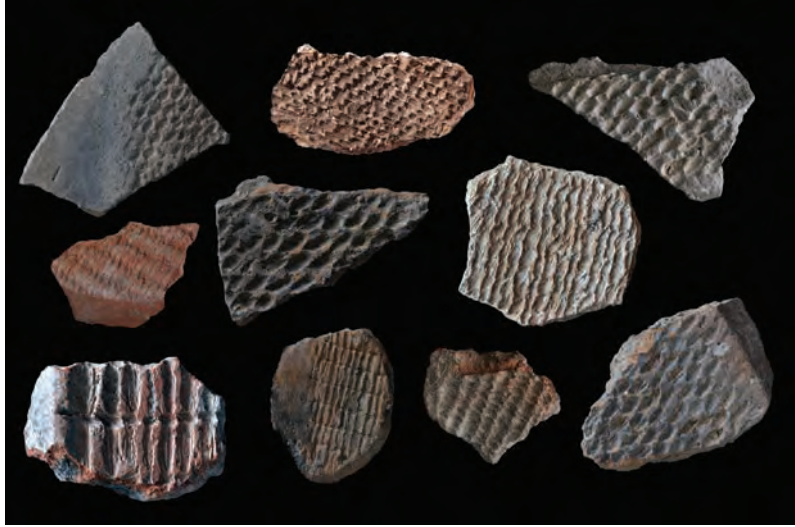


Fig. 128 - Aşağı Pınar, wares that occur through Layer 7.



Fig. 129 - Aşağı Pınar, wares of Layers 7 Early - 8.





Fig. 130 - Aşağı Pınar, wares of Layers 7 Early - 8.



Fig. 131 - Aşağı Pınar, wares of Layers 7 Early - 8.



Fig. 132 - Aşağı Pınar, marble pendants of Layers 6 and 7.



Fig. 133 - Aşağı Pınar, flat figurines, Layers 7 and 8; the one on the left is from upper layers.



Fig. 134 - Aşağı Pınar, rod-like figurines, Layers 7 and 8.



Fig. 135 - Aşağı Pınar, a typical figurine of Layer 7 Late.



Fig. 136 - Aşağı Pınar, figurines with triangular faces, Layer 7.



Fig. 137 - Aşağı Pınar, clay figurine in sitting position, Layer 7 Late.



Fig. 138 - Aşağı Pınar, the so-called Karanovo blades, Layers 6 and 7.



Fig. 139 - Aşağı Pınar, bone spoons, Layer 6.



Fig. 140 - Aşağı Pınar, clay pintadera, Layer 7.



Fig. 141 - Aşağı Pınar, clay pintadera, Layer 7.



Fig. 142 - Aşağı Pınar, festooned bone implements.



Fig. 143 - Aşağı Pınar, a bone hook and toggle-pins, Layers 6 and 7.



Fig. 144 - Aşağı Pınar, *Spondylus* bracelets, Layers 5 and 6.

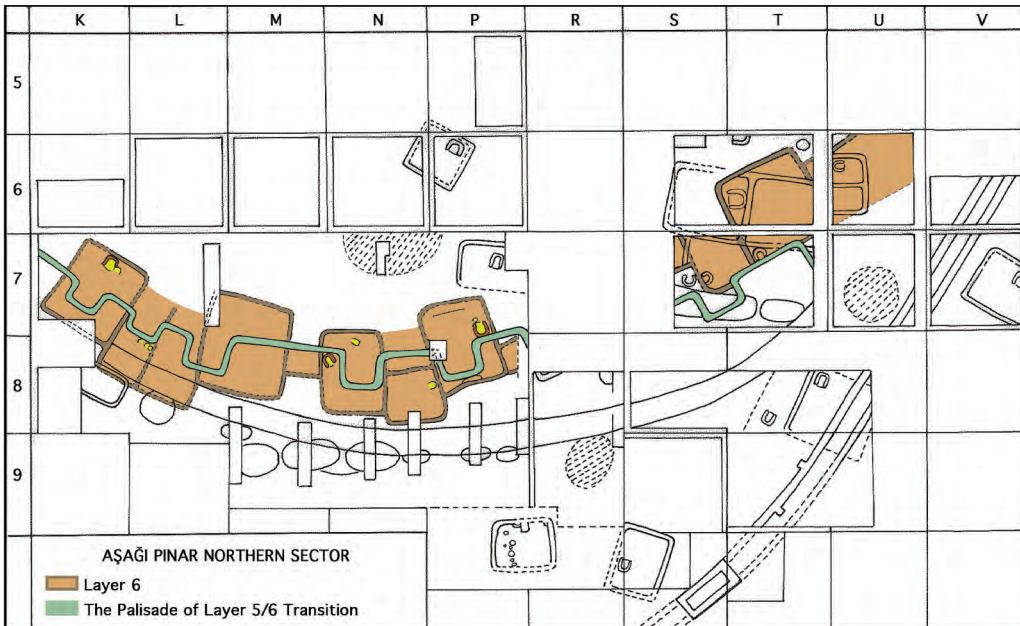


Fig. 145 - Aşağı Pınar, the settlement of Layer 6 with the palisade of Layer 5/6 Transition marked in green.



Fig. 146 - Aşağı Pınar, a detail from one of the rooms of Layer 6 building complex, showing the wall construction system.



Fig. 147 - Aşağı Pınar, a detail from the wall construction of Layer 6.



Fig. 148 - Aşağı Pınar, a detail of a room with oven, collapsed silos, and in situ vessels Layer 6.



Fig. 149 - Aşağı Pınar, silos in Layer 6.



Fig. 150 - Aşağı Pınar, vessels in Layer 6.



Fig. 151 - Aşağı Pınar, vessels in Layer 6.



Fig. 152 - Aşağı Pınar, the so-called tulip-shaped vessels, Layer 6.



Fig. 153 - Aşağı Pınar, fine black burnished vessel from Layer 6.



Fig. 154 - Aşağı Pınar, incised-decorated vessel from Layer 6.



Fig. 155 - Aşağı Pınar, a decorated lid from Layer 6.



Fig. 156 - Aşağı Pınar, a group of celts in situ in Layer 6.



Fig. 157 - Aşağı Pınar, one of the cult tables, Layer 6.



Fig. 158 - Aşağı Pınar, different types of cult tables from Layer 6 buildings.



Fig. 159 - Aşağı Pınar, pillar-like cult objects from Layer 6 buildings.



Fig. 160 - Aşağı Pınar, a figurine from Layer 5/6 Transition.



Fig. 161 - Aşağı Pınar, a figurine from Layer 5.



Fig. 162 - Aşağı Pınar, cylindrical figurines, Layers 2 - 5.



Fig. 163 - Aşağı Pınar, figurines of Layers 2 - 4.

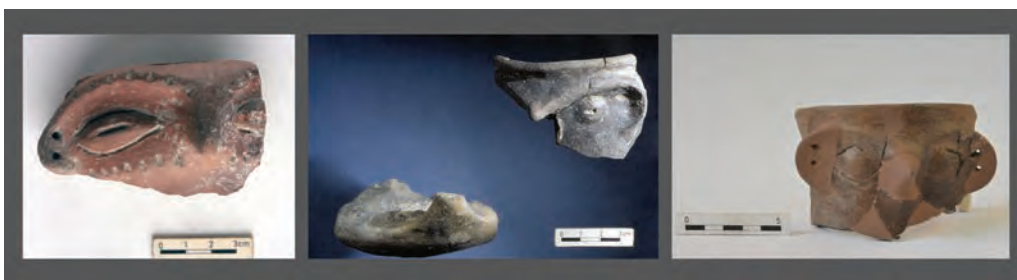


Fig. 164 - Aşağı Pınar, the so-called "Vinča" face depictions, Layers 3 and 4.



Fig. 166 - Aşağı Pınar, vessels of Toptepe type in Layer 3.

Fig. 165 - Aşağı Pınar, a typical vessel of Layer 3.

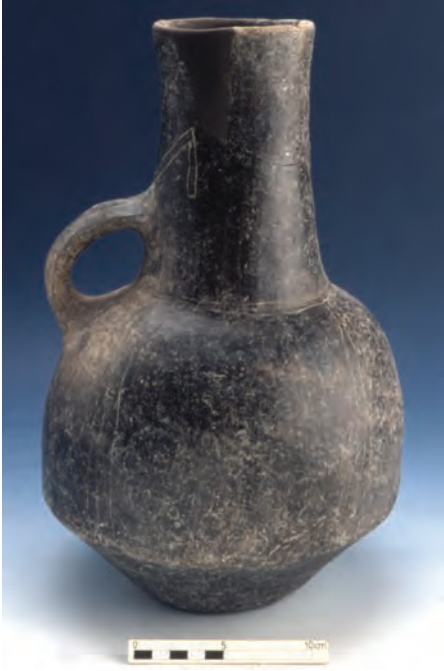


Fig. 167 - Aşağı Pınar, vessels of Toptepe type in Layer 3.



Fig. 168 - Aşağı Pınar, vessels of Toptepe type in Layer 3.



Fig. 169 - Aşağı Pınar, anthropomorphic vessel with human motifs in relief on its body, Layer 3.



Fig. 170 - Aşağı Pınar, anthropomorphic vessel of a seated person. The head is missing, Layer 3.

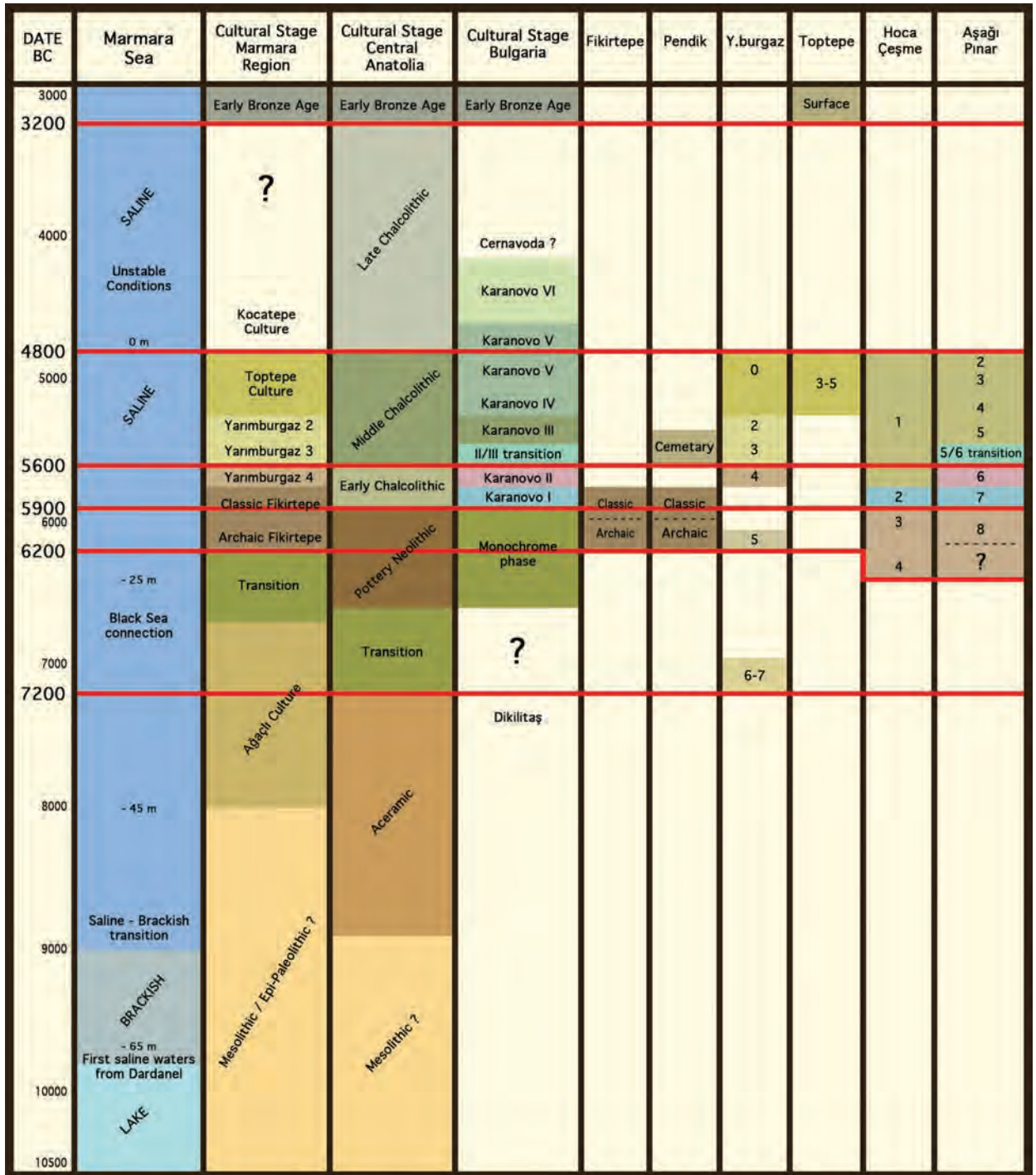


Fig. 171 - A tentative synchronization chart of the Marmara Region.

PERIODS	Mesolithic / Epi-Paleolithic	Pottery Neolithic	Early Chalcolithic	Middle Chalcolithic	cal. BC
DATES	7500 - 7000	6500 - 6000	5500 - 5000	4500 - 5000	cal. BC
Uğurlu		IV	III		
Coşkuntepe					
Aktopraklık		Site C			
Ziljinar		X IX VIII VII VI VA VB			
Menteşe					
Baron		VIIc-VIb			
Yenikapı		Archaic Fikirtepe	Yanmburgaz Phase	Topktepe Phase	
Fikirtepe		Archaic			
Pendik		Archaic Fikirtepe	Cemetary		
Yarımburgaz	7-6	5	4 3 2	0	
Topktepe				3-5	
Hoca Çeşme		4	3 2	1	
Aşağı Pınar		7	8 6 5/6 4 3 2		
DATES	7500 - 7000	6500 - 6000	5500 - 5000	4500 - 5000	cal. BC
PERIODS	Mesolithic / Epi-Paleolithic	Pottery Neolithic	Early Chalcolithic	Middle Chalcolithic	

The chronological table has been put together according to the assessments of the authors of the individual papers.



Major Neolithic sites in Northwestern Turkey.