

The Problems of Dating Prehistoric Axe Factories and Neolithisation in Turkish Thrace

Burçin Erdoğu

Department of Archaeology, University of Durham, UK
Burcin.erdogu@durham.ac.uk

ABSTRACT - Prehistoric axe factories or manufacturing areas have been found in the Sarköy region of Turkish Thrace. So far, they are unique in the prehistoric record of the Balkans and Anatolia. A typological and petrological analysis of the stone axe factories and investigations of their distributions are in progress. Early results show that all the axes are manufactured from the same rock - metabasite. The source of metabasite is the Western outcrops of Ganos Mountain. At the early Neolithic settlement of Hoca Çeşme, stone axes were made of the same rock as the Sarköy sources. In this paper, I discuss the problems of dating prehistoric axe factories, together with the wider problems of the early Neolithic period in Turkish Thrace.

IZVLEČEK - V turški Trakiji v regiji Sarköy so bile odkrite prazgodovinske delavnice oziroma področja, kjer so izdelovali kamnite sekire. Zaenkrat je to edinstven primer v prazgodovinskem zapisu Balkana in Anatolije. V teku so tipološke in petrološke raziskave kamnitih sekir iz delavnic in raziskave njihove razprostranjenosti. Raziskave zaenkrat kažejo, da so bile vse sekire izdelane iz iste kamnine - metabazita. Površinska nahajališča te kamnine ležijo na zahodnem delu hriba Ganos. Tudi v zgodnjeneolitski naselbini Hoca Çeşme so bile kamnite sekire izdelane iz enake kamnine. V članku razpravljamo o težavah pri datiranju prazgodovinskih delavnic sekir ter o širših vprašanih zgodnjeneolitskega obdobja v turški Trakiji.

KEY WORDS - stone axe production; neolithisation; Thrace; Western Anatolia

INTRODUCTION

According to R. Wagner, "in learning how to use tools, we are secretly learning how to use ourselves" (Wagner 1975:77). He claims that tool use is about the objectification of our skills as the controls which tools place on the relationship between humans and the environment. In prehistoric times, stone served as the main material for making tools. Only stones that met certain technological requirements were used and they were deliberately sought out. Stone is most intractable and the most difficult material to work on. Each tool took so much labour to produce that it was among the most valued of a person's possessions. The polished stone axe is a very significant tool type, especially in the Neolithic period. The polished stone axe provided a central symbol within Neolithic society because it effectively linked a whole

range of spheres of human activity (Tilley 1996:114). The axe was a basic tool in subsistence, an important exchange item linking together communities, personal status and prestige items in a community. The stone axes which circulated within society had a worth which would have been related to debt and kinship, and to the articulation of relationships between persons and groups (Thomas and Tilley 1993:290). According to Tilley: "the axe provided a durable symbolic medium for creating and maintaining social ties and dependencies through ritual and everyday activities" (Tilley 1996:114).

K. Kristiansen has argued that the axe links together agricultural production, exchange and ritual consumption and feasting (Kristiansen 1984:79). Ethnogra-

phical studies show that the leader in lineage groups in the Pokou, Ussiai and Matankol people of the Admiralty Islands is in possession of the axe/adze and can also pass it on to his successor (*Ohnemus 1998.152*). He holds the axe/adze in his hand while speaking and dancing in ceremony. On a sad occasion, such as death, the leader appears without his axe/adze. The axe/adze is also used in peacemaking talks or punishment. It stands for law and order, peace and joy. Among Australian Aboriginal societies, the stone axe was prominent in interpersonal relations, in the totem system and in the wider belief system (*Taçon 1991.194*).

Axes probably had important roles in ceremonial activities. In the Papua New Guinea highlands, the largest axes were valued especially for ceremonial and display purposes (*White and Modjeska 1978.29*). During the mortuary feast of the Sabarl Islanders of Papua New Guinea, the dead paternal clan publicly presents five ceremonial axes to its maternal clan heirs. In absolute secrecy, the axes are used to construct in effigy the corpse of the honoured dead (*Battaglia 1983.291*). The axes were placed next to the dead against one another, with the heads facing in the same direction. They rest on their blades and points, resembling angels in the air. They are said to represent a human body reclining in its grave. The axes and the dead become intertwined in the grave. Then, the deceased was raised as it were from the grave and re-installed at the centre of reproductive life. This marks the beginning of his life as an ancestor and establishes him as a source of economic and spiritual aid for the living. The corpse is magically endowed with the power to reproduce axe blades; it becomes more than a representation of the ancestor, it becomes a concrete substitute for the 'child' as a reproductive unit of his/her society (*Battaglia 1983.298*).

The axes may serve as points of reference for broader belief systems. In Neolithic chamber tombs in Brittany, the deposition of particular types of stone axes is relatively restricted, especially of those obtained from great distances. By passing from hand to hand, over the distance from their sources, each axe would have built up its own genealogy, as myths became attached to them (*Kristiansen 1984.79*). The tomb may act to fix all of those myths in one location. Axes were so deeply connected with the person that the history of axe and person becomes intertwined. Thus the burial of the axes introduced the presence of this person to the depositional context (*Thomas and Tilley 1993.293*). In Neolithic

chamber tombs in Brittany, some of the axes were deliberately broken (*Thomas and Tilley 1993.290-91*). Axes may be regarded as having biographies, like persons. They are born (produced), exchanged and destroyed (die). As Chapman argued, the relationship between fragmented objects and persons is an important, interpretative link (*Chapman 1996.214; 2000*). Axes were deeply connected with the person, and when the body died, the axes were ritually destroyed.

In the centre of the chamber at Mané-er-Hroëk, Brittany, a large ring of jadeite and a huge axe was arranged so that its butt penetrated the ring. Behind the blade of the axe were two beads, and behind this were a perforated axe and a further bead. All these axes and beads are set along a north-south axis. According to Thomas and Tilley, the sexual symbolism is here quite explicit that all axes represent phalluses (*Thomas and Tilley 1993.291-293*). Among the Australian Aboriginal groups in the Yir Yoront of North Queensland and Western Arnhem Land, stone axes and other tools were recognised as belonging to men, especially older men, and embodying their ancestral power (*Taçon 1991.194-195*). The women and young had to borrow the axe from the older male. In the borrowing, the status, position and power of older males were reinforced. Aborigines also believed that the axes were formed from ancestral bones. In Sabarl Island society, the axes are personified persons and identified with the bodies of the persons making them (*Battaglia 1983.295*). The axe blade is called "Hinona" - the "content" or "vital substance" of the valuable. In the context of the physical person, "Hinona" is the term for "genitals" and "right hand", a symbolism associated with economic and biological reproduction. The axe blade broadly represents the reproductive potential of a singular person (*Battaglia 1990.133*).

Factories or manufacturing areas are places where craft specialists perform a limited set of activities on a frequent, perhaps regular basis in order to produce items for exchange with other groups of people. Stone axe factories or manufacturing areas were recently found in Turkish Thrace. Although the field data are not complete, typological and petrological investigations of prehistoric stone axe factories show us the operational chain for prehistoric axe manufacture and the raw material from which the axes are made. In this article, I would like to discuss the problems of the dating of stone axe factories, together with the wider problems of the early Neolithic period in Turkish Thrace.

Prehistoric Axe Factories in Turkish Thrace

In 1989, a large number of roughouts was sold to Istanbul Museum by a farmer from the Sarköy region. Scholars working in Eastern Thrace were for a long time looking for the site from which these roughouts came. In 1995, the stone axe factory of Yartarla was found by M. A. Isin, director of Tekirdag Museum, and he demonstrated that the roughouts held in Istanbul Museum come from Yartarla. Later, two more axe factories or manufacturing areas, Hamaylitarla (Buruneren) and Fener Karadutlar, were found by O. Ozbek in the Sarköy region. A geo-archaeological project since 1997 has focused on the typology and petrology of axes and the wider questions regarding these sources (*Ozbek in this volume*). However, since there are no intensive archaeological surface surveys in the Sarköy region yet, it is possible that other such sites exist.

As a result of the investigation of prehistoric axe factories, two topographical locations can be distinguished. The stone axe factory of Yartarla is located ca. 14 km North-West of Sarköy, ca. 3 km north east of the village of Sofuköy. It is situated on a high terrace of the Kavak Suyu River. The Kavak Suyu River rises in the Ganos Mountain and descends westwards to the Gulf of Sazoz. It has a flat, marshy, alluvial mouth. The Kavak Suyu runs through wide gorges, with steep sides that in some places rise vertically from the river, reaching a height of 200–250 m, at which Yartarla was formed. Hamaylitarla (Buruneren) and Fener Karadutlar are situated on well-watered lowlands at the southern foot of Mounts Helvaci and Sarikayalar. Hamaylitarla (Buruneren) is located ca. 17 km West of Sarköy and ca. 1 km west of the village of Kizilcaterzi. Fener Karadutlar is situated on Cape Ince, on the northern shore of the Sea of Marmara, ca. 1 km northwest of Hamaylitarla. The southern foot of Mount Helvaci, Kazanagzi stream and a number of small seasonal streams run into the Sea of Marmara, constituting flat, fertile cultivated land (Fig. 1).

All the axe factories were found associated with prehistoric settlements.

In all examples, roughouts, flakes and hammer stones were found in and around the prehistoric settlements. In three sites, all axes are manufactured from the same rock, metabasite, and the operational chain for prehistoric axe manufacture is the same.

The stone axe factories of Hamaylitarla (Buruneren) and Fener Karadutlar are situated at the rock source. The source is in western outcrops of the Ganos Mountains. However, Yartarla is about 3 km away from the source.

Problems of Dating Prehistoric Axe Factories

Although hundreds of stone axes are discovered at excavations each year in the Balkans and Anatolia, until now no prehistoric axe factories have been found. However, at the site of Divostin in Serbia, numerous unfinished axe specimens indicate the method of manufacture. In Divostin phase II, a working floor with roughouts, drilling pieces, flakes and also a large pit filled with the flakes of roughouts were found (*Prinz 1988.257–259 and Plan IIIa*).

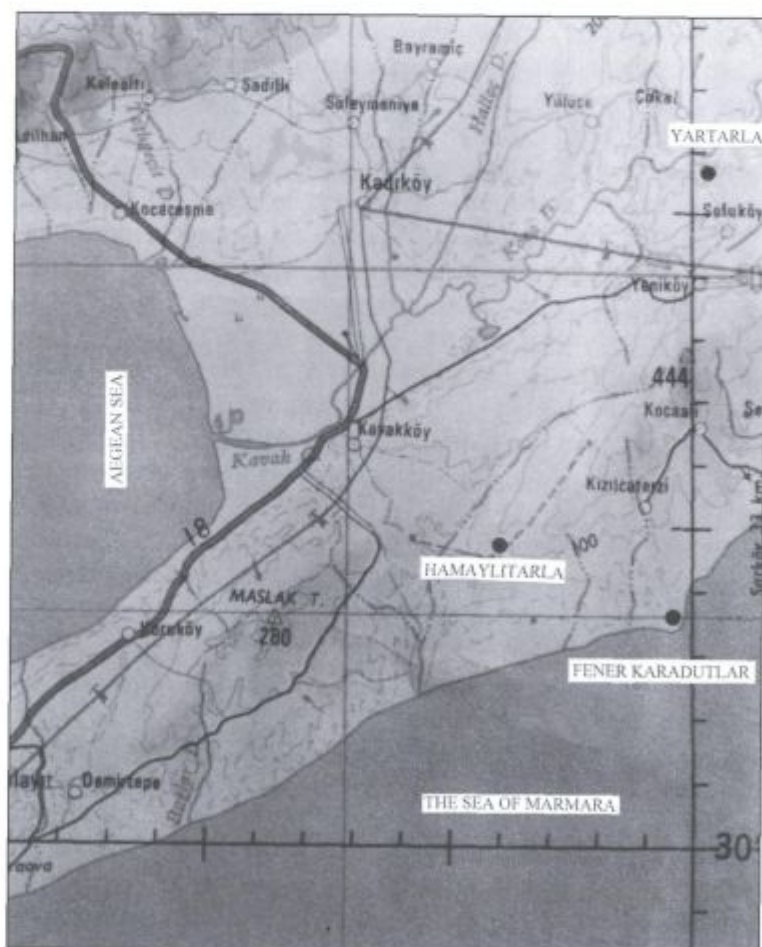


Fig. 1. Location map for Prehistoric axe factories in Turkish Thrace.

This concentration, Sector B, seems to indicate an area where stone axes were manufactured. Divostin phase II is dated to the Late Vinča Culture (4th millennium BC). In Obre II in Bosnia, the regular shapes of sixteen stone axes were found between two stone slabs in sounding D, together with two big flint knives, three bone awls and two round baked clay objects. This has been interpreted as an axe-making area (Benac 1973.82 and Fig 13a). A similar axe-making area was also found in sounding VII at Obre II (Benac 1973.82). Obre II, sounding D, is dated to the Classic Butmir Culture (4th millennium BC). However, the dates from sounding VII in Obre II fall within 5th millennium BC. In Bosnia, at the site of Kalošević-Malo Brdo a large number of flaked stone axe roughouts was discovered (Chapman 1976.146). The pottery on the site was found to date to the Late Vinča Culture. Kalošević-Malo Brdo is probably an axe-manufacturing site; however, there are as yet no detailed investigations.

The dating of axe factories in Eastern Thrace is problematic. No complete axes were found in the factories. In the settlement of Yartarla, Late Chalcolithic and Early Bronze Age sherds were collected. The settlement of Fener Karadutlar was completely destroyed by the building of a Byzantine church; only a few Early Bronze Age sherds were found. At the site of Hamaylitarla (Burunerren), early Neolithic sherds together with a few Early Bronze Age sherds were collected. It seems evident that, without excavations, it is difficult to date these stone axe factories. The petrological investigation of polished stone axes from excavated sites and surface collections in Eastern Thrace is still in progress. On the other hand, early results from the Early Neolithic site of Hoca Çeşme, near the town of Enez, showed that the polished stone axes of Hoca Çeşme was made from metabasite, probably from the Sarköy region. Pottery

similar to that of Hoca Çeşme was also found in Hamaylitarla. The following discussions will focus on materials from the site of Hamaylitarla.

Hamaylitarla (Burunerren) and Its Relations

Hamaylitarla was first discovered by M. A. Isin, director of Tekirdag Museum at the beginning of the 1990's and initially dated to the Early Bronze Age. In 1997, O. Ozbek and the author visited the site and found stone axe rough-outs, flakes and hammer stones together with Early Neolithic pottery. As a result of the geo-archaeological project of O. Ozbek, we understand that Hamaylitarla is an axe factory associated with prehistoric finds. The site of Hamaylitarla measures about 120x120 m. The stone axe factory is spread over 250 square meters. An area of 70x70 m was investigated, using alternately spaced 10x10 m grids (Tab. 1 and Fig. 3).

The vast majority of the Hamaylitarla pottery, up to 90%, is red slipped and burnished. Black and brown burnished sherds were found in smaller quantities. All pottery is handmade, thin-walled and with an abundant use of grit and sand-temper. A little chaff is usually present in the paste. A number of sherds are tempered with chaff only. Mica is rare or absent. The paste colours are black, buff or cream. The different tones of the red and pink slip (mainly 2,5 YR 6/6 Red) are applied on both surfaces or on the exterior surface only. Sometimes the firing was irregular, causing mottling and smoke staining on the surface. The thickness of the application varies greatly. Surfaces are usually burnished. Sometimes the interior surfaces are smoothed only. The range of shapes consists of deep bowls with S profiles, bowls with plain rims and flaring sides, straight-sided bowls, bowls with angle-necks and hole-mouth vessels. Vertically placed tube-like and knob-like tubular lugs, as well as crescentic lugs, are characteristic. Flat and ring bases were found. For decoration, bands in relief occur (Figs. 4 and 5).

Pottery similar to Hamaylitarla was also noted at Kaynarca, near the town of Gelibolu (Özdoğan 1986; 1999, Fig. 43). Recent surveys in Western Anatolia have revealed new Early Neolithic sites, such as Tepeköy, Araptepe, Höyücek II, Nemrut (Meriç 1993), Coskuntepe (Seeher 1990), Tepeüstü-Barbaros, Kyme-Ege Gübre and Bergama-Pasaköy. Similar wares and shapes occur especially at the sites of Araptepe, Tepeüstü-Barbaros, Kyme-Ege, Gübre and Bergama-Pasaköy (personal observation).

Grid no.	Neolithic pottery	E. B. A pottery	Chipped stone	Weight [g] (Neo. only)
1	136	2	0	1500
2	33	1	1	500
3	21	1	0	300
4	76	2	0	800
5	120	27	1	1200
6	10	12	0	200
7	6	2	0	60
8	19	6	6	300
9	10	9	2	200

Tab. 1. Summary results of Hamaylitarla.

Hamaylitarla was dated to the Classic Phase of the Fikirtepe Culture by Özdoğan (1997.21; 1999.214). Before talking about dating Hamaylitarla, I would like to discuss briefly the Fikirtepe Culture. In the Marmara region, the Fikirtepe culture is the earliest Neolithic Culture in the regional sequence. According to Özdoğan and Efe, three evolutionary phases were distinguished on the basis of pottery (Özdoğan 1997.19; 1999.213; Efe 1996.51). The earliest phase of the Fikirtepe Culture, called the Pendik phase or archaic phase, is known from the lower layers of the Fikirtepe and Pendik excavations (Özdoğan 1997.21). Pottery from this phase comprises brown-grey, dark grey and sometimes pale orange, reddish brown coloured, burnished wares. The most common shapes are bowls and jars with either simple convex sides or with a slight "S" curve. Hole-mouth vessels, exaggerated large lugs and vertically perforated knobs are also common. Decoration is rare, mainly consisting of incised lines. The most common motifs are parallel lines, triangles, squares and hatching.

The second phase is the Classic Fikirtepe Phase. It is best represented at Pendik and the upper horizon of Fikirtepe. According to Özdoğan, the transition between the first and the second phases is difficult to define (Özdoğan 1997.21). There is a gradual development in the pottery. The most common form is a bowl with "S" curved profiles and an oval mouth. Besides the heavy lugs, there are also tubular lugs. Four-footed rectangular vessels or boxes are very characteristic. There are also lids. The decoration is the same as in the previous phase, but the designs are more complex. During the Classic Fikirtepe phase, the red slipped, burnished wares began to appear. According to Özdoğan, Ilipinar level X represents the transition between the first and the second phases (Özdoğan 1997.21; 1999.213). Classic Fikirtepe pottery was also found in the Kütahya-Eskisehir Region, Inner Western Anatolia (Efe 1995; Özdoğan 1997.21).

The last phase of the Fikirtepe Culture is called Developed Fikirtepe or the Yarimburgaz 4 phase. This phase is characterized by elaborate decoration made by wedge-like excisions, often set directly behind one other or else set in zigzags. The designs are more complex, which Özdoğan called textile-like designs (Özdoğan et al. 1991). Dark faced wares are common. The surfaces of vessels are mostly burnished, and occasionally a dark slip is applied. The red slipped and burnished wares rarely occur. The most characteristic shapes are short-or tall-necked jars with squat globular bodys. Developed Fikirtepe type

sherds were also noted in Ilipinar level VIII. The sites of Demirci Höyük (Seeher 1987), Orman Fidanlığı and Kanlitas (Efe 1989/90; 1996) in the Eskisehir region include typical developed Fikirtepe sherds.

Recently, L. Thissen proposed that differences in the main vessel shapes between sites on the Eastern Marmara coast and Ilipinar X may be related to differences in the subsistence base rather than indicating chronological variety (Thissen 1999.32). This means there could be considerable regional and chronological variation. According to Thissen and Roodenberg, the Iznik-Yenisehir region was settled by early farmers migrating from Central Anatolia (Thissen 1999; Roodenberg 1993). However, for Thissen, Fikirtepe sites on the Eastern Marmara coast show the simultaneous adaptation of farming techniques and pottery, probably as a result of contact with the Iznik-Yenisehir region (Thissen 1999.38). Özdoğan also agrees that Epi-palaeolithic populations on the Eastern Marmara coast adapted Neolithic elements (Özdoğan 1998.450; 1999.215).

Comparisons between the Iznik-Yenisehir region and the Eastern Marmara coasts show that the buildings of Fikirtepe and Pendik are oval huts with depressed floors and wattle and daub walls. However, the buildings of Ilipinar and Mentese are rectangular, constructed in wattle and daub. The subsistence of Ilipinar was mostly dependent on domesticates, while Fikirtepe and Pendik were based on mixed hunting, fishing and a stock breeding economy, with some agriculture (Roodenberg 1995.167-168; Özdoğan 1989.203). The chipped stone industries of both Fikirtepe and Pendik are both similar to the preceding Epi-palaeolithic tradition. Although Özdoğan argued that the chipped stone industry of Ilipinar is different from those of Fikirtepe and Pendik (1997.23), recent work shows that Ilipinar represent a continuation of a local Epi-palaeolithic tradition analogous to Fikirtepe and Pendik (Thissen 1999.37). Moreover, the chipped stone industries from Fikirtepe-type settlements in the Eskisehir region, such as Fındık Kayabasi and Asarkaya, are also similar to the Epi-palaeolithic tradition (Efe 1995.108).

¹⁴C dates from Yarimburgaz Cave (Özdoğan et al. 1991), Mentese (Thissen 1999; Roodenberg 1999) and Ilipinar (Roodenberg et al. 1989/90; 1995) are seen in Table 2. The Fikirtepe Culture can be dated to c. 6200-5700 cal BC.

Now I shall discuss some observations about the early Neolithic period in Western Anatolia and the

Marmara Region. I believe that these observations are directly related to the dating of Hamaylitarla and also correlations between Western Anatolia and the Marmara Region (Fig. 2).

① 90% of the Hamaylitarla assemblage is red slipped and burnished. The Fikirtepe Culture is marked by dark monochrome pottery. During the Classic Fikirtepe phase, red slipped and burnished wares began appearing. According to Özdoğan (1999:213), in the Classic Fikirtepe phase, red sherds comprise six to ten percent of the total assemblages. On the other hand, the excavations of Ilipinar and Mentese have not revealed red slipped and burnished sherds (*personal communication with L. Thissen*). In Western Anatolian sites, red slipped and burnished sherds similar to those of Hamaylitarla are found. This type of pottery is very common in Western Anatolia (Meriç 1991; Harmankaya et. al. 1997).

② Vertically-placed tubular lugs characteristic for the Lake District as well as Western Anatolia are attested at Hamaylitarla. Vertically placed tubular lugs do occur rarely in the Classic Phase of the Fikirtepe Culture (*only one published example: Özdoğan 1999, Fig.33, D.231*), but are not characteristic elements of the Fikirtepe Culture.

③ There are some similarities between Hamaylitarla sherds and the early phases of Hoca Çeşme. Before explaining these similarities, I would like to discuss Hoca Çeşme. Excavations at Hoca Çeşme-Enez, conducted by M. Özdoğan between 1990 and 1992, suggest the existence of a different Early Neolithic culture in Eastern Thrace, called Hoca Çeşme Culture by Özdoğan (Özdoğan 1997). Hoca Çeşme is a small mound on a natural rise overlooking the delta of the Meriç River, ca. 5 km east of the district centre of Enez. It measures about 80 x 70 m and the archaeological deposit is about 2 m thick (Özdoğan 1993:182; 1998; 1999, 217-219). Four phases were discovered in Hoca Çeşme. Phase IV is the earliest phase at Hoca Çeşme. The architectural remains of this phase were built immediately on the bedrock. Houses are oval, wattle and daub, hut-like structures, cut into bedrock some 30 cm deep. Their diameter varies from 5 to 6 m. The settlement was surrounded by a massive stone fortification wall around 1.20 m thick, and it sits right on the bedrock. Post-holes found just behind the wall indicate that the fortification wall was supported by a wooden structure (Özdoğan 1998:439). The pottery of this phase is characterized by well burnished, thin walled red or black wares. Deep bowls with "S"-curves, vertically placed tubular lugs, crescent-shaped lugs, bead rims and flat bases are common elements of this phase. There are also a few zoomorphic vessels. Decoration is rare, mainly consisting of fine curvilinear or vertical bands in relief. There are also some grooved and incised sherds.

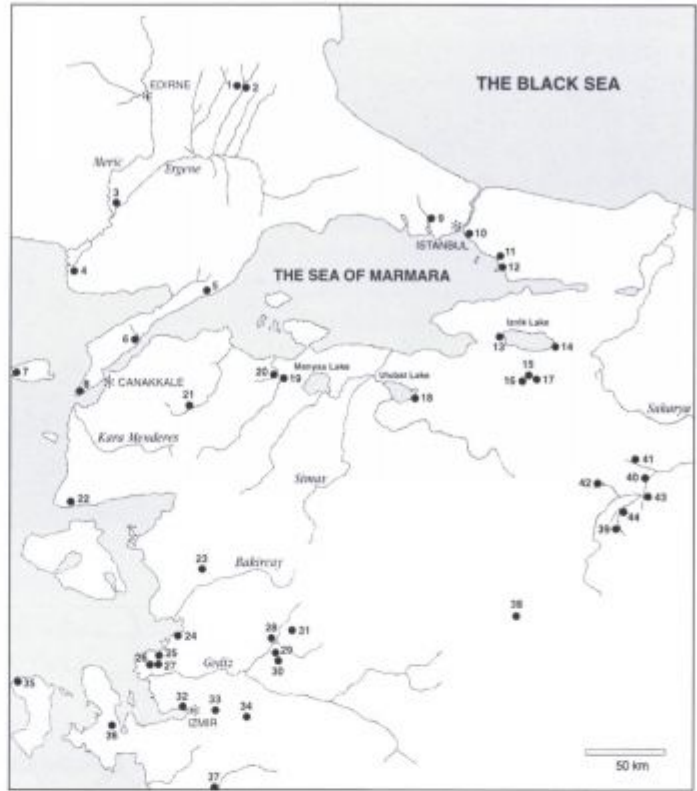
Lab. No.	Level	¹⁴ C Age BP	Cal BC (1σ)
Gm-15529	Yarimbürg. 4	7330±60	6231 (6216,6167,6164) 6084
Gm-18745	Yarimbürg. 4	6650±280	5797 (5615,5585,5561) 5322
Gm-24463	Mentese	7260±60	6213(6158,6143,6082) 6028
Gm-24461	Mentese	7170±60	6156 (6018) 5931
Gm-24462	Mentese	7050±35	5986 (5975,5950,5916) 5844
Gm-17046	Ilipinar X	7100±30	6006 (5988,5940,5929) 5920
Gm-15085	Ilipinar X	7100±50	6012 (5988,5940,5929) 5960
Gm-15087	Ilipinar X	7070±50	5992 (5981,5946,5921) 5844
Gm-17045	Ilipinar X	7025±30	5979 (5890) 5841
Gm-17048	Ilipinar X	7025±90	5992 (5890) 5794
Gm-17047	Ilipinar X	6925±70	5890 (5792)5724
Gm-15084	Ilipinar X	6440±50	5475 (5466,5444,5401, 5382) 5325
Gm-15077	Ilipinar IX	7020±50	5982 (5889,5846,5845) 5810
Gm-16144	Ilipinar IX	6935±35	5840 (5835,5834,5799) 5735
Gm-15078	Ilipinar IX	6920±70	5867 (5787) 5722
Gm-16145	Ilipinar IX	6800±90	5736 (5711,5678,5672) 5624
Gm-16146	Ilipinar IX	5330±80	4320 (4221,4163,4118, 4055) 4003
Gm-17052	Ilipinar VIII	6995±45	5973 (5869,5861,5842) 5805
Gm-17054	Ilipinar VIII	6990±30	5890 (5866,5864,5841) 5807
Gm-17055	Ilipinar VIII	6980±45	5957 (5840,5816,5815) 5795
Gm-17051	Ilipinar VIII	6960±45	5879 (5838, 5822,5809) 5749
Gm-17056	Ilipinar VIII	6950±45	5870 (5837,5826,5806) 5742
Gm-16149	Ilipinar VIII	6890±90	5841 (5734) 5671
Gm-17053	Ilipinar VIII	6750±65	5718 (5658,5651,5640) 5565

Ref. University of Washington. Radiocarbon Calibration Program 2000

Tab. 2. The Fikirtepe Culture dates.

Hoca Çeşme phase III consists of two architectural layers. Houses

Fig. 2. Distribution of Early Neolithic Settlements in Western and North-Western Turkey: 1. *Asagi Pinar*, 2. *Bulgar Kaynagi*, 3. *Maya Baba*, 4. *Hoca Çeşme*, 5. *Hamaylitarla*, 6. *Kaynarca*, 7. *Ugurlu*, 8. *Karaagacetepe*, 9. *Yarimburgaz*, 10. *Fikirtepe*, 11. *Pendik*, 12. *Tuzla*, 13. *Ilipinar*, 14. *Hoyucek*, 15. *Marmaracik*, 16. *Mentese*, 17. *Yenisehir II*, 18. *Aktopraklik*, 19. *Taracci*, 20. *Yilanlik*, 21. *Calca*, 22. *Coskuntepe*, 23. *Pasakoy*, 24. *Caltidere*, 25. *Kyme-Ege Gubre*, 26. *Araptepe*, 27. *Hoyucek II*, 28. *Kayislar*, 29. *Nuriye*, 30. *Alibey*, 31. *Morali*, 32. *Kucuk Yamanlar*, 33. *Ulucak*, 34. *Nemrut*, 35. *Agio Gala*, 36. *Tepeustu-Barbaros*, 37. *Tepekoy*, 38. *Akmakca*, 39. *Asarkaya*, 40. *Orman Fidanligi*, 41. *Demirci Hoyuk*, 42. *Kanlitas*, 43. *Keskaya*, 44. *Findik Kayabasi*.



are again oval in plan and the fortification wall still exists, but with some renovations. On the north western edge of the settlement, one house is different from the others. It is a big oval hut of 7 m diameter, and its floor was paved with small pebbles coated and painted in red. The pottery of phase III shows a gradual development in fabric and decoration. All the ware types of Phase IV continue, although they are slightly coarser and thicker. Red coating on black burnished ware appears. There are also red-black, and light cream-red-black mottled sherds. Vessel shapes are similar to the previous phase. However, the profiles are now more carinated and necked jars are slightly increasing.

Phase II consists of three architectural layers. This phase is marked by a change in the plan and construction techniques of the buildings. The houses are rectangular in plan, with plastered walls. There are domed ovens on raised platforms; round or rectangular bins and working platforms were found inside the houses. The fortification wall was still in use. The red and black wares of the previous phases were now noted in lesser amounts. In phase II, there is an increasing amount of reddish-brown and matt black sherds. The sherds are notably thicker. Some new shapes are attested, such as footed rectangular or triangular vessels with excised or incised decoration, and tall-necked jars sometimes with small handles. The decoration of the preceding phases continues. Fluting and intentional mottling also occur. There are also some red on cream, red on black, white on black and white on red painted sherds. According to Özdoğan, houses and pottery, especially white on red sherds of phase II, are strongly reminiscent of Karanovo I period of Bulgaria (Özdoğan 1997; 1998.448). A few red on buff painted sherds in Phase II are also similar to Early Sesklo painted sherds (Özdoğan 1998.449).

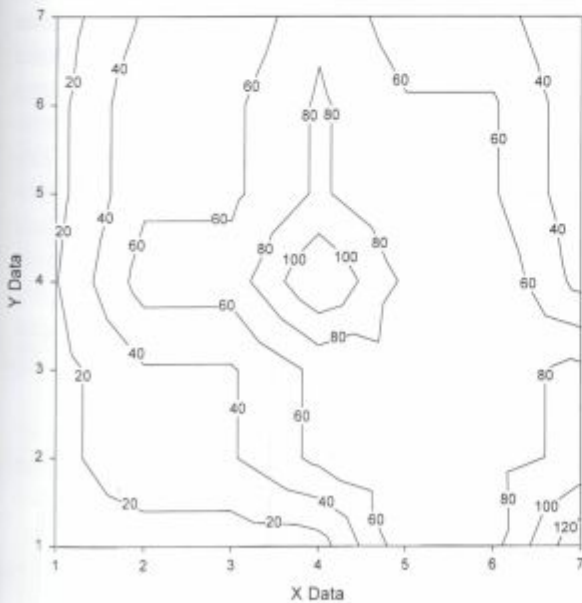


Fig. 3. Contour plan of Early Neolithic pottery distribution, Hamaylitarla.

Phase I deposits have been considerably eroded by agricultural activity. In this phase, Toptepe phase I and the Kumtepe Ia-Besiktepe type of pattern-burnished bowls were found together with Karanovo III-IV types of sherds.

A number of ^{14}C dates are available at Hoca Çeşme (Özdoğan 1997:28; 1998). They are presented in Table 3.

Although there are some technological differences between the pottery of Hoca Çeşme and Hamaylitarla, a basic similarity between the sites cannot be denied. Deep bowls with S curves, vertically placed tubular lugs, crescent-shaped lugs and bead rims constitute links between both sites. However, some of the forms and decorations at Hoca Çeşme are absent in Hamaylitarla. On the other hand, Hamaylitarla pottery is slightly coarser than that of Hoca Çeşme. The pottery of Hoca Çeşme is elaborately made and the surfaces are lustrously burnished. It is not yet clear whether these differences in pottery are due to chronological factors (i.e. Hamaylitarla is earlier than Hoca Çeşme), cultural differences (i.e. the site of Hamaylitarla belongs to the Fikirtepe Culture, while Hoca Çeşme does not) or social variation (i.e. Hamaylitarla is a manufacturing site occupied by craft specialists only).

In addition, Özdoğan compares Hoca Çeşme to Western Anatolian sites (Özdoğan 1997). Above, I also compare Hamaylitarla to Western Anatolian sites, such as Tepeüstü and Araptepe.

④ According to Özdoğan, Hoca Çeşme is an Anatolian colony in Eastern Thrace (Özdoğan 1997; 1998:450). 'The pottery, small finds, the lithic technology, and the domesticates are unmistakably of Central Anatolian origin' (Özdoğan 1997:26). There is a close similarity in the pottery between early Hoca

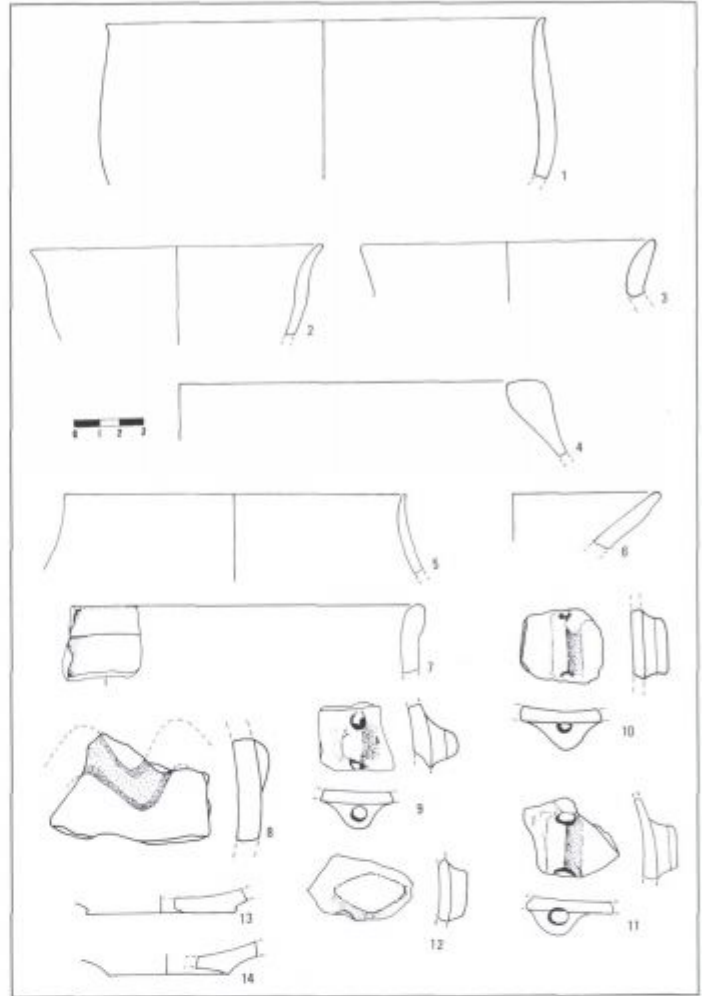


Fig. 4. Pottery from Hamaylitarla (Buruneren).

Çeşme and Hacilar IX-VI and Kuruçay 11-13. According to Özdoğan, the lithic technology is said to have characteristic traits of the Central Anatolian cultures (Özdoğan 1997). Connections with Anatolia are also documented by figurines and pseudo-stamp seals (cf. Hacilar: Mellaart 1970:Fig. 187). An analysis of the animal bones of the lower levels at Hoca

Çeşme determined that all the animals were domesticated (Buitenhuis 1994). However, round building structures of the early Hoca Çeşme different from those in Central Anatolian settlements.

In the course of our survey on the island of Gökçeada, c. 20 km west of the coast of the Gelibolu Peninsula, we found a new early Neolithic site, Ugurlu, with pottery exactly similar to Hoca Çeşme (Fig. 6). Ugurlu is a low mound c. 900 m northeast of the village of Ugurlu in the western part of

Lab. No.	Level	^{14}C Age BP	Cal BC (1 σ)
Bln-4609	IV	7637 \pm 43	6473 (6459) 6439
Grn-19779	IV	7360 \pm 35	6233 (6224) 6110
Grn-19355	IV	7200 \pm 180	6229 (6056,6042,6028) 5845
Grn-19357	III	7135 \pm 270	6234 (6005,6003,5994) 5728
Grn-19780	III	6920 \pm 90	5886 (5787) 5718
Grn-19311	III	6960 \pm 65	5955 (5838,5822,5809) 5734
Grn-19781	III	6900 \pm 110	5886 (5741) 5665
Grn-19310	II	6890 \pm 280	6019 (5734) 5535
Grn-19782	II	6890 \pm 60	5837 (5734) 5718
Grn-19356	II	6520 \pm 110	5609 (5478) 5369

Ref. Univ. of Washington. Radiocarbon Calibration Program 2000

Table 3. Hoca Çeşme dates.

the island. In Ugurlu, red and black slipped, well burnished, thin-walled sherds were found similar to those of Hoca Çeşme IV. Most of the forms are deep bowls with S profiles and bead-rims. There are a significant number of sherds with vertically placed tubular lugs, crescent-shaped lugs and ring-bases. There is also a piece of a zoomorphic vessel. In Ugurlu, red-black or light cream-red-black mottled sherds were also found as Hoca Çeşme III type. However, absent at early Hoca Çeşme are very long vertically placed tubular lugs. These types of lugs were also found at Ayio Gala (Hood 1981; Fig. 6.13, 14), Coskuntepe and Tepeüstü (personal observation). Ugurlu indicates that more Hoca Çeşme-type settlements exist. It is obvious that without any detailed knowledge of Western Anatolia, it is very difficult to interpret Hoca Çeşme.

⑤ When we compare the ^{14}C dates of Hoca Çeşme with the dates from other sites in southeast Europe, for instance, Achilleion and Sesklo in Thessaly, Hoca Çeşme IV-III dates match Achilleion Ia-IIIb and Sesklo (Gimbutas et al. 1989.24-25; Wijnen 1981. 131). When we look at Nea Nikomedia in Macedonia, with the exception of one early ^{14}C date (8180±150 BP, Q-655), almost all the dates from Nea Nikomedia match Hoca Çeşme IV-III (Pyke and Yiouni 1996.195). Özdoğan proposes an average age of Hoca Çeşme IV as 6400-6100 cal BC. Bloedow gave an age of 6481-6216 cal BC for Achilleion, 6489-6406 cal BC for Sesklo and 6469-6373 cal BC for Nea Ni-



Fig. 5. Pottery from Hamaylitarla.

komedeia (Bloedow 1992/93.56). When we look at Bulgaria, Hoca Çeşme IV is earlier than the Karanovo I horizon, and the ^{14}C dates of the Karanovo I horizon match those of Hoca Çeşme III. Although Hoca Çeşme II was correlated to Karanovo I by Özdoğan, all the ^{14}C dates of Hoca Çeşme II match with the Karanovo II horizon. Boyadziev gave ages of 6000/5900-5500/5450 cal BC for Karanovo I-II (Boyadziev 1995). In Bulgaria, excavations in the Struma valley and in north-eastern Bulgaria have been claimed to reveal sites with levels containing monochrome pottery, earlier than the Karanovo painted pottery horizon (Stefanova 1996. 15). Dark monochrome pottery was found at sites such as Krantsi, Koprivets, Pomoshitsa, Poljanitsa-plateau, Elehshitsa and Slatina (Stefanova 1996) Only a few ^{14}C dates for this horizon are available, all from Poljanitsa-plateau: 7535±80 BP, 7140±80 BP, 7380±60 BP and 7275±60 BP (Görsdorf and Bojadziev 1996.122). Dates from the Poljanitsa Plateau more or less match early Hoca Çeşme. To sum up, it is clear that the earliest layers of Hoca Çeşme are contemporary with early Neolithic sites in Thessaly and Macedonia (Fig. 7). According to ^{14}C dates, early farming communities were settled simultaneously in South-Western Turkish Thrace, Thessaly and Macedonia.



Fig. 6. Pottery from Ugurlu.

⑥ Özdoğan argues that in Pendik, above the Fikirtepe horizon, there lies a prehistoric cemetery yielding early Hoca Çeşme wares (Özdoğan 1993; 1999.217). From this point of view Özdoğan suggested that Hoca Çeşme could be later than

the Fikirtepe Culture (Özdoğan 1993.185; 1997.Fig. 5). According to Özdoğan's scenario of endemic movement, the full Neolithic was first established in north-western Anatolia, later followed by Hoca Çeşme in the northern Aegean (Özdoğan 1997.19–27). However, there is a chronological inconsistency in this hypothesis. The ^{14}C dates of Hoca Çeşme are earlier than those of the Fikirtepe Culture. Özdoğan argued that the first wave of an endemic movement took place during the pre-pottery Neolithic, originating in Central Anatolia (Özdoğan 1997). In this paper, I have not attempted to discuss this problem. On the basis of the second movement directly linked to late Çatal Höyük, the full Neolithic was established in the northern Aegean (Özdoğan 1997.19–27; Budja 1999.133). According to Thissen, the possible time range for the movement from Çatal Höyük to the northwest may set anywhere between 6500/6400–6300/6200 cal BC (Thissen 1999.37). However, as M. Budja has correctly argued, 'It is worth nothing that the founding of Hoca Çeşme (6400–6100 cal BC) fits with the exodus in the Konya plain in the period anywhere between 6500/6400–6300/6200 cal BC' (Budja 1999.133).

⑦ It seems Hamaylitarla pottery is much more similar to the Western Anatolian red slipped and burnished ware tradition than to Classic Fikirtepe. I believe that there are strong similarities and relationships between the Fikirtepe Culture, especially the Classic Phase and the western Anatolian red slipped and burnished ware tradition. western Anatolian Early Neolithic sites may be contemporary with the Classic Fikirtepe phase. As yet, no detailed Early Neolithic excavations have taken place in western Anatolia. Only future investigations can show us the similarities and dissimilarities in relationships between the western Anatolian red slipped and burnished ware tradition and the Fikirtepe Culture.

CONCLUSIONS

The problem of dating prehistoric axe factories and general questions concerning the Early Neolithic period of Eastern Thrace are outlined above. The finding of prehistoric axe factories in Eastern Thrace has aroused much interest, and so far is unique in the prehistoric record of the Balkans and Anatolia. Our work on axe factories is still at opening stage. Probably the most important question is how far

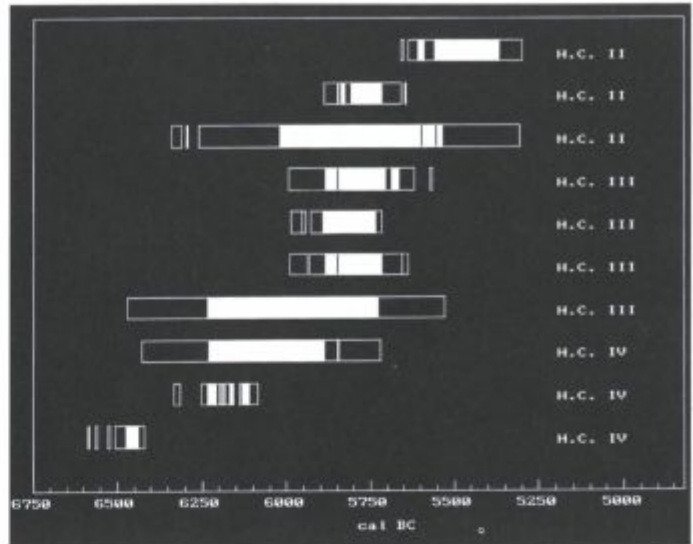


Fig. 7. Calibrated dates of Hoca Çeşme.

these axes were distributed from the source. The distribution of goods from sources to the people desiring them is an important function of the exchange system. Petrological investigations of polished stone axes from excavated sites and surface collections in eastern Thrace are still in progress. In the future, we will be able to define the distributional range of axes from the factories. However, early results show that at the early Neolithic settlement of Hoca Çeşme, stone axes were made of the same rock as the Sarköy sources.

It seems evident that there are still gaps in our knowledge of the transition to the Neolithic in eastern Thrace. New investigations carried out in north west Anatolia and eastern Thrace over the past few years have increased our knowledge. However, there is still not enough evidence to understand the complete picture of the transition to the Neolithic in the region. I believe that only proper excavations and intensive surveys, especially in western Anatolia, would help our understanding of the Neolithic transition not only in eastern Thrace but also in Europe.

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