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METALS FROM CAVES: THE SIGNIFICANCE OF THE METAL FINDS FROM KARAİN AND KILIÇİNİ CAVES WITHIN THE CONTEXT OF THE LATER PREHISTORY OF THE ANTALYA REGION
MAĞARALARDAN METALLER: KARAİN VE KILIÇİNİ METAL BULUNTULARININ ANTALYA BÖLGESİ GEÇ PREHİSTORYASI AÇISINDAN ÖNEMİ

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Abstract: A number of caves located on the skirts of Mount Katran near Antalya display a unique character, harbouring extensive traces of human habitation from the Holocene era (from the Neolithic through to the Early Bronze Age) following the Palaeolithic period. In this respect, the Karain and Kılıçini caves are among such sites in this region that provide important archaeological data. The metal artefacts from both caves provide new insights on the use of caves during the Late Chalcolithic and Early Bronze Age, as well as casting a light on regional and interregional interactions. By approaching the available data from two different perspectives, this study aims to place this metal inventory in its correct regional and interregional context through typological and functional analyses; on the other hand, based upon the metal artefacts and further archaeological evidence, it also intends to provide some insights into the dynamics lying behind the intensive, yet unusual occupation of the caves during these particular periods.

Keywords: Karain • Kılıçini • Late Chalcolithic Age • Early Bronze Age • Prehistoric Metal Working

Öz: Antalya yakınlarında Katran Dağı eteklerinde yer alan bir dizi mağara Paleolitik dönemi takiben, Holosen çağ boyunca da (Neolitik – Erken Tunç Çağı arası) yoğun kullanım izleri barındırmaları açısından ünik bir karakter sergilemektedir. Bu bölgede yer alan Karain ve Kılıçini mağaraları da bu bağlamda önemli veriler sunan yerleşimler arasındadır. Her iki mağarada ele geçen metal eserler Geç Kalkolitik ve Erken Tunç Çağı boyunca mağaraların kullanımlarına yeni bakış açıları kazandırmak yanında, bölgesel ve bölgelerarası ilişkilere de ışık tutmaktadır. Mevcut verileri iki farklı açıdan değerlendirmeyi amaçlayan bu çalışma, bir yandan metal eserleri tipolojik ve fonksiyonel açıdan ele alarak bölgesel ve bölgelerarası ilişkiler açısından değerlendirmeyi ve bölgenin metal endüstrisi içinde doğru bağlama oturtmayı; diğer yandan yine bu eserler ve diğer arkeolojik kanıtlar ışığında, mağaraların bu dönemlerde, pek de alışıldık olmayan biçimde, yoğun bir şekilde tercih edilmesinin ardında yatan nedenlere dair bazı bakış açıları sunmayı amaçlamaktadır.

Anahtar Kelimeler: Karain • Kılıçini • Geç Kalkolitik Çağ • Erken Tunç Çağı • Prehistorik Metal İşçiliği

1. Introduction

Throughout the history of mankind caves have always had an important, and sometimes a special place. Started with their use as natural shelters by humans during the Palaeolithic period, this process was further diversified by various other types of use in later periods. Even today, caves are used for different purposes, especially by nomadic or semi-nomadic communities. Within the borders of modern Turkey, hosting a significant number of caves, the Taurus Mountains in the south takes the

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first place in this respect[1]. A series of caves in this mountain range, located in the immediate vicinity of Antalya, exhibit a unique character compared to the other regions of Anatolia, in terms of harbouring intensive habitation traces, beginning from the Palaeolithic period onwards and continuing for a long time into the Holocene era; and which provide important data from an archaeological perspective (Fig. 2, Tab. 1)[2]. Both Karain and Kılıçini, the subjects of this study, are among the caves of this region. Mount Katran, where both caves are located, is a part of the Beydağları range of the western Taurides and extends in a north-northeast / south-southwest direction to the west of the upper travertine platform, to the north of Antalya[3]. Initial investigation of the caves located on the slopes of Mount Katran were initiated by the late İ. K. Kökten in the 1940's. In the course of these preliminary investigations many caves and rock shelters were identified and some were excavated with limited soundings[4]. The surveys in the region re-started in 1984[5] and later continued between 1992 and 1993[6]. During these works, the eastern slopes of Mount Katran and the travertine plain in front of the mountain were surveyed as two separate units; and in addition to those earlier documented by Kökten, several new caves and rock shelters were recorded and investigated.

Due to its course of geological formation, many caves and cavities were formed on the eastern slopes of Mount Katran and these were intensively used by prehistoric people[7]. Apart from providing a natural shelter, the environmental features of the region seem to have played a major role in the selection of these caves. Both the quality of the massive limestone caves and raw material sources in the close vicinity, together with the abundance of water supplies and hunting animals, probably made this area a privileged place for early settlers[8].

The area where the Mount Katran caves are located is at the exact intersection point of the ancient regions of Lycia, Pamphylia and Pisidia. Actually there is strong evidence indicating that the caves in each of these regions were intensively occupied, especially during the Chalcolithic period and to some extent during the following Early Bronze Age (EBA)[9]; yet Mount Katran and the surrounding area differs from the other regions in both the high quantity of the caves and the limited number of mound settlements from the Chalcolithic and later periods. The mound-type settlements in this area are instead located on the plains of Korkuteli and Elmalı, behind the western Taurides[10].

While the number of mounds known in neighbouring regions has increased through recent research[11], some of which were already known and investigated through large-scale excavations, there

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1 Taşkıran 2018, 63.

2 Taşkıran 1994, 231.

3 Yalçınkaya 1995a, 55.

4 Kökten 1947, 227ff.; Kökten 1958, 13ff.

5 Yalçınkaya 1986; Kayan *et al.* 1988.

6 Yalçınkaya 1995b, 10ff.

7 Kayan 1990, 16.

8 Kayan *et al.* 1988, 9; the investigations revealed the existence of a lake on the travertine plain in front of Mount Katran during the Pleistocene and early Holocene, see Yalçınkaya 1995a, 55.

9 Becks 2015, 35 and especially the existing literature; Becks 2016, 29ff.

10 Kökten 1949, 826.

11 See Özgen 2006; Özsait 2007, Vandam – Kaptijn 2015, Becks 2016.

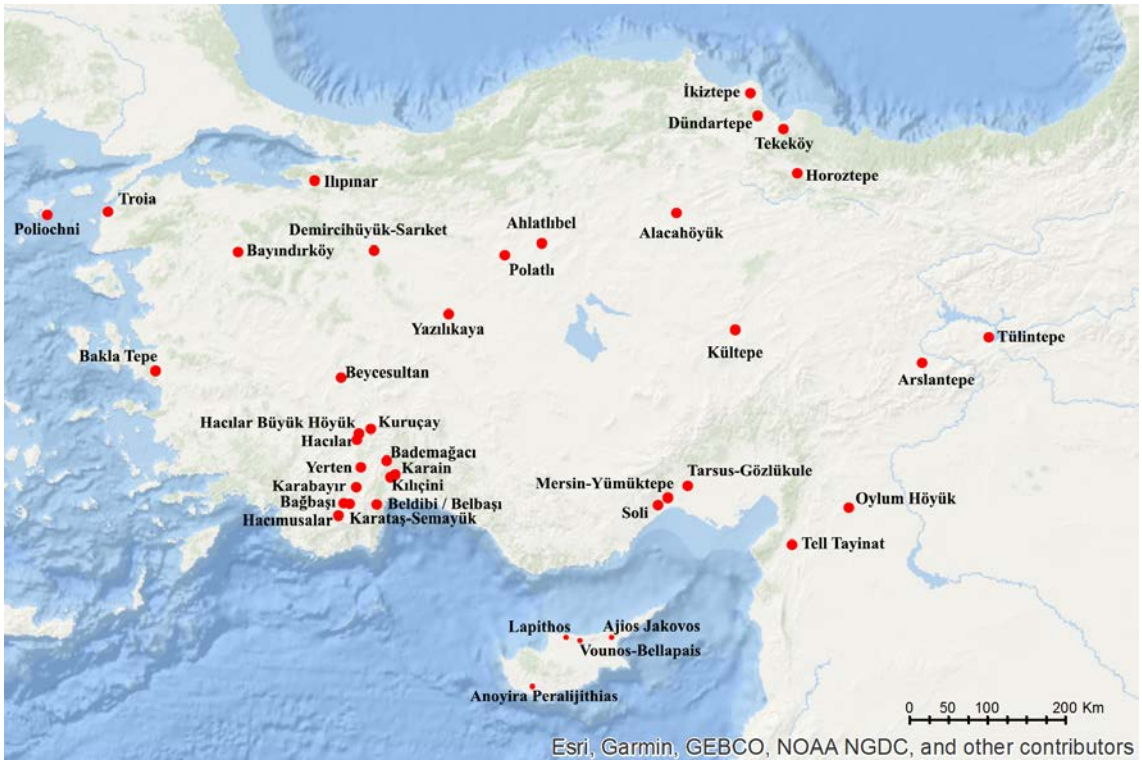
İkiztepe
Dündartepe
Tekeköy
Horoztepe
Ilıpınar
Troia
Poliochni
Demircihüyük-Sarıket
Bayındırköy
Ahlatlıbel
Polatlı
Alacahöyük
Yazılıkaya
Bakla Tepe
Beycesultan
Kültepe
Tülintepe
Arslantepe
Hacılar Büyük Höyük
Kuruçay
Hacılar
Bademağacı
Yerten
Karain
Karabayır
Kılıçini
Bağbaşı
Beldibi / Belbaşı
Hacımusalar
Karataş-Semayük
Mersin-Yümüktepe
Tarsus-Gözlükule
Soli
Oylum Höyük
Tell Tayinat
Lapithos
Ajios Jakovos
Vounos-Bellapais
Anoyira Peralijithias
0 50 100 200 Km
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

Fig. 1


Anfini
Harunini
Kömürcüler
Boynuzluin
Suluin
Öküzini
Karain
Çarkini
Kılıçini
Sırtlanini
Mustanini
Yağca
Ayanlar
Arılık Yıkığı / Tavşantepe
Gökhöyük
Taşhöyük
Cave
Mound
Modern Town

Fig. 2

are not many mounds on the travertine plain just in front of Mount Katran. Three of them, namely Bozüyük, Taşlıhöyük and Yayvantepe were identified by Kökten as the actual habitation areas of the Holocene material culture, that is represented in the caves (Fig. 2)[12]. Among them only Gökhöyük has been excavated in a limited manner. The excavations here were carried out by Antalya Museum and initiated in consequence of the partial destruction of the mound during construction works. The excavations, which lasted 21 days, did not reveal any proper stratigraphy, nor any architectural remains that might indicate the presence of a settlement[13]. On the other hand, scattered *pithos* sherds and sporadic human remains – thought to be associated with *pithoi* – led to the conclusion that this area had been used as a cemetery; and pottery finds show a close resemblance with those found in the Karataş-Semayük burials[14]. This same area was probably also used as a burial ground for a tumulus during antiquity[15].

As shown from the Gökhöyük example, mound-type settlements in the region seem to start with the EBA[16]; contrasting with the intensive use of caves in the preceding periods, giving rise to the question, whether Neolithic and Chalcolithic people deliberately chose caves as habitation areas and this possibility has been frequently expressed in previous studies[17]. To give a proper answer to this question, two issues should be clarified: the dynamics behind the choice of caves as habitation areas, in some different way when compared to the neighbouring regions and the exact character of these cave settlements. While current evidence is insufficient to reach a certain conclusion for the latter, the geographical and environmental conditions do provide important clues, which might help to answer the first question.

From a wider geographical perspective, mound settlements in the region are located beyond the Çubuk Pass to the north[18]. This area and the plain in front of the mountain range, where the caves are located, have very different climatic conditions and topographical features and the Taurus Mountains act as a natural barrier between these two zones[19]. Based upon the fact that the mountainous regions and coastal zones in and around Antalya did not host the proper conditions for a settled life, especially in the Late Chalcolithic and later periods, it was proposed that the material culture from the caves rather represents short-term or seasonal occupations[20]. On the other hand, when the abundance of water supplies and animals for hunting are taken into account, this way of living, rather than dealing with the difficulties of agricultural activities, may be interpreted as a deliberate choice for an easier life[21]. The continuous occupation of caves until the end of the EBA in this area, distinct from the neighbouring regions, may also be explained in this manner.

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12 Kökten 1963, 26; the three mounds referred as Gökhöyük, Taşhöyük and Arılık Yıkığı (Tavşantepe) in later publications should be those mentioned by Kökten, see Kayan 1990, 18; Yalçınkaya 1986, 436.

13 Yener – Atvur 2002, 14.

14 Taşkıran 1994, 231.

15 Yener – Atvur 2002, 14.

16 Taşkıran 1994, 231.

17 Yalçınkaya 1992, 40; Taşkıran *et al.* 2012, 8.

18 Taşkıran 1994, 231.

19 Kökten 1949, 825.

20 Lloyd – Mellaart 1962, 104; Duru 1996a, 96.

21 Duru 2007, 227.

In this respect, whether the habitation traces in the Mount Katran caves belonged to permanent occupations or rather, represent those of a temporary character (especially for their seasonal use by the people from the northern mounds) is one of the most frequently asked questions and is yet to be answered[22]. However, some architectural arrangements and certain finds suggest that, at least some of the caves were used as permanent habitation areas in certain periods[23]. In this context, the metal objects that constitute the subject of this study, together with other available data, appear to carry the potential to provide important data about the nature of this type of life in the caves and the dynamics behind it.

2. An Overview of the Previous Research on the Metalworking Activities and the Metal Inventory of the Region

Before presenting and discussing the material in detail, it is worthwhile to take a closer look at the metal inventory of the region and summarize the results of the previous studies. While almost every part of Anatolia displays a rich picture in terms of its metallurgical activities and metal artefacts, the Antalya region presents a rather limited inventory. This may be the result of insufficient research, yet some finds from excavations in the region provide important data in this field.

The first interaction between humans and metals began in an indirect way, with the discovery of coloured minerals and their use as pigments. For the Antalya region the first evidence of such activities comes from the Beldibi and the Belbaşı rock shelters. The use of iron oxide in the Beldibi rock paintings is also confirmed by the presence of fragments of natural iron oxide lumps in the soundings and through the discovery of pebbles, also painted with a similar pigment, in the same layer[24]. Similar iron-oxide lumps have been also attested from the Belbaşı excavations[25].

The real appearance and development of metal working industry in Anatolia as a particular craftsmanship begins in the Chalcolithic period. In close vicinity, the use of metals prior to this period was encountered at Hacılar, an inland settlement located at the "Lakes District". Here, traces of copper use are present at Layers VII and VI, both dated to the Late Neolithic Period. In addition to copper residues, within some pots (crucible?), fragments that might reflect artefacts such as beads, needles and awls were also discovered in Layers II-A, II-B and I A-B dating from the Late Chalcolithic period[26]. These activities should be defined as small-scale activities representing the preparatory phase of metallurgy.

Bağbaşı is one of the few settlements in the region that provide information on the Late Chalcolithic metal inventory, though on a limited scale. Three metal artefacts from the site represent typical tools intended for daily use and consist of two awls/punches (one of them displays a composite tool with a chisel-like end) and a needle[27]. Another item, originally catalogued as a scoop[28] was later identified by R. Duru as a possible crucible[29], based upon similarities with the Kuruçay examples. If

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22 Taşkıran *et al.* 2012, 9; Umurtak 2005, 66.

23 Taşkıran 2011, 126; Taşkıran *et al.* 2012, 9.

24 Bostancı 1959, 133 and 150.

25 Bostancı 1962, 256.

26 Mellaart 1970, 153.

27 Eslick 1992, 40-41, Nos. 322-324.

28 Eslick 1992, 35, No. 255, Pl. 58, 255.

29 Duru 2008, 143-144, Res. 290.

this assumption is correct, it may be listed among the earliest evidence for metal production activities in the region.

Another site providing important information is Kuruçay, within the borders of Burdur province. The excavations conducted in the Late Chalcolithic levels provided up to twenty needles and awls, some of them only parts of the shaft survived[30]. More important information from this period comes from another group of items, including four flat axes, a spearhead and a knife[31]. Since the spearhead was recovered from a deposit near the slope surface and it presents a developed type, previously undocumented for this period, it was initially dated to the EBA; however, based upon the later examinations and specifically the similarities observed in the production technique with that of the flat axes, it was re-dated to the Late Chalcolithic period[32].

Two crucibles from 6th and 3rd levels indicate metal production activities at the settlement[33]. Although they bear no traces of metals within them, the above-mentioned analysis carried out on the finds showed they were produced by casting using smelted copper[34]; together this data may be interpreted as evidence of a local production. The finds from both Bağbaşı and Kuruçay indicate, in this period, a small-scale industry (*Household Metallurgy*), mostly specialized in the production of basic tools.

Further to the northwest, another group of finds from Beycesultan are dated approximately to the same period as the Kuruçay finds. The objects discovered as a single group represent a typical household collection of tools. The analyses showed that all the objects, except a possible chisel, were cold worked[35]. A silver ring[36] among them is significantly important in terms of the technological level achieved during this period. Besides representing one of the earliest silver artefacts from Anatolia, the analysis indicates the use of the cupellation technique in the silver refining process[37], which marks a distinct level in metallurgical advance.

When we approach the subject from a wider regional perspective, it is possible to say that the metalworking tradition in the south Anatolian coastal zone had begun in a more developed way. In this regard, the finds from Mersin-Yümüktepe provide important data on the history of metallurgy in Anatolia. A flat axe/chisel and roll-headed pins[38] from the XVI. Level (*ca.* 5000 B.C.) represent the first examples of cast objects and the beginning of extractive metallurgy in Anatolia; and all of them were produced from smelted copper[39].

At Tarsus Gözlükule, a small ring and several other items made of lead, from Chalcolithic levels indicate the use of metals during the late IVth millennium B.C.[40]. During the following EBA I period

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30 Umurtak 1996a, 56; Duru 2008, 143, Res. 286.

31 Umurtak 1996a, 56-57, Lev. 160, 1-6; Lev. 161, 6-11.

32 Umurtak 1996a, 56, fn 13.

33 Umurtak 1996b, 52, Lev. 146, 7; Lev. 147, 1; Lev. 149, 6-7.

34 Umurtak 1996a, 57.

35 Stronach 1962, 282, Fig. F.8.

36 Stronach 1962, 291, Fig. F.8:15.

37 Gale *et al.* 1985, 164.

38 Garstang 1953, 136-137; Fig. 80b and 85, Pl. XXI, a.

39 Yalçın 2000, 22, Abb. 8; Caneva 2000, 70.

40 Goldman 1956, 301-303.

the metal artefacts are mostly limited to small tools and ornaments, however towards the end of the EBA, larger implements, such some weapon types came into use. For this period a cache of finds is worth mentioning. This group, including a flat axe, a slotted spearhead, three daggers, three chisels and a toggle-pin was among the contents of Room 56, which was dated to the EBA III and destroyed by a violent fire[41]. Room 55 from the same layer was later identified by Müller-Karpe as a possible metal-workshop, based on the find of a sandstone mould and some other finds related to metal production (metal gouge, hematite weight and a probable *tuyère*)[42].

The EBA metal artefacts from Tarsus-Gözlükule are not in large numbers and cannot be described as flourishing or attractive items compared to other contemporary sites from other regions in Anatolia; yet the significant number of moulds indicates the existence of a noteworthy metal production at the site, which began in the EBA and continued, increasingly during the succeeding periods. When its possible control over the metal resources of the Bolkar Mountains is taken into account, it is most likely that Tarsus-Gözlükule played a major role, in terms of metal production and raw materials trade, in respect to the relations of the south Anatolian coastal zones with northern Syria and Cyprus, especially from the EBA II onwards[43].

Returning to the inland zone, it is noteworthy that EBA I metallurgy in Beycesultan also reflects a developed character. Especially some dagger forms[44] representing the prototypes of later and developed examples with a central flange, which appear as a form unique to western Anatolia after the middle of the IIIrd millennium B.C., can be interpreted as a solid evidence for the formation of this type in this region.

For the Antalya region information concerning the metal inventory of these periods is provided from few excavations and by some chance finds. The first of such finds was a dagger found near Karabayır Village[45]. It was found together with a small red-slipped pitcher in a *pithos* and was interpreted as a burial gift. Two further daggers are today in Ashmolean Museum, Oxford, and were published by Przeworski[46]. Said have come from a mound near the Yerten Village (in some publications also referred as Yelten), both items have been dated to the later part of the EBA in previous studies.

The first of the excavated sites in Antalya region is Bademağacı Höyük. The metal artefacts here were all uncovered in settlement contexts and provide an important inventory. Besides the various and numerous tools and pins of different types, items of jewellery and weapons such as flat axes and daggers show that metal production was an important craft in this settlement[47]. Found in different seasons, two stamp seals – one from copper/bronze[48], the other from lead[49] – two ear studs[50] and

41 Goldman 1956, 281.

42 Müller-Karpe 1994, 42.

43 Kuruçayırlı – Özbal 2005, 59.

44 Stronach 1962, 285, Fig. F.9, 1-3.

45 Pace 1921, 63, Fig. 32.

46 Przeworski 1967, 140, Taf. IX, 6-7.

47 Duru - Umurtak 2011a, 36.

48 Duru – Umurtak 2008, 207, Lev. 50, e-f.

49 Duru 2002, 564, Lev. 48, 11, Lev. 49, 11.

50 Duru 1996b, 793, Lev. 10, 3; Lev. 13, 5; Duru – Umurtak 2010, 24, Res. 8.

two silver pins[51] are amongst the special finds. Another important find was the preserved half of a silver bowl[52]. Having a diameter of 24 cm and a depth of 4.5 cm, the thickness of this vessel is less than 1 mm. With these features the bowl itself represents a unique example in the Anatolian metal-working tradition for this period and reflects the high level of craftsmanship reached by metal smiths in this region around 2300 B.C.[53]. Apart from these special finds, some daggers[54] from Bademağacı provide important information regarding the regional development scheme of certain weapon forms, which will be discussed in this article (see below the section on sword and dagger from Kılıçini).

Another site, Karataş-Semayük in Elmalı plain also has a rich inventory in terms of the metal artefacts. Most of the metal objects from this site come from burials. A similar situation is also attested in many contemporary Anatolian sites and elsewhere, and is not very surprising; hence due to their economic value metals were either passed from one generation to another or recycled for a long time. Therefore they mostly come from undisturbed graves rather than from settlement contexts. Despite the limited numbers of metal objects (19) from settlement contexts, the presence of 729 artefacts from the cemetery is a striking reflection of this situation[55]. The majority of the Karataş metal inventory consists of copper based artefacts of different types and functions; but also includes items made of precious metals, mostly forms of jewellery. Besides being the largest group for the region, this rich collection also represents the most comprehensively studied corpus[56]. Even though the settlement yielded no finds related to metal production, the typological assessments and examinations of metal finds provided valuable insights regarding typological development schemes in the region and interactions with neighbouring zones.

A further excavated site, in Elmalı plain is Hacımusalar Höyük. Here, a pair of earrings and a toggle-pin constitute the metal finds from the EBA levels[57], which were only investigated in a limited area. Despite these few finds, it is likely that Hacımusalar has a great potential in this field, since the prehistoric levels still remain untouched and it represents a regional administrative centre in the region from its enormous size, about five times larger than Karataş-Semayük[58].

A few metal items were also found during the short-term excavations at Gökhöyük, 4 km from the Karain Cave. Due to the fact that no architectural remains were found and because of the scattered human bones together uncovered, all of the finds are considered as burial gifts, and the metal ones among them are represented by two arrowheads and a dagger, while the arrowheads show traces of a thin silver plating, partially destroyed due to heavy corrosion[59]. Despite the lack of direct evidence to prove a local production, the silver finds from Gökhöyük, Bademağacı and Karataş-Semayük together constitute at least evidence for the circulation of precious metals in the region,

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51 Duru – Umurtak 2011b, 15, Res. 8.

52 Duru – Umurtak 2011b, 15.

53 Duru - Umurtak 2011a, 37.

54 Duru - Umurtak 2011a, Res. 21.

55 Fidan 2005, 32 and 40.

56 Bordaz 1978.

57 Özgen – Baughan 2016, 323 , Fig. 5, a-b.

58 Özgen – Baughan 2016, 322.

59 Yener – Atvur 2002, 18, Res. 17, Çiz. 3, 7.

and are possibly related to the working of the silver deposits in the Bolkar Mountains, not far distant.

A last site worth mentioning is Hacılar Büyük Höyük, where excavations started recently in 2011 and in progress[60]. Apart from numerous pins and items of jewellery from settlement contexts from this site, a dagger, found in the 2016 season has a special importance[61]. This iron dagger comes from an EBA II destruction deposit and was found together with a part of its wooden handle and remains of a fabric that was once wrapped around it, and represents one of the earliest examples of Anatolian iron metallurgy.

As briefly summarized above, the region has a considerable history and potential in terms of metallurgical activities. The finds from Karain and Kılıçini caves, discussed below, will also provide new information in this respect, and regarding the use of caves during the prehistoric and protohistoric periods.

3. Materials

3.1. Karain Cave

Karain Cave is located within the borders of Yağca Village, approximately 30 km northwest of Antalya (Fig 1-2). It is carved into the Çadır Hill on the calcareous and steep slopes of the Cretaceous period of Mount Katran and lies respectively 150 and 450 m above the plain and sea level[62].

The cave was discovered by İ. Kılıç Kökten in 1946, during a research visit to the Gurma (Kurma) cave[63]. The excavations initiated by Kökten in the same year continued until 1973 with various intervals[64]. After Kökten's death in 1974, the excavations were resumed in 1985 by a team headed by Işın Yalçınkaya from Ankara University[65]. The second-generation excavations aimed to answer a series of questions through an inter-disciplinary approach on a multi-dimensional concept and are still in progress, led since 2015 by Harun Taşkıran from the same university[66].

Kökten's excavations revealed the cave's long history of occupation for subsequent periods; moreover the uncovered Roman pottery and niches on the walls along with Greek inscriptions proved that the cave had a sacred character during Roman times[67]. The votive inscriptions published by S. Şahin show that the cave was a place of worship dedicated to a mountain goddess during the Late Roman period[68].

Karain is one of the most important find spots for the Anatolian Palaeolithic period and actually is a cave complex consisting of many chambers, named A to G. Chamber E has the thickest deposit and was investigated by Kökten in deep soundings[69].

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60 Umurtak – Duru 2013.

61 Umurtak – Duru 2018, 414-15, Res.: 8, a-b.

62 Yalçınkaya 1987, 21.

63 Kökten 1947, 232.

64 Kösem 2012.

65 Yalçınkaya 1987.

66 Taşkıran *et al.* 2017.

67 Kökten 1955, 273.

68 Şahin 1991.

69 Özçelik 2012, 37.

Starting with Kökten's excavations, pottery evidence began to be recovered showing the cave was also inhabited in the Holocene era. The mixed pottery assemblages were interpreted by Kökten as belonging to the Neolithic, Chalcolithic and EBA (Copper Age)[70]. Due to the systematic and detailed excavations conducted under direction of I. Yalçınkaya, it was possible to examine the finds of particular periods through a more detailed stratigraphic context.

From Chamber E, a few sherds dated to the Early Chalcolithic period represent the single Holocene finds[71]. They were found at the bottom and around a pit, thought to have been dug in the Holocene period. Apart from these, all the other Holocene finds from the cave, including the metal objects discussed here, come from Chamber B. This hall is located to the west of the main gallery and the first excavations here began with a sounding trench dug by Kökten. To reveal the entire stratigraphic sequence of the chamber has been possible through the detailed excavations after 1996 by Yalçınkaya and her team. The Holocene deposits in Chamber B reach a max. depth of 1.5 to 2 m. The upper levels include Medieval and Roman pottery, while the lower layers provided EBA, Chalcolithic and Neolithic findings[72].

According to the results from Yalçınkaya's excavations, the Holocene stratigraphy at Chamber B is represented by 5 subsequent geological layers and listed as H.I to H.V, from the most recent to the oldest[73]. The uppermost layer consisting of previously excavated and mixed deposits is additionally recorded as H.0. The subjects of this study are associated with the levels H.II, H.III and H.IV, and calibrated ^{14}C dates for the former level indicate, the lower and upper limits of 4740 and 4510 B.C., respectively[74]. H.III is characterized by a predominant distribution of Chalcolithic finds and radiocarbon dates indicate an interval of between 4920 and 4700 B.C.[75]. H.IV is defined as a homogenous Chalcolithic layer[76] and there are four sets of radiocarbon data available for the dating of this layer, which varies between 6160 and 4930 B.C.[77] While there are no architectural remains associated with the pottery, typological evaluations showed that all phases of the Chalcolithic period (Early, Middle and Late) were represented in the cave[78]. As for the EBA, even though they are not studied in detail, characteristic forms such as tankards[79] and wheel-made vessels[80] indicate a rather later date into the late EBA II and EBA III. Without giving any detailed information, Lloyd and Mellaart also list Karain in their distribution map of the "Southwest Anatolian EBA II Culture"[81].

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70 Kökten 1949, 822; 1955, 280; 1963, 26.

71 Yalçınkaya 1988, 18, Res.: 7.

72 Özçelik 2012, 39.

73 Yaman 2011, 246.

74 Yaman 2012, 169.

75 Yaman 2012, 169.

76 Yalçınkaya *et al.* 2008, 473.

77 Yaman 2012, 169.

78 Seeher 1988; Aykurt – Ayengin 2011.

79 Yalçınkaya *et al.* 2011, 27.

80 Yalçınkaya *et al.* 2006, 409.

81 Lloyd – Mellaart 1962, 196-97, Map VI, No. 74.

3.1.1 Karain Metal Finds

Cat. No. 1 (Fig. 3-4)

Inv. No.: KB 2003/163 (A) – Antalya Museum

Type: Flat axe

Length: 12,18 cm

Width (butt): 1,09 cm

Width (blade-max.): 2,18 cm

Width (edge): 4,73 cm

Fig. 3

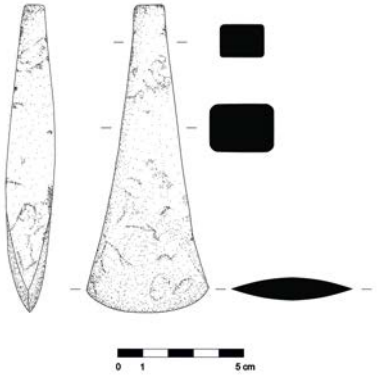

Fig. 4

Intact. Massive body; narrow, straight butt with rectangular section; slightly concave sides with a flaring, concave cutting edge with oval section. Cast as a single piece then finished by hammering. Both the butt and the cutting edge show some traces of wear from use; heavily corroded.

Cat. No. 2 (Fig. 5-6)

Inv. No.: KB 2008/01 – Antalya Museum

Type: Flat axe

Length: 15,45 cm

Width (butt): 1,27 cm

Width (blade-max.): 2,64 cm

Width (edge): 5,09 cm

Fig. 5

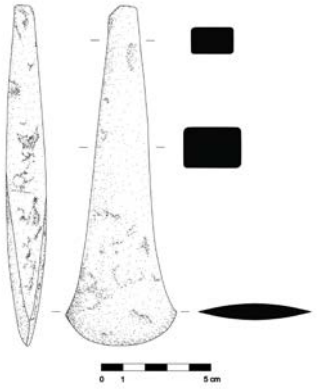

Fig. 6

Intact except a small part of the butt. Massive body, narrow, straight butt with rectangular section; slightly concave sides widening towards a flaring, concave cutting edge with oval section. Cast as a single piece then finished by hammering. Both the butt and cutting edge show some traces of wear from use; heavily corroded.

Cat. No. 3 (Fig. 7-8)

Antalya Museum

Type: Awl

Length: 9,29 cm

Width (shaft-max.): 0,46 cm

Fig. 7

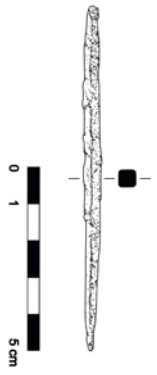

Fig. 8

Intact. Square section, narrowing to a sharp point at one end, the other part consists of a blunter butt; heavily corroded.

Cat. No. 4 (Fig. 9-10)

Inv. No.: KB 2011/8 – Antalya Museum

Type: Awl

Length: 10,59 cm

Width (shaft-max.): 0,64 cm

Intact. Rectangular section with a sharp, pointed end; the other tip is slightly flattened (chisel?); heavily corroded.

The first of the flat axes was found in 2002, in the H.III geological level[82]. The relevant excavated layers of that season in this area were reported as reflecting a homogenous character while most of the pottery sherds were dated to the EBA[83]. The overall picture of level H.III in Chamber B reflects an in situ EBA deposit in the uppermost layers, while the lower ones include Early/Middle Chalcolithic features with few or no permeation at all[84]. On the other hand, the excavations at particular spots revealed only Chalcolithic material[85]. Despite the fact that radiocarbon data indicates an interval for the Chalcolithic period, the presence of EBA elements in this layer is interpreted as a result of numerous pits and due to the use of this sector as a dump area during the latter period[86].

Fig. 9

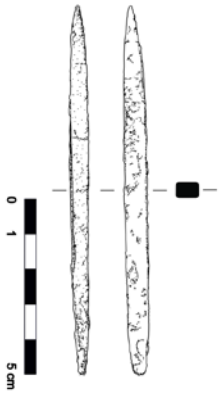

Fig. 10

The second axe was recovered in 2008 in the uppermost and mixed deposit of H.0, in a small cavity leaning towards the cave wall[87]; but both the position of the cavity and the shape of the pot found together with the axe were interpreted as both objects originally belonged to the earlier levels of H.III or H.IV[88].

The first of the awls was found in 2009 in the H.III level[89], which was dominated by Late Chalcolithic sherds, and including fewer EBA pieces in lesser quantities[90]. The second awl was recovered from the same geological level, H.III in 2011[91].

Apart from the materials presented here, both copper pins and beads from the H.II level found in 2004[92], and a copper piece and a golden bead from the same level from the 2006 season[93] consti-

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82 Yalçınkaya *et al.* 2004, 24, Çizim 8:2.

83 Yalçınkaya *et al.* 2004, 24.

84 Yalçınkaya *et al.* 2013, 11.

85 Yalçınkaya *et al.* 2009, 291.

86 Aykurt – Ayengin 2011, 48.

87 Yalçınkaya *et al.* 2010, 46, Resim: 1.

88 Yalçınkaya *et al.* 2010, 46.

89 Yalçınkaya *et al.* 2011, 28, Resim: 1:2.

90 Yalçınkaya *et al.* 2011, 27-28.

91 Kartal-Yalçınkaya 2012, 28.

92 Yalçınkaya *et al.* 2006, 409.

tute the other metal items from the site.

One of the main problematic issues when dealing with flat axes is to determine their exact type, and thus the function of such objects. It is not easy to determine or set clear boundaries, whether they are weapons or tools used in a similar way like adzes[94]. This distinction is usually based on the find contexts and some examples found along with other types of weaponry in burial contexts are regarded as weapons, whereas they also represent one of the main tool types, mainly associated with cutting and/or with woodworking[95].

Whether it was used as a weapon or as a tool, this form, which clearly originated from the stone counterparts of preceding periods, represents one of the simplest and oldest types in the Near Eastern metal inventory and has been encountered in a wide geographical area from the Obeid period onwards[96]. Since similar forms with minor differences appear widely over a long time interval, chronologically they bear no or very little value. From a typological point of view, narrower types with a splaying cutting edge are usually considered as representing relatively later types starting after the middle of the EBA; however some examples from the Late Chalcolithic levels of Ilıpınar[97] and Kuruçay[98] show that these types were already in use during the earlier periods in Anatolia.

Regarding the typological classification, an important feature taken into account, which might indicate the use of such objects as a chisel or adze rather than a hafted flat axe, are the traces of wear and hammering observed on the butt[99]. Such intensive traces observed on the Karain examples suggest that these were also used as tools rather than weapons.

From a stratigraphic point of view, the H.III geological level, to which all four objects belong, contains mostly Chalcolithic material, also including a few EBA sherds; yet during the EBA, Chamber B seems to have been completely blocked with no available space for occupation; and it is suggested that the settlement in this period was limited only to the terrace area in front of the cave[100]. The studies of the lithic industry from the same level also indicate a dominant presence of Chalcolithic material[101]. Both flat axes and awls provide no distinctive information, neither typologically nor chronologically; but on the other hand the Karain axes show a great resemblance to some examples from Ilıpınar[102] and more importantly Kuruçay[103], in the near vicinity; and the typological similarity between awl No. 4 and the aforementioned composite object from Bağbaşı is worth mentioning. Thus, considered together with the radiocarbon data for this level, it seems probable to date the Karain metals to the Late Chalcolithic Age – leaving doubt aside – as this fits to the overall nature of the Late Chalcolithic metal industry of this region, characterized mostly by tools and similar implements.

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93 Yalçınkaya *et al.* 2008, 473.

94 Deshayes 1960, 51.

95 Gernez 2007, 110.

96 Przeworski 1967, 8; Deshayes 1960, 51ff.

97 Roodenberg 2008, 319, Fig. 10, 11.

98 Umurtak 1996a, 57, Lev. 160, 4; Lev. 161, 9.

99 Summers 1991, 183.

100 Yaman 2012, 8.

101 Aydın 2016.

102 Roodenberg 2008, 319, Fig. 10, 12.

103 Umurtak 1996a, 57, Lev. 160, 5; Lev. 161, 10.

3.2. Kılıçini Cave

The Kılıçini Cave was discovered in 1993 by Philippe Lacroix during a survey carried out in the region and was visited by the Karain team in the same year. It is located within the borders of Yağca village, 75 m to the north of Mustanini Cave and lies 350 m above sea level (Fig. 1-2)[104]. Following a narrow entrance, the interior of the cave appear as a large gallery, where the deposits have been partly displaced due to many large subsidences when major cracks formed. Beside its speleological importance, the cave also presented important archaeological finds. Apart from the sword discovered in Lacroix's initial visit, the Karain team found additional metal items including a dagger, a pin and a hair spiral, together with a spindle-whorl with incised decorations and a whetstone[105].

3.2.1. Kılıçini Metal Finds

Cat. No. 5 (Fig. 11-12)

Inv. No.: 1.47.93 – Antalya Museum

Type: Sword

Length: 51,0 cm

Width (tang): 2,2 cm

Width (shoulders): 4,6 cm

Width (blade-max.): 4,4 cm

Thickness (tang): 0,35 cm

Thickness (blade-max.): 0,8 cm

Diameter of the rivet hole: 0,45 cm

Intact. Rectangular tang with a slightly rounded heel; rounded shoulders with slightly concave sides narrowing towards the pointed tip; pronounced central flange with flat-hexagonal section. One rivet hole placed in the tang close to the heel. The wear along the middle part of the blade is most probably due to use. Cast as a single piece in a bivalve mould, finished by hammering. Heavily corroded.

Cat. No. 6 (Fig. 13-14)

Inv. No.: 2.47.93 – Antalya Museum

Type: Dagger

Length: 19,45 cm

Width (tang): 1,27 cm

Width (shoulders): 4,55 cm

Width (blade-max.): 3,0 cm

Thickness (tang): 0,16 cm

Thickness (blade-max.): 0,73 cm

Diameters of rivet holes: 0,25 cm

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[104] Yalçınkaya 1995a, 65.

[105] Yalçınkaya 1995a, 65, Lev. VI, 1-6.

Fig. 11

Fig. 12

Fig. 13

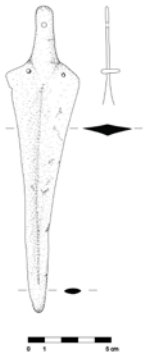

Fig. 14

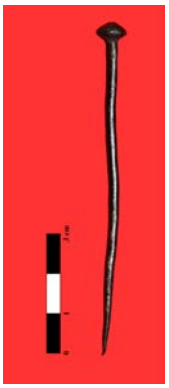

Fig. 15

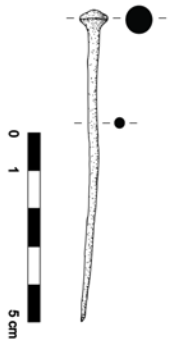

Fig. 16

Fig. 17

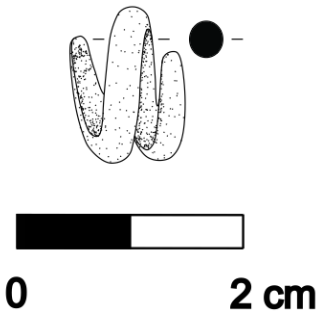

Fig. 18

Rivets: 1,26 x 0,23 cm (left); 1,06 x 0,23 cm (right)

Intact. Long and narrow tang with a slightly rounded heel; triangular shaped pointed shoulders with concave sides narrowing towards the rounded tip; thick and rhombic section. Tripartite rivet system in "Λ" formation; one close to the top of the tang, others placed on the shoulders; only the shoulder rivets are preserved. Cast as a single piece in a bivalve mould, then finished by hammering. Heavily corroded.

Cat. No. 7(Fig. 15-16)

Inv. No.: 3.47.93 – Antalya Museum

Type: Pin

Length: 8,3 cm

Diameter (head): 0,75 cm

Diameter (shaft): 0,25 cm

Intact. Circular shaft with a shallow biconical head and pointed tip.

Cat. No. 8(Fig. 17-18)

Inv. No.: 8.47.93 – Antalya Museum

Type: Hairring

Width: 1,0 cm

Heigth: 1,36 cm

Diameter (max.): 0,32 cm

Intact. Spiral shaped coil of circular-sectioned thin wire with blunt tips.

All of the above artefacts were found during the survey scattered in various spots in the cave, which creates difficulties in defining their proper context and also makes it hard to date them precisely. On the other hand, some clues might be useful in clarifying these issues; thus they are firstly taken and evaluated separately on typological and chronological grounds, followed by an overall assessment of the whole group.

3.2.1. A Short Sword[106]

The distinction between daggers and swords is not easy to define and constitutes one of the most problematic issues regarding the typology of the weapons. In earlier studies, this division was mainly based on the length of the weapon. While Bonnet sets the limit as 40 cm[107], Gordon, in his most cited and widely accepted study, lists daggers and swords in four different categories[108]. According to his criteria, weapons with a length of between 20 and 28 inches are short swords and those with a length of more than 28 inches are classified as long swords. With a length of 51 cm the Kılıçini weapon can be assigned to Gordon's third category and be identified as a short sword.

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[106] The short sword presented here was the subject of a recent article by the author; thus this chapter is more limited to the chronological development of this form. For a comprehensive discussion on the earliest swords in Anatolia and their functions see Keskin 2019.

[107] Bonnet 1926, 72.

[108] Gordon 1953, 67.

The swords are usually considered to be a natural development of dagger forms, but differ from those in their lengths and by the section of the blade[109], which strengthens the body, both as a cutting and a thrusting weapon. On the other hand, from a morphological point of view some recent studies classify shorter examples also as swords[110], particularly for earlier periods. In one of the recent and most comprehensive studies on Near Eastern metal weaponry Gernez states that, morphologically, the thickness of the blade constitutes one of the main characteristic feature of a sword and should appear as an optimum combination of lightness and strength; the section is also a reflection of this necessity and mostly appears in a developed form[111].

To overcome the fragility of swords as elongated daggers designed for use in close combat is the invention of a central flange extending through the blade, from the tang towards the tip; and a solid hafting system by using single or multiple rivets[112]. This morphological combination first appears on daggers and to have a closer look at this developmental scheme will help to properly date and place the Kılıçini sword as a representative of this type of form.

This triangular blade form with a central flange resulting in a flat-hexagonal section appears as an Anatolian type, particularly after the second half of the IIIrd millennium B.C. While some minor variations observed on shoulder forms and tang structure probably represent local variations, the presence of the common central flange is often interpreted as a developed feature, which ensures the rigidity of the blade.[113]

Statistically more examples of this type appear in the western and southern regions of Anatolia. Typological parallels to the Kılıçini example appear within the group of metal weapons[114], allegedly from Bayındırköy in Balıkesir province; and dated to the later part of the EBA, a date based on the developed central flange.[115] Further examples come from Sadberk Hanım Museum in İstanbul. Here, three daggers, all bearing hexagonal sections and a single rivet[116], exhibit a great resemblance to the Kılıçini weapon. From the numerous examples from Bayındırköy they are also interpreted as originating from western Anatolia and are dated to the same period. The emergence of the central flange, observed on these later and developed types, can be traced back to the EBA I daggers from Beycesultan[117], which probably constitute the prototypes and indicate a possible area of origin of this form. On the other hand, several examples from central Anatolian centres, such as Ahlatlıbel[118], Alacahöyük[119] and Polatlı[120], dated to roughly the same period, also show the distribution of this type in this region. Similar forms also appear in a group of metal weapons of a possible origin in

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109 Przeworski 1967, 147.

110 Gernez 2007, 433; Schulz 2006, 215 and fn 3.

111 Gernez 2007, 433.

112 Yadin 1963, 44; Sandars 1961, 19.

113 Maxwell-Hyslop 1946, 14; Stronach 1957, 94.

114 Schiek – Fischer 1965, 158, Taf. 23, 1, 11, 13.

115 Bittel 1955, 116, Abb. 7; Bittel 1955, 161ff.

116 Anlağan – Bilgi 1989, 27, Res. 8-11.

117 Stronach 1962, 285, Fig. F.9, 1-3.

118 Koşay 1934, 75 and 92-93, Lev. 5.

119 Koşay 1951, Lev. CLXXXIII, Res. 1, Lev. CCIII (both rivetless swords).

120 Lloyd – Gökçe 1951, 60, Fig. 14, 12.

Horoztepe[121] and in İkiztepe graves[122], indicating that the distribution of this type was spread further towards the northern coasts.

On the southern coasts parallel forms appear within the group of metal weapons from the so-called Soli Hoard[123]. Six weapons from this group(S.3419, 3420, 3421, 3422, 3424, 3426)[124] with varying lengths bear the same central flange, with a hexagonal section and all have a single rivet, except for the rivetless dagger S.3422. Based on its length (approx. 25 cm), Bittel classified Nr. S.3419 as a short sword, while the others were listed as daggers. Even though the dating of the whole group is still problematic and later dates into the beginning of the IInd millennium B.C. were initially proposed[125], some earlier dates, in the late EBA was also suggested[126], particularly for some types, including the daggers mentioned here. Similarly, Stronach considers these examples as more developed variations of the main type with a central flange and interprets them as an evidence of the presence of this form in southern regions around the end of the EBA[127].

Three further examples from the close vicinity of the Kılıçini Cave provide additional information on the use and development of this form in this region. The first of these was found near Karabayır Village during the early 20th century in a *pithos* with a small sized jug, possibly representing burial gifts[128]. Other two examples come from Bademağacı[129] and from Karataş-Semayük[130] as excavated finds from EBA II layers. All three daggers with their central flange and flat hexagonal section, and with single riveted long tangs show that this form was known and used in the Antalya region during the second half of the IIIrd millennium B.C. While the origin of this form is sought rather in inner western Anatolia, its presence on the southern coasts is likely to be interpreted as a result of intensive contacts via land routes between these two zones, which is supported by the pottery evidence.

From the typological development scheme summarized above, the Kılıçini example possibly represents a later variation of this type as a short sword, regarding its length. With respect to the emergence of the earliest swords in the Near East, Anatolia is in a unique position. The earliest examples appear as early as the late IVth millennium B.C. at Arslantepe[131] in Eastern Anatolia and followed by different types in the immediate succeeding period from the same site[132] and Tülintepe[133]

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121 Tezcan 1960, 25, Lev. XXX, 4; Muscarella 1988, 407-408, Nos. 542 and 545.

122 Bilgi 1984, 44, Nos. 50-51, Fig. 13, 50-51.

123 Von Luschan 1902.

124 Bittel 1940, 184ff, Taf. II.

125 Von Luschan 1902, 301; Bittel 1940, 204.

126 Mellink 1956, 49; Stronach 1957, 98; Keskin 2019, 93; for a detailed discussion on the dating of the hoard see Muscarella 1988, 396.

127 Stronach 1957, 96.

128 Pace 1921, 63, Fig. 32.

129 Duru – Umurtak 2011a, Res. 21.

130 Mellink 1969, 322, Pl. 74, Fig. 22; for a better photograph where the central flange is more recognizable see Şahoğlu – Sotirakopoulou 2011, 322, No. 345.

131 Palmieri 1981, 104, Fig. 3, 1-4.

132 Frangipane *et al.* 2001, 108, Fig. 18, 8-9.

133 Yalçın – Yalçın 2009, 125, Fig. 3, 1.

within the same region. While swords only appear from the beginning of the IInd millennium B.C. in other parts of the Near East, Anatolia's early sword-making tradition continues in central parts during the second half of the IIIrd millennium B.C., as represented by abovementioned examples from several sites, such as Alacahöyük, Ahlatlıbel and Horoztepe. The existence of the same dagger forms together with swords at Ahlatlıbel is particularly important since it shows the transition between two weapon forms of the same type, of which type the Kılıçini sword also belongs. Based upon the abovementioned typological evaluations and particularly on the Soli examples, it seems most likely that the Kılıçini sword dates to the last quarter of the IIIrd millennium B.C. The relatively weak structure of the tang with a single rivet and the absence of a solid grip, which appears as a main characteristic feature of "genuine swords" of the IInd millennium B.C., also support an earlier dating from the later part of the EBA.

The find contexts and structural weakness of earliest swords are often interpreted as being a result of their symbolic value, related to power and societal status; thus they were thought to have been produced specifically for burials, rather than having a functional use[134]. In this respect, the traces of wear observed along both sides of the Kılıçini sword provide new insights on the functional use of early types, at least as a cutting weapon[135]. Moreover, the Kılıçini sword, together with other examples from the Soli hoard, might have played an important role in the transition process of this Anatolian form and tradition, to other parts of the Near East via the southern coasts.

3.2.1.B Dagger

The Kılıçini example represents a developed form, but before going into a detailed typological evaluation it might be useful to determine the exact type of this object. While it was listed as a spearhead in the preliminary report[136], I think this form rather represents a dagger. As in the case of daggers and swords above, the distinction between daggers and spearheads may also be problematic, at least for some types; and undoubtedly leaving aside some spearhead forms with narrow bodies and long shafts, it is not always easy to set clear boundaries between the two forms. The identification of dagger-like forms as spearheads is usually based upon the find contexts[137] and specifically on their position related to the skeleton, if they come from burial contexts. Typologically, spearheads with a leaf-shaped blade and a riveted hafting system have usually a thicker and shorter tang and weigh up to twice much when compared to similar dagger forms. The distribution of such spearheads is also limited to a particular and a small area, including only Northern Palestine and Byblos[138]. From this information and the typological assessments below it seems more appropriate to classify this form as a dagger.

While considering the Kılıçini example there are three main features to be dealt with. Firstly, the triangular shaped blade with a long-thin tang and concave sides narrowing towards the tip; secondly the rhombic section of the blade and finally the tripartite rivet system in "Λ" formation. Most of the typological studies are based upon the overall form, while the section and riveting system are on-

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134 Gernez 2007, 442; Klimscha 2018, 222.

135 Such traces were also observed on an Arslantepe type sword from a private collection, allegedly from the Tokat area, and was interpreted in a similar way, see Zimmermann *et al.* 2011, 4, Abb. 2.

136 Yalçınkaya 1995a, 66.

137 For a comprehensive discussion see Gernez 2007, 371.

138 Gernez 2007, 375.

ly considered in determining the sub-types; however such features should be taken separately into account as distinctive morphological characteristics indicating a deliberate choice in the production and use of the particular weapon.

The triangular blade form with wide shoulders and concave sides is one of the rarest forms in Anatolia and appears mostly in southern parts; on the other hand, a few examples from Dündartepe[139] and Tekeköy[140] provide evidence for the use of this type on northern coasts during the EBA.

The rhombic section itself appears as an improved variety used to strengthen the blade as a thrusting weapon and also indicates a technological breakdown in the production process, since they can only be manufactured in bivalve moulds.

Considering the whole Near Eastern region, the earliest examples with rhombic section emerge during the end of the IVth millennium B.C. in the Levant, but became widespread only in the later part of the IIIrd millennium B.C. In Mesopotamia they appear from the Early Dynastic II period onwards and continued in use until the beginning of the IInd millennium B.C.[141].

In Anatolia, the dagger found at Yazılıkaya is one of the earliest examples of this type. This dagger with a long and rivetless tang was interpreted by Stronach as the possible prototype of later and much developed forms with a central flange and dated to an interval of 2500-2300 B.C. based upon the associated pottery[142].

Even though they bear no rivets and display different forms of shoulders, some examples with rhombic sections from the İkiztepe burials can be listed as northern representatives of this feature and are dated roughly to the same chronological horizon, between 2400-2200 B.C.[143]. The dagger with a long and rivetless tang from Bademağacı EBA II levels[144] gains a special importance regarding the development of this type within this very region.

The use of multiple rivets by hafting the handle to the blade, is also a reflection of a technological development and offers two advantages[145]: Firstly, the blade and the handle became stabilized as a single unit; on the other hand, the presence of rivets and the size of the tang allows for the proper distribution and minimization the shock wave during an impact, thus improving the strength of the weapon.

In this regard, the tripartite rivet system arranged in the form of a "Λ" appears as a developed practice through the end of the IIIrd millennium B.C. Although there are some examples with a similar rivet formation dating from the IVth millennium B.C. in Anatolia and other regions, they differ through not having a distinct tang and have a different morphology[146]. Regardless of the tang and the blade forms, the use of triangular rivets are widespread in many areas, especially in Mesopotamia during the latter half of the IIIrd millennium B.C. and in the Levant through the Middle

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139 Özgüç 1948, 401, Lev. IV, 8.

140 Kökten *et al.* 1945, 374, Lev. IV, 7; Stronach 1957, Fig. 2, 8.

141 Gernez 2007, 467.

142 Stronach 1957, 90, Fig. 1, 19.

143 Bilgi 2005, 17 and Pl. 14, 2; 20, 3; 31, 1.

144 Duru – Umurtak 2015, 80.

145 Gernez 2007, 453

146 e.g. a dagger/knife from Ilıpınar Late Chalcolithic cemetery, see Roodenberg *et al.* 1989-1990, 77, Fig. 7, 4.

Bronze Age; but are very rarely attested in Anatolia and Caucasus and more interestingly non-existent in Iran[147], thereby probably reflecting a regional choice of production techniques and trends.

Considering all these three features as a whole allows us to properly evaluate and date the Kılıçini dagger. One of the recent and most comprehensive studies on Near Eastern metal weaponry is that of Gernez's, where he handles typological classification through a very detailed and in-depth approach including morphological criteria, rather than solely based on overall form; and according to his classification the Kılıçini dagger belongs to Type P2G[148].

This form with a relatively long tang and a triangular rivet system arranged in "Λ" shape constitutes one of the statistically most represented types of Near Eastern daggers and Gernez's sub-types are determined according to the form and the section of the blade. In this respect, the Kılıçini dagger can be assigned to the sub-type P2Gd. Examples of this sub-type come mostly from the Levant, but also from Cilicia and Cyprus, while the earliest specimens appear in the EBA III in the Levant and continued to be used during the EBA IV and at the beginning of the MBA[149].

In his early study on Anatolian metal weapons Stronach also reached a similar conclusion, stating that the tripartite rivet system is foreign to Anatolia, while most of the examples date from after 2000 B.C.; on the other hand, a few examples of his Type 5e represent the limited inventory of this form during the EBA. According to him this type firstly emerges in and around Cilicia and was used with the combination of the tripartite rivet system with Anatolian forms[150].

Although there are minor differences regarding the tang structure and the shoulder forms, three daggers from an EBA III hoard at Tarsus-Gözlükule[151] and two further examples from Tell Tayinat (Phase J)[152] and Oylum Höyük[153] show the use of this tripartite rivet system in the southern regions of Anatolia during the later part of the IIIrd millennnium B.C. Its use during the following MBA is also evidenced, especially in the central region of the country[154].

When all three features (form and section of the blade and tripartite rivet system) are taken into account as a whole, one of the comparable finds in Anatolia comes from İkiztepe on the northern coast. While it differs from the Kılıçini dagger with its shorter-compressed form and rivets with a square section, this item probably represents a local variation and is dated to the transition period, from the EBA to the MBA[155].

More related examples come from southern centres, such as Yerten and Soli, as was the case for the sword. While Przeworski, who first published the Yerten dagger, dates it to the late IIIrd millennium B.C.[156]; later Stronach proposed a similar dating[157], based specifically on the similar examples

147 Gernez 2007, 555.

148 Gernez 2007, 464.

149 Gernez 2007, 468.

150 Stronach 1957, 99-100.

151 Goldman 1956, 292, Nr. 99-101, Fig. 428.

152 Braidwood – Braidwood 1960, 453, Fig. 351:6, Pl. 54:2.

153 Özgen – Helwing 2001, 92, Abb. 25, h.

154 Özgüç 1959, 57, Res. 65, Lev. XLIX, 10 (from Karum Level III); for further examples see Erkanal 1977, 28-29 (under Type 2).

155 Bilgi 1984, 43 (under sub-type 2c), Fig. 13, 55.

156 Przeworski 1967, 140, Taf. IX, 6.

from Cyprus.

Three examples from the Soli hoard exhibit a great resemblance to the Kılıçini dagger. The first of them, S.3442[158] should represent a later type, in respect to the five rivets. Another two, S.3430 and S.3439[159], display similar forms, while the latter shows an exact resemblance with the position of the rivets on the shoulder. The dating of the Soli hoard has been discussed above; nevertheless Stronach lists these three daggers, together with the Yerten example under his Type 5, to which the Kılıçini dagger can also be assigned, and states: *"… Type 5 daggers possess an interesting distribution which reveals the extent of coastal trade along the South Anatolian shore as well as the lively contact between Cyprus and the mainland at this time."*[160] Indeed, exact parallels harbouring all three features outside Anatolia are widely attested from Cyprus. The majority of such examples, which Catling classifies under his Type 2c, and states their domination for the Early Cypriote period[161], comes from burial contexts and is dated to Early Cypriote III; on the other hand a few examples dated to the Middle Cypriote period show the continuation of their use in the beginning of the IInd millennium B.C., similar to the case in Anatolia.

While Cypriote examples of this type also show typological variations, exact parallels to the Kılıçini dagger come from the cemeteries on the northern coast of the island, which were used for a long time in subsequent periods. The first of these was recovered from the Vounos-Bellapais cemetery in Tomb 15[162]. This tomb belongs to the Dikaios's Period II and is dated to the Early Cypriote II, between 2500-2300 B.C.[163]; whereas Stewart proposed a later date in the Early Cypriote III[164].

Several examples from Lapithos form the second group. The first of these come from Tomb 301C[165], which was first used during the Early Cypriote II period[166]. The second example comes from Tomb 302A[167] and all of the chambers of this tomb are dated to the very beginning of the Early Cypriote III period[168]. The last two examples from this site belong to the same tomb, 313A[169], dated to the middle of the Early Cypriote III period[170]. A further example was found at Ajios Jakovos in Tomb 6, dated to the Middle Cypriote III[171], seems to constitute a representative of this type in the IInd millennium B.C.[172].

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157 Stronach 1957, 100.

158 Bittel 1940, Taf. II.

159 Bittel 1940, Taf. III.

160 Stronach 1957, 100.

161 Catling 1964, 60, Fig. 3, 5.

162 Dikaios 1940, 36, Pls. LX, 7, XLII, e; same grave also provided a pin similar to that found in the Kılıçini cave.

163 Dikaios 1940, 147 and 163.

164 Stewart 1962, 387.

165 Gjerstadt *et al.* 1934, 37, Pl. XIV, 2:7.

166 Gjerstadt *et al.* 1934, 38.

167 Gjerstadt *et al.* 1934, 43, Pl. XV, 2:37.

168 Gjerstadt *et al.* 1934, 46.

169 Gjerstadt *et al.* 1934, 92, Pl. XXIV, 1:90 and 1:104, Pl. CXLIII, 6 and 4.

170 Gjerstadt *et al.* 1934, 99.

171 Gjerstadt *et al.* 1934, 322.

172 Gjerstadt *et al.* 1934, 319, Pl. LXII, 1:81.

The last example[173] from Cyprus belongs to a group of metal objects acquired by the Limassol Museum in 1977, said to have originated from Anoyira Peralijithias[174]. Based on typological assessments this dagger was dated to the Middle Cypriote I-II, while it was suggested that an earlier dating into the Early Cypriote IIIB was also possible[175].

The typological and morphological similarities between the Kılıçini dagger and the Cypriote finds are apparently a reflection of increasing contacts between these two areas during the later part of the III[rd] millennium B.C., a relationship that can be followed in many aspects of the material culture[176]; and speak for a dating of the Kılıçini example to the same period. Daggers from both Yerten and Soli can also be included within this sphere of interaction, while the question still remains open, as to where this form first emerged. Both Cyprus and the south Anatolian coastal zone appear equally possible, but it is hard to reach a conclusion from the available data. Based upon typological assessments, especially of Yerten, Soli and the Cypriote examples, it seems more plausible to place the Kılıçini dagger in the last quarter of the III[rd] millennium B.C., which also complies with the dating of the sword suggested above. Similar daggers with three rivets in "Λ" formation and slightly rhombic section from the Yellow Period of Poliochni on Lemnos[177] also supports this dating and may further be interpreted that the coastal trade between the southern shores of Anatolian mainland and Cyprus[178] may have extended as far as the north Aegean.

3.2.1.C Pin

The pin represents a typical form attested over a wide geographical area[179]. The earliest examples of this type emerge in the late IV[th] millennium B.C. and was widely used in subsequent periods. The sub-type of this form with a flattened biconical head first appear in the IV[th] millennium B.C., but become widespread after the middle of the III[rd] millennium B.C., particularly in northern Syria and Cilicia, where their presence continues during the II[nd] millennium B.C.[180]. Apart from Tarsus-Gözlükule, similar examples in the near vicinity come from Bademağacı[181] and from Karataş-Semayük[182] in the EBA II period.

3.2.1.D Hair Ring

This type of artefacts are mostly found in burials around the skull and interpreted as hair spirals / rings or earrings. Similarly, the Kılıçini example was found near a skull in the cave and the traces of corrosion left on the skull (Fig. 21)[183] leaves no doubt that this item was once used as a hair accessory.

Two copper/bronze examples, representing much simpler forms, from the EBA I levels at Tar-

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173 Swiny 1986, 71, Fig. 65, LM RR619/21.

174 Weinstein-Balthazar 1990, 263.

175 Weinstein-Balthazar 1990, 71.

176 Peltenburg 2007, 145ff; Bolger 2016, 52.

177 Bernabò-Brea 1976, Tav. CCXXXV, b-c.

178 Supra no. 162.

179 Klein 1992, 98ff, see under type I.10B1.

180 Klein 1992, 100; Goldman 1956, 294, No. 164, Fig. 430 (EBA III), 295, No. 173, Fig. 430 (MBA).

181 Duru 2002, Lev. 48, 4-5, both with incised decorations on the head.

182 Bordaz 1978, 132, KA 450, KA 115N (with incised decoration), both from EBA fills.

183 Yalçınkaya 1995a, 66.

sus-Gözlükule show that they were in use from the beginning of the III[rd] millennium B.C.[184]; however, more similar forms appear, mostly after the second half of the millennium. The famous golden examples[185] from the "Treasure F" from Troia are accompanied by silver[186] and bronze[187] ones from the same site. While the Treasure F is dated approximately to an interval between 2300-2200 B.C.[188], similar examples from outside Anatolia are known from a wide geographical area and are dated roughly to the same chronological horizon[189]. The silver example[190] found beneath the foundations of a Troia-III building during Korfmann's excavations represents a later use; whereas a golden one recovered at Beşiktepe from a Troia-I context show that examples of this type made of precious metals were already in use from the beginning of the III[rd] millennium B.C.[191].

In the close vicinity of Kılıçini, many examples were found at Karataş-Semayük. Under the main category of rings Bordaz lists them within the sub-type Ia as "*coiled rings with tapered extremities*". A total of 41 items were all found in the burials, as single items or in groups of up to ten. Most of them were copper/bronze with a few of silver. A single example was produced from lead, while two further bronze examples were coated in gold[192]. Based on the find positions within the burials Bordaz interpreted them as artefacts ornamenting the side of the head, and in some occasions, green stains were left on the skull by corroded specimens, in a similar way to the Kılıçini example[193].

The scattered positions of the objects in the cave make it difficult to determine their exact context and possible relations between them; yet *pithos* sherds found near the skull and in other spots (Fig. 19), and sporadic human remains (Fig. 20) probably associated with them, indicate the presence of a grave(s) within the cave[194]. In this respect, it is possible to identify all the artefacts as a closed group of a burial. Based on the hair ring found nearby, it was suggested that the skull most probably belonged to a female[195]; however, as was shown by the Karataş-Semayük examples, such items are also encountered in male burials, even if only in rare examples[196]. Similarly, metal weaponry is thought mostly to be associated with male burials, but during the EBA in Anatolia in different regions, single or multiple weapons are also found in many female burials[197]. While it is not possible to say something specific about the gender, it should be noted that spindle-whorls and pins, along with other items, constitute the standard inventory of EBA burials in Anatolia. Another interest-

184 Goldman 1956, 298, Nos. 263-264, Fig. 432.

185 Sazcı 2007, 247.

186 Tolstikov –Treister 1996,191, Nos. 250-251.

187 Tolstikov –Treister 1996, 191, No. 252.

188 Sazcı 2007, 135.

189 Sazcı 2007, 247. For a detailed discussion on the distribution of this type in and outside Anatolia and particularly on their function and use, see Bordaz 1978, 40-52.

190 Sazcı – Korfmann 2000, 94, Abb. 2.

191 Korfmann 1987, 264.

192 Bordaz 1978, 30.

193 Bordaz 1978, 31.

194 Harun Taşkıran, pers. comm.

195 Yalçınkaya 1995a, 66.

196 Bordaz 1978, 31.

197 Koşay 1934, 76 and 93-95 (Ahlatlıbel); Bilgi 2005, Pls. 21, 25 and 33 (İkiztepe); Keskin 2004, 148 (Bakla Tepe); Seeher 2000, 122 (Demircihöyük-Sarıket).

Fig. 19

Fig. 20

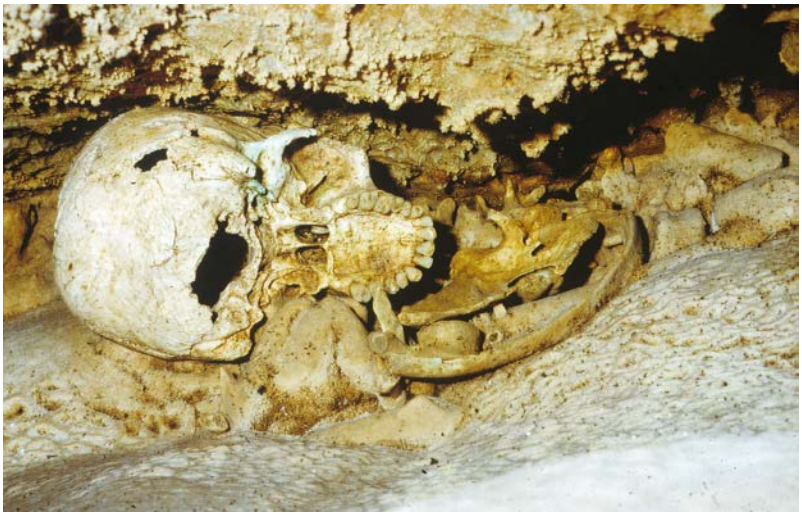

Fig. 21

ing point worth mentioning is that whetstones are found together with swords in the same burials in the Mycenaean Shaft-Graves[198]. Although they belong to a much later period, a similar practice is evident in Anatolia during the EBA, particularly in the İkiztepe graves, with some special types of weaponry[199].

From this data we may consider all the artefacts from Kılıçini as representing a whole group from a single burial. If so, and even if that was not the case, it is possible to date the whole assemblage to the last quarter of the III[rd] millennium B.C., more specifically to around 2200 B.C.; while the individual typological evaluations of each item also conform to this suggested date.

4. Conclusion

The metal finds from the Karain and Kılıçini caves provide important insights regarding the use of these caves in this region during the Late Chalcolithic and EBA periods. When we approach from a

198 Sandars 1961, 24, Pl. 19, 4-5.

199 Bilgi 2005, Pls. 21, 25 and 33.

wider, regional perspective, the research on the Elmalı Plain show that the number of settlements begins to increase considerably in the Late Chalcolithic period, and particularly in the EBA[200]. A similar situation has been also encountered in the neighbouring Burdur Plain; and recent surveys indicate that while many Late Chalcolithic sites remained inhabited, the plain became more densely occupied with the emergence of new sites during the EBA[201]. Vandam and Kaptijn underline the fact that for both periods the new sites are mainly small-sized and rather short-lived[202]; on the other hand several key-sites build an exception to this pattern. A pre-planned and accordingly executed settlement pattern can be followed through subsequent periods in the region, starting with Kuruçay in the Late Chalcolithic period, through the later parts of the EBA at several other sites, such as Hacılar Büyük Höyük, Bademağacı and Karataş-Semayük. This fact also suggests a wide distribution of small-sized satellite and/or seasonal settlements gathered around local administrative centres[203]. While interpreting the evidence from the Girmeler Cave in Fethiye, a similar view was expressed by D. French as: "*An economic function which is an integral part of the total economic/social activity at Hacılar and its related sites.*"[204]

A careful examination of the data on Table 1 clearly shows that the occupation or use of the caves in the region of Mount Katran seems to increase from the beginning of the Chalcolithic period. On the other hand, the majority of the archaeological evidence comes as isolated pottery sherds, usually not associated with a proper stratification and/or architectural remains. Since most of the data was gathered not from excavations, but only from surveys and, in a few cases limited soundings, this might be the result of an insufficient level of research results; yet it may also reflect the actual condition for the use of the caves, forming temporary habitation areas. A similar situation was also observed for the mound-type settlements in the Elmalı Plain, particularly for the Middle Chalcolithic period, where such sites produced no architectural remains and/or other finds, except for small amounts of pottery[205]. The ephemeral nature of such sites – and the Mount Katran caves – is often interpreted as that they reflect seasonal camps by semi-nomadic communities mainly dependent on animal husbandry, and most likely were not involved in relatively more developed activities, such as simple trading, metalworking and pottery making[206]. In this respect, both Karain and Kılıçini gain a special importance from several perspectives. Firstly, they are the only two caves that produced metal artefacts. The Kılıçini metal finds may be interpreted in a different way rather than being the outcomes of a cave habitation, since they might belong to a burial context, or to a special deposition; yet the possibility of another explanation is still open, considering the cave was not excavated in full. On the other hand, the presence and character of the metal finds from the Karain cave, along with other types of intensive finds (especially figurines, jewellery and distinguished forms of pottery) for the Late Chalcolithic and the EBA clearly indicate the rather developed character of the inhabitants.

Regardless of their exact character, archaeological evidence from the Mount Katran caves show

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200 Becks 2016, 31.

201 Vandam – Kaptijn 2015,169.

202 Vandam – Kaptijn 2015, 169.

203 Duru 2013, 9.

204 French 2008, 198.

205 Eslick 1980, 13.

206 Umurtak 2005, 66.

that the possessors of this material culture were both related to the northern mound settlements and had an outlet to the south coast as evidenced by marine-based finds[207] from earlier periods onwards. Thus, these early people might have been part of such a network – mentioned above – in a region with non-favourable conditions for agricultural production, in other words for a settled life. In this respect, the metal finds from both sites provide us with important insights into the use of caves in this very region for the Late Chalcolithic and EBA periods, both for regular occupation as shown by the utilitarian character of the Karain finds, and for probable symbolic purposes, such as burials and/or special deposits reflected in the Kılıçini assemblage and evidence from some other caves in the region (see Table 1). The typological assessments of the Kılıçini finds, particularly of the dagger and sword, clearly reveal that this different way of living was not a simple one, but was directly involved in the extensive trade networks of the later EBA, connecting the southern coasts both to the central Anatolian plateau and to the inner western parts, and to the Cyprus further to the south.

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[207] Lloyd – Mellaart 1962, 104; Kartal 2003, 52.

Site	Period	Type of Evidence
Arifini	Chalcolithic / Early Bronze Age	Pottery[208]
Boynuzluin (Bibişini)	Late Chalcolithic	Pottery and remains of a fragmentary wall; possible traces of cremation[209]
Çarkini	Late Neolithic / Chalcolithic	Pottery[210]
Çevlikbaşı I and II	Chalcolithic / Early Bronze Age	Pottery[211]
Harunini	Chalcolithic	Pottery and human skeletal remains[212]
	Early Bronze Age	Pottery[213]
Karain	Late Neolithic	Pottery, other finds[214] and post-holes[215]
	Chalcolithic (Early to Late)	Pottery and other finds[216]
	Early Bronze Age	Pottery and other finds[217]
	Holocene (period undefined)	Sporadic human skeletal remains[218]
Kılıçini	Early Bronze Age	Metal and other artefacts; *pithos* sherds[219]
Mustanini	Chalcolithic / Early Bronze Age	Pottery[220]
Öküzini	Late Neolithic	Pottery[221], obsidian, other finds and burials[222]
	Chalcolithic (Early to Late)	Pottery, fragments of braziers and obsidian[223]
Sırtlanini	Chalcolithic / Early Bronze Age	Pottery[224]
Suluin	Late Neolithic / Middle Chalcolithic	Pottery, plastered floors and architectural remains[225]

Table 1. *Caves on Mount Katran with Traces of Early Holocene Occupation*
(Neolithic through Early Bronze Age; lithic materials excluded)

208 Yalçınkaya 1995a, 57.
209 Yalçınkaya 1995a, 65; 1990, 39; Taşkıran 1994, 230.
210 Kökten 1958, 13; Yalçınkaya 1995a, 64.
211 Yalçınkaya 1995b, 10.
212 Yalçınkaya 1995a, 64; 1990, 39.
213 Yalçınkaya 1995a, 64.
214 Yalçınkaya 1987, 23; Yalçınkaya *et al.* 2013, 12.
215 Yalçınkaya *et al.* 2014, 238.
216 Yalçınkaya 1987, 23; Seeher 1988; Aykurt – Ayengin 2011.
217 Yalçınkaya 1987, 23; see also relevant chapters in this article for further references.
218 Yalçınkaya 1995a, 64; 1987, 23.
219 Yalçınkaya 1995a, 65ff; 1995b, 10-11; Keskin 2019.
220 Yalçınkaya 1995a, 57.
221 Kökten 1958, 13.
222 Carter *et al.* 2011, 124-125, Table 1.
223 Kökten 1958, 13; Carter *et al.* 2011, 125, Table 1.
224 Yalçınkaya 1995a, 57.
225 Taşkıran *et al.* 2012, 5ff; 2014, 217; 2016, 224.

List of Figures*:

* Raw drawings by the author; digitized and processed by Emine Akkuş-Koçak. Photos in Figs. 7, 9 and 19-21 © Karain Excavation; all other photographs by the author.

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