# POSSIBLE LINKS BETWEEN THE HIGHLAND REGIONS NORTH OF THE CENTRAL TAURUS AND WEST CAPPADOCIA IN THE MIDDLE CHALCOLITHIC PERIOD (6th AND 5th MILLENNIUM BC)

# ORTA KALKOLİTİK DÖNEMDE ORTA TOROSLARIN KUZEYİ DAĞLIK ALAN İLE BATI KAPADOKYA ARASINDAKİ OLASI BAĞLANTILAR (MÖ 6-5. BİNYILLAR)

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**Anahtar Kelimeler:** Kestel Madeni, Çardacık-Karatepeler, Mahmatlı-Boztepe, Orta Torosların Kuzeyi, Batı Kapadokya, Orta Kalkolitik Dönem

## ABSTRACT

*When the data obtained from recent archaeological studies concerning the Middle Chalcolithic Period in west Cappadocia are put together, the results are often illuminating. A re-evaluation of finds from Kestel Mine and the northern Taurus survey carried out by Aslıhan Yener, during the years 1987-1996, made it possible to reveal the bigger picture. The cultural patterns of the Middle Chalcolithic Period are quite well-known not only due to Güvercinkayası I-II and Köşk Höyük I but also to the layers in Canhasan I 2A/B in the Karaman district and Mersin-Yumuktepe XVI in the Anatolian south coast. All remains that are present in the area point to a culturally and perhaps socio-politically linked community structure which had shared certain standards in the types of settlements, styles of architecture and pottery production. They also maintained similar storage and goods preservation practices. Contrary to earlier*

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*assumptions, the relatively contemporary material that was found in the highland regions in the north Central Taurus indicates that the community structure during this period may have had a more complex organization pattern. The sites of Kestel mine, and two close settlements (Çardacık-Karatepeler and Mahmatlı-Boztepe) could provide evidence for the possibility that the Middle Chalcolithic communities had a system that utilized surplus products effectively and thus developed craft specialization.*

## ÖZET

*Batı Kapadokya'da Orta Kalkolitik Çağ'a yönelik değişik uzmanlarca son yıllarda yapılan arkeolojik araştırmalardan elde edilen veriler birleştirildiğinde oldukça ilginç sonuçlar ortaya çıkmaktadır. Son olarak Aslıhan Yener başkanlığında, 1987-1996 yıllarında, bölgenin güneyinde Orta Torosların kuzeyindeki dağlık alanlarda yapılan yüzey araştırması ve Kestel maden ocağı kazısı buluntularının tekrar değerlendirilmesi, büyük resmin daha net anlaşılmasına olanak sağlamıştır. OKÇ'nin kültür özellikleri, Batı Kapadokya'da yer alan Güvercinkayası I-II, Köşk Höyük I dışında, Karaman yöresindeki Canhasan I 2A/B ve güneyde Akdeniz bölgesindeki Mersin-Yumuktepe XVI. tabakalarından iyi bilinmektedir. Bu dönemin tüm buluntuları, yerleşim alanlarının seçiminde, mimari ve çanak çömlek üretiminde belli standartları olan, ürün depolamaya ve bu ürünü korumaya önem veren, kültürel ve belki de siyasal olarak birbirine bağlı bir toplumsal yapıyı işaret etmektedir. Orta Torosların kuzeyindeki dağlık alanlarda rastlanan çağdaş malzeme ise dönemin toplumsal yapısının tahminlerin ötesinde, daha karmaşık bir örgütlenmeye sahip olabileceğini göstermektedir. Buluntu alanlarından biri olan Kestel maden ocağı ile yakınındaki iki yerleşme, Anadolu'nun bu bölgesinde OKÇ toplumlarının artı ürünü işlevsel olarak kullandıklarının ve buna bağlı olarak da besin üretimi dışında uzmanlaşmaya imkan sağlayan bir sistemi oluşturduklarının kanıtı olabilir.*

## INTRODUCTION

Following a thorough re-evaluation of materials obtained from increasing numbers of archaeological studies in Anatolia in the last 30 years, prehistoric cultures of most areas have gradually become more definable. One of those areas is the western region of Cappadocia, which covered an area of what is now Aksaray, Nevşehir and Niğde. Little had been known about the period between 6th and 5th millennium BC in the region until 20 years ago. Excavations at Köşk Höyük (Bahçe, Bor-Niğde), Tepecik Çiftlik (Çiftlik, Niğde), Güvercinkayası (Çatalsu, Gülağaç-Aksaray) and soundings at Gelveri Yüksekkilise (Güzelyurt, Aksaray) shed light on the region's history[1]. Analysis of the pottery found at those excavation sites has brought about alternative ways of thinking which made it possible to attribute new meanings to field survey finds as well as uncovering information concerning the way of life during the period.

Within the scope of what recent data has shown, there has been a re-evaluation of the Chalcolithic finds which belonged to the field survey started in the Taurus and the excavations at Kestel mine directed by Yener[2]. After reassessments, finds from Kestel mine and the settlements of Mahmatlı-Boztepe and Çardacık-Karatepeler near the Kestel region have been dated back to the last quarter of 6th BC and first quarter of 5th millennium BC. Those finds are well-known from the Middle Chalcolithic levels of Güvercinkayası I-II and Köşk Höyük I. The finds suggest that early metal production in the highland regions started during the Middle Chalcolithic Period. Furthermore, it is possible that the as-yet little known societal structure of the period may have been more complex than we had assumed it to be.

The finds from Güvercinkayası I-II and Köşk Höyük I with other field survey finds from the western Cappadocia point at marked changes that took place in human lifestyles approximately at the end of the 6th millennium BC. Changes in settlement choice, architecture and pottery production, can easily be observed in most finds. The majority of settlements, unlike the ones in earlier or later periods, were located on a natural hill that overlooked the landscape or on a slope[3]. It can be clearly understood from the excavations at Güvercinkayası that the preference of settlement choice was due to security concerns[4].

Similarities are also visible in their architecture styles. The buildings in Güvercinkayası and Köşk Höyük have generally similar plans, they only differ in size. Rectangular shaped buildings had a single-room with a cellar constituted by a dividing wall at the back of the room. There was always a domed oven and fireplace in the main room. In some of the buildings, there was a platform with grinding stones. The cellar and bins, which were found in every house, were used for storing grains[5].

The pottery collected both from excavations and surveys show that the dominant ware group dated to the Middle Chalcolithic Period was the black/dark burnished wares[6]. The uniformity in architecture can better be observed in pottery. The sherds that were found in different settlements were quite similar concerning their production techniques and forms. The clays generally have added minerals. In addition to mineral temper, chopped straw and mica can also be found in the paste. The majority of pots were carefully burnished to have a shiny effect. The surface of some pots were mottled. However, all the large, narrow-neck storage pots are black on the exterior and brown or red on the interior surface[7]. Those pots were probably fired in an oxidizing environment and then their exterior surface was carbonized with well-controlled firing.

Storage vessels and jars have an important place in shape variations[8]. The pots usually have an egg-shaped body. The storage vessels generally have a long, vertical neck whereas jars do not have necks. Apart from these, bowls of all shapes and sizes are objects used on a daily basis. An important feature of storage vessels is the naturalistic and symbolic relief-decorated figures applied on the exterior surface. Among these relief-decorated figures, cattle, goats, deer, dogs and snakes are the frequently observed ones[9]. The fact that the figures were applied especially on storage vessels may well be an indicator of the changing religious beliefs with the increasing complexity of a new economy based on surplus production.

1 Silistreli 1985; Bıçakçı 2001; Öztan 2002; Öztan/Açıkgöz/Özkan/Erek/Arbuckle 2007; Gülçur 2012.

2 Yener 1993.

3 Gülçur 1999: 199, 203; Gülçur 2012: 217-18.

4 Güvercinkayası is located on a steep rock that is almost impossible to reach from western and southern slope. The upper and lower settlements are divided by a fortification wall strengthened by two towers. Several important structures were aligned behind the fortification wall. The lower settlement expanded through the north and the east. For more details see: Gülçur 2012: 218-219; Gülçur 2004: 142-144.

5 Öztan 2002: 56; Gülçur 2004: 143; Gülçur 2012: 218-19, Öztan/Açıkgöz/Arbuckle 2009: 315.

6 Silistreli 1991: 97; Gülçur 2004: 144-46.

7 Silistreli 1985: 32; Gülçur 2004: 144-45; Gülçur 2012: 221.

8 Gülçur 2004: 145.

9 Silistreli 1985: 32-33; Öztan 2002: 58; Gülçur 2004: 146; Gülçur 2012: 216.

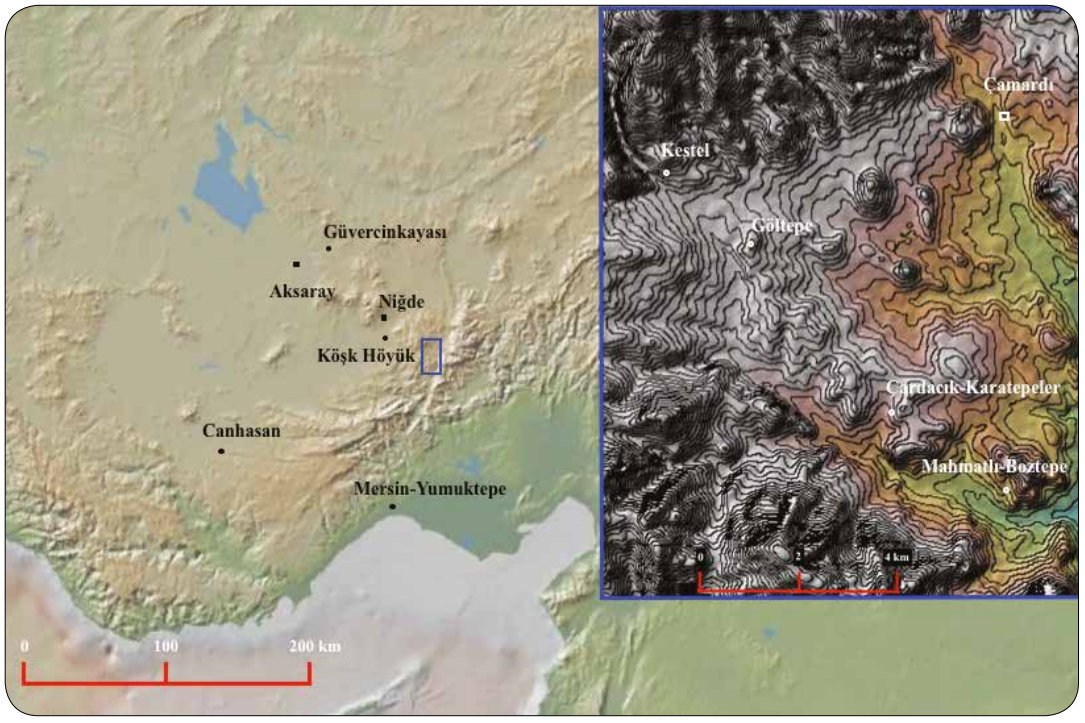


Figure 1: Map of Sites Mentioned in the Text with Inset Map of Çamardı District / *Makalede Sözü Geçen Arkeolojik Alanları Gösterir Harita*

Figure 2: Kestel's Main Gallery and Tunnels (A. Hacar) / *Kestel Ana Galerisi ve Maden Tünelleri*

## THE FINDS IN THE HIGHLAND REGIONS

The field survey in the north of Central Taurus range in the south of Niğde province in 1987-1996 along with the Göltepe and Kestel excavations carried out by Yener have significantly changed what we knew about early metallurgy during Early Bronze Age in Anatolia[10]. The ceramics, which were found, feature important information about mining practices. These data have been re-evaluated under the light of current thinking since 2012. At the initial stages, the re-evaluation process was limited to the examination of the pottery that belonged to the Early Bronze Age. However, it was inevitable that the scope of examination had to be extended once the Middle Chalcolithic Period finds that we are familiar with from Güvercinkayası and Köşk Höyük were discovered in the same zone. The finds unearthed in the highland regions also force us to reconsider our knowledge about the early history of ancient Anatolia.

The sites where the finds dating back to the Middle Chalcolithic Period brought to light are located in the highland Çamardı district in today's Niğde province and at an altitude between 1800 and 2000 m. One of those sites, Kestel mine, is located in the 2km west of Celaller village, on a steep slope[11]. The other two sites, Çardacık-Karatepeler and Mahmatlı-Boztepe, are positioned on a natural hill, in accordance with the settlement types in the Middle Chalcolithic Period. The two settlements surveyed by Yener in 1991 are situated 7 and 9km from the mine in the southeast direction (Fig. 1)[12].

Kestel mine was also discovered as a result of the same research project directed by Yener in 1987 and soundings were initiated immediately following the discovery in the same year[13]. The mine comprises of a gallery entered

[10] Yener 1988: 19-28; Yener 1993: 233-246; Yener 2000: 71-128; Willies 1991: 241-247.

[11] Kaptan 1988: 5; Yener 1988: 18-19.

[12] Yener 1993: 235.

[13] Kaptan 1988: 5; Yener 1988: 18-19; Yener/Özbal/Kaptan/Pehlivan/Goodway 1989: 201.

through a 5-8 m diameter corridor and tunnels leading to the gallery (Fig. 2). The diameters of the tunnels can be as small as 60 cm[14]. Early Bronze Age materials similar to Göltepe were found during the intermittent excavations done up until 1996[15]. In addition, dark burnished pottery, which had been dated to Late Chalcolithic Period, were also identified[16].

## POTTERY

The Middle Chalcolithic pottery from Kestel mine was retrieved from soundings S.2, S.9 and trenches T.10, T.12. The finds in Çardacık-Karatepeler and Mahmatlı-Boztepe sites were collected in 1991. All pottery collected from the three sites reflect the uniformity of the period.

The sherds, similar to the ones found in the north of the area, comprise of usually black/grey burnished pottery (Figs. 7-9). The paste is generally medium-fine and mineral tempered; chopped straw or mica were used as well[17]. The dark colours on the exterior surfaces were probably achieved by deliberate blocking of oxygen access through the later stages of firing. It is assumed that reversing some wide and narrow-neck vessels before firing them might have prevented their inner parts from being affected by the reducing environment. As a result of the process, unlike their exterior surface, the interior surface acquired tones of light red, reddish brown and grey (Fig. 7). Apart from the vessels of this kind, there are also ones with dark colour or mottled examples (Figs. 8-9).

The pottery is thought to have variable firing temperatures; particularly some of the elaborately shaped examples are well-fired and have clinky features (Figs. 8. 2-4). Most examples display special emphasis on burnishing similar to the ones at Güvercinkayası and Köşk Höyük[18]. Shiny burnishing was applied to the exterior and interior surfaces of the open vessels, whereas only exterior surfaces of the closed vessels were burnished (Figs. 7-9).

The shape variations comprise of storage vessels, jars and bowls. However, the proportion of storage vessels is higher just as it is the case in Güvercinkayası and Köşk Höyük. This similarity also applies to vessel shapes. The storage vessels that were examined have a lot in common with the ones found in Güvercinkayası I-II and Köşk Höyük I. They usually have a conical base, egg-shaped body and long cylindrical necks[19] (Figs. 5. 5-7, 6. 1, 3, 5-7, 7. 3-7, 9. 3, 5). The transition from the body to the neck is sharply angular. As is known from the finds at Güvercinkayası, in order to give more strength the base was thickened with a separate element of clay[20] (Figs. 5. 7, 9. 3).

All the jars are formed neckless except from one example with a wide-neck formed by the irregular everted rim (Figs. 5. 2, 7. 2). Other examples have a globular body and simply rounded or slightly everted rim (Figs. 5. 1, 3). A carinated body sherd must have belonged to a jar also known at Güvercinkayası[21] (Fig. 5. 4).

The rim diameters of the bowls are between10 to 33 cm. Those bowls have a hemispherical, conical or slightly carinated profile (Figs. 3, 4, 8. 2-6, 9. 1-2, 4). Similar examples of the carinated bowls were found in Güvercinkayası[22]. Most of the bowls' lips are generally simply rounded. Apart from the simply rounded or flat base, the bowls with omphalos or a distinctive body-bottom transition can be seen (Figs.4. 5-8, 8. 5-6, 9.1). Parallel forms are commonly found at Güvercinkayası[23]. One of the two-handled examples has a strap-handle attached to the rim and extends to the middle of the body (Fig. 4. 2). The other example has a horned-handle which is known to have spread during this period from northern Anatolia to Cilicia (Figs. 4. 4, 9. 2)[24].

One of the characteristic features of the Middle Chalcolithic pottery is the stylized relief-decoration applied especially on the bodies of storage vessels. Those fragments were found in all of the three sites. The horn relief on a body sherd from Kestel probably formed a stylized animal head by composing a thick vertical or horizontal handle just like the examples found in various contemporary sites (Figs. 6. 4, 7. 1)[25]. A similar example to the ones that belong to Çardaçık-Karatepeler is also known from Güvercinkayası. It is composed of parallel incised stripes and regularly embossed knobs that cover the bottom of the handle. The incised stripes are decorated on the horizontal handle-body join (Figs. 6. 6, 7. 3). There are only two of the knobs remaining in the sherd collected from Çardacık-Karatepeler. An examination of the example from Güvercinkayası

[14] Yener/Özbal/Kaptan/Pehlivan/Goodway1989: 201.
[15] Willies 1991: 242-46; Yener 2000: 87-98.
[16] Kaptan 1988: 5-6; Yener/Özbal/Kaptan/Pehlivan/Goodway 1989: 201-202, Yener 2000: 92,
[17] Silistreli 1984: 84; Silistreli 1985: 32; Öztan 2002: 58-59; Gülçur 2004: 145-46.
[18] Silistreli 1984: 84; Gülçur 2004: 145.
[19] Gülçur 2004: 145-46, Figs. 7. 2, 8. 1, 9. 1; Çaylı 2010: 146; Öztan/Açıkgöz 2011: 139, Fig. 2.
[20] Çaylı 2010: 20, kat. 68.
[21] Gülçur 2004: Fig. 5. 1.
[22] Gülçur 2004: 145, Figs. 2. 4, 8, 3. 4-7.
[23] Gülçur 2004: Figs. 2. 4, 7.
[24] Garstang 1953: Fig. 93. 11; Koşay/Akok 1957: 14, Fig. XVIII. 2; Gülçur 2004: Fig. 4. 2.
[25] Gülçur 2004: Figs. 5: 1, 6. 1.

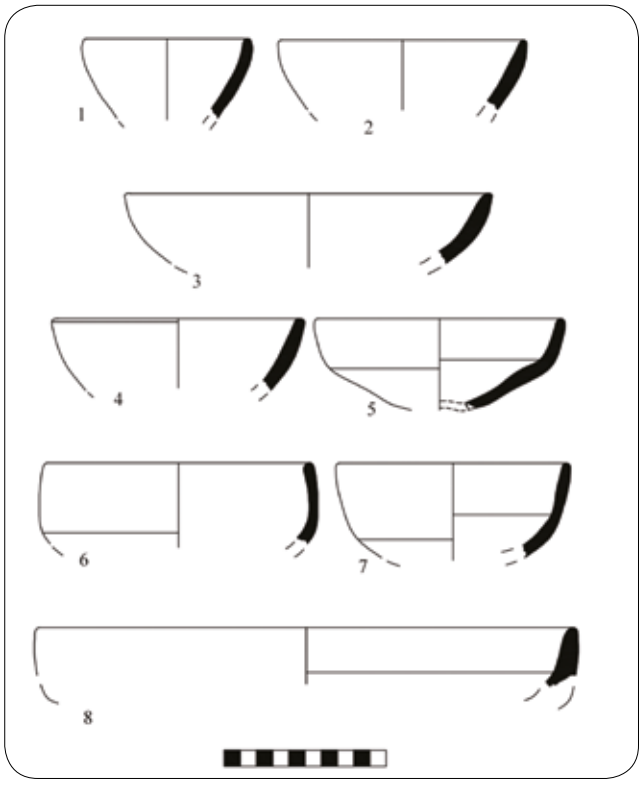

Figure 3: Middle Chalcolithic Ceramics (1-2,5-6 from Kestel, 3-4,7 from Çardacık-Karatepeler, 8 from Mahmatlı-Boztepe) (A. Hacar) / *Orta Kalkolitik Dönem Çanak Çömleği (No:1-2,5-6 Kestel, 3-4,7 Çardacık-Karatepeler, 8 Mahmatlı-Boztepe)*

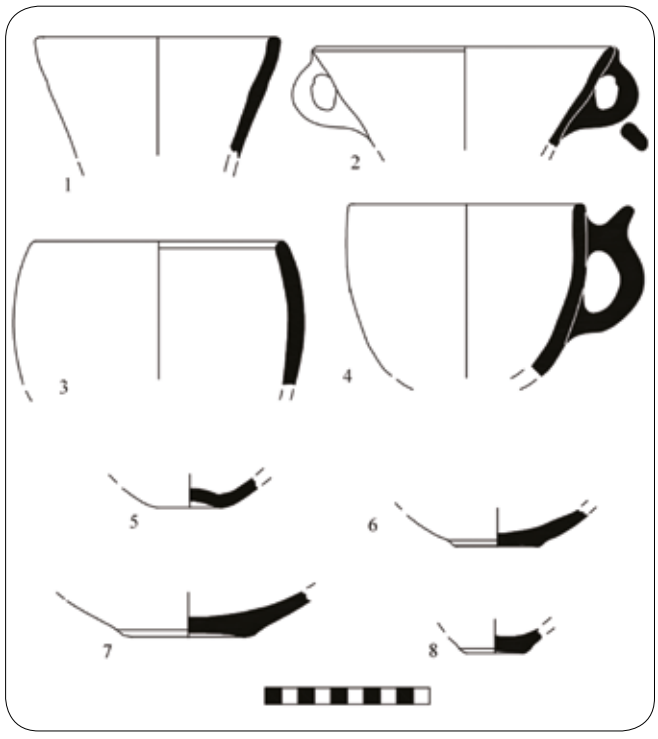

Figure 4: Middle Chalcolithic Ceramics (1-5 from Kestel, 6 from Çardacık-Karatepeler, 7-8 from Mahmatlı-Boztepe) (A. Hacar) / *Orta Kalkolitik Dönem Çanak Çömleği (No: 1-5 Kestel, 6 Çardacık-Karatepeler, 7-8 Mahmatlı-Boztepe)*

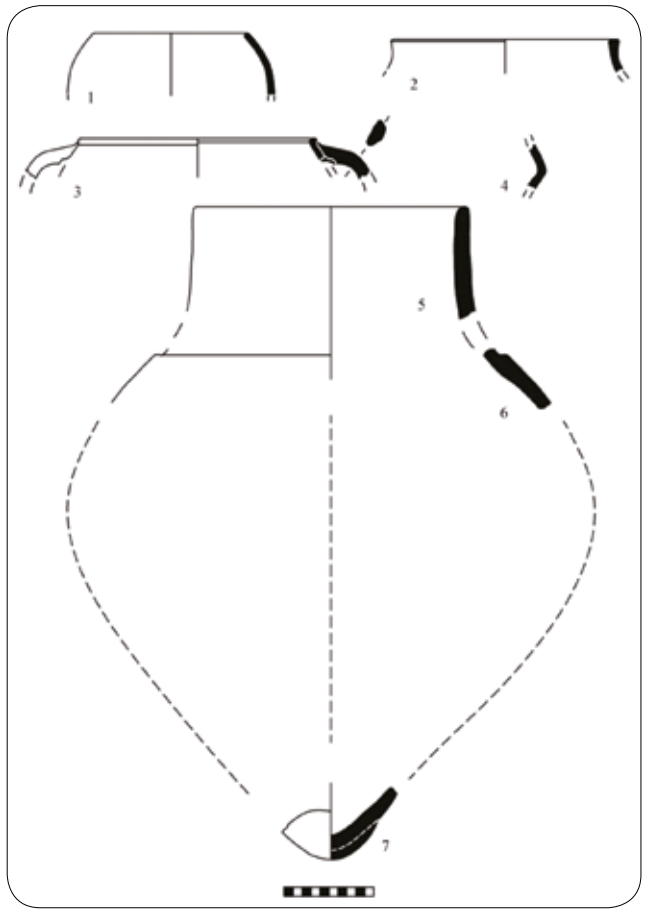

Figure 5: Middle Chalcolithic Ceramics (1-4 from Kestel, 5-7 from Mahmatlı-Boztepe) (A. Hacar) / *Orta Kalkolitik Dönem Çanak Çömleği (No: 1-4 Kestel, 5-7 Mahmatlı-Boztepe)*

makes it clear that the decoration belonged to a panel of 20 knobs in rows of four horizontal lines[26].

Mahmatlı-Boztepe offers a variety of examples that belong to storage vessels with relief decoration of the period. One of those sherds has relief eyebrow/horn making up a stylized animal or human face combining with a handle, which is commonly found in Güvercinkayası and Köşk Höyük (Figs. 6. 5, 7. 7)[27]. Another commonly preferred example, which reflects the thin parallel fluting, applied on the intersecting parts of the body and the handles was also discovered at Güvercinkayası (Fig. 9. 6)[28]. That pattern gives the impression of a claw tying the body to the handle. A different piece obtained at Mahmatlı-Boztepe is known both from Güvercinkayası and Köşk Höyük. The fragment, which belongs to the upper part of a body, has a snake figure in high relief (Figs. 6. 7, 9. 5)[29]. Just like the ones found in the two other settlements,

[26] Çaylı 2010: kat. 68.
[27] Gülçur 2004: Fig. 25; Çaylı 2010: kat. 72, 82-84.
[28] Gülçur 2004: Figs. 10: 5, 22; Çaylı 2010: kat. 68.
[29] Silistreli 1985: 32-33; Esin 1998: 98; Gülçur 2004: Figs. 11. 7, 23.

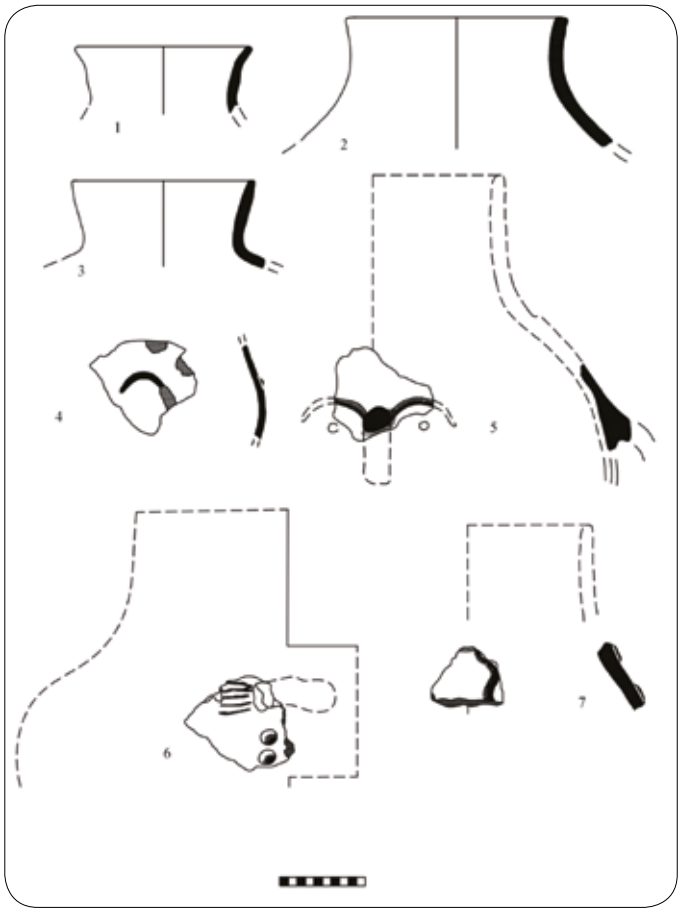

Figure 6: Middle Chalcolithic Ceramics (1-4 from Kestel, 6 from Çardacık-Karatepeler, 5, 7 from Mahmatlı-Boztepe) (A. Hacar) / *Orta Kalkolitik Dönem Çanak Çömleği (No: 1-4 Kestel, 6 Çardacık-Karatepeler, 5, 7 Mahmatlı-Boztepe')*

the snake figure from Mahmatlı-Boztepe is adorned with impressed dots. Those dots probably represent the scales of snakes in nature. Based upon the examples found in Güvercinkayası and Köşk Höyük, one can conclude that those dots were encrusted.

## DATING

The pottery from Kestel, Çardacık-Karatepeler and Mahmatlı-Boztepe belong to a standardized ware group in terms of their production technique, surface treatment and forms. The ware group which is regarded as black/dark burnished ware have been safely documented at Köşk Höyük I and Güvercinkayası I-II. Radiocarbon dating revealed that the examples taken from the layers of Güvercinkayası date back to a period between 5210 and 4860 BC (cal. C14)[30]. Similarly, dates for Köşk Höyük Layer I pointed at a period between 5211 and 4911 BC (cal. C14)[31].

[30] Gülçur 2012: 223.

[31] Öztan 2002: 56, Öztan/Açıkgöz/Özkan/Erek/Arbuckle 2007: 533.

At the same layers of Güvercinkayası and Köşk Höyük a few imported painted pottery known from Canhasan I 2A/B were found out during excavations[32]. Despite the fact that there have been continuous debates about the absolute dating of the levels of Canhasan I 2A and B, it is quite important in that it links Güvercinkayası and Köşk Höyük Middle Chalcolithic levels with Canhasan Chalcolithic levels[33].

There are striking similarities between Güvercinkayası I-II and Mersin Yumuktepe XVI, which date back to 5000 BC. In Layer XVI, unlike in its preceding phases, drastic changes came into play in architecture, pottery and other finds[34]. Those changes are parallel to the ones at Güvercinkayası. Apart from general building types, the settlement plan consisting of an upper and lower settlement is also similar to that of Güvercinkayası. Among the pottery that was obtained from Mersin Yumuktepe, there were examples with dark burnished which resemble the ones in the northern part of Central Taurus range[35]. Mersin level XVI came to an end following a catastrophe like Güvercinkayası probably at the same period[36].

The bulk of the data has shown that the black/dark burnished pottery obtained from Kestel, Çardacık-Karatepeler and Mahmatlı-Boztepe should be dated back to 5250-4750 BC, corresponding to the levels at Güvercinkayası I-II, Köşk Höyük I and Mersin XVI.

## DISCUSSION

As a result of the re-evaluation of the finds from Kestel Mine and the northern Taurus survey carried out by Aslıhan Yener, for the first time Middle Chalcolithic finds are documented in this region. This significant discovery has brought about many questions regarding the social structures. At this point it will be more

[32] Gülçur states that the painted pieces which were obtained from Güvercinkayası are the contemporaries of the ones in Canhasan I level 2A (Gülçur 2012: 221; Gülçur/Endoğru 2001: 50). Öztan and Silistreli, however, associate the similar material of Köşk Höyük Level I to Canhasan I level 2B (Öztan 2002: 58-59; Silistreli 1985: 34). The radiocarbon dating from Canhasan I level 2B suggests that the layer dates back to an earlier time before Middle Chalcolithic Period, approximately to the first half of 6000 BC (Thissen 2002: 303, 324, 326-327). Despite the lack of reliable analysis, level 2A is said to be dating back to the Middle Chalcolithic Period, according to French (French 1998: 65-69). That is why we believe that both of the settlements are contemporaries of Canhasan 2A.

[33] French 1967: 165-173, chart. 1-2; Thissen 2002: 303, 324, 326-327.

[34] Garstang 1953: 131-53; Caneva/Köroğlu 2010: 37-44.

[35] Garstang 1953: 143, Figs. 11, 16-17; Caneva/Köroğlu 2010: 42-43.

[36] Caneva/Köroğlu 2010: 42, 44; Gülçur 2012: 222-23.

Figure 7: Middle Chalcolithic Ceramics (1-2 from Kestel, 3 from Çardacık-Karatepeler, 4-7 from Mahmatlı-Boztepe) (A. Hacar) / *Orta Kalkolitik Dönem Çanak Çömleği (No: 1-2 Kestel, 3 Çardacık-Karatepeler, 4-7 Mahmatlı-Boztepe)*

Figure 8: Middle Chalcolithic Ceramics (1-3 from Kestel, 4-6 from Mahmatlı-Boztepe) (A. Hacar) / *Orta Kalkolitik Dönem Çanak Çömleği (No: 1-3 Kestel, 4-6 Mahmatlı-Boztepe)*

accurate to evaluate Middle Chalcolithic finds from the northern Taurus as two separate groups: as mine and settlement finds.

The Middle Chalcolithic finds retrieved from Kestel mine have presumably shown that early metal production in the region commenced in the late 6th millennium BC onwards. However, it is not certain whether or not Çardacık-Kartepeler and Mahmatlı-Boztepe were settlements where groups of miners settled. The fact that they were located on a quite mountainous area which was not fertile enough for agricultural production and the rich resources for mining in the area makes it possible to consider that the place might have been used to accommodate groups of miners. An alternative point of view may suggest that the settlements belonged to semi-nomadic communities who were engaged in animal husbandry. The increased variety of dairy products in this period may be considered as an evidence supporting this view[37].

But here in order to discuss, we want to accept the first hypothesis as true, taking the uniformity of the finds from Cappadocia into consideration. Nevertheless it is still not possible to determine whether Çardacık-Karatepeler and Mahmatlı-Boztepe, both of which are claimed to be the miners' settlements, belonged to the miners who exploited Kestel mine. When the distance between Kestel and the two settlements (approximately 7-9kms) are examined, it seems more probable that the groups who stayed in those settlements continued production in mines nearby. Another uncertainty about those mining communities is that it is not clear which mineral(s) they produced. Were attempts made to produce other minerals apart from copper, which was commonly found in settlements of the Middle Chalcolithic Period? It may be possible to answer the question once further research is done, however, there is no definite answer for such a question for the time being.

[37] Gülçur 2012: 223.

Figure 9: Middle Chalcolithic Ceramics (2 From Kestel, 1,4 From Çardacık-Karatepeler, 3,5-6 From Mahmatlı-Boztepe) (A. Hacar) / Orta Kalkolitik Dönem Çanak Çömleği (No: 2 Kestel, 1,4 Çardacık-Karatepeler, 3, 5-6 Mahmatlı-Boztepe)

Despite the uncertainty, the fact that the Middle Chalcolithic finds similar to the ones that are common to the north were obtained from Kestel mine and the two settlements of the highlands show that specialized mining practice had started in the area far earlier than it was assumed. That puts us in a position to reconsider our knowledge regarding the social life during the Middle Chalcolithic Period in the western part of Cappadocia and produce new hypotheses. The main and most important of all the hypotheses is the probability that the Middle Chalcolithic communities in western Cappadocia managed to establish a societal structure including craft specialization other than agriculture.

The majority of data derived from the excavations and field surveys dating back to the Middle Chalcolithic Period shows that an organised community which probably had strong socio-political links established in the western region of Cappadocia and that a stratified social structure was on the verge of coming into existence[38]. The settlement plans, choice of location and similarities in architecture point at a striking uniformity[39]. The uniformity of the period is even more apparent in pottery that was produced. The style of production, forms and decorations are so standard that they look as if they were produced in the same workshop.

Apart from the finds of architecture and pottery, there were few other finds, which suggest that craft specialization in mining had already started in the region. A furnace used for smelting process, parts belonging to multiple dimpled stones and residuals of copper were brought to light in a forecourt in Köşk Höyük level I[40]. As it is described above, the finds which were obtained from the two places other than Cappadocia but were found to be in relation to it were considered to be important. One of those two sites, Canhasan I level 2B yielded a mace head that was put into shape with a process of annealing and hammering[41]. The finds from the Cilician site Mersin-Yumuktepe have even more importance. An axe and needles made from copper put into shape following a process of casting and hammering were found in level XVI and they clearly show the level of specialization in mining during the period[42]. A copper seal from level XVII contains significant amounts of tin (%2.6)[43].

Kestel mine, Çardacık-Karatepeler and Mahmatlı-Boztepe probably played a role in the first production stage of early metallurgy. Although it has not been proven yet, the finds from Köşk Höyük and MersinYumuktepe suggest that craftsmen who

[38] It is uncertain as to which regions the societal organization had managed to spread to. However, field survey done on the area is informative. The field survey conducted by Gülçur and Yener confirms the existence of the culture in Aksaray, Niğde and the south of Nevşehir. In addition, in field surveys done by Kulakoğlu reveal similar pottery forms in contemporary settlements in Kayseri (Kulakoğlu, personal communication). That brings us to the possibility that the culture we definitely know that existed in western Cappadocia might have spread an area large enough to cover Kayseri as a province.

[39] Gülçur 1999: 199, 203; Gülçur 2012: 217-219.

[40] Öztan 2002: 56-57.

[41] Yalçın 1998: 286.

[42] Garstang 1953: 134-40, Figs. 80b, 85; Yalçın 2000: 114-15; Caneva/Köroğlu 2010: 44. Those finds provide information not only on the level of technology they had reached in mining practices but also on the phases of mine production and circulation. Geographically, Yumuktepe is not far away from the aforementioned region. However, as shown in Fig. 1, the archaeological areas evaluated in the article are located on the far north edge of the natural ways that connect Central Anatolia to Cilicia.

[43] Garstang 1953: 108; Esin 1969: 97, 144.

performed the next stages of metal technology were in existence. The specialization of mining may have triggered expertise in other fields[44]. For instance, the uniformity of the materials mentioned in the article and obtained from northern areas indicate a possible specialization in the production of pottery.

The finds found in the northern part of the highlands prove the transition to a new socioeconomic model. The protected spacious silos that were found in excavations at Güvercinkayasi I-II and Köşk Höyük I along with the proportional majority of storage jars can be considered as archaeological proof for our hypotheses[45].

## CONCLUSIONS

It is clear that the highlands in the north Central Taurus range connected since the Pre-Pottery Neolithic Period[46] were integrated together in a new socio-economic structure centred in the north after the last quarter of 6th millennium BC. For the time being, the archaeological data is incomplete regarding the nature of the hierarchical structure. However, the excavations and field surveys give clues about the structure of this organization. The data obtained point to a societal structure where communities are culturally, economically and politically interlinked. They also signal relationships between neighbouring regions. Additionally, the size of the storage units found in Güvercinkayası and Köşk Höyük refers to a society where surplus products are used effectively. The data regarding stages of controlling and redistribution of goods is incomplete for the present. However, as Gülçur points out, storage unit number 13 located in the upper settlement of Güvercinkayası which was behind the fortification wall and the storage unit number 14 which is attached to the former but larger in size than the other units may show that the surplus products were protected strictly by an elite class[47].

The existence of surplus products and an elite class in Middle Chalcolithic societies have been demonstrated by the finds obtained from the highlands. If our interpretations are correct, we suggest that craft specialization may have started in Anatolia in the Middle Chalcolithic Period. Mining is one of the fields of specialization.

This organizational pattern came to an end between 4750-4500 BC following a catastrophe that broke out in the main layers of Güvercinkayası I-II, Köşk Höyük I and Mersin Yumuktepe XVI[48]. Both the nonlocal mud-brick architecture of Güvercinkayası and the other finds similar to the Late Ubaid can provide information regarding the origin of the cultural change[49].

There are few archaeological data that remain from the cultural change that took place from 4750-4500 BC to the end of the EB I (2800 BC) in western Cappadocia. Although the research carried out in the nearby regions show that mining production continued in a similar way during the Late Chalcolithic Period and first stage of the Early Bronze Age I, it was not done in an organised and intensive manner[50]. Besides Kestel and other find spots in its region, Çamlıbel Tarlası and Derekütüğün near Çorum which dated back to the Late Chalcolithic Period can be cited as examples[51]. After examining the finds in Çamlıbel Tarlası, Schoop concluded that the area could have been a camping site for groups who did seasonal production in a copper mine nearby[52]. Similar conclusions can be seen in Derekütüğün mine and in its vicinity, which yielded Late Chalcolithic, finds[53]. Another example in the highlands might be Senir Sırtı which had mining activity during the Early Bronze Age II and III located near Hisarcık, Kayseri. The pottery collected from that mine included pieces which belonged to the Early Bronze Age II as well as the Late Chalcolithic Period[54].

[44] Nissen 2004: 51-52.

[45] Silistreli 1991: 95; Özkan/Faydalı/Öztan/Erek 2004: 196; Gülçur/Kiper 2008: 246-49, 251; Öztan/Açıkgöz/Özkan/Erek/Arbuckle 2007: 535-536; Öztan/Açıkgöz 2011; 139-140; Gülçur 2012: 219-20. A study by Çaylı presents some valuable information about the structures (numbers 13 and 14) which were protected by the two-tower fortification wall of Güvercinkayası. During excavation, storage jars that are characteristic to the Middle Chalcolithic period were found semi-buried and arranged in a line in a cellar of the house 14. Initially designed as an ordinary structure, adjacent to number 14, house 13 was turned into a storage area by building in storage units that are attached to each other. For further information on yearly distribution and the storage capacity of those units, see Çaylı 2010: 128-130,146-147; Gülçur 2012: 220.

[46] The trace element analysis of a copper sample from Aşıklı was well-matched by Bolkardağ and Bakır Çukuru in the north of the Central Taurus range see: Esin 1999: 28-29, Yener 2000: 23.

[47] Gülçur 2012: 224.

[48] Garstang 1953: 134; Caneva/Köroğlu 2010: 40; Öztan 2002: 56; Gülçur 2012: 219-220.

[49] Gülçur 2004: 144; Gülçur 2012: 220.

[50] Contrary to Central Anatolia, there is specialized metal production including stratified societies in southeastern Anatolia see Yener 2000: Lehner/Yener 2014: 540.

[51] Aksoy 1998; Schoop 2011; Lehner/Yener 2014: 542-544; Yalçın/Yalçın/Maass/İpek 2015: 148-184.

[52] Schoop 2011: 142-43.

[53] Yalçın/Yalçın/Maass/İpek 2015: 151-52.

[54] Yener/Kulakoğlu/Yazgan/Kontani/Hayakawa/Lehner/Dardeniz/Öztürk/Johnson/Kaptan/Hacar 2015: 604, Figs. 7-8.

During the Early Bronze Age II, the growth of interregional trade brought about an increase in wealth and population. In this period, there is a striking intensity in the amount of the archaeological data obtained from all the regions in Anatolia. Both the excavation finds and the survey finds point to cultural zones that are usually shaped within geographical territories[55]. In addition, upper-lower settlements systems and monumental structures that once belonged to an elite social class imply a fully stratified society. It is therefore fair to say that those cultural zones were the political territories managed by a certain ruling class[56].

The uniformity of pottery and architecture, divided settlements systems that point to differences in social classes, the efficient use of surplus and mine production in the Central Taurus range which apparently depended upon another structure in the western Cappadocia in the Middle Chalcolithic Period, have a lot in common with the societal structure of Early Bronze Age II. Without a doubt, that system in the Middle Chalcolithic Period might not have had a hierarchical structure that was as institutional as it was in the Early Bronze Age II. However, it can be concluded that primitive building blocks of the economic and political institutions that would shape Anatolia in the later periods began to form during this period.

[55] Bittel 1942: 187-191; French 1969: 19-55; Efe 2004: 17-21.
[56] Efe 1998: 298-299, Map.1; Efe 2004: 23-24.

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