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Settlement history and material culture in southwest Turkey: report on the 2008–2010 survey at Çaltılar Höyük (northern Lycia)

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Abstract

This report presents the main results of research activities carried out at Çaltılar Höyük, northern Lycia, southwest Turkey, between 2008 and 2010. During this period, an international team undertook topographic, archaeological and geophysical surveys, together with artefact studies and analyses, aimed at determining the nature and extent of occupation at the site, and offering new data about the settlement history and material culture of this region in pre-Classical times. The results of this work suggest that the site was occupied from at least the fourth millennium (Late Chalcolithic) to the middle of the sixth century BC, a date that coincides with the Persian conquest of Lycia, with only scant evidence of use/occupation after this phase. In addition, the nature of our finds suggests that the site, despite its location in the summer pastures (*yayla*) and at a considerable altitude (1,250m), was well-connected to other Anatolian and Aegean regions, and probably served as more than just a minor seasonal agro-pastoral settlement, particularly during its Early Bronze Age and Late Iron Age periods of occupation. The evidence relevant to the second millennium BC is too limited at present to allow further interpretation about the nature of occupation at the site, but is significant per se, especially in view of the scanty archaeological remains of this period in the region, and despite the numerous references to the Lukka people and settlements available in documentary sources.

Özet

Bu rapor, güneybatı Türkiye'de, kuzey Likya'da bulunan Çaltılar Höyük'de 2008–2010 yılları arasında yapılan araştırma faaliyetlerinin ana sonuçlarını kapsamaktadır. Bu süre içinde, uluslararası bir ekip, yerleşimin niteliğini ve kapsamını belirlemek ve bu bölgenin Klasik dönem öncesindeki yerleşim tarihi ve maddi kültürü hakkında yeni bilgiler elde etmek amacıyla, buluntu çalışmaları ve analizler yanında, topografik, arkeolojik ve jeofizik araştırmalarda bulunmuştur. Bu çalışmanın sonuçlarına göre, yerleşim yeri, en azından dördüncü binden başlayarak (Geç Kalkolitik) M.Ö. 6. yy'ın ortalarına kadar (Pers işgaline rastlayan dönem) iskan edilmiştir, fakat bu dönemden sonrası kullanım veya iskan için yeterli kanıtlar mevcut değildir. Buna ek olarak, buluntuların niteliği bakımından; yazlık meralarda (yayla) kurulmuş ve önemli bir yüksekliğe sahip olan (1.250m) konumuna rağmen, yerleşim yerinin diğer Anadolu ve Ege bölgeleriyle bağlantılı olduğu ve özellikle Erken Tunç Çağı ve Geç Demir Çağlarında büyük ihtimalle, sadece küçük bir mevsimlik tarım alanı olmaktan daha fazlasını sunduğu söylenebilir. M.Ö. ikinci bine ait kanıtlar bu dönem için yerleşimin niteliği açısından daha fazla açıklama yapmamıza şu an imkan vermeyecek kadar sınırlıdır, fakat yazılı kaynaklarda Lukka halkına ve yerleşimine pek çok referans verildiği halde, özellikle de bölgede bu döneme ait arkeolojik kalıntıların yetersizliği göz önüne alındığında kendi başına önemlidir.

In conclusion, the preliminary results of our thin section analysis show that a very wide number of clay sources (at least a dozen) derived from three broad geological zones are represented at our site. Two of these broad zones, and consequently many of the petrographic subgroups, are not 'local'. For the Chalcolithic period, most of the pottery appears to be of local production, but in the Early Bronze Age we have clear evidence of numerous imports from probably the Elmalı plain as well as the Denizli/Menderes massif area, and wider connections are also shown by the imported obsidian discussed below. All the samples of potential second millennium ceramics (red-slipped and grey wares, CT-22, CT-24, CT-28–33) appear to have been imported to Çaltılar, but given the overall scarcity of second millennium material, as collected from the site, this result should be treated with extreme caution, if used at all. In other words, it would be premature to conclude from this limited evidence that all the pottery of this period was necessarily imported to our site, since it is possible that, accidentally, no 'local' second millennium ceramics have been selected for sampling. For the Iron Age, however, there is very clear evidence for imports from even wider areas, as shown by both macroscopic and microscopic analyses, which have interesting implications for the history and nature of the settlement during this period, discussed further in the final section of this article.

Lithics (chipped stone and obsidian sourcing study)

Techno-typological attributes

One piece of obsidian and 116 of chipped stone were collected by the Çaltılar survey, of which 20 were selected for publication (figs 53–57): of these, most (19) come in the form of broken prismatic blades of chert. Significantly, almost half (eight) of these chert blades were denticulated, i.e. retouched along one or both margins with multiple notches to produce a saw-like edge, while a further three had clear traces of macroscopic gloss on their edges (for example, fig. 53). The combination of denticulation with intensive-use polish suggests strongly that these blades were specifically being used as sickle elements; some of the wider examples may in fact have been inserted into wooden boards as part of a threshing sledge, a farming technology now claimed to have been in use in Anatolia and the Near East since Pre-Pottery Neolithic B (eighth millennium BC; Anderson 2006).

While most of the assemblage illustrated here is comprised of end products, there are two pieces that attest a certain amount of on-site knapping. The first is the base of a small, pressure-flaked obsidian blade core, that had been worked around its entire circumference (fig. 54), the second is a core tablet (platform rejuvenation flake) from a blade core of an orange variegated chert (fig. 55).

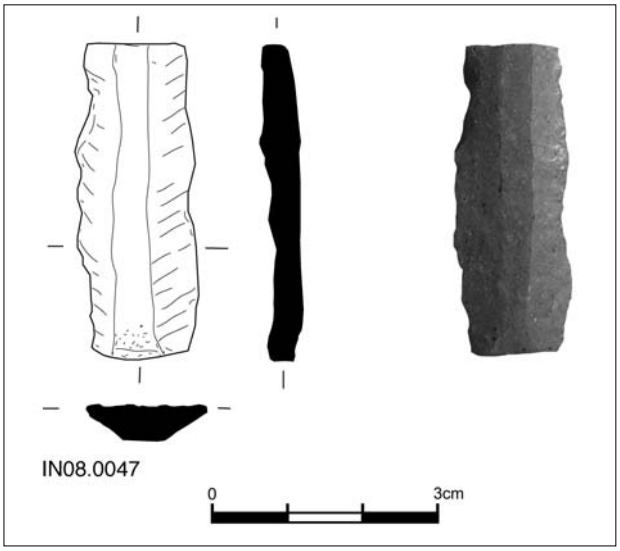

Fig. 53. Chert blade showing macroscopic gloss on edge

Dating

At present there is little that can be said with confidence as to the date of the chipped stone, as unipolar chert blade production is something that we associate with sites of Neolithic, Chalcolithic and Bronze Age date in Anatolia and neighbouring regions. More specific dating could be accorded the material if we had larger sample numbers, greater technological detail (as evidenced through proximal sections) and/or more distinctive retouched tool types; for the meantime it is probably safe to argue that most of these finds should be associated with the Late Chalcolithic and Early Bronze Age occupation periods at Çaltılar. The obsidian blade core could also date anywhere from the Late Neolithic to Middle Bronze Age, being analogous in technology and scale to what one views at sites in the Lake District such as Late Neolithic Höyücek (Balkan-Atlı 2005: pl. 199), and the Late Chalcolithic and Early Bronze Age sites of Bakla Tepe and Liman Tepe on the western Anatolian coast (for example, Kolankaya Bostancı 2006; 2007), and further to the west in the Aegean (for example, Carter 2009).

As for the sickle/threshing sledge elements, the production and circulation of these implements has a very long history, spanning the Aceramic Neolithic until modern times in the eastern Mediterranean, not least during the third millennium BC, as with the trade of Canaanean blades in the Levant and Anatolia (for example, Kardulias, Yerkes 1996; Anderson et al. 2004).

Raw materials

While local sources of chert are reported, the evidence – perhaps surprisingly – does not indicate the on-site reduction of true raw materials, given that the assemblage (including the pieces not illustrated here) lacks

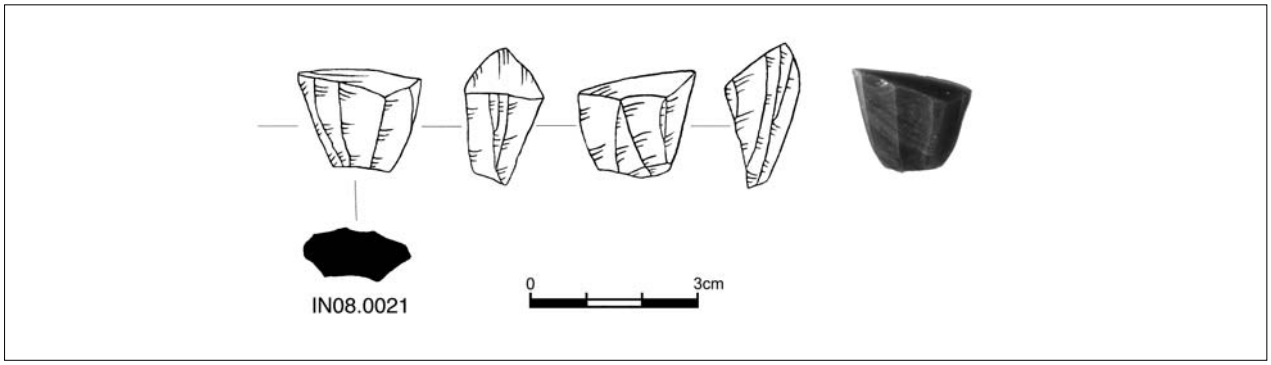

Fig. 54. Pressure-flaked obsidian blade core

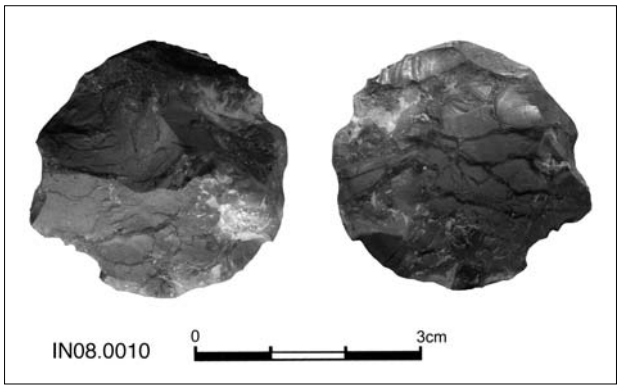

Fig. 55. Core tablet (platform rejuvenation flake)

nodules, cortical debris and/or preformed cores. The assemblage structure thus suggests that these cherts were primarily worked at source, with only end-products tending to be brought to the site. The range of colours and textures amongst the chert artefacts might also suggest that a number of different raw materials are represented within the Çaltılar assemblage. Where these other siliceous resources came from is not entirely clear; this is a not uncommon problem for archaeologists working in Anatolia given the lack of dedicated research on chert sourcing and the fact that supplies of workable stone are likely to be found throughout the larger region, not least within the massive 1,000km-long karstic range of the Taurus mountains (for example, Bezić 2007).

The assemblage did, however, contain a blade-like flake of a dull red radiolarite (fig. 56), a distinctive and relatively geologically restricted raw material that quite conceivably comes from outcrops along the banks of the Göksu and Burhan rivers in the Antalya region. This is one of the mainstay resources exploited by the inhabitants of the Öküzini Cave from the Epi-Palaeolithic to Late Chalcolithic (Pawlikowski 2002), with small quantities then being used at distance in the Konya plain by the Aceramic Neolithic to Early Chalcolithic community at Çatalhöyük (Carter et al. 2005).

As for the various other cherts (fig. 57), there are again a number of pieces whose colour and texture (grey, matt/coarse; tan/grey fine; tan/mottled, orange variegated *inter alia*) are also highly reminiscent of raw materials used for blade manufacture from Çatalhöyük into the Early Chalcolithic (sixth millennium BC). Here these materials are exotic; one thus might wonder if the source region for these cherts lies somewhere between the Konya plain and Çaltılar, either in the Lake District, where the chipped stone assemblages of prehistoric sites are dominated by local cherts (for example, Höyücek and Kuraçay Höyük: Baykal-Seeher 1994) and/or within the westernmost extension of the Taurus. In truth, a great deal more work needs to be done on the question of chert sourcing, commencing with a detailed geo-archaeological characterisation of those materials local to Çaltılar itself, following such work as that undertaken by the Göksu Survey (Newhard et al. 2008).

The obsidian sourcing study

The one piece we can assign a source to with certainty is the obsidian blade core, having non-destructively characterised the raw material at the McMaster Archaeological XRF Lab (MAX Lab) using a ThermoScientific Quant'X energy dispersive X-ray fluorescence spectrometer (EDXRF; for instrument configuration and data collection methods, see details in Poupeau et al. 2010: 2711). The

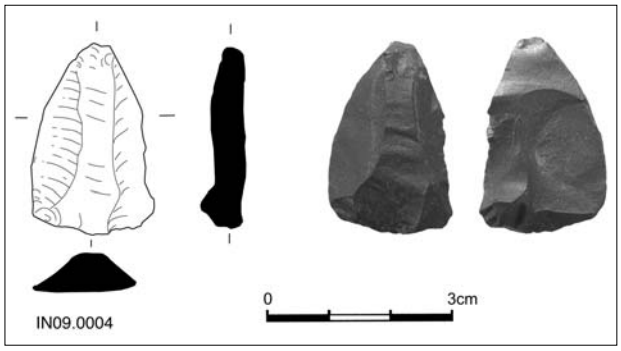

Fig. 56. Flake of radiolarite

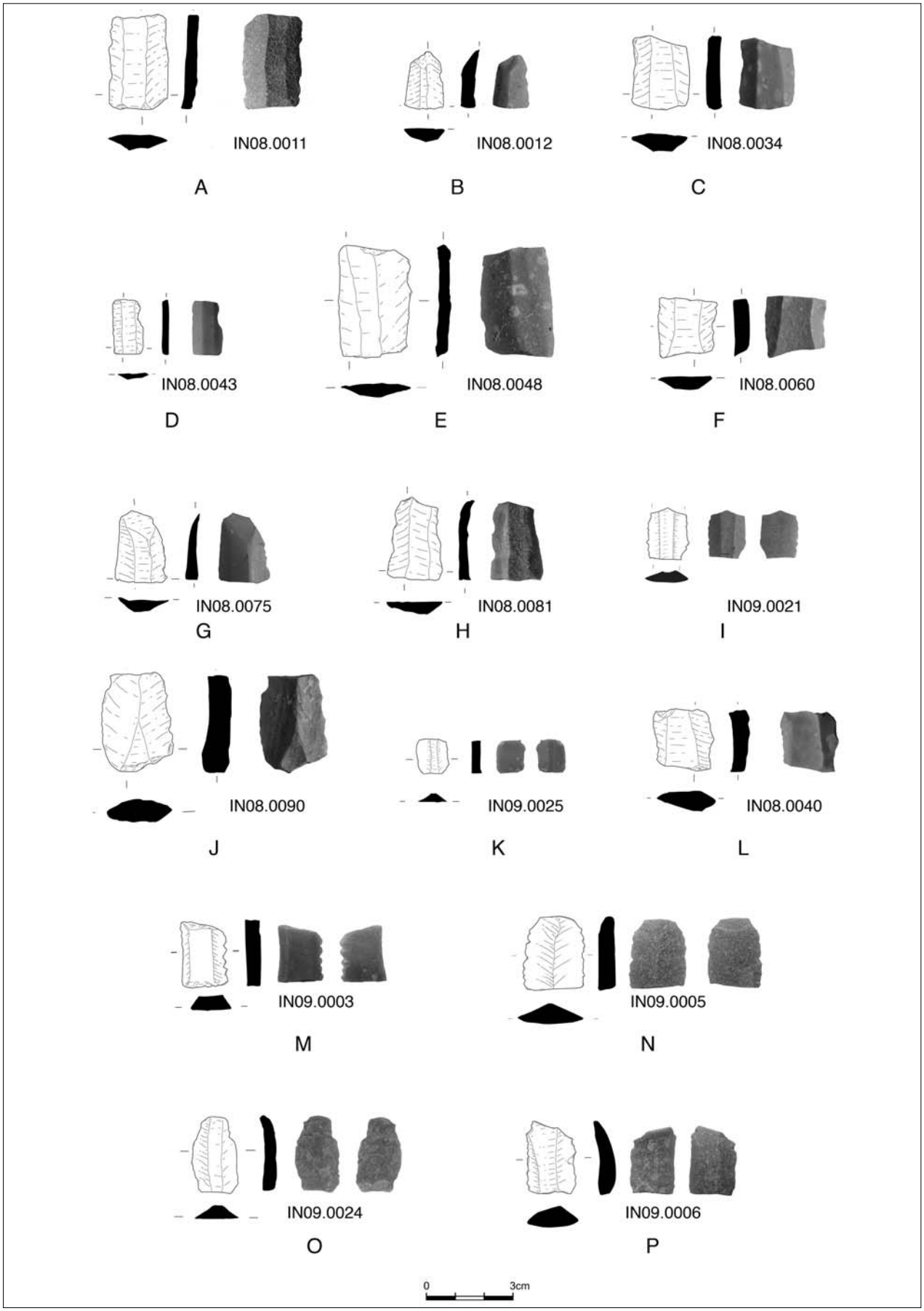

Fig. 57. Other chipped stone

analysis recorded a series of major elements (Ti, Mn and Fe) and trace elements (Ni, Cu, Zn, Ga, Rb, Sr, Y, Zr, Nb, Ba, Pb and Th) that have been previously used to discriminate the obsidian from the major sources of the Aegean and Anatolia, i.e. those most pertinent to Çaltılar given the site's location and date (cf. Bellot-Gurlet et al. 2008; Poupeau et al. 2010). Trace element intensities were converted to concentration estimates through reference to various standards, including those certified by the National Institute of Standards and Technology (NIST) and the United States Geological Survey (USGS) (table 9).

In a Sr/Zr vs Rb/Zr bivariate contents plot (fig. 58), the Çaltılar core's elemental signature clearly matches that of geological samples from Nenezi Dağ in southern Cappadocia, some 460km to the northeast (Poidevin 1998: 121–22). This is one of the two major obsidian sources of central Anatolia (along with East Göllü Dağ), whose products were exploited at distance from the Epi-Palaeolithic onwards and used by communities throughout Anatolia, Cyprus and the Levant (Chataigner 1998: 285–87; Carter et al. in prep.). For the Chalcolithic onwards we know slightly less about this source's history and directionality of exploitation, arguably the result of a research bias in characterisation studies towards Neolithic assemblages. That said, recent work has documented tiny quantities of this obsidian in Late Chalcolithic (fourth millennium) strata at both the Öküzini Cave (Carter et al. in prep.), 100km to the east of Çaltılar, and at Aphrodisias (Blackman 1986), 110km to the northwest, while more recently a few Nenezi Dağ products were identified in Early Bronze Age II deposits at Malia on Crete, the furthest westerly find-spot of this material (Bellot-Gurlet et al. 2008).

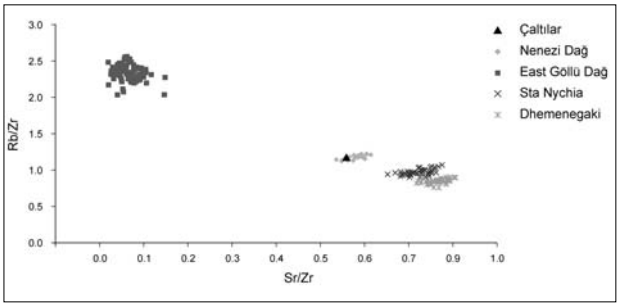

Fig. 58. Sr/Zr vs Rb/Zr bivariate contents plot of Çaltılar obsidian core and samples from other major Anatolian and Melian obsidian sources

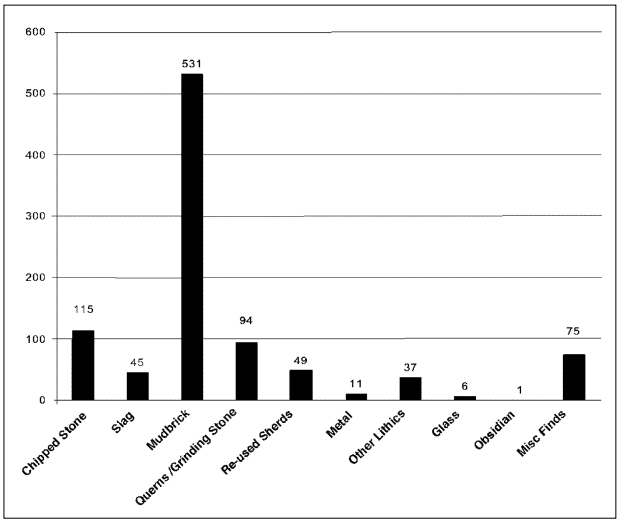

Fig. 59. Tabulation of other finds

Other materials

Our site has yielded a number of other finds, which are tabulated in fig. 59. Of these, metal, glass and miscellaneous items are mostly modern, and include numerous shotgun cartridge cases, which are testimony to the popularity of the höyük for hunting activities, as indeed we witnessed in the course of our fieldwork. Bones were extremely rare, and were not collected, since they all appeared to be very recent.

The most abundant finds are fragments of burnt mud-brick. We also collected many pieces of slag, which are currently being analysed to establish the kind of activities that they actually represent, but these may be the result of modern activities on the site. A good number of quern and grinding stones, many made of basalt, as well as some pounders, were also collected, but their date remains uncertain.

Beside the prehistoric lithic tools made of chert and the obsidian core discussed in the previous section, the only other finds worthy of further mention here are reused sherds that were reworked to create discoid objects of

Sample	Ti	Mn	Fe	Co	Ni	Cu	Zn	Ga	Rb	Sr	Y	Zr	Nb	Ba	Pb	Th	Sr/Zr	Rb/Zr	Source
Çaltılar 1N.08.0021	1066.82	482.43	11516.3	0	-7.84	7.27	56.15	19.05	168.45	97.22	20.49	147.75	21.78	741.29	34.86	26.4	0.66	1.14	Nenezi Dağ
RGM-2	1642.58	287.04	13994.07	0	2.93	12.14	38.96	19	148.06	102.71	26.53	231.47	13.46	818.2	21.83	16.69			Stan-dard
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm			

Table 9. Elemental data of Çaltılar obsidian core

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