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NEO-LITHICS 1/12
The Newsletter of Southwest Asian Neolithic Research
When we look in journals and other publications during the years of war and regional troubles in the past century, we find it strange that there is little to no mention of these impacts. Possibly volumes became thinner or several years were bound in one volume, editors changed, manuscript quality altered, etc., but academic fixation seems to have developed untouched by cataclysmic events. Many years later, we may identify thoughts in publications that possibly are related to, or must be the outcome of, recent historic learning, at the least. Today, in our research areas monstrous and outrageous developments and crimes against humanity take place while our prehistoric business goes on, in one way or another. Why this is? Are we historians immune against the historic events we are contemporary witnesses to? Is there a responsibility of us Near Eastern (pre-) historians to raise our voices, as was done by European cultural scientists in confronting nuclear armament in the later 1980s, which resulted for some colleagues in changing research perspectives and modified teaching attitudes?

This Neo-Lithics is delayed because a thematic issue on the Neolithization of NE-Africa was converted to be a SENEPE volume of ex oriente.

Hans Georg K. Gebel & Gary O. Rollefson

New Results on the Younger Dryas Occupation at Körtik Tepe

Aytaç Coşkun, Marion Benz, Corinna Rössner, Katleen Deckers, Simone Riehl, Kurt W. Alt, and Vecihi Özkaya

“...It is now clear that the eastern part of southwest Asia was an independent center of development. This region constitutes a unique cultural entity rooted in the local late Upper Paleolithic/Epipaleolithic cultures [...]”
Peasnall 2000: viii

Introduction

Although Peasnall and Zettler wrote the above fundamental conclusion more than ten years ago, research about “Epipaleolithic” settlements in southeastern Turkey is only at its beginnings. It is indeed premature to speak about the “Epipaleolithic” in this region, because a clear definition is still lacking. Most findings come from surveys or small test excavations dated by typology. Well stratified sites with unmixed layers – such as Öküzini or Karain Cave in the southwestern Taurus Mountains – are missing (Algaze et al. 1991, 1994; Rosenberg and Togul 1991; Kartal 2003; Garrard et al. 2004; Hauptmann 2011). Therefore, remains of at least two multi-layered constructions and several pits excavated beneath the early Holocene settlement at Körtik Tepe in 2011 and 2012 are of major importance. A sequence of four radiocarbon samples and three dates from other locations of the site firmly date this early occupation to the second half of the 11th and the first half of the 10th millennia calBC.

The Epipalaeolithic Occupation in Trenches A104 and A80

Trenches A80 and A104 are located in the southwestern and western part of the tell (Fig. 1). In both trenches, remains of pre-Holocene constructions were documented (Benz et al. 2012; n.d.). In A80, at -490 cm, the most ancient construction was cut down about 40 cm into the natural soil. Three postholes belonging to this oldest construction were...
observed. The course of the later sediments and the position of the postholes suggest that this building had a diameter of about 3 m. Above this first building, several more destruction and filling layers, a hearth, as well as traces of thin layers of anthropogenic origin appear. In contrast to the compact clay and stone constructions of the upper layers (Özkaya and Coşkun 2011), the more flimsy remains of the lower layers indicate rather ephemeral occupations or an outside space.

The occupational remains in A104 (Fig. 2) have been described in detail elsewhere, that it suffices to summarize the results (Benz et al. n.d.). Locus 1 is a large pit, of which the southwestern quadrant was excavated. If it is circular, its full diameter is about 180-200 cm. It probably was originally about 1 m deep. In shape it resembles an inverted bell. A similar bell-shaped structure was observed at Demirköy3 (Algaze et al. 1991:181).

The pit was filled with many flints and obsidian artifacts, including an obsidian lunate and a very large complete obsidian nodule. The flints were mostly medium to large flakes and only a few microliths. The ashy remains contained some animal bones, mostly of smaller species, a shell, and many fish bones. Only three items of jewelry, two ring-beads, and a teardrop-shaped black stone pendant, were found. Mixed in with the fill were some scattered stones, most of which showed traces of heavy burning or which had been fractured by heat.

The lowest part of Loc. 1 (-5.35/-5.51 m) was lined with large river stones.

Because the walls were not straight and narrowed towards the bottom, it is unlikely that Loc. 1 was a habitation. More likely it was used for storage, though its extraordinary diameter makes it a rather large structure for such a function. West of this pit another round structure with a diameter of about 80 cm was discovered (Loc. 4). It had been dug into the natural soil down to -4.76 m, but because of later (Neolithic) destruction it is not possible to determine its original height. To its west and southwest it is lined by some small postholes (PL 6-10). A large posthole (PL2) could be observed in the northern profile. Loc. 4 was mostly devoid of finds.

The most impressive structure of that trench was a multi-layered pit (Locus 5). At the bottom of that construction was a pit (Loc. 5_2) (Fig. 3). A fire must have destroyed the organic superstructure, which fell into the pit from the east. Two charcoal samples (CH 96= ETH-45335; CH97= ETH-45336) of this earliest occupation have been dated. After the fire, the pit had been completely filled in by sediment hardly distinguishable from the natural soil. The structure was then expanded to the west and clearly used as a habitation (Locus 5).

Locus 5 (Fig. 2) is a large round or oval structure, which extends for 2.40 m from the western profile to the east and about 1.40 m from the southern profile to the north. If it was oval it should continue N-S for at least another 1.40 m, or 3 m if it was a round structure with a diameter of 4.40 m. It had been dug 40-50 cm into the soil. A possible entrance lay on the northern border. To the east and west of this entrance curving depressions were bending to the southeast and west, res-
pectively, possibly the remains of a wooden wall which continued along the postholes, PL 6-10. On the eastern border of Locus 5 there was another large posthole, PL 4. Inside this construction - about 1.50 m to the west of the posthole -, a hearth (Locus 5_1) had been dug into the natural soil. It was 30 cm wide and extended 20 cm from the southern profile. The bottom and walls of this hearth were covered with flat river pebbles blackened from fire. Above this cultural layer is the first quite sterile fill. Separated from it by a rather thick layer of charcoal, there is another cultural layer with heavy traces of burning. Except at its southeast part, this cultural layer was thickly strewn with flint flakes, cores, some obsidian, and animal bones. In the western part the surface was covered with stones. A charcoal sample for dating (CH 92=ETH 45334) was taken from the upper part of that layer, just above Locus 5_1.

Above this cultural layer an almost sterile layer slopes in the same direction, covered by another cultural layer that contained stone tools and flints, animal bones, many fish, and the remains of a turtle shell. A charcoal sample from this layer (CH 85=ETH 45333) has been dated, too. An accumulation of stones in that younger layer was observed on the same spot as in the older layer. This implies a prolonged tradition in how space inside this habitation was used.

In conclusion, Locus 5 was used for living purposes, either for an extended period or repeatedly. Though there must have been a strong fire that destroyed the first structure, it was restored and continued in use for at least two more phases. Flint napping activities and cooking/heating are attested within the structure. The construction of Locus 5 confirms the changes in building traditions that had been observed in Trench A80 (Özkaya et al. 2011). For further interpretations we must await the analysis of the animal bones, fish, and other botanical remains as well as the study of the large number of flints.

**Trenches A21 and A83**

In 2012 remains of a round structure with a diameter of about 3 m were documented in Trench A21. This construction was strongly eroded. However, the course of the habitation was visible by the differences in fills: within the building there were several anthropogenic levels alternating with fill layers (Fig. 4). They delineate clearly the inner space. In contrast, outside the building the fill was unstructured. The construction consisted of an accumulation of stones that were mixed with and covered by a thin layer of clay forming a slightly elevated border. The round shape of that structure was interrupted in the northwestern part possibly marking an entrance. East of this entrance, remains of a decaying wall were observed: Several, nearly fist-sized stones had fallen inside the structure, mixed with clay and covering a cultural layer with many flints and obsidian artifacts. The cultural layers inside this structure consist of alternating layers of sand, clay, carbonates and organic dark brown earth with charcoal (Fig. 4). During the second occupational phase a perinatal individual was buried in a pit below the floor. The corpse was completely covered by red ocher. After the filling of the burial pit, the same area was still occupied.

Although the analyses of the finds are only at their beginnings, they confirm a continued and repeated use of the same space and thus support the observations of Trench A104, just 3 m to the south. Beneath the round construction, below – 440 cm, another cultural
layer was encountered in the eastern part of the trench. Though the excavation continued down to -455 cm, the bottom of this layer could not be reached. It contained a huge amount of stones, animal bones, and several lenses of sterile clay. In contrast, in the northwestern part, outside the construction, natural soil was encountered at +/- 442 cm, suggesting that the living spaces were dug partly into the residual soil.

In the eastern part of the tell, remains of the earliest occupation were discovered in a limited test cut (1.20 x 2 m), in Trench A83. The earliest remains consist of two pits that were spaced from each other by about 20 cm (Loci 2 and 6). The upper fill layer of Loc. 2 includes many river pebbles, very few animal bones without any sign of burning, and a few flakes. Below that fill, at -537 cm, there is a light brown sterile layer 2-3 cm thick. From that layer down to the bottom of the pit, at about -545 cm, is a very ashy layer with hardly any piece of charcoal and a few stones at the bottom. The shape of the pit was round to oval, with a width of about 35-40 cm and a length of 32 cm. Loc. 6 was filled with dark brown earth, almost devoid of finds. Its shape was round with a diameter of ~22 cm.

Both pits had a similar depth of about 30 cm. The loamy sediment into which they were dug did not show any traces of burning, making the function as fire pits improbable. The filling of the northern pit might hint at a possible function as a cooking pit into which an organic container was placed and filled with heated stones.

The two pits were covered by a dark brown layer very rich in flints, obsidian, bone tools, and animal bones. Above that, was a thin clay floor, sloping slightly to the west. Construction details such as post-holes were not discovered, but this is likely due to the limited space that was excavated. Nevertheless, it can be concluded that these remains definitely contrast with the more massive stone buildings of the Holocene occupation and support the observations in the other deep cuts.

<table>
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<tr>
<th>Lab-Code</th>
<th>Trench/Location ID</th>
<th>Material</th>
<th>Depth cm</th>
<th>BP</th>
<th>Δ °C</th>
<th>cal BC (68.2%/95.4%)</th>
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<td>ETH-45344</td>
<td>A80; C4 CHS2</td>
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<td>Populus/ Salix</td>
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<td>10205±40</td>
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<td>Secale sp. seed</td>
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Table 1 Radiocarbon data of the deep cuts in Trenches A60 and A104. ETH 45336 and ETH 45335 (Trench A104) date the same cultural layer. The same holds true for ETH 45340 and ETH 45344. ch=charcoal.
Radiocarbon Data from Trenches A104, A80, and A84

New radiocarbon data of Phase VIII in Trench A80, Phase VI in A84 and of Trench A 104 confirm our earlier suggestion of the site’s occupation during the Younger Dryas (Tab. 1; Benz et al. 2012). If the results of radiocarbon data in Trench A104 were sequenced, they would range between 10190 calBC to 9800 calBC (68.2%) (Fig. 5). Without sequencing, the date for the earliest occupation would be extended back to 10400 calBC. The date of a rye seed from Trench A84 is in good accordance with a Younger Dryas beginning (Öz-kaya and Coşkun 2011). Although radiocarbon data for Trench A21 and the eastern part of the tell are still missing, the character of the discoveries is in support of a pre-Holocene occupation there, too.

Preliminary Results of the Archaeobotanical Analyses

The results of studies on the ecology and subsistence are preliminary since the analysis is still on-going. All studied samples of the Younger Dryas occupation derive from the pit (Loc.1) and the two fireplaces (Loc. 2 and 3) in Trench A104 (Fig. 2).

Thirteen different plant families were identified among twenty samples (from 140 liters of sediment) with 855 plant remains. 16 charcoal samples (n=454 fragments) from these floated samples have been investigated so far. From early Holocene layers 10 charcoal samples have been examined (n=1859 fragments). Cruciferous plants (Brassicaceae) constitute more than a third of all the seeds (Fig. 6), and grasses (Poaceae) represent nearly 30% of the seeds. Goosefoot (Chenopodiaceae) and knotweed (Polygonaceae) families as well as poppy (Papaver sp.) seeds are also relatively frequent. A few grains of rye, einkorn, and barley were also identified (Tab. 2), but compared to the seed finds in the early Holocene levels (Riehl et al. 2012), Triticum-type species are much less frequent.

In general, the seed assemblage of the Younger Dryas indicates a vegetation of predominantly steppe and riverine woodland. Grasses (Poaceae) and goosefoot (Chenopodiaceae) favor open and dry areas (Hillman 1996). This spectrum of seeds corroborates the results of the charcoal analysis (Fig. 7). Deciduous oak (Quercus) is absent from the samples of the deep cut, but present in the layers of the early Holocene. Similarly, pistachio (Pistacia sp.), hackberry (Celtis sp.), buckthorn (Rhamnus sp.), fig (Ficus sp.), and alder (Alnus sp.) only appear within the Holocene levels, and charcoals of almond (Amygdalus sp.), ash (Fraxinus sp.)
and maple (Acer sp.) then also clearly increase. In contrast, riverine trees or shrubs such as tamarisk (Tamarix sp.) and poplar/willow (Populus/Salix sp.) were present in both the Younger Dryas and the early Holocene. The impact of the Younger Dryas thus seems likely: while the grasses and (open) oak park woodland species were relatively rare during the Younger Dryas, Körtik Tepe may have belonged to the open oak park woodland zone during the early Holocene, with a higher density of Poaceae species as has been suggested by Hillman (1996). The current state of our archaeobotanical research, however, does not allow any conclusion about whether or not some of the wild plants had already been cultivated or not.

Discussion

Reoccupation of the same space and continuity in the activity zones at Körtik Tepe suggest a repeated, perhaps permanent, use of the same locations already during the Younger Dryas. The burial of a perinatal individual beneath a floor and the continued occupation of that area underline the close commitment to the site. The steppe and riverine environments of the Younger Dryas had a diversified spectrum of use by the hunter-fisher-gatherer community. First results of isotope analyses from human remains of the early Holocene layers hint at a mixed diet with meat and predominantly C-3 plants and to a local origin of most inhabitants (Siebert n.d.). These results correspond well with the broad spectrum of animals used at Körtik Tepe (Özkaya et al. 2011) and with data from other permanent sites of hunter-gatherer communities (e.g., Savard et al. 2006). First results of our archaeobotanical studies show a clear impact of the climatic change from the drier and colder conditions of the Younger Dryas to the warmer and probably moister conditions during the early Holocene (cf. Peasnall 2000:70). A similar impact of the Younger Dryas was observed in the Van Sea Pollen Core, though reforestation started only later there (Litt et al. 2009). However, further analyses of samples of the deep cuts are necessary to confirm these preliminary observations.

Conclusions

In light of the “Epipalaeolithic” occupation at Körtik Tepe it is likely that results of earlier surveys in the Batman region concerning the “Epipalaeolithic” should be revised. Flints from surveys of the ridges overlooking the Upper Tigris and the Batman Çayı, which were previously classified as Paleolithic, may in fact be Epipalaeolithic.

Because the analyses of flint and obsidian tools are still in progress, it is premature to decide whether the development of the early Holocene communities was based on external influences or local origins. However, the Epipalaeolithic occupation at Körtik Tepe supports a repeated and possibly continuous commitment to the site from the Younger Dryas to the early Holocene and suggests a permanent living on the site if not for all, then at least for a substantial part of the community. Despite the pronounced changes in ecology at the transition from the Younger Dryas to the early Holocene, the inhabitants of Körtik Tepe stayed at that location and their settlement flourished during the early Holocene before they abandoned it forever.

Endnotes

1. The German team is grateful to Vecihi Özkaya and his team for their cooperation and to Nevin Soyukaya for her valuable help. Analysis of seed remains, isotopes and the chronological analysis were financed by the German Research Foundation (BE 4218/2-2; AL 287/9-2), to whom we offer our thanks. Kathleen Decker’s research was possible thanks to a Margarete-von-Wrangell habilitation fellowship funded by the European Social Fund in Baden-Württemberg.

2. All samples from Körtik Tepe were analysed by Irka Hajdas, ETH Laboratory of Ion Beam Physics, Zürich. The site of Hallan Çemi, about 60 km farther northeast on the western border of the Sason Çayı, was first dated to the Younger Dryas, but new AMS data from that site are almost exclusively of the earliest Holocene (Rosenberg 2011). Radiocarbon data from Hallan Çemi
and Körtik Tepe are given in the open access data base PPND (Coşkun et al. 2010).

3 In that publication the site is referred to as “Demirci Höyük”.

4 Because the pit was cut through by the test cut, its northern extension cannot be determined precisely.

5 Sequencing in Trench A80 does not enhance the accuracy of the data for Phase VIII because Phase VII could not be dated. The data of Phase VIII would thus be biased to a more recent age (see Benz et al. 2012).

References


Siebert A. et al. n.d. Living on the edge in Körtik Tepe - insights on mobility and dietary habits of a PPNA-population on its way to sedentism (working title, in prep.).