Quaternary International xxx (2017) 1–9

Contents lists available at ScienceDirect

Quaternary International

journal homepage: www.elsevier.com/locate/quaint

Bone implements from Chalcolithic Tepecik-Çiftlik: Traces of manufacture and wear on two classes of bone objects recovered from the 2013 excavation season

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ARTICLE INFO

Article history:
Received 8 September 2017
Received in revised form
3 November 2017
Accepted 27 November 2017
Available online xxx

Keywords:
Chalcolithic
Bone artifacts
Turkey
Use wear
Idols

ABSTRACT

The site of Tepecik-Çiftlik in southern Cappadocia, Turkey, has provided a rich assemblage of worked bone objects from Pre-Pottery Neolithic (PPN) levels continuing into the extensively excavated Pottery Neolithic (PN) levels and the Early Chalcolithic period (6100-5800 cal BCE). This report presents an initial study of the worked bone objects recovered from the Chalcolithic levels during the 2013 excavation season. This paper examines the methods of manufacture, use-wear traces, and animal species used in the manufacture of two types of Chalcolithic bone tools at Tepecik. The most common tools are pointed implements, primarily made on caprine metapodia, many of which appear to have been used as perforators. Other objects include "idols" made from the first phalanges of equids, including both wild horses and hydruntines.

1. Introduction and background

Between 2000 and 2017 archaeological excavations were carried out at the site of Tepecik-Çiftlik in the Niğde region of southern Cappadocia, Turkey, under the direction of Professor Erhan Biçakçi of the University of Istanbul. These extensive excavations have revealed deposits dating to the Pre-Pottery Neolithic (PPN) extending into the Pottery Neolithic (PN) and the early Chalcolithic (ca. 6100-5800 cal BCE) periods. Tepecik-Çiftlik is a unique site in the Melendiz Valley region of Southern Cappadocia because it provides a complete archaeological sequence from the Pre-Pottery Neolithic through the Chalcolithic period. This report will present a preliminary study of some of the bone tools recovered from the 2013 excavation season which includes 128 Chalcolithic bone tool implements and a single bone tool from the later Neolithic period. Seven of the specimens were not available for detailed study because they were housed in the Niğde Museum.

We were invited to join the Tepecik-Çiftlik excavation team in 2014, as the bone tool specialist (DVC) and the zooarchaeologist (PJC). This provided a unique opportunity for collaboration since we were able to search the faunal collection for bone tools and debitage fragments that may have been missed by the excavators and to identify the faunal elements that were used in bone tool manufacture. We began our research with the Chalcolithic materials that has been recovered during the 2013 field season. This is a small portion of a much larger bone tool and animal bone assemblage accumulated over 15 seasons of fieldwork. Examination of the remainder of the bone tool collection and the faunal assemblage is ongoing but because of the field limitations will require several years to complete. Therefore, we believe an interim report is warranted. The conclusions drawn from it are necessarily preliminary.

While early Neolithic faunal assemblages from Central Anatolia are generally made up of 80–90% sheep and goat bones (Steiner et al. 2014), caprines make up only about two-thirds (68.7%) of the Chalcolithic faunal assemblage from Tepecik-Çiftlik recovered during the 2013 and 2015 excavation seasons based on NISP. As can be seen in Fig. 1, cattle (including both domestic cattle, *Bos taurus*, and wild cattle, *Bos primigenius*), red deer (*Cervus elaphus*), roe deer (*Capreolus capreolus*), wild pigs (*Sus scrofa*), hares (*Lepus europaeus*), and foxes (*Vulpes vulpes*) are also well represented in the Chalcolithic assemblage. The abundant equid remains include both wild horses (*Equus ferus*) and hydruntines (*Equus hemionus hydruntinus*). We have identified the larger equids as *Equus ferus* because there is no clear

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https://doi.org/10.1016/j.quaint.2017.11.042
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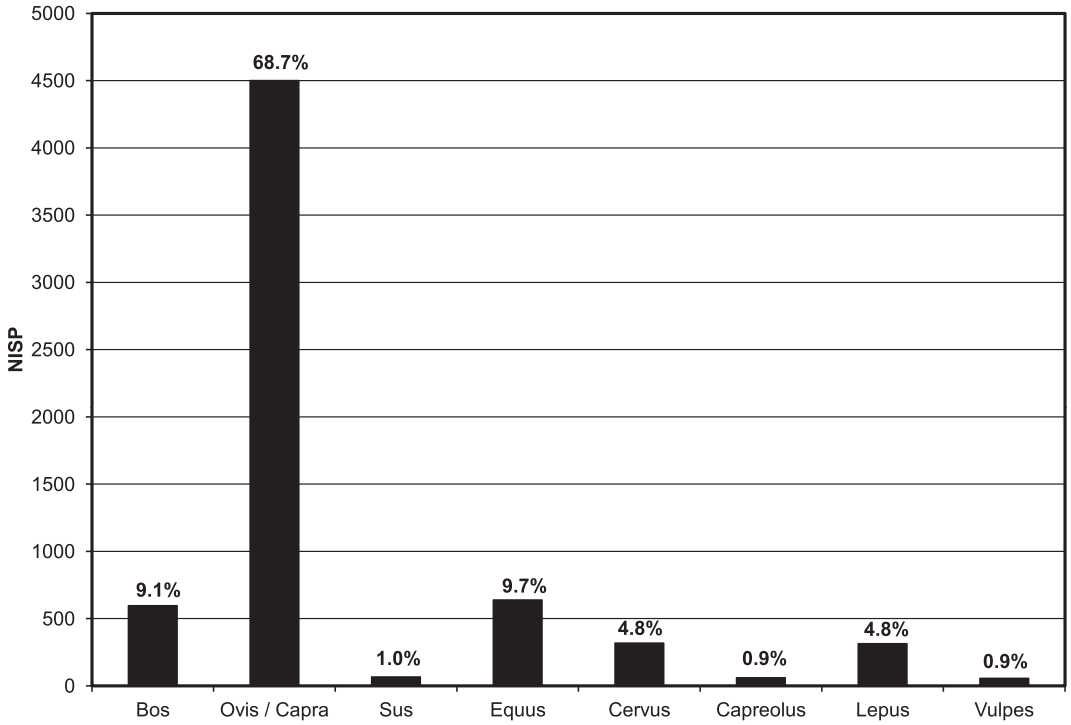

Fig. 1. Taxonomic ratios based on NISP for the most common mammals recovered from the 2013 and 2015 excavations at Tepecik-Çiftlik. The equid category includes 182 bones that were identified as wild horse (*Equus ferus*) and 173 bones that were identified as hydruntines (*Equus hemionus hydruntinus*).

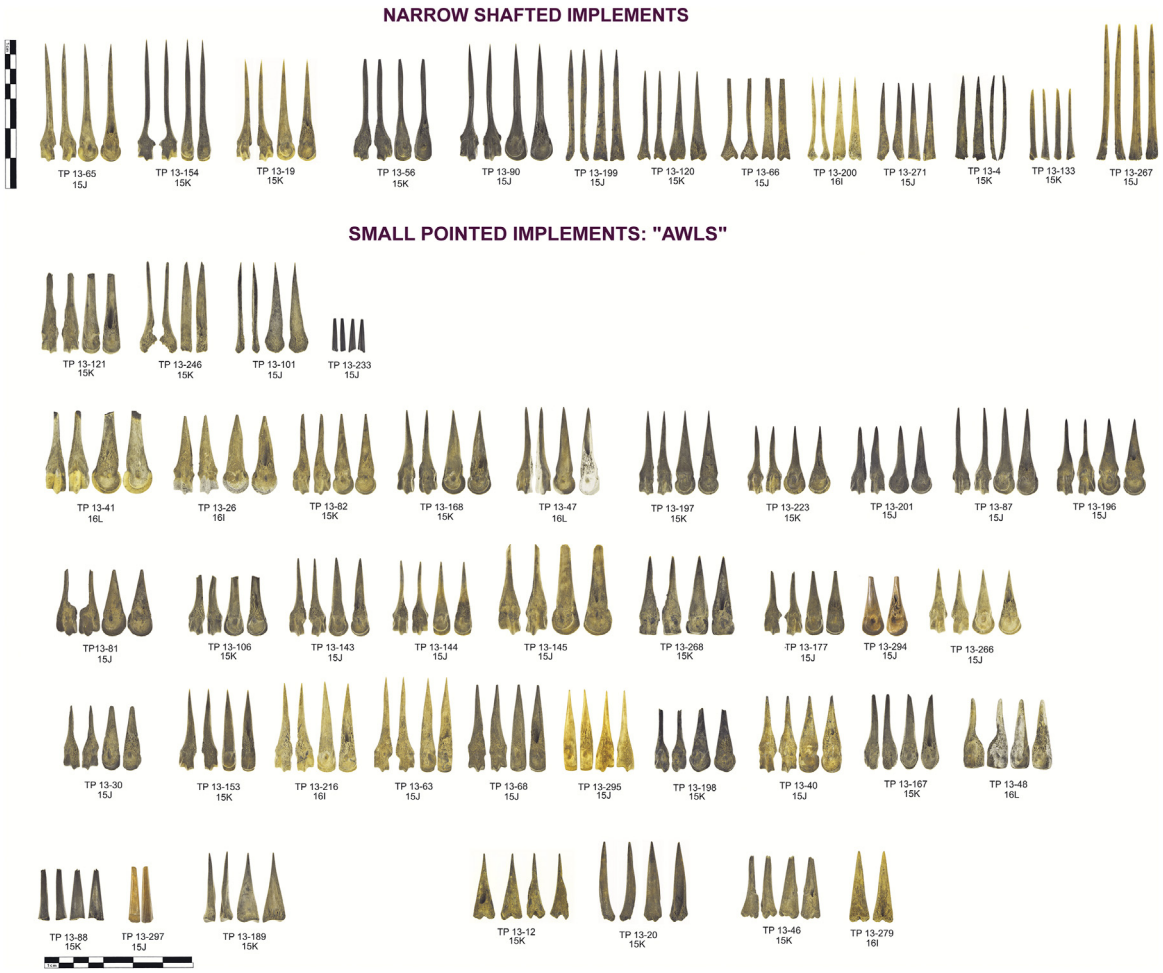

Fig. 2. The 2013 assemblage of small pointed implements. The top row may be fasteners, while the remaining tools appear to be fine perforators. The tools in the bottom row are missing their epiphyses.

Please cite this article in press as: Campana, D.V., Crabtree, P.J., Bone implements from Chalcolithic Tepecik-Çiftlik: Traces of manufacture and wear on two classes of bone objects recovered from the 2013 excavation season, Quaternary International (2017), https://doi.org/10.1016/j.quaint.2017.11.042