Journal of Archaeological Science: Reports 5 (2016) 296–306

Contents lists available at ScienceDirect

Journal of Archaeological Science: Reports

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

Diet at Late Chalcolithic Çamlıbel Tarlası, north-central Anatolia: An isotopic perspective

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ARTICLE INFO

Article history:
Received 11 May 2015
Received in revised form 16 November 2015
Accepted 30 November 2015
Available online 8 December 2015

Keywords:
Anatolia
Stable isotopes
$\delta^{13}C$
$\delta^{15}N$
Chalcolithic
Diet

ABSTRACT

Carbon ($\delta^{13}C$) and nitrogen ($\delta^{15}N$) stable isotope analysis of bone collagen from 57 human and 137 faunal samples was conducted with the aim of reconstructing human diet at the Late Chalcolithic (mid-4th millennium BC) site of Çamlıbel Tarlası, north-central Anatolia. The analyses indicate that the diet of the inhabitants of Çamlıbel Tarlası was based largely on C_3 resources. Comparison of human and faunal $\delta^{15}N$ values suggest that animal proteins were likely to be of secondary importance to diet, with cultigens such as wheat and barley and potentially pulses taking the role of dietary staples. Age-related variation in stable isotope signals was identified.

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1. Introduction

Chalcolithic settlements and societies on the Anatolian Plateau have received relatively little attention in comparison to earlier Neolithic and later Bronze Age sites and consequently the economy and society of prehistoric communities in this region are poorly understood (e.g. Parzinger, 1993; Steadman, 1995; Özdoğan, 1996; Düring, 2008; Schoop, 2011a). Çamlıbel Tarlası (ÇBT) is one of only a small number of prehistoric sites to have been excavated in north-central Anatolia (Schoop et al., 2009; Schoop, 2010, 2011b). Stable carbon and nitrogen isotope analysis of human and associated animal remains from Çamlıbel

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http://dx.doi.org/10.1016/j.jasrep.2015.11.034
2352-409X/

Tarlası was conducted in order to reconstruct dietary intake of the small rural farming community and to assess the relative importance of plant vs animal foods in diet.

2. Çamlıbel Tarlası — archaeological background

Over three seasons (from 2007 to 2009) Çamlıbel Tarlası was excavated under the direction of one of the authors (U-DS) with the express aim of expanding knowledge of prehistoric settlement, chronology and economy in north-central Anatolia. Çamlıbel Tarlası was a small, short-lived settlement located on a small plateau (*c.* 1040 m asl) in a narrow valley, approximately 3 km from the main Budaközü Plain, in the Turkish province of Çorum (see Fig. 1; Schoop, 2010, 2011b, 2015). The main activities attested at the site are agriculture and extractive metallurgy. Palynological evidence indicates that the wider region was forested (Dörfler et al., 2000; Marsh, 2010). Surrounding plateaus would have been ideally suited to small-scale agriculture (cultivation and livestock husbandry). An outcrop of copper ore is located ~2 km to the east of the site (Marsh, 2010).

Seven phases of activity have been identified at Çamlıbel Tarlası (Table 1) and these have been dated to the Late Chalcolithic (Table 2). The earliest phase of activity (ÇBT I) is represented by numerous bowl furnaces, possible copper smelting installations cut into the ground surface and insulated with layers of potsherds, stones and clay. Following this initial phase of activity, there were three construction phases (ÇBT II, ÇBT III and ÇBT IV) interspersed with three non-architectural phases (phases of ephemeral use — FPEU, SPEU and TPEU) during which Çamlıbel Tarlası saw human activity probably on a seasonal basis. The whole sequence dates between 3650 and 3375 cal BC (Table 2).

Table 1
Phases of activity at Çamlıbel Tarlası.

Phase	Characteristic features
TPEU	Fragmentary burials in plough zone
ÇBT IV	Habitations, large courtyard with evidence of slag processing, slag, crucibles
SPEU	Second phase of ephemeral use: seasonal presence, bowl furnaces, ore
ÇBT III	Large, free-standing buildings, crucibles, copper slag
FPEU	First phase of ephemeral use: seasonal presence, bowl furnaces, ore
ÇBT II	Dense architecture, room clusters, bowl furnaces, copper ore, many infant graves
ÇBT I	No habitation structures, water course, seasonal use?, bowl furnaces, copper ore
Virgin soil/bedrock	

3. Çamlıbel Tarlası — human remains

A large number of child burials were discovered within the settlement, either underneath the house floors or externally, in immediate juxtaposition to the house walls. Intramural burial appears to have been reserved for children; the few adults from Çamlıbel Tarlası appear to have been buried during the episodes without permanent settlement at the site. Nineteen individuals were excavated from 17 jar burials and primary inhumations at Çamlıbel Tarlası (Thomas, 2011; Irvine et al., 2014). Two distinct burial practices were observed at Çamlıbel Tarlası: although both children and adults were inhumed in a contracted, 'hocker', position with the head pointing to the south and facing towards the east, most of the very young children were interred in large pottery vessels (see Table 3; Schoop et al., 2009; Schoop, 2011b). In addition to these identifiable graves, more human bones were recovered as isolated finds. All of these 68 instances were individual bones or small assemblages of bones in secondary contexts. These finds suggest

Fig. 1. Map of Anatolia indicating the location of Çamlıbel Tarlası.