BONE ARTIFACTS AS WITNESSES TO CULTURAL CONTINUITY AT TATARLI HÖYÜK

Artefactos de hueso como testigos de continuidad cultural en Tatarlı Höyük

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ABSTRACT This paper is a preliminary evaluation of the bone artifacts from Tatarlı Höyük in Adana, Turkey. It is a site that holds an important place in the settlement history of Cilicia and shows a continuous, characteristic settlement until the Early Roman Period. In addition to personal ornaments such as beads and pendants, tools used in different economic activities in the daily life of Tatarlı Höyük, especially weaving, such as spatulas, spindle whorls, needles, pointed tools and handles are found in the bone assemblage. Majority of textile tools in these bone assemblage can be assumed as the evidence of economic importance and continuity of the weaving industry at Tatarlı Höyük.

Keywords: Tatarlı Höyük, Anatolia, Bone Artifact, Weaving, Cultural Continuity.

RESUMEN Este artículo es una evaluación preliminar de un conjunto de artefactos de hueso procedentes de Tatarlı Höyük, en Adana, Turquía. Este yacimiento ocupa un lugar importante en la historia de los asentamientos en Cilicia y muestra una ocupación continuada y característica hasta los inicios de la dominación romana. Además de los ornamentos personales, tales como cuentas y colgantes, se han documentado herramientas empleadas en diferentes actividades cotidianas en Tatarlı Höyük, especialmente relacionadas con el tejido, tales como espátulas, ruedas de huso, agujas, útiles apuntados y mangos, los cuales componen parte del conjunto óseo trabajado. La mayoría de las herramientas de la actividad textil en este conjunto de hueso son asumidas como evidencia de la importancia económica y continuidad que la industria del tejido ocupó en Tatarlı Höyük.

Palabras clave: Tatarlı Höyük, Anatolia, Artefacto de hueso, Tejido, Continuidad Cultural.

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INTRODUCTION

Tatarlı Höyük is located on the eastern part of the Ceyhan plain, within the borders of Adana province. It is located 35 km east of Ceyhan district and five km north of the town of Mustafabeyli (Ünal and Girginer, 2010:275) (fig. 1). The Çukurova region, where Tatarlı Höyük is located, is an important location in historical periods. Tatarlı Höyük, together with Tarsus Gözlü Kule, Yumuktepe, Misis Höyük and Tepebağ Höyük, have yielded important serious information on the archeology of the region (Girginer *et al.*, 2010:453). As a result of surveys conducted at the mound in 1951 (Seton-Williams, 1954:170) and 1991 (Sayar *et al.*, 1993:179), it was revealed that Tatarlı Höyük is an important settlement. Therefore, since 2007, excavations have been carried out on behalf of the Ministry of Culture and Tourism and Çukurova University led by Assoc. Prof. Dr. K. Serdar Girginer and his team (Girginer *et al.*, 2010:453).

Stratigraphically, there are eight different strata in the mound dating from the Neolithic (7000-5000 BC) up to the Late Hellenistic / Early Roman Period (c. 330-50 BC) (fig. 2) (Novak *et al.*, 2017:175-176). The Building A on the east side of



Fig. 1.—Geographical Location of Tatarlı Höyük.

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Fig. 2.—Topographical Plan of Tatarlı Höyük.

the settlement has been identified as a temple and dates back to the Late Bronze Age I (1650-1450 BC) and Late Bronze Age II (1450-1200 BC). To the west of the mound, a fortification wall dating to the Late Bronze Age II (1450-1200 BC) and Middle Iron Age (850-609 BC) was unearthed. A gateway leading to the citadel was uncovered to the north-east (Novak *et al.*, 2017:174) (fig. 2).

Architectural structures related to these strata could be dated with find contexts, especially pottery finds. The minor objects enabled us to make the preliminary assessments of the spatial functions of the buildings. Among the small finds uncovered in the contexts of the mound, bone artifacts are remarkable even if they are relatively few in number compared to other find groups.

The purpose of this study is to evaluate the bone artifacts found in Tatarlı Höyük from a different perspective, cultural continuity. The small finds, including bone objects, clearly reflect cultural continuity best among the classes of artifacts recovered from excavations, on-going since 2007. In this context, bone finds found in different levels of the mound were typologically grouped and evaluated together.

BONE ARTIFACTS

A total of 65 bone artifacts have been unearthed from different stratigraphic layers of the mound during the work carried out between years 2007-2016 (fig. 3). This bone tool assemblage from Tatarlı Höyük was classified into eight different sub-groups based on general ascribed function. Eight pieces of unidentifiable artifacts could not be included in any typology. In this paper, there will be an attempt to present the bone artifacts, focusing mainly on their typology instead of the period they were found in the stratigraphic sequence, in order to better assess possible cultural continuity at the mound settlement.

Spatulas

Altogether, 14 spatulas appear in Tatarlı's bone assemblage. 13 of these specimens came from Hellenistic Period (fig. 4 a-d), and one is from Late Bronze Age contexts (fig. 4e). All were made from *Bos taurus*' ribs, with the exception of the Late Bronze example, made from a *caprine*'s rib. Only three spatulas, one end pointed and, the other rounded, was found intact. Of the other spatulas, only the pointed parts were preserved. This situation makes it difficult to create subtypes within this type.



Fig. 3.—Typological Distribution of Artifacts by Periods.



The spatulas have been widely used in Anatolia since the Aceramic Neolithic Period (Özkan, 2002:513). Many samples are known from different stratas, for example Çayönü (Efe, 1998:40), Kuruçay Höyük (Umurtak, 1994:66; Umurtak, 1996:54), Ilıpınar (Marinelli, 1995:127-128), Tarsus (Goldman, 1956:309; Goldman 1963: 380), Zeugma (Charles, 2013:281).

Various purposes have been proposed for using spatulas ranging from pottery and leather burnishing, cooking (Erdalkıran, 2017:237-238), potter's tool (Charles, 2013:281; Peyronel, 2016a:852 n.25), cosmetic implements, writing implements (Cassuto, 2016:277), even blades (Goldman, 1963:380), to an ophthalmic instrument used to remove foreign matter from the eye (van Beek and van Beek, 1990:208). However, the common consensus on the function of bone spatulas is in the archaeological literature as tools for textile production (Peyronel, 2016a:852). B. Charles has made a suggestion about the use of spatulas that are "possibly used to beat the threads of the weft on the loom" (Charles, 2013:281). Bone spatulas have also been identified as netting tools (Peyronel, 2016a:852 n.25) or implements used in pattern weaving (Cassuto, 2016:277).

Spindle Whorls

In antiquity, spindle whorls, along with the spindles and distaffs, played a leading role in the production of spun fibers for weaving. Only three spindle whorls were found at Tatarlı, two of them in the Late Bronze Age and one in the Hellenistic Period contexts. Two Late Bronze Age specimens, one conical (fig. 5a) and the other hemispherical (fig. 5b) and a disc shaped Hellenistic example (fig. 5c) are all flat-bottomed whorls with a single hole through the center-section and undecorated. The small number of bone spindle whorls contrasts with the large number of



Fig. 5.—Spindle Whorls.

terracotta and stone spindle whorls (Girginer *et al.*, 2011:135; Girginer, 2012:112; Girginer *et al.*, 2014:183) discovered at the settlement. In most publications, the shape and weight of the spindle are associated with the thickness of the thread (Cassuto, 2016:274-275). Some experimental studies on bone spindle whorls also indicate that they are likely to be used to spin the fine fibers in small quantities (Peyronel, 2016b:189). This experimental work suggests that different types of yarns may have been spun to make in textiles in Tatarlı. We do know from archaeobotanical studies (Aslan *et al.*, 2015:102) that linen was probably processed at the settlement.

Needles

Four examples of bone needles are known from the settlement, except for one undated example made from *Bos taurus*' long bone (fig. 6a), each sample was found from different strata, one from Late Bronze Age layers (fig. 6b), one from Iron Age (fig. 6c) and the last from Hellenistic layers (fig. 6d) and made from *caprine's* long bones. They all have flat heads slightly curved on the edges with a round perforation and fine pointed tips.

Pointed Tools

A total number of 14 objects with pointed tips are grouped and evaluated under this title and thought that these fragments must be the pieces of perforators or awls (fig. 7). Except two specimens from Late Bronze Age made from *Bos Taurus*' long bone, all were made from long bone of *caprine*. However it is not possible

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Fig. 7.—Pointed Tools.

to make a definite typology of the artifacts, due to their state of preservations. As with many ancient settlements, these pointed tools should have been a part of the weaving kit also in Tatarlı Höyük.

Handles

There are 10 examples of handles from Tatarlı made from bone and allowing tools to be used quite easily. There are three different kinds of handles.

A total of seven tube shaped samples, undecorated or decorated with engraved lines. Four came from Middle Bronze Age levels (fig. 8a) and one each from the Late Bronze Age, the Iron Age levels and the Hellenistic Period (fig. 8b). The lower end of a tool could have been fitted quite easily into such cylindrical or tube-shaped bone handles. With the increase in the use of metal tools from the Early Bronze Age onwards, these easily produced cylindrical bone diaphysis-based handles met daily needs in many settlements in Anatolia (Goldman, 1956:309; Sheftel, 1974:274).

Another type of handle, made from long bone of *Bos Taurus*, takes the form of a hollow tube with a rectangular outer form with four protrusions at one end (fig. 8c). The handle was decorated with single-center circles between the double grooves in the upper and lower edges. P. Sheftel suggests that such handles, similar to samples found from strata dating to the 3rd - 2nd centuries BC at Gordion (Sheftel, 1974:246-247 no. 27, 263) and may have been used as a mirror or knife handle. The sample from Tatarlı Höyük was also found in a layer contemporary with the Gordion find dating to the Hellenistic Period. Another fragmented specimen with a rectangular form probably also belonged to the rectangular handle type.

The only specimen made from horn from Tatarlı Höyük is a handle dating to the Hellenistic Period (fig. 8d). The surface of the handle was roughly evened out



Fig. 8.—Handles.

and widened out to the rounded end. The metal haft of the tool was fitted in the handle hole.

Plug

A bone plug, dated to the Middle Bronze Age, is unique within the Tatarlı's bone tool assemblage (fig. 9). Artifacts made of stone, clay, metal or bone in the archaeological literature and shaped like a button with one end slightly pointed and the other end having a flat or convex surface are described as "plug" or "stud" (Duru, 1972:123). One of the examples of bone plug from Early Bronze was found at Maşat Höyük, Northern Anatolia (Emre, 1996:26). The metal examples of these objects were identified by their placement in graves where they clearly functioned as earplugs (Duru, 1972:124-125). The only example of Tatarlı Höyük, from Middle Bronze Age, shaped like a flat disc at the upper part and the cylindrical body was pointed towards the other end.



Fig. 9.—Plug.

Personal Ornaments

In addition to tools, the presence of some personal ornaments made from bone, although in very small numbers; still indicate that the people living in Tatarlı Höyük preferred this raw material in a variety of functional spheres. Three pieces were classified as pendants on the based on their form (fig. 10). They are all made from long bone of *caprine* and one specimen from Late Bronze Age, one from Iron Age and the third from Hellenistic Period. It is known that such pendants were used for necklaces (Marinelli, 1995:129).

Beads, often used in decorative objects, were widely used throughout prehistory and beyond. Only seven beads were found at Tatarlı Höyük. These specimens were made from bone, an example from fish vertebra and five specimens from shell (fig. 11 a-b). Two of them could be dated to the Hellenstic Period and one specimen to Early Bronze age and four specimens were found from step trench and it is not possible to date them exactly.



Fig. 10.-Pendant.



Fig. 11.-Beads.

RAW MATERIAL

The first zooarchaeological studies on the finds indicate that the faunal assemblage of the mound was produced entirely from *caprine* and *Bos taurus*' bones, with the exceptions of a fish vertebra and a shell (fig. 12). If the raw material selection of bone objects is evaluated from a chronological point of view, it is possible to claim that the artifacts during the Early Bronze, Middle and Late Bronze Ages (2400 - 1200 BC) and the Iron Age (1200 - 330 BC) were made of *caprine*'s bones (%81), while they were predominantly made of *Bos taurus*' bones (%59) in the Hellenistic / Early Roman Period. Long bones and ribs were most preferred skeletal materials in the assemblage of the settlement. A metacarpal bone from the Hellenistic layers as a waste product is the only evidence for a possible bone industry in the mound up to now (Silibolatlaz-Baykara and Girginer, 2018:59). At present it is quite hard to talk about an organized bone-working. After completing current zooarchaeological research conducted by D. Silibolatlaz Baykara, we can have an understanding of existence of a bone tool industry at Tatarlı Höyük.

The profile of the faunal remains recovered during excavations at the mound harmonizes with the raw materials is preferred for tool production. During studies conducted on the zooarchaeological finds of 2010 season (Başoğlu and Kahya, 2016) and of 2012 season (Silibolatlaz-Baykara and Girginer, 2018) it was also determined that the highest number of bones came from *caprine* and *Bos taurus*. In the faunal distribution, an increase was observed in the *Bos taurus* in the Hellenistic Period indeed (Başoğlu and Kahya, 2016:162; Silibolatlaz-Baykara and Girginer, 2018:59). This increase also clarified the change in raw material selection during the Hellenistic / Early Roman Period.

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Fig. 12.—Numerical Distribution of Artifacts by Raw Material.

GENERAL OVERVIEW

In this article, bone artifacts dating to different periods found during recent excavations at Tatarlı Höyük were investigated typologically in terms of a preliminary evaluation. A detailed study of the assemblage, including zooarchaeological, technological and use-wear examinations will be dealt with in a further study. Altogether 65 bone artifacts were found at Tatarlı Höyük and date to a wide time range from the Early Bronze Age to the Late Hellenistic / Early Roman Period. The dating of the bone tools depended on where the objects were found in the stratigraphy and by comparison of the objects with similar types in contemporary materials.

However, the bone tool finds were not classified according to periods and the assemblage itself was not divided by period. Rather, the authors stepped back in order to see the whole picture. We wanted to look at the picture of daily life the bone tools form in each period horizon at the mound. In other words, the way bone tools were used served to demonstrate local cultural continuity at the settlement as seen from the point of view of this class of artifact.

In Tatarlı Höyük, the osseous raw material was also the preferred raw material for the production of the variety of tools needed and used in daily life. Although we have general knowledge about the social and economic life of the settlement, the bone objects that belong to the inhabitants of Tatarlı Höyük themselves, mostly found in domestic contexts, which provide some clues about the everyday life of the mound. If we deal with the artifacts from Tatarlı Höyük as a whole, it seems that it was given particular importance to the functionality. The majority of the bone tools found at the mound consisted of instruments used in textile and textile-related fields such as spatulas, spindle whorls, needles, or pointed tools. In addition to these weaving tools made from bone, other finds related to weaving such as terra cotta and stone spinle whorls and a huge number of terra cotta loom weights occur in every layer at the mound evidence the economic importance and continuity of the weaving industry at Tatarlı Höyük (Girginer *et al.*, 2010, 464; Girginer 2012, 111; Girginer *et al.*, 2014, 183; Dündar & Gerçek, 2018:154).

The archaeological finds unearthed during excavations at the Tatarli Höyük were evaluated together with archaeobotanical (Aslan *et al.*, 2015:102) and zooarcheological (Başoğlu & Kahya 2016; Silibolatlaz-Baykara & Girginer 2018) analysis provide us with a perspective of economic activities at the ancient settlement over time. This evaluation of the bone tool assemblage, of course, has its own unique place as well. Despite the small number of objects in the assemblage, the objects that were recovered from Tatarli Höyük demonstrated a continuity in use which was proven with the presence of tools probably used in the same way occurring from different layers of the mound.

When the spatial distribution of loom weights and spindle whorls are combined with the data obtained from interdisciplinary studies, it would not be wrong to say that weaving activities with threads made from vegetable fibers and *caprine*-wool was significant economic source subsistence. In other words, weaving tools such as loom weights, spatulas, spindle whorls, including bone samples, show that the mound had been a center of weaving for at least 2,500 years (Girginer *et al.*, 2011:135; Girginer, 2012:112; Girginer *et al.*, 2014:183). Bone needles and pointed tools, as well as metal samples from the settlement, appear to be a part of the weaving kit in the mound.

The presence of a small number of personal ornaments, such as beads and pendants, is an indication that people lived in Tatarlı Höyük prefer this raw material for making different kinds of personal ornaments.

In this study, which is a typological evaluation of the manufactured bone from Tatarlı Höyük, we can understand that this mound was a permanent settlement where characteristic architectural and ceramic finds from the Neolithic Period to the Late Hellenistic / Early Roman Period can be found. Bone objects recovered from the excavation have been interrogated, in terms of cultural continuity. Although the finds uncovered between 2007 and 2016 can mostly be attributed to the Hellenistic Period, the artifacts found in the layers belonging to the Iron Age and the Bronze Age showed that there was one common economic occupation of the inhabitants, weaving, throughout all periods at the site. In this article, the concept of cultural continuity was taken as a starting point from this point of view. With spatial analysis of the finds in the following researches, both the worked-bone industry in the settlement and the role of bone artifacts in economic activities or daily life of Tatarlı Höyük will be more clearly understood.

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