Exploitation of aquatic resources for adornment and tool processing at Măgura ‘Buduiasca’ (‘Boldul lui Moș Ivănuș’) Neolithic settlement (southern Romania)

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ABSTRACT

Măgura ‘Buduiasca’ (‘Boldul lui Moș Ivănuș’) settlement has an important place among the Prehistoric settlements from the Balkans. It is characterized by continuous habitation from the Early Neolithic through to the Early Chalcolithic allowing an understanding of the development of utilitarian objects and personal adornments in respect of the raw materials used and their processing patterns. One group consists of local bivalves (Unio sp.) which were exploited in an opportunistic manner: first as an important source of food and second as a source material for producing artefacts after recovery from domestic waste. The local gastropods shells (Lithoglyphus sp., Theodoxus danubialis, Esperiana sp., Anisus Planorbis sp.) are without any nutritional value and used only as a source of raw materials. They could be collected during specialized expeditions organized for this purpose at certain times of the year. Imported elements are a third category which most likely arrived at Măgura ‘Buduiasca’ as finished objects. They provide evidence for complex exchange networks at this period in prehistory. Species like Mytilus or Cardium most likely come from the Black Sea, while Spondylus or Glycymeris may have their origins in the Mediterranean Sea. The presence of these raw materials demonstrates different transformation methods with their origin influencing the processing procedure: allogene valves for adornments, while Unio sp. are especially transformed into utilitarian tools.

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1. Introduction

During Prehistory aquatic resources represented an important source of food and also raw materials for processing adornments and utilitarian tools. Some of these raw materials traveled long distances, probably becoming symbols of their social identity or maybe “exchange currency” related to their scarcity or difficulty in procurement (e.g., Vellanoweth, 2001; Kuhn and Stiner, 2007; Kuhn, 2014; Stiner, 2014).

This ‘history’ is long with the first valves used for utilitarian purpose connected with two human types before Homo sapiens, namely Homo erectus from Sangiran (Choi and Driwanorto, 2007) and Neanderthals, following discoveries in Italy and Greece (Darlas and de Lumley, 1999; Douka, 2011; Douka and Spinapolice, 2012). Adornments processed from aquatic gastropods and bivalves are later attested in Europe in Aurignacian contexts associated with modern humans (e.g., Vachaeren and d’Errico, 2006; Alvarez Fernandez and Jorís, 2008). Within other Upper Paleolithic cultures shells of gastropods and scaphopods, with no nutritional value, are used, brought, in some cases, from hundreds of kilometers away (e.g., Taborin, 1993; Alvarez-Fernandez, 2010). During the Mesolithic the tradition of using small perforated gastropods continues (e.g., Măgărit, 2008; Rigaud, 2011; Cristiani and Borić, 2012; Grünberg, 2013; Cristiani et al., 2014; Rigaud et al., 2015) but utilitarian pieces made from Mytilus and Unio valves with a serrated side also appear (Courtin and Vige, 1987).

During the Neolithic there was a gradual percentage reduction in the use of small gastropods and an increase in adornments and utilitarian items made of valves (Unio sp., Spondylus sp., Glycymeris sp., Cardium sp. etc.), some of them circulating from the Mediterranean Sea to the center of the continent. To further understand

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this development we focused on Mágrá ‘Buduiasca’ (Teleorman County) Neolithic settlement. This is a key site because of the continuity of habitation from the Early Neolithic to the Early Chalcolithic which allows study of the development of adornments and utilitarian tools with respect to raw materials used and their chaîne opératoire.

2. Archaeological setting

Mágrá ‘Buduiasca’ is located in southern Romania (Fig. 1), on a lower terrace of the Teleorman River, within the south-east part of Mágrá village. Discovered in 2001, it was archeologically researched during 2001–2008. Its extent is approximately 850 × 350 m, with almost 30 ha surface area. ‘Boldul lui Moș Ivănuș’ is the name given to a secondary terrace protuberance located on the south-east side of ‘Buduiasca’ area and is part of it.

The present stage of research indicates that the first Neolithic inhabitants (Starčevo-Criș I) had settled at the ‘Boldul lui Moș Ivănuș’ and in a later stage of Early Neolithic (Starčevo-Criș III) habitation extended to the entire ‘Buduiasca’ area where it continued during the Middle Neolithic and Early Chalcolithic (Dudești and Vădastra cultures). Far from being complex, the stratigraphy of the Mágrá settlement is horizontal. A total of 400 m² of surface area have been studied, revealing no continuity between different archaeological levels and variation in their composition. Stratigraphic analysis of the relevant profiles from the archaeological sections and samples has helped determine the temporal relations between the different Neolithic activities. A series of 32 14C data outlines the occupational stages of this settlement: Starčevo-Criș I – c. 6000-5900 cal BC, Starčevo-Criș III – c. 5800-5700 cal BC, Dudești – c. 5500-5300 cal BC and Vădastra – c. 5200-5000 cal BC (Table 1). Assemblages from the entire Neolithic sequence have been studied. The inventory of the assemblages generally consist of ceramic fragments, animal bones, valves, stones, bone and flint tools, anthropomorphic and zoomorphic figurines, and adornments. Different features were interpreted from the analyses of assemblages including dwellings, pits, waste areas, and depositions with ritual character.

3. Methods and materials

3.1. Methodology

Various shells from all over the world, especially those processed in the form of personal adornments, have benefited from detailed studies regarding their possible social-cultural functions (e.g., Vanhaeren, 2005; Rigaud, 2011). Nor have studies of wear traces (e.g., Cristiani et al., 2005; Cuenca-Solana et al., 2014, 2017; Reynard, 2014; Lemorini et al., 2016; Romagnoli et al., 2017; Weston et al., 2017) on the surface of the pieces been lacking, proposing ways of attaching for adornments (e.g., Cristiani and Borić, 2012; Vanhaeren et al., 2013; Langley and O’Connor, 2015; Langley et al., 2016) or of using for different tools (e.g., Smith and Allen, 1999; O’Day and Keegan, 2001; Przywolnik, 2003; Debruyne, 2010; Allen and Ussher, 2013; Romagnoli et al., 2014, 2016; Szabó and Koppel, 2015; Tumung et al., 2015; Harris et al., 2017). The focus of this paper has been on some aquatic resources, used by prehistoric communities north of the Danube for processing tools.