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Session: S6-B: Traceology in the 21st Century: Contributions to Archaeological Science and the Human Journey

For poster

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Use of bone and antler as raw material during the chalcolithic in Northeastern Bulgaria (based on the materials from tell Polyanitsa)

During the Chalcolithic in many cultures of the Balkan-Danube region intensive use of antler, bones of wild and domestic animals, as well as shells and wild boar's tusks were detected. Using of these raw materials and a well-developed technology, various tools, household and cult objects, and jewelry was made. A rich assemblage, numbering 266 objects in accordance with the field inventory, of similar products was collected during the archaeological excavations of tell Polyanitsa, located in Northeastern Bulgaria. The settlement existed from the beginning of the Early Chalcolithic to the end of the Middle Chalcolithic. The aim of this paper is to introduce into scientific circulation these less known materials and to present the results of technical-morphological and experimental and traceological analysis.

Studies of the Chalcolithic materials of the Balkan-Danube region very rarely include special analysis of antler and bone products, tusks, shells, while numerous finds of this time testify to the intensive use of this raw material in many places. The considered collection is the biggest for Chalcolithic settlements in Northeastern Bulgaria, and most of the items were subjected to technical-morphological and experimental and traceological analysis.

The abundance and diversity of the examined objects from antler, bone, shells, and tusks testifies to the widespread use of these types of raw materials in the Polyanitsa settlement. Many products and methods of their manufacture have analogies in the materials of other settlements in Northeastern Bulgaria: hoes, diggers, axe-shaped, adze-shaped tools, couplings, awls, daggers in the Golyamo Delchevo and Durankulak tells, bracelets made of spondylus shells in the Varna and Durankulak necropolises, beads in the Radingrad and Ovcharovo tells.

The traceological analysis of the collection showed that the bone and antler tools were used in agriculture, processing of flint, wood, hides and leather, and ceramics. It should be noted that among the flint inventory of the settlement, various tools were found that served for processing bone / antler raw materials. Among them are planing knives, scrapers, saws, drills, burins. These facts, as well as the finds of semi-finished and unfinished bone / antler products, indicate the existence of local production. The quality of processing and the rich assortment of products are proof of the high level of development of the bone-processing industry and the demand for its

products in the economic and household activities of the population of the Chalcolithic sites of Northeastern Bulgaria.

These results may serve as a basis for further comparative studies of the Neolithic and Chalcolithic bone industries from Bulgaria and Romania.

Keywords: Chalcolithic time, Northeastern Bulgaria, bone and antler artifacts, experimental and traceological analysis