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Unreviewed Mixed Matters Article:

Book Review: Die Knochen- und Geweihgeräte der Feddersen Wierde by Katrin Struckmeyer

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Author(s): Wietske Prummel [1] ✉

[1] Rijksuniversiteit Groningen, Broerstraat 5, 9712 CP Groningen, the Netherlands.

The purpose of this book, which was originally presented as a dissertation at Hamburg University, is to present the 1,293 bone, antler, horn and ivory tools that were found at the terp settlement Feddersen Wierde in the coastal area of Lower Saxony, Germany, and to decide on the possible functions of the tools.

> Despite these small criticisms, this is a very useful book for all archaeologists interested in the use of bone, antler and horn as raw materials and for experimental archaeologists who want to experiment with bone, antler and horn tools and to discover for which purposes these tools were used.

Gebrauchsspurenanalysen an Geräten von der Römischen Kaiserzeit bis zum Mittelalter und enthoarchäologische Vergleiche. Studien zur Landschaft- und Siedlungsgeschichte im südlichen Nordseegebiet/Studies in Landscape und Settlement History in the Southern North Sea Region 2. Feddersen Wierde 7.

For the later objective, microscopic use-wear analyses were carried out on experimental replicas of most of the tool types and some ethnoarchaeological comparisons were made. The objects were recovered during the almost complete excavation of the Feddersen Wierde during the period 1955-1963.

As many as 25 tool types were recognised, of which rounded and sawn ribs, awls, split metapodia and antler points (presumably hoes) were the most numerous. Only 103 bone, antler and horn fragments were found that are unfinished tools, raw material or waste of tool manufacturing. The author rightly concludes from this low number that no specialised bone and antler working was done at the site. Some tools, such as the antler combs, were probably imported to the site.

In terms of material, 89% of the tools were made of bones, 10% of antler (red deer and roe deer), 1% of horn and less than 1% (n=1) of ivory (a fan grip). Cattle bones, especially ribs and metapodia, were by far the most numerous among the tools (69%). Sheep, horse, pig and dog bones follow with respectively 19%, 9%, 2% and 0.3% of all bone tools. These proportions are more or less equal to the proportions among all bones of the domestic animals at the site. The most suitable bones were selected from the butchery waste to make specific tools. Dr J.M. Grimm assisted in the species and skeletal element identification of the tools. Fish bones were used as tools as well: a perforated vertebra of a meagre (Argyrosomus regius) and sturgeon (Acipenser sp.) scutes used as a kind of scraper.

The function of most of the tools found at the Feddersen Wierde was not certain before this study was done. To learn more about the possible functions of the tools, the author made experimental bone and antler tools. She conducted 42 experiments with these duplicates using six groups of contact materials: fresh cattle skin, leather (such as tanned skin, humid as well as dry), humid potter clay, plant material (such as straw and hemp fibre), willow bark and wood (species unspecified). The experiments were partly done at the Historisk-Arkæologisk Forsøgscentre Lejre, Denmark, and partly at the author's home institute in Wilhelmshaven.

The experimental tools were microscopically analysed after being used in the experiments. The author was introduced to microscopic use-wear analysis by Professor A. van Gijn of

Leiden University, Netherlands. Use-wear analysis showed that each contact material caused its own type and degree of change of the surface of the experimental tool and its own amount of gloss and scratches. The results are shown in 24 photographs at the end of the book. Microscopic use-wear analysis was then applied to approximately 200 archaeological tools from 16 of the 25 tool types found at the site. Photographs presented in the book show the use-wear on the tools. In this way the author was able to decide on the function of many of the bone, antler and horn tool types from the Feddersen Wierde. For instance she concluded from the use-wear analysis on red deer antler points with a nick, a hole and gloss that these tools might have been part of a horse harness. For readers not familiar with use-wear analysis, it might have been useful for the author to refer to the photographs of the use-wear on the experimental bones. Unfortunately, the use-wear photographs of the archaeological and the experimental tools are not connected with each other in the text.

The ethnographic information made it possible to identify the fragments of cattle ribs with rounded edges and those with notches as possible tools used by potters, who may have used them to smooth the surface of the pots built from clay coils. A second example is the explanation that she found for the gloss on the shaft of cattle metapodia. This type of bone is attached to a loom in the ethnographic museum of Vietze (Germany) and was used to polish textiles.

Two other types of analysis that the author used were the 3D representation of the cutting and sawing areas and the profiles of teeth in serrated tools. How to interpret the 3D representations, which are nice colourful pictures, was insufficiently explained in the book. A drawback of the book is that most of the tools are dated to general periods such as the Roman period, Early Middle Ages and Late Middle Ages. This is not the fault of the author, but is the result of the way the material was sampled during the excavations between 1955 and 1963.

Despite these small criticisms, this is a very useful book for all archaeologists interested in the use of bone, antler and horn as raw materials and for experimental archaeologists who want to experiment with bone, antler and horn tools and to discover for which purposes these tools were used.

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Corresponding Author

Wietske Prummel
Rijksuniversiteit Groningen
Broerstraat 5
9712 CP Groningen
the Netherlands
E-mail Contact