

From Hooves to Horns, from Mollusc to Mammoth

Manufacture and Use of Bone Artefacts from Prehistoric Times to the Present

Proceedings of the 4th Meeting
of the ICAZ Worked Bone Research Group
at Tallinn, 26th–31st of August 2003

Edited by

Heidi Luik, Alice M. Choyke, Colleen E. Batey and Lembi Lõugas



Tallinn 2005

Sõrgadest sarvedeni, merikarbist mammutini

**Luuesemete valmistamisest ja kasutamisest
esiajast tänapäevani**

ICAZ-i Töödeldud Luu Uurijate Töögrupi
4. konverentsi toimetised,
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Heidi Luik, Alice M. Choyke, Colleen E. Batey ja Lembi Lõugas

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The participants of the 4th meeting of the WBRG at the Estonian Open Air Museum in Rocca-al-Mare, 29th of August 2003

Front row, from left: Erika Gál, Heidi Luik, Kristiina Mannermaa, Cornelia Becker, Lembi Lõugas, Etan Ayalon, Yolaine Maigrot, Mária Bíró, Alexandra Legrand, Rozalia Christidou.

Second row, standing, from left: Liina Maldre, Alice Choyke, László Bartosiewicz, Tina Tuohy, Juha-Pekka Joona, Mikko Hietala, Anna Wickholm, Steven Ashby, Ilga Zagorska, Hans Christian Küchelmann, Barbara Stopp, Günther Karl Kunst, Colleen Batey, Sabine Deschler-Erb, Isabelle Sidéra, Edit Czeglédi, Yehoshua Dray.

(Photo by Erki Russow)

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Introduction

In this volume we present the proceedings of the 4th meeting of the Worked Bone Research Group (WBRG) held in Tallinn in the Institute of History in August 2003. WBRG is a working group of ICAZ (International Council for Archaeozoology) uniting archaeologists and archaeozoologists investigating bone working and the use of bone artefacts and includes researchers from many regions and working in different periods.

Since the time humans learned to make tools, they also used raw materials obtained from animals to make them. Stone Age people knew how to totally exploit the animals they killed, with the least possible waste. Meat was eaten, hides were used for clothing, tendons for tying and sewing and bones for making tools. Bone, although organic, also contains inorganic components and is usually better preserved than most other organic materials. Thus, it is frequently represented among archaeological finds. Owing to their physical structures bone and antler have several properties which make them particularly convenient for producing various objects which raw materials such as stone and wood were not suitable. The title of the book refers to artisans' skill in exploiting all parts of animals, from claws and hooves to antlers and horns, as well as to the use of skeletal parts from both very small and very large animals: tools and artefacts have been made of mollusk shells as well as elephants' tusks.

The temporal range covered in this book is very great: from the Palaeolithic to the present day. Bone and antler were already important raw materials for tools in the Paleolithic although bone artefacts were used throughout the prehistory as well as in the Middle Ages. Up to the present day souvenirs are still made of bone in various places. The on-going work of experimental archaeology in duplicating prehistoric bone artefacts may also be included among kinds of bone manufacture still going on today. Territorially, the present volume mostly concerns Europe although some papers are also concerned with finds from beyond Europe.

The volume contains a total of 35 papers by 39 authors, mostly from Europe including: Great Britain, France, Switzerland, Netherlands, Germany, Austria, Hungary, Italy, Greece, Bulgaria, Romania, Russia, Finland, and Estonia. In addition researchers from Israel and the United States of America are also represented.

Most of the papers are grouped based on the period of the finds they deal with. The first part contains papers discussing the technologies of bone working in the Palaeolithic and Mesolithic periods as well as the possibilities studying how these tools were used in this period (C. Beldiman, A. van Gijn, E. David, K. Mannermaa). In the second part, the development of bone working technologies in the Neolithic Period is analyzed, with special emphasis on the micro-analysis of processing and use wear traces (I. Sidéra, R. Christidou, A. Legrand, Y. Maigrot). The third part deals with the Bronze Age, studying bone artefacts from fortified settlements (A. M. Choyke, C. Becker). The fourth part contains papers concerned with bone working in Europe in the Iron Age and in the eastern and western Roman provinces (T. Tuohy, B. Stopp & G. K. Kunst, M. Bíró, S. Deschler-Erb, K. Gostenčnik, E. Ayalon, Y. Dray). Two of the papers in this section, however, concern bone working in Caesarea Maritima (Ayalon, Dray). These papers cover a long time range at this site from the AD 1st–13th centuries. The fifth part comprises articles on bone artefacts and bone working in the Viking Age and the Middle Ages (S. P. Ashby, H. Luik & L. Maldre, L. Smirova (Holden), I. Kováts, M. Stancheva, E. Kovács). The sixth part consists of papers dealing with artefacts made from special raw materials (shells, bird bone, elk antler, fish bone, walrus ivory, the skeleton of marine turtle) (E. Cristiani, C. Lemorini, F. Martini & L. Sarti, E. Gál, L. Bartosiewicz, C. E. Batey, J. Frazier). The final section contains papers connected with

experimental archaeology (R. Christidou & A. Legrand, E. Cristiani & F. Alhaique, Á. Vecsey, E. Czeglédi, G. Szöllősy, H. Ch. Küchelmann & P. Zidarov). E. Czeglédi's paper on bone purse fasteners from the Avar period in Hungary is included in this part because it belongs together with G. Szöllősy's article describing an experiment making purses with such fasteners.

I would like here to thank everyone who helped to carry through the conference and prepare this volume. The preparation of this book was financed by the Cultural Endowment of Estonia, Estonian Science Foundation (grant no 5098), Institute of History, the Chair of Archaeology of Tartu University and the non-profit organization *Arheoloogiakeskus*.

I wish to state my sincere thanks to my co-editors Alice Choyke, Colleen Batey and Lembi Lõugas, and the editor-in-chief of the series, Valter Lang, for his help and advice. Thanks are also due to the artist Kersti Siitan, who elaborated many of the drawings and designed the book, and Liis Soon, who always gave a helping hand when my own English failed.

I also wish to express my gratitude to my colleagues at the Institute of History, who helped during the conference: Lembi Lõugas, Liis Soon, Kersti Siitan, Aive Rumm, Gurly Vedru, Mirja Ots, Erki Russow, Mauri Kiudsoo, Jaana Ratas, Toomas Mägi, and Anu Mänd; I am also thankful to the museums and museum workers, who kindly introduced their exhibitions to the conference participants: the museum-reserve of Jõelähtme, where Triinu Mets should be specially mentioned, the Museum of Niguliste and the Open Air Museum of Estonia. The organization of the conference was financially supported by Estonian Science Foundation (grants nos. 4203 and 5098).

And last but not least: I am very thankful to all the authors who kindly contributed to this volume.

Heidi Luik,
Editor-in-chief