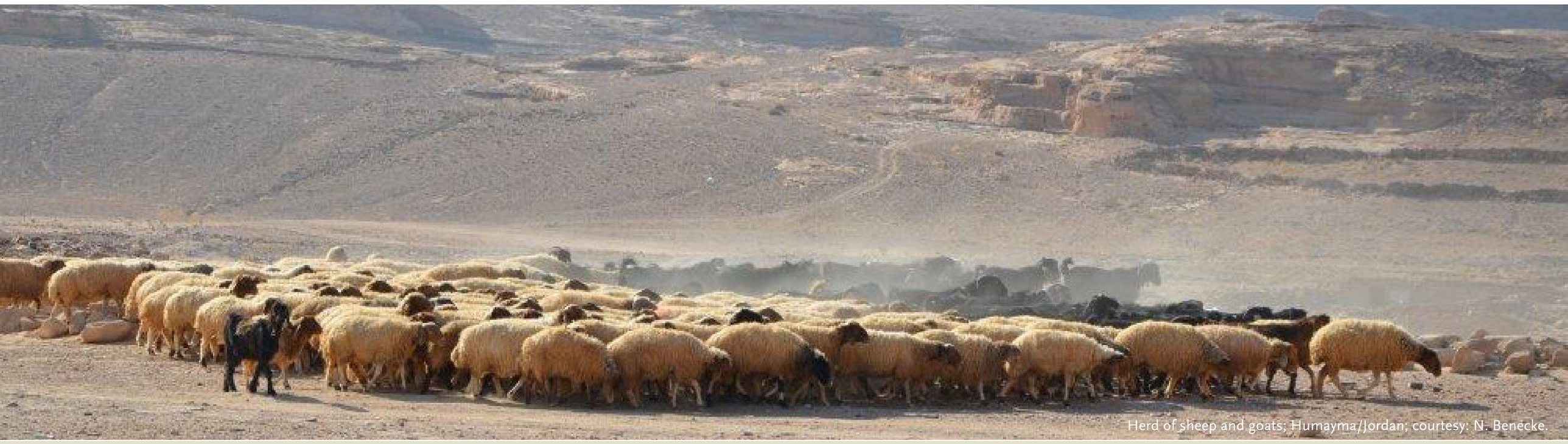
EXCELLENCE CLUSTER TOPOI

Freie Universität Berlin

Humboldt-Universität zu Berlin



Herd of sheep and goats; Humayma/Jordan; courtesy: N. Benecke.

(A-4) THE TEXTILE REVOLUTION

Domestic Sheep – Wool Production – Landscape Changes

Wool production is closely connected to the domesticated sheep and specifically to those animals with a woolly coat. With the keeping of woolly sheep, not only did the economy of communities change, but also textile technologies, equipment for producing garments and people's appearance. Using a multi-proxy approach, the origin of woolly sheep, the paths and speed of their dispersal throughout the Old World and the social and technological innovations that accompanied or perhaps spurred the development and exploitation of wool are explored in our research project.

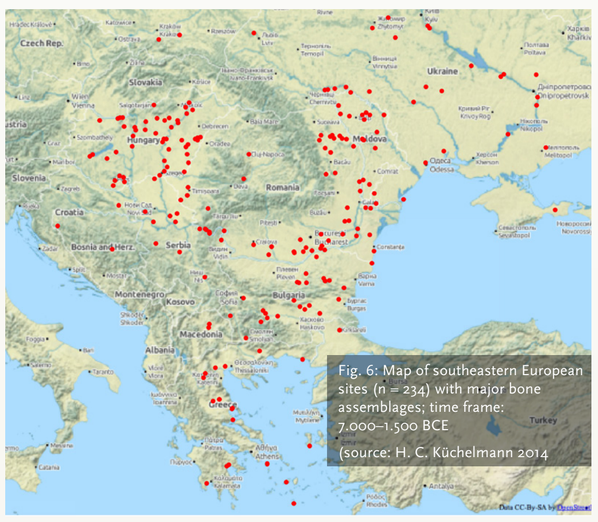


Fig. 6: Map of southeastern European sites (n = 234) with major bone assemblages; time frame: 7.000–1.500 BCE (source: H. C. Küchelmann 2014

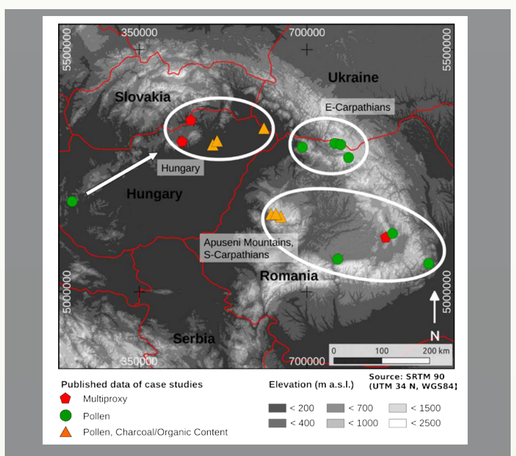


Fig. 7: Study area and locations of case studies integrated in the standardized assessment of herding impact (M. Schumacher).

Fig. 3: Loomweights from Grabovac, Serbia (weight range cca. 90g-390g). (Foto: A. Grabundzjia)

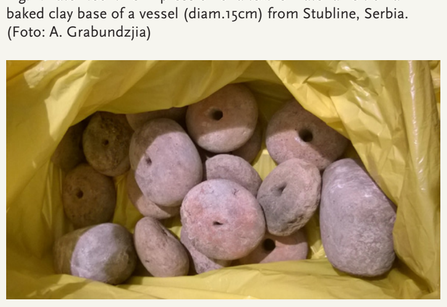


Fig. 2: Spindle Whorls from Tell Arpachiyah, Iraq, lenticular shape. (Foto: C. Schoch)

Fig. 1: Late Neolithic impression of a textile material left on a baked clay base of a vessel (diam.15cm) from Stubline, Serbia. (Foto: A. Grabundzjia)

Fig. 5: Weaving eperiment at Zagreb Museum November 2014 Astragali (Bos taurus (each ca. 70g-80g)/ Cervus ephalus (each ca. 40g-50g)) as Loomweights. (Foto: Arheološki muzej u Zagrebu).

A-4-1: ARCHAEOLOGICAL EVIDENCE FOR THE USE OF WOOL IN SOUTHEASTERN EUROPE AND THE NEAR EAST

The two archaeological projects study textile tools and other indirect evidence for wool use (Fig. 1). Spindle whorls and loom weights (Fig. 2-3) are the most common textile-related finds and as such are indispensable for exploring differences in textile production. Their morphological and metric characteristics are documented in detail for many sites across a wide geographical and chronological scope (Fig. 4).

The focus of the research is on detecting patterns of change in textile production and technology, ranging from a smaller, site-based scale to a larger regional one. Next to statistical analysis also experimental archaeology (Fig. 5) is employed.

A comparison of the developments in southeastern Europe and the Near East goes beyond the mere raw materials used and considers differences in climate, economy, mobility and tradition.

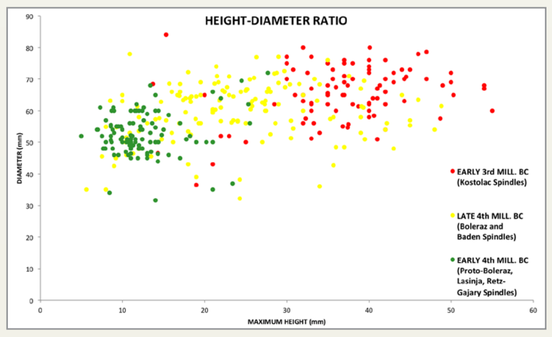


Fig. 4: Chronological development of Height-Diameter ratio of Spindle Whorls in the Pannonian Plain. (A. Grabundzjia)

A-4-2: ARCHAEOZOOLOGICAL ANALYZES OF DOMESTIC SHEEP IN THE AREA BETWEEN THE NEAR EAST AND CENTRAL EUROPE (5TH-2ND MILLENNIUM BC)

Animal bone assemblages from prehistoric sites provide an important source for the reconstruction of past economies, e.g. a sheep-dominated strategy. In the Near East, sheep husbandry originally focussed on meat and milk. By the end of the fourth mill. BCE at the latest, it shifted to wool exploitation. Subsequently this new development spread westwards, the rapidity and dimension of which are still unexplored. A wide range of sites in southeastern Europe with major bone assemblages has been tested (see map) to identify patterns of wool exploitation. Relevant factors are a general increase in numbers of sheep, higher numbers of animals slaughtered at an old stage, an equal sex ratio and modifications in size.

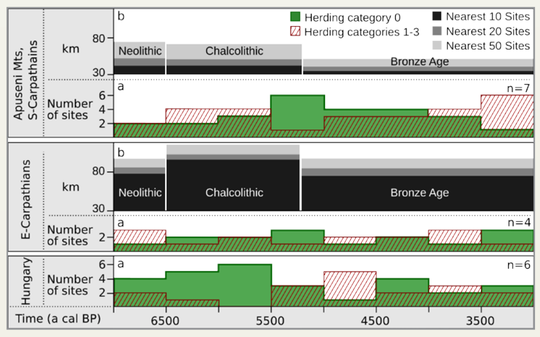


Fig. 8: (a) Categories of herding impact as resulting from fuzzy analysis aggregated for three sub-regions of the study area; (b) mean distances between sediment archives and 10, 20 and 50 nearest settlement sites for the Neolithic, Chalcolithic and Bronze Age, respectively (archaeological periods after Görsdorf and Bojadziev (1996), Greenfield et al. (2005) and Link (2006).

A-4-3: MID-HOLOCENE LANDSCAPE CHANGES DUE TO GRAZING

21 case studies from the Carpathian region have been compiled to give a large-scale perspective on Holocene environmental dynamics. Pollen of secondary indicator species and arboreal pollen values were combined to trace herding impact. Absolute herding impact is rather low, and environmental archives suggest gradually increasing herding intensity. Significant grazing pressure is not reported before the Iron Age. However, spatial aggregation of results implies asynchronous phases of alternating herding probability. In the southern Carpathians and Apuseni Mountains a first phase of increased herding probability dates to the Chalcolithic, a second one to the Late Bronze Age. In northern Hungary the first herding indications date to the Early Bronze Age.

A-4-4: TEXTUAL EVIDENCE RELATED TO SHEEP HUSBANDRY IN THE ANCIENT NEAR EAST

Late 4th to 3rd millennium cuneiform texts provide ample evidence for sheep and goat breeding and the usage of wool in the manufacture of textiles. Woolen textiles were the primary commercial goods exported in exchange for strategic resources unavailable in Mesopotamia. This project discusses cuneiform terminology for sheep, goats, their races and breeds. It deals with the quantification of sheep and goat husbandry and its role within the framework of state resource management with regard to its local and diachronic variation. The correlation of terminology for breeds and quantitative data, both derived from cuneiform sources, with zooarchaeological evidence holds considerable promise.

Wolfram Schier / wolfram.schier@topoi.org
Susan Pollock / susan.pollock@topoi.org

—> www. topoi.org/group/a-4/

berlin-brandenburgische AKADEMIE DER WISSENSCHAFTEN

Institutum Archaeologicum Germanicum

MAX-PLANCK-INSTITUT FÜR WISSENSCHAFTSGESCHICHTE

Stiftung Preußischer Kulturbesitz