13TH ICAZ
INTERNATIONAL CONFERENCE

ABSTRACTS

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A series of suggestions and drawings for the conference logo were submitted by METU, Ankara University and Hacettepe University students. After a vote by the members of the Scientific and Organizing Committee, the drawing proposed by Zeynep Ece Sahin was chosen. It encircles a number of bone "shadows" topped with the statue of a deer drawn after a metal find from the "Kings' tombs" at Alacahöyük. This statue is displayed at the Anatolian Civilizations Museum in Ankara.

ICAZ
International Council for Archaeozoology

ODTÜ
METU

International Council for Archaeozoology

Middle East Technical University

Cattle for the ancestors at Neolithic Çatalhöyük, Turkey

The recent ontological turn in anthropological theory has opened a space for relational approaches in zooarchaeology, in which boundaries between animals and humans are permeable and persons can take non-human forms. Here I explore cattle-human relations in the Near Eastern Neolithic, focusing on Çatalhöyük in central Anatolia. I argue that the relationship between humans and wild cattle at Çatalhöyük was intense, with aurochs hunting a powerfully performative experience followed by feasting. There are many parallels in the treatment of dead humans and aurochsen. Both humans and cattle parts are buried beneath house floors, in complementary spatial positions, incorporating both into the houses (which have their own life cycle) as ancestors. The Near Eastern Neolithic is characterized by a widespread concern with heads and heedlessness; both human and animal heads are sometimes removed and used, displayed, and deposited, as well as depicted. Cattle heads and horns are especially prominent in these contexts.

Central Anatolians resisted the adoption of domestic cattle for several centuries, while they accepted the herding of sheep and goats. I suggest this reluctance derives from the particularly close relationship between cattle and humans evident at Çatalhöyük. When small numbers of domestic cattle appear in the later levels of the site, wild cattle display initially intensify. These domestic cattle may signal a change in human kinship patterns now marked with bridewealth, perhaps eroding the endogamous marriage system at Çatalhöyük and contributing to the eventual dispersal of its inhabitants.

Keywords: *Near East, Anatolia, relationality, kinship, bridewealth*
Nerissa Russell, Cornell University, NY, USA. nr29@cornell.edu

Cow milk exploitation and calf weaning in the Early Neolithic Balkans: Insights from intra-tooth variations in nitrogen isotope ratios

Human interdependence with domestic cattle (*Bos taurus*) in the North-Central Balkans can be traced to the origins of animal husbandry in the region, i.e. to the Early Neolithic (c. 6000-5400 cal. BC). The prevalence of cattle remains in the archaeozoological record and the ubiquity of bovid imagery are testimonies to their prominent role in the economic and symbolic sphere, as well as in their day-to-day interactions with humans. Furthermore, recent lipid analyses of organic residues from Early Neolithic pottery vessels from a number of Balkan sites (Ethier et al. 2017) indicate that dairying was not only present from the start, but also fairly widespread. However, cow milk exploitation would not have been straightforward, but heavily dependent on the length of lactation, the presence/absence of suckling calves, the amount left for human consumption and consequently on the calf weaning pattern. In this paper, following Balasse & Tresset (2002), we examine the weaning patterns in several individuals from Early Neolithic sites (Starcevo-Grad, Topole-Bac, Magareci mlin) by looking into the intra-tooth (M1, M2) variation in nitrogen isotope (?15N) ratios of dentine collagen. Observed trophic changes related to different dietary stages (in utero, suckling and weaning) are cross-referenced with herd age structures, in order to make inferences about slaughter patterns. An emphasis on animal life-histories, by means of stable isotope analyses and ageing, provide new insights into the nature of early cattle husbandry, milk availability and sharing between humans and calves, as well as the management of animals in these processes.

Keywords: *Early Neolithic Balkans, cattle milk exploitation, weaning, nitrogen isotope ratios, dentine collagen*

Ivana Zivaljevic, BioSense Institute, University of Novi Sad, Serbia. ivziv81@yahoo.com
Vesna Dimitrijevic, BioSense Institute, University of Novi Sad, Serbia; Laboratory for Bioarchaeology, Department of Archaeology, Faculty of Philosophy, University of Belgrade, Serbia. vdimitri@f.bg.ac.rs
Sofija Stefanovic, BioSense Institute, University of Novi Sad, Serbia; Laboratory for Bioarchaeology, Department of Archaeology, Faculty of Philosophy, University of Belgrade, Serbia. sofija.stefanovic@biosense.rs

Marie Balasse, CNRS - Muséum national d'Histoire naturelle – Sorbonne Universités, Archéozoologie, Archéobotanique: Sociétés, Pratiques et Environnement (UMR 7209), Département Ecologie et Gestion de la Biodiversité, Paris, France. marie.balasse@mnhn.fr

Multi-disciplinary perspectives on Linearbandkeramik cattle and their primary and secondary product exploitation

The farmers and stockherders of early Neolithic cultures in central and northwestern Europe were instrumental in the introduction and spread of cattle-based agriculture in this region. This initial phase was crucial in establishing cattle-based agricultural systems that proceeded them, which caused a revolutionary shift in human subsistence strategy that reshaped prehistoric European culture, biology and economy and underlie modern life worldwide. Previous investigations into cattle husbandry in the Linearbandkeramik (LBK) and associated cultures have been hampered by taphonomic/poor preservation conditions, and as a result have often been limited to site-specific or regional perspectives. The ERC NeoMilk (Evershed, FP7-IDEAS-ERC/324202) project has generated a wealth of new data for early Neolithic cattle husbandry in central Europe using complementary multi-proxy approaches on a much wider scale than has previously been possible. Here we present a synthesis of the results from this multidisciplinary research project that include detailed organic residue analyses of pottery for primary and secondary product processing, archaeozoological investigation of mortality profiles and bone fat exploitation coupled with innovative statistical approaches, as well as incremental stable isotopic and compound-specific analysis of cattle teeth. Our research indicates that cattle husbandry practices were similar across the LBK cultural zone with regional differences. The use of these animals for their primary and secondary products varied regionally, with more intensive dairying in some regions offset by more intensive bone marrow processing in others. Stable isotopic analysis provides evidence of the regional variation in the use of forest for pasture and the provision of leafy fodder during winter periods. The overall nuanced picture of LBK cattle husbandry highlights the critical importance of this domesticate in shaping the diets, economies and wider biological/evolutionary impacts of the early Neolithic communities of central and northern Europe, the legacy of which can be seen in Europe today.

Keywords: *Milk, husbandry practices, Neolithic, multi-proxy, NeoMilk, central and northern Europe*

Richard P. Evershed, Organic Geochemistry Unit, School of Chemistry, University of Bristol, UK. r.p.evershed@bristol.ac.uk
Rosalind E. Gillis, Institute for Prehistoric and Protohistoric Archaeology, Christian-Albrechts University, Kiel, Germany, rgillis@ufg.uni-kiel.de
Emily V. Johnson, Department of Archaeology, University of Exeter, UK. E.V.Johnson@exeter.ac.uk
Mélanie Roffet-Salque, Organic Geochemistry Unit, School of Chemistry, University of Bristol, UK. Melanie.Salque@bristol.ac.uk
Jessica Smyth, UCD School of Archaeology, University College Dublin, Ireland. essica.smyth@ucd.ie
Pascale Gerbault, School of Life Sciences, University of Westminster, UK. p.gerbault@westminster.ac.uk
Iain Kendall, Organic Geochemistry Unit, School of Chemistry, University of Bristol, UK. iain.kendall@bristol.ac.uk
Emmanuelle Casanova, Organic Geochemistry Unit, School of Chemistry, University of Bristol, UK. e.casanova@bristol.ac.uk
Adrian Timpson, University College London, UK. a.timpson@ucl.ac.uk
Marie Balasse, CNRS - Muséum national d'Histoire naturelle – Sorbonne Universités, Archéozoologie, Archéobotanique: Sociétés, Pratiques et Environnement (UMR 7209), Département Ecologie et Gestion de la Biodiversité, Paris, France. marie.balasse@mnhn.fr
Volker Heyd, Department of Archaeology, University of Bristol, UK,Volker.Heyd@bristol.ac.uk
Arkadiusz Marciniak, Instytut Prahistorii UAM, Collegium Historicum, Poland. arekmar@amu.edu.pl
Alan Outram, Department of Archaeology, University of Exeter, UK. A.K.Outram@exeter.ac.uk
Mark G. Thomas, UCL Genetics Institute, University College London, UK. m.thomas@ucl.ac.uk