PROGRAM

10:15–10:30 Welcome & Introduction
Lisa Onaga
MPIWG

10:30–12:00 Tracking the Invisible: New Frontiers in Biomolecular Zooarchaeology
Christina Warinner
MPI-SHH/Friedrich-Schiller University

12:00–13:30 LUNCH BREAK

13:30–14:15 Making Texture: Dental Modifications, Speech and Weaving in West Africa
Laurence Douny
MPIWG/Humboldt University

14:15–15:15 Discussant
Soraya de Chadarevian
UCLA

15:15–15:30 BREAK

15:30–16:00 Wrap-Up

CONTACT

Lisa Onaga
lonaga@mpiwg-berlin.mpg.de

ABSTRACT

This micro-workshop is the third of a series of cross-disciplinary inquiries designed to identify new approaches in the study of animals in history. By forging a conversation around the historical and scientific studies of teeth, the possibilities for reading animal materiality as historical sources are explored. State-of-the-art biomolecular methods used to characterize ancient to recent human-animal relations are discussed alongside historical challenges that have informed the reliability of, and relatedly, trust in various scientific practices. The fruition of integrative methods especially prompts workshop participants to explore how new historical puzzles have arisen in animal evolutionary history, or in the history of scientific analyses of animal proteins in connection to understandings of mobility and space.

To register and access the pre-circulated readings and papers that will be discussed in this micro-workshop, please email by June 15, 2019
event_dept3@mpiwg-berlin.mpg.de.

VENUE

Department III Seminar Room 265
Max Planck Institute for the History of Science
Boltzmannstraße 22, 14195 Berlin

MAX PLANCK INSTITUTE
FOR THE HISTORY OF SCIENCE

PROTEINS & FIBERS
MICRO-WORKSHOP

Betwixt and Between: Reconstructing Animal Histories with Teeth

JUNE 27, 2019
10:15–16:00

TRACKING THE INVISIBLE: NEW FRONTIERS IN BIOMOLECULAR ZOOARCHAEOLOGY

Christina Warinner

Within and beyond the human body, human cultures enable microbial ecosystems to grow and thrive. In our cuisine, nowhere is this more obvious than in the creation of dairy products, which have enormous global complexity and diversity in taste, aroma and texture. Thousands of years ago, with the invention of products such as yoghurts and cheeses, people were domesticating and manipulating microbes before they even knew of their existence. However, little is known about how these products arose and how humans came to intensively cultivate these multispecies foods.

Although animal bones preserve throughout the archaeological record, their secondary products—such as milk—rarely survive. As a result, it can be difficult to reconstruct how farmers and pastoralists actually used their animal livestock in the past. By drawing upon newly available technologies in the biomolecular sciences, it is now possible to identify the production and consumption of dairy products in prehistory by tracking the remains of milk proteins and microbial DNA in both culinary vessels and the dental tartar that forms on our teeth. This talk will discuss how collaboration between the fields of archaeology, microbiology, food science, and cultural anthropology is revealing insights into ancient dairying practices, microbial diversity, and the impact that animal-microbial partnerships have had on our foods, our biology, and our society today.

Christina Warinner specializes in biomolecular archaeology, with an emphasis on reconstructing the prehistory of human foods and the evolution of the human microbiome. Her work on ancient DNA and protein research has contributed significant insights into prehistoric human health, the origins of dairying, and past human population history. Her current research combines ethnography, archaeology, and microbiology in order to reconstruct the evolution of human-associated microbes in time and space and to better understand the how humans have manipulated microbes to create diverse fermented foods. Focusing on animal milk, she is researching the origins of ruminant dairying and its prehistoric spread across Eurasia.

Christina Warinner earned her PhD in Anthropology at Harvard University, where she specialized in biomolecular archaeology. She completed her postdoctoral training in evolutionary medicine at the University of Zürich and in microbiome sciences at the University of Oklahoma. She is now an Assistant Professor of Anthropology at Harvard University and W2 Group Leader of Microbiome Sciences in the Department of Archaeogenetics at the Max Planck Institute for the Science of Human History. She also holds the Sally Starling Seaver Assistant Professorship at the Radcliffe Institute and is a Professor of Biological Sciences at Friedrich-Schiller University in Jena, Germany. She is a 2014 US National Academy of Sciences Kavli Fellow and a 2012 TED Fellow, and her TED Talks on ancient dental calculus and the evolution of the human diet have been viewed more than 2 million times.

MAKING TEXTURE: DENTAL MODIFICATIONS, SPEECH AND ANIMAL METAPHORS IN WEST AFRICA

Laurence Douny

Human appropriation of animal dental characteristics, such as teeth displaying an inverted V-shape, serve social and spiritual goals that establish symbolic correspondence between animal and human realms in West Africa. Making and wearing these animal signatures has enabled men and women to acquire social status, power and charisma or to cast spells, as well as empowered them to act upon both the visible and invisible world. This brief research commentary addresses the cultural significance of teeth shaping in the Dogon and Kourouma communities through a critical discussion of concepts of 'dental mutilation' as described and classified by the early twentieth-century physician and historian Marcel Baudoin and colonial administrator Henri Labouret. Delving into archaeological studies on dental modification in West Africa, the oral tradition and meanings attached to teeth sharpening, illuminate a richer 'texture,' to teeth and how speech is expressed and modulated in particular socio-historical contexts. The commentary proposes an anthropological study of techniques of dental modification as a process of socio-symbolic transmutation, oral hygiene and of communication that also connect teeth to the material practice of weaving.

Laurence Douny is an anthropologist and research associate at the Humboldt University and a visiting scholar at the MPIWG. She is currently working on the anthropology and history of West African wild silk materials and textiles.

DISCUSSANT

Soraya de Chadarevian is Professor in the Department of History and the Institute for Society and Genetics at the University of California Los Angeles and a short-term visiting scholar at the MPIWG. She has worked extensively on the history of the molecular life sciences and has previously participated in a project on the use of DNA evidence in historical reconstructions.

Images courtesy of Christina Warinner