

Bioarchaeology from individual to population – studies of human osteology

ANDREI DORIAN SOFICARU

In 2006 I was granted a Wenner-Gren Fellowship to support my research for my doctoral dissertation research and I opted for the Department of Anthropology from University of Arkansas, where I attended classes on human osteology and where I could deepen my understanding of bioarchaeology. Upon returning to Romania, I applied to my doctoral thesis the methods and the interpretations consolidated during my stay at the University of Arkansas.

Bioarchaeology refers to the biocultural approach to human bones from archaeological context. This approach was further refined, by adding analyses of animal bones, of pollen, of soil, of stable isotopes or of ancient DNA; when possible, the results of the anthropological analyses can be verified with narrative sources, inscriptions or statistical data. The methods used in bioarchaeology offer flexibility and can be adapted to smaller or larger samples. The study of one skeleton can offer valuable insight and can help create an osteobiography of an individual and the same method can help shed light on a cemetery with hundreds of skeletons. The same flexibility applies with regard to geographical areas or periodization: it creates a standardized method which can be applied to any skeleton and consists of age estimation, sex determination, recording of health status, and metric data; it can include the analyses of stable isotopes, ancient DNA, and radiocarbon data.

I defended my Ph. D. thesis, *Population of the Scythia province during Roman-Byzantine period (3rd-6th centuries)* in 2009, January 20th at the Faculty of History of University of Bucharest supervised by Dr. Alexandru Barnea. The thesis was published in 2011, at the University “Al. I. Cuza” Publishing House with the title of *Population of the Scythia province during Roman-Byzantine period*

In my field of study teamwork is common and the results were disseminated in 42 different studies spanning from 2009 to 2017: in six I am the single author and in other six, first author; there are also three books and three book chapters. From a total of 36 articles, 26 were published in international databases (ten in journals with impact factor).

From October 1st, 2010 to April, 1st, 2011 my research was supported by a *Fulbright Senior Award* at the Department of Anthropology at The Ohio States University under the supervision of Dr. Clark S. Larsen.

Between September 2012 and December 2016 I was director of the project *Revealing Bucharest's Past: an Integrative Study of Ancient DNA and Osteoarchaeological Data of Late Medieval Populations* (PNII-ID-PCCE-2011-2-0013).

From 2011 together with my colleagues from the department I developed a standard method for the analysis of buried skeletons, and from 2016 we created another one for the cremated remains. Both methods favor teamwork and decrease significantly the time necessary for the analysis of one skeleton. Furthermore, I managed to attract external funding from the City of Bucharest Museum, Museum of National History and Archaeology Constanța, The Institute of Eco-Museum Researches from Tulcea, and Banat Museum to analyze human remains and by using the methods mentioned above our team could complete each project.

The structure of the habilitation thesis is as follows:

Description of the research results

Interest fields

- I. Bioarchaeology – theoretic background*
- II. Bioarchaeological studies for the Roman-Byzantine period*
- III. Human remains from Upper Paleolithic*
- IV. Health status and demography for the Medieval period*
- V. Lifestyle in the premodern times*
- VI. Changes and adaptation from Mesolithic to Neolithic*
- VII. Sedentary or nomad people in Bronze and Iron Age*

Starting from concepts formulated by M. Zvelebil & A. W. Weber who supposed that human behavioral ecology (it explains how populations adapt to the climatic changes and what strategies are using for subsistence and reproduction) and cultural transmission (cultural behavior acquired through social learning and transmitted within and in groups) could be applied in bioarchaeology, I would like to explore further the possible development of a functional pattern which might validate some of the hypothesis brought forward.

Together with my colleagues from the laboratory of human osteology I plan to amplify our efforts and create a database for the bones recovered from archaeological excavations and another one for the publications concerning human bones discovered in Romania.

The opportunity to supervise doctoral theses at Alba Iulia University offers me the chance to share my experience in bioarchaeology with future researchers from this field. Furthermore, this fall I will be for the first time in the organizing committee of the *Homines, Funera, Astra* conference (the 6th edition) and this will be another opportunity to make public my research and to attract student to this field of study.

For the close future, I am exploring the possibility of working in two Complex Projects of Frontier Research, in Romania, and in one of *European Research Council* project along with colleagues from ten European countries. Meanwhile, I intend to apply to a Marie Skłodowska-Curie Fellowship at Southampton University.