

## INTERDISCIPLINARIA ARCHAEOLOGICA

## NATURAL SCIENCES IN ARCHAEOLOGY

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## The IANSA Journal's Thematic Variety – a Mirror of the Current Movements in Archaeology

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The scope of current archaeological research is extremely wide. Starting with the theory, one can read papers that are philosophically conceptualized and constructed—and continue all the way through—to finally end with a methodology that uses the pure empirical logic of the natural sciences. These latter kinds of papers are strongly supported by the IANSA journal; however, we do not exclude the former mode of thinking using "softer" forms of argumentation. Simply stated, our approach fully encompasses interdisciplinarity, which demands the synergy of minimally one, but usually two or more, other disciplines.

Current movements in archaeology are radical - with obvious and huge inclinations towards multidisciplinarity, demanding the existence of large teams of researchers. These teams are already quite common and they all need space for the publication of their results. Twenty years ago, singleauthor papers were the norm and multi-author papers were the exception; today the picture is quite the opposite. Because of the strong connection of archaeological research with the natural sciences - and their associated publication standards - the multidisciplinary approach has expanded to both local as well as international journals. This general trend reflects the global changes in science generally – everything is faster; publications are accessible by a single click, the number of electronic journals is increasing and scientific research has become more open to the wider public. This new mode for the publication of scientific results is fully supported by our journal. In the globalised world there is no way back.

This issue of our journal reflects several recent trends in the archaeological sciences. After the last IANSA issue was devoted to the burial place of Prague-Zličín and to the Migration Period, we would like to again present a more general issue which contains papers from different European regions focusing on many varied aspects of life in past societies. In this issue, for example, it is possible to find a huge variety of papers. The geographical scope of the articles is not just limited to Central Europe. Although,

thematically, it is knowledge from this region which dominates, we are also publishing studies focusing on other parts of the world, here represented, for example, by Africa, Italy and Russia. The thematic range of this journal also remains a broad one. In this issue we present articles from the fields of geoarchaeology, archaeological anthropology, archaeobotany, technology and archaeological theory.

But let's have a closer look at the contents of this issue:

The physical anthropologist Anna Pankowská and her team present a study describing the process of incorporation of strontium, barium and calcium isotopes into human hard tissues. They analyzed human hard tissues from the Early Bronze Age archaeological site at Chrášťany in Moravia. Significant variances in the isotope ratios were identified by tissue type and this paper discusses the manner in which the type of hard tissue influences these isotope ratios.

Alexandra Golyeva from the Russian Academy of Sciences and her team describe their results of geochemical and morphological analyses of sediments at the Late Bronze Age site of Muradymovo in the Urals. Residual soil contamination by gypsum has been detected in these sediments even though the abandonment of the site was 3,500 years ago. This is due to the fact that the Bronze Age people in this region had a tradition of building their houses out of gypsum rock.

An Italian team led by Loredana Carratoni from the University La Sapienza in Rome presents the results of mineralogic, petrographic and chemical analyses of Greco-Italic amphorae excavated from a cargo wrecked close to Punta Romana in Sardinia around 200 BC. The analyses confirm the origin of the amphorae from the Campania region, namely from the Lacco Ameno furnaces on the island of Ischia as well as from the furnaces operating in the Capua district.

Michal Hejcman from the Czech University of Life Sciences and his team present a paper giving a new method for the better comparison of amounts of particular cereal species found at archaeological sites. The aim of their study



was to compare the kernel weights of cereal species planted in Europe since the Neolithic and to propose recalculation coefficients for their relevant comparison. After recalculation, archaeobotanists and even archaeologists can estimate the real value of specific crops in different prehistoric periods.

The anthropologist Michal Živný along with the archaeologist Zbyněk Moravec present the results of their anthropological analysis of a unique grave from the first half of the 19<sup>th</sup> Century excavated at a cemetery in Puchmajerova Street in Ostrava (Czech Republic). A skeleton buried in this grave shows interesting traces of dissection intervention. Based on the archaeological findings, anthropological assessment and written sources, it was possible to identify this skeleton as the remains of Mariana Máchová (1817–1837) who died by committing suicide.

Monika Baumanová from the University of Basel presents a thematic review dealing with archaeological theory. Her review presents a perspective on how archaeologists may proceed when applying analytical methods both to seek patterns in the past as well as interpret past constructed space. She proposes that space may be seen as a humanmade material culture, which plays an active role in social processes. As a case study the author describes the advantages and shortcomings of several archaeological studies concerned with the spatial structure of the Swahili house. She concludes that we need to actively engage approaches that reveal quantifiable patterns in the built environment, as well as consult more relativistic issues of perception, sensory experience and social production and consumption of space.

Our review editor Anna Pankowská has prepared a review of a book of proceedings called "Transformation by Fire. The Archaeology of Cremation in Cultural Context" that describes different possible attitudes to the phenomenon of cremation in past societies. Finally, the Backstory section contains another article in the Look into Region series. This time Jaroslav Peška and Lukáš Šín present the activities of the rescue archaeological institution known as the Archeological Centre in Olomouc, which is also the main publisher of this journal.

The content of this issue confirms the above-mentioned statement about the thematic diversity of the papers published in the IANSA Journal. We hope you will find here much which is new and important for your work.