

**Review of ARCHAEOLOGY STUDIES:
RAW MATERIAL EXPLOITATION FROM PREHISTORY
TO THE MIDDLE AGES, eds. Selena Vitezović and Dragana
Antonović, Serbian Archaeological Society, Belgrade 2017.
(191 pages with illustrations, ISBN 978–86–80094–07–6)**

The book is edited by S. Vitezović and D. Antonović and printed in Belgrade in 2017 as a paperback. (ISBN: 978–86–80094–07–6). The book is in total 192 pages and contains 8 papers. In addition to this it includes 28 images, 9 maps, 7 tables, 2 charts and 15 illustrations.

This book aims to explore raw materials and their use. The first chapter is titled „*Raw material managing and exploitation in the past*”. In this chapter the editors give an introduction to the book. In doing so, they emphasize the importance of raw material and its studies in archaeology in order to create a depth of understanding of social and economic networks and structures built by prehistoric communities. This is done in conjunction with prerequisites to our interpretation of past human communities, environments, relations, land use, dealing with distances and their under evaluated relations, either trade or kinship, in order to execute demand and supply relations, taking place either for daily chores or symbolic needs.

The collection of papers included in the volume is chosen to show that through the ages the modus operandi remains the same, despite raw material types gradually showing changes.

This quote clearly indicates the approach of the editors:

„*The technology or technological systems can be roughly described as process and practices associated with production and consumption from design to discard*” (p.8).

This is inclusive of all the dimensions of production and consumption including use and also discard.

Chapter 2 is titled „*Beauty (con)test: aesthetic qualities of knapped stone raw materials*” by **Milica Mitrović**. Mitrović questions the aesthetic value of past objects and raw materials. The chapter is focused on understanding the value of objects from the past to closer periods of history. In addition to this, it forms a critique on the lack of aesthetic approaches to past objects and to communities. Mitrović touches upon the current problems in archaeology and prehistoric technology and clearly and simply emphasizes the nature of the problem.

Chapter 3 is authored by **Vedrana Kristofić** and titled „*Selection and exploitation of osseous raw materials at the site of Jakovo-Kormadin*”. Kristofić introduces the site of Jakovo –Kormadin and its past history of research followed by the promise to reflect on

the economy, technology and typology of the Neolithic period based on 560 artifacts. In addition to this, the paper includes an overview of the raw material acquisition and production from varied types of tools. Kristofić also explores and discusses the various specific types and parts of mammals' bones and how they were a preferred choice for specific types of tool. Kristofić finds special correlations between parts of the animal and their age which influence the tool technology. This is a carefully structured paper and the emphasis overall is on the chain of choices which are determined by actions and productivity.

The following chapter (4) is written by **Selena Vitezović** and titled „*Osseous raw materials as Ornaments in the Bronze Age: the case study of Mokrin*”. Vitezović introduces us to the osseous raw materials, their use in history and their durability as a preferred choice of raw material either for tool or personal ornament production and use. Indeed, these materials have been in use, and in many cases desired, amongst prehistoric communities. The popularity of these items has been noted from early prehistory to the Bronze Age. Vitezović also contextualizes her topic by giving in depth information on the site of Mokrin. According to that information, Mokrin represents a fine example of Maros culture which is dated to the early Bronze Age. Particularly fascinating are the 300 graves and grave goods that it has revealed, currently housed in the Kilinda National Museum. The grave goods were produced from various raw materials. These grave goods form the centre of Vitezović's paper. Their techno-typological comparison, masterfully provided by Vitezović finally leads to the conclusion that these objects were praised if not for their economic value, certainly for their sentimental value as evidenced by their use through the generations.

Radmila Balaban's paper, chapter (5), is titled „*Copper artifacts and their social role in the Vinča Culture*”. As the title clearly indicates Balaban's paper targets the copper artifacts of the Vinča culture. Balaban explains the early discovery in the Neolithic period of copper use in Serbia and the wider use and processing of copper ore in the Balkans by indicating discoveries from sites such as Belovode and Pločnik. The mining of copper was intensely conducted in the late Neolithic, as is evident from the oldest mine of Rudna Glava with its many mining shafts and pits. Artifacts were discovered in-situ. In this mine, antlers, mattocks and mallets relating to mining have been dated to the Vinča culture. Balaban introduces another impressive mine which is called Priboj on Lim. Balaban primarily identifies objects, types and sites in the paper and evaluates social relations on the basis of copper mining and processing. Balaban expands these relations from mines to graves and emphasizes type of objects relating to particular genders. The author provides references also to various other sources, their usage and, regardless their distance, aims to reference social constructions and stratification around the mining locations and based on the mined materials and their use pointing to an established social network

The following paper is authored by **Dragana Antonović** and **Vidan Dimić**, under the title of „*Copper ore and exploitation at the sites of Prljusa on Mali Sturac*” focuses on mountain of Rudnik. The copper sources of this mountain are well known and have been exploited widely from prehistoric times to the Roman period and even into the Medieval period. This paper targets the raw material sources of copper which are located on the south-western side of the mountain. The two sources are named Mali Sturac and Prljusa. These two areas are in fact the higher and lower peaks of the mountain

where several mining shafts have been discovered. Some of these mining shafts were partially investigated in the past decades but Antonović and Dimić's inquiry and research not only reveals tools and equipment that had been employed in mining activities such as mallets, hammers and so on, but also aims to understand how these shafts were exploited and copper metal extracted from the copper veins. The stone tools that have been discovered within these shafts are in high quantity, more than 2000, which also help to date the shafts. In addition to the stone tools also ceramic fragments with handles were discovered. The authors, based on the ceramic types and qualities, suggest that they are reminiscent to Bubanj – Hum culture wares. The chapter is not limited to only copper processing it also aims to shed light on its various stages.

Antonović and Dimić's paper is followed with another metal raw material focused chapter. This time about iron processing. The authors *Ivančan and Marković* explore the primary iron processing in the Drava river basin. The chapter is titled „*The primary processing of iron in the Drava River basin during the late antiquity and the early middle ages – the source of raw materials*”. This paper provides a geoarchaeological approach to the region of Drava River and is enriched by the geological information of the region and the iron ore formation region which is very suitable for this kind of process. In fact, the authors prove in their paper that the formation of iron is visible in their research areas such as Volarski Breg and Susine in Virje (Croatia) region. The discovery of the orange coloured, oxidized soils within the small trenches support the authors' in-depth iron ore formation theory in the region. This is also backed up with information about well established iron smelting activities within the surrounding region. The region is suitable and the terraces on the banks of the river from the Holocene period onwards indicate that iron ore formation geologically continued and as a result iron ore processing is a known activity, it has been concluded that there was a workable amount of iron resources available in the region.

The final chapter (8) of the book is authored by *Vesna Bikić and Uglješa Vojvodić*. Under the title of „*Pottery distribution and raw material resources in the area of medieval Ras*”. The authors aim to explore the subject using ethnographic sources in Medieval Ras (13–15 century AD). The authors not only trace the ceramic production back in time but also reverse the ceramic production sequences. Their research mainly targets the 13th-15th century medieval monasteries where ceramics were intensively produced and used in the Ras region. Alongside this they also provide very detailed pottery descriptions and ways of use of each kind of pottery for various activities. As the ceramic wares were produced for specific functions the area of use, the quality and production of these wares changes and as a result so do raw material sources. As the results of the chemical analyses of the pots show a specific characterization for each area of use, so are the conclusions reinforced by ethnographic-historical sources that provide similar information. This paper aims to aid a better understanding of pottery production and use within its medieval social context.

Each of the chapters of the book is reflective of how communities were established on the basis of their demand and supply chain. The variety of the raw material represented in the volume is also well spread across different topics i.e. bone, stone, clay and metal. Indeed, production is a key issue for daily life and requires established raw material source knowledge, skills and technologies as well as the presence of consumers.

In relation to this topic, the question of how the communities solved problems and how they structured themselves around the sources or were linked to the production lines is also well represented by the papers in this book. This volume forms a mosaic of information, stretching from prehistory to the medieval period and shows that tradition of demand and supply and, from another perspective, endless consumerism, have not changed much through time. Overall, it is a very good resource for raw material studies for both the archaeology of Serbia and for the Balkans.

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