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Content

Tajana Sekelj Ivančan, Tena Karavidović	
Foreword	5
Sanda Rončević	
Advanced Instrumental Methods in Chemical Profiling of Archaeological Samples	7
Ivan Nemet, Tena Karavidović	
Multi-method Analysis of Archaeometallurgical Iron Slags	17
Branko Mušič, Matija Črešnar, Bryan Hanks, Derek Pitman, Rosemary Capo, Miroslav Kočić, Barbara Horn	
Searching for Iron-Smelting Sites with Geochemical Transects: The Case Study of The Early Iron Age Complex of Cvinger Near Dolenjske Toplice (SE Slovenia)	23
Branko Mušič, Barbara Horn, Tajana Sekelj Ivančan	
Results of Magnetic Prospection in Connection with the Archaeological Excavation Finds of Late Antique and Early Mediaeval Iron Production Sites Velike Hlebine and Dedanovice in The Podravina Region, Croatia	39
Tomislav Brenko, Sibila Borojević Šoštarić, Ali Abd Elhameed, Fran Vrdoljak	
Follow-up Pedological and Geological Study of Two Gleysols Profiles in Podravina Region Locating Possible Bog Iron Ore Formation Zones	51
Vladimir I. Zavyalov, Nataliya N. Terekhova	
Ore Sources of Medieval Ironworking Centers of the Ryazan Principality	63
Ladislav Lazić, Aleksandar Durman	
Mining and Metallurgy in the Mount Trgovi and Northwestern Bosnia in the ancient period with special emphasis on the iron production	73
Tena Karavidović, Ivan Drnić	
Traces of Iron Production in the Area of Pokuplje in the 1st Millennium BC	87
Aleksandra Bugar	
The Okuje Site – Traces of Early Iron Production	113
Ivan Valent	
Archaeological Finds of Metallurgical Activities on the Territory of the River Drava Basin During Iron Age and Antiquity	125

Brigitte Cech

The Production of *Ferrum Noricum* in Hüttenberg, Carinthia, Austria 139

Ana Konestra, Fabian Welc, Paula Androić Gračanin, Władysław Weker

An Insight into Craft Activities in Rural Areas of Dalmatia Province - First Data on Iron Working at the Roman Settlement in Lopar (Island of Rab) 159

Daša Pavlovič, Jaka Burja

Pržanj in Ljubljana – A Metallurgical Site with Tradition? 171

Silviu Oța

An Iron Processing Workshop at Caransebeș (17th Century) 181

Damir Doračić, Jiří Hošek, Michael Brauns, Ivana Miletić Čakširan

Technical Examination and Conservation of the Early Medieval Sword from Bojna-Brekinjova Kosa 195

Gašper Oitzl

The Transfer of Ironworking Technologies in Slovenian Territory between the 14th and 16th Centuries 207

Foreword

The International Scientific Conference entitled “Secrets of iron - from raw material to an iron object” was organized by the Institute of Archaeology in cooperation with the Archaeological Museum in Zagreb as the seventh in a series of meetings of experts on topics related to medieval archaeology, but also other archaeological and historical periods. The gathering took place in Zagreb on the 10th and 11th of September 2020 in the Gallery of the Archaeological Museum in Zagreb at 6 Pavao Hatz Street, with an all-day program. The Organizing and Scientific Committee consisted of scientists from the Institute dealing with the medieval period: Tajana Sekelj Ivančan, PhD. Tatjana Tkalčec, PhD. Juraj Belaj, PhD. Siniša Krznar PhD. and doctoral student Tena Karavidović. A total of 62 colleagues participated, of which 44 international and 18 Croatian, who presented 16 international and 11 local presentations and/or posters.

Although we live in challenging and unstable times caused by the pandemic of Covid-19 virus, but also by the earthquake in Zagreb which, in the spring of 2020, significantly damaged the city centre, the intention to address issues related to iron production and the manufacture of iron objects in the pre-industrial era was successfully realised. The scientific conference was organized as a hybrid event, with presentations held at the Museum Gallery and via the web platform, all broadcasted live with the active involvement of participants in discussions through the web platform *Crowdcast*. Posters of the participants who were not able to attend the conference in person were printed out and available online on the Institute of Archaeology website during the conference. The official languages of the conference were Croatian and English.

Several lectures and presentations from the conference were prepared for these Proceedings. The received papers cover multiple archaeological and historical periods, from the Early Iron Age up to the Modern Age, while geographically covering almost the entire European area and beyond. The Proceedings are interdisciplinary and include papers with various methodological approaches and sub-topics that permeate and complement each other. The sixteen papers collected in the publication present the results of non-invasive research methods on sites with remnants of ironworks activities, the geological study of the potential for ore formation within a lowland landscape, studies of ore sources and mining, the results of archaeological excavations of preserved furnaces, workshops and ancillary facilities, as well as insights on archaeological finds of slag and technical ceramics and iron objects, as well as discussion on long-term iron production and knowledge transfer and the results of conducted analyses from the spectrum of natural sciences which define the types of materials and technology of iron production and production of iron objects, as well as methods of approach to chemical profiling of archaeological samples. The afore-mentioned papers are signed by thirty-five (co)authors, scientists from Slovenia, Austria, Germany, the Czech Republic, Romania, Poland, Latvia, the Russian Federation and Croatia, who, each in their own way, open a new perspective and contribute to our understanding of iron production and processing.

With these Proceedings, we aim to encourage some new reflections, present the results of new archaeological and interdisciplinary research and insights that will be useful in further research on specific topics related to iron production and processing, and offer them to the general scientific and professional public.

Tajana Sekelj Ivančan and Tena Karavidović

