Mining in European History and its Impact on Environment and Human Societies –

Proceedings for the 2nd Mining in European History Conference of the FZ HiMAT, 7.-10. November 2012, Innsbruck

Editors:
Peter Anreiter
Klaus Brandstätter
Gert Goldenberg
Klaus Hanke
Walter Leitner
Kurt Nicolussi
Klaus Oeggl
Ernst Pernicka
Veronika Schaffer
Thomas Stöllner
Gerhard Tomedi

Content

Preface	9
Session I Resource Management	
JACEK LECH	
Resource management in prehistoric siliceous rock mining: an archaeological perspective	13
FELICE LAROCCA & CHIARA LEVATO From the imprint to the tool: the identification of prehistoric mining	
implements through the study of digging traces. The case of Grotta della Monaca in Calabria (Italy)	21
CAROLINE O. GRUTSCH, KLAUS-PETER MARTINEK & MATTHIAS KRISMER Copper mineralizations in western North Tyrol – In prehistoric times	
exploited resources?	27
PETER TREBSCHE	
Resources and nutrition in the Urnfield period mining site of Prigglitz-Gasteil in Lower Austria – Preliminary report on the excavations from 2010 to 2012	33
REGULA WAHL-CLERICI	
Três Minas: A discussion of some aspects of the evidence for the use of water in mining	39
CLAUS-STEPHAN HOLDERMANN	
The Highest Abattoir of the Tyrol at the Schneeberg/Moos in the Passeier Valley/South Tyrol	47
Session II	
Production & Technology	
A. BERNARD KNAPP	
The Social Context of Metallurgical Production and Technological Change: Views from the Eastern Mediterranean	53

SIMON TIMBERLAKE & PETER MARSHALL Understanding the chronology of British Bronze Age mines – Bayesian modelling and theories of exploitation	59
ERICA HANNING, THOMAS STÖLLNER, ANNETTE HORNSCHUCH & BEATE SIKORSKI Quantifying Bronze Age Smelting Sites in Mitterberg Mining District	67
THOMAS KOCH WALDNER Prehistoric copper production in the region of Kitzbühel, North Tyrol - mining and smelting	73
DANIEL STEINIGER & CLAUDIO GIARDINO Prehistoric mining in central Italy: New evidence from the Monti dellaTolfa (Latium)	81
PATRICK ROSENTHAL, DENIS MORIN, RICHARD HERBACH, ADONIS PHOTIADES, SERGE DELPECH, DENIS JACQUEMOT & LIONEL FADIN Mining technologies at deep level in Antiquity: The Laurion mines (Attica, Greece)	89
CONSTANTIN CANAVAS Mine drainage in medieval Muslim Spain. Continuities and discontinuities in a cross-cultural context	97
SUSANNE KLEMM, SUSANNE STROBL & ROLAND HAUBNER Mediaeval Iron Smelting in the Area of the Iron Mountain (Steirischer Erzberg) at Eisenerz, Styria (Austria)	103
PETRA MÁTYÁS-RAUSCH The Life and Mining Work of Felician von Herberstein (1540-1590)	111
DIRK BRANDHERM, ALEXANDER MAASS & EMILIO DIZ ARDID Multi-period mining remains from the Sierra de Orihuela (Alicante, SE Spain)	115

Session III	
Societal Interaction & Ecology	
LARS BLUMA The environment approach in German mining: bodies, workplaces and hygiene around 1900	123
MARION KAISER Influence and Perception. How pit and quarry industry change landscapes	127
VALESKA FLOR Living with Lignite. A Glimpse on Lignite-linked Problems in the Renish Lignite-Mining Region	133
ANITA FEICHTER-HAID The "Pfennwerthandel" in the Mining Region of Kitzbühel	139
MICHAEL KASPAR The development of social stratification in the Montafon - transformation of a former mining area in the 17 th century	145
IVONNE BURGHARDT, CHRISTIANE HEMKER & YVES HOFFMANN Medieval mining in Dippoldiswalde (Saxony). New approaches on research of mining impact	151
MARTIN ŠTEFÁNIK The Role of Italian Businessmen and Entrepreneur in the Beginnings of Central Slovakian Metal Mining with special regard to the Productivity of Gold in Kremnica in the 1 st Half of 14 th century	157
ELISABETH GRUBER & IRINA WINDHABER Names as Indicators of Mining Activities in the Area of Klausen/Villanders (South Tyrol/Italy)	161
TIM MIGHALL, ANTONIO MARTINEZ CORTIZAS, NOEMI SILVA SÁNCHEZ, SIMON TIMBERLAKE, FRANK M. CHAMBERS & WILLIAM O'BRIEN Characterising vegetation changes in former mining and metalworking areas during prehistoric and Roman times: Perspectives from Britain and Ireland	167

BARBARA VIEHWEIDER & KLAUS OEGGL Reconstruction of the vegetation in the region of Kitzbühel (Tyrol) and the impact of different mining phases since the Neolithic	17:
UWE MEYERDIRKS Neubulach and Freudenstadt: Foundation, development and impact of medieval and early modern mining towns in the Northern Black Forest (SW-Germany)	18
WILLIAM O'BRIEN Copper Mining in Ireland during the Later Bronze Age	19
Session IV Data Base, Modelling & Geoinformation supporting Mining Research	
IRMELA HERZOG Medieval mining sites, trade routes, and least-cost paths in the Bergisches Land, Germany	201
MARKUS HELFERT, BRITTA RAMMINGER & REGULA WAHL-CLERICI Underground surveying with 3D-laserscanning of the "Galeria dos Alargamentos' in the Roman gold mining district of Três Minas and Campo De Jales (Northern Portugal)	207
RENGERT ELBURG, FANET GÖTTLICH & THOMAS REUTER From the skies into the underground. Remote sensing, survey and documentation in a medieval mining landscape in the Ore Mountains	215
KRISTÓF KOVÁCS & KLAUS HANKE Spatial Analysis Techniques for Investigation of Tool Marks on Archaeological Finds	223
Airborne laser scans as a tool for historical science? – First methodic considerations using the example of medieval mining in the Saxon Ore Mountains (Erzgebirge/Germany)	229
List of Authors	235
Sponsors	249