The Exploitation of Raw Materials in Prehistory
The Exploitation of Raw Materials in Prehistory:

Sourcing, Processing and Distribution

Edited by
Telmo Pereira, Xavier Terradas and Nuno Bicho

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The significance of the different raw materials found in the Prehistoric record was recognized very early in the history of archaeological science. A major reason for that was the immediate resemblance between tool-kits seen in modern hunter-gatherers and in early farmer societies. Some of them, often the most exquisite, had symbolic meaning. Others were local, ordinary, coarse and even ugly, but they all had a meaning, a reason to be present in such context and significance in the daily life, traditions, territory and ecology of those communities. As a consequence, their study was considered relevant almost from the start of archaeological investigation and such studies always had a close relation with new technological developments that could help fill gaps, refine the analysis or increase the accuracy of data. Progressively, such research became a branch of archaeological enquiry and used more and more complex equipment according to the development of new techniques.

Presently, a large bulk of good photographs can be taken and seen in real time, automatically associated with accurate coordinates and sent in a second to the other side of the world. All this can be done just by using a telephone that fits in the pocket of your shirt. If one wants, it is possible to add the geochemical spectrum result in seconds with a portable X-ray fluorescence machine carried on a backpack. Yes, we live on what was science fiction just a few decades ago; and that is pretty damn cool!

The investigation of archaeological raw materials uses such top high-resolution methods and such large amount of detailed quantititative data that can estimate with great confidence that the 0.00005% of some element on the rock you just picked from the outcrop is the same that previous human species, living dozens of thousands of years ago, in other geological era, used one day to produce a meal. And if you used a total station in both the rock and the stone tool, you can geospatially relate them to the millimeter. This is so trivial for archaeologists today but so extraordinarily accurate that some people only believe it if you show them all the steps from the process and the individual results of each technological gadget.

This approach has been carried out across regions and the chronology of human occupation therein, merging archaeology with anthropology, geology and geography. The data acquired have been able to help bring
relevant insights to infer traits of human behaviour such as cognition, ecology, ecodynamics, territory, social complexity or technology.

In this scope, the University of Algarve and the Consejo Superior de Investigaciones Científicas (IMF, Barcelona) organized the international meeting *Raw Materials Exploitation in Prehistory: Sourcing, Processing and Distribution* in March 2016, at the University of Algarve, Portugal. The goal was to bring together both younger and senior scientists and their on-going projects focusing on the inorganic raw materials used during Prehistory, regardless the region or the specific time period. This included lithics, pottery, ceramics, metals, glass, beads and colorants. The sessions brought together people from Europe, Africa, Asia and America, and discussed issues such as quarrying and mining, geochemical and mineralogical analysis, archaeometrical characterization, provenance distribution and determination of raw materials, their geological and archaeological context, the raw materials used for making pottery and ceramics, those used in prestige items and as colouring materials, the objectives, changes and procedures of heat treatment and also mechanical experiments to test their physical properties.

This book contains some of the studies presented in the meeting. They represent the state-of-the-art of on-going research across the world in what concerns to sourcing, processing and distribution of Prehistoric raw materials.

Telmo Pereira, Xavier Terradas, Nuno Bicho
CONTRIBUTORS

Acosta, Alejandro
Instituto Nacional de Antropología y Pensamiento Latinoamericano – CONICET, ARGENTINA.
acosta@retina.ar

Agua Martínez, Fernando
Institute of History, CCHS-CSIC, Madrid, SPAIN.
fernando.agua@cchs.csic.es

Álvarez-Alonso, David
Department of Prehistory & Archaeology. UNED/C.A. Asturias. Avda. Jardín Botánico 1345 (Calle interior), SPAIN.
dalvarez@gijon.uned.es

Amado, Ana Margarida
Unidade de I&D “Quimica-Física Molecular”, Department of Chemistry, University of Coimbra, 3004-535 Coimbra, PORTUGAL.
amado.am@gmail.com

Andrés-Herrero, María De
Neanderthal Museum. Talstraße 300, 40822 Mettmann, Germany/Institute of Prehistoric Archaeology. University of Cologne. Albertus-Magnus-Platz, 50923 Köln, GERMANY.
mdeandres@neanderthal.de

Armentano, Gabriela
UMR 7041 ArScAn-AnTET, Université Paris Ouest, Nanterre-La Défense, FRANCE.
polytanos@hotmail.com

Arrizabalaga, Álvaro
Department of Geography, Prehistory and Archaeology. University of the Basque Country, UPV/EHU. Francisco Tomás y Valiente s/n, 01006, Vitoria, SPAIN.
alvaro.arrizabalaga@ehu.es
Barkai, Ran
Department of Archaeology and Near Eastern Cultures, Tel Aviv University, ISRAEL.
barkaran@post.tau.ac.il

Barrientos, Gustavo
División Antropología, Facultad de Ciencias Naturales y Museo, Universidad Nacional de La Plata. CONICET. CEAR (FHya, UNR); Paseo del Bosque s/n, (B1900FWA) La Plata, ARGENTINA.
gustavbarrie@yahoo.com.ar.

Batista de Carvalho, Luís A. E.
Unidade de I&D “Quimica-Fisica Molecular”, Department of Chemistry, University of Coimbra, 3004-535 Coimbra PORTUGAL.
labc@ci.uc.pt

Baysal, Emma
Trakya Üniversitesi, Edebiyat Fakültesi, Arkeoloji Bölümü, Edirne, TURKEY.
emmabaysal@trakya.edu.tr

Becker, Daniel
Institute of Geography, University of Cologne, Albertus-Magnus-Platz, 50923 Köln, GERMANY.
daniel.becker@uni-koeln.de

Ben-Yosef, Erez
Department of Archaeology and Near Eastern Cultures, Tel Aviv University, ISRAEL.
ebenyose@post.tau.ac.il

Bicho, Nuno
ICArEHB - Interdisciplinary Center for Archaeology and the Evolution of Human Behaviour, Faculdade de Ciências Humanas e Sociais, Universidade do Algarve, Campus de Gambelas, 8005-139 Faro, PORTUGAL.
nbicho@ualg.pt

Biró, Katalin T.
Hungarian National Museum, Department of Archaeology, H-1088 Budapest, Múzeum krt. 14-16, HUNGARY.
tbk@ace.hu
Brandl, Michael  
OREA – Institute for Oriental and European Archaeology, Quaternary Archaeology, Austrian Academy of Sciences, Vienna, AUSTRIA.  
michael.brandl@oeaw.ac.at

Buc, Natacha  
Instituto Nacional de Antropología y Pensamiento Latinoamericano – CONICET, ARGENTINA.  
natachabuc@gmail.com

Bursali, Ayşe  
Graduate School of Social Sciences and Humanities, Koç University, İstanbul, TURKEY.  
abursali13@ku.edu.tr

Campbell, Stuart  
University of Manchester, Oxford Road, Manchester, M13 9PL, UNITED KINGDOM.  
stuart.campbell@manchester.ac.uk

Cannavò, Valentina  
Università degli Studi di Modena e Reggio Emilia, Dipartimento di Scienze Chimiche e Geologiche, Via G. Campi 103, 41125 Modena, ITALY.  
valentinacannavo@gmail.com

Carloni, Delia  
Università degli Studi di Napoli Federico II, Scuola di Specializzazione in Beni Archeologici, Dipartimento di Studi Umanistici, Via Marina 33, 80133 Napoli, IT. / Centro Regionale di Speleologia “Enzo dei Medici”, Via Lucania, 3, 87070 Roseto Capo Spulico (CS), ITALY.  
delia.carloni@hotmail.it

Carvalho, António Faustino  
FCHS, Universidade do Algarve, Campus Gambelas, 8005-139 Faro, PORTUGAL.  
afcara@ualg.pt
Carvalho, Susana
susana.carvalho@anthro.ox.ac.uk

Carvalho, Vânia
Museu de Leiria – Convento de Santo Agostinho. Divisão de Ação Cultural, Museus e Turismo, Câmara Municipal de Leiria, Largo da República. 2414-006 Leiria, PORTUGAL.

Cascalheira, João
ICArEHB - Interdisciplinary Center for Archaeology and the Evolution of Human Behaviour, Faculdade de Ciências Humanas e Sociais, Universidade do Algarve, Campus de Gambelas, 8005-139 Faro, PORTUGAL.
jmescalheira@ualg.pt

Catella, Luciana
División Arqueología, Facultad de Ciencias Naturales y Museo, Universidad Nacional de La Plata. CONICET. CEAR (FH y A, UNR); Paseo del Bosque s/n, (B1900FWA) La Plata, ARGENTINA.
catelullacatellaluciana@hotmail.com.

Cavallo, Giovanni
Dept. of Earth and Environmental Sciences, University of Pavia, ITALY.
giovanni.cavallo@supsi.ch

Chiarulli, Beverly A.
Retired, Indiana University of Pennsylvania, UNITED STATES OF AMERICA.
bev@chiarulli.net

Coll Riera, Joan Manuel
Arrago S.L. Sant Cugat 76 Baixos. E-08201. Barcelona, SPAIN.
info@arragosl.com
Contributors

**Guida, Giuseppe**
Istituto Superiore per la Conservazione el il Restauro, Roma, ITALY.
giuseppe.guida-01@beniculturali.it

**Hartoch, Else**
Gallo-Roman Museum of Tongeren, BELGIUM.
else.hartoch@limburg.be

**Healey, Elizabeth**
School of Arts, Languages and Cultures, University of Manchester,
Oxford Road, Manchester, M13 9PL, UNITED KINGDOM.
elizabeth.healey@manchester.ac.uk

**Heinz, Guido**
Römisch-Germanisches Zentralmuseum, Archaeological Research
Institute, Mainz, GERMANY.
heinz@rgzm.de

**Hodgskiss, Tammy**
Evolutionary Studies Institute (ESI), School of Geosciences, University of
the Witwatersrand, Private Bag 3, Wits 2050, Johannesburg, SOUTH
AFRICA.
tammyhodgie@gmail.com

**Högberg, Anders**
Faculty of Arts and Humanities Department of Cultural Sciences,
Archaeology Linnaeus University 391 82 Kalmar, Sweden and
Department of Anthropology and Development Studies University of
Johannesburg, Auckland Park, SOUTH AFRICA.
anders.hogberg@lnu.se

**Hughes, Richard E.**
Geochemical Research Laboratory 20 Portola Green Circle Portola Valley,
CA 94028 UNITED STATES OF AMERICA.
rehughes@silcon.com

**Jordão, Patrícia**
Deutsche Archäologische Institut-Madrid, SPAIN.
pjordao73@gmail.com
Kadrow, Stawomir
Institute of Archaeology and Ethnology – Polish Academy of Sciences.
Slawkowska st 17, 31-016 Kraków, POLAND.
slawekkadrow@gmail.com

Kulkova, Marianna A.
Herzen State Pedagogical University, St. Petersburg, Russia. Address: 6 Kazanskaya Street, 191186, St. Petersburg, RUSSIA.
kulkova@mail.ru

Lambert, Maryline
Department of Archaeology, Durham University, UNITED KINGDOM.
maryline.lambert@durham.ac.uk

Larocca, Felice
Università degli Studi di Bari, Gruppo di ricerca speleo-archeologica, Piazza Umberto I 1, 70121 Bari, IT. / Centro Regionale di Speleologia “Enzo dei Medici”, Via Lucania, 3, 87070 Roseto Capo Spulico (CS), ITALY.
felicelarocca1964@gmail.com

Le Bourdonnec, François-Xavier
IRAMAT-CRP2A, UMR 5060 Université Bordeaux Montaigue/CNRS, FRANCE.
Francois-Xavier.Le-Bourdonnec@u-bordeaux-montaigne.fr

Lefrais, Yannick
IRAMAT-CRP2A, UMR 5060 Université Bordeaux Montaigue/CNRS, FRANCE.
Yannick.Lefrais@u-bordeaux-montaigne.fr

Linderholm, Johan
MAL_ Environmental archaeology laboratory Department of Historical, Philosophical and Religious Studies, Humanisthuset, HB 121, Umeå University, 90187, Umeå SE, SWEDEN.
johan.linderholm@umu.se

López De Heredia, Judit
Aranzadi Society of Sciences, Donostia/San Sebastian, SPAIN.
jlzdeheredia@gmail.com
Loponte, Daniel  Instituto Nacional de Antropología y Pensamiento Latinoamericano – CONICET, ARGENTINA.
dashtown@gmail.com

Lugliè, Carlo  LASP, Dipartimento di Storia, Beni Culturali e Territorio, Università di Cagliari, Piazza Arsenale 1, 09124 Cagliari – ITALY.
luglie@unica.it

Lume Pereira, Federica  Karl Jaspers Centre for Advanced Transcultural Studies, Ruprecht-Karls-Universität Heidelberg, GERMANY.
federica.lume-pereira@asia-europe.uni-heidelberg.de

Maeda, Osamu  Institute for Comparative Research in Human and Social Sciences, University of Tsukuba 1-1-1 Tennodai, Tsukuba 305-8571, JAPAN.
maeda.osamu.gm@u.tsukuba.ac.jp

Mangado, Xavier  Seminari d’Estudis i Recerques Prehistòriques (SERP), Dept. Història i Arqueologia, Universitat de Barcelona, C/Montalegre, 6, 08001, Barcelona, SPAIN.
mangado@ub.edu

Marín, Dioscorides  University of Lleida - Department of History. Plaça Victor Siurana, 1. 25003 Lleida, Cataluna, SPAIN.
diosco.marin@gmail.com

Marreiros, João  MONREPOS. Archaeological Research Centre and Museum for Human Bihavioural Evolutio, GERMANY.
marreiros@rgzm.de

Martins, Rui  Núcleo dos Alunos de Arqueologia e Paleoecologia, Universidade do Algarve, Campus Gambelas 8005-139 Faro PORTUGAL.
ruimgmart@gmail.com
Neugebauer-Maresch, Christine
OREA – Institute for Oriental and European Archaeology, Quaternary Archaeology, Austrian Academy of Sciences, Vienna, AUSTRIA.
Christine.Neugebauer-Maresch@oeaw.ac.at

Nyland, Astrid J.
Archaeological Museum, University Of Stavanger, NORWAY.
astrid.j.nyland@uis.no

Olausson, Deborah
Department of Archaeology and Ancient History, University of Lund, BOX 192, 221 00, Lund, SWEDEN.
deborah.olausson@ark.lu.se

Oliva, Fernando
CEAR, Facultad de Humanidades y Artes, Universidad Nacional de Rosario, ARGENTINA.
fwpoliva@gmail.com

Orozco, Teresa
Departament de Prehistòria i Arqueologia, Universitat de València. Avenida Blasco Ibáñez 28, 46010 València, SPAIN.
Teresa.Orozco@uv.es

Ortega, David
Spanish National Research Council – IMF, Archaeology of Social Dynamics. Egipciaques, 15. 08001 Barcelona, SPAIN.
ortegacobos@gmail.com

Özbali, Hadi
Department of Archaeology and History of Art. Koç University, Istanbul-TURKEY.
ozbal@boun.edu.tr

Özbali, Rana
Arkeoloji ve Sanat Tarihi Bölümü, Rumeli Feneri Yolu, Koç Üniversitesi, Istanbul, TURKEY.
rozbal@ku.edu.tr
The Exploitation of Raw Materials in Prehistory

Paixão, Eduardo
Interdisciplinary Center for Archaeology and Evolution of Human Behaviour. Campus Gambelas – Universidade do Algarve. 8005-139 Faro, PORTUGAL.
eduardo.paixao88@gmail.com

Paolini-Saez, Hélène
Laboratoire régional d’Archéologie. Corse-Du-Sud, FRANCE.
lra@lra-corse.fr

Peche-Quilichini, Kewin
Inrap France and ASM UMR 5140 Université de Montpellier, FRANCE.
baiucheddu@gmx.fr

Peña Poza, Javier
Institute of History, CCHS-CSIC, Madrid, SPAIN.
javier.pena@cchs.csic.es

Pereira, Telmo
ICArEH – Interdisciplinary Center for Archaeology and the Evolution of Human Behaviour, Faculdade de Ciências Humanas e Sociais, Universidade do Algarve, Campus de Gambelas, 8005-139 Faro, PORTUGAL.
telmojr.pereira@gmail.com

Péterdi, Bálint
Geological and Geophysical Institute of Hungary, HUNGARY.
peterdi.balint@gmail.com

Pétrequin, Anne-Marie
MSHE C.N. Ledoux, CNRS et Université de Franche-Comté, 32, rue Mégevand, F 25030 Besançon Cedex, FRANCE.
anne.marie.petrequin@free.fr

Pétrequin, Pierre
MSHE C.N. Ledoux, CNRS et Université de Franche-Comté, 32, rue Mégevand, F 25030 Besançon Cedex, FRANCE.
arceo.petrequin@free.fr
Pimentel, Nuno
Instituto Dom Luiz, Fac.Ciências, Universidade de Lisboa, PORTUGAL.
npimentel@fc.ul.pt

Querré, Guirec
French Ministry of Culture and communication – UMR 6566 CReAAH,
University of Rennes 1, FRANCE.
guirec.querre@univ-rennes1.fr

Rauba-Bukowska, Anna
Institute of Archaeology and Ethnology – Polish Academy of Sciences.
Sławkowska st 17, 31-016 Kraków, POLAND.
a.rauba@yahoo.pl

Rey-Solé, Mar
Seminari d'Estudis i Recerques Prehistòriques (SERP), Dept. Història i Arqueologia, Universitat de Barcelona, C/Montalegre, 6, 08001,
Barcelona, SPAIN.
mreysole@ub.edu

Riccardi, Maria Pia
Institute of Materials and Constructions, Univ. of Applied Sciences and Arts - Supsi, SWITZERLAND.
mariapia.riccardi@unipv.it

Richardson, Amy
Wainwright Post-Doctoral Research Fellow, Institute of Archaeology 36 Beaumont St, University of Oxford, Oxford, OX1 2PG, UNITED KINGDOM.
amy.richardson@orinst.ox.ac.uk

Rodrigues, Nelson
Department of Earth Sciences, Faculty of Sciences and Technology,
University of Coimbra - Polo II, 3030-790 Coimbra, PORTUGAL.
nelsonr@ci.uc.pt

Roig, Jordi
jordiroig@arragosl.com
Contributors

**Sheridan, Alison**  
Department of Scottish History and Archaeology, National Museums Scotland, Chambers Street, Edinburgh EH1 1JF, UNITED KINGDOM.  
a.sheridan@nms.ac.uk

**Silvestre, Romina**  
Universidad Nacional de Misiones, Instituto Nacional de Antropología y Pensamiento Latinoamericano, CONICET, ARGENTINA.  
romisilvestre@gmail.com

**Şimşek, Gülsu**  
Chemistry Department and Surface Science and Technology Center (KUYTAM), Koç University, Rumelifeneri Yolu, Sariyer, 34450 Istanbul, TURKEY.  
gusimsek@ku.edu.tr

**Skeates, Robin**  
Department of Archaeology, Durham University, UNITED KINGDOM.  
robin.skeates@durham.ac.uk

**Taylor, Ruth**  
Departamento de Prehistoria y Arqueología, Facultad de Geografía e Historia, Universidad de Sevilla, Maria de Padilla s/n, 41004 Sevilla, SPAIN.  
ruth.taylor@hotmail.com

**Terradas, Xavier**  
Spanish National Research Council (CSIC) – IMF, Archaeology of Social Dynamics. Egipciaques, 15. 08001 Barcelona, SPAIN.  
terradas@imf.csic.es

**Tirosh, Ofir**  
The Institute of Earth Sciences, The Hebrew University of Jerusalem, ISRAEL.  
ofirtirosh@gmail.com

**Tiziana, Levi Sara**  
Hunter College, Department of Classical and Oriental Studies, The City University of New York, 695 Park Ave, New York, NY 10065, UNITED STATES OF AMERICA.  
sl1889@hunter.cuny.edu
Tóth, Zoltán
University of Miskolc, Sámuel Mikoviny Doctoral School of Earth Sciences, HUNGARY.
tzhenator@gmail.com

Váczi, Tamás
Department of Mineralogy, Eötvös Lóránd University, Department of Mineralogy Budapest, 1117 Budapest, Pázmány Péter sétány 1/C. HUNGARY.
vaczitamas@caesar.elte.hu

Vidale, Massimo
Dipartimento dei Beni Culturali, Università degli Studi di Padova, ITALY.
massimo.vidale@unipd.it

Wadley, Lyn
Evolutionary Studies Institute (ESI), School of Geosciences, University of the Witwatersrand, Private Bag 3, Wits 2050, Johannesburg, SOUTH AFRICA.
Lyn.Wadley@wits.ac.za

Weniger, Gerd-Christian
Neanderthal Museum, Talstraße 300, 40822 Mettmann, Germany./Institute of Prehistoric Archaeology, University of Cologne. Albertus-Magnus-Platz, 50923 Köln, GERMANY.
weniger@neanderthal.de

Wojcieszak, Marine
Evolutionary Studies Institute (ESI), School of Geosciences, University of the Witwatersrand, Private Bag 3, Wits 2050, Johannesburg, SOUTH AFRICA.
marine.wojcieszak@gmail.com

Yağcı, Mustafa Baris
Chemistry Department and Surface Science and Technology Center (KUYTAM), Koç University, Rumelifeneri Yolu, Sariyer, 34450 Istanbul, TURKEY.
byagci@ku.edu.tr

Yaroshevich, Alla
Israel Antiquities Authority, Rockefeller Museum Building, POB 586, Jerusalem, 91004, ISRAEL.
allayaroshe@gmail.com
Yılmaz Akkaya, Ceren
Chemistry Department and Surface Science and Technology Center (KUYTAM), Koç University, Rumelifeneri Yolu, Sariyer, 34450 Istanbul, TURKEY.
ceryilmaz@ku.edu.tr

Yravedra, José
Department of Prehistory. Complutense University of Madrid – UCM, SPAIN.
jyravedra@ghis.ucm.es

Zarina, Liga
University of Latvia, Faculty of Geography and Earth Sciences, Jelgavas 1, Riga, LV-1004, LATVIA.
Liga.Zarina@lu.lv

Zorzin, Roberto
Civic Museum of Natural History, Verona, ITALY.
roberto.zorzin@comune.verona.it