

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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FOREWORD

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 quantitative 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.

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