

4 FUEL AND FIRE: THE FIRE RECORD AS AN ARCHIVE OF NEANDERTHAL BEHAVIOUR AND THEIR ECOLOGICAL ENVIRONMENT

Abstract author(s): Burguet-Coca, Aitor (Leiden University, Faculty of Archaeology, Department of Archaeological Sciences; Institut Català de Paleoecologia Humana i Evolució Social - IPHES-CERCA; Universitat Rovira i Virgili - URV, Departament d'Història i Història de l'Art) - Allué, Ethel (Institut Català de Paleoecologia Humana i Evolució Social - IPHES-CERCA; Universitat Rovira i Virgili - URV, Departament d'Història i Història de l'Art) - Cabanes, Dan (Department of Anthropology, Rutgers University) - Martínez-Moreno, Jorge (Centre d'Estudis del Patrimoni Arqueològic, Universitat Autònoma de Barcelona) - Benito-Calvo, Alfonso (CENIEH Centro Nacional de Investigación sobre la Evolución Humana) - Albert, Rosa Maria (ICREA; Universitat Autònoma de Barcelona, Departament de Prehistòria, Facultat de Filosofia i Lletres) - Mora, Rafael (Centre d'Estudis del Patrimoni Arqueològic, Universitat Autònoma de Barcelona)

Abstract format: Oral

Firewood is the main fuel used by Neanderthals during the Middle Palaeolithic. The abundance or scarcity of fuel conditions human groups' relationship with fire. The pyroarchaeological record -fire record in archaeological sites- is a key archaeological aspect for understanding Neanderthal behaviour and environmental conditions.

In this work, we focus on the importance of understanding the surrounding vegetation, potentially used as fuel, to understand fire management by Neanderthals. The results are based on the phytolith and charcoal record documented in the late Middle Palaeolithic levels of Cova Gran de Santa Linya (Les Avellanes, Lleida). We will evaluate the potential of each analysis, the limits, and the complementarities between disciplines when dealing with the use of fuel and fire.

The obtained results indicate similar patterns in fuel use, wood was selected as the main fuel, and more precisely montane pine wood. This indicates that the selection criteria was possibly based on the most abundant and available wood, showing no scarcity periods and the presence of a forest of cryophilous pines in the surroundings. Along with the use of wood, the phytolith results showed the use of grasses, complementing the results of anthracology with the identification of non-woody plants, providing us with a more complete picture of exploitable plant resources and fire management.

This study suggests that the availability of wood resources was determinant in the occupation and probably condition the mobility patterns of human groups. The analysis of the pyroarchaeological record can also be a way of approximating the settlement patterns and forest environment by Neanderthals groups.

5 PALAEOVEGETATIONAL CONTEXT OF NEANDERTHAL OCCUPATIONS AT THE ARCHAEOLOGICAL SITE OF EL SALT (SE IBERIA)

Abstract author(s): Val-Peón, Cristina (Institute of Neotectonics and Natural Hazards, RWTH Aachen University) - Burjachs, Francesc (Institució Catalana de Recerca i Estudis Avançats - ICREA; Institut Català de Paleoecologia Humana i Evolució Social -IPHES; Àrea de Prehistòria, Universitat Rovira i Virgili - URV) - Galván, Bertila (Àrea de Prehistòria, Unidad de Docencia e Investigación de Prehistoria, Arqueología e Historia Antigua, Departamento de Geografía e Historia, Facultad de Humanidades, Universidad de La Laguna) - Hernández, Cristo (Àrea de Prehistòria, Unidad de Docencia e Investigación de Prehistoria, Arqueología e Historia Antigua, Departamento de Geografía e Historia, Facultad de Humanidades, Universidad de La Laguna); Archaeological Micromorphology and Biomarkers Laboratory, Instituto Universitario de Bio-Organica Antonio González, Universidad de La Laguna) - Mallol, Carolina (Àrea de Prehistòria, Unidad de Docencia e Investigación de Prehistoria, Arqueología e Historia Antigua, Departamento de Geografía e Historia, Facultad de Humanidades, Universidad de La Laguna; Archaeological Micromorphology and Biomarkers Laboratory, Instituto Universitario de Bio-Organica Antonio González, Universidad de La Laguna)

Abstract format: Oral

The period spanning from Marine Isotope Stages 4 to 3 has been characterised by millennial to centennial changes between cold-dry and moist-warm periods. Rapid climate changes have been recorded in continental and marine deposits, as well as correlated with Greenland Stadials and Interstadials. Nevertheless, while some natural sites evidenced open landscapes for these critical times, different archaeological sites documented the presence of mixed forests for the same chronologies in Western Mediterranean.

The Iberian Peninsula has been considered a refugium in moments of climatic instability during this period (71-29 ka BP), which may have been crucial for Neanderthals to settle in this territory until their disappearance. Thus, it is of great importance to explore past environments from a local-regional perspective and on a small time scale.

In this paper, we present the palynological results and evaluate the preservation potential of palynomorphs from different profiles of El Salt, emphasizing the importance of identifying possible biases caused by taphonomic factors that may affect the reconstruction of the palaeovegetation.