
Early Mesolithic hearth pits in SE Iberia: a multiscale interdisciplinary approach to clarify formation processes.

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Abstract

Behaviours and ecology of the last prehistoric hunter-gatherers in Europe have been traditionally addressed through the investigation of archaeological lithic and faunal assemblages. Fire features, a source of potentially key data for the reconstruction of human activities, occupation modes and management of natural resources, have only been explored partially, especially in Early Holocene dune systems of the Iberian Peninsula. In such contexts, hearth pits documented have been described, providing account of morphometrics and contents (e.g. rock fragments, artefacts, charcoal, shells). However, detailed graphic recording, sampling and subsequent laboratory analysis of the sediments and materials that make the bulk of the burnt remnants have received limited attention. The lack of a comprehensive methodological approach together with the scarcity of investigations addressing the sedimentary evidence at a multiscale level of fire features have resulted in a consistent loss of information vital for the characterisation of use of the space, the assessment of the integrity of the archaeological record and the reconstruction of site formation processes.

This communication introduces the preliminary results of the investigations on Early Holocene combustion structures currently conducted within the frame of the project *PALEODEM-Late Glacial and Postglacial Population History and Cultural Transmission in Iberia* (ERC-CoG 2015-ref 683018). Data from a selection of hearth pits documented in El Arenal de la Virgen, an Early Mesolithic (9.3 – 8.6 Kyr) camp site located in continental dunes at the margins of a paleolake in SE Iberia, are presented.

An integrative methodology has been developed for the analysis of the hearth pits and their sedimentary setting based on contextual geoarchaeology, archaeobotany, lithic analysis and 3D photogrammetry.

Results available to date allow us to provide a suite of multiscale interdisciplinary parameters for the understanding of the processes involved in the formation and taphonomy of the early Mesolithic hearth pits investigated and distinguishing them from apparently similar features that are the product of natural dynamics.

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