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The silence of the layers: Archaeological site visibility in the Pleistocene-Holocene transition at the Ebro Basin

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ABSTRACT

The Ebro Basin constitutes one of the most representative territories in SW Europe for the study of prehistoric societies during the Pleistocene-Holocene transition. The correlation of palaeoenvironmental and geomorphological proxies obtained from sedimentary records with chronologically well-constrained reference archaeological sites has allowed defining this time frame precisely, such that three main pilot areas have been broadly depicted: the Alavese region, the Pre-Pyrenees and the Bajo Aragón.

Overall, the human imprint in the Ebro Basin was rare during the Upper Palaeolithic, but more visible from the Upper Magdalenian (14500–13500 cal BP) to Neolithic times (up to 5500 cal BP). Local environmental resources were continuously managed by the prehistoric communities in the different areas of study. In fact, the Ebro Basin acted during those millennia as a whole, developing the same cultural trends, industrial techniques and settlement patterns in parallel throughout the territory.

However, some gaps exist in the ¹⁴C frequency curve (SCDPD curve). This is partially related to prehistoric sites in particular lithologies and geological structures that could have partly been lost by erosional processes, especially during the Early Holocene. In addition, this gap also parallels the reconstructed climate trend for the Pre-Pyrenean and the Bajo Aragón areas, which are defined by high frequencies of xerophilous flora until ca. 9500 cal BP, suggesting that continental climate features could have hampered the presence of well-established human communities in inland regions.

The interdisciplinary research (archaeology, geomorphology and palaeoclimatology) discussed in this paper offers clues to understand the existence of fills and gaps in the archaeological record of the Ebro Basin, and can be applied in other territories with similar geographic and climate patterns.

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1. Introduction

Interest in, scientific literature and projects, and meetings related to climate-human interactions have notably increased in recent years. Reconstruction of population distributions and/or analysis of occupation patterns and cultural changes in their environmental context have emerged as a major research interest (Aura et al., 2011; Banks et al., 2013; Bar-Yosef, 2015; Binford, 1999; González-Sampérez et al., 2009; Sánchez Goñi, 1997; Starkovich and

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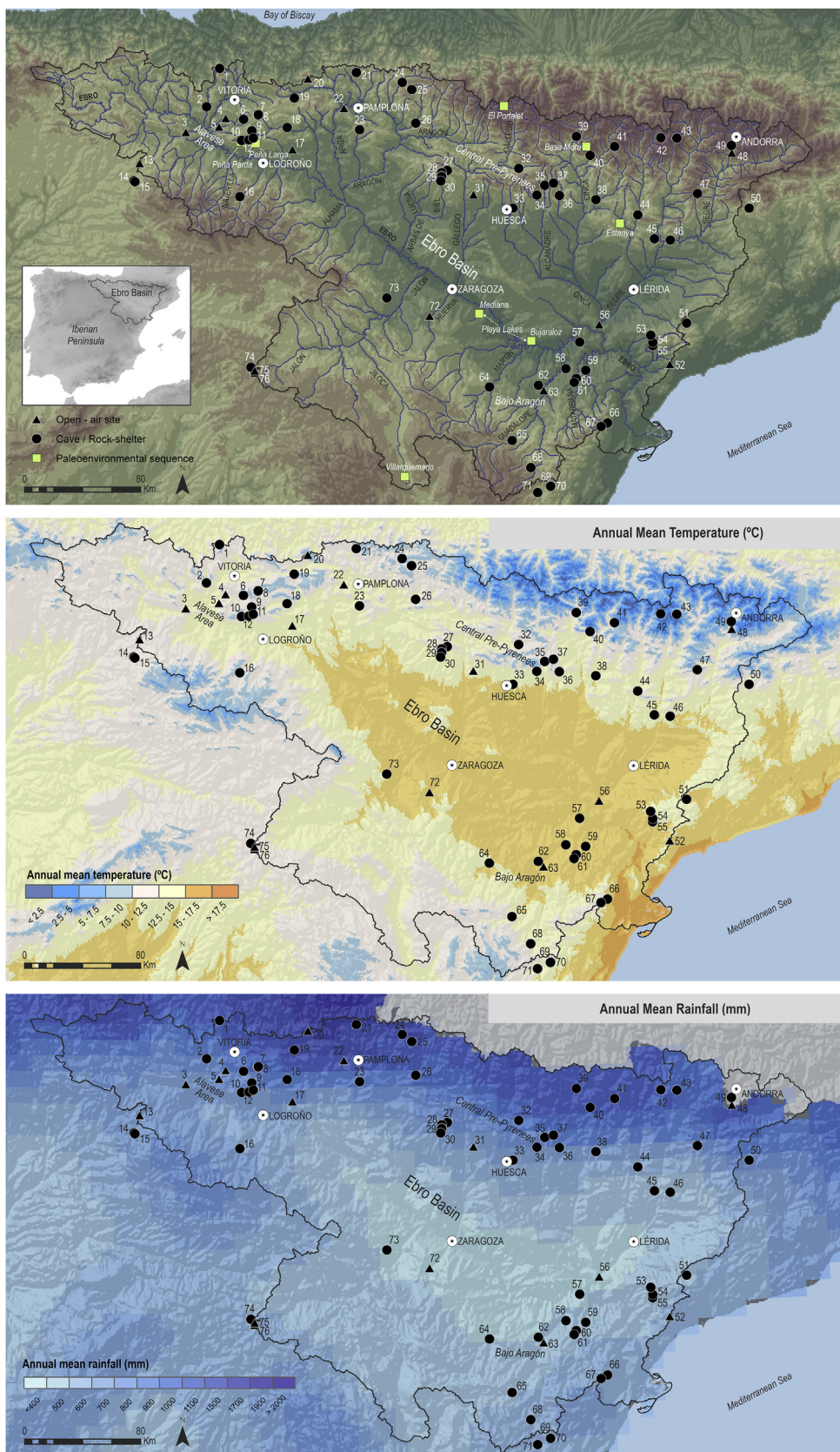


Fig. 1. Location of the archaeological sites (open air/cave or rockshelter) and paleoenvironmental records discussed in the text. 1 Urratxa-III. 2 Socuevas. 3 El Prado. 4 Araico. 5 Larrenke N. 6 Mendandia. 7 Kanpanoste and Kanpanoste Goikoa. 8 Atxoste. 9 Martinarri. 10 San Cristóbal. 11 Husos-I and Husos-II. 12 Peña Larga. 13 Alto de Rodilla. 14 Portalón. 15 Mirador. 16 Cueva Lóbrega. 17 Cascajos. 18 Orcillas. 19 Portugain. 20 Artegieta. 21 Abautz. 22 Paternanbidea. 23 Artusia. 24 Aizpea. 25 Zatoya. 26 Padre Areso. 27 Paco Pons. 28 Peña. 29. Legunova and Rambla de Legunova. 30 Valcervera. 31 Samitiel. 32 Eslugón. 33 Espantalobos. 34 Chaves. 35 Pacencia. 36 Huerto Raso. 37 Drólica. 38 Forcas-I and Forcas-II. 39 Coro Trasito. 40 Puyascada. 41 Trocs. 42 Sardo. 43 Estany de la Coveta. 44 Colomera. 45 Cova Gran. 46 Parco. 47 Montanissell. 48 Camp Colomer. 49 Balma Margineda. 50 Balma

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