Fellowships awarded in the second call for postdoctoral contracts, within the framework of the IPHES Maria de Maeztu Unit of Excellence

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ADRIAN ARROYO

Project title: ***The impact of seasonality on savanna chimpanzee technology: a primate archaeology approach***

The evolutionary success of early hominins can be closely linked to the ability to manufacture and use stone tools as an adaptative trait to a changing environment. The earliest evidence of stone flaking is dated to 3.3 million years. However, study the influence that the environment had in the emergence of technology, using exclusively the archaeological record, has limitations. To overcome this situation, we can rely on modern analogies.

Tool production and tool-use are not exclusive to the *Homo* genus, and is reported in a range of animal taxa, including primates. Among them, chimpanzees (*Pan troglodytes*), are the extant primates that possess the most diverse toolmaking and tool-use culture and are considered a key comparative species to further our understanding of cultural evolution.

Utilizing a primate archaeology approach, this project will apply analytical techniques used in Palaeolithic archaeology to investigate west African savanna chimpanzee (*Pan troglodytes verus*) technology. As case-study I will study the chimpanzees from the Dindefelo Community Nature Reserve (Senegal) and use this data to understand key aspects of the evolution of technology. This work will contribute to consolidating our knowledge about primate technology and how it is affected by environmental variations. Results will also provide insights to understand how early hominins may have adapted their technology based on environmental fluctuations during the Plio-Pleistocene.

PATRICIA MARTÍN

Project title: ***From the sheepfold: implementation and evolution of the husbandry of sheep and goat in the inland of the Iberian Peninsula***

Husbandry practices in the Iberian Peninsula date back to the Early Neolithic, during the second half of the 6th millennium cal BCE. The Iberian Peninsula was one of the last stops for domestics after their spread throughout the Mediterranean region. Contrary to traditional theories, husbandry practices were rapidly disseminated from the Mediterranean coast inland de Iberian Peninsula. During this process, herds were mainly composed by **domestic caprines**, especially sheep. From the second half of the 5th millennium cal BCE onwards, husbandry practices were consolidated, diversified and intensified, across Iberia.

The aim of this project is to the **livestock management strategies** implemented during the process of establishing and consolidating husbandry in the inland of the Iberian Peninsula. These strategies are an example of the capacity of shepherds and herds to **adapt** to this territory and of the impact (economic, social and cultural) of the arrival of the farming economy in this region.

Specifically, this project focuses on the study of the management of sheep and goats from caves occupied as a sheepfold between the Early Neolithic and the Middle Bronze Age. These sites by their own definition, are directly linked to husbandry practices, providing high-resolution information and well-preserved samples.

This study will be carried out using zooarchaeological and isotopic approaches. An ethnoarchaeological programme will also be developed in order to create a reference base, specific to the Iberian Peninsula, and to give a solid interpretation of these analyses.

JUAN IGNACIO MORALES

Project Title: ***Tracking the invisible***

Northern Mediterranean Iberia is the southernmost European region where the complete cultural succession of the Middle-to-Upper Paleolithic Transition has been identified. However, evidence is scarce and extremely fragmented, and a continuous referential section is still to be found. ***Tracking the invisible*** is a project aimed at increasing and evaluating the archaeological record of NE Mediterranean Iberia between 42 – 35 ka cal BP. It is focused on three main tasks: 1) documenting new transitional contexts on known or high-potentiality sites; 2) developing a multi-method dating program for the late Mousterian, Chatelperronian and Aurignacian evidence to evaluate the chronological boundaries of the Transition; and 3), the technological characterization of each technocomplex.

Tracking the invisible includes excavation, dating or assemblage analyses from four sites representing novel sequences in Mediterranean Iberia: Cova Foradada (Calafell, Tarragona); La Griera (Calafell, Tarragona); Cova Gran de Montserrat (Collbató, Tarragona) and Cova de la Guineu (Font-rubí, Barcelona), and expects to provide pivotal data from a key region for the Neanderthal demise and their potential interaction with the incoming *Homo sapiens* populations. This action will fill a significant gap, allowing to connect the well-known evolutionary dynamics above the 42nd parallel North with the alleged Mousterian persistence in central and southern Iberia.