

ANNUAL REPORT: SPAIN COVA GRAN 2014 FIELD SCHOOL

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Students excavating a hearth

The Cova Gran de Santa Linya (Catalunya, Spain) research project is directed by Dr. Jorge Martínez-Moreno and Dr. Rafael Mora from Centre d'Estudis del Patrimoni Arqueològic de la Prehistòria-Universitat Autònoma Barcelona, and Dr. Alfonso Benito Calvo from Centro Nacional de Investigación sobre la Evolución Humana, Burgos. The 2014 field season spanned from June 29th to August 2nd, with the participation of 9 students from Institute of Field Research. This sequence contains different cultural processes in the sectors named Ramp, Transition and Platform. Cova Gran is relevant for contextualizing last 50.000 years of the human presence in the Western Mediterranean. Fieldwork was conducted in two previously documented sectors Ramp and Platform (Mora et al. 2011) and objectives planned for this year have been overcome.

The Ramp sector -R- is a 200m² platform and the excavated area extends 120m². In this area are differentiated the units S1 and 497, originated by different climatic processes. 8 archaeological levels are stratified punctuated for being sterile. Unit S1 contains levels S1E, S1D, S1C, S1B1 and S1B, which correspond to Mousterian, and 497D assigned to the Early Upper Paleolithic. Levels 497C and 497A, in the sedimentary unit 497, are attached to Early Upper Paleolithic. All levels are rich in lithics, bones and hearths. Special interests are marine ornaments -markers of the irruption of *H. sapiens* in Western Europe- recovered in 497D, 497C and 497A.

The techno-typological change detected between the stratigraphically overlaid S1B and 497D levels seem to correspond to different cultural traditions. Changes in raw material, knapping systems, blanks and the retouched tools, directing to the debate about the possible extinction of *H. neanderthalensis* in parallel to the dispersion of *H. sapiens* in Western Europe (Martínez-Moreno et al. 2010). Otherwise, the analysis of Mousterian levels in Cova Gran during the challenging MIS 3. This phase has been characterized by recurrent and global climatic crisis.

These environmental factors can be essential to understand Neanderthal lifestyle and the demise of this specie before the irruption of anatomically modern humans.

The central platform is a surface extended under the visor of the shelter about 2000 m², which it has been excavated around 50 m² in the Platform sector (P). Units identified are unit N corresponds to the Holocene, and unit P attached to MIS 2.

The human presence has been detected in unit P of the Platform sector. Angular debris and falls from large blocks with limited fine sediments in 1,7 m thick suggest very cold climatic conditions. The excavations of levels 4P, 5P, 6P and 8P, dated between 20,4-18 ka Cal BP, confirm the occupation site during Last Maximum Glacial (LMG). Artifacts recovered like points and backed bladelets, burins and end-scrapers on blade are associated to massive antler projectiles, and needles can refer to the early phases of the Magdalenian in the Pyrenees. Marine shells and perforated gastropods transported for more 200 km suggest strong social networks connecting these groups from a wide landscape.

The Holocene sequence shows the settlement of farmer-shepherds using Cova Gran as a domestic site with an important number of hearths and pits. During Late Prehistory the cave was used for stabling sheep-goat. Dung deposits excavated, around 0,5 m thick, repeatedly and intentionally burned suggest the regular installation of big sheep and goats herds. This appreciation opens perspectives to analyze the origins of pastoralism in the northeast of Iberia.

Cova Gran is a longterm project. Currently, investigations are focused on diverse lines of research, which have resulted in a vast number of presentations in colloquium and publications. In 2014 we have attended to 6 workshops in the UISPP XVII World Congress held in Burgos, presenting micromorphology, raw material, Late Glacial settlement, and Middle Paleolithic and Middle to Upper Paleolithic transition contributions. Additionally, we have held several talks for the general public in diverse universities and local entities. Regarding publications, two important papers have been published. The first is a synthesis of the Iberian Middle Paleolithic, in which Cova Gran plays a predominant role (de la Torre et al. 2013, *Current Anthropology* 54, S320-336). The second is the study of pen deposits at Cova Gran (Polo et al. 2014, *Journal of Archaeological Science* 41; 784-800).