

El Niño Cave (Aýna, Albacete, Spain): Late Middle Palaeolithic, Rock Art, and Neolithic Occupations from Inland Iberia

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El Niño cave, located on the south-eastern border of the Spanish Meseta, hosts a discontinuous sequence including Middle Palaeolithic and Neolithic levels, along with Upper Palaeolithic and Levantine style paintings. It is a key site for understanding human occupations of inland Iberia during the Palaeolithic and early prehistory. This paper summarises the main results of a multidisciplinary project aimed at defining the prehistoric human occupations at the site.

Keywords: Middle Palaeolithic, Neolithic, Palaeolithic rock art, Levantine style rock art, inland Iberia

In contrast to other Spanish regions, inland Iberia, mostly defined by the Central Meseta (plateau), is

characterised by a reduced number of Palaeolithic sites, especially from the Upper Palaeolithic (Straus 2018), despite recent discoveries (Yravedra *et al.* 2016; Cascalheira *et al.* 2020). Many of these sites correspond to open-air finds. In this framework, El Niño cave (Aýna, Albacete), located in the Sierra de Alcaraz mountain range on the south-eastern border of the Central Meseta (Fig. 1), constitutes a key site, hosting one of the few Palaeolithic sequences of the region, along with Palaeolithic and post-Palaeolithic rock art.

The site was first published in 1971 (Almagro-Gorbea 1971), which concentrated on the Upper Palaeolithic rock art and the Levantine Style Art at the site. In 1973, fieldwork directed by Iain Davidson documented the archaeological deposits (Higgs *et al.* 1976), which evidenced the human use of the cave during the Middle and Upper Palaeolithic, recent prehistory (Neolithic and Chalcolithic), and maybe the Mesolithic. The results of the excavation were included in Davidson's PhD thesis (1981) but were not published, and the site remained almost unknown. For this reason, since 2008 we have been conducting a comprehensive review of the site through the study of the

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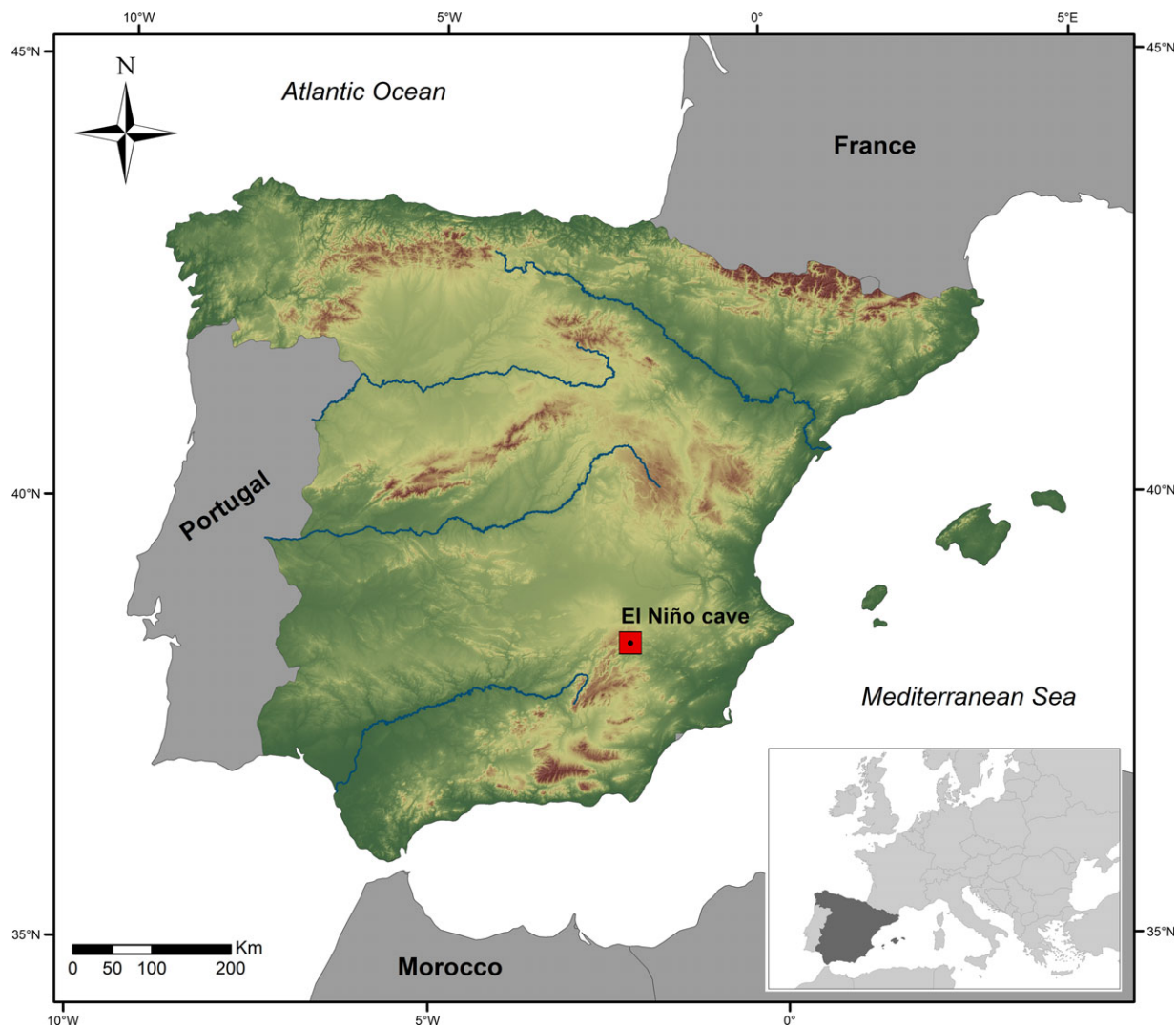


Fig. 1.
Location of El Niño cave (map: A. García-Moreno)

Palaeolithic paintings, the analysis of the archaeological materials, and a dating programme (García-Moreno *et al.* 2016).

The aim of this paper is to present El Niño cave to a broader, international audience, due to its potential for studying Middle Palaeolithic, Upper Palaeolithic, and Neolithic human settlement in inland Iberia.

ARCHAEOLOGICAL SITE

The site is located at 812 m above sea level in the Barranco del Infierno ravine, part of the Mundo

River canyon, a tributary of the Segura River (Fig. 2). At the cave opening is a small rock shelter where Levantine style paintings are located. The cave is about 60 m long and oval in shape, with a speleothem formation dividing it into two chambers, the outer of which hosts the main panel of Palaeolithic paintings.

Fieldwork in 1973 (Davidson 1981; Davidson & García-Moreno 2013) focused on two trenches outside the cave entrance (Trenches 1 & 2). A discontinuous sequence of 11 archaeological levels was defined. Levels XI (base) to III–IV correspond to the



Fig. 2.
Aerial view of the cave's entrance and its landscape (photo: Cineproad S.L.)

Middle Palaeolithic. Levels II and I appear to contain mixed assemblages, with both Middle Palaeolithic and post-Palaeolithic materials, and a wide range of dates, arguing against the archaeological integrity of these upper levels (García-Moreno *et al.* 2014).

A further two test pits were dug: one at the foot of the Levantine paintings (TAL, for Trinchera Arte Levantino), where a Neolithic sequence was identified (García-Moreno *et al.* 2015), and another below the main panel of Palaeolithic paintings, which yielded a small collection of undiagnostic lithics and several faunal remains.

MIDDLE PALAEOOLITHIC

Most archaeological remains from Trenches 1 and 2 came from Levels XI and the unit formed by III–IV,

corresponding to two Middle Palaeolithic occupation phases.

Level XI was dated by Amino Acid Racemization (AAR) on an *Equus* molar at 55.55 ka (LEB-9570). The lithic assemblage is characterised by a variety of reduction sequences on flint (Levallois & Quina) and quartzite (Discoid & Quina), resulting in large, retouched flakes transported to the site and resharpened *in situ*. Lithic tools comprise two retouched flakes and three side-scrapers (Fig. 3a). The fauna is dominated by horse (*Equus* sp.), followed by ibex (*Capra* sp.) and red deer (*Cervus elaphus*). Whereas ibex is still common in the precipitous immediate landscape, the presence of horse and other large ungulates, such as aurochs or rhino, also evidences the exploitation of open plains. Level XI also provided 17 plant remains, corresponding to



Fig. 3.
Middle Palaeolithic industry: (a) Level XI; (b) refits from Level III-IV; (c) Level III-IV
(photo: J. Rios-Garaizar, A. García-Moreno & A. San Emeterio)



Fig. 4.
Endocarp of *Celtis sp. australis* (photo: I. López-Dóriga & A. García-Moreno)

mineralised endocarps of *Celtis sp. australis* fruits, which may have been consumed by Neanderthals (Fig. 4). Together, evidence suggests Neanderthal occupations during this phase involved the exploitation and transport of distant resources and the ramification of *in situ* lithic production through Quina technology.

Due to the lack of collagen, bone apatite from Level III–IV was radiocarbon dated to 33,380–32,250 cal BP¹ (UGAMS-7739: 28,660±90 BP) and 32,910–31,920 cal BP (UGAMS-7737: 28,270±80 BP), which is too young for Middle Palaeolithic (Higham *et al.* 2014). Despite the apparent consistency, these dates provide minimum age estimates as young carbonate cannot be fully removed from bone apatite and ages are nearly always erroneously young (Wood *et al.* 2013). In contrast with Level XI, local quartzite is largely dominant over flint. Three series of refits (Fig. 3b) demonstrate quartzite cobbles were knapped *in situ* following a Quina production schema. There is also evidence of cordal Discoid and Levallois knapping on quartzite, producing typical Levallois flakes and Pseudolevallois points. Flint was introduced as final tools, such as a Mousterian point, two side-scrapers, and Levallois flakes (Fig. 3c). Fauna was limited to a few poorly preserved remains corresponding almost exclusively to *Capra* sp. In this case, evidence points towards a shift in subsistence strategies compared to earlier occupations, based on the immediate exploitation of local resources, including *in situ* knapping of local quartzite and transport of flint tools.

UPPER PALAEOLITHIC PAINTINGS

Cave art attests the use of the site during the Upper Palaeolithic. The main panel, located in the half-light of the outer chamber, includes nine figures comprising typical Palaeolithic representations: two male and three female deer, two ibex, one bovid, and one horse (see Garate & García-Moreno 2011 and the discussion of scenes in Palaeolithic art in Davidson 2021 for a detailed description of the composition of the panel) (Fig. 5). The test pit below the panel contained a small layer of ash with a few bones, with the apatite of one radiocarbon dated to 27,280–27,020 cal BP (UGAMS-7738: 22,780±60 BP), which is consistent with a Late Gravettian and/or Solutrean attribution to the paintings or, at least, some of them (Garate & García-Moreno 2011).

A second panel, found in a small side gallery of the inner chamber, includes two small partial figures of a horse, an ibex, and a snake made of parallel, sinuous lines with interior rings in its upper half (Garate & García-Moreno 2011). The characteristics and motifs stylistically relate El Niño's rock art to both the Cantabrian and Mediterranean regions and imply the connection between these areas during the Upper Palaeolithic.

NEOLITHIC

Evidence of post-Pleistocene occupations was found in the upper levels of Trenches 1 and 2 mixed with older materials and mainly in a test pit below the Levantine paintings, where a sequence of five archaeological levels was identified (García-Moreno *et al.* 2015). Bone collagen from Level Iib was radiocarbon dated to 5060–4840 cal BP (GdA-2102: 6065±40 BP). Lithic industry is consistent with a Mesolithic and/or Neolithic age, made mostly of flint, and characterised by microblade technology, including four geometric microliths (Fig. 6a). A polished adze was found out of stratigraphic context (Fig. 6b).

Pottery technology can be attributed to the Early Neolithic (Martí-Oliver 1988). All fragments were handmade, most of them fired in a mixed firing (Cubas *et al.* 2020). Decorations are scarce, usually consisting of plastic applications, such as lugs and cordons, or incisions (Fig. 6c; Cubas *et al.* 2016). The vessel morphologies identified suggest pottery was used for food storage. Several potsherds of Bell Beaker pottery confirm the use of the cave also during the Chalcolithic.

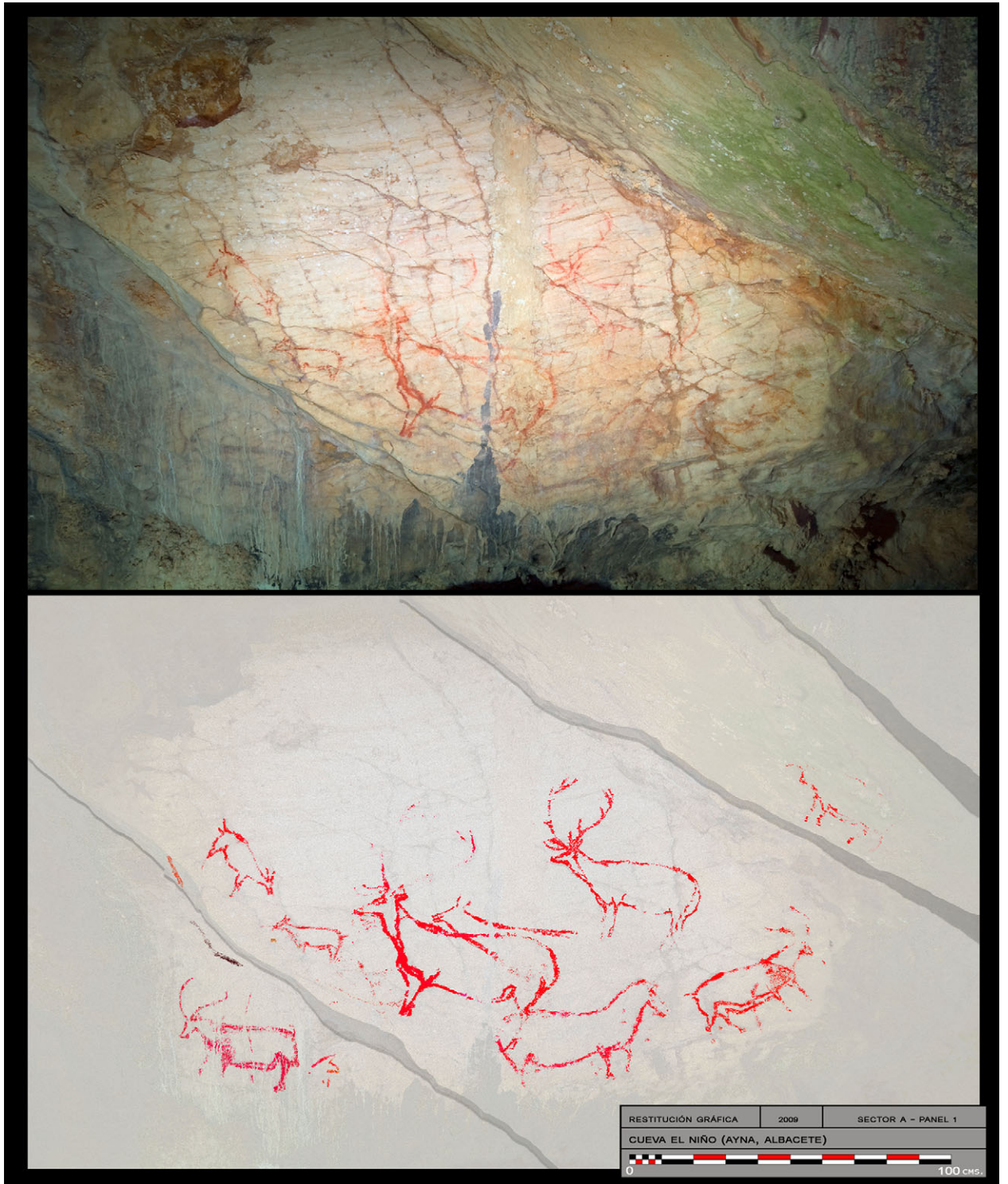


Fig. 5.
Main panel of Palaeolithic paintings (photo: D. Garate; illustration: D. Garate)



Fig. 6.
Neolithic knapped (a) and polished (b) lithic industry and pottery (c) (photo: A. García-Moreno,
A. San Emeterio, J. Rios-Garaizar & M. Cubas)

Ungulate remains mostly consist of ovicaprids, either goats or sheep. A significant number of rabbit (*Oryctolagus cuniculus*) remains were also found, as is usual in Mediterranean Spain. The site also contains post-Palaeolithic paintings, located over the outer wall of the cave entrance. The panel, assigned to the Levantine style, is composed of ten human representations. Taken together, current evidence suggests Neolithic occupations at El Niño related to pastoralism, possibly as part of a transhumance system combining the open lowlands and the mountainous highlands of the Segura River basin (Davidson 1980).

SUMMARY

In conclusion, El Niño cave enables further study of the dynamics of prehistoric human settlement in south-eastern Iberia. Fifty years later, the review of the 1973 excavation and the study of its archaeological materials and rock art provide new insights on the evolution of Neanderthal populations, the occupation of inland Iberia during the Upper Palaeolithic, and the process of neolithisation in south-eastern Spain.

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Note

¹ All radiocarbon dates have been calibrated against IntCal20 (Reimer *et al.* 2020) in OxCal v. 4.4 and are reported at 95% probability.

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RÉSUMÉ

La grotte d'El Niño (Aýna, Albacete, Espagne): occupations du Paléolithique moyen récent, art pariétal et niveaux néolithiques dans l'arrière-pays ibérique, par Alejandro García-Moreno, Miriam Cubas, Iain Davidson, Diego Garate, Inés López-Dóriga, Ana B. Marín-Arroyo, Miguel Ángel Mateo-Saura, José E. Ortiz, Ana Polo-Díaz, Joseba Rios-Garaizar, Aixa San Emeterio, Trinidad De Torres et Rachel Wood

La grotte d'El Niño, située à la limite sud-est de la Meseta espagnole, abrite une séquence discontinue comprenant des niveaux du Paléolithique moyen et du Néolithique, ainsi que des peintures du Paléolithique supérieur et de style levantin. Il s'agit d'un site clé pour comprendre les occupations humaines de l'intérieur de la péninsule Ibérique au cours du Paléolithique et de la Préhistoire récente. Cet article résume les principaux résultats d'un projet multidisciplinaire visant à définir les occupations humaines préhistoriques du site.

ZUSAMMENFASSUNG

Die El Niño Höhle (Aýna, Albacete, Spanien): Das späte Mittelpaläolithikum, Felsbilder und die neolithische Besiedlung im iberischen Binnenland, von Alejandro García-Moreno, Miriam Cubas, Iain Davidson, Diego Garate, Inés López-Dóriga, Ana B. Marín-Arroyo, Miguel Ángel Mateo-Saura, José E. Ortiz, Ana Polo-Díaz, Joseba Rios-Garaizar, Aixa San Emeterio, Trinidad De Torres und Rachel Wood

Die Höhle El Niño am südöstlichen Rand der spanischen Meseta beherbergt eine diskontinuierliche Abfolge von mittelpaläolithischen und neolithischen Schichten sowie Felsmalereien in spätpaläolithischem und levantinischem Stil. Es handelt sich um eine Schlüsselstelle für das Verständnis der menschlichen Besiedlung des iberischen Binnenlandes während des Paläolithikums und der frühen Vorgeschichte. Dieser Beitrag fasst die wichtigsten Ergebnisse eines multidisziplinären Projekts zusammen, das darauf abzielt, die prähistorischen menschlichen Besiedlungen an diesem Ort zu definieren.

RESUMEN

La Cueva del Niño (Aýna, Albacete, España): Paleolítico Medio, arte rupestre y ocupaciones neolíticas en el interior de la Península Ibérica, por Alejandro García-Moreno, Miriam Cubas, Iain Davidson, Diego Garate, Inés López-Dóriga, Ana B. Marín-Arroyo, Miguel Ángel Mateo-Saura, José E. Ortiz, Ana Polo-Díaz, Joseba Rios-Garaizar, Aixa San Emeterio, Trinidad De Torres y Rachel Wood

La Cueva del Niño, situada en el reborde sudeste de la Meseta castellana, alberga una secuencia discontinua que abarca desde el Paleolítico Medio hasta el Neolítico, además de pinturas rupestres paleolíticas y de estilo Levantino. Se trata por lo tanto de un yacimiento clave para comprender la ocupación del interior de la Península Ibérica durante el Paleolítico y la Prehistoria Reciente. Este artículo recoge los principales resultados de un proyecto multidisciplinar destinado a definir las diferentes ocupaciones del yacimiento a lo largo de la Prehistoria.