



## U-series and $^{14}\text{C}$ datings for a newly discovered decorated area in the Palaeolithic cave of La Peña de Candamo (Asturies, Northern Spain)



M<sup>a</sup> Soledad Corchón<sup>a\*</sup>, Diego Garate<sup>b</sup>, Olivia Rivero<sup>c</sup>, Hélène Valladas<sup>d</sup>, Edwige Pons-Branchu<sup>d</sup>, Xabier Murelaga<sup>e</sup>, Paula Ortega<sup>a</sup>, Francisco J. Vicente<sup>f</sup>

<sup>a</sup> University of Salamanca, Department of Prehistory, Ancient History and Archaeology, Spain

<sup>b</sup> Archaeological Museum of Bizkaia (Basque Country)—Arkeologi Museoa, Spain

<sup>c</sup> University of Cantabria, Cantabria International Institute for Prehistoric Research, Spain

<sup>d</sup> Laboratoire des Sciences du Climat et de l'Environnement, CEA-CNRS-UVSQ, Spain

<sup>e</sup> University of the Basque Country, Department of Analytical Chemistry, Spain

<sup>f</sup> Archaeological Museum of Salamanca, Spain

### ARTICLE INFO

#### Article history:

Received 10 March 2015

Received in revised form 26 May 2015

Accepted 5 June 2015

Available online 6 July 2015

#### Keywords:

Cave art

U-series

$^{14}\text{C}$

Engravings

Chronology

La Peña de Candamo

### ABSTRACT

The cave known as La Peña de Candamo (Asturias, Northern Spain) was declared a World Heritage Site by UNESCO in 2008. That same year a comprehensive study of the cave was resumed, which had not been undertaken since its discovery in 1914. Current research being carried out has made it possible to locate a new area decorated with paintings and carvings, and in which evidence of human occupation has also been detected. This area is called the "Gallery of Batiscias", located at the bottom of the cavity next to a small cone of clogged scree that seals off a now-blocked entry from the outside.

Dating through Uranium series and  $^{14}\text{C}$ , has enabled us to estimate the chronology of the archaeological evidence located in this area (lithic industry, ochres, bones and carbons), where the artistry was also carried out. Analyses have also allowed us to identify the Palaeolithic access points to this decorated gallery. In this regard, the U/Th Holocene age obtained for the speleothems that seal the corridor connecting the *Great Hall* to the *Gallery of Batiscias* indicates that circulation between the two areas was possible in the Palaeolithic age. In addition, the 28 ky dating obtained for the carbonate crust that seals the scree over the exit to the outside from the gallery shows that, as from that moment, access was only possible from the *Great Hall*.

© 2015 Elsevier Ltd. All rights reserved.

### 1. Introduction

The cave La Peña de Candamo (Asturias, Northern Spain) contains one of the classical sets of Palaeolithic parietal art on the Cantabrian coast (Fig. 1); it was discovered in 1914 and published some years later (Hernández-Pacheco, 1919). After its scientific discovery, the cave barely aroused interest among researchers (Rodríguez, 2012), and the lack of control of visitors led to an important deterioration of the cave and its parietal art, to the point that it was temporarily closed to the public in 1979 (Corchón and Garate, 2010).

In 2008, the cave was declared a World Heritage Site by UNESCO and in that same year an interdisciplinary team began a comprehensive study of it under the direction of Dr. María Soledad Corchón Project: MICINN-FEDER (Ref: HUM2007-66057/HIST), and MINECO (Ref. HAR2010-17916). I.P: M Soledad Corchón.<sup>1</sup> Since then, a meticulous exploration of the cave has led to the discovery of a considerable amount

of heretofore unknown figures in all its sectors (Corchón and Garate, 2010; Corchón *et al.*, 2013). At the same time, new three-dimensional documentation techniques (Corchón *et al.*, 2009, 2011), direct  $^{14}\text{C}$  dating by AMS (Corchón *et al.*, 2014a) and non-destructive analytical techniques using RAMAN and ERX (Olivares *et al.*, 2013) have been applied.

The exploration of the different areas of the cave has allowed us to locate new rock carvings and paintings, as well as evidence of human activity on the floor of its final gallery (Corchón *et al.*, 2010/11). This is called the *Gallery of Batiscias*, which was discovered and explored by Hernández-Pacheco (1919), who, however, did not detect any evidence of graphic activity at the time. Below we present the new samples of cave art located on different panels, the archaeological material of the floor of occupation, as well as the results obtained in the dating of the calcite crusts by means of the Uranium series method, and the organic remains through  $^{14}\text{C}$  (AMS) analysis.

### 2. Description of the evidence of occupation and the cave wall art

Currently the cave of La Peña de Candamo is accessed through a small hollow that leads to a corridor with two side chambers. The one

\* Corresponding author.

E-mail address: [scorchon@usal.es](mailto:scorchon@usal.es) (M.S. Corchón).

<sup>1</sup> Coordinating of the archaeological works on La Peña de Candamo: M<sup>a</sup> S. Corchón and D. Garate.

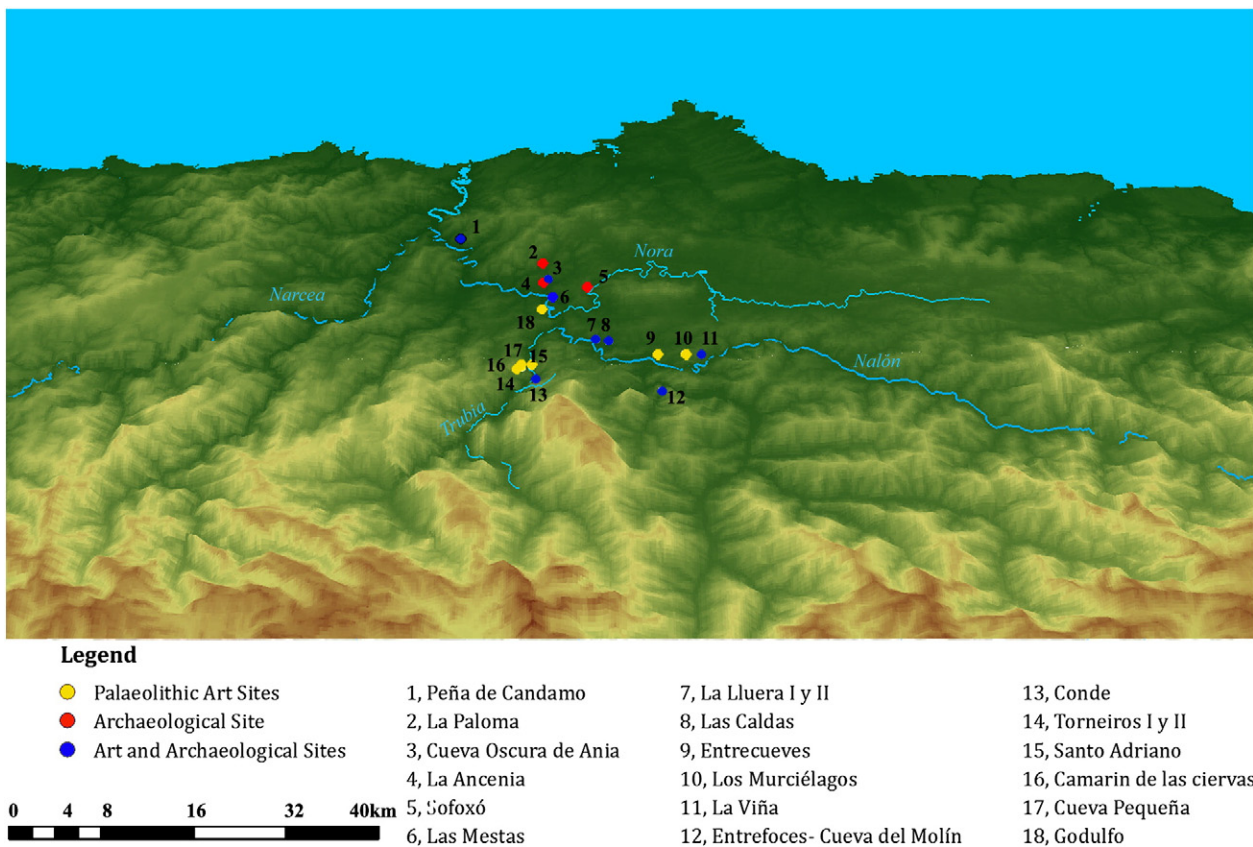


Fig. 1. Principal sites in the Nalon Valley and location of the Cave of La Peña (San Román de Cadamo, Asturias).

on the left has a drop of approximately six metres, and preserves a total of four red signs. On the right, a deep fissure descends to a lower floor whose development is blocked by large cemented blocks; no evidence of Pleistocene human activity has been found in this area. At the end of the corridor, a large number of impressive draperies and flowstones make it difficult to move towards the *Great Hall*, which is accessed through a small side corridor that was opened artificially at the beginning of the 20th century. The *Great Hall* is a circular-like enclosure measuring some 20 × 20 m on the floor and around 40 m in height, and most of the parietal art of the cave is concentrated here. Most important is a large panel measuring 8 × 4 m on which more than fifty animal figures can be observed, superimposed in a variety of colours and made using different styles and techniques. This concentration of pictures is exceptional, both because of the scarcity of similar panels (in the Cantabrian area, others have only been found in the caves of Llonín, Tito Bustillo, Altamira and Castillo), and because of the information it contributes, since the parietal stratigraphy facilitates the identification of the successive decorative phases. In any case, the poor state of preservation of the panel has limited both the study of the styles and techniques (Corchón *et al.*, 2014b) and the radiometric dating of the decorative phases (Fortea, 2000/2001; Corchón *et al.*, 2013). In this regard, the results of previous direct datings of the paintings (Fortea, 2000/2001) provided some interesting results, but in certain cases they were contradictory or even aberrant. There is no doubt that the severe deterioration of the panel has had a determinant effect on the results obtained (Hoyos *et al.*, 1998).

At the back of the *Great Hall* on the far right there is a really narrow cat-hole that rapidly becomes larger forming a series of small successive rooms over some twenty metres, making up the *Gallery of Batiscias* (Fig. 2). The last one is somewhat larger, measuring approximately 8 × 3 m, and is the only one that can be walked through standing up. A completely cemented small scree cone can be seen there; it was explored and summarily described by Hernández-Pacheco (1919),

although he did not make any other archaeological observations of the gallery. Its distance from the tourist route and the relative difficulty in accessing it explain why this gallery has been much less visited, and therefore has become much less degraded than the rest of the cave.

The floor of the last chamber shows evidence of human activity on the surface, as well as blocks and fractured speleothems (Fig. 3). Among the undoubtedly anthropic remains some lithic industry has been found, twenty quartzite pebbles, some knapped and others impregnated with ochre, a dozen fauna remains and five ochre fragments.

The lithic remains comprise an assemblage of 17 pieces, with cores, some worked pebbles (Fig. 4), and some debitage assemblages. The raw material used is local quartzite, two types of which can be identified that are very common in other Solutrean sites and levels of the Nalon Valley, such as Las Caldas Cave (San Juan de Priorio, Oviedo). One of them is Barrios quartzite, a very high quality raw material with outcrops some 30 km away, but which was collected from the terraces of the Nalon River just 800 m from the cave (Fernández-Irigoyen *et al.*, 2013). The facies identified is a whitish colour and fine-grained; its hardness and the absence of fissures determine a conchoid fracture, sharp edges and good qualities in general for knapping. It has been recognized in large blades and flakes, one of them with impregnations of ochre and charcoal (Fig. 4.8, 4.9). The other variety of quartzite is thicker-grained and also found on the terraces of the Nalon River. Since it is not as hard and has frequent cracks, it is less apt for knapping processes, although it has been recognized in several cores (Fig. 4).

The knapping techniques documented in this assemblage are based on the extraction of large flakes, in some cases with intense exploitation of the core. Among the most typical is a rubefacted one, with multipolar knapping and two opposing planes of percussion, which shows negatives of large flakes and flakes (Fig. 4.2). Another, with a cortical main percussion plane, shows traces of extraction of this same type of pieces (large flakes and flakes) (Fig. 4.1). A different rubefacted core, bipolar with two crossed percussion planes, has also been used as a

Download English Version:

<https://daneshyari.com/en/article/7446530>

Download Persian Version:

<https://daneshyari.com/article/7446530>

[Daneshyari.com](https://daneshyari.com)