Cave of Altamira and palaeolithic cave art of northern Spain. Composition, characteristics and management

La cueva de Altamira y el arte paleolítico del norte de España. Composición, características y gestión

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ABSTRACT

The World Heritage property is formed by eighteen sites: Altamira, on the List since 1985, and seventeen caves inscribed in 2008 as an extension of the original property. These sites constitute one of the most important ensembles of Palaeolithic art in the World. Located in caves, from the entrances to the deepest parts of these karst formations, it displays all the necessary elements to guarantee the authenticity and the integrity of the property: research carried out since the last third of the nineteenth century has documented a wide variety of the representations, techniques and themes that characterise this phenomenon, whose chronology spans about 30 Ky. Another remarkable feature of Cantabrian Cave Art is the good state of conservation of the parietal manifestations. Preserved in the protected environment of the deep caves for millennia, it is our obligation to conserve it for future generations. Accordingly, the authorities responsible for the sites deploy a range of administrative and curative measures which try to eliminate or, at least, diminish the risks of deterioration. These vary to some extent depending on an important factor: the opening of the caves to the public, which makes their management more complex.

Keywords
Northern Spain, Cantabrian Region, Upper Palaeolithic, Cave Art, World Heritage, Cultural Heritage Management, Conservation, Tourism

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RESUMEN

El bien incluido en la Lista de Patrimonio Mundial está formado por dieciocho sitios: Altamira, en la lista desde 1985, y dieciséis cuevas inscritas en 2008 como una extensión del bien original. Estos lugares constituyen uno de los más importantes conjuntos con arte paleolítico del mundo. Localizado en cuevas, desde la entrada a las partes más profundas de estas formaciones kársticas, despliegan todos los elementos necesarios para garantizar la autenticidad y la integridad del bien: la investigación realizada desde el último tercio del s. XIX ha documentado una amplia variedad de las representaciones, técnicas y temas que caracterizan este fenómeno, cuya cronología abarca unos 30,000 años. Otra característica destacable del arte paleolítico cantábrico es el buen estado de conservación de las manifestaciones parietales. Preservadas durante miles de años en el medio ambiente protegido de las cuevas profundas, es nuestra obligación conservarlas para las generaciones futuras. En consecuencia, las autoridades responsables de los sitios desarrollan una serie de medidas administrativas y protectoras que tratan de eliminar o, al menos, disminuir los riesgos de deterioro. Esto puede variar en cierto grado dependiendo de un factor importante: la apertura de las cuevas al público, lo que hace su gestión más compleja.
1. COMPOSITION OF THE PROPERTY

Northern Spain, also known as Cantabrian Spain, is a narrow strip of land, about 400km long and averaging 40km in width, confined between the Cantabrian Mountains in the south and the Bay of Biscay in the north. Fully exposed to oceanic conditions, its temperate climate made it an ideal place for human occupation, especially in the coldest periods of the last Ice Age. In addition, its lithology, consisting mainly of limestone, has resulted in the formation of numerous caves that were eagerly made use of by the first settlers in the region. The combination of both geographic traits provided Cantabrian Spain with excellent conditions for occupation even in the coldest phases of the last Ice Age, which explains the high population density throughout the Upper Palaeolithic and, in consequence, the great wealth of the archaeological record formed in that period of Prehistory (ca. 40,000-11,000 years ago). Cantabrian Spain is in fact one of the world’s most important centres of Palaeolithic rock art because of the very high density of decorated caves and the excellent quality of the parietal ensembles.

The suite of decorated caves listed as World Heritage by UNESCO illustrate the beginning, the flourishing and the decline of Palaeolithic rock art, an artistic cycle with a duration of nearly 30,000 years, closely linked to the appearance of a new human species, Homo sapiens. Indeed, parietal art is a characteristic phenomenon of our species, whose advent is associated with the appearance of new cultural forms implying profound material changes and the development of artistic expression through the techniques of painting, engraving and sculpture. Within that period of time, this prehistoric art is even more outstanding because of the formidable expressive capacity achieved with truly rudimentary means and the high levels of technical perfection attained.

The World Heritage property consists of eighteen caves: the Cave of Altamira, on the World Heritage List since 1985, and seventeen caves added in 2008 as an extension of the property. The caves of La Peña de Candamo, Tito Bustillo, Covaciella, Llonin and El Pindal in Asturias; Chufín, Hornos de la Peña, the four caves in Monte Castillo (Las Monedas, La Pasiega, Las Chimeneas and El Castillo), El Pendo, La Garma and Covalanas in Cantabria; and Santimamiñe, Altxerri and Ekain in the Basque Country are veritable monographs of Cantabrian Palaeolithic art, which is exceptionally rich and diverse. These additional sites complement and augment the importance of Altamira and contribute towards a better understanding of the outstanding universal value of the phenomenon of Palaeolithic art, the first art of humankind.

2. MAIN CHARACTERISTICS

The total number of Palaeolithic cave art sites in Northern Spain surpasses a hundred, which includes some of the most important ensembles in the world. The greatest concentration of sites is in the sector between the River Nalón in the west and the River Miera in the east; i.e. the area covering the centre and east of Asturias and the centre-west of Cantabria. To these we must add the decorated caves in the provinces of Biscay and Gipuzkoa, belonging to the Basque Country.
Figure 1: Map of northern Spain with the positions of the caves listed as World Heritage (© Consejería de Educación, Cultura y Deporte, Gobierno de Cantabria / Ingenia, S.L.)

Figure 2: “El Camarín” in Cueva de la Peña de Candamo (San Román de Candamo, Asturias) (© Consejería de Educación, Cultura y Deporte, Gobierno del Principado de Asturias)
In the Upper Palaeolithic, human groups drew on the walls and ceilings of these caves numerous depictions belonging to two main thematic groups: animal figures (including the human figure) and the so-called signs. The figurative repertoire, although it is varied, is by no means large. The animals depicted are restricted to a certain range of species (bison, horse, stag/hind, ibex and aurochs and a few more) which appears to have become almost “fixed” in an early moment of the development of the art and which continued in use after that time. The catalogue of signs varies with clear regional and chronological components.

The art does not appear to have been distributed in the caves at random. Instead the figures display a certain organisation in groups or panels with an internal structure, where the elements are combined in central or secondary themes. The compositions that are produced can be seen repeated at different cave art sites.

The techniques of engraving and painting were used either on their own or together in the same figure. The former could be done simply with a finger in soft surfaces, or with the help of an implement such as a flint burin; paint could be applied as a line, by dabbing it on as a series of dots, by spreading it as a colour-wash, or by spraying it on the wall by means of an airbrush. Engraving is seen in a wide range of forms; from very fine and shallow lines, that may be single or repeated, to the chiselling away of the rock surface to obtain the effect of a bas-relief.

The pigments used in the paintings were of mineral (iron and manganese oxides) and organic –vegetable-origin (charcoal, soot). They were used alone or mixed together, or sometimes with the addition of material of animal origin. During the long cycle of Palaeolithic art, various techniques were used for preparing and applying the mineral and organic colouring materials. The mineral pigments were ground up and mixed with water, then applied on the wall by spraying, by dabbing or with a brush. The mineral could also be used in a solid state, sometimes after being prepared, as in the so-called “ochre pencils”. The most common organic colouring matter was charcoal, used to draw the outline of the figures or to fill their interior –occasionally with the help of the artist’s hand– and in the form of veritable charcoal pencils to reproduce the tiniest detail of the animals.

Regarding the stylistic characteristics of this art, in the first place a clear difference can be seen between the depictions of animals and of humans. Although both are normally represented in profile, the animals reproduce, in different ways and degrees of realism, the most characteristic features of the animals’ bodies, whereas human figures are always simplified or directly deformed. However, humans are sometimes directly and personally represented in the form of the stencilled outlines of their hands held against the cave wall. The treatment of the figures fluctuates between a high degree of “realism”, which on occasions can be amazingly detailed, and a sketched, schematic approach that reduces the animal to its essential forms. Both approaches existed throughout the Upper Palaeolithic, and occasionally affect different figures within the same composition.

During the course of this long artistic cycle, general evolutionary trends can be seen in relation with the conventional representation of volume. The search for the third dimension includes the definition of depth (with different formulas for perspective in the animals’ horns and limbs) and the structuring or modelling of the interior of their bodies (going from a simple outline to the use of dividing lines, colour fill or bands of engraved lines to express variations in the animals’ coats). In the same way, changes can be noted in the representation of different parts of the body (in the proportions of whole or partial figures or in the number of limbs represented) as well as in their coordination and animation.

Although the interpretation and meaning of this art is still (and always will be) a subject of discussion, these depictions, both figurative and abstract, realistic and conventional, naturalistic and schematic, formed a vehicle of expression for the thoughts of Palaeolithic people, represented in images that were converted in symbols whose meaning escapes us, but which reflect a certain concept of the world where the natural and supernatural meet.

A series of traits characterise Palaeolithic rock art in northern Spain and differentiate it from the art in other parts of the Iberian Peninsula and Europe (González el al. 2003).

The cave art ensembles in the Cantabrian region undoubtedly display certain unique characteristics. Local phenomena include variations of a strictly regional nature; thematic and technical traits that give this group of sites its own personality and differentiate it from other Palaeolithic rock art regions. Those distinctive traits are:

1. A very high number of sites, over a hundred, which in a relatively small geographic area results in an extremely high density of rock art sites.
2. The existence of ensembles of exceptional importance because of their large number of representations and quality, including several phases or “styles” within this artistic cycle, such as Altamira and the Monte Castillo caves in Cantabria, Tito Bustillo in Asturias, and Ekain in Guipúzcoa.
3. A peculiar distribution of animal figures, with a high proportion of the most common ungulates in the region (red deer hinds and stags, horses, ibex, aurochs and bison) and fewer cold environment species like reindeer and mammoth. This peculiarity is underscored by the special pre-eminence of the figures of
hinds, which contrasts with the proportions of males and females of this species found in other regions.

4. The existence, limited to this region (particularly in the western and central sectors), of specific abstract representations, particularly quadrilateral and oval signs and the symbols known precisely as “Cantabrian” claviforms.

5. Some especially significant associations of animal figures, such as hind and horse particularly in the Solutrean, and horse and reindeer in the late Magdalenian.

6. The presence of “regional styles” found in clearly limited areas and periods, such as the so-called “Ramales School” of paintings (in the east-central sector and dated in the archaic phase of Palaeolithic art) or the striated engravings (in the same sector in the early Magdalenian).

7. The perfection achieved in the combination of technical procedures in the Magdalenian, with the astonishing results visible in the bichrome and polychrome paintings in Altamira, La Pasiegaga, El Castillo, Tito Bustillo and Ekain.
Figure 5 · Detail of the main panel in Cueva de El Pindal (Ribadedeva, Asturias) © Consejería de Educación, Cultura y Deporte, Gobierno del Principado de Asturias
Figure 6: "Ceiling of the Polychromes" in Cueva de Altamira (Santillana del Mar, Cantabria) (© Consejería de Educación, Cultura y Deporte, Gobierno de Cantabria / Colección Pedro Saura)
Figure 7 · Engraved figure of a horse inside Cueva de Hornos de la Peña
(San Felices de Buelna, Cantabria) (© Consejería de Educación, Cultura y
Deporte, Gobierno de Cantabria / Colección Pedro Saura)
Figure 8 - Panel of the Hands in Cueva de El Castillo (Puente Viesgo, Cantabria) (© Consejería de Educación, Cultura y Deporte, Gobierno de Cantabria / Colección Pedro Saura).

Figure 9 - Paintings of a horse and reindeer in Cueva de Las Monedas (Puente Viesgo, Cantabria) (© Consejería de Educación, Cultura y Deporte, Gobierno de Cantabria / Colección Pedro Saura).
Palaeolithic rock art is as fragile as it is valuable. Preserved for thousands of years in the darkness of the caves, during this time it has been subjected to the natural dynamics in those underground environments, and its survival is the best proof of the stability of those conditions. Despite the alterations caused by natural hydrogeological and biogenic factors, this ancient art has reached the third millennium AD in a more than acceptable state of conservation. However, its discovery itself, badly planned attempts at conservation and, above all, the inadequate opening of caves to tourism have been the main threats to its protection. Human action alone has brought about, in just a few years, what Nature had not effectuated in the course of centuries.

Air-tight entrances, adaptations, modifications and alterations to the caves and rock-shelters, lighting installations, unauthorised incursions and mainly massive visits to show caves have in some cases caused profound changes to the environmental conditions that enabled the conservation of the rock art, seriously endangering its survival. Variations in the regime of air circulation, increases in the temperature, relative humidity and carbon dioxide, biological pollution, vandalism and negligence have broken the delicate balance in a very sensitive environment, resulting in various kinds of harm to the paintings and the rock surface, including the rock cracking and flaking off; the growth of calcite hiding or covering the figures; the adsorption of
the paintings in the rock surface, causing them to practically disappear or to fade into stains of colour; the disaggregation and corrosion of the rock by the combined action of condensation, water acidification and certain micro-organisms; the erasure of representations drawn on soft clay surfaces and their covering by graffiti or the smoke from carbide lamps.

Therefore, numerous and varied risk factors may contribute individually, or more usually in combination, to the deterioration of the parietal ensembles and the caves that contain them. They act in different domains, in different ways and to varying degrees (Fortea et al. 1993; Ontañón et al. 2011). However, it can be stated that these factors of deterioration are today under control. Effective administrative protection of the caves, continuous supervision, restrictions in the number of visitors to show caves and the monitoring of micro-environmental conditions and biological impact, allow us to be optimistic about the possibilities of preserving for future generations this heritage of incalculable value received from our most remote ancestors. In this first part of the 21st century, we should aim to explore new approaches in the methods used to conserve rock art and apply the latest techniques enabling innovative procedures and increasingly high levels in the capacity and efficacy of data collecting and processing. This should be carried out in an eminently practical way to acquire greater skill in decision-taking processes leading towards a responsible and sustainable management of this magnificent heritage (Ontañón et al. 2014).

3. MANAGEMENT AND TOURISM

The instruments for the protection and management of the listed sites guarantee, or should guarantee, that the outstanding universal value and the conditions of integrity and authenticity that existed when the sites were listed are maintained in the future.
Indeed, in principle the property enjoys appropriate legislative, statutory and institutional protection to ensure its long-term conservation, over and above any political fluctuations. It is given the highest level of protection recognised by legislation at all levels of Spanish administration: national, regional and local. In addition, the full and effective application of these measures ensures the real protection of the property against developments and changes that might have negative effects on its outstanding universal value, integrity and authenticity (Fernández, Lobo, Ontañón 2012).

In the context of Spanish territorial organisation and the administrative autonomy of the different entities in its structure (autonomous communities, provinces and municipalities) the property is managed in a decentralised administrative framework. In this way, practically all the competence in Cultural Heritage (except aspects of exportation and illicit trade) has been transferred to the autonomous communities; in the present case, to the Principality of Asturias, the Autonomous Community of Cantabria and the Basque Country. In addition, the latter region is formed by three provinces whose deputations are also competent in the matter.

In order to coordinate the management of the property, which requires inter-regional and inter-administrative (state-autonomous communities) action, the administrations involved have formed a joint body with specific functions whose objective is to carry out the unified management of the property by means of a Management Plan. These administrations recognise its authority and suitability for this objective and guarantee the effective application of its management plan, as it is founded on its respective administrative attributions, without going beyond them in any circumstances.

The “Coordination Commission of the Property Altamira Cave and Palaeolithic Cave Art of Northern Spain”, founded within the Historical Heritage Council, is the body in charge of coordinating and supervising the protection, conservation, research and dissemination of the property. The members of the commission are designated by the respective regional Directorate Generals and include political and technical representatives (Technical Commission). The Presidency is rotary and the Secretariat is designated by the Ministry of Culture of Spain.
Figure 12 - Figure of a horse in the Lower Gallery at La Garma (Ribamontán al Monte, Cantabria) (© Consejería de Educación, Cultura y Deporte, Gobierno de Cantabria / Colección Pedro Saura).
Figure 13: Frieze with hinds painted in Cueva de Covalanas (Ramales de la Victoria, Cantabria) © Consejería de Educación, Cultura y Deporte, Gobierno de Cantabria / Colección Pedro Saura.
As well as by criteria of protection and conservation, the management of cultural properties should be guided, as far as possible, by another concept connected with the social dimension of cultural heritage that has grown in importance in recent years: the conciliation of the conservation of cultural heritage with its public use and enjoyment. The expansion of forms of “alternative tourism”, including rural and cultural tourism, has resulted in increasingly intense interaction between cultural heritage and tourism in a very dynamic dialectic, which is still not totally resolved, between the notion of cultural heritage as a property to be conserved and, at the same time, as a resource susceptible to an economic and social use (Tourtellot 2007).

The caves open to the public in Northern Spain form an important heritage property which is also exploited as a tourist resource. They include some of the caves listed as World Heritage, like La Peña de Candamo, Tito Bustillo and El Pindal in Asturias, Chufín, Hornos de la Peña, El Castillo, Las Monedas, El Pendo and Covalanas in Cantabria, and the first part of Cueva de Santimamiñe in Biscay. In these circumstances, it is the duty of the administration responsible for them and also of all the actors in the tourism industry to ensure the conservation of the properties by making them visitable in the framework of “sustainable tourism”.

The caves with rock art and the museums and cultural centres associated with them (like Asturias Archaeological Museum, Tito Bustillo Rock Art Centre, Teverga Prehistory Park, Altamira National Museum, Prehistory and Archaeology Museum of Cantabria, Biscay Archaeological Museum and Ekainberri) receive several hundred thousand visitors a year. At least a part of these can be attributed to a specialised market known as “heritage tourism”, which includes ecotourism and cultural tourism and which is guided by ethical notions of heritage conservation. Additionally, another part of these visitors can be associated with local, national and international tourism, with interests that occasionally coincide with the previous group and who share an interest in “real” experiences such as direct contact with the underground world and its manifestations of rock art (Dominguez Arranz 2009). As the general educational level rises, tourists express a growing interest in the natural environment, history and culture and are increasingly aware of the need to protect it. It is therefore important to inform tourists and tour operators not only about the natural and cultural underground heritage that can be seen in the caves, but also about the work carried out to conserve it and show it to the public through appropriate actions for the publicity and interpretation of the sites. In the case of limestone caves, in the first place it is necessary to adapt the regime of visits to the “carrying capacity” of the caves, defined by the micro-environmental conditions characterising each site, and secondly to arrange and manage the flow of visitors according to the “management capacity” defined by the available human and material means.

Only then can the conservation of the caves and their rock art be guaranteed while offering a satisfactory product for all types of visitors, making their visit an agreeable and interesting experience that will encourage them to make known the outstanding universal values of this underground heritage. When the caves in Northern Spain were added to the World Heritage List, a commitment was acquired regarding the responsible and sustainable management of this property, which we should leave to coming generations in the same state in which it reached us from the depths of geological and prehistoric times.
REFERENCES AND BIBLIOGRAPHY


Figure 15 · Parietal engravings of a reindeer and Arctic fox in Cueva de Alttxerri (Aia, Gipuzkoa) (© Departamento de Cultura del Gobierno Vasco / Pedro Saura Ramos)


