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ABSTRACTS & FIELD TRIPS GUIDEBOOK

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Altamira Cave (Santillana del Mar, Cantabria)

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Although a hundred and twenty-five years have gone by since Marcelino Sanz de Sautuola discovered this cave art ensemble, and over a hundred decorated caves, in Cantabrian Spain alone, have been discovered since then, Altamira remains the example par excellence of Palaeolithic cave art. Its polychrome bison certainly constitute one of the most amazing creations in all western prehistory. Both circumstances – the first Palaeolithic cave art ensemble to be studied, and the exceptional conservation and quality of its art – have made this site into a cultural point of reference of the first order, and also a kind of battlefront where different interests and scientific approaches converge.

1. Location and Archaeological Context

Cueva de Altamira is situated about two and a half kilometres to the south-west of the town of Santillana del Mar. Its entrance is very near the top of a low limestone hill, just 161m above sea level, in a dominating position over the surrounding land. From this place, as its name indicates (Altamira could be translated as "high view"), there are wide panoramas over the regional territory, especially an area of karst to the west and the north, where the coastline is, about 5km away at the present time, or towards the valley of the River Saja, hardly two kilometres to the south.

This area of the Cantabrian Marina, relatively open terrain that could easily be crossed by herds of ungulates and groups of hunters, was used with certain intensity by Upper Palaeolithic human groups (ca. 37,000-11,500 BP). In fact, the archaeological site of Altamira is not an isolated case, but rather the icing on the cake. In a radius of ten kilometres around the cave many other Palaeolithic settlements are known, in some cases with parietal decoration, even if they are much less spectacular. Thus, we can find the caves of Las Aguas (Novales) and El Linar (La Busta) to the west of Altamira, La Clotilde (Santa Isabel de Quijas) by the River Saja in the south, Cueva de Cudón in the east, across the River Besaya, and also Cueva de Sovilla up-river, at the entrance to Buelna valley. Simple Upper Palaeolithic deposits
are even more abundant in the area, usually habitat sites. They include the caves of La Peña de Caranceja, Cualventi, Gurugú and La Pila, among others. This relative archaeological wealth must be a pale reflection of the original situation, or of the total sum of remains left behind by human groups in the Upper Palaeolithic. But it is all we have to obtain an idea of the life of the primitive communities in our land.

2. Description of the Cave

The entrance of Cueva de Altamira faces north-northeast, at just over 160m above sea level. It leads to a relatively straightforward cave nearly 300m long. It is especially significant that it is formed in Cretaceous limestone strata (Cenomanian-Turonian), about 1m thick, alternating with thin beds of clay, and generally in a horizontal position. The formation of vertical fissures and the fracture and collapse of blocks of limestone are more common features in Altamira than in other caves formed in thicker beds of limestone or with more oval cross-sections. This permanent structural instability has its implications in a very angular and broken longitudinal development, in passages and chambers with rectangular cross-sections, with flat roofs and vertical walls, sometimes offering overhanging surfaces, whose vertical faces and horizontal steps were used by the artists.

On the other hand, this orthogonal shape has resulted in great instability, especially in the areas that are more exposed to changes in temperatures, near the entrance. As a result, the excavations in the vestibule have been able to define different phases in the collapse of large limestone
blocks, which has occurred throughout the history of the cave. The main episodes frame the Palaeolithic anthropic occupations stratigraphically. They are located below the occupation level of Solutrean chronology (ca. 21,000-17,000 BP), and finally they partly seal the following early Magdalenian level (ca. 16,000-14,200 BP). The latter episode of collapse took place during middle or late phases of the Magdalenian. It made the entrance smaller and more difficult, and possibly made the vestibule a less attractive place for a habitat. As time passed, the blockage at the entrance was consolidated by carbonate concretion, and with it, Cueva de Altamira was slowly forgotten.

In addition, the instability to which we have referred may have been increased by dynamiting at a nearby quarry (before the paintings had been discovered) and possibly by the work carried out to lower the floor in the Hall of the Polychromes or, at the present, by any building work that could affect the limestone beds in which the cave has formed. This instability has made it necessary to take action to preserve the cave. The main work, in the 1920s, consisted of building large pillars and supporting walls to prop up the roof in different parts of the cave (see the plan in Fig. 1). The most important supports, between the vestibule and the decorated chamber, artificially separated these two spaces which had originally been united.

3. The exploration of Altamira

It seems that the cave had been known to the local people of Santillana and Vispieres since 1868. Don Marcelino Sanz de Sautuola, a restless scholar, naturalist and archaeologist, studied it between 1875 and 1879, and he discovered and correctly interpreted the Palaeolithic deposit in the entrance. Here he found abundant tools in stone, bone and antler, charcoal, and remains of the animals and shellfish consumed on the site, and which were similar to the kind of material recovered from French caves. He also spotted some black drawings on the cave walls, although he did not think much about them at first. In 1879, his daughter Maria accompanied him on one of his visits, and discovered the large bison painted in red and black on the roof at the back of the entrance vestibule, which was very low above the floor in this part of the cave. This discovery was the start of great events. Sautuola began the study of the art, and soon decided to publish his results. In a memorable booklet printed in 1880, he proposed the Palaeolithic chronology of the paintings in Altamira, and the deposit, which would be synchronic (Sanz de Sautuola 1880; Madariaga de la Campa 1976). As is well known, this was in complete contradiction with the established concept people then had of primitive societies and evolution, and started a bitter controversy, which we cannot go into now. This only ended in the first years of the twentieth century, when the accumulation of evidence from sites in the Dordogne and French Pyrenees forced not only the acceptance of the Palaeolithic chronology of the paintings in Altamira, but also the most transcendental point in the discussion: the full aesthetic and intellectual capacity of populations that were "primitive" technically and
economically, whether they were Palaeolithic hunters or modern societies. The controversy had great scientific significance and has often been described. The basic information about the discussion appears in the works of B. Madariaga (1976; 2000); while more recent, and recommendable, assessments have been made by E. Palacio (2002) and M. R. González Morales and O. Moro (2002).

At the beginning of the century, the French prehistorians, E. Cartailhac and H. Breuil (the latter was just beginning his fascinating career in Prehistory), travelled to Santillana and made a full, detailed study of Altamira. Their documentation and analysis of the cave art, aimed at proving its Palaeolithic age, and at comparing it with the art of modern primitive people, was completed with the results of the excavations carried out by Alcalde del Río, an important local researcher who was then beginning his collaborations with Breuil (Cartailhac & Breuil 1906; Alcalde del Río 1906).

Despite this, the fundamental study of Altamira is the volume published by H. Breuil and H. Obermaier three decades later, in 1935. It had a great deal of novelties in comparison with the previous work of 1906, for example in the drawings and measurements, which were a consequence of the improved facilities for copying and lighting, as the floor below the polychromes had been lowered. Together with more adequate financing, this allowed more exhaustive documentation and the correction of some errors in the first book, both in the stratigraphic order of the figures in certain panels (the superimposition of different figures was one of the main ways in which the parietal art could be put in chronological order), and in the copies made of
some of the figures themselves. Furthermore, it included the results of new excavations undertaken in the vestibule by Obermaier in 1924 and 1925, which completed the results obtained by Alcalde del Río.

Opinions about Altamira, regarding the chronology and order of the cave art, were changed substantially by the publication of A. Leroi-Gourhan's synthesis (1965). Although this prehistorian was not in possession of specific and detailed documentation on the cave, and his study has striking omissions and great overall simplification, he proposed an older age for the polychrome animals. In this way, for Leroi-Gourhan, the bison on the famous ceiling, the technical and expressive apogee of the Upper Palaeolithic, need not necessarily belong to its final stages, as Breuil had thought. Instead, based on analogies between rock art and portable art, he proposed that they had been painted in the early or middle Magdalenian (or in his Styles III - IV). This older date has been ratified by the absolute radiocarbon determinations obtained for the polychromes since 1992.

Since the 1960s, a large number of summaries of the fieldwork carried out in the first third of the century have been published. These include impressions, reinterpretations and up-dates (and to which the present essay might be added), but they contain hardly anything of a comparable standard to those first monographs. The most interesting contributions have been the studies of the last passage in the cave (Zone X, see the plan in Fig. 1), which contains a large number of figures, made by L. G. Freeman and other prehistorians, the new digs carried out in the vestibule by the same researcher and J. González Echegaray, the radiocarbon dating of the cave art and the deposit, and the splendid photographs of the art recently published (Freeman, et al. 1987; Freeman & González Echegaray 2001; Valladas, et al. 1992; Moure Romanillo, et al. 1996; Saura et al. 1998; Múzquiz 1988). But this large number of publications cannot disguise the current lack of knowledge we have about Altamira. Breuil's fieldwork, excellent for its day, is simply not good enough at the present time. In fact, just limiting ourselves to the documentation of the art, we can point out that there are many figures in Altamira that have never been published, other animal figures that were described in publications have not been reproduced in drawings, and even the documentation of the main ceiling is limited to the more visible and spectacular figures, with partial reproductions of each figure. Finally, the available survey has been designed to show the building work in the cave and the paths through it, rather than to illustrate the areas used and chosen by its Palaeolithic explorers and their working conditions.

4. Palaeolithic occupations at Altamira

If, for a moment, we leave aside the large composition of polychrome animals, the rest of the archaeological record inside Altamira is quite conventional and relatively similar to the assemblages at other decorated
caves or archaeological sites in the region. The walls and ceilings inside the
cave contain a large number of engravings, black paintings and others in red,
yellow and violet, representing animals and anthropomorphic beings,
abstract signs and non-figurative images. Similarly, at the cave entrance,
within daylight, a deposit was formed with the remains of human occupation
that were especially frequent between approximately 19,000 and 14,000 years
ago, in the Magdalenian and Solutrean periods. In this lapse of time, the
parietal art inside the cave was produced, or at least most of it, as researchers
are not unanimous on this point, as we shall see below.

The different excavations carried out in the vestibule have therefore
been able to distinguish two occupation levels corresponding to late phases of
the Upper Palaeolithic. The oldest, the Solutrean layer (a period dated in
Cantabrian Spain between 21,000 and 16,500 BP), contained a great deal of
flint and quartzite tools; the hunting points made with flat retouch, and a
concave or notched base, are especially characteristic. There were also deer
antler spears; monobevelled, bi-pointed assegais with central flattening,
and other bone artefacts. Among these, the most interesting are four
perforated pendants made from bone plaquettes and decorated with lateral
engraved marks. A bone from this level has been dated to 18,540 ± 320 BP, a
date which fits in perfectly well with our knowledge of the Solutrean period.

Figure 3. Reproduction made of the polychrome bison on the ceiling, made by H. Breuil.
These magnificent copies, although owing much to his interpretation, defined the public
image of the art during much of the 20th Century
(Breuil & Obermaier 1935, lamine XXVII).
The early Magdalenian layer had a much more abundant bone and antler assemblage, as is usual in this period. The tools included assegais with a quadrangular section and monobevelled base, perforated needles, spatulas, pendants made from horse and aurochs teeth, and many stone scrapers, burins and backed bladelets. This layer has been dated by C14 several times, with results between 15,910 ± 230 and 13,900 ± 700 BP. A scapula with an engraved deer was dated by accelerator mass spectrometer to 14,480 ± 250 BP. These scapulae, which often have striated hind's heads, are very similar to some of the parietal engravings inside the cave. The date, therefore, means that these examples of portable art can be attributed to the early Magdalenian, as at El Castillo, El Juyo or the Asturian cave of El Cierro, thus overcoming the doubts caused by their position in the area of contact between the Solutrean and Magdalenian layers in Altamira (Straus 1983; Utrilla Miranda 1981; Altuna & Straus 1976; González Sainz 1993; Álvarez Fernández 2001).

Human activity was not limited to the area with daylight in vestibule, as the distribution of paintings and engravings already makes clear. Interesting artefacts have been found on the cave floor in different places inside. The most important was a fragment of a perforated antler staff, with several engraved figures of chamois, and which was found in the Hall of the Polychromes. A number of borers, a fragment of spatula, and a tube made from a cut bird's bone, were found in the Main Gallery. Even more surprising was the discovery of three flat *Pecten* shells, i.e. the opposite of the concave shell used for drinking by medieval pilgrims. They were perforated next to their hinge, and hidden under a block about half way along the cave passage (Álvarez Fernández 2001).

A discussion, which still has not reached a conclusion, is based on determining whether the human occupations were limited to the periods mentioned above – Solutrean and early Magdalenian – or other older occupation existed. In the case of Altamira, this doubt is caused by the excavation difficulties in the vestibule, which have to avoid the large limestone blocks that have collapsed at different times, so that it is very difficult to dig any deeper into the deposit. This problem is the reason why we still cannot be certain whether pre-Solutrean occupations took place or not. This, in turn, leads to different chronological proposals for the paintings on the walls and ceiling inside the cave. It is important to point out now that the archaeologist responsible for the most important excavations (H. Obermaier, in the 1920s) expressed in unmistakeable terms his belief in older occupations in the vestibule, which he attributed to the “Aurignacian” because of the find of some “Font-Robert blades”, a lithic implement that is now considered as characteristic of the Gravettian period (between 27,000 and 21,000 BP in Cantabrian Spain). In their 1935 report (Breuil & Obermaier 1935: 196), they noted that “it is probable that other Palaeolithic layers, especially of Aurignacian age, are found below [the Solutrean layer], as paintings and engravings of that period are found inside the cave”. A similar
statement is made on page 36. This stylistic argument is completed by H. Obermaier's note (1929: 9-11), where he offers as proof the find of some “Font-Robert blades”. Although this publication is difficult to locate, it is reproduced in the documentation provided by B. Madariaga de la Campa (1972: 243-245). In our opinion, we believe that Obermaier's observation, often forgotten, is quite feasible. Above all, because among the parietal art in the cave (even though most of the figures are indeed of Solutrean or early Magdalenian age), some depictions appear to belong to a much earlier style, just as Breuil and Obermaier claimed.

The human groups who occupied Altamira, coinciding with the coldest moments of the Upper Palaeolithic, lived from the hunting of red deer, and occasionally bison or aurochs, or animals of rocky terrain such as ibex and chamois. Their diet was complemented by birds, fish, and very rarely, by seal, and the gathering of diverse products, which included marine molluscs. The gathering of sea food on the coast, which would then have been noticeably further away, and the return to the cave with limpets (*Patella vulgata*) and winkles (*Littorina littorea*) became more important in the early Magdalenian.

5. Graphic Activity: An Assessment of the Parietal Art

The best overall study of Altamira, published by Breuil and Obermaier in 1935, differentiated ten topographic areas along the 300m length of the cave. Cave art is found in all of them, from the rear of the entrance vestibule to the final narrow passage. However, the artists did not distribute the decoration at random throughout those areas, but were particularly interested in enclosed areas, the chambers and side-passages with only one entrance and no way out. Thus, they worked most intensely at the back of the vestibule, which had a relatively independent chamber with a flat roof on its left-hand side (Zone I), as well as in a chamber on a lower level, on the left, half-way along the cave (Zone VI, or *Hoya*, The Pit), or in other narrow side-passages. Finally, and again quite intensely, they decorated the final passage, where it is necessary to stoop and crawl (Zone X, or *Cola de Caballo*, The Horse's Tail). In fact the Zones I and X contain over 95% of the cave art in Altamira, which we shall now briefly review.

The Hall of the Paintings, or of the Polychromes, or Zone I. The rear of the vestibule, a large, low-roofed chamber on the left-hand side, out of the reach of daylight, is the location for the famous ceiling painted with polychrome animals and many other examples of cave art. Today, this hall is separated from the vestibule by a wide wall holding up the roof, built in 1922, and besides, the floor has been partially dug out so that the paintings can be seen more easily.
The hall is 18m long, and about 8 or 9m wide. The original height of the roof was between 2m at the entrance and 1.10m at the back. All the paintings and engravings known in this chamber were produced on the ceiling, which must have been difficult, especially considering the size of the polychrome animals, which in some cases are nearly two metres long.

These animals, painted in different tones of red and black, and often engraved too, are the best known figures in Altamira and we shall start our descriptions with them. There are about twenty large figures of a type of bison that was the ancestor of the modern day European bison, situated above all on the left of the ceiling (zone 1a on the plan), although a few poorly-conserved examples are found at the front and right (zone 1b on the plan), separated from the others. A smaller number of hinds and horses were represented with the same technique, but the wild boar that have sometimes
been identified are rather doubtful (at least one of them is really a leaping bison, with the characteristic horns and beard).

The techniques with which these paintings were produced are relatively more complex than usual for Palaeolithic art. The animals' outlines were drawn in black or engraved with a burin, before the colours were applied: reddish ochre combined with black or, in the case of some bison, only in the latter colour. The pigment was applied directly with the hand, with brushes and pieces of animal skin and occasionally with colouring “pencils”. The outlines were emphasised and drawn more precisely with multiple engraved lines, which were also used to indicate details such as the eyes, horns that are always fine and systematically in correct perspective, the snout and hoofs. Equally, engraving was used to define the limbs and separate planes at different depths. In order to achieve volume and shape, as well as colour shading and ordering anatomical elements in different planes – horns, limbs, ears... - parts of the interior of the body were washed and scraped in different ways. With the same aim, prominences in the ceiling (the base of one of the limestone strata in which the cave had formed) were cleverly used by adjusting some of the figures to these positive volumes, and fissures and steps in the rock were used systematically to line up with different parts of the animals' outlines or internal morphology. The result, a large group of animals in different shades of red, circled in black and engraving, standing out extraordinarily from the yellowish colour of the rock, produces a profound effect on visitors who enter the chamber and turn a light towards the ceiling.

The animals were painted in very different positions and postures: standing up and bellowing, resting and turning their heads back, trotting and jumping, or just standing still. They seem to be figures isolated from one another, without any obvious relationships amongst each other. However, the homogeneity in technique, style, and to a certain extent size, of the polychrome paintings, or the fact that the outlines of the animals seem to fit together like pieces in a jigsaw puzzle, has led many researchers to consider it as a synchronic assemblage, the work of a single artist, or perhaps of several artists working closely together, and this seems reasonable (Apellániz Castroviejo 1983; Múzquiz 1988; cf. Alcalde del Río 1906: 17-18; Cartailhac & Breuil 1906: 75). Nevertheless, it is likely that not all the bison on the ceiling are synchronic, and therefore some of them need to be segregated. The recent radiocarbon determinations, although they still have certain problems in their interpretation, show that most of the animals, including the largest and truly polychrome ones, were produced some time between 14.900 and 14.100 BP, towards the end of the early Magdalenian period. But two smaller bison, shaped in black and engraved, facing one another, may be later, and produced between 13.600 and 13.100 BP (Moure Romanillo et al. 1996: 297-301). The differences in techniques, size and perspective that can be seen between these two small bison and the truly polychrome figures, had already been pointed out by the main researchers at Altamira. However, taking into account that
they are less realistic and finished figures, they were believed to be a little older than the polychromes (Breuil & Obermaier 1935: 59), in a too rigid application of the formal evolutionism that prevailed at that time. The results of the radiocarbon determinations were able to segregate the production of each type of bison, but placed the simpler figures in a more recent time.

Numerous interpretations of the whole composition have been made, since that of Max Raphaël, above all of later structuralist prehistorians, as well as more recent naturalistic interpretations which explain it as a simple herd of bison in the rutting season (Raphaël 1986; Leroi-Gourhan 1965: 270-272; Freeman 1978; Freeman & González Echegaray 2001). We must remember, however, that Palaeolithic people never saw the ceiling as we do – the lighting and the height of the floor have changed – nor consulted a sketch of the ensemble like the illustrative and explanatory one published in 1906.
and systematically reproduced since then. To obtain a mental image of the relative positions of the larger bison and horses, of the hinds, acephalous animals and the other supposedly complementary figures, must have been extremely difficult for the Palaeolithic visitors who were not involved in the decoration of the ceiling. An additional problem for the overall interpretation of the composition of preserved polychromes lies in the possible loss of information.

Figure 6. “Claviform” signs situated near the polychrome figures on the ceiling in Altamira (photo by P. Saura)

It is not only striking that some similar bison figures are isolated at the front-right of the chamber but that – as the archaeologists who knew Altamira before the construction of supports for the ceiling in the 1920s warned (Breuil & Obermaier, 1935: 35): “It is probable that in prehistoric times the painted
ceiling extended further towards the entrance, which would be located further out than it is today; but the process of the progressive collapse of this area of the cave has often caused the beds of rock to fall to the cave floor”.

It is also worth stressing, lastly, that the skill displayed in the depiction of the bison, the consummate expression of force and strength they evoke, often makes us forget their highly conventional character. These bison are simply a version, of extremely high quality, of an iconographic scheme that was used widely in western Europe in the Magdalenian period, repeated time and time again on portable objects or in more modest parietal ensembles.

The polychrome bison, and these other monochrome figures possibly added later (which apparently occupy free spaces and assuming the pre-existing main composition), are in fact just the last great art to be produced on the roof, which had been profusely decorated before. Below the bison, and in better view in lateral areas of the hall, we can see a large number of painted and engraved animal figures and signs, seemingly of quite diverse age within the Upper Palaeolithic. In brief, we can find a large number of animals in red, produced with wide linear outlines or in colour-wash. They
include a group of horses in a clearly pre-Magdalenian style, with small heads, short limbs and large bellies (Figure 7). Superimposed on the horses there are several negative hand images in violet and two positive hands in red. Above the red figures there are also black figures, in a Magdalenian style. Equally, red claviform signs are very common, as there are more than forty examples, similar to those in the Gallery B of La Pasiega, as well as "grilles", and over seventy "comet" shaped signs, formed by series of converging engraved lines. The polychrome animals are superimposed on all these series of depictions. Finally the ceiling has great numbers of engravings of animals and anthropomorphs, which mix human and animal characteristics. These appear both above and below the different paintings, and the most interesting are hind's heads with striated bands marking their chin and chest. There is also an exceptional figure of a stag bellowing, opposite the head of an ibex. Although the stag does not seem to be wounded, it reminds one immediately of similar animals in Peña Candamo, El Buxu, Gallery B in La Pasiega and Cueva Grande in Otañes where, as at Altamira, the stag faces the depiction of an ibex.

In reality, the precise definition of these series of depiction, both from the technical and the formal and stylistic points of view, and their sequential ordering on the ceiling, is one of the tasks which still has not been concluded satisfactorily. Despite this, the multiple superimpositions of figures observed by Breuil in different places in the hall, together with examples in smaller panels at El Castillo, La Pasiega and Peña Candamo, formed one of the most important foundations for the chronological order that he proposed for Palaeolithic parietal art in the Cantabrian region.

* Zones II to V. These sectors are located in more or less open and comfortable passages, occasionally with small side-passages. In Zone II, sections of wall covered with a layer of clay were used to draw in the clay with fingers or blunt-tipped objects, and a bovine's head can be recognized among the lines of a composition five metres long (No.2 on the plan). These walls continue with abstract engravings of sinuous, intertwining lines, and some animals. A few black animal paintings are found too, with relatively different stylistic conventions.

A little further inside the cave, in Zone III, a corroded calcite flowstone was used for two large, deeply-engraved figures of horses and other less clear motifs (No.4 on the plan). Beyond the flowstone, a few animals, which were finely engraved or painted in black, are normally isolated figures.

At the back of Zone III, on its left-hand side, a narrow side-passage has on its walls and roof all the red abstract signs which are known in the interior passages of Altamira (No. 6 on the plan, Fig. 8). They are four oval signs, subdivided into three fields, and a band nearly two and a half metres long with scaliform designs, as well as other quite faded signs. This relative hiding-away of abstract signs is a well-known feature in Cantabrian
Palaeolithic art, with the clearest examples being in Cueva del Castillo, La Pasiega and La Peña de Candamo

Figure 8. Group of abstract signs in a narrow side passage in Zone III (No. 6 on the plan). In the photograph, taken from floor level, some “scaleriform” signs can be seen, painted at the base of a rock projections, and several oval signs at a lower level (photo by P. Saura)

The opposite wall has a series of cornices with good vertical sections of wall. These have a series of hinds and stags (at least nine figures) and a horse, engraved with fine lines, and occasionally with bands of striated lines (No. 8 on the plan). This concentration of engravings of hinds, little known, is similar to the one at the end of Zone X in Altamira and in other caves in the centre of Cantabrian Spain. These engravings of hinds and, more rarely, stags, conventionally represented were sometimes drawn in groups in specific
panels, separated from the rest of the decorated area (there are similar concentrations to the ones in Zones IV and X in Altamira (№ 8 and 30 on the plan), in the sector B7 at La Pasiega, on the walls on the right of the “Great Hall” at El Castillo and its continuation in the passage to the Second Chamber, as well as in chambers Ie and If in the Lower Gallery at La Garma).

Figure 9. Hind’s head drawn on the edge of a rock projection, which acts as the line of its chin. It is located in Zone VI (№ 15 on the plan) and was dated by C14-AMS to 15,050 ± 180 BP (photo by P. Saura)

On other occasions these striated engravings accumulate on more complex panels, where they are found overlying or underlying other figures (Zone I in Altamira, main panel in Zone X in Tito Bustillo, Sector C3 in La Pasiega, panels at the start of the “Gallery of the Hands” in El Castillo). These same figures of hinds, so characteristic of the Magdalenian period in the centre of
Cantabrian Spain, are found in other caves with smaller numbers of parietal depictions, like Los Emboscados, las Aguas and Cobrantes. In their portable versions, always on scapulae, they have been recovered from the deposit in Altamira as well as at El Castillo, El Cierro, El Juyo and El Pendo.

In more open corridors, through Zones IV and V, we can find a few figures painted in black or engraved, but no important compositions. The most interesting at the start of Zone IV are blocks of limestone with simple engravings of animals, like horses and an anthropomorph, drawn before the blocks fell to the floor. Or a magnificent whole hind engraved on the left wall with repeated lines around its outline and striated bands in its head and chest (Nº 7 on the plan). A black line below the hind was recently dated to 14,650 ± 140 BP. A little further on, we come to more engravings of an aurochs and a bison, and black paintings of a possible feline and other animals.

Figure 10. Composition of very stylised ibex figures in Zone VI (Nº 15 on the plan) (photograph by P. Saura)

* Hall VI. This is a large side chamber, which is reached by descending a flowstone slope, hence its usual name, "The Pit". At the bottom, both walls have panels of art. They include representations of two very stylized ibex, in a similar composition to figures at the rear of Gallery C in La Pasiega, although
the latter are technically rather more complex (Fig. 10). A hind's head is very simple but quite expressive (Fig. 9), and a third ibex in black is badly deteriorated (Nº 15 on the plan). At the start of this hall, there is a black outline of a bison (Nº 14 on the plan). They are relatively coherent figures stylistically, and the date obtained for the hind, of about 15,050 BP, can be applied to the others also.

* Zones VII to IX. After the Pit, we reach a couple of chambers with many collapsed blocks and calcite reconstruction. There are few depictions in this part of the cave. In fact, they tend to become rarer as we leave the sectors nearest to the entrance, until they become abundant again in the very last passage, Gallery X. In chambers VII-IX, we can only see non-figurative black marks, a few rare intercrossing engravings of horses, and at the end an indeterminate quadruped painted in black.

![Image](image.png)
* Gallery X, or "The Horse's Tail". In contrast, the narrow, winding final passage in Altamira, about 50m long, harbours a large number of black paintings and engravings and even a few remains of red paint. Five of the most important black paintings are quadrilateral signs of the Cantabrian type, some of which are divided into three parts, with lines ordered like steps inside the sign, while some also have an enlargement of their longest side. Another three, smaller, quadrilateral signs are associated with them, and these have series of lines radiating outwards from their perimeter, and so are of a less conventional type than the first (Fig. 11). This composition of signs was dated by C14-AMS to 15,440 ± 200 BP.

In the same way, several "masks" are surprising figures in this last passage. They are natural rock forms which were animated by the addition of eyes, nostril or mouth painted in black. Exactly the same idea has been recognized in other masks in Cueva del Castillo and in the Lower Gallery at La Garma. Besides these, there are black paintings of animals, such as a horse in a rather archaic style, and non-figurative marks, and above all engravings of bison and a horse, some ibex, and hinds particularly. Indeed, the end of the passage has perhaps the most important group of striated hind's heads, and also stags, in the whole cave (Nº 30 on the plan).

6. Structure of contents and chronology

At present, it is very difficult to make an even remotely accurate inventory of the themes represented in Altamira, both because of the volume and complexity of the ensemble and because the studies published and available are by no means exhaustive nor systematic. González Echegaray's study of 1978 is still the most indicative, and this established a minimum of 141 clearly identifiable animals: 37 bison, 35 cervids, mostly hinds, 33 horses, 24 caprids (including a chamois), 7 aurochs, 2 or 3 possible carnivores (a highly dubious wolf and felines proposed by Breuil), possibly 2 mammoths, and a deer with wide antlers, which has sometimes been identified as an elk, although the presence of this animal in Cantabrian Spain is merely hypothetical. There are also several negative and positive hand images, at least 9 engraved anthropomorphs, and several "masks". Regarding the signs, of which there are well over a hundred, the most important are the claviforms and the comb or grille shaped signs, in red, and the "huts" or "comets" made up of converging striated lines. These are all found in the Hall of the Paintings, while the rest of the cave has the oval and scaliform signs in red, in the central passages, and the black quadrangular signs with a pointed protuberance or a fringe, in the "Horse's Tail". It is worth noting, and perhaps relevant chronologically, that these different types of signs only appear in certain areas of the cave, and are not repeated in different places. Their high relative abundance is, however, usual in the central part of the Cantabrian
region, where there is also a high proportion of abstract signs in the caves of La Pasiega, El Castillo, Chimeneas and Las Aguas, etc.

As we have seen, Altamira displays practically the whole range of cave art techniques, except sculpture and bas-relief. But they are not distributed regularly or uniformly throughout the cave. The Hall of the Polychromes is completely different from the rest of the cave, as here all the techniques are found (except perhaps engraving on soft clay). Away from this hall, red paintings are very rare, as the only ones are the signs in the side-passage in Zone III, and a few remains of figures in the Horse’s Tail, and of course polychromes do not exist anywhere else in the cave. The animal paintings in black, of different stylistic conventions, and the engravings including those with striated lines, are dispersed more homogeneously throughout practically all the decorated areas.

Regarding the chronological attribution and order of all these figures, practically all prehistorians agree that it is highly likely that occupation of the cave, as reflected in the habitation deposit, and the decoration of walls and ceilings, coincided within the same span of time. The art would have been produced, either at different times during the periods of occupation, with a gradual accumulation of different compositions and isolated figures, or within a reduced time-span.

The first problem lies in deciding whether at Altamira human occupations existed before the period well-documented stratigraphically, and dated between 19,000 and 14,000 years ago. We have already expressed our inclination to accept Obermaier’s proposal, and consider it is probable that occupations existed, at least during the Gravettian period (from about 27,000 years ago). This does not imply that we should re-accept, in the same terms, Breuil’s opinion that the cave art in Altamira is divided between the Aurignacian and late Magdalenian, but we do believe that the ensemble at Altamira covers a long chronology, and is like a palimpsest, as we shall see below.

The second problem consists of determining the degree of synchronicity or diachronicity of the art ensemble. In contrast with Breuil and Obermaier’s idea that a succession of isolated figures and some compositions (such as the polychromes) accumulated over a very long time period, in the 1960s structuralist researchers reduced the period during which the art was produced considerably. For Leroi-Gourhan it was clear that all the black figures were relatively synchronic, and corresponded to later moments of his Style III, which he believed could be dated in the Solutrean or early Magdalenian. He situated the art in the Hall of the Polychromes in the Magdalenian III-IV, which included the polychrome animals and the claviform signs, but without referring to the red horses, hands, lines of red dots and huts or comets, which certainly do not seem to be of the same period. The engravings, present throughout the cave, would correspond to different
moments during the cave’s occupation in the Solutrean and early Magdalenian, and some of them in the Horse's Tail might even belong to the late Magdalenian.

In recent years, different scholars have stressed this short chronology, based on the concentration of radiocarbon determinations obtained for the paintings within the limits of the early Magdalenian period, and some not too convincing parallels between the iconographic composition of different zones of the cave. In this way, the decoration of Altamira would have taken place in a short period of scarcely two millennia in the early Magdalenian or Magdalenian III (Bernaldo de Quirós 1991; Moure Romanillo & Bernaldo de Quirós 1995), or in two moments: the first in an old phase of the early Magdalenian (red horses, claviforms, etc.) and a more recent stage of the same period (polychromes, black paintings and some engravings) (Freeman & González Echegaray 2001: 63).

Although this is not the place to discuss the chronology at too much length, it can be adduced that above-mentioned concentration of radiocarbon dates is logical, taking into account that only figures painted in black with charcoal have been dated, and these are all of a relatively similar style, as Leroi-Gourhan already pointed out. But red paintings cannot be dated by C14-AMS, and these must be quite older, judging by their style, by their position beneath figures in Magdalenian style in the Hall of the Polychromes, and by the absolute dates that have been obtained for red paintings at other sites. In our opinion, the large number of figures and the relatively different topographic locations of technical procedures in the cave, are arguments in favour of a long temporal distribution. Although these are not decisive reasons, in both aspects Altamira differs from what is usually found at Cantabrian cave art ensembles that are generally considered synchronic (such as Chimeneas, Monedas and Covalanas), which have a much lower number of depictions and greater technical (and certainly stylistic) homogeneity. In contrast, they bring Altamira in line with ensembles of which nobody questions their chronological depth (such as El Castillo, La Pasiega, the Lower Gallery at La Garma, La Peña de Candamo and, now initial inaccuracies have been overcome, Tito Bustillo).

Therefore, the possibility that the cave was occupied in pre-Solutrean times, as Obermaier suggested, and that at the same time, some examples of cave art were produced inside the cave, cannot be ruled out. Based on merely stylistic considerations, possible examples of older figures are the red paintings at the rear of the main panel, the hands, and the simple engravings on the collapsed blocks in Zone IV. However, most of the art known in Altamira corresponds to the time of the occupations, whose remains are still to be found in the vestibule, and they were probably produced during the Solutrean, and certainly more abundantly and with greater assiduity during the early Magdalenian (between 16,500 and 14,000 years ago). And it is clear that there are figures later than the early Magdalenian. At least, the smaller
bison on the main panel were produced about 13,600 or 13,100 BP, according to the radiocarbon determinations, which corresponds to the middle Magdalenian in the region.

Altamira was a reference point for Palaeolithic populations in Cantabrian Spain during long periods of the Upper Palaeolithic. It was not, especially in the early Magdalenian, just another cave. The size and spectacular appearance of its iconographic assemblage suggest a diversity of functions much greater than is seen at other sites in the region belonging to the same period. Despite this, we should not be dazzled by its singularity, which has increased with the passage of time and is especially strong at present. Other caves with similar compositions of polychrome animals must have existed (like the few examples we know at caves such as Tito Bustillo and Ekain) because, among other reasons, the high level of skill seen in the reproduction of conventional motifs could hardly have been achieved at the first attempt.

Bibliography


