

HISTORIA Y DOCUMENTOS

# *Sanz de Sautuola and the discovery of the Caves of Altamira*



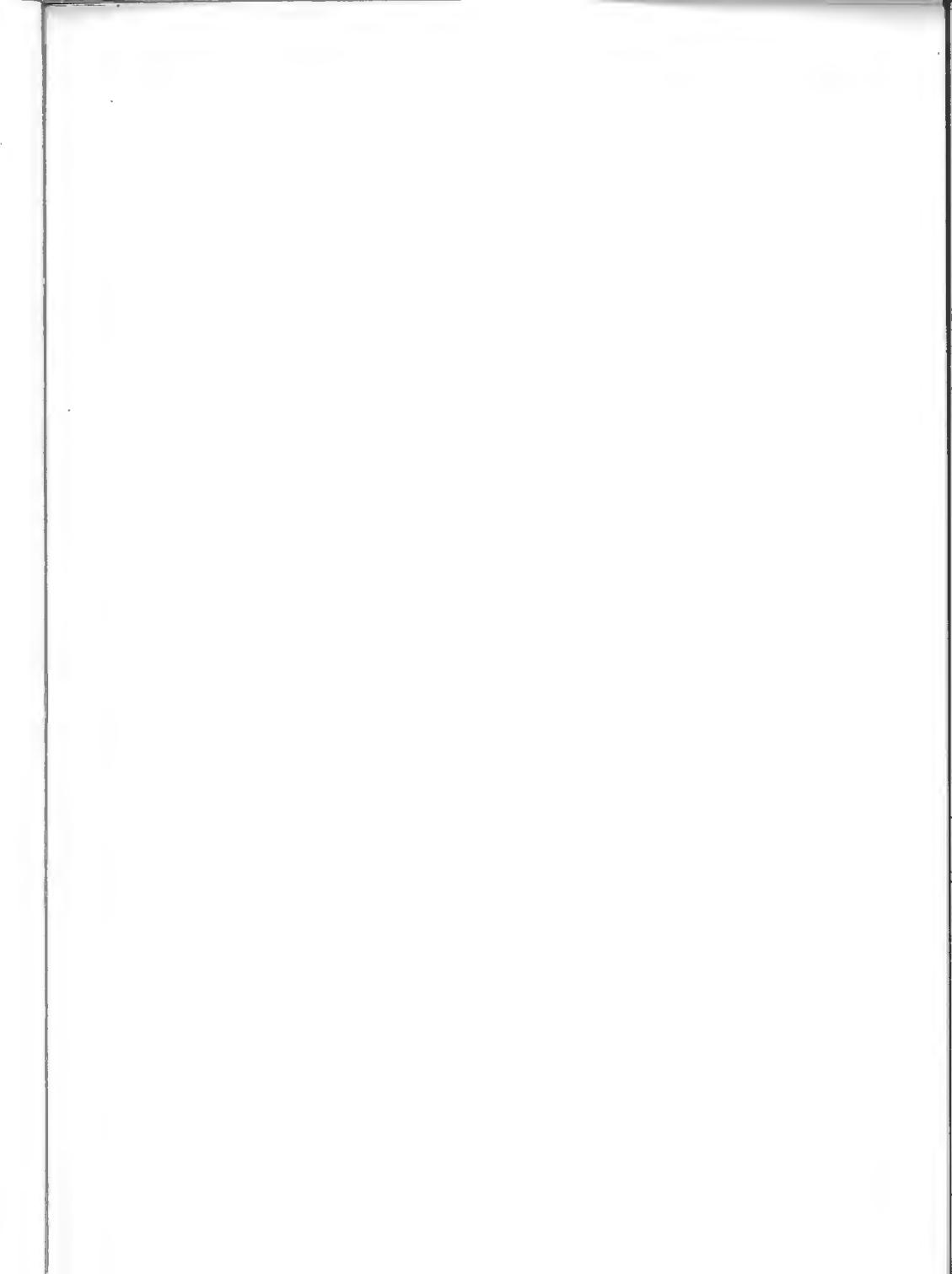
*Benito Madariaga de la Campa*

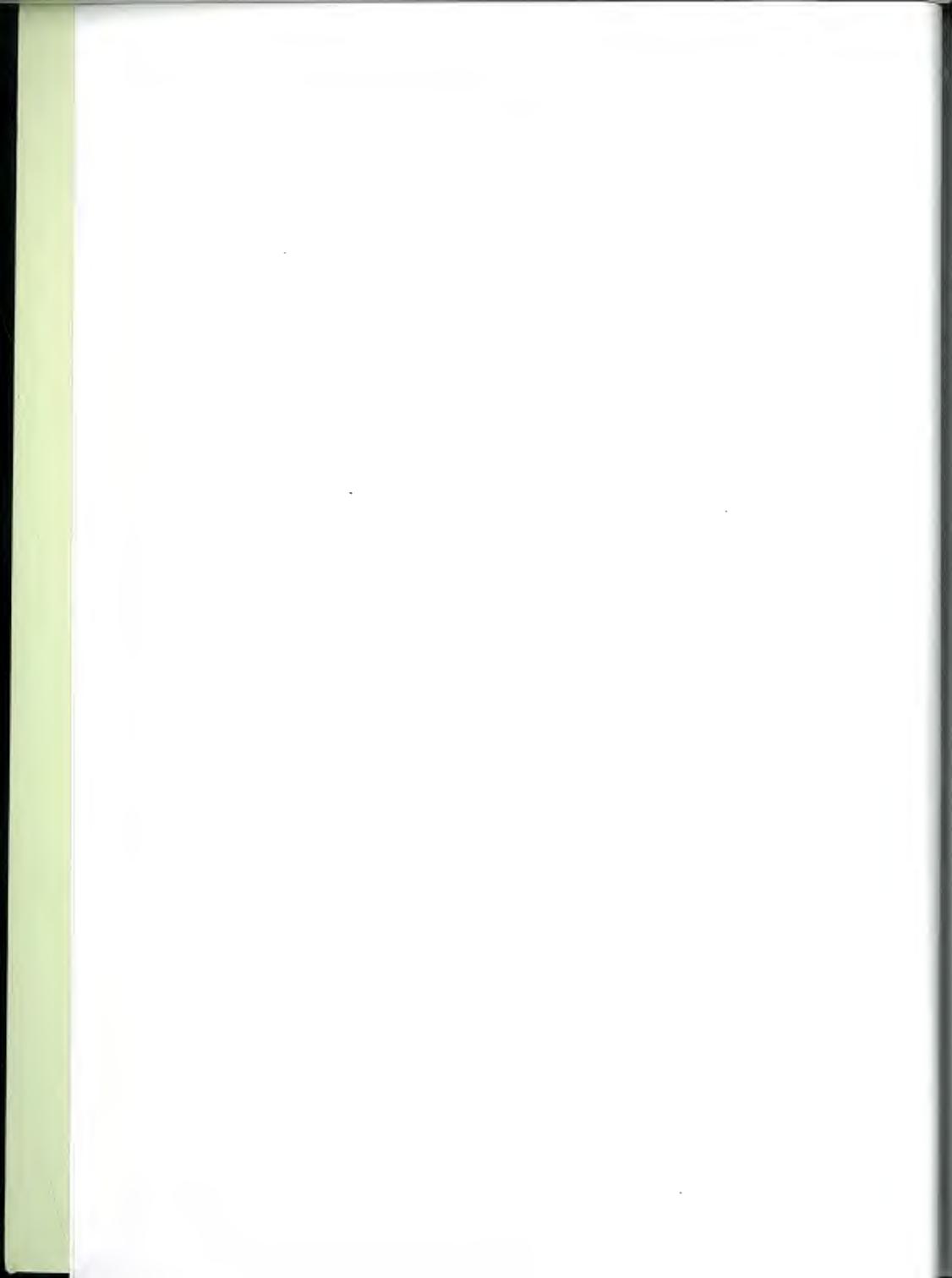


Fundación  
Marcelino Botín

**Benito Madariaga de la Campa.**

The author has a doctorate in Veterinary Sciences from the Faculty of León (University of Oviedo) and has worked as a civil servant in the Ministry of Agriculture, Livestock and Fishing, and has also worked as a laboratory assistant in the Santander Institute of Oceanography, but is now retired. He is the Chronicler of the city of Santander, as well as being a corresponding member of the Academy of History, the Academy of Doctors and the Academy of Veterinary Sciences, all three in Madrid. He is also a member of several cultural institutions in Santander. Amongst the books he has written on a range of subjects, the following studies on Prehistory are of particular interest: *Las pinturas rupestres de animales en la región Franco-cantábrica* (1969), with prologue by Flélix Rodríguez de la Fuente; *Hermilio Alcalde del Río. Una Escuela de Prehistoria en Santander* (1972), with prologue by Professor Martín Almagro; and the edition of Marcelino Sanz de Sautuola's *Escritos y Documentos*, with its introduction by Emilio Botín. Because of his knowledge of marine biology, Benito Madariaga has taken part in some excavations involving the study of molluscs in the strata of the caves of La Chora, Morín, El Pendo and El Juyo in Cantabria and in those of Tito Bustillo, El Águila, La Cámara Superior and El Llongar, in Asturias. He is also an authority on the subject of cave painting and has given several lectures and had articles published on this topic.





*Sanz de Sautuola  
and the discovery of the Caves of Altamira*

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# *Sanz de Sautuola and the discovery of the Caves of Altamira*

SOME OBSERVATIONS ON THE PAINTINGS



*Benito Madariaga de la Campa*



Fundación  
Marcelino Botín  
Santander, 2001

*The Fundación Marcelino Botín, established in 1964, is an institution devoted to furthering the causes of education, culture, science and welfare, under the auspices of the Ministry of Culture. It is particularly concerned with:*

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- Prehistory, archaeology and ethnography
- Historical art heritage

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- Poverty
- Psychosocial integration

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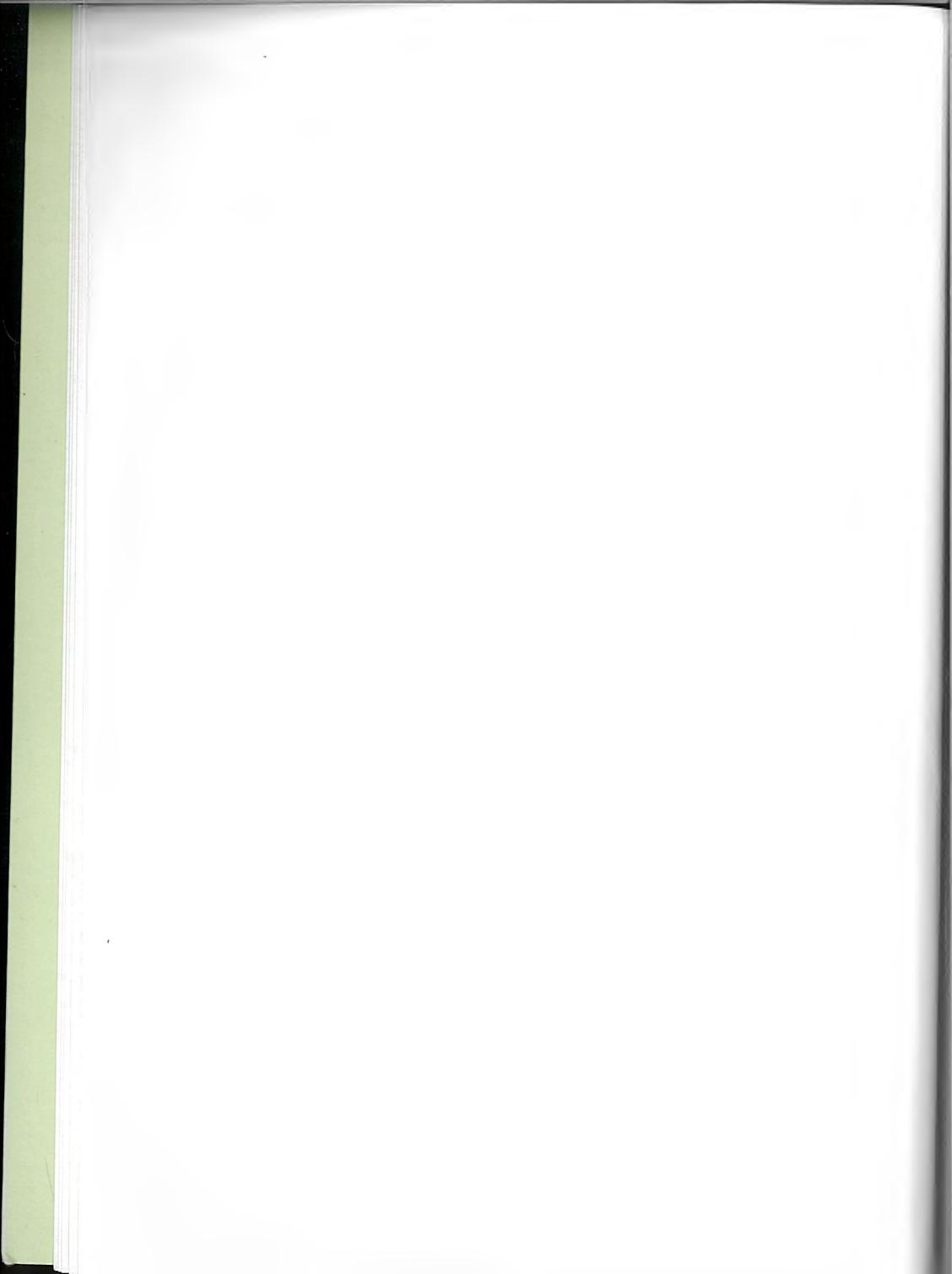
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## *Foreword*

FUNDACIÓN MARCELINO BOTÍN

The figure of Marcelino Sanz de Sautuola has a place in the history of Cantabria and in the minds of Cantabrians as that of a man of wide-ranging intellectual preoccupations, whom Menéndez Pelayo once described as 'a very cultured person, fond of learned pursuits.' But it was, without a doubt, the discovery of the paintings on the ceiling of the Cave of Altamira and his championing of this cause that brought him lasting fame at a time when the study of prehistory was just beginning in Europe.

The Fundación Marcelino Botín, founded in 1964 by his grandson Marcelino Botín Sanz de Sautuola y López, proudly follows in his footsteps through its disinterested support of scientific learning in these modern times. In 1966 it gave its full technical and financial backing to get the Altamira Project off the ground, a project which is now a reality and which constitutes the most ambitious enterprise undertaken to date, with a view to furthering both the conservation of the site and public awareness of the project.

In order to encourage further studies in this field, the Fundación assembled in its Library in Santander an archive on Marcelino Sanz de Sautuola, with 1400 references containing personal and family details, coverage in the Press, letters, documents and bibliography. This archive was set up with the object of piecing together the role of this great Cantabrian and putting the final touch to the collection which bears his name in the *Archivo Histórico Provincial de Cantabria*.

The historiography of this stage of the beginnings of prehistoric art, with its declarations in favour of and against the authenticity of the paintings, has been brought together in these pages by the writer Benito Madariaga, who has made use of part of the source material, in some cases never before published, held in the Marcelino Sanz de Sautuola Archive.

The present book is a monographic study of the figure of the discoverer of the chamber with the paintings, with some observations on the progress made since then with regard to the meaning of prehistoric art, its assessment and the new interpretations of the palaeolithic paintings in the Cave.

In this volume the problems that up to now have been most keenly debated concerning the famous ceiling of the main chamber at Altamira are explained, as well as the technique and materials used, the rites associated with its creation, and the measures to ensure the conservation of the Cave.

The Fundación Marcelino Botín includes this publication in its History and Documents Collection in homage to and in memory of Sanz de Sautuola, though of this it is ever mindful, but even more particularly at this time, when the great enterprise of the replica and the new Museum and Research Centre of Altamira is reaching its culmination.

### *Acknowledgements*

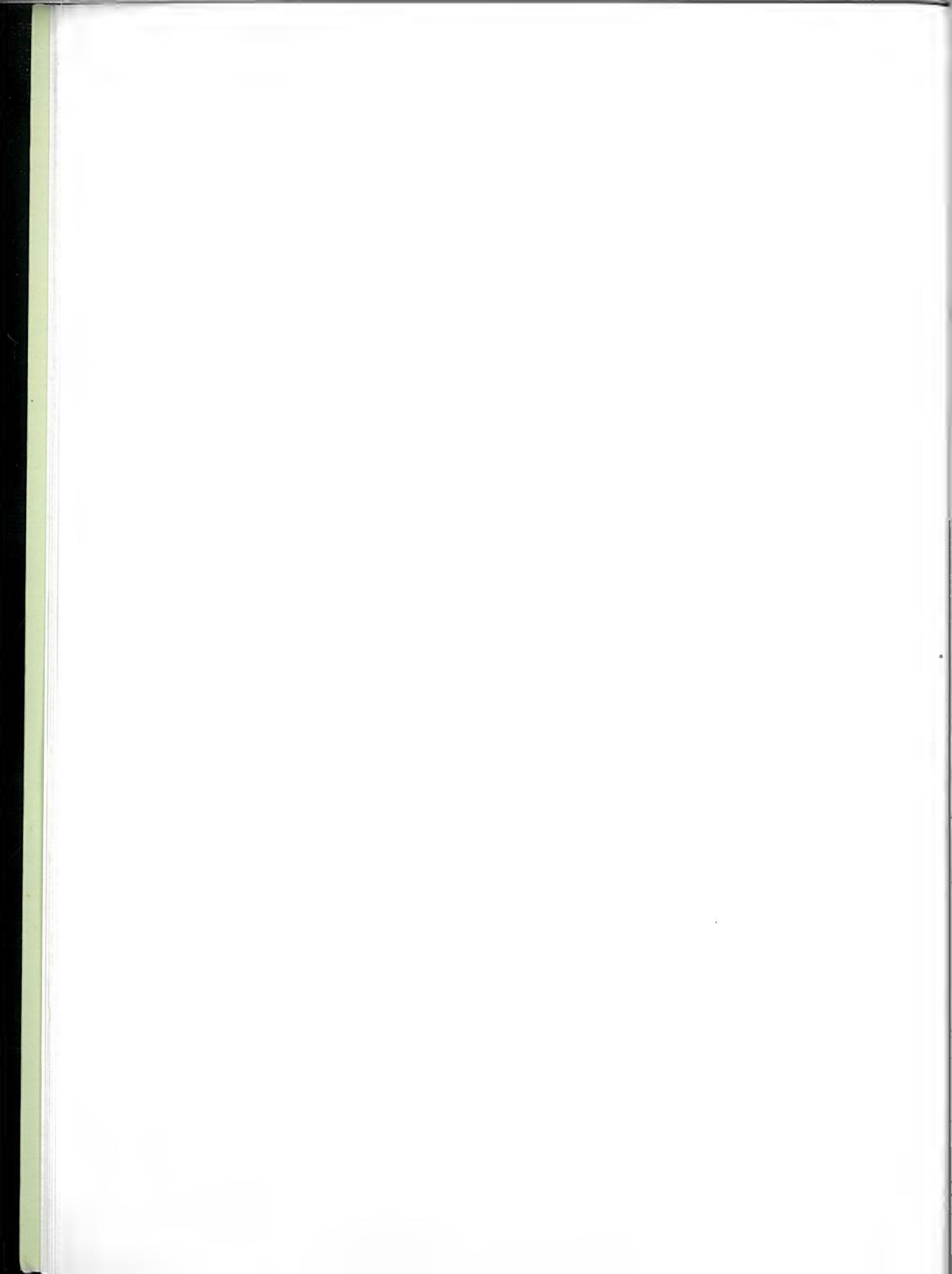
In the writing of this work I have made use of the Archive of Marcelino Sanz de Sautuola, the Fundación Marcelino Botín in Santander, and collections from the Hemeroteca Municipal of Santander. I should like to express my thanks for the attention and interest shown to me by the staff of these libraries. I should also like to express my gratitude to the Servicio del Patrimonio Cultural de la Dirección General de Cultura, the Consejería de Cultura y Deporte del Gobierno de Cantabria. I should also like to thank Professor Alfonso Moure Romanillo, Dr. Joaquín González Echegaray, Manuel Mallo Viesca, Daniel Gallejones and Fernando Soria for assisting me with materials used in the preparation of this work and for their valuable comments. Don Angel Olivares de Miguel is the person responsible for the graphics and drawings , and Florencio Goyenechea and Juan Abascal Mazorra have provided the photographic information. José Antonio Lasheras made helpful suggestions and brought to my attention a number of bibliographical references which I had not known previously. I should like to thank every one of them for their involvement.



*I. Interests of a nobleman*



*Red painted horse with drawings superimposed.*  
H. BREUIL AND H. OBERMAIER. Illustration X



## *1. Interests of a nobleman*

'The actual discovery of primitive art is due to a little known Spaniard, the Cantabrian nobleman, Marcelino Sanz de Sautuola - a highly cultured person, a dedicated scholar, who could never have dreamt that his name would become immortal in the annals of prehistory'.

*Marcelino Menéndez Pelayo*

At the Exhibition of Agriculture, Livestock, Industry and Fine Arts of Old Castile, which took place in Valladolid in 1859, Marcelino Sanz de Sautuola (1831-1888), representing the interest of the Santander business community, exhibited a number of items including cocoons and skeins of silks, honey, beeswax, seeds and a collection of a hundred and fifteen different molluscs. He was awarded a bronze medal and a diploma for his exhibits.

From an early age he had been greatly interested in the Natural Sciences, as well as agriculture and the study of trees. He was the person responsible for the planting of the very first eucalyptus tree in Cantabria, which took place in the village of Puente San Miguel, where he was born. Three years later he wrote an article on the possible development of the eucalyptus, and the same year he attended the exhibition of the Maritime and Industrial Athenaeum where the work of many Santander craftsmen, artists and manufacturers was on display.<sup>1</sup>

<sup>1</sup> *La Abeja Montañesa*, Oct. 8th., 1866.



*Marcelino Sanz de Sautuola  
(1831-1888)*



*María Justina Sanz  
de Sautuola y  
Escalante, the  
daughter of the  
discoverer of the cave  
(1870-1946)*



In February 1878 the paper *El Comercio de Santander* informed its readers that Sanz de Sautuola would be taking part in the forthcoming Universal Exhibition in Paris and that he would be exhibiting regional produce there (runner beans, chestnuts, walnuts, maize and locally grown corn).<sup>2</sup> Whilst attending this Exhibition along with other Cantabrians, Sautuola took the opportunity to visit the section of Anthropological Sciences, where he observed numerous fossils and carved flints, similar to those he had in his own Natural History collection, which had some 'very unusual forms of petrification', as he wrote in Remigio Salomón's *Guía de Santander (Guide to Santander)* in 1860. Paul Broca was then chairman of Anthropological Sciences, and a good number of scientists with an interest in the Palaeontology of caves and the geological periods of Palaeontology, as they called Archaeology at that time, took part in the exhibition. The Canarian professor, Chil y Naranjo represented Spain and Francisco Tubino, one of the founders, attended, along with Juan Vilanova, of the Spanish Prehistory Association.

Sautuola's interest was stimulated by what he had seen at the exhibition and on his return he began to devote his leisure time to exploring the caves around Santander and Puente San Miguel, the two places where he spent most of his time. As a 'mere amateur of Prehistory,' as he dubbed himself, he wanted to visit a cave situated between the villages of Herrán and San Esteban, on the fringes of Vispieres, in the Sierra de Juan Mortero, in a part of Santillana del Mar, which shortly before had been given the name of Altamira, after a nearby meadow.<sup>3</sup>

<sup>2</sup> *El Comercio de Santander*, Feb. 12th., 1878, p. 3.

<sup>3</sup> *El Impulsor*, Torrelavega, Sept. 26th., 1880. See also the geographical situation as described by Sautuola in his book, *Breves apuntes sobre algunos objetos prehistóricos de la provincia de Santander*, 1880, p. 11. (*Brief Notes on Prehistoric Objects found in the Province of Santander*.) In future we shall cite from the new edition



*Monolith erected above the cave by  
the Athenaeum of Santander on  
September 22nd., 1921, in memory of  
Sanz de Sautuola*



*Eucalyptus trees from the first  
plantation carried out by Sanz de  
Sautuola at Puente San Miguel*

Sautuola was, however, rather more than a mere collector or amateur as he had a Law degree and in addition was a corresponding member of the Academy of History, and a member of the Provincial Commission of Historic and Artistic Monuments. He also held other offices and was instrumental in the economic development of the province.

When he wrote his *Breves apuntes* (*Brief Notes*), as he calls them, he warned his readers that the study of Prehistory might well be considered a Utopian pursuit, as it was so little known about in Spain at that time. His grounding in this new science can be clearly seen in the books in his own library and in the quotations he makes use of from writers such as Casiano de Prado, Juan Vilanova, John Lubbock and Boucher de Perthes. It is more than likely that about this time he had come across information from Victor Meunier's book, *Los antepasados de Adán. Historia del Hombre fósil. (The ancestors of Adam. History of the Fossil Man)*, published in 1876 and translated into Spanish by Alejo García Moreno, who also translated into Spanish G. Tiberghien's 'The Commandments of Humanity or the Moral Life in the form of a Catechism, according to Krause'.

The aforementioned cave had been discovered purely by chance in 1868, according to H. Breuil, and between 1870 and 1872 in Sautuola's opinion. He maintained that it was found by a tenant farmer of his called Modesto Cubillas, or as stated in the baptismal records in 'bable' (Asturian dialect), Modesto Cobielles Pérez, born on June 15th., 1820 in the village of Celorio in Llanes<sup>4</sup>. According to Father

appearing in Sautuola's *Escritos y documentos* (*Writings and Documents*), ed. Benito Madariaga, Santander, Institución Cultural de Cantabria, 1976. It will be referred to in future as *Apuntes* and *Escritos y documentos*, p. 281.

<sup>4</sup> Record of baptism, Parish Church of San Salvador in Celorio in the diocese of Oviedo, Book 7, folio 88. I am indebted to the prehistorian, José Manuel Gómez Tabanera for sending me this information.

Patricio Guerín<sup>5</sup> he was a tile-maker by profession, and there is evidence to prove that he carried out various jobs for Sautuola. In 1861 he pruned several trees for him, and in 1882 he rented some grazing land from him. So, in whichever year it was (somewhere between 1868 and 1872), while out hunting, Modesto Cubillas' dog ventured into this hitherto unexplored cave, and Cubillas, knowing Sautuola's interest in such things, told him all about the cave he had found hidden by the undergrowth.

Living as he did in Santander and having heard that there were caves in the vicinity, Sautuola went to look at one situated on the outskirts of Revilla, in the district of Camargo, where he came across prehistoric materials which proved that it had been lived in.<sup>6</sup> Other caves to which he refers later in his book, *Breves apuntes sobre algunos objetos prehistóricos de la provincia de Santander* (1880), were those at Venta del Cuco, in the township of Santillana and at San Pantaleón, in Escobedo, now known as El Pendo, in the township of Camargo. Now well and truly hooked, he also investigated the cave at Cobalejos, in Piélagos, and was informed by Sebastián de Soto Cortés of a cave called El Poyo in the village of Saja, in Los Tojos, and another one, with two entrances, by way of Ibio to Campos de Estrada.<sup>7</sup>

Of all the caves that were investigated the one at Altamira was to produce the most tools and remains of fauna. As they explored the various sections of the cave they found engravings and small paintings in

<sup>5</sup> 'Centenario del descubrimiento de la cueva de Altamira', *Altamira*, Nos. 1, 2 and 3 (1967), pp. 141-146.

<sup>6</sup> *Apuntes*, p. 9.

<sup>7</sup> José Alfonso Moure, 'La cueva de Cobalejos en Puente, Santander, y su industria paleolítica', *Ampurias* (Barcelona) vol. XXX, 1968, pp. 181-193. For the caves mentioned here, see Marcelino Sanz de Sautuola, *Escritos y documentos*, p. 281.

*Sanz de Sautuola .  
Detail from the  
sculpture at San  
Miguel*



*Monument to the  
discovery of the cave of  
Altamira by Agustín de  
la Herrán, on the estate  
at Puente San Miguel*



different parts of the five chambers but the paintings on the ceiling of the principal chamber were still to be discovered. Sautuola himself confirmed the date when he wrote in his notebook: 'I first visited this cave four years ago', that is to say in 1876. As we shall see presently, he was to carry on investigating new caves in the area after publishing his findings. So, in 1881, Eduardo Saiz Acebo wrote to tell him where there were other caves which might be of interest to him. (*Archivo Marcelino Sanz Sautuola*).

It was in 1879, on one of his visits to Altamira, thanks to the intervention of his eight and a half year old daughter, María Justina, that Sautuola discovered the animal paintings on the roof of this famous cave. He explained why he had failed to see them for himself even though he had been in precisely the same spot previously. This is his account of it:

'I didn't discover the paintings in the first chamber until last year (1879), because I didn't examine the ceiling so thoroughly the first time round, and also because you have to find the best positions to see things in, particularly if there isn't much light. It has happened that people who knew the paintings existed have failed to spot them because they were directly beneath them.' (*Apuntes*, p. 23).

We can be fairly sure that the discovery took place during the summer, or more likely, in the autumn, when temperatures were still quite pleasant. Being small, his daughter could see the paintings when she looked up at the ceiling, which in the main chamber was about two metres thirty centimetres high at the back. When she spotted them she immediately shouted out the now famous sentence 'Look, Daddy! Paintings of oxen...!'<sup>8</sup> The fact that her father had not noticed them earlier was later

<sup>8</sup> This is what the little girl actually said, and not 'bulls', as stated by some authors. We should point out that Sautuola made no mention of his little girl being with

seized upon by his rivals, who made much of this point and others, which we shall mention in due course, to question the antiquity of the caves.<sup>9</sup>

Amongst the first people he told about his discovery were his friends, Eduardo Pérez del Molino Rosillo, who had a chemist's shop and a Laboratory in Torrelavega, and the bibliophile, Eduardo de la Pedraja, both of whom had discovered several caves. The former studied strata in the spa town of Torrelavega, Hoznayo and the Cueva de las Brujas (Witches' Cave), and the latter explored the caves at Cobalejos and Fuente del Francés.<sup>10</sup>

On August 8th., 1879 Sautuola wrote to the historian, Aureliano Fernández Guerra to let him know of his findings, and he told him that what he had discovered in the cave appeared to belong to the Palaeolithic Period. He went on to research this area and give an account of his findings to the Academy.<sup>11</sup> On October 6th. the same year he wrote again to the learned body of History, in almost identical terms, saying : 'I've found in that province ( i.e. Cantabria) a fair number of flint tools, along with many bones belonging to ruminants and carnivores, and a few shells of the genus *patella* (sic). I plan to carry out further research on these and report back to the Academy. I should very much like to know if in the Academy there is any indication that research of this nature has ever been done in the province before.'<sup>12</sup>

him on the day the paintings were discovered. The first reference to his daughter is to be found in Amós de Escalante's study, *Antigüedades Montañesas*.

<sup>9</sup> 'El Parlante a sus impugnadores (Conclusión)', III, *El Cántabro*, Torrelavega, Jan. 15th., 1881, p. 1.

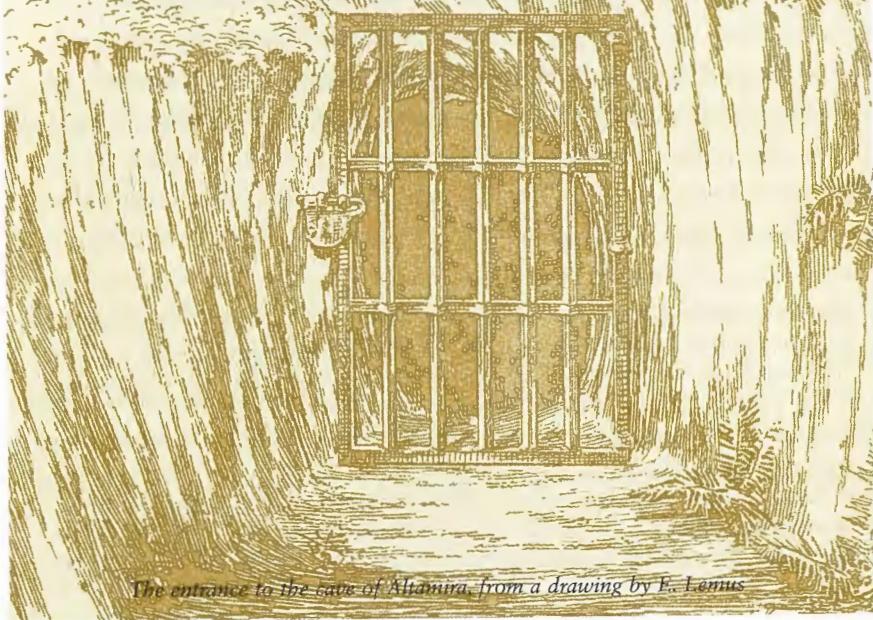
<sup>10</sup> Julián Sanz Martínez, *Rincones de la España Vieja, Santander*. Madrid, Viuda y hijos de Sanz Calleja.

<sup>11</sup> Photocopies of this can be seen in the Sautuola Archive at the Fundación Marcelino Botín.

<sup>12</sup> *Ibid.*



Title page of the book "Brief notes on prehistoric objects in the province of Santander."



The entrance to the cave of Altamira, from a drawing by F. Lemus

These records are of particular interest as they are the first to refer officially to the explorations carried out in that year, although Sautuola makes no mention of there being any cave paintings. We know for certain that he had discovered the paintings on the ceiling before November 8th., as he wrote to his brother-in-law, Agabio Escalante asking him to find him an artist who would be able to copy the figures. So the discovery of the paintings must have taken place some time between the dates mentioned in his report to the Academy and the writing of this letter. Sautuola's father had died on October 10th. I think that at this very sad time for the family he retreated to his estate in Puente San Miguel, near Santillana del Mar, where for a few days he was able to give some time to his own interests. After the finding of the ceiling paintings, the cave became very well known, possibly because once news of the paintings began to spread it was visited by a good number of people from neighbouring towns and villages such as Villapresente, Cerrazo and Torrelavega.<sup>13</sup> In those early days following the discovery the large numbers of sightseers flocking to see the cave before any controlled supervision was established meant that the cave could easily become damaged. We must be grateful that its discoverer lost no time erecting a wooden gate at the entrance, which was later replaced by an iron one, as recorded in the meeting of the Town Council of Santillana on August 22nd., 1880.

Sautuola was amongst the few who had no doubts about the importance of his discovery, assigning the cave to the Palaeolithic period and describing the high artistic quality of the paintings in his book:

<sup>13</sup> *El Impulsor*, Sept. 20th., 1880.

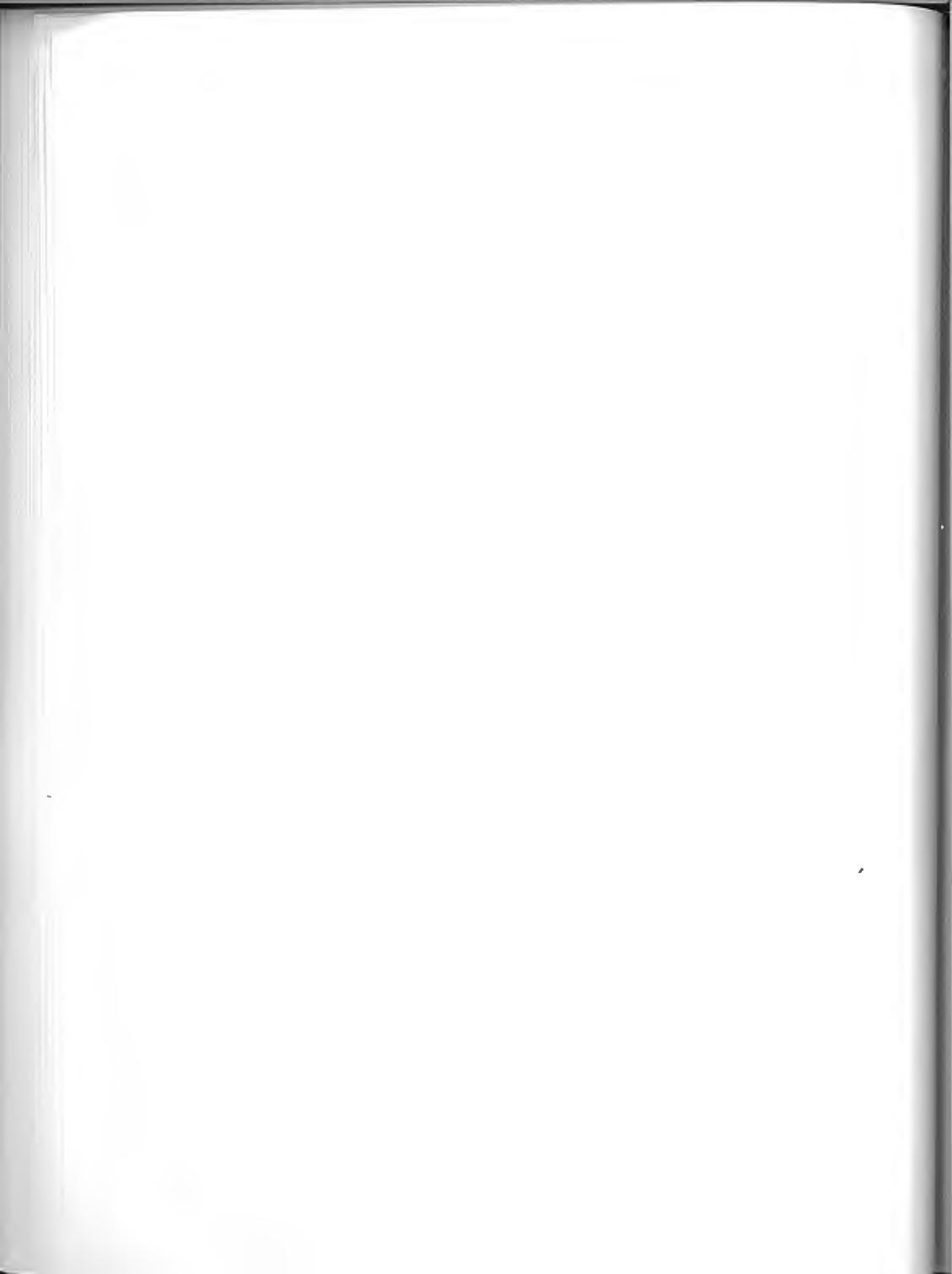
'When one examines these paintings in detail one realizes the artist was very practical in the way he executed them. You can see that he painted with a very steady hand, always making clean, surprisingly accurate strokes, considering the uneven surface of the roof and whatever tools he had at his disposal. No less worthy of attention are the many different postures the artist must have had to adopt, because in some places there was scarcely room to kneel down and in others he would not be able to reach even if he stretched his arm as far as it would go. It is even more amazing when you consider that all this had to be done in artificial light because you cannot imagine any daylight ever getting into the cave or, even if the entrance was very big (which seems unlikely), there would be precious little light in the innermost third of this chamber, where the paintings are, and it turns to the left, which means it would only receive a feeble reflected light. It is also worth noting that a considerable number of figures are positioned in such a way that the convex protuberances of the roof are used to advantage, without spoiling the overall effect. This goes to show that the artist had remarkable artistic flair.' (*Apuntes*, pp. 16-17.)



*The present-day entrance to the Puente San Miguel estate*



*The principal present-day façade of the house at Puente San Miguel, belonging to the Sautuola family*



*II. Serious doubts about the discovery*



*'Modelled' black bull, in motion*  
H. BREUIL Y H. OBERMAIER. Illustration X



## *II. Serious doubts about the discovery*

‘These paintings do not appear to belong to the Stone Age, nor do they appear primitive, or Assyrian or Phoenician, and only have the manner of expression of a mediocre disciple of the Modern School’

*Eugenio Lemus*

After the discovery of the cave the enigma of its paintings soon spread to neighbouring towns and villages, and the news was of particular interest to people who, because of their artistic and cultural background, could offer a well-founded judgement of them. The paintings aroused such curiosity that, as we shall see in due course, even the royal family went to see them, whilst they were on holiday in the little town of Comillas, two years later. 1880 was a significant date on account of the interest shown in the cave and the ongoing research it inspired. A number of well-known people were amongst the many visitors, including Juan Vilanova, Francisco Giner de los Ríos, Augusto González de Linares, Eugenio Lemus, the Marquis of Casa-Mena, Dr. José Argumosa, Miguel Rodríguez Ferrer, Angel de los Ríos y Ríos and Maximiliano Regil.<sup>14</sup> Out of all these people, Juan Vilanova (1821-1893), a doctor and naturalist, was at the time the person best equipped in Spain to pass judgement on the significance of

<sup>14</sup> More details about visitors to the cave can be found in *Escritos y documentos*, Marcelino Sanz de Sautuola, *El Impulsor*, Sept. 26th., 1880, pp. 234-243.



*Juan Vilanova y Piera  
(1821-1893)*



*Eduardo Pérez del Molino  
y Rosillo (1855-1933)*

the cave in the context of Prehistory. This was the reason why Sautuola and Pérez del Molino wrote and invited him to go to Santillana del Mar. He arrived in Santillana on September 6th. with the backing of the Ministry of Public Works and went to see the cave with Sautuola and Rodríguez Ferrer. When he had had a thorough look at it he was in complete agreement with Sautuola and they both became firm believers in the Prehistoric nature of Altamira. During his visit Vilanova fitted in two lectures - one in the Casino Montañés in Torrelavega and the other in the Instituto Provincial in Santander, corroborating the importance of the discovery of the cave. What he said complied perfectly with the new science that was just beginning to take off, although many people were wary and reluctant to accept these new ideas - in just the same way as happened in the case of evolutionism. Fully aware of the significance of Sautuola's discovery, he wrote: 'When my friend Sautuola, with his experience and qualifications, went into the cave it was nothing more than a hiding-place for animals, and he was certain that since then up until the moment when, by a stroke of luck, he spotted the paintings in the first chamber, no-one had ever been there before.'<sup>15</sup>

With a view to having the figures on the ceiling reproduced, Vilanova approached the Ministry of Public Works and asked if the necessary arrangements could be made for the cave to be lit by electricity. This actually happened, as an experiment, in September, 1880, thanks to José Escalante, the Professor of the Instituto de Santander, who was in favour of the first photographs of the interior of the cave being taken.

<sup>15</sup> Orestes Cendrero Uceda, Juan Vilanova y Piera. *Conferencias dadas en Santander*, Col. Cantabria 4 Estaciones. Santander, Servicio de Publicidad de la Universidad de Cantabria, Exmo. Ayuntamiento de Santillana del Mar, August 1997, p. 114. The talks were published under the name of *Conferencias dadas en Santander*, (Lectures given in Santander), Torrelavega, 1881.

As well as the report on the discovery Vilanova had it in mind to present the data and material found in several caves in the Santander area, plus a copy of the ceiling of the Altamira cave at the Lisbon Conference, which was to take place from the 19th. to the 29th. of September.

The Conference papers were planned to be held in the Academy Library and the Portuguese organizers had set up an exhibition with the materials collected in the excavations made in the Tagus basin and in the Quaternary deposits in Lisbon and Leiria. Amongst those attending the conference were the Quatrefages, (father and son), whose work *Souvenirs d'un naturaliste* (1854) Sautuola had in his library, Capellini, a teacher from Bologna, Cartailhac, from Toulouse, and the prestigious prehistorians Mortillet, E. Rivière, F. Daleau, P. Girod, E. Lartet and Henri Martin.

But unfortunately for Vilanova he did not manage to convince those present of the importance and authenticity of the paintings and his account of the findings failed to arouse sufficient interest in his audience to make them want to go and examine the cave for themselves in spite of his invitation to that effect. The Town Council of Santillana had even planned to have a record of the events of the conference presented as a tribute to the organizing committee; amongst those invited to the dinner was Sautuola, in his role as discoverer of the cave. (October meeting, 1880)

Sanz de Sautuola's book was published in Septembre, and a few days later he sent a copy to his friend, Angel de los Ríos y Ríos, the chronicler for the province of Santander. The opinion he formed of the cave gave rise to considerable debate in *El Eco de la Montaña*. Angel de los Ríos upheld the biblical concept of antediluvian man and was opposed to the explanations of the origin of man given by Vilanova, which De los Ríos referred to as 'preconceived systems', alluding perhaps to evolutionist theories. Sautuola responded to this allegation and

informed him that there was nothing at all suspect in Vilanova's views and that on the first page of his book (presumably he was referring to *Origen, naturaleza y antigüedad del hombre*, 1872), there appeared the ecclesiastical statement authorizing its publication.<sup>16</sup> The unfortunate explanations offered by the Chronicler, a man opposed to anything and everything to do with prehistory, as Sautuola described him, led the finder of the paintings to invite him to see the cave for himself, which he did on November 20th., 1880, though his opinions remained unaffected by his visit.

The controversy over the authenticity, this time from a scientific point of view, spread to the Spanish Society of Natural History, which consisted of prestigious biologists and geologists. They met every month in the Royal Academy of Medicine and their findings were published in the annals of the Society, along with records and minutes of the meetings. It had been set up in 1871 and in its first year there were already 238 members. At the meeting on September 1st. Juan Vilanova had presented a box containing the materials found in the cave by Sautuola and Pérez del Molino, with pieces of flint, carved bones, etc., plus a reproduction of the ceiling paintings. As a result of this first meeting it was agreed that the Ministry of Public Works and the Economy should be approached and asked to finance their findings and promote the exploration of caves in the region. Vilanova told the Society that he would let them know the results as soon as he had made a thorough study of the materials he had been given.

Shortly before the publication of Sautuola's book, Francisco Giner de los Ríos, while staying with the González de Linares family, had gone to Altamira in September 1880 with the students of the *Instit-*

<sup>16</sup> *Escritos y documentos*, p. 131.

*ucción Libre de Enseñanza* and went back there in October. With the intellectual curiosity typical of him, he suggested to Rafael Torres Campos (1853-1904), a teacher at the *Institución*, married to María Balbás, the daughter of Leopolda González de Linares, sister of the naturalist, that he (Torres Campos) should make a study of the cave. Torres Campos, who was spending his summer holiday at Cabezón de la Sal, agreed to take on the task. The geologist, Francisco Quiroga y Rodríguez (1853-1894), who also taught there, helped him in the investigation. Their report was published in November 1880.<sup>17</sup>

Following on from Sautuola's book and the publication of the lectures given by Vilanova, this was a sound piece of in-depth work, although they had not been able to specify the date of the paintings. In the first place they did not deny the Palaeolithic nature of the tools found there. They wrote of the animal paintings: '...the paintings on the ceiling - if it can be proved that they were done by the same person who crafted the tools - reveal extraordinary artistic skills' (*Escritos y documentos*, p. 262). They referred to the perfection of the strokes and the confidence with which the lines were drawn: 'even the most curved and complex' were executed boldly and accurately. On the subject of colour they pointed out the two colours used, the gradations and the chiaroscuro effect achieved by scraping. And finally they observed the artist's tendency towards polychromatic sculpture, the way in which he made use of the convex parts of the rock for eyes and mouths. 'As we have stated'- they wrote - 'the following elements are part and parcel of the technique of the painter of Altamira: linear perspective, aerial perspective, colour diluted in water or grease, and a paintbrush.' (p. 266) And they went on to say:

<sup>17</sup> *Boletín de la Institución Libre de Enseñanza*, N°. 90, Madrid, Nov. 16th., 1880, pp. 161-163.



*Rafael Torres Campos  
(1853-1904)*



*Francisco Quiroga Rodríguez  
(1853-1894)*

'It doesn't make sense to go looking for paintings like the ones at Alta-mira. We mustn't expect to see paintings like these in any form of newly developing art.' It was only later on, when they could find no obvious explanation, that they began to think that the figures might have been painted by Roman soldiers during the occupation of Cantabria. The doubt stemmed from the paintings, not so much the engravings or the prehistoric nature of the cave. So the puzzle remained unsolved but the debate continued until similar wall paintings were later found in France.

In 1880 and 1881 a new polemic held sway in *El Cántabro*, a Torrelavega newspaper which was published six days per month and whose controversial articles reached a wide public. The Sunday paper, *El Impulsor*, was also full of information about the differing views on the cave.

The first hint of authenticity was due to the reproduction of the third plate in Sautuola's book with the ceiling paintings. At that time the people of Santillana saw a French painter called Paul Ratier (1832-1896), whom Sautuola later commissioned to do some oil paintings, going into the cave. Apparently Ratier was the artist responsible for copying the ceiling paintings. Sautuola was to find himself forced to stand up to the person known by the pseudonym '*El Parlante*', who was questioning his integrity in the Press, and he stated in no uncertain terms:

'I, and no-one else, am the only person who can be accused of deceit and invention (the double meaning of this word is not lost on me), which is how this gentleman of the press describes the discovery. I should like to point out to him that when it is a matter of discrediting someone publicly and in the press, someone who at least deserves as much consideration and credit as the person who maligns him, the first thing he should do is remove his mask or the

pseudonym he hides behind and face the the consequences of his statements, and then put forward reasons to lend force to his case. It is a very simple matter to discredit or ridicule someone by resorting to the easy measure of declaring oneself incompetent, which is not strictly necessary in order to interfere in something he does not fully understand.<sup>18</sup>

Regarding the matter of people believing that it was Ratier who had painted the ceiling, Sautuola wrote a letter to Vilanova in 1886 asking him to present it to Lemus in front of everyone at the meeting of the Natural History Society. In the letter he stated that 'Ratier was not capable of executing the paintings in the cave as he did not possess the requisite artistic skills'.<sup>19</sup>

Neither was it believed at the time by the sceptics and those with little or no knowledge of Prehistory that the controversial paintings were the work of a caveman, as the calibre of the paintings made it impossible for them to attribute them to an 'uncivilised man', as they referred to early cave dwellers at that period. Eugenio Lemus gave his backing to these lines of thought when he affirmed that he could find no sign in the paintings that suggested primitive art. On the other

<sup>18</sup> *El Cántabro*, Jan. 25th., 1881, pp. 1 and 2. See also L'Oimon's article in reply to 'El Parlante' in *El Cántabro*, Jan. 10th., 1881, p. 1.

<sup>19</sup> *El Cantábrico*, Aug. 9th., 1902. Ratier was not, however, just an amateur artist. He studied drawing with Brocheton and later worked in Paris. In the Church of Santa Lucía in Santander the painting of Santa Lucía with the blind is still to be seen on the high altar. Several of his portraits and still lifes were on display at the exhibition of the Athenaeum of Commerce and Industry, opened on Oct. 7th., 1866. *La Abeja Montañesa* said of his paintings: 'The pictures of Señor Ratier on display reveal the talents of this painter, but the one showing the little boy begging for alms is particularly good, and the still lifes, in their own way, are no less praiseworthy.'

hand, until the cave of Altamira was discovered there had been no precedents of wall paintings.

The issue of the Altamira cave was still under discussion at the meeting of the Spanish Society of Natural History on January 5th., 1881, during which Vilanova read out the correspondence between Cartailhac and Sautuola. At the meeting on June 1st., he put forward his conclusions on the antiquity of Altamira, exactly as he had presented the case at the International Congress of Anthropology and Prehistoric Archaeology in Lisbon.

The viewpoint of such a prestigious scholar as Emile Cartailhac was also unfavourable regarding the prehistoric nature of the paintings, in spite of his interest in the cave itself, an opinion that was ratified following the report made by Edouard Harlé, a Bordeaux engineer who had visited the cave in February and again in April 1881 with Sautuola and Pérez del Molino. Before his trip he wrote to Sautuola asking his permission to carry out excavations in Altamira. With this in mind he also made contact with Cartailhac and sent him the work schedule he planned to follow: the gathering of materials, a study of conditions in the cave and his wish to make a copy of the drawings, which Sautuola persuaded him not to do because of the possibility of damaging the paintings.<sup>20</sup> In the *Boletín de Comercio*, on the occasion of the second visit of the French prehistorian in April, during which he devoted two days to investigating the cave, he wrote: 'as a result of his painstaking investigation it has been found that parts of different paintings and drawings are covered with a stalactitic layer of almost microscopic crystals'.<sup>21</sup> In the view of the Press,

<sup>20</sup> Begouen Archive (1881). Taken from Marcelino Sanz de Sautuola's collection of documents, in the Fundación Botín, Santander.

<sup>21</sup> *Boletín de Comercio*, April 24th., 1881, p. 2. Also March 3rd., the same year, on the subject of the same visit.

this observation appeared to resolve any question of doubt concerning its antiquity, but that was not the case, as Harlé's report on the reproductions of the roof paintings was not positive. When he saw the paintings and the vividness of the drawings he gave the warning that 'presque partout la peinture peut s'enlever facilement avec le doigt' ('the paint can be removed almost anywhere with your finger') [p. 281], a detail which inclined him to see it as recent, although without casting aspersions on the honesty and integrity of the discoverer of the cave. In a letter to Cartailhac, sent after his visit, he noted down the things he had found in the Altamira cave and in others and sent him a box containing some of them.<sup>22</sup> With the results from these he wrote a report which he sent to E. Cartailhac, who published it in the journal, *Matériaux pour l'Histoire Naturelle et Primitive de l'Homme*. In this study, whose fauna was identified by Alb. Gaudry, and the marine items by the researchers Fischer and Munier-Chalmas, Harlé said: 'Les silex et surtout les os travaillés permettent de fixer comme date des débris l'époque de la Madeleine' (p. 279). But when he refers to the paintings, saying how many there are and describing the different types and the techniques used, he states in conclusion: 'Je crois avoir démontré que les belles peintures du plafond K B sont fort récentes. Il semble probable qu'elles ont été faites dans l'intervalle des deux premières visites de M. de Sautuola, de 1875 à 1879. Plusieurs dessins de la partie A D sont aussi récents' (p. 282).

After receiving this communication Cartailhac had no doubts about the prehistoric nature of the cave, and in his book *Les âges préhistoriques de l'Espagne et du Portugal* (1886) he referred to the implements and carved bones found in the cave. In his reference to Altamira he based his account on Harlé for the terrestrial and marine fauna and he also

<sup>22</sup> Begouen Archive (1881), Fondo Sanz de Sautuola.

illustrated this part with reproductions of flints, harpoons, a needle, etc. However, he made no reference whatsoever to the paintings.

The doubts surrounding the frescoes of Altamira also came to the notice of Gabriel de Mortillet who, on May 19th., 1881, wrote to his colleague Cartailhac as follows: 'I now come to the part concerning the Santander paintings. Simply by looking at the drawings you sent me in your letters I can see that it is a farce, nothing more than a hoax. They have been done and shown to the whole world so that everyone can have a laugh at the expense of palaeontologists and prehistorians who would believe anything.'<sup>23</sup> Years later when the French caves with wall paintings were discovered (which I shall talk about in a later chapter), Harlé was to retract this opinion which had done so much harm to the recognition due to Altamira. In a letter to Henri Breuil dated April 16th., 1903, he admitted: '...The first time I was struck by the fact that a lot of the bison are actually painted underneath the stalactites. If it hadn't been for the discovery of Font-de-Gaume, where the bison are covered by layers of stalactites, and if this hadn't been found after Altamira, I would still have my doubts about it. But now I must set the record straight. The bison of Font-de-Gaume prove the authenticity of Altamira'.<sup>24</sup>

The popularity acquired by the cave made King Alfonso XII, who was staying with the Marquis of Comillas at the time, want to go and see the cause of all this controversy. The townsfolk of Santillana welcomed the King, who was with one of his sisters and the Infanta Isabel.<sup>25</sup>

<sup>23</sup> Cf. Archive of the Institute of Human Palaeontology, Paris. Reproduced by Benito Madariaga in *Hermilio Alcalde del Río. Una escuela de Prehistoria en Santander*, Astillero, published by Patronato de las Cuevas Prehistóricas de la Provincia de Santander, 1972, p. 83.

<sup>24</sup> Reproduced by Benito Madariaga, *Hermilio Alcalde*, op. cit., p. 83.

<sup>25</sup> Pablo del Río, 'Tres hechos particulares de la cueva de Altamira', *Alerta*, Nov. 21st., 1979, p. 20.



*Augusto González de Linares (1845-1904)*



*José Escalante y González (1843-1911)*

As proof of his visit, a member of the King's retinue wrote the King's name - not very successfully - on the wall of the cave. A few days earlier, the King's sisters, Doña Eulalia and Doña Paz, had been to see the cave. The Press summed it up as follows: 'It was a pleasant surprise to find the prehistoric temple, unique of its kind, according to reliable sources, profusely illuminated by oil lamps on the walls, which had been thoughtfully provided by the Marquis of Casa-Mena'.<sup>26</sup>

The day after the King's visit to the cave, Modesto Cubillas, possibly acting on someone's advice, sent a letter to the King, with this request:

'To His Majesty King Alfonso XII - I, the undersigned, wish, with the greatest of respect, to make the following statement: that I am the real discoverer of the cave of Altamira which Your Majesty has visited, and I am the person who took various people to see it, amongst them don Marcelino Sanz de Sautuola, the current delegate for the district where the cave is situated. I was born in Celorio, in the township of Llanes, in the province of Oviedo, and now live in Puente Avíos, in the district of Ongayo. I am a poor farm-worker of sixty-one years of age, who just about manages to make ends meet. Whether the cave has merit, or not, I am the first person to have seen it in modern times and therefore I am the person responsible for the cave having become famous.'

'If Your Majesty is of the opinion that I deserve some recompense, I should be most grateful. I am your most humble and loyal servant. May God grant you and your family a long life'.

Torrelavega, September 14th., 1881. M. Cuvillas.<sup>27</sup>

<sup>26</sup> 'SS. AA. RR. en Santillana y la cueva de Altamira', *Alerta*, Nov. 21st., 1979, p. 20.

<sup>27</sup> Pablo del Río, op. cit., p. 20.



*King Alfonso XII on the occasion of his visit to the cave in September, 1881*

As Cubillas rightly pointed out in this letter, the importance of the cave had still not been fully recognised. The perfection of the ceiling paintings caused not only the prehistorians but also Eugenio Lemus, head of National Calchography, to be mistaken about them. Having impugned the Palaeolithic authenticity of the cave back in 1866 at the Society of Natural History meeting, in 1902 Lemus still remained convinced, as we shall see in due course, that the paintings were modern and therefore false.

In that same year, the Spanish Society of Natural History once again gave the issue its consideration. The first session took place on February 3rd. and the Cantabrian biologist and geologist, Augusto González de Linares informed the members present, amongst whom was Vilanova, that when he explored the cave of Oreña in the province of Santander, he had not found paintings like those to be seen in the cave at Altamira. However, when he referred to the objections that had been made over the antiquity of the Altamira paintings, he put forward the idea that there might be some suspicion with regard to the correlation between the culture of the people and the perfection of the painting, and to support his point he referred to the drawing skills of the Bushmen. This was the very first sign of support for the significance of the caves to be made within the Society. His colleague, Salvador Calderón y Arana (1851-1911), at the second session of the year on September 1st., was more explicit when he added to the existing bibliography, quoting examples of caves in different parts of Africa and commenting: 'Señor Linares, who is familiar with this highly interesting literature and can quote from it, and who has followed the history of the cave at Altamira since its origins, is the one destined to visit this cave, proving before all else its authenticity and showing that, unbelievable as it may seem, the good faith of scholars has not been taken advantage of by some practical joker as certain people believe'. (*Escritos y documentos*, p. 182).



*View of the ceiling of the "Paintings chamber"*

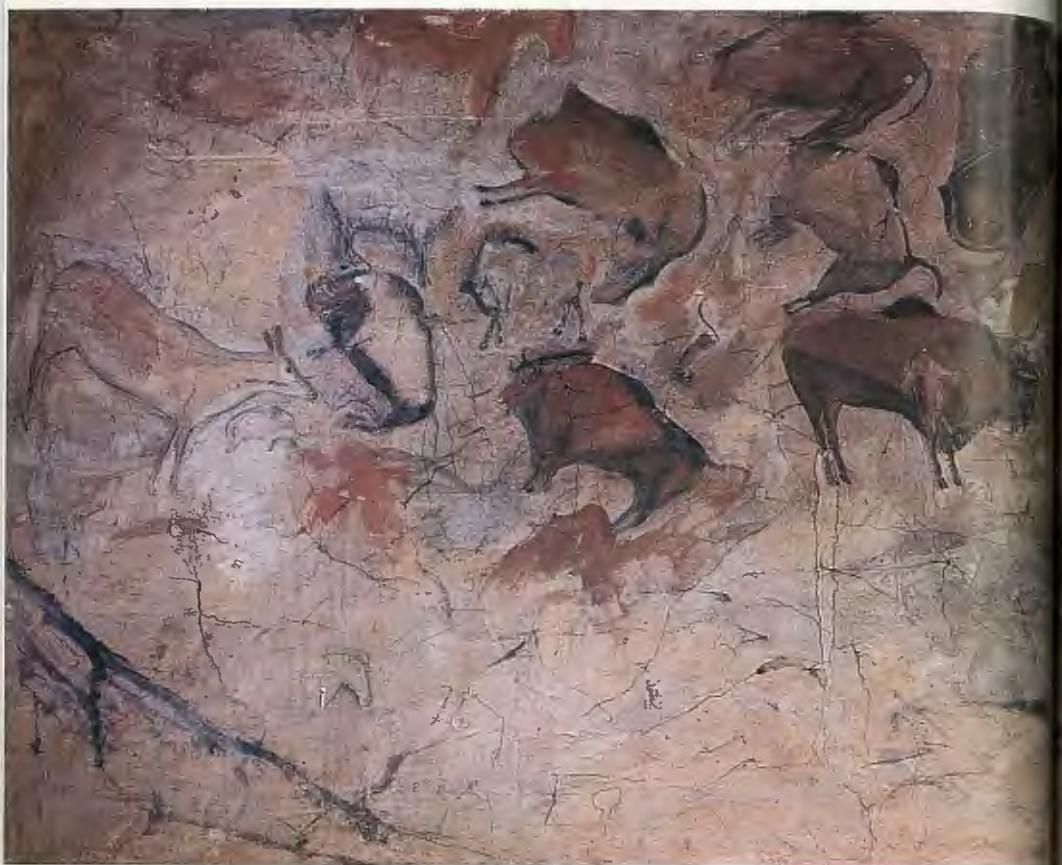
The issue of the cave continued to arise at the sessions which the Society held from time to time. Perhaps the session on November 3rd. was of particular interest, with Juan Vilanova, who supported the authenticity of the paintings, being present, as well as Eugenio Lemus, who was opposed to them being considered prehistoric. The former spoke of lectures at the Nancy conference he had attended earlier that year and how, when he read Cartailhac's book, he observed that he had failed to mention numerous Spanish sites. He also made reference to the negative influence of Harlé on the famous French Prehistorian, who, as has been pointed out, had not made any mention at all of the Altamira paintings in his books. Vilanova had made this point earlier at conferences in Algiers (1881) and La Rochelle (1882)<sup>28</sup> but to no avail.

Eugenio Lemus then explained what he had felt when he visited the cave and, although he recognised that the artist had painted the ceiling with a certain confidence, after examining several paintings he had not found any sign of primitive art in them. It was at this session that he suggested the matter might have been rigged, saying that he had asked a friend of his who lived in Torrelavega, if at the time of the discovery he had noticed a dumb painter there, to which he replied that 'about that time he stayed for a while in Puente San Miguel, a village on the hillside where the cave is' (p. 188). And indeed, as we know, Ratier did play his part, making the reproduction of the roof paintings for the illustration in Sautuola's book, and this gave rise to the suspicion that it was a fraud.

The year ended with another session on December 1st. with a long exposition in which Sautuola intervened quoting the letter he had

<sup>28</sup> The sessions held that year were published under the title of *La gruta de Altamira* by the Spanish Society of Natural History, Madrid, Fortanet, 1886, pp. 5-19.

written in reply, along with Vilanova, Eugenio Lemus and the prestigious naturalists, Ignacio Bolívar and Manuel Antón y Ferrández, Eduardo Reyes y Prosper, former pupil and member of the Royal Academy of Painting, Sculpture and Engraving of San Carlos in Valencia. This debate turned out to be a continuation of the earlier one and also a replica of the preceding session. Juan Vilanova began by reading the letter, which we have already mentioned, from the discoverer of the paintings, who indignantly rejected the supposed falsification attributed to Ratier and commented in it that there were still people alive who had accompanied him on that visit and no-one in modern times had ever entered the cave. Vilanova then supported his opinion that it was of the Magdalenian period by showing drawings from the other chambers.





*Paul Ratier's reproduction of the ceiling of the Altamira cave (1880).  
(By courtesy of the Prehistory Museum of Santander)*



*III. Vindication of the authenticity of Altamira*



*Detail showing a red positive hand and a negative purple one.*  
H. BREUIL AND H. OBERMAIER. Illustration IX



### *III. Vindication of the authenticity of Altamira*

'It is impossible to fail to pay homage to the Spanish observer; he proceeds methodically, prudently and with all necessary calm: he was very *au fait* with the science of prehistory, and there is not a single error in his work'

*E. Cartailhac and H. Breuil*

After the ninth International Congress of Prehistoric Anthropology and Archaeology in Lisbon, during the last ten days of September, 1880, without the prehistorians ever having been to Santillana del Mar to see the Altamira paintings, one of the participants, Henri Martin, on October 5th. wrote a letter of apology to Juan Vilanova, in the belief that everyone else had been to see the controversial paintings. Having to return early to his own country meant that he was unaware, in principle, of the negative outcome of the project. As Vilanova had given him a copy of Sautuola's book, at the request of the author, the French prehistorian felt obliged to offer his opinion, 'reflections' as he expressed it, on the paintings. This is what he wrote:

'It seems highly improbable that people of the Middle Ages or more recent times should have faked these paintings. Who could have given them the idea, since they did not know the European bison, which disappeared from Spain and France so many centuries



*Drawing of a bisón sent by Sautuola to E. Piette 1887*



*Two of the publications in the Menéndez y Pelayo Library, dated 1886 and 1908*

ago? And if these representations are ancient, to whom should we attribute them? Certainly not to the Celts, as there is nothing like this on dolmens or other monuments of that ancient race.

On the contrary, there is in the drawings a certain analogy with the sketches made on stone or on bone with pointed flints, by the men of the later Cave Era, which can be seen in Southern France and Switzerland.

So one could say that these were the same men who did the drawings in Santander, but their artistic skills were slightly more advanced. It also appears that the combination of decorative lines seen in one of the illustrations, is very similar to certain drawings done by cavemen'. (*Escritos y documentos*, p. 48).

The following month Cartailhac wrote to Sanz de Sautuola to tell him what he thought about the pamphlet he had kindly sent him. In the letter he encouraged him to carry out new investigations and excavations and asked him to let him have the bones he had found so that he could classify them and return them to him. He asked him, among other things, if he had found any dolmens in the area or any bones with drawings on in the cave, but he made no reference whatsoever, as we have already commented, to the paintings. However he wrote almost prophetically: 'I do not believe that any other discovery has ever been made in Spain that is of more importance than yours, from the point of view of prehistoric archaeology'. (*Escritos y documentos*, pp. 49-50).

On February 8th, 1887, the year before Sautuola died, Edward Piette wrote to Emile Cartailhac after reading Sautuola's book: 'Don Marcelino de Sautuola m'a envoyé sa brochure sur les objets préhistoriques de la Province de Santander, et notamment sur les peintures de la grotte de Santillana del Mar... Je ne doute pas que ces peintures soient



*Announcement of death published in the Santander daily newspaper, "El Atlántico"*

*Item appearing in the same paper with the news of the death of Sanz de Sautuola*

## EL ATLÁNTICO.

### SECCION DE NOTICIAS.

Ha fallecido nuestro respetable conciudadano el señor don Marcelino S. de Sautuola, cuya muerte ha sido unánimemente sentida en esta población, en la que aquél nombre figuraba entre los más justamente estimados.

El Sr. Sautuola, persona tan modesta como ilustrada, a quien su elevada posición financiera permitió no ejercer la carrera del derecho que poseía, vivía modestamente, cultivando su constante afición de anticuario y bibliófilo montañés, y solo el deseo de ser útil a su pueblo le sacaba de su provechoso retiro, dándole en todo preferente lugar en las Juntas y corporaciones administrativas. Fue Consejero provincial, diputado más tarde, vocal de la Junta de Obras del Puerto, y era en la actualidad presidente de *La Ligue de Contribuyentes*, consejero de la Sociedad de abastecimiento de aguas, y de esta Bursáral del Banco de España, vocal del Consejo provincial de Agricultura, Industria y Comercio, individuo de la Sociedad Antigua del País de Liébana y de la Comisión de Monumentos Históricos y Artísticos de la provincia y correspondiente de la Academia de la Historia.

Possía una buena librería y un curiosísimo archivo en que hay muy raros papeles relativos a cosas de la Montaña. Era dueño también de una discreta colección de objetos antiguos hallados en sus frecuentes expediciones artísticas por la provincia.

Visten luto por el señor Sautuola muchas distinguidas personas de esta población, entre las que se cuenta el ilustre literato don Amón de Escalante, de quién era hermano político y a quien como a todo el resto de su apreciadísima familia, envía la Redacción de *EL ATLÁNTICO* sincero pésame.

A las diez y media de la mañana de hoy será conducido el cadáver al panteón de familia que en el pueblo de Puentecillas Miguel poseía la del señor Sautuola.

de l'époque Magdalénienne'.<sup>29</sup> This is the second acknowledgement to be made by a Frenchman of the discovery of the nobleman from Puente San Miguel.

Sautuola died in 1888 without having had the satisfaction of any official public confirmation of his theories concerning the cave, and then the following year Juan Vilanova became a member of the Royal Academy of History (on June 29th.), his acceptance speech being replied to by Antonio Cánovas. At this period the credibility of Altamira was at rock bottom and it was no longer the object of debate it had once been. However, he put his reputation on the line by referring once again to the cave and the paintings in his speech, saying:

‘...on the ceiling of the first chamber and the walls of the other four or five the cave at Santillana offers, in my opinion, the most authentic and ancient examples known. Indeed, the rough drawings and the paintings done in ochre which can be seen there, and which I myself have examined umpteen times, display the same characteristics as those found on pieces of ivory and stags' antlers found in various caves in France. Several of these represent animals of the period, depicted in profile, by the use of strokes, even the finest of lines, made with a sharply pointed instrument' (p. 54).

In his speech Vilanova made frequent references to the Bible and so spoke of the Pre-Adamites, although he also alludes to the anthropoid ape as the ancestor of our species. When speaking of the theory of evolution, he very wisely accepted it, being well aware of the prejudice that

<sup>29</sup> Quoted by M. Almagro Basch, ‘Arte paleolítico hispano-aquitano y arte mesolítico levantino,’ in *Altamira, cumbre del arte prehistórico*, Madrid, Instituto Español de Antropología Aplicada, 1968, p. 185.

still existed amongst the conservative and religious classes, and he wrote: 'However, I do not wish to become entangled for the moment in the examination of these doctrines, which I am far from dismissing out of hand. Neither do I wish to point out those facts, of which there are a considerable number, which in my humble opinion, are not very consistent with their absolute principles, merely to prove my impartiality. I am solely concerned with the conclusion I put forward in this paper' (p. 13).

In the final years of the century explorations of caves in the South of France began to produce material of interest, thanks to the discoveries of artefacts and rock engravings made by prestigious prehistorians. In 1890 L. Chiron discovered the cave of Figuier, in Saint-Martin d'Ardèche; in 1895, Emile Rivière and G. Barthoumeyrou explored the cave of La Mouthe (Dordogne) and the following year Rivière discovered an important group of engravings, which they informed the Academy of Sciences about on September 28th. On the same date the following year, while washing the walls of the cave at Pair-non-Pair, François Daleau found a group of paintings buried by undisturbed strata of the upper Palaeolithic period and he sent word of his discovery to the Archaeological Society of Bordeaux on November 13th. Lastly, in 1897, the famous cave of Marsoulas was discovered by F. Regnault and L. Jammes, later to be studied by E. Cartailhac and H. Breuil.

This chain of discoveries was followed in 1900 by the study of Abbé Breuil, who produced evidence of the drawings on the two walls of the frieze in the cave of Marsoulas and had copies made of them. Thanks to Rivière's research, a group of prehistorians made up of Henri Breuil, Denis Peyrony and Louis Capitan visited Combarelles in 1901, and they made copies of the drawings there from 1903 onwards. This was the year that the spectacular discoveries of the caves of Mas-d'Azil (Ariège) by Breuil took place and the cave at Font-de-Gaume was discov-

ered by D. Peyrony the same year. The great wealth of polychromatic paintings, including some of bison, obliged the French prehistorians to think again about the Altamira question. By this time the existence of wall paintings, first witnessed in the cave at Santillana del Mar, was beyond question. In 1902 Cartailhac investigated the cave at Marsoulas and Breuil did copies of the drawings. The race for the discovery of cave art had begun. The Spaniards would not be bringing up the rear after Breuil and Cartailhac's trip to Cantabria.

As soon as the discoveries made in France became known via the Press, early in the summer of 1902, Hermilio Alcalde del Río, the founder and director of the School of Arts and Industry in Torrelavega, asked the naturalist Augusto González de Linares for details of these and he showed him the drawings of the animal figures of Font-de-Gaume, featured in a magazine.

On September 30th. Emile Cartailhac and Henri Breuil went to Santillana to visit Altamira, as had been announced in the Press the previous week. The first thing they did was examine the collections of prehistoric objects belonging to private collectors. So they saw things from Altamira and other caves which were in the possession of the Sautuola family and Eduardo de Pedraja's family. As neither of the two visitors spoke Spanish at that time, Menéndez Pelayo and Pérez del Molino, the M.P., acted as their interpreters and went with them to the caves. Incidentally, the owners and one of the editors of the daily newspaper *El Cantábrico* also accompanied them. The object of the trip was to reproduce the figures in the famous Altamira cave. Abbé Breuil describes it as follows:

'My experience of tracing cave paintings was limited at that time. However, I didn't feel I could trace copies of the large figures painted on the ceiling of the cave. The colour, which was quite thick,



Emile Cartailhac  
(1845-1921)



Henri Breuil (1877-1961)



Prehistorians at the entrance to the cave of Altamira: J. Cabré, the guide to the cave, P. Serrano, H. Breuil, L. Siret, H. Obermaier and a brother of L. Siret

like porage, would have stuck to the paper and this would have destroyed the paintings. It was only possible to make a copy of a geometric nature, which, working eight hours a day, lying flat on my back on top of sacks full of bracken, took me about three weeks. It wasn't a flying visit by any means- more like full-time residence in the cave.<sup>30</sup>

In a statement to the daily newspaper *El Cantábrico* on October 6th., 1902, Cartailhac said that the cave of Altamira was 'the most beautiful and the most impressive. 'The state of conservation of its paintings and drawings – he added – is very satisfactory. Spain should take pride in protecting it, so that scholars from all over the world will always be able to study it'.

On October 26th., they returned to France with the drawings done in pastels. Eugenio Lemus, as an authority on the reproduction of graphic art, suggested that photography might be used to reproduce the drawings in more detail. About that time Cartailhac had retracted publicly the reservations he had expressed with regard to the cave at Santillana del Mar. The day before they left the Frenchmen sent a letter to the Press, in which, apart from thanking the authorities and the people who had worked with them on the project, they described the work carried out in some detail: 'Although we have been able to make the album of paintings and drawings, as curious as they are varied, of the Altamira cave, we have not once taken a mattock to the earth of that site, which we consider to have been barely disturbed in the painstaking investigations carried out so far.'<sup>31</sup>

<sup>30</sup> E. Ripoll Perelló, 'Vida y obra del abate Henri Breuil, padre de la prehistoria' (Life and Work of Abbé Breuil, Father of Prehistory), an offprint of *MisCELÁNEA en homenaje al abate Henri Breuil (1877-1961)*, Barcelona, 1964, p. 6.

<sup>31</sup> *El Cantábrico*, Oct. 25th., 1902.

In the letter appreciation was expressed in memory of Sautuola and Vilanova and attention was drawn to the possibility of the paintings deteriorating. This note of warning was later to be picked up and amplified by Luis Hoyos Sainz in an article in the same newspaper: 'The Town Council, the *Diputación* and everyone in our region must not forget that the study and scientific investigation of the cave should be concerned first and foremost with conserving it: 'It is essential that when all the investigations are over it should not be necessary to put up a notice saying that this is where the famous cave of Altamira used to be.'<sup>32</sup>

Maybe it was these statements that prompted the official letter sent by the Civil Government of the province of Santander to the Mayor of Santillana (Sept. 30th., 1902), in which the orders necessary to ensure a more positive conservation policy were given. It was prohibited to fire a gun inside the cave, visitors were to be accompanied by a guide, objects were not to be removed and the paintings and drawings to be treated with respect because of the risk of deterioration. On November 25th. it was announced by the Civil Government that unauthorised persons should not be allowed entry and any form of lighting which might blacken the walls of the cave should not be permitted, likewise the use of drills to extract stone in the immediate vicinity.<sup>33</sup>

After the intervention of the French prehistorians it was announced that there was to be a Spanish commission to make copies of the paintings by tracing the originals. The Royal Academy of San Fernando at a meeting on November 10th., as Eduardo Ripoll recounts, aired 'various ideas on the appropriateness of tracing the paintings in the cave in question', which was forwarded to the Commission of Historic and

<sup>32</sup> *El Cantábrico*, Nov. 4th., 1902.

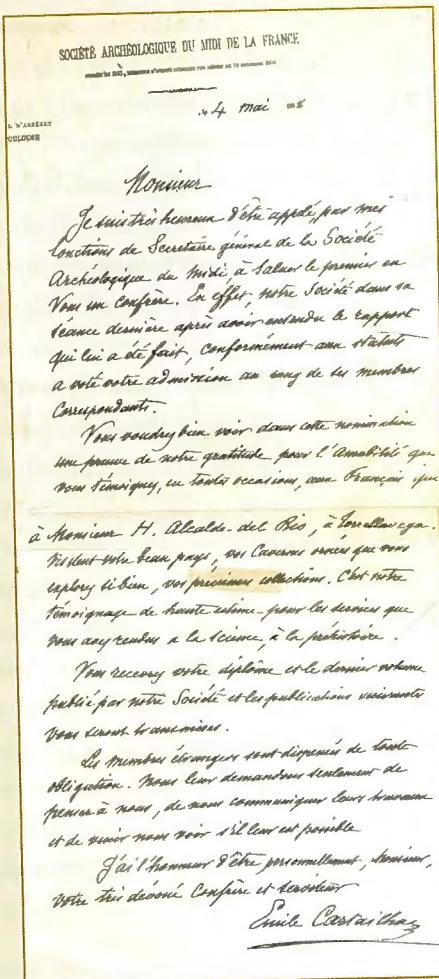
<sup>33</sup> M. Sanz de Sautuola collection, Fundación Marcelino Botín.

Artistic Monuments of the Province of Santander. At the same time it was considered a good idea to form a bibliographical index of all the writings alluding to the cave. With regard to the tracings, the Commission could not guarantee that it would be 'possible to do anything, because of the roughness and unevenness of the walls of the cave, whose protuberances had sometimes been used by the artists to make the paintings stand out and give a sense of chiaroscuro to their work'.<sup>34</sup>

Señor Aznar, a teacher at the School of Arts and Industry in Madrid, attempted to reproduce the cave paintings and Hoyos Sainz proposed that his work should be scrutinised by a team made up of the following people: Menéndez Pelayo, González de Linares, Olavarría, Lemus and himself.

Stimulated by the interest shown by the French prehistorians, Hermilio Alcalde del Río began to make a study of the cave on his own account, making up for his lack of prehistoric grounding, being self-taught, 'with tenacity of effort'. In just over two months he explored the cave thoroughly and found new evidence of human habitation. At the same time, being an expert on painting as he had studied at the Advanced School of Painting, Sculpture and Engraving in Madrid, he spent twenty days making a copy in pastels of the paintings in the Altamira cave. He was the person responsible for the first classification of the paintings, from the technical point of view, into three different types: the first, made up of indeterminate lines; the second, in colour and sketched; and the third, with definite, confident strokes. In his book *Las pinturas y grabados de las cavernas prehistóricas de la provincia de Santander*, he

<sup>34</sup> See the relevant documents at the Royal Academy of San Fernando, Oct. 2nd., and Nov. 4th., 1902. Minutes of the meeting on Nov. 10th., and records for Nov. 14th. and 21st., 1902.



A note from  
Cartailhac to  
Alcalde del Río,  
telling him about  
his appointment as  
a corresponding  
member of the  
Archaeological  
Society of the Midi

drew a plan of the cave with the animals depicted on the roof and he included drawings and anthropomorphic figures, roof shapes and net-like forms etc. found in the different chambers.

In his correspondence with Eugenio Lemus he writes that González de Linares often accompanied him on his days of investigation in the cave, and how the Frenchmen erased recent drawings so that they would not appear on the photographs (Oct 21st., 1902). On December 4th. he wrote to Lemus : 'I have now reproduced most of the existing drawings or at least, most of what I have managed to see. There are only seven more paintings left to do: I have already done fourteen of these, forty engravings and about the same number of other types of representation.' And referring to the method used to reproduce them, he adds: 'One cannot make a tracing of the paintings since it is impossible to do because of the roughness and irregularity of the roof; and on top of all that, there's the fact that the outlines of the figures are not definite... they are faded and one has to stand well back from them in order to appreciate them, one cannot see them properly close to.'<sup>35</sup> In this letter he tells him that, having a hunch that the case of Altamira was not an isolated one, he had started to have a look at other caves. In his book he later referred to it as follows: 'and I began the far from easy task of travelling around and exploring the most rugged part of this province. My efforts were crowned with success and now I feel it's all been worth while as I can supply new information to those who enjoy nothing better than dedicating themselves to the study of this kind of material.' (*Las pinturas y grabados...* p. 7).

This was Alcalde del Río's most important contribution, because in a short space of time he carried out a whole series of discoveries of caves which had wall paintings. And so, in February, 1903, Father

<sup>35</sup> Fundación Marcelino Botín, Marcelino Sanz de Sautuola collection.



*Reproductions of figures from the cave by Alcalde del Río in 1902*

Lorenzo Sierra (1872-1947), a teacher at the school of the Fathers Paúles in Limpias visited a cave called the Valle cave, which had been discovered by shepherds at Ojébar, in the district of Rasines. In April that year Alcalde explored another cave with a stratum in Barcenaciones, and in September, accompanied by Father Sierra, he discovered the caves of Covalanas and La Haza, in Ramales, which both had paintings. Then Sierra visited the one at Omoño (La Cueva del Mar) and two more in Hoz del Marrón and Seña. But the most outstanding finds in the region occurred when Alcalde discovered the cave of Hornos de la Peña in October, 1903, and then in November, the cave of El Castillo (The Castle) in Puente Viesgo. These were followed in 1905 by Santián, which had been known about since 1880, La Clotilde, in collaboration with Breuil, in 1906, the drawings of El Pendo and Lameaza in 1907, El Pindal, Maza-culos, Balmori in 1908 and La Loja (in this case, working once again in collaboration with Breuil and Mengaud), as he did in 1908, and Las Aguas at Novales in 1909. Then Lorenzo Sierra discovered, with Alcalde, the cave of El Mirón, 'in which they found a palaeolithic seam of some importance.'<sup>36</sup> Sierra explored and made known the cave of El Salitre in 1903 and the Venta de la Perra one in 1904. He carried out excavations in Rascaño and collected material in the El Mar cave. Lastly he worked in the caves of Truchiro, La Sotorriza in 1906, and of El Otero in 1909. In 1906 two important things happen, which will be dealt with later - the publication of Alcalde's book about the caves of Altamira, Covalanas, Hornos de la Peña and El Castillo. On June 15th. the signing of the first contract by the Prince of Monaco and Alcalde del Río to promote further studies and publications on the paintings and drawings of the caves alluded to, in collaboration with Abbé Breuil, took place.

<sup>36</sup> Julián Sanz Martínez, op. cit., p. 93.



*Photographic portrait of the prehistorian Lorenzo Sierra, teacher at the Colegio de San Vicente de Paúl (Cantabria)*



*Hermilio Alcalde del Río. Oil painting by Joaquín Bárbara Balza*

About a year after the previous visit of the two French prehistorians to Santillana in 1902, Abbé Breuil and A. Bouyssonie went back to Altamira to make copies of the drawings. On this occasion they were accompanied by the naturalist, Augusto González de Linares and the anthropologist, Luis de Hoyos Sainz.<sup>37</sup> In 1904, thanks to the intervention and the useful information given by the Prince of Monaco's secretary, M. Saigne, and Salomón Reinach, Albert I was able to see the reproductions in pastels of the Altamira paintings done by the French priest. On November 11th. it was agreed that all the material on the wall paintings of Altamira should be published by a Franco-Spanish team consisting of Cartailhac, Breuil, Capitan, Daleau and Peyrony, on the French side, and Alcalde del Río and J. Cabré on the Spanish. However, as we shall see later, the number of collaborators involved decreased, and in the contracts for 1906 and 1909 the investigation of the Altamira cave was not considered.<sup>38</sup>

Father Breuil made preparations for a new working expedition to Altamira in 1905, but he came up against a number of administrative difficulties and problems concerning collaboration. González de Linares, who spoke French well, had died. Eduardo Pérez del Molino was at the time busy with political elections and the Mayor of Santillana del Mar did not grant him permission to carry out excavations in the cave. To make matters worse, Alcalde del Río had made good progress with the work on the paintings and the stratum. He then went to see Hoyos Sainz, who advised him to seek official support from the Embassy, a necessary requisite in a country like ours, so ready to heed recommendations. So he wrote to the Mayor of Santillana and to Don José Rioja,

<sup>37</sup> *El Cantábrico*, Sept. 3rd., 1903.

<sup>38</sup> Eduardo Ripoll Perelló, op. cit., 1964, p. 8.

the successor to González de Linares at the Centre of Marine Biology in Santander, as he was not sure that he would be able to work on the project the Frenchman was preparing for.

At the time Hoyos Sainz was possibly the local candidate best suited to helping Breuil and acting as intermediary in his negotiations. The Spanish anthropologist, then a lecturer in Toledo, had written a series of articles in *El Cantábrico* during July 1902, commenting on the acknowledgement of E. Cartailhac regarding the Altamira question. He would be a recognised figure in the field of prehistory, both for his investigations of the cave at Suano and the ones at Revilla, on which he had given information to the prehistorians, as well as his research on one of the levels of the San Isidro cave, which he classified as Chellean.

Breuil wrote to him again in October 1905 and made him see that the excavations he planned to make in Altamira 'would not threaten the stability of the cave in any way' and suggesting that he should try and get the necessary authorization for the prospecting work involved. He also proposed that he should exclude Alcalde del Río from the work on the cave, and that the material should be divided between Spain and France and the findings published jointly. Apparently it was planned that he should collaborate with L. Capitan, who had worked with Breuil and published two important studies on Palaeolithic engravings and paintings in 1901, but he did not turn up. But the French priest's visit was not to materialize until the following year. In June he wrote again to Hoyos Sainz and told him about the publication of the findings of Alcalde del Río, with whom he said he had a good relationship. Soon afterwards, on July 1st. 1906, Alcalde signed, as we have already mentioned, his first contract with the Prince of Monaco, in which it was agreed that the joint study of Alcalde and the French priest on the wall paintings and engravings of the caves of Covalanas, El Castillo, and

Hornos de la Peña, which had been discovered by Alcalde, should be published. From that moment Breuil began a close collaboration with the director of the School of Arts and Industry which was to last for the rest of his life. As a result of this the Spaniard figured as co-author of one of the books sponsored by the Prince of Monaco, *La caverne d'Altamira à Santillana près de Santander, Espagne* (1906) and *La Pasiega à Puente Viesgo, Santander* (1913).

When Breuil read the small volume published by the Spanish prehistorian, he said that it was pointless to 'try to belittle the importance of Alcalde's discoveries', although he had found 'many serious errors concerning the evolution of Quaternary art which he has fallen into because he has not been aware of the numerous superimpositions of the works of art of Altamira' (Letter to Hoyos Sainz, March 27th., 1906). The same year Rafael Altamira published a review of Don Hermilio's book, saying that it was an honour for Spain that a Spaniard should have written this book which did not rely exclusively on material taken from foreign scholars, who up to this stage had been the only reliable source of information.

The administrative aspects involved in acquiring the authorization which would allow the excavations to take place were dealt with by Eduardo Pérez del Molino, who applied to the acting Governor for the required permission, on the understanding that the findings of the investigation be handed over to the National Museum in Madrid or the one that Hermilio Alcalde del Río was organizing. The governor, García Morante, summoned the Provincial Commission of Historic and Artistic Monuments of Santander to assess the case in hand. Amongst those present was Eduardo de la Pedraja, who was then sixty-eight years old, a close friend of Sanz de Sautuola and, as noted earlier, an explorer of caves in the region, who possessed a collection of important prehistoric material.

This commission agreed that the most reasonable course was for the governor to send Breuil's request to the Museum of Natural Sciences and also to the Academy of San Fernando, and the decision should be left to them. In the meantime the Mayor of Santillana was to withhold permission for the work to commence. On February 13th., 1906, the governor wrote to the director of the Museum of Natural Sciences, Don Ignacio Bolívar. His reply was that he was delegating representation of the museum to Luis de Hoyos Sainz who would have to be present when M. Breuil was at work, and with the added proviso that all the material resulting from the excavations should be sent to the Anthropological Museum in Madrid, rather than the one in Torrelavega, which Alcalde del Río was planning to provide with the collection of items found. This did not prevent them sending duplicates to the less prestigious local museum, once the material had been studied and classified. Ignacio Bolívar added in his communication: 'On the other hand, the findings of the early investigations and subsequent ones, which have taken place in the cave of Altamira, carried out by Doctors Vilanova, Linares, Bolívar, Calderón, Quiroga, Antón, Hoyos and Reyes, are already housed in the Museum of Anthropology in Madrid, and it is essential that the others should also go there so that they create a unified corpus of material.'<sup>39</sup> The Academy of Fine Arts of San Fernando appointed Don Hermilio to supervise on their behalf, together with Hoyos Sainz, the work to be carried out in Altamira.

Once the authorization and the work team were organized, Henri Breuil returned to Santander on July 2nd. just as the holiday season was beginning. His first visit was to his friend and intermediary,

<sup>39</sup> *El Cantábrico*, Feb. 4th. and 20th., 1906.

Pérez del Molino and, after having a word with the editors of *El Cantábrico*, he went on to Torrelavega, where he planned to have his centre of operations. The person acting as his guide and colleague in this enterprise was the director of the School of Arts and Industry, and later he dedicated some words of appreciation to him: 'The lack of a common language had limited our conversations, but he became extremely enthusiastic about the excavation of the numerous caves in the area, and this led to a number of important discoveries in a short space of time, in which Father Lorenzo Sierra helped.' The pair of them were great friends and work colleagues up until the time of his death.<sup>40</sup>

While Breuil was in Torrelavega he mislaid his breviary and as he needed it for his prayers, he had to put a notice in the paper, which led to a whole series of amusing stories and misunderstandings. When they went to Puente Viesgo, where they had been around this time, to enquire about the book, Alcalde took the opportunity to call and have a word with Ignacio Bolívar, who happened to be staying at the spa. *El Cantábrico* summed up the visit of Breuil and Alcalde to the Castillo cave, saying: 'The stratigraphic investigations taking place at the archaeological site of this scientific gem will be carried out by Señor Alcalde del Río, whose expenses were then thought to be around 10.000 pesetas. On July 22nd. they left Puente Viesgo for Ramales to investigate the caves of Covalanas and La Haza.'<sup>41</sup>

When the work was completed Breuil wrote to Hoyos Sainz to tell him what they had achieved: 'I'm back in France after making copies of lots of drawings in six new caves. Given the circumstances I simply didn't have time to do any excavating - not a chance! But I may go back

<sup>40</sup> Minutes of the fourth session, Congreso de Ciencias Prehistóricas y Protohistóricas, Madrid, 1954-Zaragoza, 1956. Quoted by E. Ripoll, op. cit., p. 10.

<sup>41</sup> *El Cantábrico*, July 23rd., 1906.

next year to get on with that. Señor Alcalde del Río has been a great help and a source of good advice.<sup>42</sup>

Henri Breuil's next visit was not to take place until 1909, when on July 21st. Prince Albert of Monaco arrived in Santander on board the yacht, *Princesse Alice*. When the yacht docked at one of the quays of Maliaño, the city dignitaries, and also José Rioja, the director of the Centre of Marine Biology, and the prehistorian P. Jesús Carballo, head of the College of Silesians, went to pay their respects, and left their cards or names. The Prince only paid attention to the Basque scholar, Jesús Elósegui, and Breuil. Then Breuil met up with Alcalde to arrange trips for the Prince, who wished to go and see the most important caves in the province.<sup>43</sup>

The next day Breuil, Obermaier and Carballo went aboard the yacht to arrange the journey to the cave of Covalanas at Ramales where they went that afternoon. On the morning of the 23rd. they went to Puente Viesgo to see the El Castillo cave, which the Prince found impressive, and in the afternoon they went to Santillana to see the Altamira cave, which he found even more amazing because of the outstanding quality of the paintings. He described them as a true record of the past, an important legacy which must be jealously guarded and handed down to posterity. A second contract with the Prince, involving the excavation of the caves of Valle at Rasines, the Venta de la Perra at Carranza and the El Castillo cave at Puente Viesgo, resulted from this visit. The first two caves mentioned were under the supervision of Father Lorenzo Sierra, and El Castillo, that of Hermilio Alcalde, and they would be working with partners such as Breuil, Hugo Obermaier and the priest, J. Bousso-

<sup>42</sup> In an undated letter in my book, *Hermilio Alcalde del Río*, p. 113.

<sup>43</sup> *El Cantábrico*, July 22nd., 1909, p. 1.

Dîner du 22 Juillet 1909

Crème et laitue au Chèvre

Boeuf sauce Vanille

Caneton aux Olives

Salade poiv. à l'Anglaise

Gâteau glacé Montcalm

Desert

Menu of the dinner served at the dinner on  
July 22nd. 1909, during the Prince of  
Monaco's visit to Santander



His Royal Highness Prince  
Albert of Monaco



The visit of Prince Albert of Monaco to the cave of El Castillo, in Puente Viesgo, on July 23rd. 1909. On the left is H. Breuil, with Hugo Obermaier behind, the painter, Bonat, to the right, and in front, hat in hand, Hermilio Alcalde

nie. Strangely enough, Altamira was not on the agenda, as I have already said, as the report on this was to be published firstly by Cartailhac and Breuil in 1906 and later by Breuil and Obermaier in 1935, thanks to the patronage of the Duke of Alba, under whose presidency the Commission for the Protection of the Cave of Altamira was formed. The 1935 study involved a comprehensive and thorough check of the paintings, and in 1952 Breuil concentrated his efforts on them once again in *Quatre cents siècles d'Art pariétal*. Each new study of the cave revealed that there were fresh signs of deterioration in spite of the efforts made to preserve the cave and its contents.

In 1978, L.G. Freeman published a work on the detailed study of some of the drawings in the cave, which was investigated again in 1976. In it he stated that, in his judgement, the so-called wild boar could well be a bison running, and one of the drawings represented two male bison during the rut mounting a female, ideas which I shall mention at a later stage. Back in 1880, when the cave was described in the Press, the animal on the panel was classified as a wild boar and its long snout and curly tail were alluded to (*Escritos*, p. 247). For their part, Breuil and Obermaier in their new study of the drawing of the wild boar, completed in 1935, tell us that 'lines of the black horns of a previous bison can be seen on its forehead.' (p. 29). The doubt always remains as to whether the artist decided to change it into a wild boar because of a crack in the ceiling which made the snout look like a face. However, the head of the bison is clearly defined.



Entre les soussignés :

S.A.S le Prince de Monaco, représenté par M. Louis Mayer, Son Conseiller Privé, demeurant à Paris 2 rue de Logelbach, d'une part,  
et M. Hermilio Alcalde del Río, directeur de l'École des Arts et Métiers de Torrelavega, y demeurant,  
d'autre part.

Il a été convenu ce qui suit :

1<sup>er</sup> Son Altesse Sérénissime prend à sa charge la publication des recherches de M. Alcalde del Río et de M. l'Abbé Breuil, travaillant en collaboration, sur les peintures et gravures préhistoriques des Grottes de Covalanas, Castillo, Hornos de la Peña, découvertes par M. Alcalde del Río.  
En conséquence, M. l'Abbé del Río cède et abandonne à Son Altesse Sérénissime la propriété de ladite publication, M. l'Abbé Breuil s'y réservant entièrement, à tel point, du 20 octobre 1904. - Son Altesse Sérénissime se réserve la propriété des dessins originaux et photographies qui serviront à illustrer la publication ; il lui en sera fait remise, après l'exécution des clichés et des planches, par Son Altesse Sérénissime, pour la direction de la publication, les planches seront soumises à Son approbation.

2<sup>er</sup> M. Alcalde del Río et M. l'Abbé Breuil conservent le droit même avant la publication de l'ouvrage, de faire, sur les sujets qui y seront traités, des communications académiques, articles, thèses, conférences ; ces travaux pourront être illustrés de figures en noir ou en projections.

3<sup>er</sup> La cession dont il s'agit est consentie moyennant le remboursement par Son Altesse Sérénissime à M. Alcalde del Río, des déboursés par lui faits dans ses prééminent recherches dans ces trois localités qu'il déclare se monter à 900 francs, dont remise lui sera faite à la fin

*The contract for the publication of the wall engravings and paintings of the caves of Covalanas, Castillo and Hornos de la Peña (Cantabria) between the Prince of Monaco and Hermilio Alcalde del Río, in 1906, in collaboration with Henri Breuil*



IV. *The Excavations*



*Detail of a negative image of purple painted hands superimposed on a horse.*  
H. BREUIL Y H. OBERMAIER. Illustration IX



#### IV. *The Excavations*

'Altamira is an exceptional prehistoric site. The existence of extensive archaeological strata by the entrance lends its wall paintings a remarkable interest, since we are to suppose that a good number of its paintings and drawings must have been done by the people who lived in the hallway at the entrance to the cave'

*Francisco Jordá Cerdá*

The distinction between the boring operations and the actual excavation work carried out in the cave should be pointed out. The early collections of materials found in the cave were assembled by Sau-tuola and Vilanova, who found an almost complete skeleton of a bear during one of his investigations, and also Eduardo de Pedraja and Dr. Ballota-Taylor, a Santillana doctor, all of whom uncovered remains and implements in the course of their explorations. Even as late as 1907 Francisco de las Barras announced at a meeting of the Society of Natural History that he had found on one of his visits to the cave, teeth of bear, deer and horse (*Ursus*, *Cervus* and *Equus*), as well as a *Patella* (limpet) and a *Trochus* (top shell). Amongst the remains found there he mentions one with a horse,<sup>44</sup> which could well have been a female deer, carved on it.

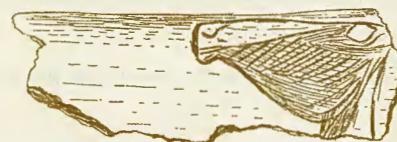
<sup>44</sup> *Bulletin of the Spanish Society of Natural History*, 1907, VII, pp. 219-221.



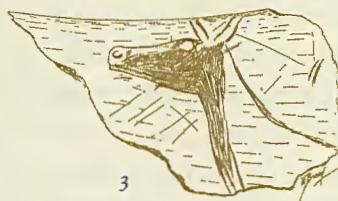
Engraving of a female deer on a bone (Altamira)



2

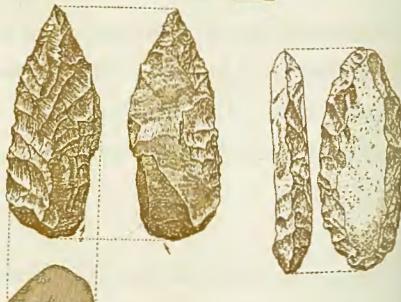
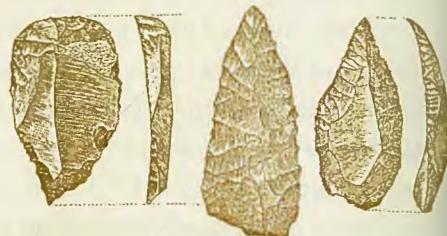


I



3

1, 2 and 3. Female deer engraved on a scapula of a cervid from the early Magdalenian period at Altamira (Alcalde del Río, Breuil and Obermaier)



Points, blade and scraper from the late Solutrean period at Altamira

In the main chamber of the Altamira cave Sautuola discovered a seam about a metre deep, in which he found huge limpet shells, fragments of bone, teeth and pieces of flintstone, which he later reproduced in his book.

The early excavations were brought to public notice by Edouard Harlé in 1881 and years later, in 1906, by those of Hermilio Alcalde del Río. In the case of the latter the materials found went to the Museum of Natural Sciences and were later put on display in the School of Arts and Industry in Torrelavega. The excavations brought to light the existence of an Upper Solutrean stratum and another of the early Magdalenian period. The description of scapulas of animals with the heads of striped female deer on them, which he thought belonged to the Solutrean period, and which were later classified correctly by Obermaier as being Magdalenian, the materials used for the paintings and the drawings of carved tools and implements brought a new interest and importance to the study of the cave.<sup>45</sup>

In 1924 and 1925 Hugo Obermaier carried out two new excavations with more scientific know-how and confirmed the existence of a final Solutrean stratum and another of early Magdalenian. He invited Hermilio Alcalde and Father Jesús Carballo to work with him on the first site (work which would take three weeks or so), but they did not accept, and Jesús Carballo warned of the danger involved in attempting to excavate in the area just inside the entrance where there was the risk of rock falling.<sup>46</sup> At the second one, when they had been working there

<sup>45</sup> César González Sainz, *Hermilio Alcalde del Río. Escenas Cántabras*, Cantabria 4 Estaciones, Santander, Universidad de Cantabria, 1999, note 17, pp. 48-50.

<sup>46</sup> Daniel Gallejones, 'Las excavaciones y la guerra civil pudieron acabar con Altamira', *El Diario Montañés*, July 22nd., 1979, p. VIII.

about two months, some rock did give way, injuring Obermaier, which made it necessary to build a stone wall.<sup>47</sup>

In addition to molluscs, remains of horses, deer, bison, goats, wild boar, bear, etc. were found. In this case the fauna depicted corresponds with what had been uncovered in the stratum, but as the palaeontologist Jesús Altuna states, in Franco-Cantabrian caves there is not always a connection between what is depicted in the drawings and the palaeontological remains that have been found there, which makes it impossible to apply any pattern of homology or similarities of any kind, which would be extremely useful to us in this case. He cites the cave of Ekain where the horse is the animal most frequently represented, and yet he only found there one bone belonging to a horse. If it was the totemic animal that would explain why it was not hunted and is the one depicted most frequently in the sanctuary.<sup>48</sup>

The two-tone paintings of the cave at Santillana were classified as belonging to the early Magdalenian period. The materials found in the cave during excavations of different periods have been studied by E. Ripoll (1961), F. Jordá (1964, 1968), J. González Echegaray (1971), I. Barandiarán (1973), L. G. Strauss (1977), M. P. Utrilla (1981), and the fauna by J. Altuna and L. G. Strauss (1976) and Richard Klein (1980-81).

<sup>47</sup> Joaquín González Echegaray and Leslie Gordon Freeman, 'Obermaier y Altamira. Las nuevas excavaciones en "El hombre fósil", 80 años después', Ed. Alfonso Moure, Santander, University of Cantabria, 1996, pp. 249-269.

<sup>48</sup> Jesús Altuna, *El arte paleolítico en el País Vasco*, 2 Arte prehistórico, San Sebastián, Etor, 1976, pp. 28 and 30. Idem, 'Fauna de mamíferos en los yacimientos prehistóricos de Guipúzcoa, *Munibe*, 1-4, San Sebastián, Sociedad de Ciencias Naturales Aranzadi, 1972, pp. 437-438. See also by this author, 'Relación entre la fauna cazada por los pobladores del yacimiento y las figuras representadas en el santuario', in *El yacimiento prehistórico de la cueva de Ekain (Deba, Guipúzcoa)*, Guipúzcoa, Sociedad de Estudios Vascos, 1984, pp. 281-349.

The last excavations in the cave took place during just a few days between 1980 and 1981, carried out by the team consisting of J. González Echegaray, who was in charge, and the prehistorians L.G. Freeman, F. Bernaldo de Quirós, Victoria Cabrera and Richard Klein, who was responsible for the study of the fauna. This operation was undertaken with a caution equal to that of Obermaier, and their findings with regard to strata, the description of occupations, and fauna corroborated what he had found.

When Jesús Altuna checked the fauna collected in Obermaier's excavation he did not find any remains of lynx, fallow deer or wolf. The species most frequently found was the deer, followed by the horse and large bovines, including bison and aurochs, then bear, goat, chamois, wild boar, roe deer, reindeer and seal. (Bernaldo Quirós)

TABLE I

FREQUENCY OF REMAINS OF FAUNA STUDIED IN THE EXCAVATION  
ACCORDING TO THE DATA OF J. ALTUNA AND R KLEIN

	1924 Excavation	1980 Excavation
Deer	19	15
Bovines	4	2
Horse	4	1
Roe deer	2	3
Chamois	1	—
Goat	1	—
Bear	—	1
Fox	—	1
Wolf	—	1

Sources: F. Bernaldo de Quirós (1988) p. 44.  
J. G. Echegaray and L. G. Freeman (1996) p. 259.

The marine fauna was mainly made up of limpets (*Patella vulgaris* L.) and snails (*Littorina littorea* L. and large *Littorina obtusata* Gmelin). The species of limpets was named *Santuolae* after the man who found them in the cave at Altamira. Harlé considered these to be very similar to the ones found on the Chaussey Islands. Henri Fischer gave the *Littorina littorea* L., a huge snail, the name of *Major*.<sup>49</sup> For prehistoric men gathering limpets was a means of obtaining a good source of protein which was there for the taking when they had little luck with hunting. In some caves the remains of shells found there would suggest that it was a fairly common practice. Other molluscs, such as *Trivia europea* Montagu and *Buccinum undatum* L., would be used as adornments. Limpet shells also served as containers for paint.

<sup>49</sup> Benito Madariaga de la Campa, "Consideraciones sobre la fauna malacológica en el Paleolítico cantábrico", *Homenaje al Dr. Joaquín González Echegaray*, Edit. José A. Lasheras, Santander, Ministerio de Cultura, 1994, pp. 131-139.



*Skull of a cave bear, found in the cave of Las Monedas (Cantabria)*

*Collection of limpet shells used to hold colouring materials*





*V. The sanctuary of Altamira*



*Detail of the ceiling, with red claviform signs, a horse and engravings of huts.*  
H. BREUIL Y H. OBERMAIER. Illustration VI



## V. The Sanctuary of Altamira

'Nothing has been able to rival Cantabrian art in beauty or antiquity. With the cave of Altamira painting reached a peak of perfection which cannot be bettered, merely elaborated on with differing styles and subject matter'

*Luis Pericot*

Once the authenticity of Altamira was confirmed, the key questions of the prehistorians concerning the examples of wall painting had been: 'What did the paintings signify?' and 'What was the idea behind them?' From the outset there were a good number of answers, some of which, as we have seen, were completely off the mark. Miguel Rodríguez Ferrer wrote in a widely read article, published in 1880 in *La Ilustración Española y Americana*, that Altamira 'was the prehistoric temple of an indigenous race who worshipped Nature'. The writers of this piece which was prepared for publication by the *Institución Libre de Enseñanza* referred to it as follows: 'And therefore it would appear essential to place these paintings in a relatively recent period and attribute them to an artistically advanced race.' (*Escritos*, p. 267). In the view of Breuil, Cartailhac and Salomón Reinach, Altamira and other caves of the Magdalenian period were simply sacred chambers or caves used for magic rites, which would have required a certain initiation, as in later ages'.<sup>50</sup>

Déchelette was in agreement with these views and in his highly thought of *Manual de Arqueología Prehistórica* defined Altamira, with great accuracy, as the Sistine Chapel of Quaternary Art (p. 150). Menéndez Pelayo, in the introductory volume of the *Historia de los heterodoxos*, referred to the symbolism of the wall paintings and accepted the opinion of Reinach and Déchelette on the religious nature of primitive life. L. Harrison Matthews saw the aim of the paintings as being 'to provide a resting-place for the spirits of the animals which were sacrificed.'<sup>51</sup>

The theory of magic and rites involving animals, each tribe having its own practices, still prevails with regard to the possibility that certain caves might have been sanctuaries, places used for rites of initiation. The paintings and the magic propitiatory practices carried out on the animals depicted would be thought to help in the capture of animals. On the other hand, when the picture was of the totemic animal it protected them and the species was respected because of this. Salomón Reinach<sup>52</sup> put forward this idea as follows:

'If the Troglodytes thought in the same way as the Aruntas in present-day Australia, the aim of the ceremonies they carried out before these effigies must have been to ensure the survival of elephants, wild bulls, horses, and deer, which were their source of food. They also tried to entice them to the area near the cave, in the belief that a spirit or an animal can be compelled to live in the place where its body has been depicted.'

<sup>50</sup> Marcelino Menéndez Pelayo, *Historia de los heterodoxos españoles*, VIII, 2nd. edition, Madrid, Consejo Superior de Investigaciones Científicos, 1963, p. 28. See also E. O. James, 'La religión del hombre prehistórico', Madrid, Ediciones Guadarrama, 1973.

<sup>51</sup> *Los mamíferos*, Barcelona, Ediciones Destino, 1976, p. 378.

<sup>52</sup> *Cultes, mythes et religions*, vol. I, 2nd. edition, Paris, 1908, pp. 132-133.

## Adiciones y notas finales

Más extensión habiere querido darme a este apéndice, resumiendo en él los principales hallazgos de nuestra prehistoria, por cierto, arqueología, y nombrarlos, pero mi estado de salud me ha impedido de mi voluntad dar a otras tareas que me han permitido realizarlo. Aparentaré lo que buenas y buenas intenciones, sin la pretensión de poner al completo una bibliografía tan dis-

## Advertencia final

Era mi propósito cerrar el pró-  
ximo volumen con una serie de notas  
adicionales, en que se consignaran los  
hallazgos principales de nuestra  
prehistoria y arqueología primaria, pos-  
terior a lo que va consignado en  
el texto, pero habiendo creído este  
apéndice más de lo que al principio per-  
mitía, se ha de abandonar al principio per-

Rough notes on the principal discoveries of  
our prehistory by Menéndez Pelayo  
(1856-1912). (Menéndez Pelayo Library,  
Santander)

Marcelino Menéndez Pelayo (1856-1912)  
studied the beliefs, rites and  
superstitions of prehistoric times



So the practices would be based on rituals to do with hunting or death, performed on the animal represented in the painting. And so they show, for example, the wounded bison in the 'black chamber' in the Niaux cave at Ariège, or the stag with its body pierced by javelins in the cave of la Peña de Candamo (Oviedo). This so-called theory of magic cult is also present at Altamira, as there are hidden-away places which might have been used for these practices. The part of the cave called 'the Horse's Tail', already described by Sautuola, seems to have been a meeting-place where rites of this type were performed, having as it does paintings and drawings, and a number of masks drawn on the stone at various points along the final passage.

The theory of decoration, that is of art for art's sake, defended at the time by E. Piette is not greatly favoured nowadays, and although the motivation of art or beauty is debatable, in many cases their huge artistic merit is obvious, since, as Menéndez Pelayo said, the works have the mark of aesthetic flair and we now accept that whoever the people were who painted them they must be regarded as true artists.

Strangely, the human figure does not appear, or at most only in a very minor capacity, and in any case merely plays a subsidiary role. The animals they hunted are the protagonists. There is no sign either of their natural surroundings or, with very few exceptions, of invertebrates or lesser animals, and then only in a secondary capacity. For example, the Count of Begouen found a bone of a bison with an insect of the *Troglophilus* species carved on it in the cave of Trois Frères, in Ariège, and in the Cave of Altxerri, in Aya, Guipúzcoa, there is a drawing of a snake. But, as has been noted, such cases are rare. René Huyghe writes on the subject: 'Magdalenian realism, insofar as it is only applied to what it depicts most effectively (that is, animals), leaves no trace of anything else, which clearly proves that it does not answer to an artistic need. The

human figure, when it does put in a rare appearance, does not have any of those marks of authenticity.'<sup>53</sup>

What there is at times is realism and a profound knowledge of the body and external anatomy of the animals depicted, which should not be confused with an aesthetic intent. This happens in paintings where we can see the colour of the animal's coat or fur, the striped markings on different parts of the body or legs, the interdigital spaces, or the eye lends expression to the face. This sort of expression can be seen in the particularly beautiful and perfectly executed head of the principal bovid in the Altamira cave (which I believe to be a young bison), with the alert expression of the animal skilfully captured. As happens in other caves, the Altamira artist intentionally painted the eye in profile, although this does not happen with all the animals. Examples of this can be seen in the impressive male bison, the remarkable representation of the female deer, the female bison on heat, and generally speaking, in most of the faces. As Herbert Kuhn said: 'the strength of the face lies in the centre, in the eye and the expression'. Without the life which the eyes impart to the paintings Altamira would simply be a collection of dead animals, lacking vigour and point. The eyes and the uplifted tails of the bison make these authentic works of art look life-like.

The repeated animal figures, even though there are a few cases of rather basic or crudely executed examples, and the lack of variants or fresh subjects make me think that it was a matter of rites intended to bring them good luck in their hunting or the need to ensure the survival of the species which they hunted for food, although this is not completely clear from the remains of the excavation. Very occasionally predatory animals appear, such as the wolf in the Altamira cave mentioned earlier, or the carnivore in

<sup>53</sup> *Dialogue avec le visible*, first published by Flammarion, Paris. Translated and edited by Editorial Labor, Barcelona, 1965, p. 123.



Black painted head of a female deer in the La Hoya area (Altamira)

the La Garma cave, animals competing with man in hunting down species used by man. This does not prevent there having been, if not a motive, then an aesthetic result, depending on the skill of the artist in question. Art for art's sake would have been a luxury then at a time when Quaternary man was dependent on two basic instincts: food and reproduction. The former was a daily necessity, vital for the life of the individual and of the group. They needed to obtain a good quantity and variety of food in order to get the necessary calories. Their intake depended on the weather, their age, their weight, whether they were male or female, and the amount of energy expended. According to F. D. G. Clark they would need at least 2,2000 calories<sup>54</sup> per day, of which 200 grams should be protein and the rest in the form of fats, with a very small amount of carbohydrates and salt.

In 1908 Salomón Reinach brought to people's attention the utilitarian, practical character of the animals in the paintings, from a dietary point of view:

‘C'est, en effet, cette idée mystique de l'évocation par le dessin ou le relief, analogue à celle de l'invocation par la parole, qu'il faut chercher à l'origine du développement de l'art à l'âge du renne. Cet art n'était donc pas ce qu'est l'art pour les peuples civilisés, un luxe ou un jeu : c'était l'expression d'une religion très grossière, mais très intense, faite de pratiques magiques ayant pour unique objet la conquête de la nourriture quotidienne. Une peinture, une sculpture représentant des animaux comestibles assurait le succès de la chasse ou de la pêche non moins que les harpons barbelés ou les sagaises’ (p. 135).

<sup>54</sup> J.G.D. Clark, *Excavations at Star Carr*. Univ Press, Cambridge. 1954. See also Benito Madariaga: ‘Los recursos del hombre paleolítico astur-cantábrico en su entorno ecológico-faunístico’, *Gallaecia*, no. 1, La Coruña, 1975, pp. 33-61.



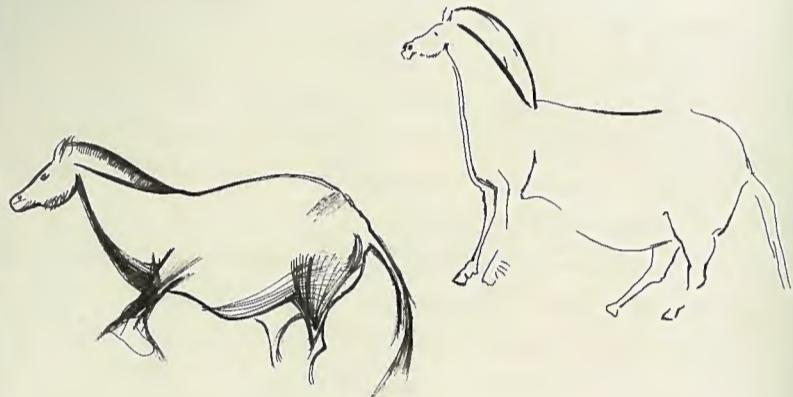
*This bison's head, very simply drawn, is particularly interesting artistically because of the way in which the eye, and the area around the nose and mouth have been depicted, which lend the face a special beauty*

For men and animals alike reproduction was of vital importance for the species. The representations of reproduction illustrate this and amongst the animals depicted in the cave of Altamira are examples of mating, of states of pregnancy, of animals being born and there are also cases of phallic anthropomorphs, etc., which I shall allude to later. There is something similar in the Tito Bustillo cave in Asturias, where animal drawings appear next to vulvae, which, in the view of Dr Junceda Avello, would represent multiparous women.<sup>55</sup>

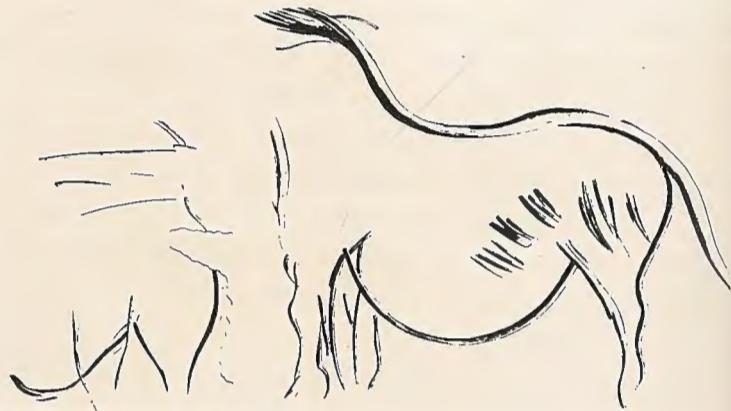
We should deduce, therefore, that these two basic instincts are the reasons which may have led prehistoric man to produce these murals in the caves. But there are many other questions which remain unanswered, such as the existence or non-existence of a naturalistic intention, the reasons why paintings should have others superimposed on them, the importance and significance of the sex of the animals depicted, why they occurred in certain places, the occupations carried out at different seasons in the cave, and if hunting really was the principal reason behind the paintings. Amongst the Bushmen, when a painting became blurred they would restore it or paint another one over it. Perhaps this represented a renewal of their offering.

It appears that the figures were not always drawn at random. Alcalde del Río, in 1906, expressed the opinion that the artist proceeded 'obeying a fixed and premeditated plan' (p. 17). In the large panels, as we shall see presently, we presume that the animals were sometimes drawn following a method of positioning them in accordance with a hierarchy within the herd. And so, in Altamira, it would be necessary to consider the group as being made up of separate bands of males and

<sup>55</sup> *La sexualidad primitiva y su simbología a través del arte prehistórico*, Oviedo, edited by Richard Grandío, 1974, p. 20.



*Drawings of pregnant mares in the cave at San Ramón de Candamo (Asturias)*



*Figure of a pregnant mare, drawn in bold outline*

females, each with their own leader, and only coming together during the mating season. In the case of horses, a male takes on the same duty as leader of the herd. In Tito Bustillo it would be the biggest one at the head of the top line in the panel and in Ekain the one occupying the central position.

Some figures face the mouth of the cave, some the other way. Some appear at close quarters, and others further away or partly hidden by others. Although there are not any hunting scenes as in the cave at Niaux, there are examples of different poses and types, at rest, on the move, complete or incomplete, mating, or, in the case of the bison, wallowing in mudbaths. When the bison are depicted running at speed they look true to life as, when they raise their legs backwards and forwards they do not touch the ground, and this can be seen, for example, in the bison charging along, which until recently was thought to be a wild boar.

Sometimes we find pictures of different species forming a community, as represented, for example, in the cave which we are now studying. For hunting purposes larger animals are preferred over smaller species which indubitably must have also been eaten. The most hunted and most frequently found in the excavations was the deer.

It has been said that the paintings could represent animals that had been hunted and killed, seen at close quarters.<sup>56</sup> But this is not always the case, since in Altamira there are, as we have already noted, scenes of a magical naturalism concerned with fertility. What is striking in some of these is the rigidity of the legs, the flaccid tail, the cloven hoofs and horses' hoofs depicted in a way that Harrison Matthews describes as 'on tiptoe', a pose typical in dead animals. In his opinion the animals would be drawn as seen lying on their sides, a phenomenon

<sup>56</sup> P. A. Leason, 'A new view of the western European group of quaternary cave art', *Proceedings of the Prehistoric Society*, New Series (1939), 5 : 51.



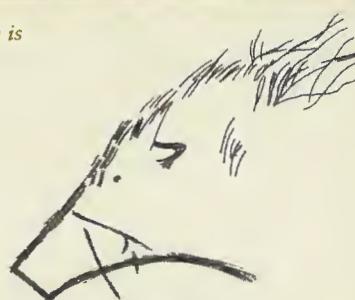


Panel from the ceiling of the Altamira cave, drawn by Hermilio Alcalde del Río in 1902



*Bison running. Note the horns and the tail which is longer than that of a wild boar (which it was originally thought to be)*

*Drawing of a boar's head from the cave of Peña de Candamo (Asturias). Note the tusk*



studied in 1938 and 1939 by P. A. Leason.<sup>57</sup> When an animal is alive and standing up, the angle of articulation is formed in the hoof, but this disappears in those that have been sacrificed, which are shown in the paintings as if they were hanging or floating. (See, for example, the case of the headless bison). For an animal to remain standing and balanced, it is necessary for the joints to remain fixed because of the muscles, tendons and ligaments, which prevent movement beyond a certain angle. This phenomenon does not occur in animals that have been sacrificed or anaesthetised, and they fall down. An example of the hoof pointing straight down can be seen in the back hoofs of the so-called stationary bison, whose body appears to have been pierced by a dart.

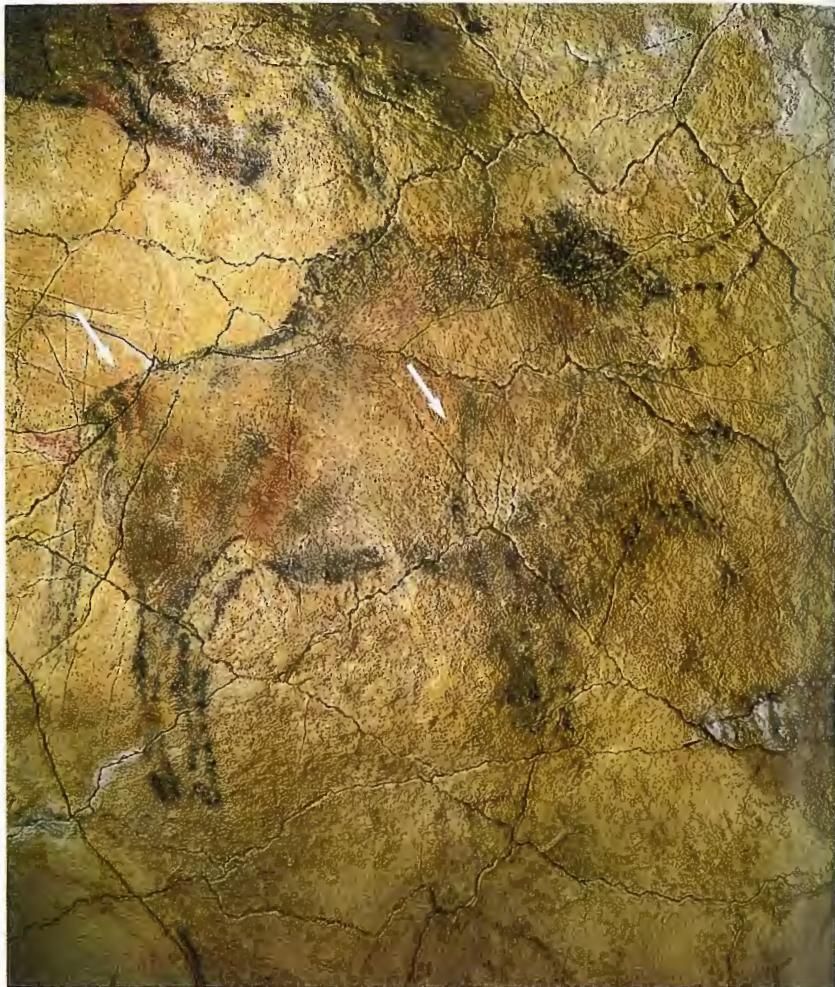
Muscular rigidity occurs in sacrificed animals after a quarter of an hour, starting in the head muscles and spreading to those in the neck, trunk and legs. According to Sanz Egaña, it takes between six and ten hours, depending on the temperature and the humidity of the atmosphere. Tiredness is also a factor, as it accelerates the stiffening process.<sup>58</sup>

In Altamira the dominant, or rather, the most frequently represented species is the bison, as it is in the caves of El Pindal, Altzerri and Santimamiñe, whereas in Tito Bustillo, Isturitz and Ekain it is the horse. In France, it is the horse that features most in Les Combarelles, and in Font-de-Gaume it is the bison.

As Alfonso Moure points out, the most commonly found animal in the polychromatic paintings is the bison, but throughout the cave the stag predominates (engravings, black paintings, etc). It has been noted that there is a connection, by no means fortuitous, between technique and subject matter. The most complicated procedures (polychromatic

<sup>57</sup> *Ibid.*, p. 51.

<sup>58</sup> *Enciclopedia de la carne*, 2nd. ed., Madrid, Espasa Calpe, 1967, p. 442.



*Example of a bison with its feet 'on tiptoe', or pointing downwards. Note the pigmentations of the coccygeal area and some kind of spear piercing the body*

painting, making use of the irregularities of the rock's surface etc.) are used for certain animals, for reasons which may have something to do with the significance of the art.

One might ask if they were selected as characteristic of the group and if particular caves were sanctuaries of a totemic cult (even if they were not the most common animals). The representations of animals carved on tablets or bones would also have some significance we cannot be sure about, but they may have been manual offerings and similarly they figured on propellants and hunting and fishing equipment, maybe for decorative purposes. In some primitive African tribes the stones covered with animal skin carried in little pouches were fetishes which they wore hanging round their necks, and Eskimos used to draw a protecting divinity on their weapons. For other artists the painted stones would be a sort of practice sketch. Similar drawings on stones and rocks have appeared in places many miles apart, so that we find the same picture in La Genière, in Ain, and in Font-de-Gaume, in the Dordogne.

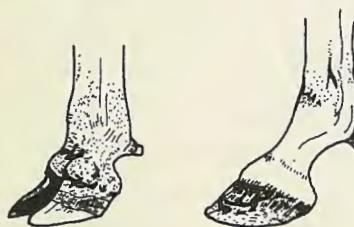
The cave at Altamira was from the outset considered an exceptional case, not only because of the problems connected with its discovery (it being the first cave where the existence of prehistoric wall paintings caused such controversy), but also because of the plastic beauty of its drawings and the artist's, or artists', treatment of space and volume. As Nouguier has written: 'Altamira still remains, after the myriad discoveries of caves adorned with drawings which came in its wake, the most marvellous of them all'.<sup>59</sup> Its paintings were carried out on the ceiling, which, as we have already seen, earned it the name of the Sistine Chapel of Quaternary Art. Even though a few others, such as the Rouffignac cave, with paintings on the ceiling, do exist, they do not outshine that of Altamira, where the

<sup>59</sup> Louis-René Nouguier, *El arte prehistórico*, Barcelona, Plaza y Janés, 1968, p. 120.



Photograph of  
the extremities of  
bovids which had  
been sacrificed.  
Note the angle of  
the hoof

Normal  
position of the  
extremities of  
an animal  
standing up



Drawing of a bovid  
which has been  
sacrificed (by Angel  
Olivares)

Characteristic  
position of the  
hoof of a  
sacrificed animal





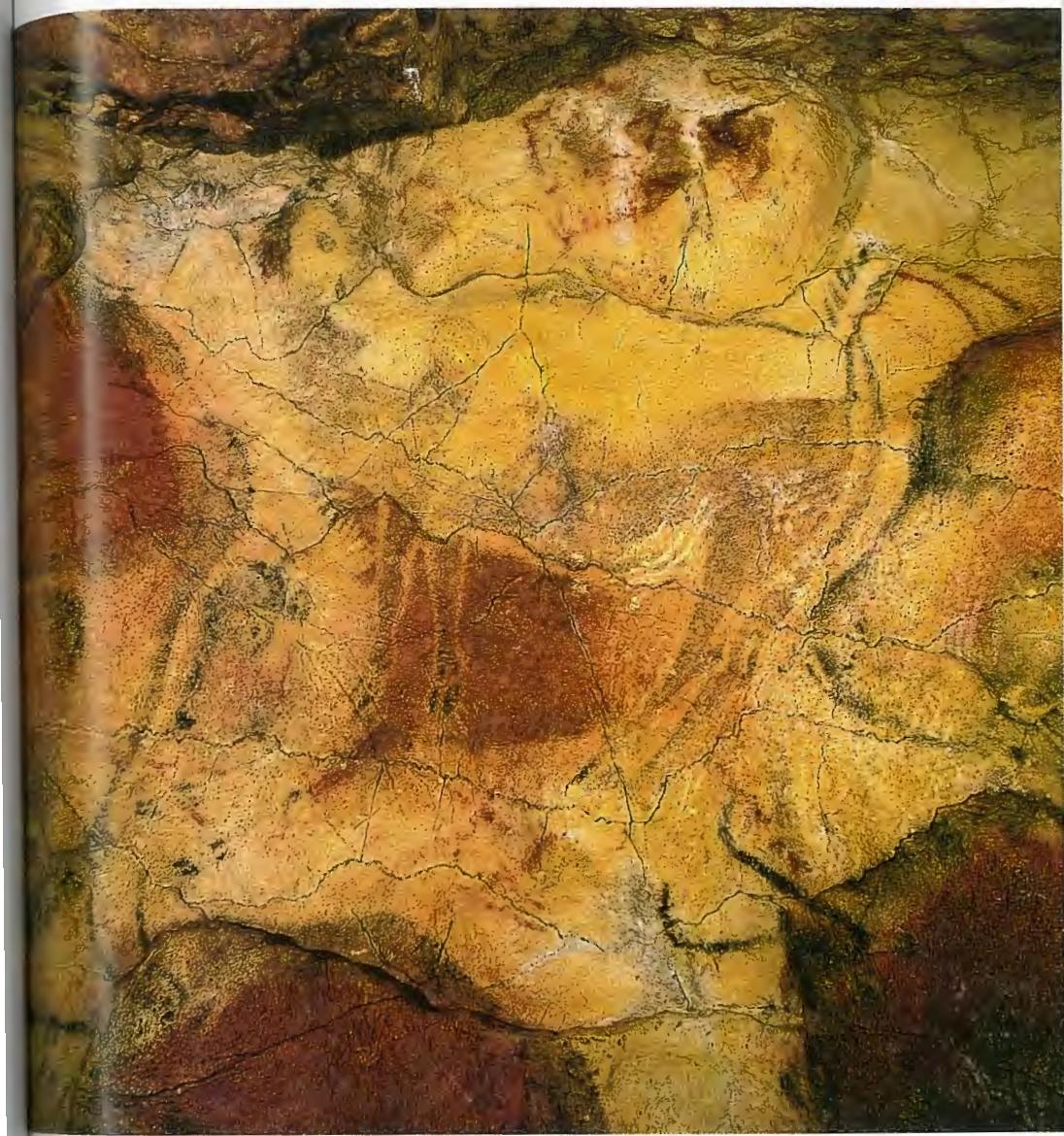
*Partial view of the paintings chamber*

principal figures are not too crowded together. But, in addition to this, it is unusual in that it represents a group of different species of animals, amongst which the bison is predominant. We should also point out the poses previously mentioned of animals at rest, on the move, mating and giving birth.<sup>60</sup> There are drawings and paintings belonging to different epochs, in both red and black and, as we have already commented, a clever use of space, the artists having made good use of the rock of the ceiling to give an idea of the dimensions of the animals, bearing in mind their relationship to the overall representation. The rocks used in this way can be considered as an important step towards Palaeolithic sculpture. In Altamira the use made of protruding rock in order to achieve a three-dimensional effect is of remarkable interest. The ability of the prehistoric artist can be seen to be combined with the anatomical depiction of head, trunk and extremities, with horns, fur, hump, hoofs and muscular strength clearly and realistically represented. In Alfonso Moure's opinion the positioning of the bison must have been decided on because of the irregularities of the roof which struck them as they were painting.

Another interesting feature of Altamira are the representations of humans, and masks with a magic, ritualistic significance painted on the rocks, which are very similar to one found in El Castillo, in Puente Viesgo. When the prehistorians, Henri Breuil and Hugo Obermaier went back and made an investigation of the cave, which was published, thanks to the patronage of the Duke of Alba, they stated that the discovery 'was completely unheard of for its time, and was, moreover, *'revolutionary'*',<sup>61</sup> and they bore witness to the 'incredibly high aesthetic level of the frescoes in

<sup>60</sup> Benito Madariaga de la Campa, 'Hugo Obermaier en el contexto de la Prehistoria cántabra: una valoración de Altamira', *El hombre fósil 80 años después*, op. cit., p. 66.

<sup>61</sup> *La cueva de Altamira en Santillana del Mar*, prologue by the Duke of Berwick and Alba. French version translated into Spanish by José Pérez de Barrada, Madrid, 1935, p. 6.

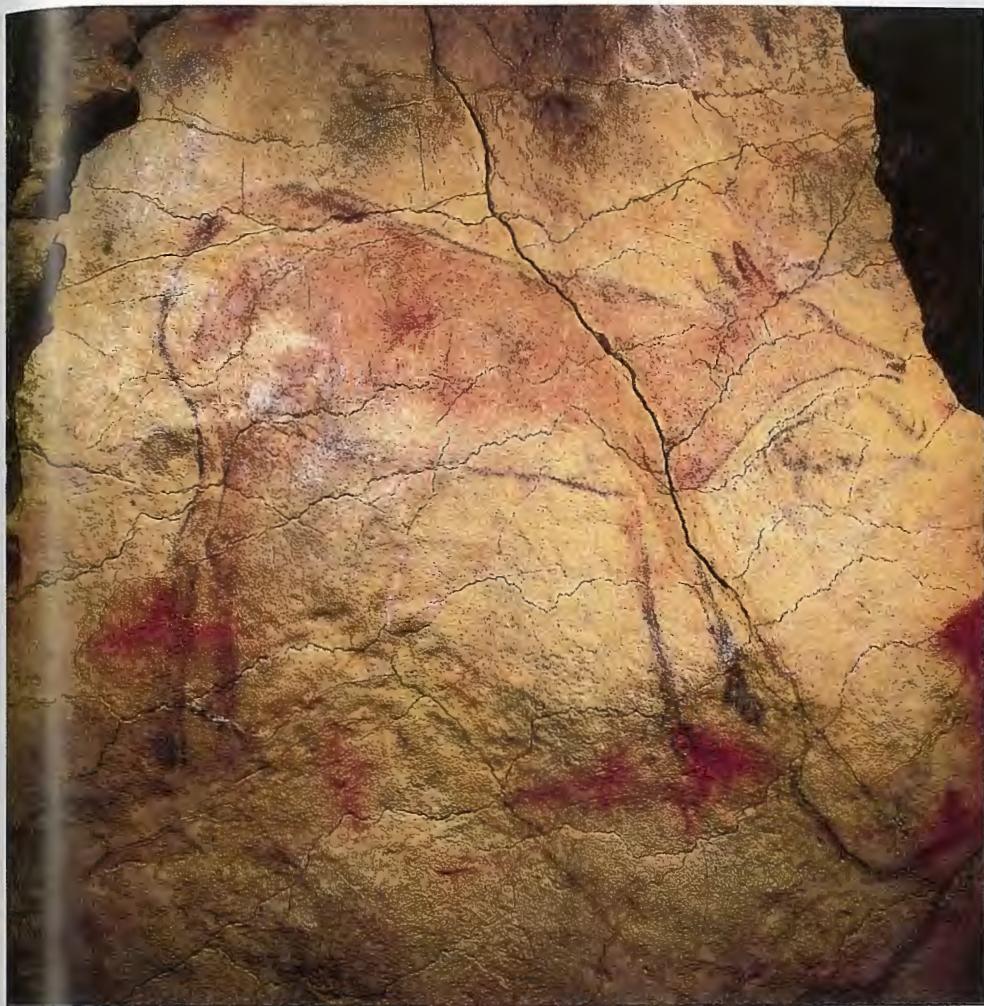


*A female bison on heat, bellowing*

the cave'. However, they failed to perceive the significance of the impressive ceiling, writing: 'Our searches for groups of figures which reveal true artistic awareness have been in vain' (p. 13). On the other hand, seen as a whole, there appears to be a bringing together in one scene of the many similar sights that would have been witnessed by prehistoric man when, as L. G. Freeman has stated,<sup>62</sup> the two sexes come together during the mating season. Similarly some species have been depicted ruminating or rolling around in mud to rid themselves of insects. Indeed, it is as if time had stood still and we were actually there at the very moment when the males and females come together to mate, as for the rest of the year the males and females remain apart. One can see, for example, or so it seems to me, the female bison on heat, bellowing, with its head back and its tail raised. This same state prior to coupling can be seen in the engravings in the 'Cola de caballo' (Horse's Tail) cave discovered by Hermilio Alcalde and which L. G. Freeman has recently described as showing males in the rutting season (pp. 171-177) when the males fight over the choice of the female, a spectacle in which they raise their tails, bellow, lower their heads threateningly, are ready to hurl themselves into the attack and even mount males. The bison in movement could reflect this same moment. If the supposed wild boar is, as Freeman suggests, a charging bison, we should have to consider, as he also points out, that the other boar at the other end could equally be a bison in an aggressive stance.<sup>63</sup>

<sup>62</sup> *Curso de arte rupestre paleolítico*, Santander, Universidad Internacional Menéndez Pelayo, 1978, pp. 166-67.

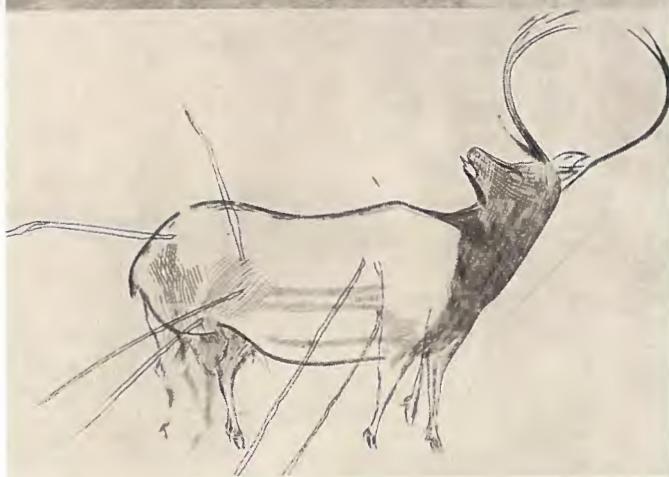
<sup>63</sup> Freeman's investigation draws attention to the presence of horns on the painting, a detail which Breuil had earlier pointed out. However, in 1880 it was identified as a wild boar because of its long snout and curly tail, which means that the crack in the rock which made the animal look as if it had a long nose was there at that time. Could it have been meant originally to be a bison and have been taken later for a wild boar?



*The impressive figure of the female deer, measuring 225 cms.*



I



2



1. Painted bison in the cave of Cardín or cave of Lledías. The painting is thought by some scholars to possibly be a fake. Note its poor artistic quality (By courtesy of Manuel Mallo Viesca)

2. Wounded male deer in the Candamo cave. Notice the way its suffering is depicted

Large herbivores spend seven hours grazing and then seven more ruminating, which they do lying down, but they are also lying down when they wallow in mud to protect themselves from biting insects. As bison's stomachs, containing the grass, are situated on the left side of the body, the bison in the Altamira cave are depicted lying on their right side. It is also strange that some of the bison in Altamira, as in the Basque caves, appear in three positions - horizontal, on the slant, and vertical, in that order of frequency. This never happens in the case of the horse, which is always horizontal, as Altuna and Apellaniz have observed.<sup>64</sup> In my opinion, this would be due to the fact that horses ruminate lying in the field in various positions and facing different directions, as cattle do. On the other hand, the horse can remain standing for a long time because of the anatomical structure of its front legs. These have tendinous tissue with very slight elasticity, which acts as a support and enables it to stand without getting tired. For this reason members of the horse family do not usually lie down and they sleep standing up<sup>65</sup>

In the Santillana cave there is also a figure of a female bison giving birth, with its head on one side. As we know, one of the symptoms of pain in Bovidae is the way in which they turn their heads round towards the back part of the body, a posture frequently adopted in giving birth and which happens in the case of the deer mentioned earlier, the one pierced by several spears, with its head on one side, which can be seen in the Peña de Candamo cave. The fine painted head referred to earlier could be that of a young bison, to judge by the long fur on its back, which bovids do not have. It is one of the finest paintings

<sup>64</sup> Jesús Altuna and J. M. Apellaniz, 'Ekain, Las figuras rupestres de la cueva de Ekain (Deva)', *Munibe*, Fascículos 1-3, San Sebastián 1978, p. 143.

<sup>65</sup> A. Trautmann, 'Fisiología general del movimiento', in *Tratado de Fisiología Veterinaria*, Barcelona, Labor, 1942, p. 33.

because of its lifelike expression and the simplicity of the drawing in profile against the black setting of the roof of the cave.

In the chamber with the paintings there are several species of animal which, according to F. Bernaldo de Quirós,<sup>66</sup> are as follows, in order of importance: twenty-seven bison, four female deer, and one male, two horses and further to the right several more, one goat and something that could be an elk, which as we have seen, have also been found in the excavations, along with the remains of deer, bison, horses, small ruminants and wolves. Amongst the paintings in black there are five horses, three cervids, two caprids, three bison and one bovid. (Bernaldo de Quirós, 1998, p. 28).

This same scholar divides the cave into three characteristic zones. In the area of the 'Cola de caballo' (Horse's Tail), there are areas which have the masks, female deer drawn in striated fashion, horses, a bison and goats. In the part with the chamber known as 'La Hoya' (The Pit) there are paintings of a female deer, a bison and some caprids, and in the third part, one can see the hands and anthropomorphs, with bison, horses, and the female deer bringing up the rear. In his view, these areas seem to present a plan of prearranged decoration, based on the irregularities of the cave. In addition, it seems likely that the same artists worked in different parts of the cave.<sup>67</sup>

In the figures of animals depicted we must refer to morphotypes, that is to say, to individualities created by man from models he saw

<sup>66</sup> 'La cueva de Altamira, el arte, los artistas y su época', in *Altamira*, Barcelona, ed. Lunwerg, 1998, pp. 25-57. For a more complete analysis of the cave drawings and paintings, see L. G. Freeman and J. González Echegaray, *La grotte d'Altamira*, soon to be published.

<sup>67</sup> F. Bernaldo de Quirós, 'Reflexiones en la cueva de Altamira', *Homenaje a Joaquín González Echegaray*, Madrid, Ministerio de Cultura, 1994, p. 263.

around him. So we cannot allude to species, even though they were inspired by the animal populations with which they coexisted. They did not always copy them precisely, sometimes only giving a rough idea of the species without anatomical or clearly defined detail of any kind. As Jesús Altuna comments, 'Palaeolithic man did not represent animals with the criteria which a systematic zoologist would use'.<sup>68</sup> But there is a danger that the realistic, more or less accurate copy, might be confused with the individual style or manner of producing a engraving or painting, although there are cases such as the female deer of Covalanas in Cantabria and also in the cave of Arenaza in the Basque Country, which are very similar in style.

In some cases, as happens with the horse family, in Altamira we can see two different morphotypes: that of a horse reduced in size, like the red horse in the chamber with the paintings, its black mane (though brown coat) and fading of the melanic pigment around the nose and mouth, similar to that found in Shetland ponies and even more so in Exmoor ponies, a comparison made by E. Bourdelle and G. Astre. And there is another type which is heavier and elongated. There are some which are depicted with high flowing mane, and some with the mane flat on the neck.<sup>69</sup> Some scholars assume that this is a stylistic convention, but I do not share this opinion.

Both morphotypes might fit in with the bones found in some Spanish caves where, according to Altuna, there are remains similar to those of *Equus caballus gallicus*, a species studied by Prat, and another

<sup>68</sup> Op. cit. (1972) : 393.

<sup>69</sup> Benito Madariaga de la Campa, 'Origen y características de las primitivas razas caballares de la Península Ibérica', *Anales del Instituto de Estudios Agropecuarios*, vol. I, Santander, 1975, pp. 93-108, and G. Astre, 'La question du pottock et les petits équides quaternaires du Sud-Ouest', *Bulletin du Centre d'Etudes et Recherches Scientifiques*, Biarritz, 1972, 9 (1), pp. 7-17.

**"DAILY TELEGRAPH".**

Londres.  
27.X.54.

**Exmoor's Claim**

THE other day I reproduced a drawing of a horse from the Altamira caves.

The copy was made by Abbot Breuil, who lectures at Wigmore Hall to my Society.

My assertion that "its mealy moccasin streaks and small ears are very similar to ours" with our Shetland and New Forest ponies, was not entirely possible, as the Exmoor Pony Society.

In my picture, the Society sees a strong resemblance to its favorite breed.

Col. V. C. Munkerton has sent me a photograph of a typical Exmoor pony, which I am sure does seem to bear this resemblance.

Col. Munkerton tells me that the Exmoor pony is very much more rarely found in other breeds.

*Family resemblance—after 15,000 years*

*—*

**PRETENSION DE EXMOOR.**

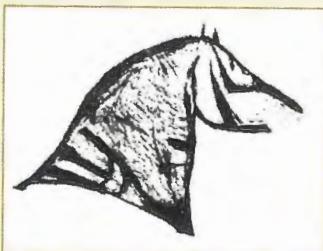
El otro día reproduce un dibujo ~~de un caballo~~ de un caballo de las Cuevas de Altamira de 15.000 años antes de Jesucristo. La copia fue hecha por el Abate Breuil, quien dará mañana una conferencia en el Wigmore Hall.

Mi aseveración de que "su hocico blanco, ojuelo redondeado y orejas pequeñas indican afinidad con los de nuestra raza de Shetland y New Forest" no ha acabado de complacer a la Sociedad de Exmoor Pony.

En mi fotografía, la Sociedad ve un fuerte parecido familiar con su raza favorita. El Teniente Coronel V. C. Munkerton me ha enviado un dibujo de un pony típico de Exmoor que parece corroborarlo.

El Teniente Coronel Munkerton me dice que la característica del hocico blanco raramente se encuentra en otras razas.

*Comparison of the horse of Altamira with an Exmoor pony.*



Horse from the cave at Ekain (Guipúzcoa) with stripes on its head and neck



Horse from the island of Liakoff, after Antonius

bigger, heavier one, which matches up with *E. caballus germanicus* Nehring, of which fewer bones have been found (Altuna, ob. cit, p. 438). However, according to Altuna, there is no sign of *Equus c. przewalski* or the tarpan (*Equus c. gmelini*) in excavations in Spain, although in the case of the *Equus caballus gallicus*, as Altuna states, there seem to be some 'archaic features',<sup>70</sup> which makes them very similar to some of the horses depicted in the cave paintings.

It is particularly interesting to compare the equine morphotypes represented in the caves of Tito Bustillo (Asturias) and Ekain (Guipúzcoa) which have zebra-like stripes on their legs and even on their heads. In Hopwood's view<sup>71</sup> these zebra-like horses would go back further than true horses and probably, in my estimation, come from crossbreeding and are of ancient African origin. According to Hopwood the crossing of a horse with a zebra is not unusual, although the two species evolved separately. In Ekain we can observe the stripes on the head, typical of the forest horse. J. Cossar Ewart was of the opinion that the pigmented stripes on the legs could exist in the form of faint lines on the face, neck and trunk. He believed that the coat of the forest horse was similar in colour to the bay horse or a light fawn and was as stripy as some types of zebra.<sup>72</sup>

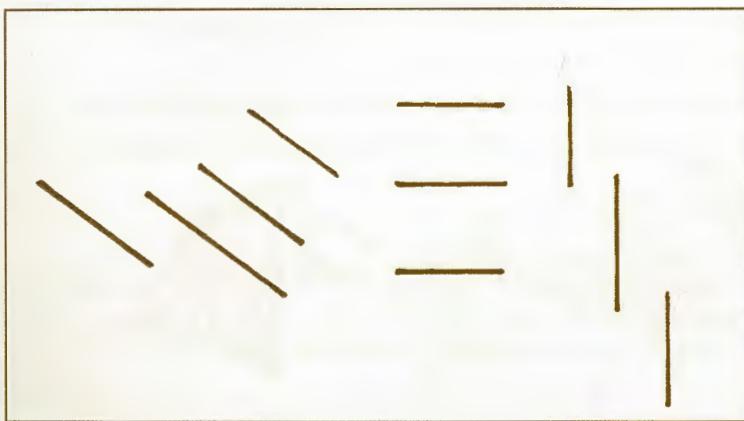
In the Tito Bustillo cave the stripes on the legs and the markings on the trunk and the back third of the body of the horses painted in purple, grey and black, can be seen quite clearly.

The intensification of colour in the form of dark bands in the sacro-coccygeal area appears on some of the bison in the Altamira cave.

<sup>70</sup> J. Altuna and J. M. Apellaniz, op. cit., p. 113.

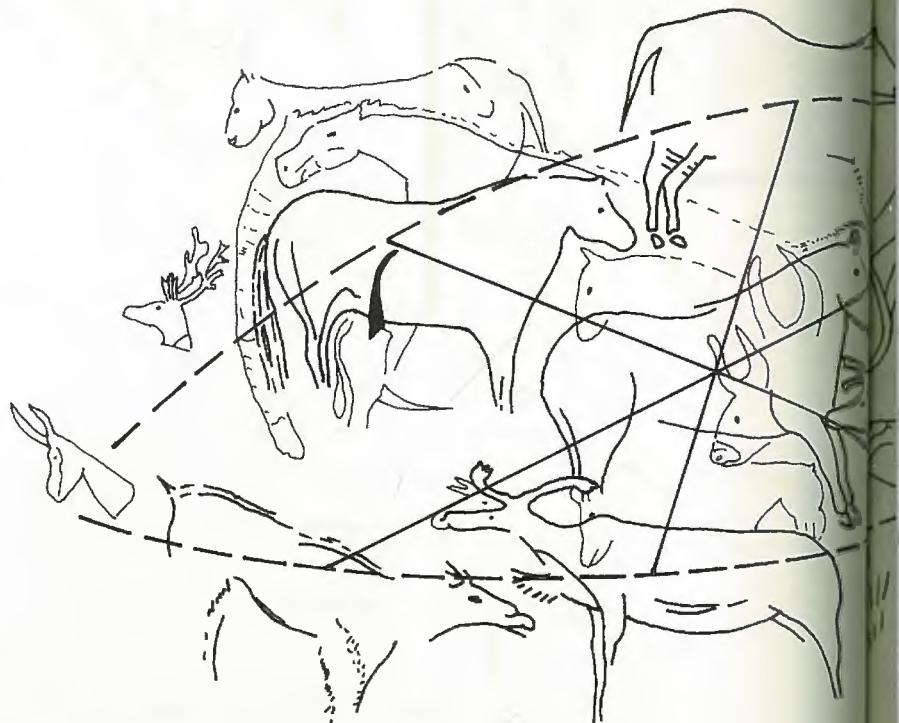
<sup>71</sup> 'Zebrine and caballine horses and their former distribution in Europe', *Proceedings of the Zoological Society*, London, (1936), 1936: 897.

<sup>72</sup> *Twenty-seventh Annual Report of the Bureau of Animal Industry*, 1910, pp. 161-174.





*Graphic of Altamira by Max Raphael. Note the variety of poses and the different directions the figures face*



*Group from the panel in Tito Bustillo following a plan of composition, with regard to layout, size and direction of the figures (by Fernando Soria)*





*Red horse with black mane,  
Altamira (1.60 metres)*



*Horse from the Tito Bustillo cave with stripes on its extremities*

This is an area which is also a centre of pigmentation in horses, and they also have the crucial dark band going across the withers and down over the shoulder. Sometimes we can see the opposite happening, a lighter colouring occurring in various parts of the body, especially around the nose in horses, or the inter-axillary part, the inner leg, and in the part below and to the side of the stomach, referred to by prehistorians as the 'M line', which separates the lower and the higher part, the fading of the colour known as 'wash' amongst zoologists. According to L. Hatisson 'the whiteness of the lower part helps to neutralize the shade produced by the higher part of the body and so destroys its three-dimensional appearance', which is found basically in ungulates living in open spaces (pp. 204-205). Ignacio Barandiarán<sup>73</sup> has studied, from an artistic point of view, numerous conventions which appear in the animal figures regarding fur, the colour of the coat, the variations in pigmentation, and the moulting process, all dealt with in a practical manner.

In the overall picture of Altamira we observe that the animals are presented horizontally, as in the caves of Tito Bustillo and Ekain. In Altamira, on the top line of figures on the slant, we can see the scenes mentioned earlier, of mating and giving birth in the case of two female bison, with other examples, one with the head missing, flanked by two supposed wild boar (bison) and a horse. There are eight figures in the group. In the middle ground are twelve figures, amongst them the large female deer which acts as a link with the third level; the bison lying on their sides, the head of the young bison, and the figure of the female bison standing up. This one has the most figures, of differing sizes. In the lower group, which has fewer animals in it, the impressive figure of

<sup>73</sup> 'Algunas convenciones de representación en las figuras animales del arte paleolítico', *Actas del Simposium Internacional de Arte Rupestre*, Santander Simposium, 1972.



*Female bison giving birth*

*Section with the vulvae on the main panel of the Tito Bustillo cave*

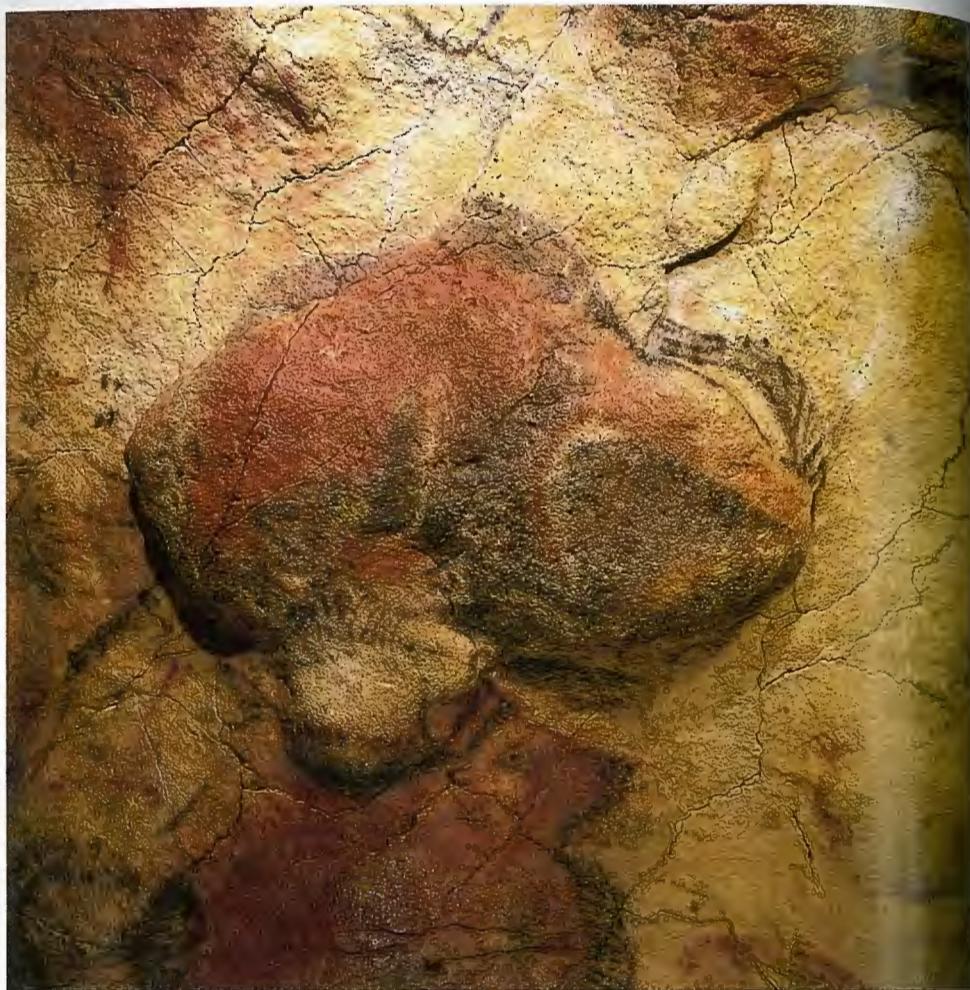
the male bison, the leader of the herd, stands out. On the lower fringe just beneath them is another collection of drawings, fewer in number but quite interesting, and a number of signs and symbols, which appear to be of a sexual nature.

The finest and most successful figure of the collection of animals on the panel of the large chamber with the decorated ceiling is the bison with its head down. The quality of the drawing, the colours and the contrast in black of the articular areas and the background make the figure outstanding. The Prehistoric artist has captured perfectly the pose of the bison lying down, a typical position of ruminants in which 'they lower their heads, fold the front legs one behind the other and drop down onto both carpal joints. Then they move the back limbs forward as far as they can, bend them and ease themselves down onto the ground'.<sup>74</sup> But in two of these bison the figures look like circles, with the heads and legs coming together, as happens when they make hollows or dips in the ground which fill with water, where they roll around and wallow in the mud in the attempt to rid themselves of troublesome insects.

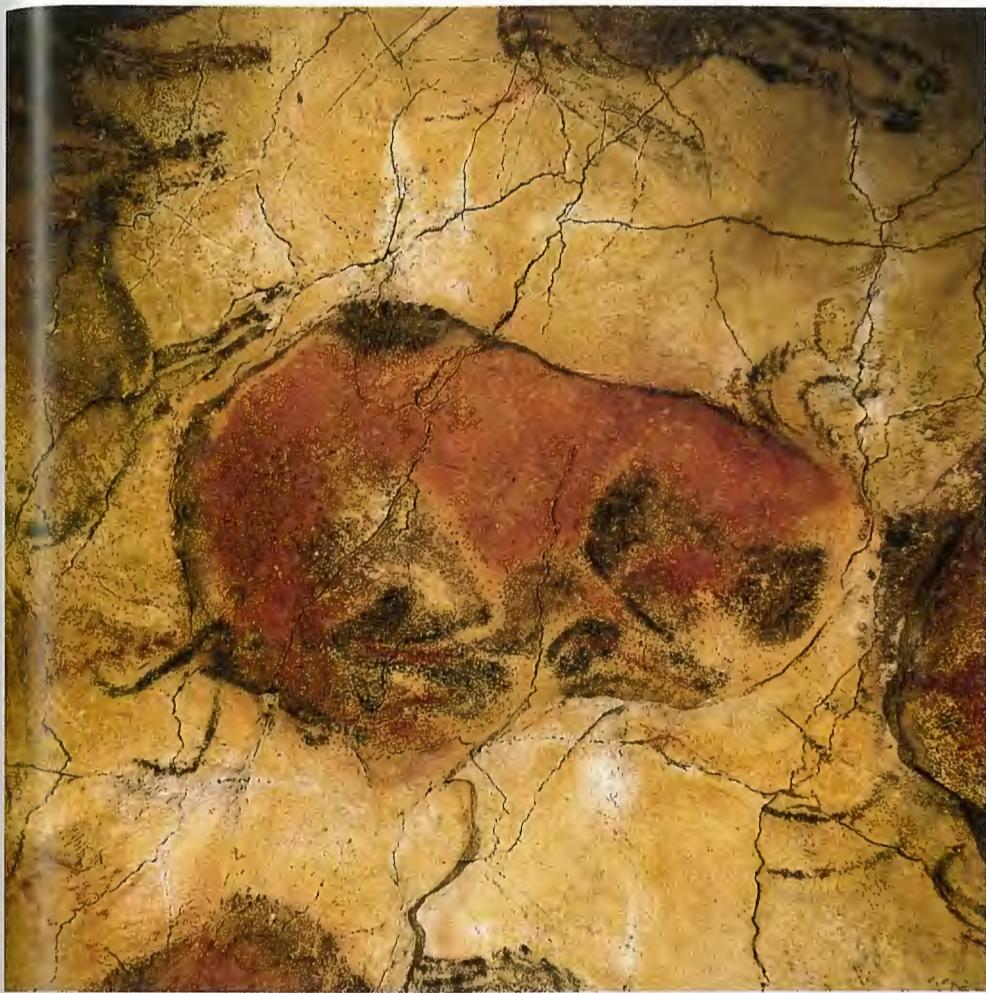
The painting's detail of eye, horns, the uplifted tail and the space between the hoofs really bring this bison to life. Since it was first discovered its quality has been recognised. As Herbert Kuhn says, 'the bison with its head down in the cave of Altamira is one of the major works of art of all time. Painted in yellow, red, white, blue and black, it is without any doubt, the masterpiece of palaeolithic painting'.<sup>75</sup> Or to put it another way, the ceiling of the Altamira cave is the earliest known example of a mural in the history of art.

In Altamira the female deer would be the peripheral, complementary animal, notable for its size, like the horse's head in the Tito Bustillo

<sup>74</sup> A. Trautmann, *op. cit.*, p. 336.



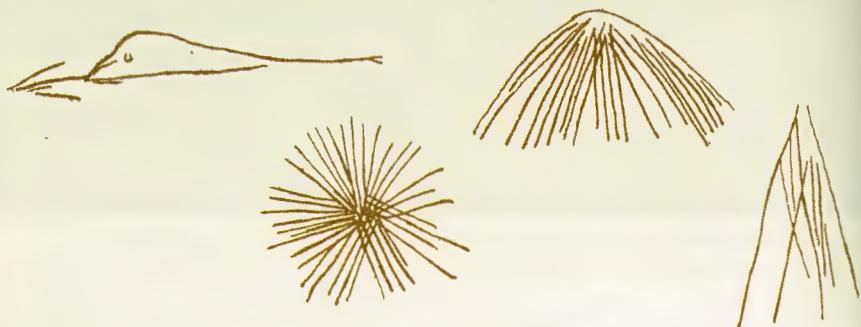
*This arched figure of a bison captures the moment when they would wallow in the hollows filled with muddy water and roll around until they appeared to be all in one piece*



*The bison lying down is outstandingly life-like because of the contrasting colours used and the sense of strength it imparts*



*Male bison. Polychrome painting measuring 2.05 metres (Altamira)*



*Different types of huts at Altamira, by Hermilio Alcalde*

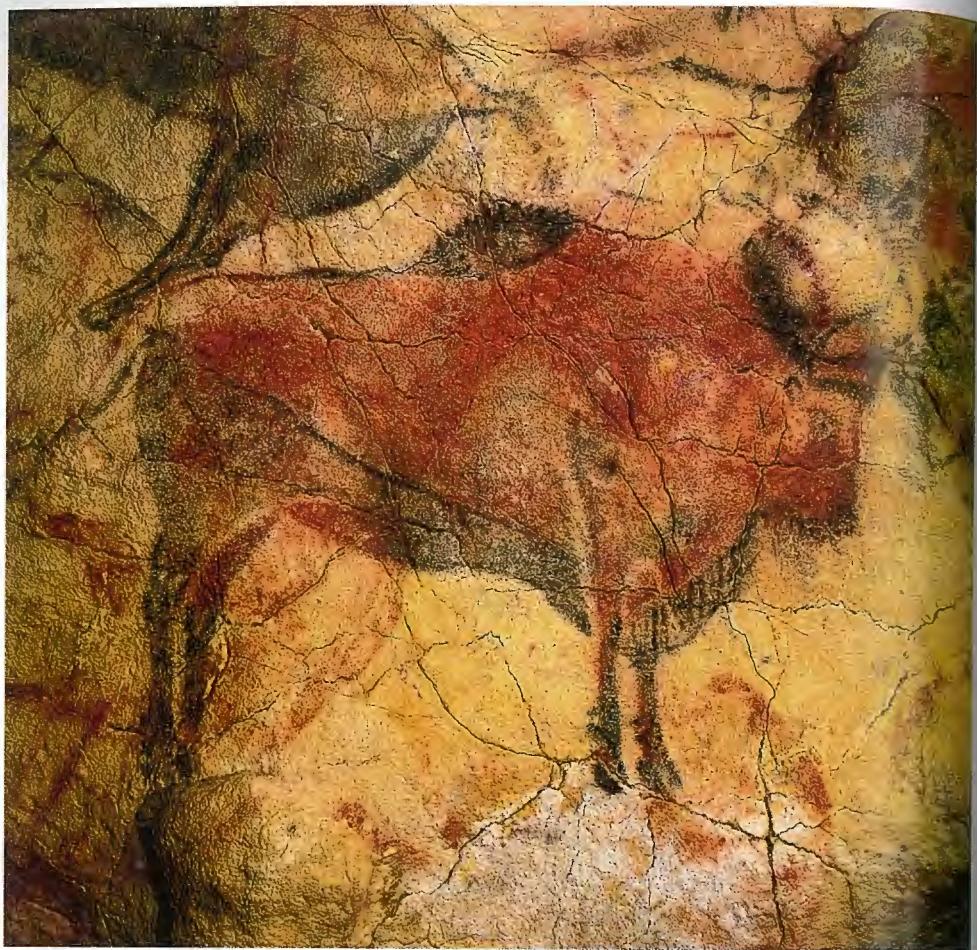
cave. In both of these we find the central figure, as had been pointed out by Max Raphael, to be the bison in the case of Altamira, and in the Asturian cave, the main horse.

All in all, the ceiling of Altamira represents the reproductive cycle of the bison in its stages of mating and giving birth, with representations of young animals and the leaders of the herd of both males and females, who only meet up in the autumn for the mating period. At the same time, we can see examples of animals running, ruminating at leisure, and one case of them being sacrificed. It is the biological cycle of this species which lives alongside other herbivores, such as horses and various types of deer.

The drawings of humans wearing masks, possibly sorcerers in disguise, with a bird's head, in a praying or ithyphallic pose, have been regarded in a different light. For some scholars the so-called key figures would be the female forms. In Tito Bustillo there are obvious representations of vulvae and placenta-like shapes, which would have been used to invoke aid in human reproduction and they appear as well in the cave of El Pindal, also in Asturias.<sup>75</sup> In Les Combarelles representations of vulvae appear next to animal paintings, in this case horses, and in La Ferrassie exactly the same thing happens. Max Raphael has pointed out

<sup>75</sup> *El arte rupestre en Europa*, Barcelona, Ed. Seix Barral, 1957, pp. 48-49. See also Peter J. Uzko and Andrée Rosenfeld, *Arte Paleolítico*, Madrid, Ediciones Guadarrama, 1967 and E. Ripoll Perelló's speech on his becoming a member of the *Academia Catalana de Bellas Artes de Sant Jordi* 'Sobre els origens i significat de l'art paleolític', Barcelona, 1981.

<sup>76</sup> Manuel Mallo Viesca and Manuel Pérez y Pérez, 'Primeras notas al estudio de la cueva 'La Ramu' y su comunicación con 'La Lloseta', *Zephyrus*, vol. XIX-XX, (1968-69) : 3-20. Idem, Manuel Mallo Viesca and J. M. Suárez Díaz-Estébanez, 'Las pinturas de las cuevas de la Rieira y de Balmori', *Zephyrus*, XXIII-XXIV, 1972-73, pp. 31-37.



*Polychrome painting of a female bison*

that, as well as magic concerned with hunting, there was also magic concerned with fertility practised in the cave.<sup>77</sup>

Drawings which were seen to be vulvae were also found in the refuge at Laussel, in the Dordogne, whilst in the cave of Trois Frères there is a sorcerer disguised as a bison, with the penis clearly depicted, as in the ones at Altamira.

The association of animal figures based on a binary system of animals and signs and on sexual dualism has shaped the theory of A. Leroi-Gourhan, of which A. Laming-Empéraire was an early exponent. These interpretations are undergoing revision at the present moment.

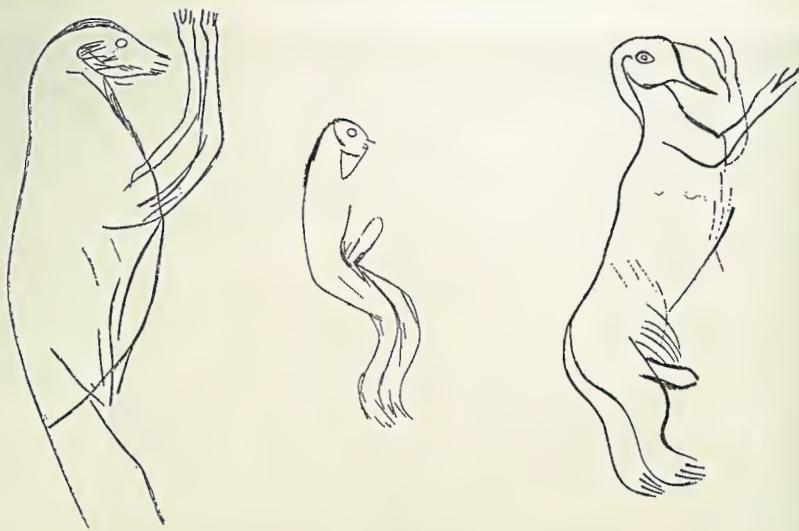
The hands, two positive and four negative, could signify possession of the cave. According to Jordá there would probably be also be the imprint of a foot.<sup>78</sup> In the case of some tribes in Australia, like the Woro-ra tribe, in Port-George, footprints also appear.

The engravings of roofs of what may have been huts found in Altamira are similar to those of bushmen, being built with branches and leaves. Alcalde del Río took it that they actually were man-made huts (p. 21).

The figure of the female deer was made to stand out in the cave because of its size, its sex and because it belonged to the most hunted species. It appeared on the fringe of the animals painted on the principal ceiling of the Altamira cave, and would have had a special significance but we do not know what this was. In my opinion the stiffness of the extremities, which are to the fore, facing the observer, and with the hoofs 'on tiptoe' (as described earlier) seems to suggest that the deer could be dead. Similarly the lighter coloured lower part of the stomach (the abdominal area) is depicted from the side, as if the deer were lying

<sup>77</sup> *Trois essais sur la signification de l'art pariétal paléolithique*, Paris, 1986, p. 27.

<sup>78</sup> 'Las representaciones rupestres de Altamira y su posible cronología', *Altamira, cumbre del arte prehistórico*, p. 104.



*Carved anthropomorphs at Altamira, (Breuil and Obermaier)*

*Claviform signs painted on the roof of the cave*



on the ground. But there are other animals in the cave which are dead or appear to have been hunted, in this case bison (the headless ones standing motionless), alongside others in motion or in natural poses, which means that the famous Altamira ceiling needs to be investigated further. The collection of animal figures could be seen as some kind of chronicle or catalogue of the skills and daily tasks of those hunting communities and, at the same time, a display of the different occupations over the centuries. If that is the case it would explain why what their ancestors of the Solutrean era had painted was still there. Another theory is that it was a 'hunting school', but this could only be applied to some, not all of the figures. Could Altamira have been one of the sanctuaries of the Franco-Cantabrian region, like Lascaux, Tito Bustillo, etc., of a hunting community which left its history depicted in caves for posterity?

To sum up, the collection of paintings and symbols in the cave seen in its entirety bears witness to the variety of motifs hidden away in its depths, which make it a true temple of Palaeolithic art. The representations are indeed a source of information and a form of communication based on a message to the tribe and other people who may have visited the caves. Within these figures and signs lies the expression of a destiny which remains unknown to us. They are silent witnesses of an explanation with a utilitarian purpose of representing the totem, the rites of initiation, propitiation and fertility. It is a kind of language in pictorial form, expressed in isolation or bringing together compositions in which its magical content may have been strengthened or renewed by the superimposing of new figures. At the heart of the problem we cannot omit the importance of what they ate, or their sexual practices, both of which give rise to a better understanding of palaeolithic man. The link with their surroundings and with animals held for them a profound meaning, which for the moment has not been satisfactorily explained.



*VI. Techniques and materials*



*Detail of an incomplete polychrome bison's head.*

H. BREUIL AND H. OBERMAIER. Illustration XII



## VI. Techniques and materials

'In all artistic creation one must bear in mind inspiration and technique, and the latter had to be put into practice by means of a tool and through methods common to the whole range of Palaeolithic drawing and painting'

*Antonio Beltrán*

Although we do not know fully the meaning and intention of the paintings and signs in the cave, a good deal is known about the implements and materials that were used. Salomón Reinach made special mention of the use made of the artificial light needed in order to be able to draw and paint the figures in the dark. ('Les peintures, exécutées peut-être à la lumière artificielle, bien qu'on n'ait pas relevé de traces de fumée sur les parois' (p. 132), but he did not discover the explanation of the procedure used. The finding of lamps has served as proof of this and the using of animal fat and bone marrow as fuel would make it seem that it was the material most commonly used. Father Jesús Carballo pointed out this possibility: 'because it has been seen that the smoke from the combustion of fats has not remained on the rock, whereas the smoke from burning wood sticks to it and this would have spoilt the paintings'.<sup>79</sup>

<sup>79</sup> *La cueva de Altamira y otras cuevas con pinturas en la provincia de Santander*, Santander, Publicación del Patronato de las Cuevas de la Provincia de Santander, N. D., pp. 39-40.

Recently experiments carried out by Matilde Múzquiz with bone marrow have produced positive results.<sup>80</sup>

In 1895 Rivière found a bowl in the shape of a lamp in the cave of La Mouthe in the Dordogne. He published this in *L'Anthropologie*<sup>81</sup> and Father Carballo also found an oval concave stone in the cave of El Pendo, which may have been for the same purpose. Studies have been published about the type of lamp, the fuel used and the amount of light they would produce.<sup>82</sup> Bushmen also used these for lighting. In the excavations carried out on the Tito Bustillo cave Alfonso Moure found materials used by artists, such as carved pieces of stone, colouring materials, implements for crushing ochre, 'pencils' of paint, etc.,<sup>83</sup> as well as tools made out of bone or stone.

With reference to the colouring materials used, the various analyses made have shown the use of different shades of ochre, of ferric oxide, vegetable carbon and manganese oxide. According to Cabrera Rodríguez, vegetable carbon was used to obtain black, and to a lesser extent, the animal carbon resulting from the burning of bones, graphite and manganese, the latter possibly being used to obtain shades of purple. Red would be obtained from haematites, and crushed amber was mixed with the pigments. Dr. Mills has proved that it has to do with the fossilized resin of some type of conifer. Yellows would come from ochre and iron oxides; browns would be obtained from ferruginous clay, whites

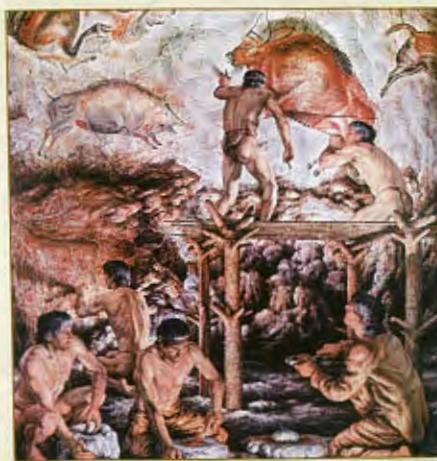
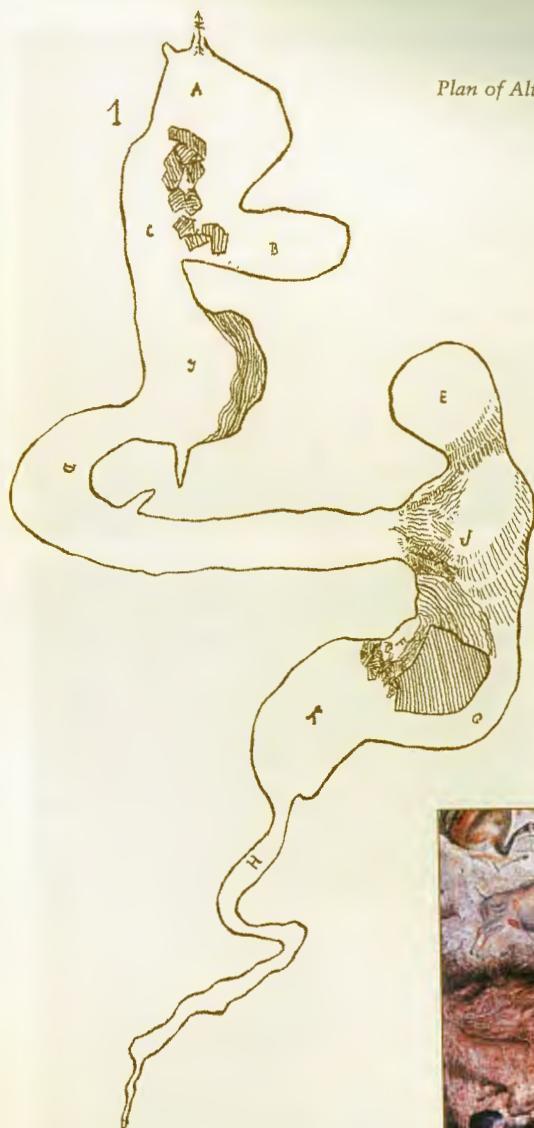
<sup>80</sup> 'Técnicas, procedimientos de ejecución, autores y planteamientos artísticos de las pinturas de Altamira', in *Altamira* (1998), op. cit., pp. 68-69.

<sup>81</sup> 'La lampe en grès de la grotte de la Mouthe (Dordogne)', *L'Anthropologie*, 10, 1899, p. 454.

<sup>82</sup> Beaune, S.A. de, 'Lampes et godets au Paléolithique', Paris, XXIV, *Supplément à Gallia Préhistoire*, CNRS, 1987.

<sup>83</sup> Alfonso Moure, *La cueva de Tito Bustillo. El arte y los cazadores del Paleolítico*, Avilés, Edic. Trea, 1992, p. 32.

Plan of Altamira (Hermilio Alcalde)



from limestone, gypsum and kaolin, and red from ochres and iron oxides. The range of colours comprises black, white, purple, red, pink, brown and yellow.<sup>84</sup> Some are due to natural fading of other colours, such as the yellows or purples, which originally were red. The material was pulverized and dissolved in water. Two specialists in colours, Kurt Herberts and Willi Baumeister, carried out tests and came to the conclusion that only water was used, as for a fresco, and animal fats and vegetable resins were not, although Cabrera mentions the use of crushed amber as an adhesive. Colourings were applied straight on to the wall, by hand, with brushes or a block of colour.<sup>85</sup> Another method of applying colour was to blow through a hollow bone, as happened at Lascaux. Recently Matilde Múzquiz has been testing the use of water as the only agglutinating agent for the colours.<sup>86</sup> When this was used the water became absorbed into the rock and mineralized via what is known as 'Van der Waal's force'. The finer the powder the greater its sticking power.<sup>87</sup> The artists who did the Munich replica of Altamira called it 'natural fresco technique.'

One topic of interest, which has already been thought about in the case of Altamira, is that the people who might have had a hand in the execution of the paintings, even though in some cases it would have

<sup>84</sup> José María Cabrera Rodríguez, 'Conservación de la cueva de Altamira: sugerencias para un programa de trabajo', *Altamira Simposium*, Madrid, Ministerio de Cultura, 1979, pp. 621-641.

<sup>85</sup> Kurt Herberts, 'Dokumente zur Malstoffgeschichte', Wuppertal, 1940. See also by the same author: 'Anfänge der Malerei', Wuppertal, 1941. Idem, 'Die Maltechniken,' Dusseldorf, 1957, 383. For W. Baumeister, see Antonio Beltrán Martínez, 'El arte cantábrico-aquitano y su proyección mundial en el ámbito prehistórico', in *Altamira, cumbre del arte prehistórico*, pp. 153-154.

<sup>86</sup> Op. cit., p. 73.

<sup>87</sup> Enrique Hambleton, *La pintura rupestre de baja California*, México. Fomento Cultural Banamex, 1979, p. 28.



*Detail of an engraving of a female deer between chambers III and IV at Altamira. This figure represents a key point of reference in the chronology of Altamira. It uses a special shaded or sculpted interior which also appears on carved bones of the Magdalenian period in the same cave. One of these artefacts from the seam, dated by the Carbon 14 method using a particle accelerator, gave the date as  $14480 \pm 250$  years ago. Note that the engraving is superimposed by a black line whose colouring has been analysed and dated as being from  $14650 \pm 140$  years ago*

*Engraving of male deer in chamber III at Altamira*

been a matter of all the figures and in others only the principal ceiling. Alcalde del Río had a hunch that some of the paintings were done by just one man (p. 17) and others, by at least three artists (p. 18). This same prehistorian was the person who first mentioned the possibility of some of them being the product of one type or 'school' of painting, and he coined the term 'Altamira art' ['Arte Altamirense'] (pp. 34-40). For his part, Professor Beltrán believed that one team of artists and their assistants were responsible for the work. (Op. cit., p. 155). Juan María Apellaniz, Alfonso Moure and Matilde Múzquiz, in their turn, have assumed that there was only one artist involved in the conception and execution of the paintings on the ceiling.<sup>88</sup> However, as they do not all belong to the same period we have to conclude that there was more than one artist, even if the bison painted in different colours do all appear to have been painted by one and the same person.

Mention has been made of the existence of workshops and the preparation of designs and sketches, which would suggest, in René Huyghe's view (Ob. cit., p.124), that there were what we would call 'schools of painting'. Juan María Apellaniz has studied the paintings of Altzerri and he thinks that there were several painters, as the similarity of the figures and the fact that they appear in other caves indicate.<sup>89</sup>

The technique followed might have begun with an engraved outline of the animal figure, in advance or at the time of drawing, then filling it in and defining the outline in black, fixing the details of mane,

<sup>88</sup> Juan María Apellaniz, *El arte prehistórico del País Vasco y sus vecinos*, Bilbao, Desclée de Brouwer, 1982, p. 63, and Matilde Múzquiz, op. cit., p. 66. Alfonso Moure has expressed precisely the same idea regarding the polychrome section.

<sup>89</sup> Juan María Apellaniz, 'Análisis de las representaciones,' in Ch. III of 'Las figuras rupestres paleolíticas de la cueva de Altkerri (Guipúzcoa)', by Jesús Altuna and Juan María Apellaniz, *Munibe*, parts 1-3 (1976): 148-156.

eye, hoof or cloven hoof, horns, etc. In the bison of Altamira the contrast of the black on the red is magnificent and the intensification of the black on the short, fluffy hair of the neck and withers, in the longer, shaggy hair of the chest, on the tail and the area near the joints. But there is yet another detail worth noting concerning the artistic merit of the bison in this cave, and that is the perfection of the drawings to be seen in the cleft in the hoofs, drawn from the anterior lateral view. The paler tones used for the underbelly or the noses of horses also had their own special technique.



VII. *The conservation of Altamira*



*Panel with painted signs and huts in the "Paintings Chamber".*  
H. BREUIL AND H. OBERMAIER, Illustration VI



## VII. *The conservation of Altamira*

'The prevention of the deterioration of the polychromatic paintings of Altamira must be a permanent priority for all organizations and institutions responsible for the safe-keeping of this inestimable treasure, this heritage of humanity'

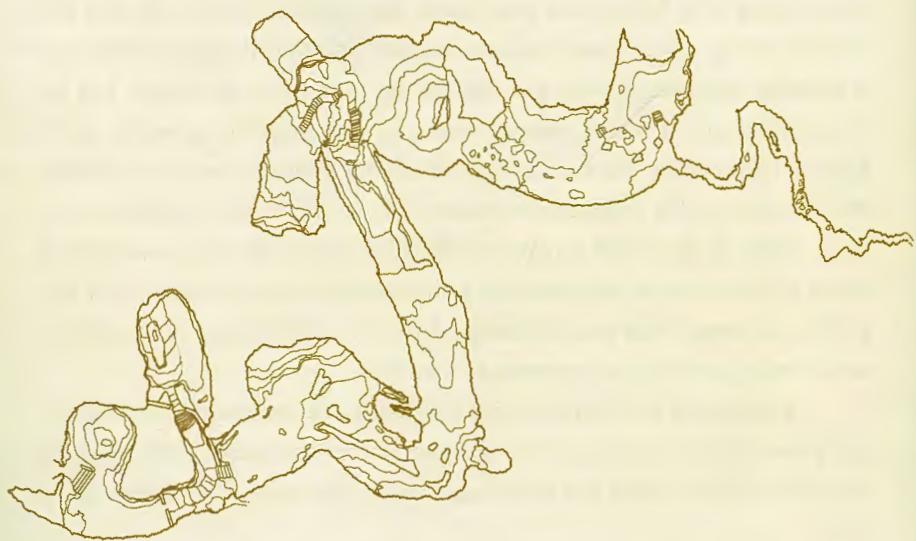
*Eugenio Villar García*

Both time and man have played their part in the gradual deterioration of the cave of Altamira. Sautuola had proved himself to be a conservationist long before this term came into existence in his concern for its well-being. As has been mentioned, not only did he immediately set a wooden door in place to prevent the interior being damaged, but he was also opposed to the idea of copies of paintings being made, as E. Harlé claims. Soon afterwards the Santillana council saw fit to change the initial door for another one made of iron, and in the September session, 1880, it agreed to repair the road leading to the cave and took a series of measures to help with its upkeep and the use made of it by the public. Someone was put in charge of the key to the cave and a person was always on hand to accompany visitors.

Harlé was the first person to measure the temperature in different parts of the interior and he saw that water had percolated through into the chamber with the paintings, and at the same time drew a plan of it.



*Profesor Eugenio Villar,  
researcher into the conservation  
of the Altamira cave*



*Plan of the cave of Altamira*

When he went back to see the cave in 1903 he noticed, to his great concern, that fresh cracks had appeared in the roof, whose deterioration made him go along with Cartailhac's views.<sup>90</sup> The same year the *Academia de Bellas Artes de San Fernando* received word of the steps taken by the *Comisión Provincial de Monumentos* of the province of Santander to protect and conserve the cave, with a view to preventing its further deterioration and in order to be able to remove the loose rock which had fallen and made excavation impossible.<sup>91</sup>

The Prince of Monaco, Abbé Breuil, Cartailhac and Hoyos Sainz warned of the protective measures which needed to be taken, and the Prince donated a thousand francs to seal off the chamber containing the paintings. The passing of time, the natural crumbling of the stone and the damage occasionally caused by an unwise choice of place in which to excavate, the fact that there had at one time been a quarry nearby, the Civil War, biological contamination, the rise in tourism and the increase in the number of paying visitors, all these factors contributed to the deterioration of the cave.<sup>92</sup> The first official guide to the cave was appointed in 1917.

Various conservation projects and the measures taken did try to avoid any major mishap, as far as was possible in those days. In 1921 the Duke of Alba created the '*Junta protectora de la cueva de Altamira*', (Committee for the Protection of Altamira) which, from the official point of view, was a considerable step towards setting up an organization to be responsible for keeping an eye on the condition of the paintings and to ensure that the cave did not fall into disrepair. This body was replaced in 1925 by the *Patronato de Altamira* (Altamira Trust) but

<sup>90</sup> Archivo Begouen, Fundación Marcelino Botín.

<sup>91</sup> Archivo M. Sanz de Sautuola in Fundación Marcelino Botín.

<sup>92</sup> Daniel Gallejones, op. cit., p. VIII.

kept the same chairman. The same year an agreement was signed between the local council and the Duke, permitting the excavation of the cave and ensuring its conservation, for a period of not more than ninety-nine years.

From that time a series of improvements took place, not all of which were successful. Amongst the proposals put forward, we must mention the one made in 1924 by Father Carballo to the Director General of Fine Arts that a replica of the cave be made, an idea which was rejected at the time as too costly. Later he proposed the same thing to the Marquis of Comillas, and although he approved it, nothing could be done about it as the Marquis died. In 1928 Professor Obermaier tried to get the Field Museum in Chicago to make a copy of the ceiling with the polychromatic paintings.<sup>93</sup> A few years went by before a copy of the Altamira ceiling could be made, both in Munich and Madrid, thanks to the project of the Deutsches Museum in Munich, which was passed on November 28th. 1957 by the *Dirección General de Bellas Artes*, with the approval of the *Patronato de las Cuevas Prehistóricas de Santander* (Trust for the Prehistoric Caves in the Province of Santander). Dr Erich Pietsch was in charge of the setting up and development of the project. The reproductions of the paintings were carried out by the team made up of G. Voglsamer, E. Senft and G. Passens by means of photographic projections and the use of natural pigments.<sup>94</sup> The official inauguration

<sup>93</sup> Julio J. Aubin, 'Altamira, técnica y riqueza', *Hoja del Lunes*, Santander, Feb. 16th., 1959 and A. Moure Romanillo and María de los Angeles Quirol Fernández. 'La reproducción de Altamira: un proyecto para la conservación y el disfrute', *Cien años después de Sautuola*, ed. Manuel R. González Morales, Santander, Diputación Regional de Cantabria, 1989, p. 266.

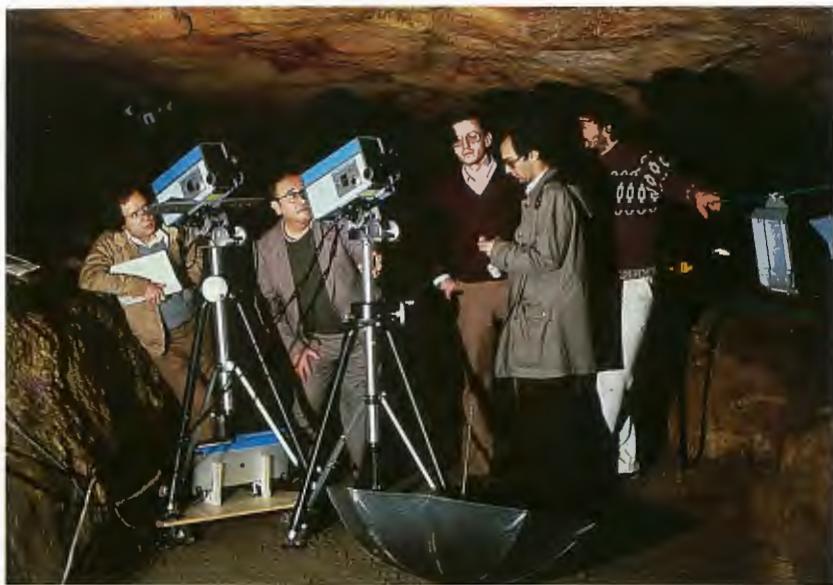
<sup>94</sup> *Altamira y la Prehistoria de la tecnología química*, Madrid, Patronato 'Juan de la Cueva', of the Consejo Superior de Investigaciones Científicas, 1964. Idem. A. Moure and María de los Angeles Querol, op. cit., pp. 268-272.

of the Munich copy, following a wide-ranging scientific effort, took place on September 14th. 1962 in the Great Hall of the Deutsches Museum, and the one for the Archaeological Museum in Madrid on October 14th., 1964. In 1970 at a meeting of the *Patronato de las Cuevas* Professor Martín Almagro made the point that people should go and see what had been achieved by the Munich Museum and that the public should stop visiting the cave and just see a reproduction of it.

Amongst the most notable programmes for improvement and conservation carried out at various stages, those of A. del Corral in 1924, Francisco Iñiguez and G. Bringas in 1941, Alfredo García Lorenzo in 1957, and Eugenio Villar in 1979, deserve special mention. Some of them worked in conjunction with the *Patronato de la Cueva de Altamira*. A. del Corral lowered the floor of the cave and strengthened it with cement. After the Civil War Francisco Iñiguez and G. Bringas tried something new, taking the floor of the chamber with the paintings down even further, which altered the atmospheric conditions of the cave considerably. In addition, a provisional wooden support was erected inside the chamber, which unfortunately caused more damage.

García Lorenzo insisted that fewer visitors should be allowed in so that the natural atmosphere of the cave would not be altered. He emphasized the risk involved in not keeping the number of visitors under control, and also got rid of the wooden support and had a wall put in its place. In 1970 and 1978, with the collaboration of Jesús Endériz, he presented a report, firstly at a conference of the International Union of Scientists and then in the *Patronato de Santander*, which dealt with these points.<sup>95</sup>

<sup>95</sup> Manuel Fernández-Miranda, 'Bisontes de infortunio', in *Cien años después de Sau-tuola*, op. cit., pp. 173-186. See also the documentation available in the *Consejería de Cultura*.



*J. R. Solana, E. Villar, P. Fernández, J. Soto and L. S. Quindós. The team from the University of Cantabria setting up the spectrophotometer to measure the colours. (1982)*



*Jesús Carballo García Taboada (1874-1961)*



In 1969 the present writer published some notes identifying the paintings in the Franco-Cantabrian region and providing information on them. In pursuing this task every care was taken to protect this unique prehistoric site.<sup>96</sup>

At the instigation of the then President of the local council, Leandro Valle, in 1978 thermographic measurements were made for the first time, thanks to the collaboration of the Marqués de Valdecilla Medical Centre.

Eugenio Villar was the first person to prepare a scientific project, which I shall come back to later, that illustrated the state of the cave and suggested appropriate measures that could be taken to prevent any change in atmospheric conditions.

The deterioration of the painting of the female deer was reported by Francisco Santamatilde Pardo, who was very familiar with the cave as he had taken photographs of it. This meant that any risk that might arise from a change in the ambient air had to be addressed. As a result, a group of prehistorians sent a letter to the board of the *Patrimonio Artístico y Cultural*, dated September 21st 1975, drawing attention to the critical state of the cave. Shortly afterwards, at the fourteenth National Archaeology Conference, which took place in Vitoria in October, 1975, the subject was raised once more. The magazine *Sábado Gráfico* was the publication that brought the matter of the gradual deterioration of the paintings to the public's attention, on October 14th. the same year. The article was accompanied by two photographs of the female deer of Altamira, with an interval of nine years between them, which clearly showed

<sup>96</sup> Benito Madariaga de la Campa, *Las pinturas rupestres de animales en la región Franco-cantábrica. Notas para su estudio e identificación*, prologue by Félix Rodríguez de la Fuente, Santander, Institución Cultural de Cantabria, 1969, pp. 77-79. In keeping with the informative purpose of the task I emphasized the need to give a detailed description of the animals and a record of their measurements in Prehistory publications.

that the intensity of the colour had faded. Some time later, at a meeting of the *Comisión Técnica de Altamira* (Board of Experts), which I shall say more about later, Dr. Carmen González Vázquez informed the gathering of patches of fungus and bacteria next to the paintings. It became a matter of heated debate and it was agreed to cut down the number of visitors to the caves, which in 1967 had been 1300 people each day. In the course of the following year it was reduced to 1100, and in 1972 the caves were closed during November and December, and in 1974 the period of closure was extended to three months. Just for the record, for some reason 173,000 people had visited the cave in 1973. In 1976 visits were abolished from November through to June, and in 1977 the cave was closed all year and only reopened in 1982.<sup>97</sup>

On January 27th. 1976, the Ministry of Education and Science had appointed a *Comisión Técnica* (Board of Experts) whose brief was to study in depth how the paintings might best be preserved. At the meeting of the group the following month it was agreed to take a series of preventive measures and carry out investigations to verify the possible causes of the deterioration. (Boletín Oficial del Estado, No. 49, February 26th. 1976). At the meetings on June 11th. and 12th., chaired by the prehistorian, Eduardo Ripoll, Dr. González Vázquez presented the aforementioned information and Professor Antonio Cendrero proposed that a replica of the cave should be constructed. The Board was set up as a safeguard against criticism that had already appeared in the Press.<sup>98</sup> The most

<sup>97</sup> Jesús Pindado, 'Altamira: historia de un cierre', *El Diario Montañés*, 30-V-1979.

For the number of visitors, see also J. A. Lasheras, Matilde Múzquiz and Pedro Saura, *Revista de Arqueología*, no. 171, July 1995, p. 14.

<sup>98</sup> Luis Carandell, 'Altamira: los desastres del turismo', *Triunfo*, 6-IV-1975. See also Daniel Gallejones: Que está ocurriendo con Altamira?, *La Gaceta del Norte*, 30-XI-1975.

important scientific undertakings of the Board were a study of the microbic flora, the geological properties of the cave, the lithological characteristics of the surfaces, the chemical composition of the pigments and the first measuring of the colour of the paintings. At the request of the Board the Altamira cave was finally closed to the public in June 1977.

The same year the Santillana district council handed over full control of the cave to the State with the condition that the money taken in entrance fees should be shared equally between the Council and the State. In return the State had to guarantee to make a payment to the council to the tune of half the amount of the expenses incurred through the development of the cave during the course of the year. This is index-linked and at the present time amounts to 25 million pesetas.<sup>99</sup>

At the instigation of Manuel Fernández Miranda, the Altamira Museum and Research Centre was created in 1979. Since then there have been new investigations into the conservation of the cave, thanks to a contract with the University of Santander, under the leadership of the prehistorian, Joaquín González Echegaray.

In the midst of all the controversy in 1980, the art critic, Santiago Amón, proved to be in favour of preservation of the cave, supporting the idea of keeping it closed, stressing that it should be reopened to the public gradually. The best possible arrangements for visits needed to be made in order to try and avoid the problem of deterioration, and specialist scholars should always be allowed in. Prehistorians such as Joaquín González Echegaray and Alfonso Moure had strongly supported the idea of keeping it closed, provided that it was not left to the scientists involved to make the decision as to the appropriate measures to be taken in order to avoid gradual deterioration (*Gaceta del Norte*, December 24th. and 27th., 1975).

<sup>99</sup> *Alerta*, 14-V-1973, p. 3, and also a personal communication from J. A. Lasheras.

In the minutes of the International Symposium on Prehistoric Art, held to celebrate the centenary of the discovery of the Altamira paintings, a series of reports and studies by various people on the subject of the conservation of caves, particularly the Santillana cave, was published.

The task given to Professor Eugenio Villar to present an investigative project to be carried out by the Department of Fundamental Physics in the University of Cantabria under his direction proved, after four years' work, to be a success. The study was made by a multidisciplinary team led and coordinated by Professor Villar, made up of the physicists A. Bonet, N. Díaz-Caneja, P. L. Fernández, I. Gutiérrez, L. Plaza, L. S. Quindós, J. S. Solana and J. Soto, all from the University of Cantabria, Professor F. Uruburo of the University of Valencia and Professor C. Hardison of the University of Oviedo, with their teams were responsible for the biological side, and Professor Gómez Laá of the University of Cantabria and Dr. Manuel Hoyos, from the *Consejo Superior de Investigaciones Científicos*, who carried out geological investigations. The investigation finished in 1983, although they still continued with the monitoring so that the eco-system of the cave would not vary. In Professor Villar's report, presented in 1979, the structure of the cave was dealt with, as well as the use of polychromatic film, the air, water vapour, contaminating agents, etc., whilst in his work programme he recommended the analysis of microbes in the air and water, the concentration of radon, particularly in the area of the chamber with the paintings, the concentration of contaminating agents and the installation of apparatus to record the temperature, humidity and amount of carbon dioxide. The Minister of Culture provided, in addition to the other apparatus, a radiation thermometer, the equipment for measuring the radon to check the ventilation in the chamber with the paintings, probes

connected to an electronic device and a spectrophotometer to measure the colour of the paintings.<sup>100</sup>

When the required length of time had passed, Professor Villar highlighted the beneficial influence that the long-term cessation of visits to the cave had had and how even the painting of the female deer had recovered its colour over the previous five years,<sup>101</sup> stressing that the conservation of the Altamira paintings depended on continual monitoring. As result of the quantitative study that had been carried out it was decided to restrict the number of visitors, (which is still the case), so that the environmental changes caused by people visiting the cave are unimportant, and more importantly, disappear in time for the chamber with the polychromatic paintings to have regained its natural micro-climate, exactly as it would be if it had not been open to the public.<sup>102</sup>

<sup>100</sup> Eugenio Villar, 'Proyecto científico-técnico elaborado para la conservación de las pinturas de la cueva de Altamira', Department of Fundamental Physics of the University of Cantabria, Oct. 1979. Published in monograph no. 5 of the Centro de Investigación y Museo, Altamira, Santander, Ministerio de Cultura, 1981. See also Eugenio Villar's 'La conservación del techo de la cueva de Altamira,' *Cien años después de Sautuola*, pp. 381-395.

<sup>101</sup> E. Villar *et al.*, 'Estudios físicos-químicos sobre la Cueva de Altamira, Museum and Research Centre of Altamira. Monograph no. 9, 1983. See also by E. Villar *et al.*: 'Natural ventilation of the Paintings Room in the Altamira Cave', *Nature*, vol. 321, no. 6070, pp. 586-588, 1986.

E. Villar *et al.*, 'Estudios físicos-químicos sobre la Cueva de Altamira, Museum and Research Centre of Altamira. Monograph no. 9, 1983. See also by E. Villar *et al.*: 'Natural Ventilation of the Paintings Room in the Altamira Cave', *Nature*, vol. 321, no. 6070, pp. 586-588, 1986.

<sup>102</sup> E. Villar *et al.*: 'Cueva de Altamira: Estudios físico-químicos de la Sala de Políchromos. Influencia de la presencia humana y criterios de conservación'. Museum and Research Centre of Altamira. Monograph no. 11, 1984. I was given the information by Professor Eugenio Villar.



*Design for the Altamira Museum and the surrounding area. Models by Juan de Hernández and Jesús Rey (1995 and 1997)*

The setting up of the Museum and Research Centre of Altamira by ministerial order on June 15th., 1979, and the setting up of the Trust, signified a remarkable breakthrough in the field of research and investigative studies.

The meeting of the *Comisión Nacional del Arte Rupestre* (National Commission for the Conservation of Cave Art) which had taken place on February 28th., 1981, was very important, because of the people who had been invited to attend, and also because of the debates and the conclusions which were adopted. Two years later, the Trust took on the reproduction of the cave's ceiling and polychromes, a task which was entrusted to Agustín de la Casa, who, as we shall see, along with a team of specialists planned how the copying was to be done, the amount of space needed and the ambience of the cave, as well as being responsible for adapting the Museum buildings. And so it happened in 1983 that the Ministry of Culture was going to arrange for the copying of the figures in the chamber with the paintings, but the project never came to fruition.

With the creation of the autonomous region, it was accepted, by means of an agreement between the Ministry of Culture and the region of Cantabria, that the form of procedure should be shared. This was authorised in 1983 and the agreement over the cave was signed in 1985. The state reserved the entitlement and the expenses and organization were shared.

In 1983 Agustín de la Casa was given the task of preparing the way for the copying of the cave paintings. He analyzed what was needed and described the elements contained in the proposal. The object was to put on display a partial reproduction of the cave, situated close to the original which would give the visitor 'an utterly realistic and credible' replica of the original. The building would be presented as just another feature of the landscape. The chamber with the polychromes

would receive special attention once the additions which had wrought in its original state had been eliminated. The floor was to be lowered so that visitors would be able see the ceiling easily. This reproduction was to be part of a scheme to generally improve the amenities of the Museum, after the design of the architect, Luis Rica.<sup>103</sup>

The same year financial help was sought from ONCE and REPSOL was asked to sponsor one of the projects under the auspices of the *Patronato de las Cuevas*, but the projects did not materialize.<sup>104</sup>

Just after the setting up of the Institute of Conservation, and the change over to the 'Comunidad' (Autonomous Region), an interdisciplinary team was formed, headed by Alfonso Moure on the scientific side, and consisting of the architect Luis de la Fuente, Federico Bernaldo de Quirós who was the director of the Altamira Museum at that time, the archaeologist María Dolores Fernández Posse, and María de los Angeles Querol, the director of the Department of Archaeology of the Ministry of Culture, and the designer, Agustín de la Casa. After a number of meetings it was agreed to have a model made, as close as possible to the original and it should be situated near Altamira, in a natural country setting in keeping with the cave. The Department of Mural Painting of the Faculty of Fine Arts in Madrid was to be responsible for the copies of the polychromatic paintings. The architect in the team was Luis de la Fuente. However this project did not meet with success either.<sup>105</sup>

<sup>103</sup> Agustín de la Casa, *Anteproyecto de una réplica de la cueva de Altamira*, Madrid, 1988. Copy by courtesy of the Museo y Centro de Investigación de Altamira.

<sup>104</sup> Carlos Bielva/Arminio, 'Técnicos de Repsol exponen el jueves el proyecto de reproducción de las cuevas de Altamira', *El Diario Montañés*, Dec 13th., 1987, p. 46.

<sup>105</sup> J. Alfonso Moure Romanille and María Angeles Querol Fernández, 'La reproducción de Altamira. Un proyecto para la conservación y el disfrute.' *Cien años después de Sautuola*, pp. 276-280.

In 1992 the first steps were taken towards the making of a facsimile of Altamira in the model Spanish town of Shima, in Mie (Japan) in the Museum of the Castle of Francisco Javier. Instead, the company undertook the installation of climatic equipment in our cave to the tune of eleven million pesetas.<sup>106</sup>

Recently the idea of the 'Neo-Cave' came up, promoted by Moure and Querol. Later, the Consortium of Altamira (*Consorcio de Altamira*) formed by the Ministry of Education and Culture, the Government of Cantabria, the Council of Santillana del Mar and the Marcelino Botín Foundation, supported and financed the model approved in 1997 under the leadership of architect, J. Navarro Baldeweg. Work began on the building and its immediate surroundings and the topographical and photogrammetric study of the chamber with the polychrome paintings was carried out by the National Geographic Institute, under Benjamín Piña. The Tragacanto company reproduced and mounted the copies of the paintings done by Matilde Múzquiz and Pedro Saura. It was a complex task in which the container and the contained (that is to say, the cave and the paintings), the exact copying of the paintings, as well as the best way of providing contingent public amenities close by without damaging the environment, all had to be given consideration. As José Antonio Lasheras wrote in 1998: 'The model will not be a substitute for the real thing. The feeling you get from looking at the original cannot be the same as the impression you get when you see a reproduction, but the replica will be a vehicle of information about the original and its social context -prehistory-, by means of which the study and scientific investigation of the cave will increase, which in turn means that visitors to the Altamira Museum will also benefit.'<sup>107</sup>

<sup>106</sup> *Revista Arqueológica*, op. cit., p. 18 onwards.

<sup>107</sup> 'Los problemas de conservación. El Museo Nacional y Centro de investigación de Altamira,' in *Altamira*, (1998), op. cit., p. 165.

Now, through this faithful reproduction, the public can observe in detail the different parts of the cave, receive information without being limited for time, as happened with visits to the cave itself, and acquire a much fuller range of knowledge.

Nearby is the National Museum and Research Centre of Altamira, whose existence we owe to José Antonio Lasheras, who is responsible for monitoring the condition of the cave and for taking any protective measures. It is also a centre for scientific and bibliographical research.

The new replica of the cave represents not only the need to conserve the cave and to be able to hand it down to future generations as part of their cultural heritage, but also a modern-day scientific adventure, which will make us more familiar with the wall paintings of this very special cave, which in 1985 was nominated by UNESCO as a 'Heritage of Humanity' (*Patrimonio de la Humanidad*).

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