

STUDIES IN SPELEOLOGY



VOL. XIII
2001/2002

PLYMOUTH

PUBLISHED BY

WILLIAM PENGELLY CAVE STUDIES TRUST LTD

ISSN 0585-718X

PALAEOLITHIC CAVE ART IN CANTABRIA, NORTH SPAIN

Peter Smith

Asociación Cántabra para la Defensa del Patrimonio Subterráneo

Photographs: A.C.D.P.S. Collection

PREFACE

The Asociación Cántabra para la Defensa del Patrimonio Subterráneo was founded in 1978 with the aim of protecting the caves of Cantabria in all their aspects; speleological, archaeological, biological etc. The conservation of the cave art of the region was an earlier priority, and in 1980 the Association collaborated with the National Commission for the Conservation of Cave Art in the production of an inventory of the decorated caves in Cantabria.

The results obtained were published in the first edition of the *Catálogo de las Cuevas con Arte Paleolítico en Cantabria*, which came out in 1986 to coincide with the 9th International Caving Conference held in Spain that year. A second, fully revised, edition was published in 1989. The present text can be considered a new edition, as once again the descriptions have been fully revised, with the addition of several discoveries made in the last decade.

The following people participated in the first two editions: J. León, J. González Echegaray, J.A. Moure, R. Bohigas, V. Fernández Acebo, M. T. Viar, M. González Morales, C. Lamalfa, J. Peñil, F. Bernaldo de Quirós, V. Cabrera, P. Sarabia, E. Torres, E. Muñoz, C. San Miguel and P. Smith. Their influence on this edition is duly acknowledged, as is the work of the numerous caving groups who made the cave surveys reproduced in this catalogue.

The English edition has been the entire responsibility of Peter Smith, who would like to thank Carmen San Miguel, Emilio Muñoz, Alís Serna, Angeles Valle, Ramón Montes, Carlos González Luque, Jesús Ruiz Cobo and César González Sainz for their invaluable help and collaboration. Above all, the author would like to acknowledge the patient assistance of Amparo López Ortiz and the staff of the Regional Museum of Archaeology and Prehistory in Santander, whose library was consulted on numerous occasions.



Fig 1. Map of the Iberian Peninsula, with Cantabria



Fig 2. Map of Cantabria, with the position of the caves.

1 Cueva Grande. 2 Cueva de Juan Gómez. 3 Cueva de la Lastrilla. 4 Cueva del Cuco. 5 Cueva de Urdiales 6. Cueva del Arco A. 7 Cueva del Arco B and C. 8 Cueva de Pondra. 9 Covanegra-Sotarriza. 10 Cueva de Cullalvera. 11 Cueva de la Haza. 12 Cueva de Covalanas. 13 Abrigo de la Peña del Perro. 14 Cueva del Otero. 15 Cueva de Cobrante. 16 Cueva de los Emboscados. 17 Cueva de Sotarraña. 18 Cueva de Salitre. 19 Cueva de la Garma. 20 Cueva del Pendo. 21 Cueva del Juyo. 22 Cueva de Santián. 23 Cueva del Calero II. 24 - 28 Cueva del Castillo, Cueva de las Chimeneas, Cueva de la Flecha, Cueva de la Pasiega, Cueva de las Monedas. 29 Cueva de Hornos de la Peña. 30 Cueva de Sovilla. 31 Cueva de Cudón. 32 Cueva de la Pila. 33 Cueva de las Brujas. 34 Cueva de Altamira. 35 Cueva de Clotilde. 36 Cueva de la Estación. 37 Cueva de Cualventi. 38 Cueva Redonda. 39 Cueva de Linar. 40 Cueva de las Aguas. 41 Cueva del Portillo I. 42 Cueva de la Meaza. 43 Fuente del Salín. 44 Cueva de Porquerizo. 45 Cueva de Chufín. 46 Cueva de Micolón. 47 Cueva de Traslacueva. 48 Abrigo de Socueva

GENERAL INTRODUCTION

Stone Age art has a lasting appeal not only with archaeologists but with the general public as well, and new discoveries are widely reported in the mass media. The reasons for this appeal are clear: many of the figures are true masterpieces, located in beautiful underground surroundings; although their significance remains enigmatic and unfathomable, they create an instinctive reaction in the sensibility of each observer.

The following catalogue of art produced during the Pleistocene is a complete record of all the decorated caves in the region of Cantabria, and is intended to be as up-to-date as possible.

Cantabria is a region of 5,290 square kilometres situated in the North of Spain. It lies between the Basque Country in the East, the Principality of Asturias in the West and the high Castilian meseta in the South, with the Bay of Biscay, *el mar Cantábrico*, marking its coastline. It is a mountainous area, reaching 2,613m above sea level in the Picos de Europa, on the boundary between Cantabria and Asturias. A number of rivers have cut steep valleys from the mountain cordillera to the sea, and several of these valleys: the Asón, Miera, Pas and Nansa, are rich in caves. In the south of the region the River Ebro starts its course towards the Mediterranean. A strip of undulating lowlands follows the coastline, but even here hills rise abruptly, such as Monte Buciero, 340m above sea level, at the entrance to the bay of Santoña. Cretaceous and also Carboniferous limestone is found in most of the cordillera, valleys and coastal lowlands. The Ebro valley has much less limestone and few caves.

Its climate is influenced by the Atlantic, resulting in relatively cool summers and mild winters, and rather humid conditions all year round. Again the exception is found in the south of Cantabria, where the climate is more continental, drier, and with greater extremes of temperature. The natural vegetation in much of the region is oak woodland (*Quercus robur*), with beech woods (*Fagus sylvatica*) on higher ground, and holm oak (*Quercus ilex*) is often found on limestone hills. Hazel (*Corylus avellana*), Holly (*Ilex aquifolium*) and the Strawberry Tree (*Arbutus unedo*) are also common in limestone areas. In many places the natural woods have now been replaced by eucalyptus plantations, and in all the coastal area, conditions are ideal for meadow land; therefore dairy farming is traditionally Cantabria's main economic activity. Nowadays, however, it is declining in importance, and tourism and other service industries have become the main employers.

Nearly half the population of 530,000 live in the capital city, Santander, which stands on a large bay midway along the coastline. Other important sea towns are Laredo and Castro Urdiales to the east of Santander, and Suances, Comillas, and San Vicente de la Barquera to the west. The second largest town is the industrial Torrelavega, and the other main centres include Camargo, on the Bay of Santander, Reinosa in the South, and Potes at the foot of the Picos de Europa.

It is a small region, somewhat smaller than Devon for example, yet inexorably linked to Palaeolithic art, ever since 1879 when the paintings of Cueva de Altamira were discovered.

This catalogue of decorated caves only includes those in the region of Cantabria, although it must be admitted that this limitation is an artificial one, unknown to prehistoric man. This can be illustrated by the example of Cueva de Venta La Perra, only a hundred metres from the Cantabrian cave El Arco, yet over the boundary with the Basque Country and out of our area of study. All these caves, in fact, belong to a much wider group, including the North of Spain, the Pyrenees and the southwest of France. This Franco-Cantabrian region contains many of the most spectacular and famous caves with Palaeolithic art - such as Tito Bustillo (Asturias), Santimamiñe (Basque Country), Trois Frères (Pyrenees) and Lascaux (Perigord). Yet beyond this broad region, many other caves are known in other parts of Spain and France, in Portugal, Italy, as far as Russia, and in fact every continent. Indeed the oldest known paintings are believed to be in Apollo 11 Cave in Namibia, at about 35,000 years old.

However, since democracy was re-established in Spain after 1975, the country has been divided into seventeen Autonomous Communities, and hence the caves of each region tend to be administrated, and consequently studied, as a separate unit. Furthermore, as a final reason, any division or boundary marked would be an artificial one, unless at least the whole Franco-Cantabrian region was included, and that would be an area, and number of caves, practically impossible to cover in the kind of depth attempted in the following catalogue.

As well as these geographical limits, the catalogue only refers to *Palaeolithic cave rock art*. Cantabria has many other sites with art produced in later periods - Neolithic, Bronze and Iron Ages, even medieval times, both in caves and in the open air. These are not included in the catalogue. Neither are there any separate references to caves where Palaeolithic art has only been found on portable bone or stone objects, so-called *mobiliary art*.

HISTORY OF THE DISCOVERY OF CAVE ART IN CANTABRIA

The science of prehistory developed quickly in the second half of the nineteenth century. After geologists had established the reality of the Quaternary glaciation, and the remains of Neanderthal man were found in 1856, Charles Darwin published "The Origin of the Species" in 1859, the same year as William Pengelly's pioneering excavations in Brixham Cave. All of this work was necessary to prove the sheer existence of prehistoric man, as opposed to the orthodox view of Christian religion. During the 1860s and 1870s intense prospection and excavations in France, especially in the Perigord, and such sites as La Madeleine, revealed large collections of Palaeolithic artefacts. These included examples of mobiliary art, unarguably prehistoric, as coming from Pleistocene sediments, and which were studied by the French archaeologist Piette in 1873. Yet, in 1878 another Frenchman, L. Chiron, published a note on the cave of Chabot, mentioning the existence of cave art, in the form of engravings on the walls; this time nobody seemed to attach any importance to the fact.

In the same year of 1878, objects from many of the French caves were on display at the Great Exhibition in Paris. There they were seen by Marcelino Sanz de Sautuola, who had already started digging, in 1876, in a cave by his gentlemanly residence near the Cantabrian village of Santillana del Mar. In 1879 he returned to this cave, called Cueva de Altamira, with his daughter María, who was eight years old at the time. While he continued his work in the entrance, she wandered a little further inside, and became the discoverer of the incredible paintings of bison on the roof of a low chamber.¹



Pic 1. Marcelino Sanz de Sautuola, the discoverer of Cueva de Altamira

Sautuola studied the paintings and published a reproduction of them in a report the following year, giving a number of reasons for believing that they were of the Magdalenian period. This was the great novelty compared with the lack of interest in the French engravings, and Sautuola received the support of a small group of scientists, including Piette, but above all of the Spanish geologist Vilanova y Piera. At an International Congress of Anthropology and Prehistoric Archaeology held in Lisbon in 1880 Vilanova defended the prehistoric age of the paintings, and he also came to see the cave for himself. Nevertheless most of the leading prehistorians of the time refused to accept that the paintings were not the work of modern man. The controversy lasted several years, among scientists and in the newspapers, and mostly among people who had not troubled to visit Altamira. Some of the more absurd theories were that the paintings had been done by shepherds, or even by Roman soldiers after the conquest of Cantabria. In March 1881 a committee of French prehistorians, headed by Emile Cartailhac, sent E. Harlé to Santillana in order to issue a report. Harlé concluded that he did not doubt Sautuola's honesty and scientific merit, but he had been deceived, and the paintings had been done between his first visit in 1876 and his second in 1879. Gradually that became the accepted view.

¹ Strangely, for such a transcendental occasion, we do not know when exactly it took place; only that it must have been before November 8th 1879, when Sautuola wrote a letter asking for someone to copy the paintings. María Justina Isabel Sanz de Sautuola was born on November 30th 1870.

Paintings were seen at the French cave of Marsoulas in 1881, and engravings in Pair-non-Pair in 1883, but once again their discoverers did not consider them to be of any value. When Sautuola died on March 30th 1888 the newspaper obituaries did not make a single mention of Altamira. They must have thought it was an embarrassing episode best forgotten. But we also need to consider the situation at that time; Darwin's theory of evolution, for example, was far from generally admitted to be true, and most archaeologists, like Cartailhac, professor at the University of Toulouse, believed they had to advance slowly and to be able to prove each discovery scientifically, in order not to be ridiculed in the public opinion. Progress in prehistory had been rapid; many previously unimagined facts had been accepted as reality, and it seems that people were not able to digest any more. Prehistoric men had been brutes with neither the time nor the sensibility to produce art, was the common view. In this respect Altamira was to play a significant part in changing our concept of ourselves and the limits of human ability.

At the turn of the century more examples of cave art were found in several caves in the Dordogne, especially La Mouthe, Combarelles and Font-de-Gaume. Under this overwhelming evidence it had to be admitted that prehistoric man was capable of producing true works of art. Cartailhac now remembered Cueva de Altamira and the injustice done to Sautuola, and in 1902 wrote his famous article *Mea culpa d'un sceptique*. He travelled to Santillana del Mar and entered the cave on October 1st 1902, accompanied by his student the priest Abbé Henri Breuil. Twenty-five years old at the time, Breuil was to dominate Prehistory for the next fifty years. He spent hours and hours in the caves copying the paintings, and in his publications he formulated theories about the chronology and interpretation of cave art which were unchallenged throughout his lifetime.

While Cartailhac and Breuil were at Altamira, they were visited by Hermilio Alcalde del Río, founder and Principal of the School of Arts and Crafts in Torrelavega. After they left, Alcalde del Río continued to study the cave alone, and then embarked on his own exploration of the region in search of more cave paintings. He joined forces with Lorenzo Sierra, priest and head of Limpas College near Laredo, and together or separately, they discovered cave art in a number of important sites, especially El Castillo, Hornos de la Peña, Covalanas, Salitre, Santián, Clotilde and Las Aguas (as well as other caves outside Cantabria, such as Pindal and Atapuerca). During this period of glorious success Prince Albert I of Monaco founded the *Institut de Paleontologie Humaine* in Paris and agreed to patronise the research in Cantabria. The Prince came to visit several of the caves personally in July 1909. Alcalde del Río, Breuil and Sierra then published their classic study *Les Cavernes de la Region Cantabrique* in 1911. The *Institut* also undertook the excavation of some of the sites, such as El Castillo and Hornos de la Peña. The German archaeologist Hugo Obermaier, another priest and Breuil's pupil, then joined the multi-national team working in Cantabria. He took part in the next great discovery: Cueva de la Pasiega. Another magnificent volume describing the art of this cave was published in 1913.



Pic 2. Obermaier, Breuil and Alcalde del Río

This golden age of exploration and international collaboration ended with the First World War. Alcalde del Río practically abandoned Prehistory, and the Spanish Civil War and the Second World War caused further disruption. The most significant contribution during these years was Breuil and Obermaier's publication on Cueva de Altamira in 1935. This was another luxurious book, under the patronage of the Duke of Alba, with both Spanish and English editions. The Spanish National *Comisión de Investigaciones Paleontológicas y Prehistóricas* researched the art of Cueva del Castillo between 1934 and 1935. But the Spanish Civil War broke out the following year, interrupting their work, which was never completed or published.

The post-war period began with the deaths of most of the pioneer explorers of cave art: Obermaier in 1946, and Sierra and Alcalde del Río in 1947. Breuil survived all his colleagues, and died in 1961. During the 1950s, two of the most important personalities working in Cantabria were Jesús Carballo, a priest, speleologist, archaeologist, and the founder of the Museum of Prehistory in Santander; and Alfredo García Lorenzo, an engineer working for the local government and a member of the *Patronato de las Cuevas Prehistóricas de la Provincia de Santander*. This organisation had the aim of discovering, studying, and exploiting prehistoric caves for tourism. Its two major successes were the discoveries of Cueva de las Monedas and Cueva de las Chimeneas at Puente Viesgo, but other important finds



Pic 3. Joaquín González Echegaray, responsible for many studies of cave art in Cantabria

included the paintings in Cueva Cullalvera, and Cueva del Juyo. Joaquín González Echegaray studied many of the discoveries during this time, while Eduardo Ripoll took charge of a revision of the art of Cuevas Castillo and Pasiega, as well as a study of Las Monedas.

The next director of the Museum was Miguel Angel García Guinea and in 1962 he founded the *Seminario Sautuola*, an archaeological association based at the Museum. Guinea and the Seminario took part in most of the discoveries of cave art through the 1960s and 70s, such as Cueva de Cobrante, Cueva del Cuco and Cualventi. Many new caving clubs started up in the same period, and one early discovery made by them was Cueva de Micolón in 1976. The contribution of cavers has continued since then with finds including Emboscados, Porquerizo, Fuente del Salín or Cueva Grande. However, since 1980 most new finds and studies have been carried out by members of the archaeological group known as *Colectivo para la Ampliación de los Estudios de Arqueología y Prehistoria* (C.A.E.A.P.), especially Emilio Muñoz, Carmen San Miguel and Alís Serna. Thanks to their untiring prospecting of the region over the last two decades they have discovered and documented such important sites as Cudón, Linar, Arco, Pondra, Calero II and La Garma, among others. Members of C.A.E.A.P. have also carried out a catalogue of caves with Palaeolithic art, as a professional contract for the Cantabrian Regional Council of Culture, which has resulted in the location of many new figures, although these remain unpublished to date.

Since its creation in the late 1970s, the Department of Prehistory at the University of Cantabria has studied the art of several caves, often finding new figures during their work.



Pic 4. Emilio Muñoz Fernández, the discoverer of numerous groups of cave art

Discoveries continue to be made almost every year. The last outstanding find happened in 1999, when building work broke into a cave in Castro Urdiales and it was found to contain an important group of paintings and engravings.

INTRODUCTION TO PALAEOLITHIC CAVE ART

This section aims to outline a few basic notions about cave art, and the Cantabrian upper Palaeolithic. This will serve as an introduction to the terminology and concepts developed later in the description of each cave, and is intended to be of special use to readers less familiar with the subject area.

1. TECHNIQUES

Cave art is usually produced by either painting or engraving the figures. The paint used is normally red or black. The latter is usually based on charcoal, while coloured pigment could be produced with ochre or iron oxides in the form of haematite, oligist or goethite. These can produce a wide range of tones: yellow, orange, sienna, red and violet. Manganese oxides have also been recorded as a source of black pigment. Pieces of ochre and other implements used for painting have been recovered from several caves, and samples have been taken from paintings for analysis of their components. As well, many experiments have been carried out to determine how the prehistoric artists worked; and probably Vaquero Turcios's book (1995) is the most complete account of this kind of study.

The writer found that iron oxides and ochres were relatively common in the limestone areas of Cantabria, and indeed he was able to collect all the minerals he needed on Monte Castillo, the hill holding the caves of Puente Viesgo. These could be used in a number of ways. The iron nodules could be applied dry, rubbing them on the wall, to produce outline figures. The oxides could also be powdered up and mixed with water (he found that blood or animal fats, often proposed for the same purpose, were not satisfactory). The paint could then be applied by spreading it on the wall as a flat wash, by drawing a line possibly with a paint covered finger-tip, by dabbing it on the wall with some kind of pad such as animal skin or fur or better with a finger tip, and sometimes by spraying it on the wall. Vaquero found that the most effective way of spraying was by using two short hollow tubes. The paint was held in a hollowed-out recipient (such as a fruit), with the end of one tube in the pigment. The artist blew through the second tube, its end over the top end of the first, and the pigment was blown out in a perfect spray, due to the Venturi effect created.

Usually each painting is of a single colour, and *polychromes* or paintings using more than one colour are therefore quite rare.



Pic 5. The engraving of a chamois in Cueva del Linar

Figures were engraved on the cave walls with a sharp object, presumably a flint burin. Sometimes these left very faint lines that can be very difficult to see; on other occasions the prehistoric artist has gone over the line repeatedly and left quite deep grooves in the rock. Where the cave wall had a coating of clay or soft calcite, an instrument such as a stick, or simply a fingertip would be enough to draw the figure. In these cases, obviously a much wider, deeper line would be left. An even simpler technique involved running three or four fingers together over soft surfaces in order to create abstract patterns of twisting, intertwining lines usually known, due to their appearance, as *macaroni*.

Occasionally figures were produced by engraving an outline first, and then completing the figure with paint. Sculpture is hardly found in Cantabria, although the technique exists in other regions. In Cantabria it was common, however, for the natural shapes and cracks of the rock to be used to give an impression of relief, or to complete part of the body.

2. THEMES

Palaeolithic figures can be divided into animals, signs and human. The animals represented were those living in the region at the time, although the artists selected some species above others. The art of the Cantabrian region is characterised by the relative abundance of female red deer (hinds). The other common species are: horse, bison, stags, ibex or goats, and aurochs. Bears, reindeer, chamois, and mammoth are rare in Cantabria, as are the smaller species such as hares, fish or birds. Certain animals such as rhinoceros, found in

French caves, or seals, wolves or insects, known in mobiliary art, have not been identified in caves in Cantabria (Powers and Stringer, 1975). It is often impossible to identify the exact species of goat, bull or deer depicted, and then terms such as *caprid*, *bovid* or *cervid* are used.

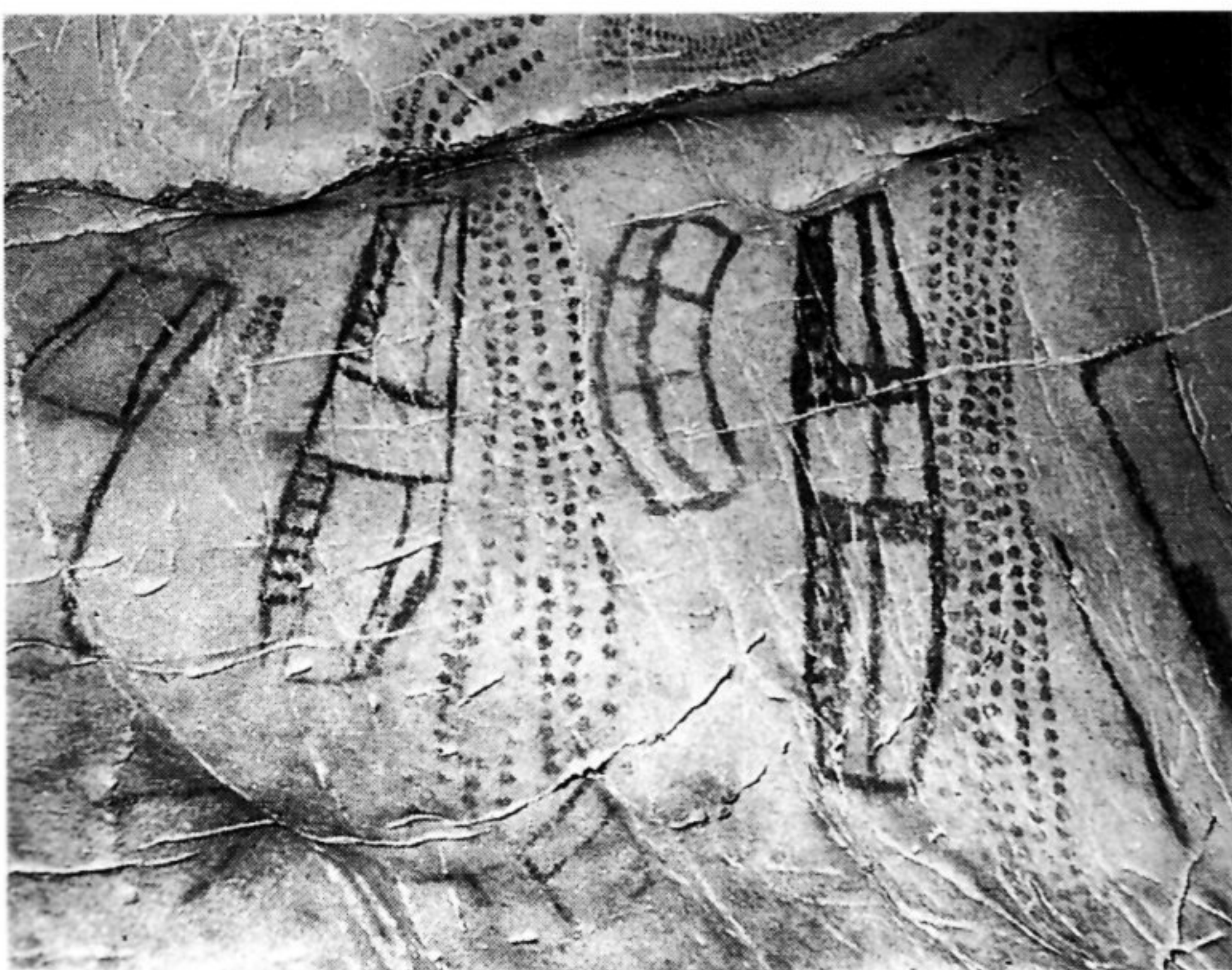


Pic 6. A magnificent painting of a bison in gallery C of Cueva de la Pasiega

The whole body of the animal is often shown, nearly always a side view, but equally often only the head, or head and back, the *cervical-dorsal line*. Sometimes the figures are of headless animals. In fact, there are very few figures that can be said to be complete, with details such as an eye, ears, indication of hair, mane or coat, tail and all four limbs including hoofs. Normally each animal is an individual representation. Although some figures are situated in clear association with each other, for example two animals facing one another, true scenes are extremely rare. Even when a number of animals may represent, say a herd of deer or bison, each animal tends to appear separate from the rest, rather than as a scenic view with perspective as we would understand it today. Neither were the different animals in a group drawn to scale one with another.

Many different kinds of signs can be classified. Common in Cantabria are *claviforms*, stick- or club-like lines of which numerous variations exist, and grid-like quadrilateral symbols. These are usually considered as abstract signs, which may have held a certain symbolic significance to prehistoric man, although attempts have been made to interpret them more literally. The quadrilateral signs, for example, have been described as either the roofs of huts or traps used to catch game. It is also common to find groups or lines of dots, often forming bands of three or four parallel lines of dots. Other types of signs include ovals, triangles, and so on. The macaroni-type engravings mentioned above, as they usually create abstract patterns, might also be considered as signs.

Representations of the human figure are relatively rare, although they can take various forms. Male figures are known as *anthropomorphs*, and they are usually masked figures, normally interpreted as shamans. Sometimes only heads or faces are depicted. They are described as masks, and may have a half-human, half-animal appearance. The stylised female figure is known as a *venus*, and female genitals, or *vulvae*, are also represented in a number of caves. The schematic treatment of the different human forms contrasts with the great naturalism of most animal figures. Nevertheless several Cantabrian caves preserve the direct contact of prehistoric man in the paintings of their own hands. These are usually negative images, left by spraying paint around the hand. It is assumed that the hands were held with the palm against the wall, hence they can be recognised as right or left hands. Positive images were made by pressing a hand daubed with paint on the wall.



Pic 7. Quadrilateral signs and bands of dots in Cueva del Castillo



Pic 8. A negative hand image in Cueva del Castillo

The wide choice of techniques and themes means that there is great variety in the figures found in different caves; as summarised here and as will be seen in the description of each cave, these can go from the magnificent bison of Altamira, to the crude engraved bovids in the clay in Cueva de Clotilde, to the mysterious red signs in Cueva de Santián, to the pairs of dots in the roof of Cueva de Cudón, and so on. Yet it is also true that they have some overall similarity that allows Palaeolithic art to be instantly distinguishable from the art of other periods. These characteristic features include the more or less naturalism of the animal figures, the scarcity of human figures, and the classic repertoire of the signs. Besides, and despite this variety in the figures, neither can it be said that no two caves are alike. Certain figures in some caves are almost identical to those in others. The best known examples in Cantabria are the hinds painted with red dots. Found first in Cueva de Covalanas in the town of Ramales de la Victoria, they have since been recognised in several other sites, giving rise to the term “Ramales School” to identify this style of art.

3. MEANING AND MOTIVES

The reasons Stone Age people had for decorating the caves has always been a fascinating topic, the subject of much debate and speculation, probably safe in the knowledge that we will never be able to find a definitive answer. Once it became accepted that Palaeolithic artists were actually capable of such paintings, the reaction was that they must have disposed of plenty of leisure time in which to do them. Thus grew the idea of “art for art’s sake”. Later Breuil used comparative ethnological studies to propose that the art was for purposes of magic, a way of seeking success in hunting. The idea of magic or religious significance still stands, but in the 1960s, another two French archaeologists, A. Laming-Emperaire and A. Leroi-Gourhan, used a new approach, by studying the paintings themselves, the groups and associations they formed and their position within the cave, to develop new theories. One of these was that each animal held a certain symbolic value, and they also showed that many groups of paintings were based around the contraposition of horses and bison or aurochs. Leroi-Gourhan concluded that horses were male sexual symbols and the bison were female. These animals often occupy the central position in decorated caves, while deer and goats, of complementary importance, were placed peripherally. The different signs also reflected the same duality; the claviforms being male and the quadrilaterals female.

It has been mentioned above that certain species were depicted more often than others, and these species do not always coincide with the animals most often hunted for food, and whose bones are found in the deposits in the same caves. However, on a regional scale, there is no doubt that deer, goats, bison and horses were the main game species as well as the most common figures in cave art. Thus, another current of belief, defended by archaeologists such as Straus (1992), claims that the art was vitally linked to their life as hunters, and that rather than having religious or symbolic significance, the function of the paintings was to transmit hunting information and knowledge. The signs are interpreted in the same terms, so that quadrilaterals, for example, are depictions of nets or traps.

Another factor is that some figures are found near the cave entrances, in the daylight zone, whereas others are deep in the caves in places of difficult access. The significance of one or other type of figure is likely to have been quite different, and sometimes they are termed as public or private art. Although Leroi-Gourhan’s theories have been criticised in recent years, and it has been shown that they do not fit every cave, they have not been replaced by any new overall idea. In fact it has become generally accepted that cave art was organised according to a deliberate plan of some kind. The different figures are not spread about the cave haphazardly.

In recent years little progress has been made in explaining the art, and it may be that this subject has become exhausted. However, different approaches offer new possibilities. An appreciation of the art itself, and the decisions made by the artists, from the choices available to them in artistic terms, such as line, colour, form and composition, and which we can still observe at first hand in every cave, may lead us more directly to an understanding of the person.

Some interesting comparisons can be made with medieval churches, which contain art in many forms: paintings, windows and stone carvings. These not only represent biblical scenes and saints, but also geometrical patterns, plant forms, mythical animals and even gargoyles. Nobody would expect a study of this art to give a complete outsider a true idea of Christianity. But it does give us a vision of the personality of the builders and worshippers in those churches.

A great difficulty to interpretation is that the art known today may only be a tiny proportion of the total works of prehistoric man. Palaeolithic art was produced over a period of at least 13,000 years in Cantabria, a long enough time-scale to decorate many more caves than those we know of. Much art may have been lost ever, deteriorated by natural processes within caves, or in caves now below sea level, or perhaps art was much more common in the open air and has been weathered away. But no doubt many caves remain to be found. After all, it has been seen that many of the original entrances have collapsed or become blocked, and the caves were only discovered by, for example, dogs chasing a fox into a tiny hole, or by cavers descending a pitch and finding a lower gallery, or exploring a normally flooded resurgence during a drought. Similarly, many caves may contain paintings yet unseen, like the paintings in Cueva del Pendo covered with dust and a kind of lichen. Each discovery that is made increases the possibility of interpreting the art correctly.

One way in which progress could be made is by studying the known caves in fuller detail, as a present handicap is that very few caves, especially the big, important ones, have ever been studied completely. Altamira and El Castillo, for instance, have hardly been revised since the beginning of the 20th century. Even when studies have been made, such as Peter Ucko’s thorough examination of Cueva de Hornos de la Peña, they have only shown how difficult it is in practice to document every figure accurately and objectively. This means it is impossible to know the exact number or type of figures in each cave, and makes any research, such as statistical analysis, quite unreliable.

4. DATING CAVE ART

The origins of art are very remote. Over 200,000 years ago, *Homo erectus* manufactured beautifully symmetrical stone hand axes,

as if they had a concept of visual perfection. Neanderthal men showed they were capable of great sensibility in collecting objects, and in their burials. Yet all the cave art described in this catalogue was the work of modern *Homo sapiens sapiens*, or Cro-Magnon man, during the Upper Palaeolithic. This was during the late Würm glaciation when the climate in Cantabria would have been more or less comparable with that of Northern Europe today. It would have been noticeably more severe in the Cordillera than in the coastal lowlands, and sheltered valleys may have had a more benign microclimate. During this long period there will also have been warmer phases, when climatic conditions would not have been dissimilar to the present day. During these fluctuating conditions, pollen studies have shown how the steppe-like vegetation with a low proportion of trees which existed during the glacial periods, gave way to pine and birch forests, and in the interstadials, woodlands with increasing, albeit small, proportions of hazel and oak.

The Upper Palaeolithic is divided into four main periods. The first was the Aurignacian, which lasted from approximately 35,000 to 25,000 BP and was characterised by a relatively limited range of flint tool types, such as blades and scrapers. It was succeeded by the Gravettian (25,000 to 20,000) with a more varied flint tool assemblage and bone spear points. During the Solutrean a form of flat retouch was used, covering both sides of the tools and creating the remarkable willow leaf and laurel leaf points. The Solutrean lasted from approximately 21,000 to 17,000. The Magdalenian period (16,500 to 11,700 BP) saw the increasing use of bone tools, especially the famous harpoons.

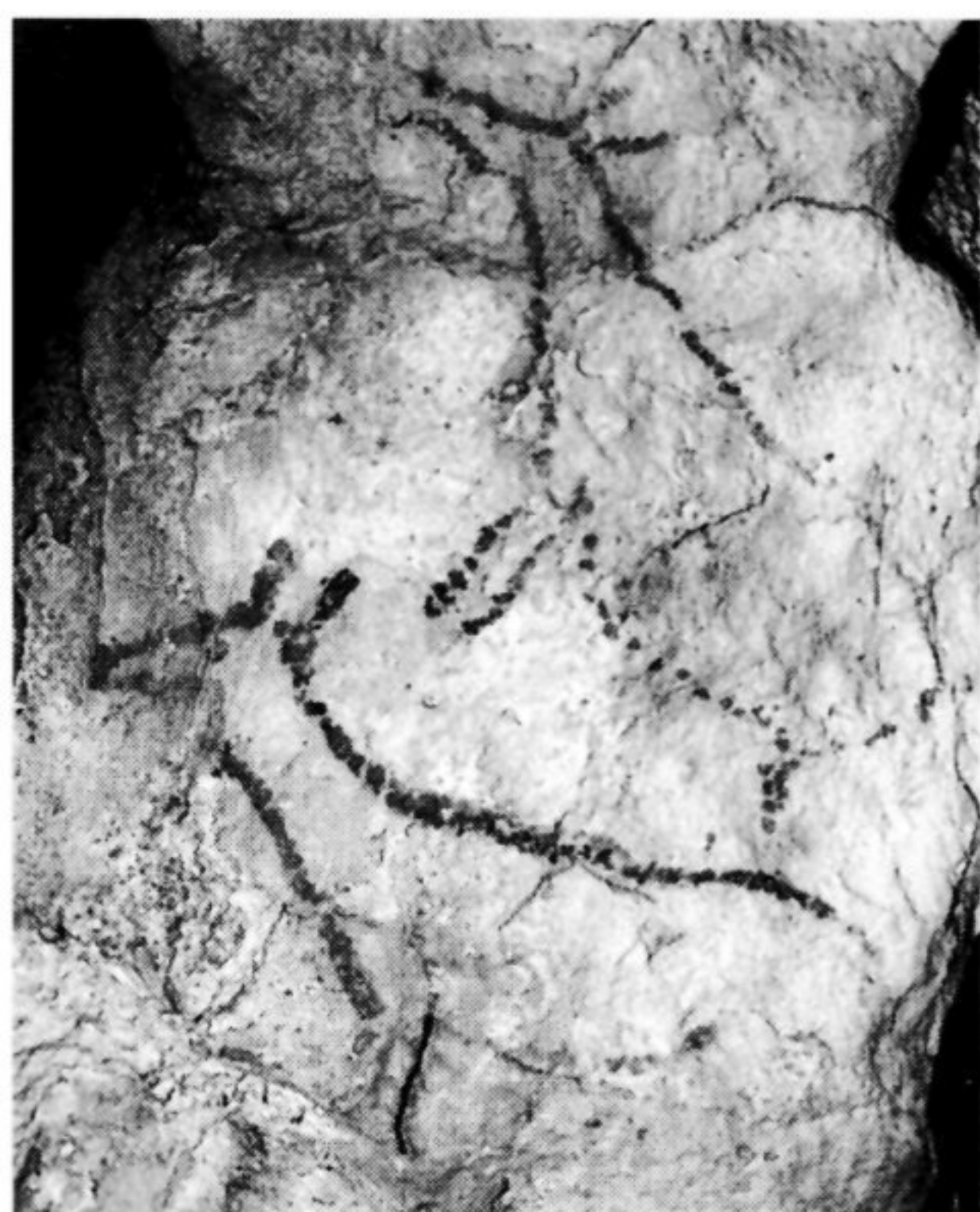
Cave art seems to have been produced less often even before the Magdalenian came to an end. In contrast, mobiliary art on portable objects continued a little longer, and into the following period, the Azilian. But after 12,000 BP art had ceased to be produced in the caves of North Spain.

Traditionally, several ways have been used to establish the relative or absolute chronology of the figures. Occasionally figures have been found covered by stratified sediments. The age of the sediments therefore puts a minimum limit on the age of the art. Some finds of mobiliary art, from archaeological levels of a known date, have figures of similar appearance to those found on cave walls. The latter are consequently supposed to be of the same date. A third method uses the superimposition of figures; in these cases it is easy to establish which is the older and which is the more recent figure. Another way that has been used is by studying the fauna represented. If they are typical of cold or temperate climate, steppe or forest, it may be possible to relate them to known climatic phases.

Unfortunately there are difficulties with the application of these methods, above all because the circumstances in they could be used do not arise very often. But the only other option available to prehistorians was the comparison of the figures to establish stylistic similarities or differences between one painting and another. This has always been more controversial, as it depends on the subjective impression of each observer.

Making use of all these methods, several models have been proposed to date the art; the two main ones being those of Breuil and Leroi-Gourhan. The former believed that cave art developed during two “cycles”; the Aurignacian-Perigordian and the Solutrean-Magdalenian. During each cycle, paintings began as simple outline figures, and progressed with more complex techniques towards bi-colour or polychrome paintings (Breuil 1952).

Later, Leroi-Gourhan (1965) developed of a sequence of four “styles”, which also reflected the age of the art. Style I, the most primitive, is limited to mobiliary art, and is of little importance in Cantabria. Style II refers to very simple figures, such as the negative hands in red, or to engravings of animals usually found near the cave entrances. These are probably of Gravettian or early Solutrean age. Style III corresponds to the late Solutrean or early Magdalenian, and is characterised by red or black outline paintings of animals, especially hinds, and more complex signs such as those made up of lines of dots. Style IV, developed during the mid- and late Magdalenian, saw greater realism in the art, as many more details were shown inside the animals’ outlines. It is sometimes possible to apply subdivisions of earlier or later moments of each style so that, for example, the striated engravings in Altamira or El Castillo correspond to early style IV, and the black paintings in Las Monedas have been included within late style IV. It has been pointed out (Sieveking 1979) that these styles can be recognised over the whole of the Franco-Cantabrian region, and it is easier to identify chronological changes in



Pic 9. Hinds in Cueva da Covalanas. This type of painting is usually dated in the Solutrean period.



Pic 10. Early Magdalerian art. The amazing figures of bison in Cueva de Altamira.



Pic 11. Late Magdalerian art. A horse in Cueva de las Monedas

them than the lesser important regional variations.

It has recently become possible to date paintings directly, by taking an extremely small sample from the painting, and obtaining a carbon 14 date by accelerator mass spectrometer (AMS). During the last few years samples have been taken of several paintings in the region, and a series of absolute dates is constructing a framework in to which all the art of the region can be fitted (Moure and others 1996, Moure and González Sainz 2000). But even this technique has its drawbacks. Only paintings with a charcoal or organic base can be dated, which excludes most red paintings, and naturally all engravings. Furthermore, the dates are not precise enough to determine whether a group of figures were painted in one prolonged session, or over a period of years; and this difference has enormous implications for the interpretation of the art. In addition, when the same figure has been tested twice, the dates obtained have not always agreed, casting doubts on the accuracy of the technique. Nevertheless, AMS dates are without doubt a great step forward in the study of cave art.

Another technique that has become available even more recently involves dating calcite by thermoluminescence. In this way samples of calcite covering any kind of painting or engraving can be tested, and this gives a date, before which the art must have been produced. Four samples have been dated from Cueva de Pondra, and they suggest that the oldest paintings in the cave could have been done as long as 30,000 years ago (González Sainz 1999).

Taking into account all the available information, we propose the following sequence for the cave art of Cantabria:

1. The oldest absolute date is that from Cueva del Calero II, at 25,000 BP. These are black line figures which do not make a recognisable animal. "Primitive" red and black figures are also known in El Castillo and Altamira, as well as the above-mentioned painting in Pondra.
2. Negative hand images are often the lowest figures in superimpositions, and in Fuente del Salín they are associated with a hearth, dated to 22,300 BP. These images were created by spraying red pigment.
3. The red discs in the end passage of El Castillo are believed to have been painted with the same technique, and are therefore likely to be of a similar age.
4. Marks made by pressing paint-daubed fingers on the wall and roof are known in Cueva de Cudón and La Garma, in both cases in caves with hand images.
5. The signs made up of bands of red dots...
6. Red quadrilaterals (in El Castillo, in close association with the signs of dots)...
7. Red claviforms in a roughly crescent-shape (known in Pasiega and Altamira)...
8. And the red animals, usually hinds, in the style often called the "Ramales School", may all form a sequence of paintings in which the use of red pigment is dominant.
9. As old or even older than this sequence of red paintings we have different types of engravings, as follows: the oldest type is probably "macaroni", made by finger impression in clay, and certainly subjacent to other engravings in Hornos de la Peña.
10. Animals also drawn by finger impression are found in Hornos de la Peña, Clotilde, Estación and Chimeneas.
11. Deep engravings in rock, especially in cave entrances, and above all in Cueva de Chufín, a Solutrean habitat.
12. Black figures may have been painted at the end of the Solutrean, as a horse in El Castillo has been dated twice, to about 17,000 and 19,000 BP
13. A black tectiform in Altamira has a date of 15,400 BP, in the Lower Magdalenian, and black animal paintings in Chimeneas (stag) and Altamira (hind) have been dated to about 15,000 BP. In the case of Chimeneas especially the figure is an outline only.
14. The great polychrome bison of Altamira have a "most likely" date (Moure and others 1996) of about 14,700 BP.
15. Fine engravings with multiple or striated lines shading parts of the body, as in Altamira, El Castillo, La Garma and other caves. A scapula with the same kind of drawing from Altamira was dated to 14,480.
16. The engraved anthropomorphs on the roof of Altamira, and possibly in Hornos de la Peña.
17. Black paintings, shading part of the body in a similar way to the striated engravings, often creating a typical line known as a "ventral M", are found in caves such as La Garma and Castillo. An ibex in La Pasiega has a date of 13,800 BP.
18. Smaller bison, filling the "gaps" between the main figures in the roof of Altamira have been dated to between 13,570 and 13,130 BP. Bison in El Castillo have a similar date. Perhaps the bison in Cueva de Urdiales were painted about this time.
19. A horse and a goat in Monedas have been dated to about 12,000 BP. These are black drawings with many details, such as eyes and mane, represented. A bison in La Pasiega has a similar C14 date.

The published AMS dates for Cantabria are limited to six or seven caves, but even so they go from 25,000 to 12,000 BP. In other words, the paintings of Monedas stand half way between the origin of art in Cantabria and the present time.

The nineteen groups listed cover most of the cave art in the region, but not all, especially such figures as are only found in one cave. And some of the groups, particularly numbers 8, 15 and 17 and 19, include figures of varying kinds: e.g. the animals in red (group 8) include outlines made of dotted lines, of solid lines, or with parts of the body shaded-in. The other groups could equally be subdivided, probably at any level, endlessly classifying styles in different caves, figures, or even by different artists. As the dates of the bison in Altamira have shown, paintings of a very similar appearance were produced during a relatively long time-span, over a millennium.

Practically all the published dates are from the Magdalenian, and many are from the early part of the period, between 15,000 and 14,000 BP. It seems this was a time of great artistic development, with many kinds of figures being executed in a wide range of

techniques and colours.

The only AMS date for the whole Solutrean period is for a horse in El Castillo, but this is understandable, as the vast majority of the paintings of that period are in red, and cannot be dated by C14. But a great deal of art was produced during that time, including nearly all the best signs; the quadrilaterals and bands of dots.

Many conclusions can be drawn from the proposed chronology. One is that the most frequent animals represented have varied in time. In the Solutrean hinds were particularly common, as in Covalanas and Pendo. In the Magdalenian the most important figures tend to be bison, as in Altamira, or horses as in Las Monedas. Yet hinds remain common in the Magdalenian as fine engravings. The variations in the species of animals depicted may correspond to changes in the meaning or use of the art.

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CATALOGUE OF CAVES WITH PALAEOOLITHIC CAVE ART IN CANTABRIA

CUEVA GRANDE

Otañes (Castro Urdiales)

The entrance is located on the eastern side of the hill called Peña de Santullán, near a large quarry. At the rear of the vestibule, two passages lead off; a series of small chambers on the left, and a narrower passage straight ahead. The total length of the cave is 170 m.

The art of Cueva Grande was discovered by G.E.L.L., the local caving club, in 1992. The cave also had diverse archaeological materials: flints, animal bones and shells of Magdalenian age, human remains, and pottery both prehistoric and Roman, all found superficially on different parts of the cave floor.

Cueva Grande has two engravings, a stag and an ibex, on the left hand wall near the end of the narrow passage. Both are done with very fine lines and are seen with difficulty. The first on the left is the stag, 31.5cm long. Practically the whole animal is depicted, including detailed antlers, and the chest and belly are striated with multiple fine lines. It faces the figure of an ibex, just 5cm away. Again almost the whole animal is represented, and at 46.5cm long, it is somewhat larger than the stag. It is probably a male, and an eye and ear are seen, as well as the long parallel horns, but the rear quarters are missing due to the wall breaking off.

The same wall has other lines, probably bear scratches, as well as modern drawings.

Striated engravings such as these are characteristic of the early or middle Magdalenian. But the difference in size of the two animals, and other variations in details such as the form of the head and eye, possibly indicate that they were done by different artists.

González, C., Bohigas, R., Molinero, J.T., Muñoz, E., Fernández, M. and Arozamena, J.F. 1994. La Cueva Grande (Otañes, Cantabria). *Arte Rupestre y Yacimiento Arqueológico. Trabajos de Arqueología en Cantabria II*, pp 33-72. Santander.

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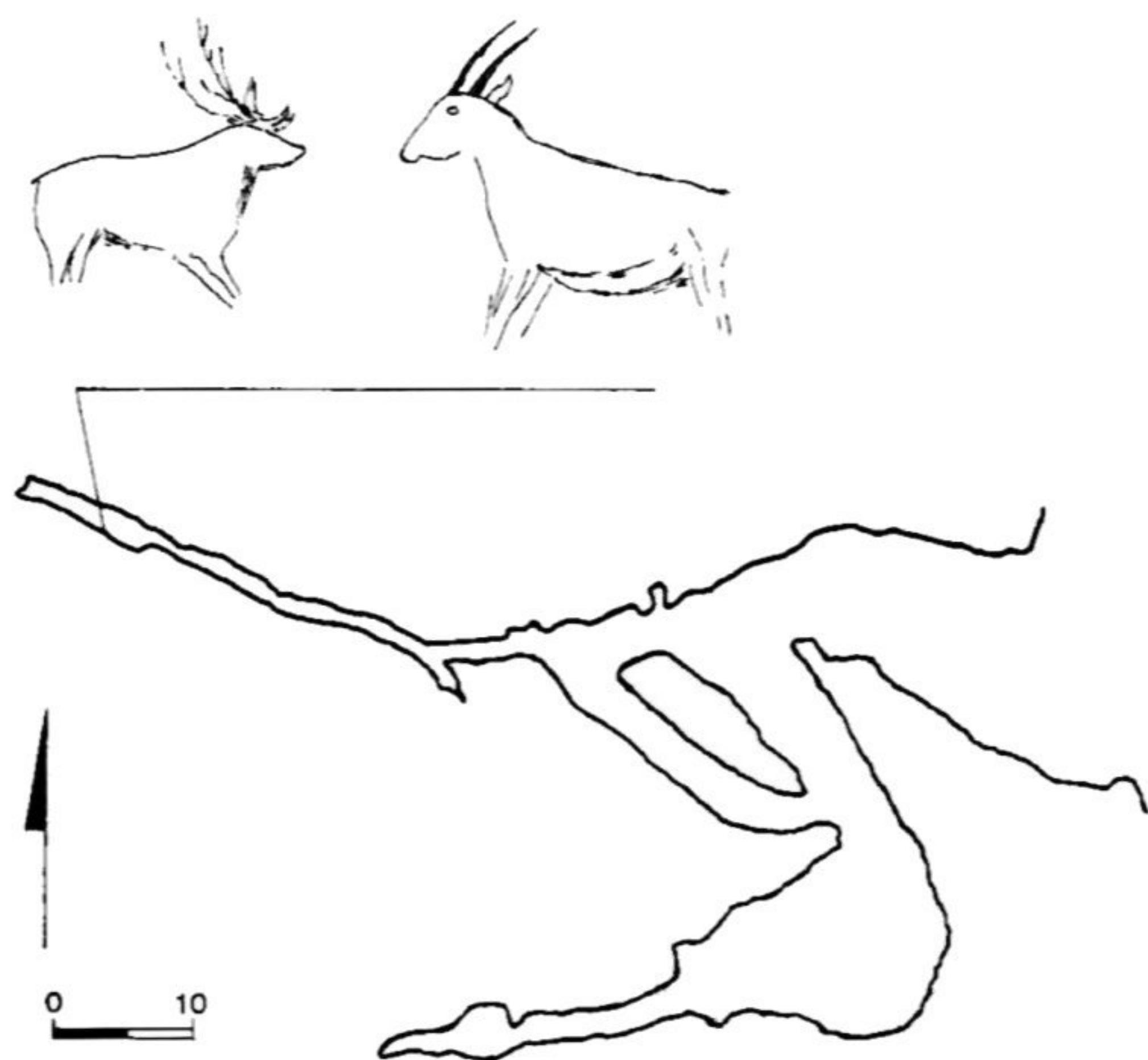


Fig 3. Cueva Grande



Fig 4. Cueva de Juan Gómez

CUEVA DE JUAN GOMEZ

Sámano (Castro Urdiales)

This cave, also known as Cueva de Hoz, has several entrances which unite, leading to pitches and a complex series of passages 1,200m long.

Several exploration digs have been carried out in the main entrance, and materials of the Bronze Age, Azilian and Magdalenian periods have been recorded. The examples of cave art were discovered by Sr. González Cuadra, a local man, about 1978 and by C.A.E.A.P some ten years later.

The art of this cave is atypical in that most of the figures apparently represent human heads or "masks". There are five of these heads, in various positions, facing left, right or straight ahead, in a chamber about 150m from the entrance. They are quite large, up to

1.9m high, and were created by adding engraved lines to the natural forms of the rock or calcite. As well as these human depictions, the cave has an engraving of the head and neck of a cervid, 88m from the entrance. This is 68cm long, and its antlers sweep back in a wide curve. The latest discovery of art in the cave is a red vertical line, or claviform, about 20cm long, at the rear of the vestibule.

The figures are supposed to be of early Magdalenian chronology.

González Quadra, F. 1980. Representaciones humanas en la cueva de Hoz (Castro Urdiales). *Zephyrus* XXXIII-XXXIV, pp 9-13. Salamanca.

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Molinero Arroyarbe, J.T. 2000. *Carta Arqueológica de Castro-Urdiales (Cantabria) Paleolítico- Edad del Hierro*. Ayuntamiento de Castro Urdiales.

CUEVA DE LA LASTRILLA

Sámano (Castro Urdiales)

Cueva de la Lastrilla is a system with an estimated length of 15 km, with several entrances. It has a well-developed series of high-level passages and large chambers, and also an active river passage. This ends after a kilometre at three sumps which connect with the sink, Cueva de la Cubilla. The art is located in the part of the cave nearest to the resurgence, where there are three entrances, which join up in the first 100-150m of the cave. Entrance I is the resurgence itself. Entrance II, a little higher and to the north is a large dry entrance containing archaeological stratigraphy, and Entrance III is almost directly above this, 6m higher.

Both the speleological exploration and the archaeological study have been carried out by different people at various times, although the local caving group, called precisely Grupo Espeleológico La Lastrilla, has been the most persistent and made the most important contributions in both fields. The first engravings were found about 1973, and the group of red paintings was seen in 1986. Digs in Entrance II have revealed Roman, Bronze Age and Upper Palaeolithic materials.

Most of the examples of cave art are found in the passage reached via Entrance III. First, the left-hand wall has a number of indecipherable red marks. Groups of more or less horizontal lines, closely packed together, the first measures 32cm in length and the second 15cm. Then the right hand wall has another red painting representing the head and horns of an ibex. A little further on the right, a large stalagmite, 2m above the floor, has a number of engraved lines, which can be viewed from a ledge behind the stalagmite. The main figure shows the head, eye, horns, chest and back of a caprid, 45cm high. This was produced with wide deep lines in the soft calcite of the stalagmite surface, which has now dried and is in danger of breaking off. Other lines lower down may represent a bovid and a stag.

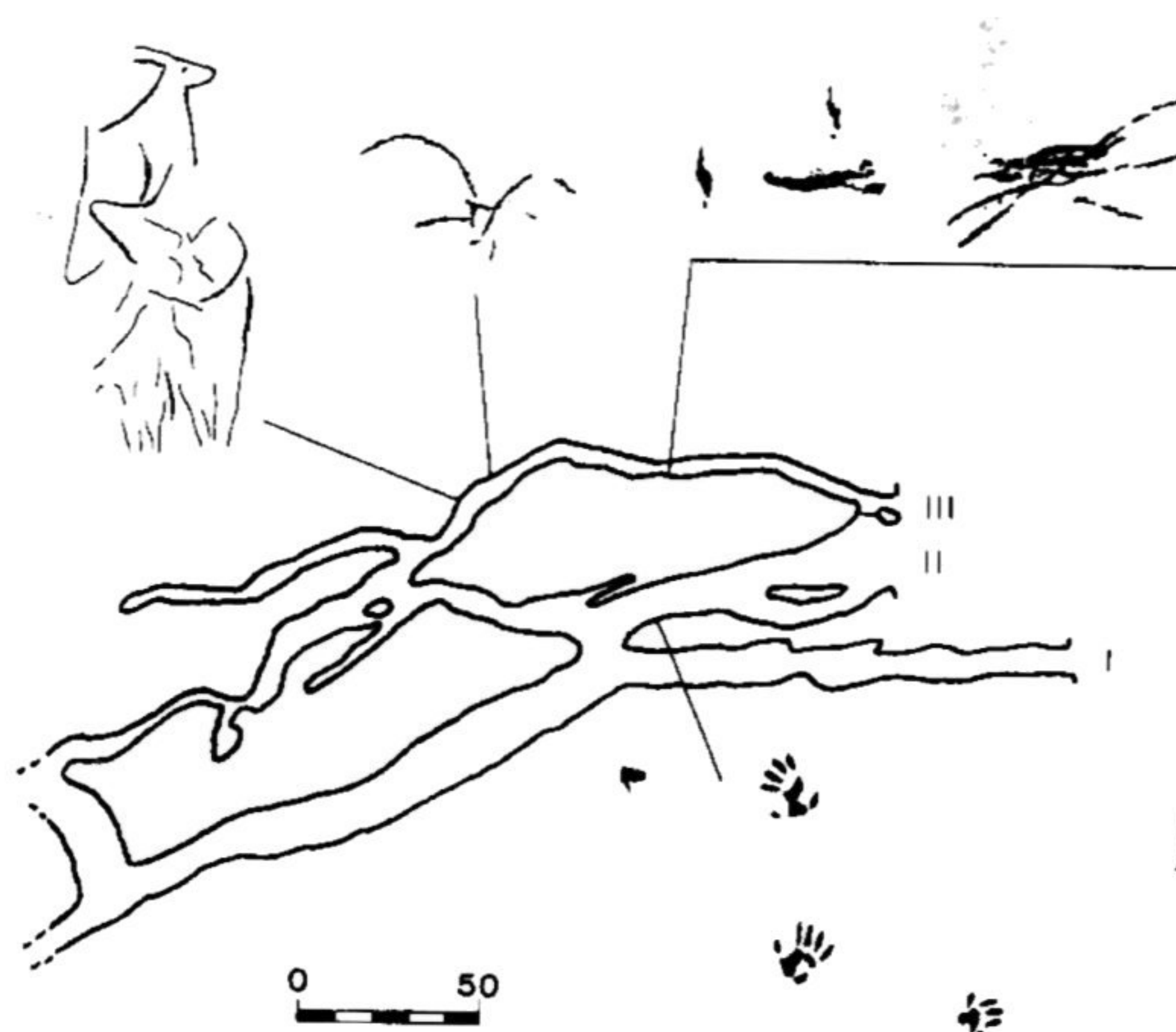


Fig 5. Cueva de la Lastrilla

At the rear of the vestibule inside Entrance II, the left-hand wall has a group of three positive images of hands. They are adults' right hands in red, but there are doubts about their authenticity. Entrance III also has two panels made up of complex patterns of engraved lines, but it has been impossible to recognise any figures among them, partly because of their poor state of conservation.

Rincón Vila, R. 1982. Contribución al conocimiento de la Estratigrafía Prehistórica en las cuevas de Castro Urdiales (Santander). *Cuadernos de Espeleología* 9-10, pp 27-74. Santander.

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CUEVA DEL CUCO

Castro Urdiales

Cueva del Cuco is located near the coast in the town of Castro Urdiales. The 6m high entrance is on private land, in a small limestone face. The vestibule slopes into the main passage of the cave, which is developed in a straight line 105m long and averaging about 2m wide.

The cave was discovered in 1966 by Señores Cuadra and Riancho, who showed the cave to the curator of the museum in Santander, García Guinea. The engravings were then located in September of the same year and in March and May 1967. The rock shelter next to the entrance has a prehistoric shell-midden, and human bones and pottery have been found inside the cave.

There are nine figures, all on the right hand wall, and grouped in six panels. Panel I is approximately halfway along the passage in a small alcove. It has two stags, which are very fine engravings, probably produced with flints. The one on the left is shown by its antlers, dorsal line and croup, neck and chest, whereas the second is only of the head, neck and antlers, which are tall and divide into multiple lines. This is a very small animal, its head is only 38 mm long, but it is one of the best-drawn and most elegant figures in the cave. Panel II has a large stag, the dominant and most complete figure in the cave. It is about 48cm high, facing left, with long antlers, head, body, front legs and the top of the rear legs; it was done with a thicker and stronger line than the other figures in the cave. In the interior of its body it has another animal; the rear-quarters of probably a horse, as well as a series of zigzag lines. The head of an ibex facing right is below the stag's chest, and other indeterminate lines to the left complete the panel.

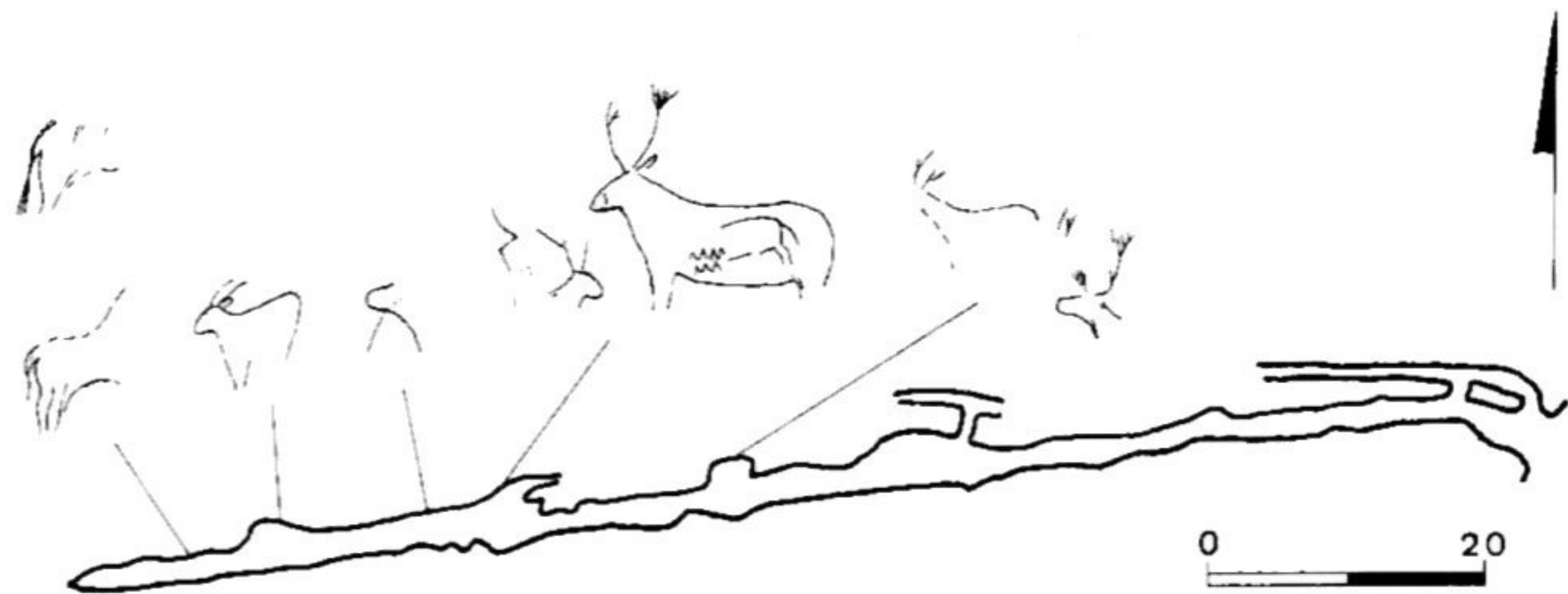


Fig 6. Cueva del Cuco

Panel III is a group of lines possibly forming the head of a cervid. Panel IV is a finely engraved ibex, 10cm long. Its parallel horns curve back, and its ear and head are well-drawn, but the body is incomplete. Panels V and VI are two horses, both headless. Of the first we see the tail, drawn with multiple lines, the croup and part of the rear leg. The last one has a long cervical-dorsal line, belly and two nearly complete rear legs. It stands 38cm high.

García Guinea concludes that the fauna represented is typical of a woodland environment, so it is possible that the engravings were produced during a milder climatic phase, in the early Magdalenian. The use of multiple lines is indeed typical of that period, and the opposition of stag and ibex in the main panel is reminiscent of the engravings in Cueva Grande.

García Guinea, M.A. 1968. *Los grabados de la cueva de la Peña del Cuco en Castro Urdiales y la cueva de Cobrantes (Valle de Aras)*. Publicaciones Patronato Cuevas Prehistóricas Provincia de Santander.

CUEVA DE URDIALES

Castro Urdiales

This recent discovery is situated within the town of Castro Urdiales, not far from Cueva del Cuco. Its entrance leads into the upper level, which is about 45m long, and averages 3.8m in width and 2 or 3m in height. It can be divided up into a series of five small chambers, one after the other. The cave also has two lower levels which are still active, and it is quite well decorated throughout.

Although the cave had always been known to the owners of the nearest house, who used it as a store, it only became known publicly after excavation work on a building site broke through the roof near the end of the upper passage. Subsequently, on July 1st 1999, the cave was visited by Emilio Muñoz and Ramón Montes, who discovered its important group of paintings and engravings.

The first chamber has a number of red marks on stalactites, and a bison painted in black. The second chamber has a figure in red, of which only the cervical-dorsal line, the belly and two fore-limbs can be identified, but its head is not visible. Another black bison is painted at the base of a stalactite. The most interesting figures are in the third chamber, where we find another group of five bison, all facing left, and a figure, almost certainly a horse although it is headless, facing in the opposite direction. The main panel in the cave is situated at the end of this chamber. It is dominated by a magnificent complete bison, about 60cm long, again facing left. It has the typical heavy hump, and the artist shaded its lower rear quarters. Perspective was used by clearly placing the animal's right legs and horn behind its body, and the ones on its left in front. The bison's face is drawn in detail, so that it starts to have a human appearance, and in this respect this new discovery resembles the better-known figure in Gallery C of Cueva de la Pasiega. It is surrounded by a group of animals, not all of which are complete or easily identifiable, but which certainly include three bison and a possible auroch. This chamber also has a group of engravings, representing horses, bison and an ibex.

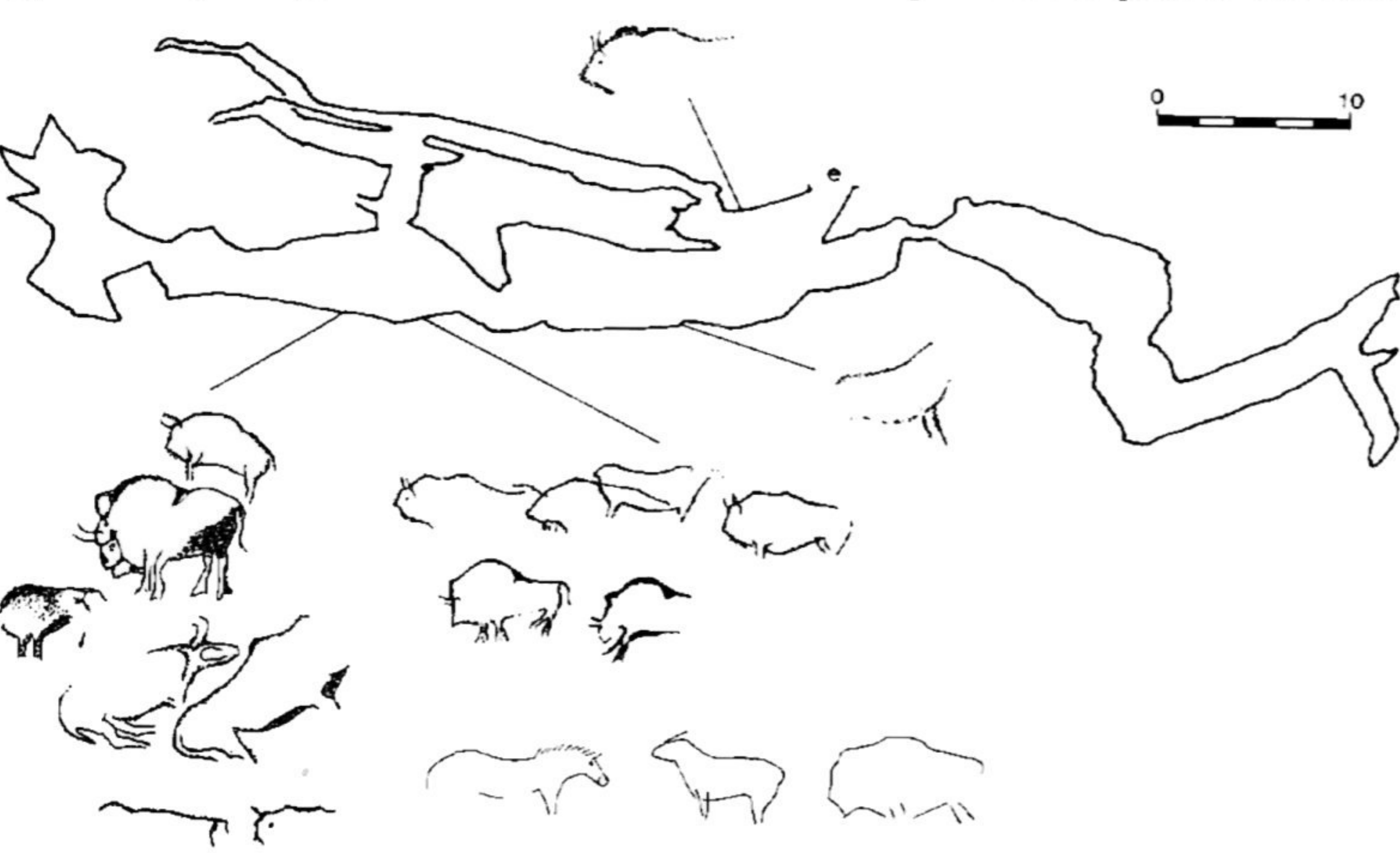


Fig 7. Cueva de Urdiales

The black bison, of which Cueva de Urdiales has eighteen examples, are good examples of middle-late Magdalenian art. The central figure shows such characteristics as details inside its outline and the use of perspective, while the colour and the theme of bison are also typical. Nevertheless, Cantabria has no equivalent site, and the cave's nearest parallel is Santimamiñe in the Basque Country.

Molinero Arroyarbe, J.T. 2000. *Carta Arqueológica de Castro-Urdiales (Cantabria) Paleolítico- Edad del Hierro*. Ayuntamiento de Castro Urdiales.

CUEVA DEL ARCO A

Venta La Perra (Ramales de la Victoria)

This is situated on the north side of the road, just before the boundary between Cantabria and Vizcaya, at the base of a limestone escarpment. The entrance is a large rock shelter, with a 24m long passage leading to a chamber. On the right, a passage slopes down for 14m, to a flowstone slope up to a high level chamber, and to a low crawl on the left at the base of the flowstone. On the left of the first chamber, the passage slopes up and becomes low over a floor of gours.

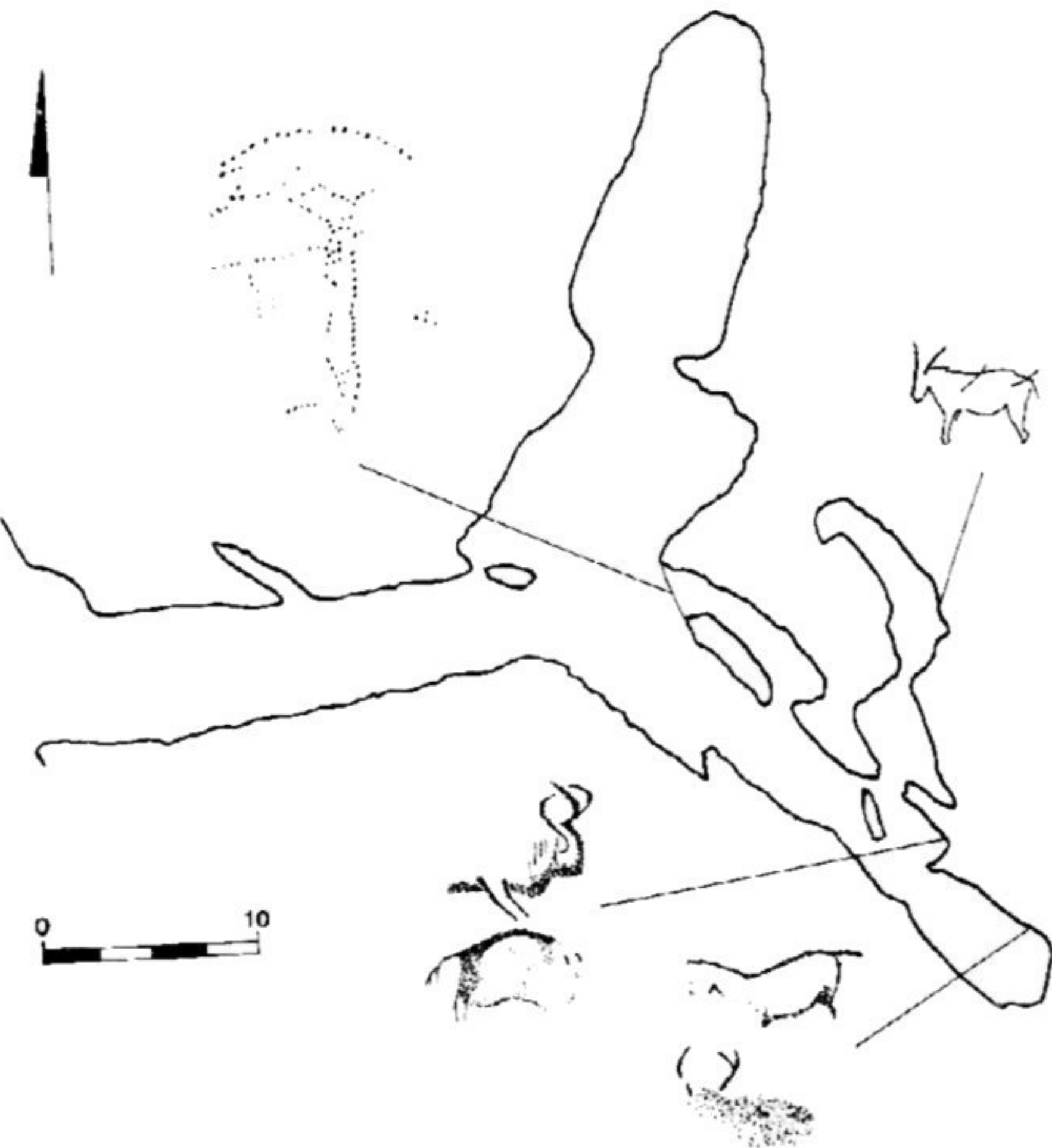


Fig 8. Cueva del Arco A

This is one of a series of some 15 caves in the same limestone escarpment. They include Cueva de Venta La Perra, discovered in 1904 by L. Sierra and which contains a number of engravings (three bison, a bear and other lines). This cave, however, lies within Vizcaya, and outside the area covered by this catalogue. It seems certain that Sierra with Breuil and/or Alcalde del Río will also have visited Cuevas del Arco, but they cannot have seen the art, which was discovered by C.A.E.A.P. in 1990. A few flints and a fragment of bone assegai are the only prehistoric artefacts to be found in the cave, which was studied together with the other caves in the area, by Carmen San Miguel for her post-graduate dissertation.

The central chamber has a painting on the wall opposite the entrance. This is a complex sign made up of red dots, 70cm high and 53cm wide. Two or three parallel lines of dots form a vertical band, and at the top they curve away towards the left. Below this curving band, two single lines of dots make a kind of "T", while another single line of dots forms a large arc over the top of the figure. Many dots may have been lost due to their general poor state of conservation, so it is likely that the figure originally had a different overall appearance.

The other figures are in the passage on the right. In the chamber above the flowstone slope, a horse and an auroch are represented in very faint red paint. In fact the head and the front legs of the horse have been lost. It is 88cm long and only its outline was drawn. Of the auroch, only the horns can be seen, as a frontal view, known as "twisted perspective", and a mass of red colour wash represents the body.

At the start of the lower passage there are two outlined animals. One is the front of a bison, 32cm high; with prominent curving horns and two front legs. Below is another auroch or bison, possibly the whole animal was originally drawn, but the head has now been lost. A narrow chamber is reached at the end of the crawl, and this has the last figure: a small goat, well engraved with a firm, neat line. Just 15cm long, the animal is complete, except that it has only one leg front and rear, although these finish with a well-drawn hoof.

The red paintings form a more or less homogeneous group, datable in the Solutrean. However, the engraving may not form part of the group; as a single figure at the end of the cave, it has parallels in Cueva del Otero and Cueva Sotarraña, and it may be of a later date.

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González Sainz, C. and San Miguel, Llamasas C. 2001. *Las cuevas del desfiladero. Arte rupestre paleolítico en el valle del río Carranza (Cantabria-Vizcaya)*. Servicio de Publicaciones Universidd de Cantabria.

(These references also apply to the following two sites.)

CUEVAS DEL ARCO B AND C

Venta La Perra (Ramales de la Victoria)

Situated some 50m west of Arco A, in the same escarpment, Arco B also has a large entrance with a natural rock arch. An 8m wide passage goes straight ahead for about 75m to a choke. It has a small side passage on the right, 27m from the entrance. This starts with a low chamber immediately on the right, and then continues down into a maze of crawls and rifts. Cueva del Arco C is a much smaller cave, in the same rock overhang, and to the left of the main entrance.

As in the case of Arco A, the paintings and engravings of this cave were discovered by C.A.E.A.P. in 1990, and studied by San Miguel in her excellent dissertation. Stone tools dated from the Middle to the Upper Palaeolithic, but principally Mousterian, have been found in Arco B, while pottery fragments were recovered from Arco C.

Although Arco B has both paintings and engravings, the former are the more important, and are located in the low chamber at the start of the crawl on the right. The chamber is 4m long, 2m wide and only 0.5m high, and the paintings are located on the roof and low walls. They are all in a brown-red colour, and are poorly conserved, with the loss of much of the pigment.

After a small mark, the first animal consists of the rear quarters and head and ears of a hind. It is 32cm long, and its outline was painted and then its interior filled with a fainter colour wash. This is followed by a panel including a rectangular sign and two animals; one is a male goat 36cm long, with two large horns one of which crosses the rectangle. The other is possibly a hind, although it has no head. It has probably been lost, but San Miguel suggests that it may never have had one. Opposite this panel, the right hand wall has an indeterminate figure, where "V"-shaped horns can be seen, and two possible legs, but without forming a logical composition. They may just be sketches. Finally, the rear wall contains the figure of a goat, outlined in red, and its neck and chest filled with colour wash, and with two long horns in an open "V".

The continuation of the crawl has another two paintings in red. First there is the head, neck and back of an unknown animal, and then the head of a hind facing left. The forehead and two ears were painted, and they are just above a crack in the rock that possibly formed part of the composition too. In the maze there are two very fine engravings: a line and a roughly "M"-shaped sign.

The other figure in Arco B is an engraved mammoth. It is found on the left-hand wall near the end of the main passage. It is a relatively deep engraving in a rather soft calcite surface, and is represented by a long trunk, one leg front and rear, a tail, and the characteristic humped back. Other details, such as eye and tusks, are missing.

Cueva de Arco C has just one figure of interest, located in a small interior chamber, 4.5m long and 65cm high. This is a red painting roughly in the shape of a "Y" on its side, and interpreted as the back, tail and rear of an unknown animal now almost completely disappeared.

The red paintings in these two caves, especially the hinds and caprids, are typical of the Solutrean style; while the mammoth may be older.



Fig 9. Cueva del Arco B and C

CUEVA DE PONDRA

Pondra (Ramales de la Victoria)

About 200m west of the three Cuevas de Arco, Cueva de Pondra has two entrances that unite in a large vestibule. The main passage heads east for 70m, and reaches a flowstone slope, where it turns to the left. After 20m and another slope upwards, the cave becomes quite low and soon comes to an end.

The first paintings were seen by C.A.E.A.P. in 1990, and San Miguel described several new figures in her dissertation. Flint flakes and both prehistoric and medieval pottery fragments have been found.

Red lines and marks are seen on the left-hand wall about 20m from the entrance. San Miguel considers them to be the remains of paintings now almost completely disappeared. A further alcove also on the left has two engravings. One of these is a horse represented by its rear quarters, leg and tail. To the left there is an almost complete horse 53cm long, drawn with a stick on calcite, producing a relatively wide line. Other lines above its head may be the initial, unsatisfactory, sketches. This figure cuts a line of red paint; what is more, the paint is partially covered by calcite and the engraving cuts the calcite, indicating a relatively long time between the application of the paint and the engraving of the horse. In fact, the calcite has recently been dated by thermoluminescence to 30,700 BP, indicating that the red line was painted before that time. In turn, calcite covering the horse has been dated to 19,000 BP, so it seems this figure was engraved at some time between these two dates.

A second alcove on the left has two paintings of hinds, like the previous horses, back to back. The one on the left is the more complete body, whereas the one on the right is smaller (25cm), and only the head, ears and front quarters are visible. They are both executed with a darker outline filled with a yellow-brown wash. They are quite different, however, in that the one on the right seems static, while the hind on the left has a long body, neck outstretched, seemingly in movement.

The opposite wall has a stag in red partially covered by streaks of calcite. It is 41cm long, its outline made up of a wide or dotted line, and it consists of the head, antlers, neck and front part of the body. Thermoluminescence dates for calcite below and above the painting have been obtained: 28,500 and 23,000 BP respectively, and these must be the time brackets within which the figure was produced.

The final low passage has more red paintings, apparently signs. One is made up of two lines, straight and curved; the other is an "L" shaped line 31cm long. A final painting is a horse's head in a yellow-brown pigment.

Cueva de Pondra forms a group with Cuevas del Arco A, B and C, in which Solutrean red ochre figures are dominant, although engravings are also present. San Miguel points out that so many paintings are seen with such difficulty that it is likely that many figures have disappeared completely. In other words, that the evidence we see today is but the remnant of the art originally contained in these caves.

González Sainz, C. 1999. Sobre la organización cronológica de las manifestaciones gráficas del Paleolítico superior. Perplejidades y algunos apuntes desde la región cantábrica. *Edades, Revista de Historia*, Vol. 6, 2º semestre, pp 123-144. Santander.

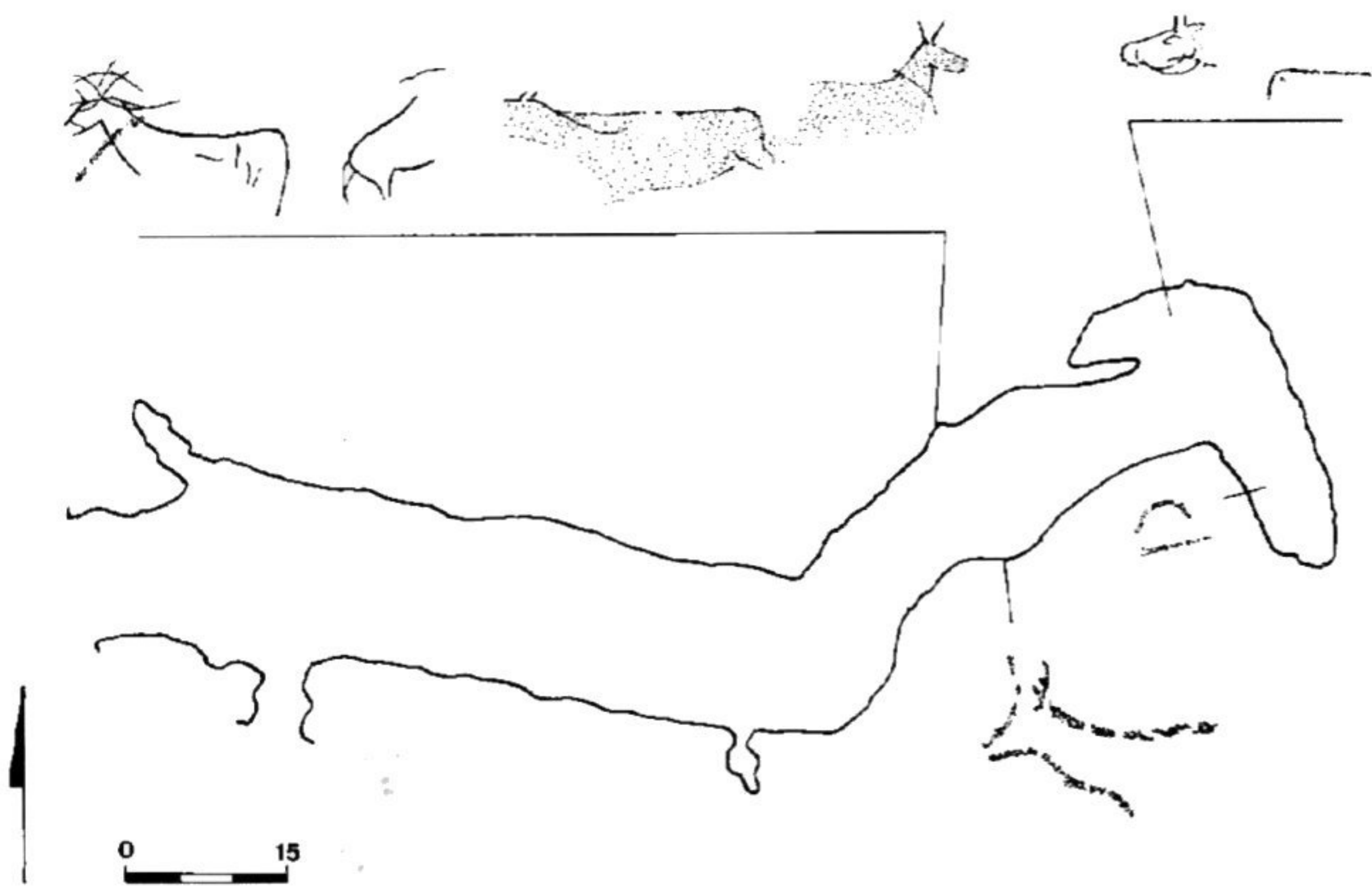


Fig 10. Cueva de Pondra

CUEVA SOTARRIZA - COVANEGRA

Venta La Perra (Ramales de la Victoria)

The cave has two entrances on the southern side of the Carranza valley, opposite Cuevas del Arco and Pondra. The lowest entrance, Covanegra, drops into a large vestibule, followed by two passages connected by smaller sections. These end at a squeeze which had to be dug out. It opens in a steeply descending passage that reaches a flat-out crawl. This leads into the passage normally reached via the second entrance, Cueva de Sotarriza. This cave begins as a steep boulder-slope down to a pool of deep water, followed by a level dry passage ending at the connection with Covanegra. Just inside the entrance of Sotarriza, another passage on the right leads to a boulder slope and a horizontal passage with deep water in wet weather. This goes to a 7m pitch which marks the known limit of exploration.

L. Sierra found the paintings in both entrances on August 12th 1906. At this time they were thought to be two separate caves. On March 12th 1983 C.A.E.A.P. connected the two caves during a revision of their contents of cave art.

Covanegra has two signs in black, in the first passage following immediately from the entrance vestibule. They are an oblique line 11cm long, and two other lines which form an angle, without converging completely and with a dot below the angle.

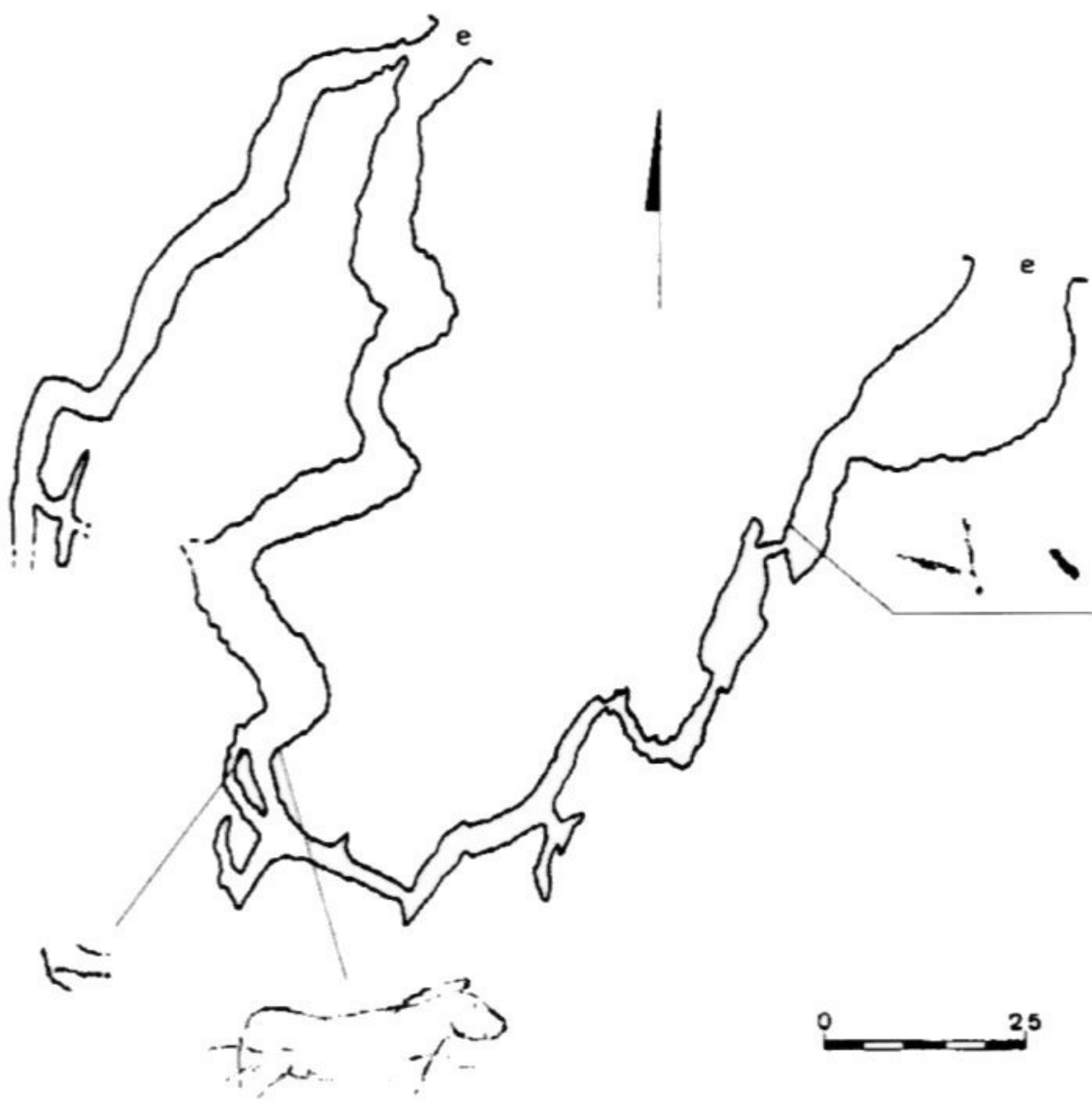


Fig 11. Cueva Sotarriza - Covanegra

There is another sign made of lines which meet, forming an obtuse angle, in Cueva Sotarriza, at the end of the dry passage, just above the start of the connecting crawl with Covanegra. It is a few metres to the right of the most interesting figure in the system. This is a well-proportioned horse in black, 41cm long. The mane, eye and mouth are shown, although the legs are not. Lines drawn in its chest and rear-quarters could represent spears. It can be compared with other horses in black in the nearby Cueva Cullalvera, and dated in the Magdalenian. The date of 8,890 BP that has recently been obtained for the figure is, therefore, almost certainly wrong.

A group of engravings can be seen on a calcite surface in the second passage of Sotarriza, just before the 7m pitch. But it is doubtful that they are intentional, and are probably animal scratches. Indeed the first passages of Covanegra have many clear groups of bear scratches.

Alcalde del Río, H., Breuil, H. and Sierra, L. 1911. *Les Cavernes de la Region Cantabrique*. Monaco.

San Miguel, C. and others, 1988. La cueva Sotarriza-Covanegra. *Sautuola V*, pp 47-54. Santander.

Moure Romanillo, A. and González Sainz, C. 2000. Cronología del Arte Paleolítico Cantábrico: Últimas aportaciones y Estado Actual de la Cuestión. *Actas del 3º Congreso de Arqueología Peninsular*, Vol. II pp. 461-473, Oporto

CUEVA DE CULLALVERA

Ramales de la Victoria

The massive entrance to this cave is situated just outside the centre of town. The main passage is over a kilometre long, and forms part of a system over 12 km in length. In wet weather the cave becomes active, and lakes form along the main passage and a stream resurges from the entrance. Large chambers are reached at the end of the main passage, and there is also a connection with a surface shaft called Torcas Humizas.

Lorenzo Sierra discovered the Upper Palaeolithic deposits in the entrance in 1906, but it was not until 1954 that the first paintings were seen: signs in red and black and two horses. Further groups of red dots were found by members of the caving group S.E.S.S. in the 1980s, and a third horse was discovered more recently.

The first paintings are found 160m from the entrance; a black shape on the left hand wall, and a second mark with a number of red lines on the facing wall. Two hundred metres from the entrance the left wall has other red marks, and a doubtful hand in red.

The first clearly authentic paintings are found 700m from the entrance in a small side chamber on the left. They are groups of claviforms, vertical lines, and dots, in both red and black. There are red dots arranged in two lines one above the other, and another more haphazard group. The central group of claviforms are especially fine examples of this kind of sign; vertical red lines with a protuberance on the right near the top of each line. Six claviforms could be seen clearly, while a seventh was more faded. Unfortunately, in the late 1980s, unknown persons partially rubbed some of them out.

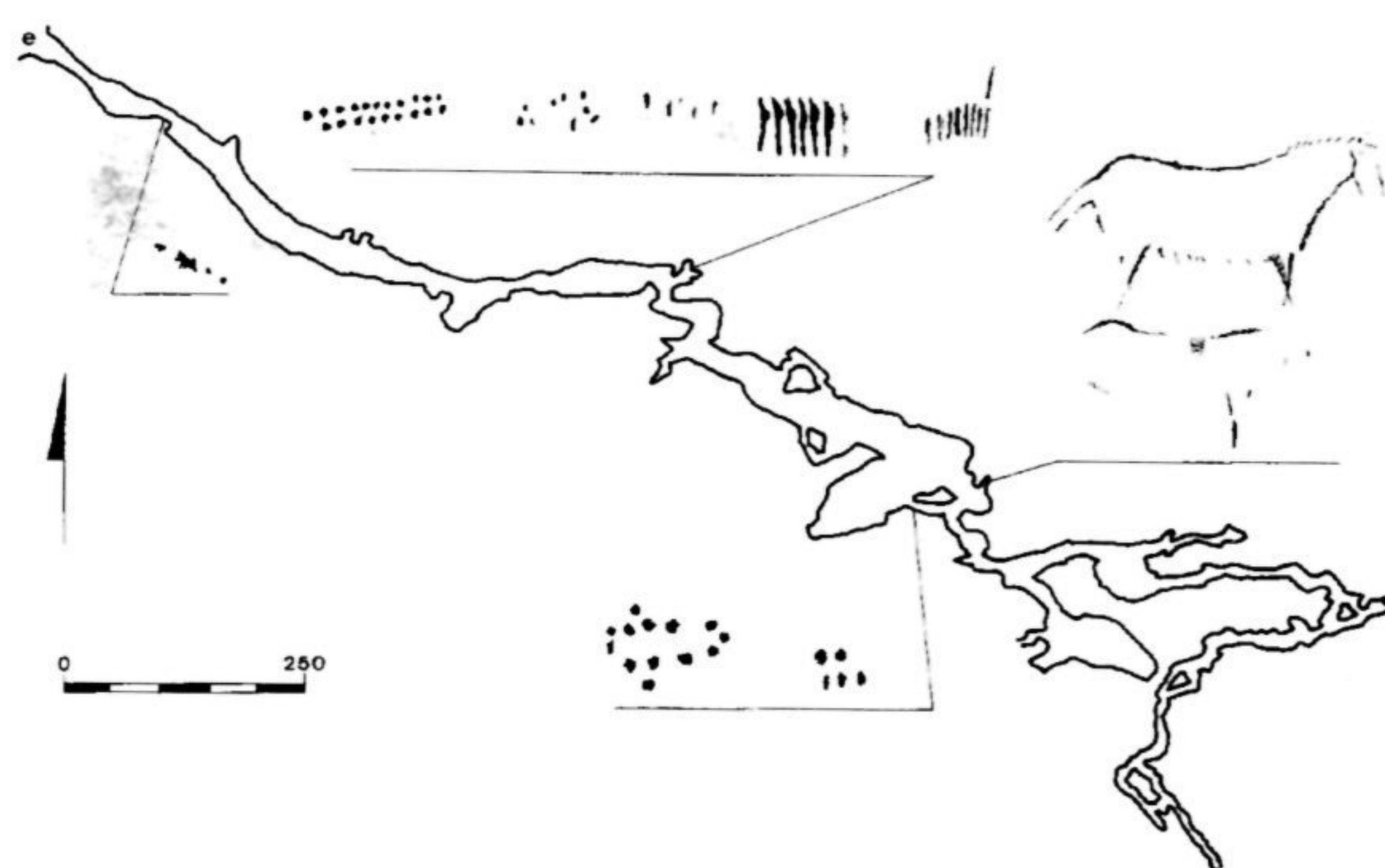
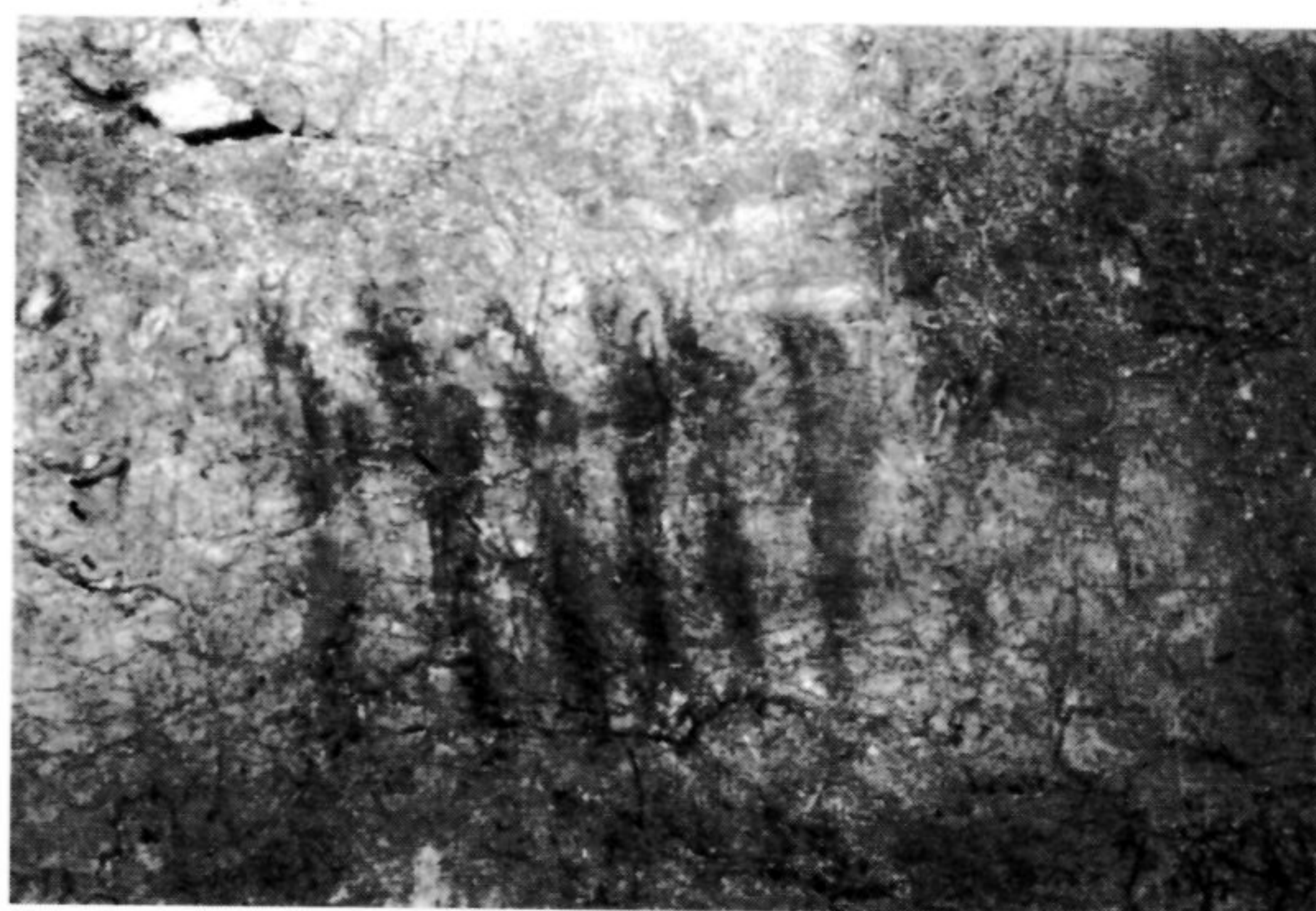


Fig 12. Cueva de Cullalvera



Pic 12. Claviforms in Cueva de Cullalvera

A further 200m along the main passage, another side-chamber on the left holds a group of three horses, their outlines painted in black. The highest figure is the most complete; although its muzzle cannot be seen, the rest of the head is very clear; as well as the dorsal line and chest, short lines represent hair under its belly, and the tops of the legs are also shown. The other horses are only partially preserved.

Now 1,100m from the entrance, a total of fifteen red dots are found grouped in two series, near another two red marks under a rock pendant.

Cueva de Cullalvera therefore has some of the remotest paintings from the entrance of any cave in the region, the largest horse, with its considerable detail, is a particularly clear example of late Magdalenian art. The radiocarbon date of 10,400 BP obtained for black paintings in the cave is therefore much too recent and cannot correspond to these figures.

González Echegaray, J. 1959. La cueva de Cullalvera. *Bol. Soc. Prehistorique de l'Ariege* XIV, pp 1-16.

González Sainz, C., Muñoz E., and Morlote, J.M. 1997. De nuevo en La Cullalvera (Ramales, Cantabria). Una revisión de su conjunto rupestre paleolítico. *Veleia* 14, pp 73-100.

Moure Romanillo, A. and González Sainz, C. 2000. Cronología del Arte Paleolítico Cantábrico: Últimas aportaciones y Estado Actual de la Cuestión. *Actas del 3º Congreso de Arqueología Peninsular*, Vol. II pp. 461-473, Oporto

CUEVA DE LA HAZA

Ramales de la Victoria

The paintings were discovered on September 13th 1903 by Alcalde del Río and L. Sierra. A new study of the art was published by the University of Cantabria in 1991.

Cueva de la Haza is located above the track leading from the town of Ramales to Cueva de Covalanas. Located inside a large rock-shelter, it is quite short, about 10 m, so its paintings were practically exterior figures. At the time of its discovery it was also quite low, but the floor was dug away so that the general public could visit the cave. This action destroyed the archaeological strata in the entrance, which corresponded to the Solutrean.

The paintings are all in red, although their state of conservation is not good, possibly because of them being so close to the exterior. As a result, some of the figures have lost much pigment, making it difficult to see or interpret them. The technique of forming lines by dabbing a series of dots was used in some figures, as in Cueva de Covalanas.



Fig 13. Cueva de la Haza

The first group of figures is located on the right hand wall. They consist of a sign or part of some indeterminate animal, followed by a possible caprid and the head and cervical-dorsal line of a hind. Group II is at the rear of the cave. The lowest figure in this group is a horse; although its head is no longer visible, the interior of its rear quarters is filled with dots. Above this is a reindeer, which has also lost much of the pigment, but its back, head and antlers were in any case completed with the natural shape of the cave wall. It is 1.2m long. Just above and behind the reindeer is an almost complete figure of a horse. This is the best-conserved and most detailed painting in the cave, and an eye, ear, mane and tail are all details clearly depicted.

Group III is found on the left of the cave near the rear. A horse, 86cm long, is the only animal in the cave looking towards the right. Only one front leg is shown, and it has no eye. A small quadrilateral sign completes this group.

The art of Cueva de la Haza can be dated in the Solutrean, and the reindeer may indicate that it was produced during a particularly cold phase.

Sierra, L. 1909. Notas para el mapa paleontográfico de la provincia de Santander. *Actas y Memorias del I Congreso de Naturalistas Españoles*, pp 103-117. Zaragoza.

Alcalde del Río, H., Breuil, H. and Sierra, L. 1911. *Les Cavernes de la Region Cantabrique*. Monaco.

Moure, A., González Sainz, C. and González Morales, M. 1991. *Las Cuevas de Ramales de la Victoria (Cantabria)*. Universidad de Cantabria.

CUEVA DE COVALANAS

Ramales de la Victoria

The paintings were discovered by Alcalde del Río and Sierra on September 11th 1903, and thus became the first to be found in Cantabria since Altamira. In 1991 the University of Cantabria published a revision of the art.

The entrance is on a high hillside to the south of the town of Ramales de la Victoria, between two other large caves: Cueva del Mirón to the left, and Cueva Mur on the right. The small vestibule has two passages leading off, and the paintings are in the longer right-hand passage. Few archaeological remains have ever been found; some stone tools, bones and a little pottery of unknown age. The passage is of a comfortable walking size - the floor was lowered near the entrance - and after about 80m it divides into a series of smaller rifts which become too tight.

The paintings occupy both walls of the passage at about 65m from the entrance. All of them are in red, and most of them have been done by dabbing dots of red pigment on the wall to form the outlines of the figures. These are mostly hinds, and show certain conventions such as the "V"-shaped ears and long necks. This combination of technique, theme and style is seen at its clearest in Covalanas, and has defined a form of painting called the "Ramales School", but it is found in several other caves, such as Pendo and La Pasiega, as well as Cueva de la Arenaza in the Basque Country.

Taking the right-hand wall, the first panel consists of a pair of hinds, one with the complete body but no legs, the other only indicated by its head, ears and cervical-dorsal line. As will be seen, the cave has other examples of hinds in pairs. The second panel has six hinds. On the left two hinds face left, while below them a hind is barely represented by ears and cervical-dorsal line. This in turn is crossed by a hind facing right, although its head is not complete. Next to it, there is a lively complete figure; although it is only 45cm long, all four legs are shown and its neck is stretched out, its head pointing slightly upwards. It is next to the sixth hind, and one of the most complete figures in the cave, 79cm long. The animal faces left, but its head is turned, looking backwards, towards the right. The outline was made with overlapping dots making a continuous line, while areas inside its body are coloured with flat red-wash.

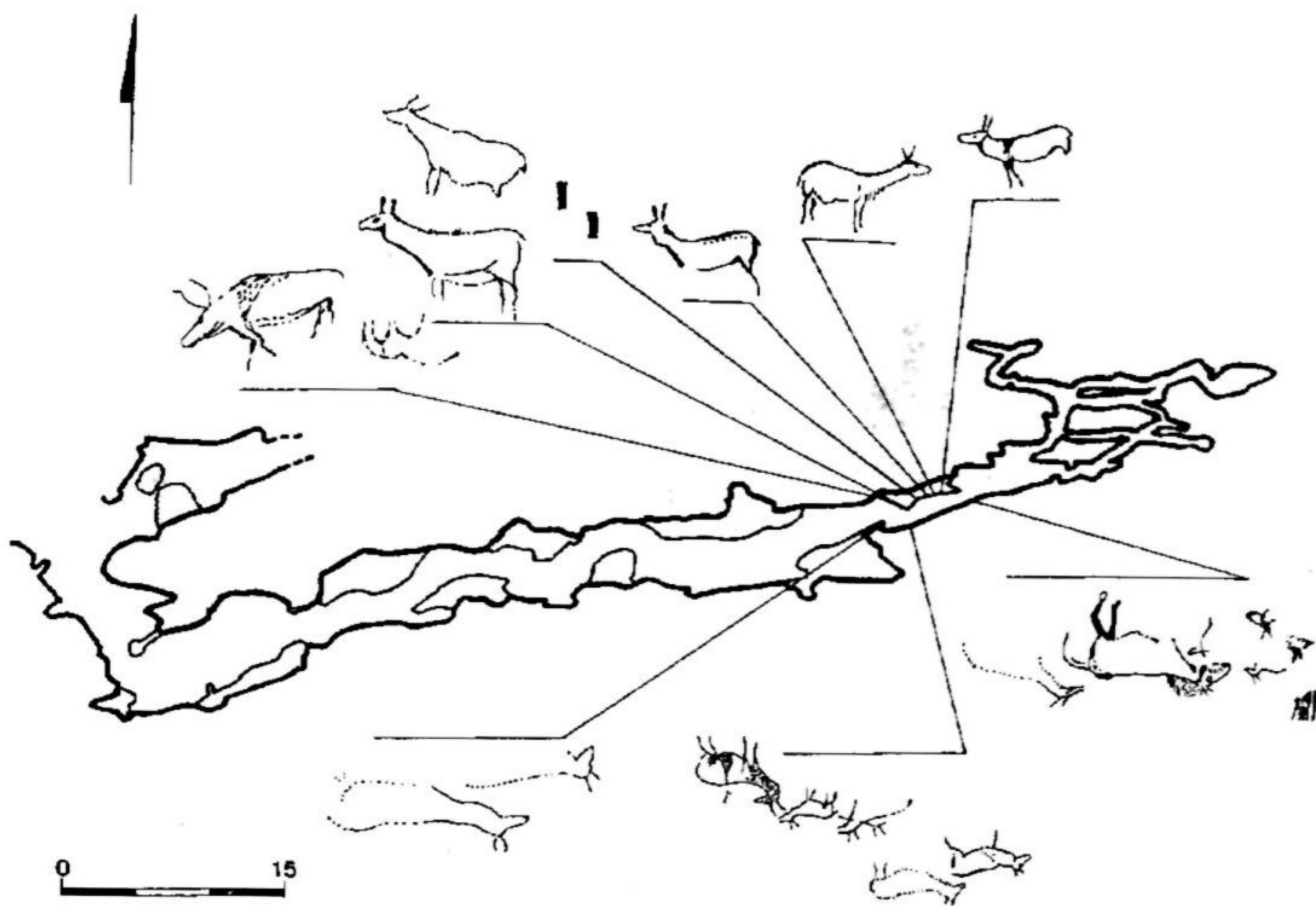


Fig 14. Cueva de Covalanas

The third panel has a horse as its central figure. About 139cm long, its front legs are missing, but otherwise it is complete with parallel lines forming its mane, and an eye and, unusually, mouth. This horse is surrounded by five heads or partial figures of hinds, and a sign in red.

The first figure on the left-hand wall is a bull, also interpreted as a reindeer. This is the largest figure in the cave, 143cm long, and a triangle of colour marks its shoulder. To its right it has two practically complete hinds, with a strange sign or upside-down bovid below. A short passage running parallel to the main passage can be entered on the left. One wall has two hinds facing each other and two rectangular signs, and the other wall has another single hind. About 65cm long, this last figure is a good example of the style of painting, although the rear legs are missing. Its outline is made up of overlapping dots, it has an eye and a band of colour marking its withers and shoulder.

These paintings define a style of painting termed as the “Ramales School”, which is dated in the Solutrean.

Alcalde del Río, H. 1906. *Las pinturas y grabados de las Cavernas Prehistóricas de la Provincia de Santander*.

Alcalde del Río, H., Breuil, H. and Sierra, L. 1911. *Les Cavernes de la Region Cantabrique*. Monaco.

Moure, A., González Sainz, C. and González Morales, M. 1991. *Las Cuevas de Ramales de la Victoria (Cantabria)*. Universidad de Cantabria.

ABRIGO DE LA PEÑA DEL PERRO

Santoña

Rather than a cave as such, this is a rock-shelter, 19m wide, 11m deep and between 8 and 10m high. It is located on the southeast side of Monte Buciero, the limestone hill at the entry to the bay of Santoña. Its floor slopes down to the left, and ends at the edge of a 50m high cliff to the sea.

The Abrigo de la Peña del Perro was first examined by C.A.E.A.P. on January 15th 1983. They also discovered archaeological deposits consisting of a late Magdalenian shell-midden, mainly formed of *Littorina* and *Patella*, and a post-palaeolithic level with much greater variety of species.

It has one panel of engravings located in a small alcove in the centre of the rear wall of the rock-shelter. They are 2.5m above floor level on a polished bed of rock, and the whole panel measures about 40 x 35cm. They were engraved with a flint burin, cutting the rock repeatedly to produce deep “V”-shaped grooved lines.

This panel can be divided into three parts, but all these are abstract patterns. The central group is the largest; it is formed of three long horizontal lines with other shorter oblique and perpendicular lines around them. Below this another group of lines converge on a natural fissure in the rock. And on the right of the main group there is a smaller number of parallel and perpendicular lines.

This type of figure is difficult to date, although similar engravings have been found in other sites in clearly Palaeolithic contexts.

Muñoz, E. and Gómez, J. 1988. Carta Arqueológica de Santoña. *Sautuola* V, pp 439-464. Santander.

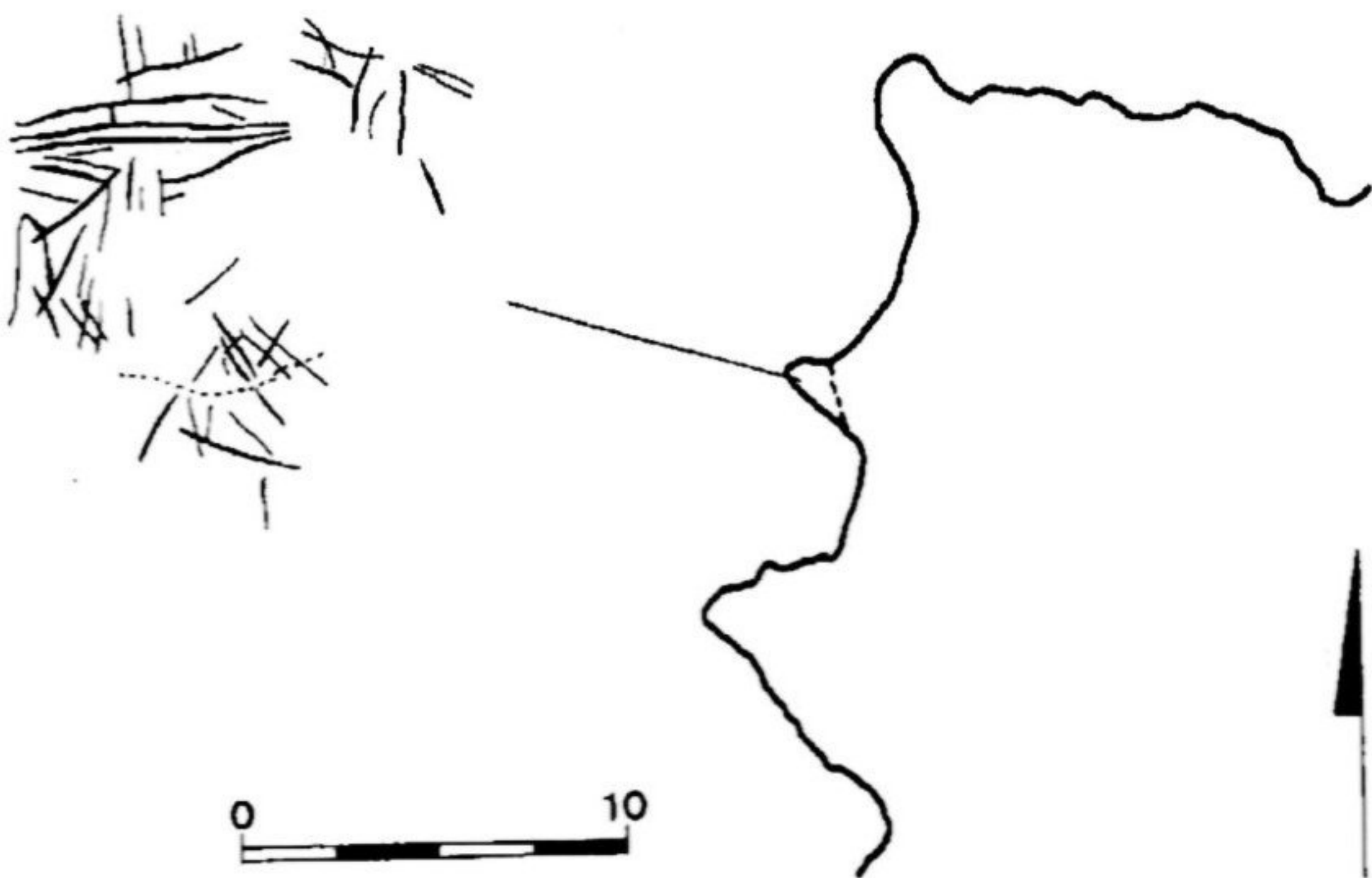


Fig 15. Abrigo de la Peña del Perro

CUEVA DEL OTERO

Secadura (Voto)

This small cave has two entrances near the top of a limestone knoll in the centre of the valley. These converge in a daylight chamber and a low passage on the right about 15m long.

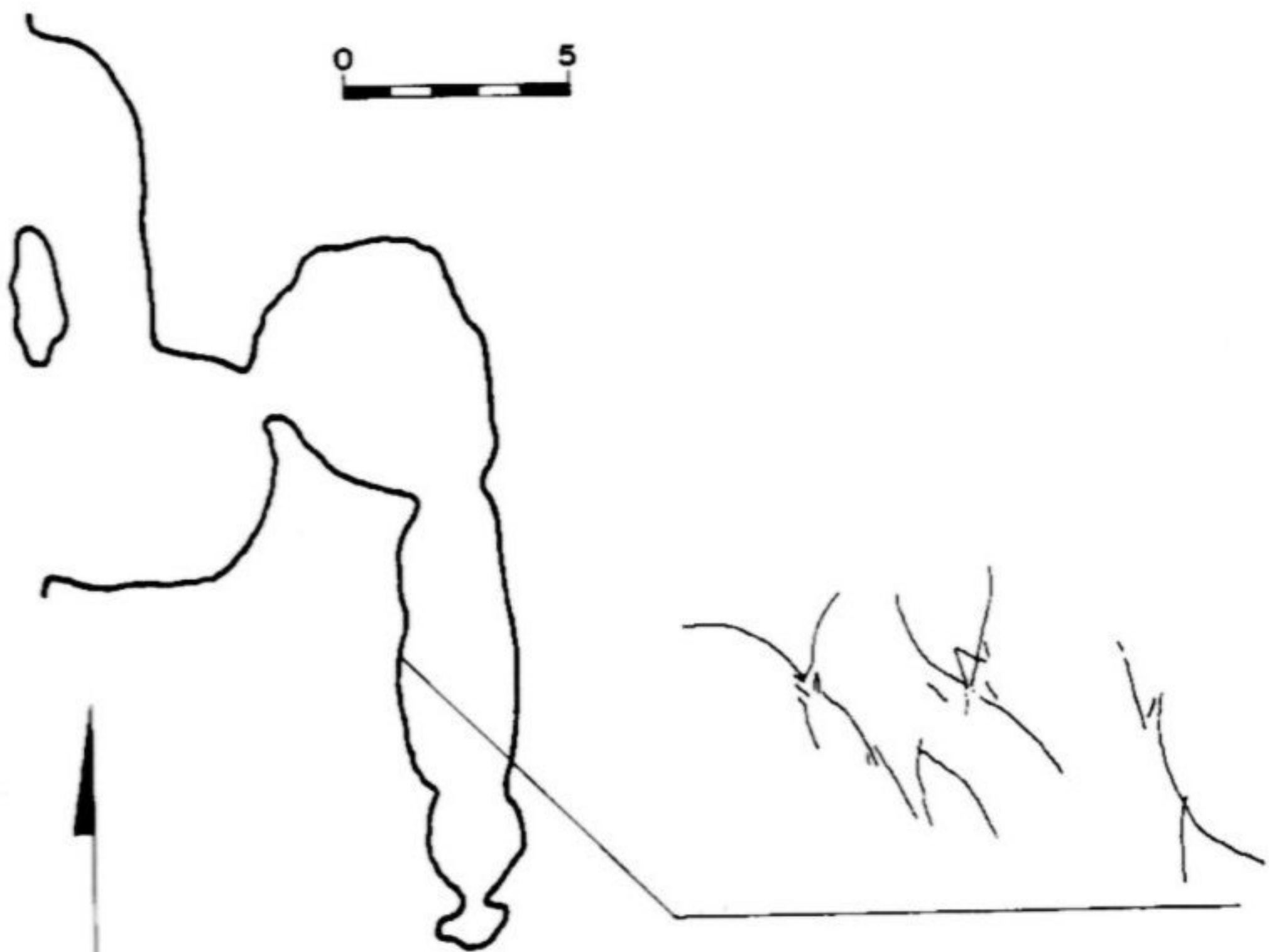


Fig 16. Cueva del Otero

L. Sierra discovered the archaeological deposit in the first chamber in February 1908 and the cave was later examined by Carballo. It was dug in summer 1963 by the Santander Museum of Prehistory, under García Guinea and González Echegaray. Levels from the Aurignacian to the late Magdalenian were found, with a possible Mousterian at the base, and possible Azilian at the top of the deposit. The engravings were first seen some years later, on October 15th 1983, by C.A.E.A.P.

Cueva del Otero has one panel of engravings, on the right hand wall of the second passage, within the dark zone of the cave. The first figure on the left is the most complete: a caprid is shown, viewed from the front and represented by its ears and long horns. It is a small figure, only 19cm high. To its right other lines probably represent another, less complete figure of a caprid and to the right of this there are further indecipherable lines.

All the figures were produced with fine, light lines cut in the rock wall, and they all appear to lean towards the left.

It is rare to find animals viewed frontally in cave art. However, this kind of representation of caprids is common in mobiliary art, on bone objects from late or final Magdalenian levels. Indeed, a bone with this kind of image coming from Cueva de la Chora, only a few kilometres away from El Otero, is on display at the Museum in Santander. The engravings of Cueva del Otero are therefore thought to be of a similar Magdalenian age.

González Sainz, C., Muñoz, E. and San Miguel, C. 1985. Los grabados rupestres paleolíticos de la cueva del Otero (Secadura, Cantabria). *Sautuola IV*, pp 154-164, Santander.

CUEVA DE COBRANTE

San Miguel de Aras (Voto)

The wide entrance at the top of a steep field leads into a massive passage over 30m wide. This contains many large old stalagmites. With few side-passages the cave ends after about 500m.

Cueva de Cobrante (or Cobrantes) was first explored by Carballo. The entrance chamber has important Palaeolithic deposits, being dug at present, and Bronze Age and Iron Age pottery has been found inside the cave. The engravings were found by the Santander Museum of Prehistory in 1962 or 1963 and studied by M. A. García Guinea in 1966.



Fig 17. Cueva de Cobrante

The first group of engravings is found at the top of a massive stalagmite boss, on the right at the rear of the entrance chamber. On the cave wall, they are just visible in the daylight coming from the entrance on a bright day. Both of them were produced with simple fine lines. The first figure is the head of a hind, and the second an almost complete figure of another hind. This is the largest figure in the cave at 57cm long. Two ears can be seen, and the top of the front legs, but not its back legs.

The other panel is also on the right hand wall, in the interior of the cave, on the far side of the stalagmite boss. Again the engravings are extremely fine, on an old calcite layer covering the wall. It seems that part of the figures may have been lost by some of this layer having broken off, while other figures are extremely difficult to see, possibly because the calcite has re-grown over the lines. On the left, the head, antlers and cervical-dorsal line of a reindeer or stag is in a vertical position, head downwards. The rear quarters of a horse is below this. On the right the figures become increasingly incomplete, and difficult to see or interpret. They include a goat, a possible venus, and the head of a hind.

This type of fine engraving is usually dated in the early or middle Magdalenian.

García Guinea, M.A. 1968. *Los grabados de la cueva de la Peña del Cuco en Castro Urdiales y la cueva de Cobrantes (Valle de Aras)*. Publicaciones Patronato Cuevas Prehistóricas Provincia de Santander.

CUEVA DE LOS EMBOSCADOS

Matienzo (Ruesga)

The entrance is located on the hillside above the main sink, at the northern end of the polje of Matienzo. A crawl opens into the main passage, which descends over a slope of gours for 50m. The cave then becomes completely dry, and a high level passage enters on the left. The main passage side-steps right, and continues in a second section about 100m long, ending at a boulder choke.

Cueva de los Emboscados was first explored by S.E.S.S. in 1962. The engravings were first seen by P. Smith on March 11th 1979, and other figures were later located by C.A.E.A.P. and the University of Cantabria. A single flint flake has been found in the entrance, which conserves the remains of a Mesolithic shell midden. The second section of the cave is also notable for the bear hollows in the floor and their claw scratches on the wall.

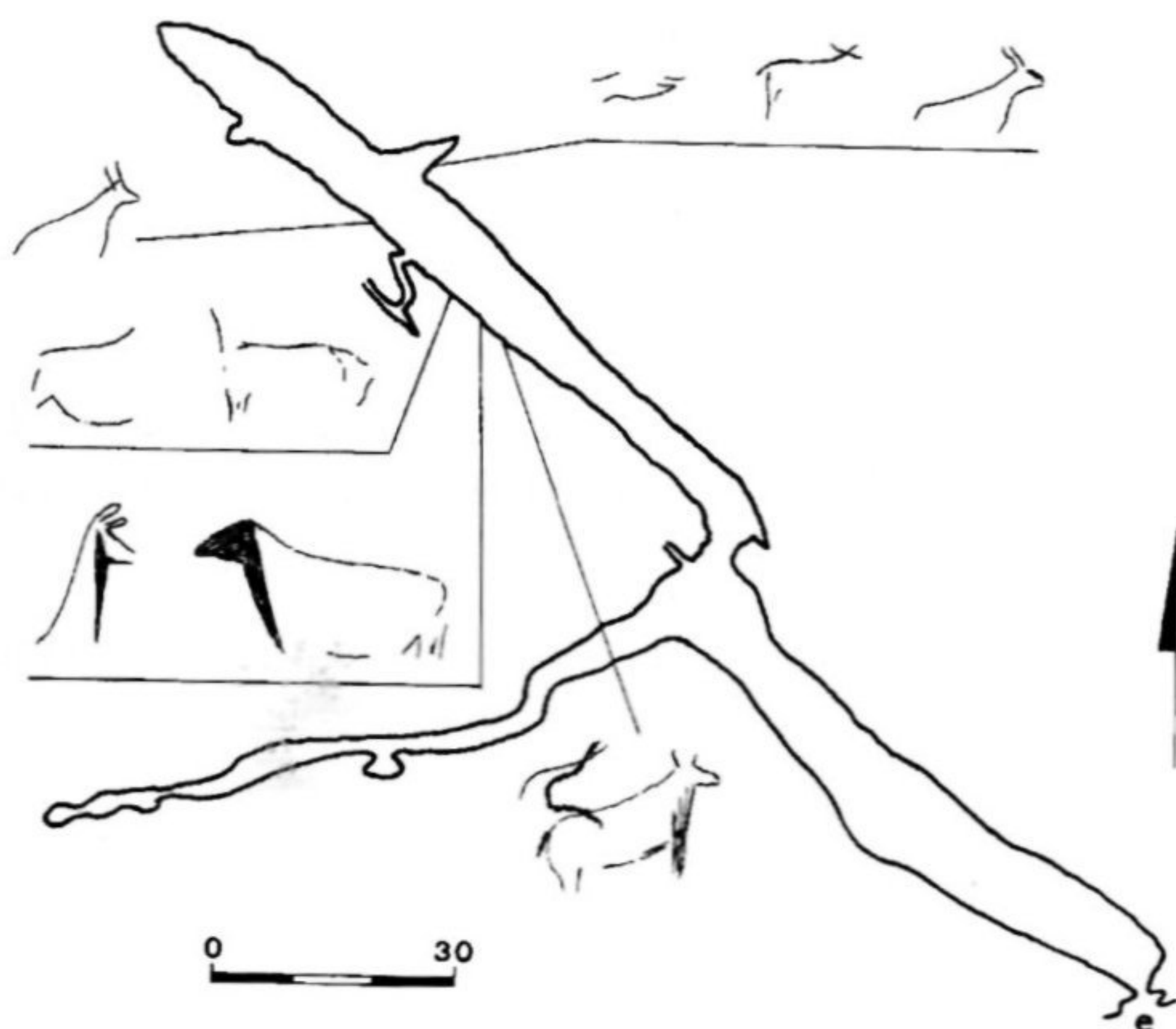


Fig 18. Cueva de los Emboscados

The cave art is concentrated in one area of the second part of the main passage, apparently marked by a large standing stone in the centre of the passage. The stone has a number of engraved lines, but no recognisable figures can be seen. The first panel on the left hand wall near the stone is the most complex and problematical in the cave. The main figure is an engraved hind facing right; it is about 80cm long, with the head, two ears (represented by two lines at an angle), the full body, tail, and the tops of the legs. Slightly above is another engraved line, possibly the rear and dorsal line of another hind, and a line of dark red paint crosses both figures. This painting forms a sign roughly in the shape of a bell turned on its side. The main problem is that certain unconventional technical aspects of the hind have led Balbin, González and González (1986) to consider it as false. First, the engraved line is finely cut and is without patina; second, the cervical-dorsal line is drawn as a series of short lines; and third, the shading effect of the animal's front is done with six or seven discreet parallel lines rather than the habitual scraped or striated surface seen in other figures. The question could easily be settled if the painting, of a clearly old appearance, crosses over the engraved lines. But the pigment is now dried and broken up, rather than a continuous line, and the wall has a rough irregular surface, and no firm conclusion can be reached as to whether the paint crosses the engraving or vice versa.

Immediately to the right there are two figures about which the same authors had no doubts. One is the head and neck of a hind, with its two ears pointed forwards. The head is not complete at the muzzle, and the front of the neck was shaded by scraping the rock surface. The line is not so deeply cut as the first hind, as if a softer, blunter instrument was used. This hind faces another animal, interpreted as a stag. Both the head and front are shaded, and it has a long cervical-dorsal line: the total length of the figure is 130cm.

The same wall has two incomplete and indeterminate animals. The first consists of a cervical-dorsal line, belly, and top of a rear leg - the complete absence of the front makes identification of species impossible. The second has a broken vertical line representing the front and chest of the animal, which faces left, a cervical-dorsal line and the rear quarters. The other figure on this wall is the head, chest and back of a caprid. This has the same kind of fine deep line as the first hind, and it has equally been considered as a recent falsification.

The opposite wall has two figures, located in an alcove. One is a hind, represented by two ears, cervical-dorsal line and tail, and one rear leg. The other is the head, horns, back and chest of a second caprid. This is a relatively small figure, 60cm long.

The technique of shading the face and/or chests of animals, above all hinds, is well known in Cantabria, in such caves as Castillo and Altamira. Following the chronology established for those sites, the engravings of Emboscados can be dated in the middle of the Magdalenian period.

As regards the two possible modern falsifications, it must be said that at the time of their discovery in 1979, all the figures existed as described above. The explanation would therefore be that an unknown person had found the prehistoric figures at some earlier time

and made two copies of them. Another possibility is that all the figures are false, but this would mean that someone had set out not to copy two figures, but to falsify an entire cave, with panels organised on both walls and using both painting and engraving. Both scenarios do seem rather unlikely, especially considering that the perpetrator could not have intended to deceive the authorities (as has happened in certain notorious cases), but kept silent instead. Of course the third possibility is that all the figures are authentically prehistoric; certainly the existence or not of "patina" is not a scientific proof of age.

Smith, P. 1981. Prehistoric Remains and Engravings discovered by the British Speleological Expeditions to Matienzo. *BCRA Transactions*, Vol. 8, No. 2, pp 85-86.

Balbín, R., González Morales, M. and González Sainz, C. 1986. Las cuevas de los Emboscados y el Patatal (Matienzo, Cantabria). In *Estudio del Arte Paleolítico*. Monografía 15, C.I.M.A., pp 233-270, Madrid.

(These references also apply to the following cave.)

CUEVA DE SOTARRAÑA

Matienzo (Ruesga)

This cave, also known as Cueva del Patatal, is located in the valley of La Vega in Matienzo. The entrance slope descends into a large passage with massive old stalagmites and columns. This is only about 80m long, but has several side-passages on the left, also well decorated.

The cave was explored by local government workmen some time around 1960. Working to the orders of engineer A. García Lorenzo, they apparently saw the one engraving in the cave. Strangely, this discovery did not receive any attention and was practically forgotten about until July 1980, when the figure was re-found by P. Smith. No archaeological materials are known in the cave, apart from animal bones probably of great age.

This solitary engraving in Cueva de Sotarraña, which was studied by archaeologists from the University of Cantabria, is located in a small alcove at the end of the main passage. It is 27cm long, executed with a quite firm, wide line. It represents a headless animal, interpreted as a cervid, with the cervical-dorsal line, two rear legs and belly, chest line and one front leg. Another line, possibly a spear, goes from the centre of its body, crosses the belly line and continues downwards for about 10cm.

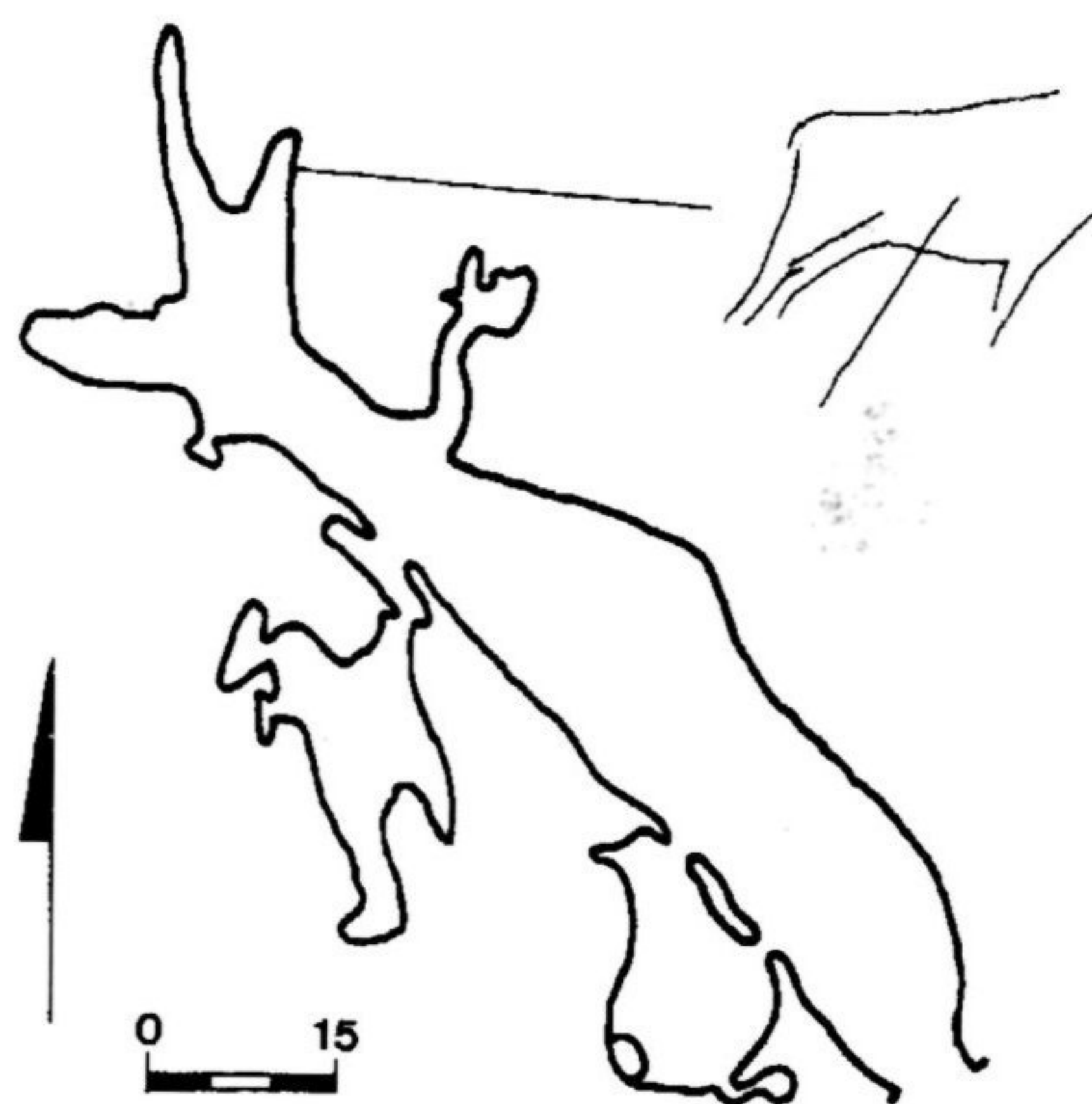


Fig 19. Cueva de Sotarraña

ABRIGO DE SAN JUAN

Socueva (Arredondo)

This is the most recent discovery of rock art in Cantabria, and also one of the most unusual, as it is a rare group of paintings in full daylight, not in a cave but in an *abrigo* or rock-shelter.

The paintings were first seen on November 10th 1999 by Alis Serna and Angeles Valle, together with other members of the A.C.D.P.S., in the large overhanging rock shelter above the village of Socueva. This is well known as being the location of one of the oldest churches in Cantabria, a small chapel probably of the 9th or 10th Century, built under the large cliff and containing the typical horseshoe arch of the period. The cliff also has the entrances of some seven caves, of which only the last one is of a notable length, and prehistoric remains of various kinds were found in three of the caves nearly ten years ago. The paintings were not seen at that time, which is not surprising as they are poorly conserved, partly covered by lichen and calcite. It is simply amazing that they have survived at all, probably thanks to the rock shelter protecting them from the worst of the weather.

The paintings form two panels close together in the sixth of the caves, which is scarcely 7m deep. They are between 2 and 2.8m above the floor, although it appears that the floor used to be higher, and has been eroded away. Panel 1 consists of two violet red lines, drawn with dry ochre. They are horizontal and parallel, and appear to make a quadrilateral shape, although calcite covering the left side of the lines effectively disguises the original form of the figure. The second panel is just over a metre to the right, towards the interior of the cave, and is more clearly visible than the other. The lower part of the panel is made up of some 35 or 36 dots, daubed on the wall with violet red pigment, and organised in horizontal rows of four or five. At the top of the panel there is a more complex figure made up of two curved lines, with an imprecise red stain above. Apart from these two panels, a few remains of red paint can be seen in several other parts of the rock shelter.



Fig 20. Abrigo de San Juan

The discoverers of these paintings do not rule out the possibility that they could be relatively modern, especially in the case of the first panel. Panel 2, however, may reasonably be considered Palaeolithic. Not only is the technique of daubing red dots well documented in Cantabria, but this kind of painting is often found near cave entrances, as in Cueva del Arco A. These red paintings are usually dated in the Solutrean.

Marcos Martínez, J. and others, 1994. *San Juan de Socueva. Acercamiento a una de las primeras manifestaciones del cristianismo en Cantabria*. Monografías de ACDPS No. 4. Santander.

Serna Gancedo, A. and Valle Gómez, A., 2000. El conjunto de pinturas rojas del abrigo de San Juan (Socueva, Arredondo). *Boletín Cántabro de Espeleología* no. 14, pp 129-137. Santander.

CUEVA DE SALITRE

Ajanedo (Miera)

At about 450m above sea level, this cave is one of the highest decorated caves in Cantabria, which is significant considering that climatic conditions would have been more severe at altitude during the Quaternary. It is located at the base of a large limestone cliff, reached by a steep path from the road. The cave is then about 165m long, generally of large proportions apart from the final chambers.

The cave was first explored by L. Sierra on July 21st 1903, but he did not see the paintings until 1906. He also carried out the first dig in the entrance, and this work was later continued by J. Carballo. Both archaeologists found the same sequence of levels: Aurignacian, Solutrean, Magdalenian and Azilian. Quirós and Cabrera revised the art in a study published in 1981.

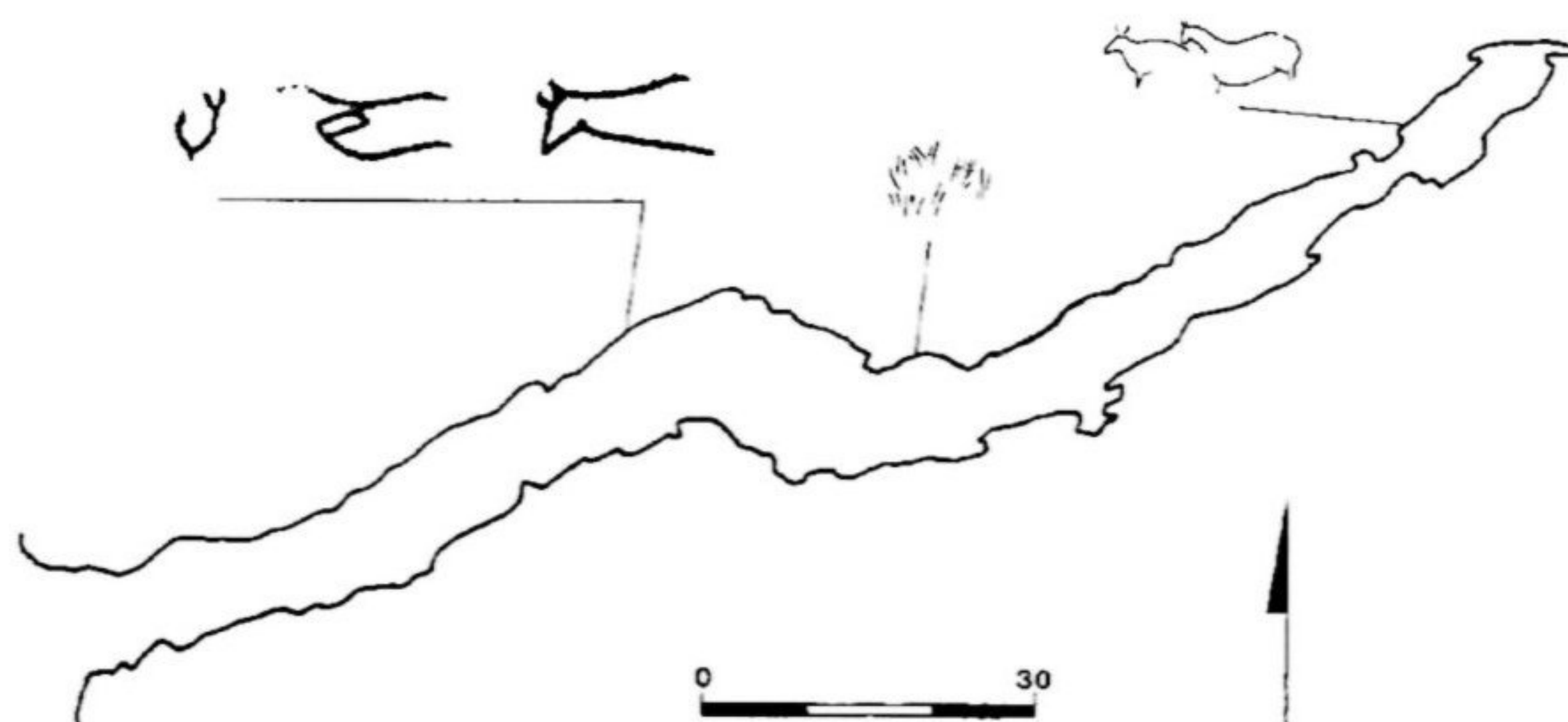


Fig 21. Cueva de Salitre

The most important figures in Cueva de Salitre are found on the left hand wall about half way along the cave passage. They are the head and neck of a hind in red, comparable with the figures of Cueva de Covalanas, and the possible back or head of another animal with two lines which could be horns. A little further inside the cave, the same wall has a panel of engravings; deep wide parallel lines in a surface of soft white calcite. However these may have been done by an animal such as a bear.

The final chamber has two small figures in black which are hard to see clearly. But infrared light was used to identify them as a horse and a bovid.

The paintings could be dated, as those of Cueva de Covalanas, in the Solutrean.

Sierra, L. 1909. Notas para el mapa paleontográfico de la provincia de Santander. *Actas y Memorias del I Congreso de Naturalistas Españoles*, pp 103-117. Zaragoza.

Alcalde del Río, H., Breuil, H. and Sierra, L. 1911. *Les Cavernes de la Region Cantabrique*. Monaco.

Cabrera, V. and Bernaldo de Quirós, F. 1981. Primeros resultados de la investigación en la cueva de Salitre (Miera, Santander). *Altamira Symposium*, pp 141-148, Madrid.

CUEVA DE LA GARMA

Omoño (Ribamontán al Monte)

The cave, located in a low limestone hill near the village of Omoño, was first explored by C.A.E.A.P. in 1991. On November 2nd 1995, the members Jose Manuel Ayllón and Alís Serna descended the second pitch and discovered the extraordinary archaeological deposits and groups of cave art.

Cueva de la Garma is developed on several levels. The entrance on the top level contains Magdalenian, Mesolithic, Chalcolithic and Bronze Age remains and is being dug by the University of Cantabria. The first 10m pitch leads to passages with bear hollows and Lower Palaeolithic stone tools. The second pitch also about 10m deep drops into the main passage, which originally had an entrance direct from the surface, used during the Palaeolithic and which has since become blocked. This passage has three skeletons corresponding to medieval burials (between 780 and 1020 AD). But its most remarkable feature is that, whereas Palaeolithic materials are usually found buried in stratigraphic levels, here they are all visible on the surface of the cave floor. Magdalenian remains, including flint tools, bone and antler artefacts, and mobiliary art objects, as well as circular stone structures, occupy over 500 square metres of the cave passage, perfectly conserved thanks to the blockage at the original entrance. This passage also contains the different groups of paintings. A third pitch descends to an active passage below, supposedly a feeder for the resurgence, El Truchiro.



Fig 22. Cueva de la Garma

As the materials in the main passage are so extraordinarily well preserved, providing a unique opportunity to learn how Palaeolithic populations used the cave, it is being studied with the greatest care. This means that there are parts of the cave floor that still cannot be trodden, making it impossible to reach all the walls and examine the art they hold. As a result, the University's study of the cave art in La Garma is going relatively slowly, but new figures are being located each year, especially engravings which can only be seen at close distance.

Nevertheless, it is already clear that the art of Cueva de la Garma is of considerable significance, with figures of different styles, located in four different parts of the lower passage. A recent report gives totals of 89 animal figures, 3 masks, 41 negative hands, 26 complex signs, 40 series of paired lines and 35 compositions of dots.

The vestibule of the original entrance has a horse in black, drawn as an outline with shading in its back and shoulder, a bison also in black, and an animal in red, with a striped body, interpreted as a carnivore. There is also a group of red dots, while the opposite wall has red rectangular signs and engravings, including two bison, a horse and a hind. The entry to a small side-chamber on the right then has an engraved hind, while the chamber itself has both engravings and black paintings, representing cervids and bison. Another small chamber, three metres long and a metre and a half wide, has engravings of hinds of a high technical quality. Most have striated necks and fronts, typical of the Magdalenian style.

The second area is further inside the cave. A hind is painted in red, in a similar style to the figures of Cueva de Covalanas. Another important painting is a horse; its outline is in black, the interior of its body is partially filled in black, producing the characteristic "M"-shape in its flank, and the cervical-dorsal line of its back follows the natural form of the wall.

Another group of panels is found near the base of the second pitch. The first of these has complex superimpositions. The first figures are an auroch and two caprids painted with a broad red outline, and with some shading of the heads and rear-quarters of the caprids. Over these were painted other animals in red, but their outlines have a thinner line. One has been interpreted as a giant deer, with a long neck, while the other is unidentified. The same panel also has engravings. Following this wall we come to the outline of a bovid in black, while the opposite wall has a *mask*, a figure which uses the shape of the rock, complemented with black paint, to represent a face. As the cave continues, a lower section of passage has a group of engravings including two bison, four horses and a hind, as well as red paintings of another two bison and a grille-shaped symbol. This art is in the roof, over stone circles which may have been working areas.

The other figures are in the final passages. A section of the left-hand wall is covered with dots, paired lines and finger-marks, reaching over two and a half metres above floor level, while the facing wall has several negative hand images. More hands are seen in the chamber at the top of the third pitch, making up the total of 41 known in the cave. In the same area there is a bison in black, painted in a vertical position, head upwards, so that a fissure in the rock could be used for the cervical-dorsal line.

The cave therefore has art of three different periods. The hands and marks are the earliest. The red paintings, such as the hind, are typical of the Solutrean style, and the black paintings and engravings are Magdalenian.

Ayllón, J. M. and Serna, A. 1996. Time Outfoxed. *Caves and Caving*, Issue 72, Summer 1996, p. 20.

Arias, P. and others, 1999. *La Garma, Un descenso al pasado*. Universidad de Cantabria.

Arias, P. and others, 2000. La Zona Arqueológica de la Garma (Cantabria): Investigación, Conservación y Uso Social. *Trabajos de Prehistoria* 57, No.2, pp 41-56. Madrid.

CUEVA DEL PENDO

Escobedo (Camargo)

The large entrance of this cave is located near the base of a large karst depression. Although the cave is only about 180m long, it consists of one massive chamber 30m high and 40m wide, sloping down from the entrance. At the rear of the chamber the floor levels out, and the final passage is a narrow meandering rift.



Fig 23. Cueva del Pendo

Cueva del Pendo was explored by Sautuola in the 1870s, and since then it has been dug on numerous occasions. Alcalde del Río, Carballo, Obermaier, Santaolalla, González Echegaray and Leroi-Gourhan are some of the more notable archaeologists who have studied the cave during the last one hundred years. An extensive stratigraphy has been uncovered, from the middle Palaeolithic to the Bronze Age and Middle Ages. At the present time the site is being revised by a team led by Ramón Montes and Juan Sanguino. The first example of cave art was discovered by Alcalde del Río in November 1907; an engraving in the final passage. In August of the following year, he returned to the cave with Breuil and they found a second engraving.

In 1997 the archaeologists working in the cave noticed a group of paintings on a wide frieze of rock within the main chamber. They were covered with dust and a kind of white fungus, which made them extremely difficult to see, and probably explains why they had previously been overlooked. Since the discovery, the dirt and fungus has been cleaned from the wall in an exemplary work of restoration. In 1998, another three hinds and three group of dots in red were located to the right of the main frieze.

The engravings are quite fine and difficult to see, which has resulted in some different interpretations. The most convincing one is that they represent two great auks (*Alca impennis*, the northern penguin), which became extinct in 1844, and as such are probably the finest examples of birds in Cantabrian cave art.

The paintings are all in red, except for one hind in sienna. The first figure on the left is a hind facing left. It is above a hind, which is painted with overlapping dots as well as using the natural form of the rock to complete its neck. The next figures are a snake-like sign and a caprid. They are followed by two hinds, and a third which is the largest figure in the panel and which occupies its central position. About 125cm long, this is one of the most impressive cave paintings in Cantabria. Its head is raised, and its neck is long and outstretched. It has "V"-shaped ears, and all four limbs. Its outline is a simple line, but its rear quarters are fully coloured-in, and the neck is filled with small red dots. It faces, in clear association with, a horse; represented only by its front quarters. Between these two figures there is a sign interpreted as a vulva. To the right of the horse, the panel is completed with another two hinds' heads, and two indeterminate headless animals, one of which is fully coloured-in, whereas the other is an outline of dots. The last two figures on the right of the frieze are a pair of hinds facing in opposite directions. The way they were painted together is similar to Cueva de Covalanas, which also has pairs of hinds in red.

It is no wonder that the discoverers of this frieze describe it as kind of prehistoric cinema screen, as this magnificent panel 8.8m long would have been visible from almost all parts of the huge entrance hall. Although the group of animals do not form a scene as such, there can be little doubt that each animal had a role within some kind of narrative that would have been known to their spectators.

The technique of dabbing red dots of paint clearly indicates that these paintings belong to the "Ramales School", and with a proposed age in the period 22,000 - 19,000 bp

Alcalde del Río, H., Breuil, H. and Sierra, L. 1911. *Les Cavernes de la Region Cantabrique*. Monaco.

Montes, R. and others. 1998. Cueva de El Pendo. Nuevas manifestaciones rupestres paleolíticas. *Revista de Arqueología*, N° 201, pp 10-15. Madrid.

Montes, R. and others, 1998. New Palaeolithic Cave Art in Cueva de El Pendo, Cantabrian Region, Spain. *Rock Art Research* 15, No. 2, pp 89-97.

Montes, R. 2000. Actuaciones arqueológicas en la cueva del Pendo (Escobedo de Camargo). In *Actuaciones arqueológicas en Cantabria 1984-1999*, pp 253-258.

Montes Barquín, R., Sanguino González, J. and others, 2001. *La Cueva del El Pendo. Actuaciones Arqueológicas 1994 - 2001*. Ayuntamiento de Camargo.

CUEVA DEL JUYO

Igollo (Camargo)

Cueva del Juyo is situated in the bottom of a doline, and the entrance used today is artificial, as the original one was too small to be used regularly. The cave is quite complex, with several series of maze-like passages, and apparently a higher level not fully explored.

The cave was discovered scientifically in 1953 by José Ruiz, a member of García Lorenzo's team of workmen, and its one published figure was seen during the initial explorations of the cave. The archaeological strata inside the first chamber has been dug over a long period; in latter years by a joint Spanish-American team led by González Echegaray and L. Freeman. Several levels belonging to the early Magdalenian have been studied, and have shown that the site specialised in hunting red deer. In another level they found structures of walls and a shrine with a rock representing a half-human, half-animal face.



Fig 24. Cueva del Juyo

The one engraving that has been published is to the left of one of the first interior chambers. At head-height in an oxbow passage, it is a rather indeterminate figure, possibly a horse. It has an extremely long body and neck. Its tail is visible, but its head, which in any case must be disproportionately small, is less clear. Recently two new figures have been seen, although still not studied. They are near the back of the same chamber, on the left hand wall, and are the heads of a hind and a goat.

Macaroni have been seen in the roof of the first chamber.

Janssens, P., González Echegaray, J. and Azpeitia, P. 1958. *Memoria de las excavaciones de la cueva del Juyo (1955-56)*. Publicaciones Patronato Cuevas Prehistóricas Provincia de Santander.

CUEVA DE SANTIÁN

Velo (Piélagos)

Cueva de Santián (or Santillán) is a single passage about 200m long, averaging 2 to 3m high and 1 to 4m wide. The main paintings are located precisely in one of the widest parts of the cave, 120m from the entrance, where the passage turns right. The cave is well decorated with formations throughout.

The cave was discovered by Colonel Manuel Santillán in 1880 and, although he recognised the value of the cave, it is not clear whether he saw the paintings. The first record of these dates from Alcalde del Río's visit in October 1905. Cueva de Santián also had a few archaeological materials: bones and shells in the interior of the cave, and a number of flints and bones, and a human skull, in the entrance.



Fig. 25. Cueva de Santián

All the paintings are in red. The main panel is a singular and enigmatic group of paintings often interpreted as hands and forearms. They are near-vertical lines, with an average length of 65cm, and generally speaking, the "arm" widens towards the top to form a "hand", and this splits into three or four "fingers". But this is not true of all the paintings, and some of them have been compared with clubs or boomerangs. Each sign is clearly illustrated in *Les Cavernes de la Region Cantabrique* and it seems they could be seen more clearly at the beginning of the 20th century, despite already having the name "ISABEL" scratched over the fourth and fifth figures of the bottom row. The pigment is rather diffuse today, perhaps precisely because of the efforts to clean up the wall. But in general terms the original descriptions of the signs can still be confirmed.

The paintings are set out in two rows, five figures above and ten below. The highest row is nearly 2m above the sloping ledge on which it is now possible to stand. Although the floor may have been dug out and lowered slightly in the centre of the passage, it is hard to imagine how the signs could have been painted without the use of some kind of ladder.

The first figure on the left of the top row is more or less vertical and divides at its top into three short lines. The second leans to the left, dividing this time into four lines, while the third sign is again more or less vertical and divides into three. The fourth figure bends to the right in its upper third; it has thus been described as a boomerang. The last figure on the top row widens in its upper half, but does not split up into fingers; therefore resembling a club.

On the bottom row the first figure is more or less vertical, and finishes at the top with four dots, looking more like the marks left by the toes in a footprint than like fingers. The second leans to the right, at the top it splits into four, and just above the middle it has a small "thumb" on the right. But this is too far removed from the fingers to look realistically like a hand. The next also leans to the right, and widens into a well-shaped palm of a hand with four fingers, but no thumb. The fourth is a little shorter, it leans to the right and divides into three prongs; thus it is described as a trident by Alcalde del Río, Breuil and Sierra, and it also has an extra small prong on the right near the top. The fifth is vertical and finishes in three small prongs too.

The remaining figures all lean to the right. Number six also divides into three, with the extra prong on the left. The seventh was described as dividing just above the middle into three large prongs, so that it looks like the footprint of a giant bird. The eighth does not divide at all, but the lower half on the left-hand side has a number of short "hairs" growing perpendicular to the main line. The next has hairs all along the right-hand side, and splits at the top into three. The final symbol has an "elbow" as it bends to the right just below the middle, and finishes dividing into four.

In conclusion, Breuil interprets the figures variously as human arms, as the feet of birds, as weapons, or even as weapons in the shape of animals' feet. There is no explanation as to why such a collection of objects should be together on one wall, showing just how confusing the issue is. Modern observers are therefore amazed that so much trouble should be taken with ladders to paint such bizarre images.

The other figure of interest in the cave is a red "X" on the wall facing the main panel. The passage leading in from the entrance has a painting on a stalagmite, and another on the opposite wall that are interpreted as a hand and a galloping horse. But these might be natural stains of iron oxides.

The chronology of the paintings is equally uncertain. Whereas Alcalde del Río, Breuil and Sierra considered them as quite primitive, and classed them in the Aurignacian period, Moure suggests a more recent, middle or late Magdalenian age. Another possibility is to associate these figures with red paintings in such caves as Pasiega, Covalanas or Haza which are usually ascribed to the Solutrean.

Alcalde del Río, H., Breuil, H. and Sierra, L. 1911. *Les Cavernes de la Region Cantabrique*. Monaco.

Moure Romanillo, A. 1992. Documentación del arte rupestre Cantábrico. La Cueva de Santián (Piélagos, Cantabria). *Zephyrus* XLIV-XLV pp 7-15. Salamanca.

CUEVA DEL CALERO II

Pielagos

This cave is located in a wood near the village of Puente Arce. The entrance is small, descending to a chamber, across which a wall has been built. Another descent leads to a larger hall, from where the cave continues comfortably through a series of chambers, often well-decorated. At its end, the passage rises to an earth choke. The total length is 200 m.

Cueva del Calero II, and its contents of cave art, were discovered by C.A.E.A.P. about 1990. It also had numerous remains of various ages, including flint tools, human burials, and Iron Age and Medieval pottery. Even the wall at the entrance is probably prehistoric, as pottery was found between the stones.

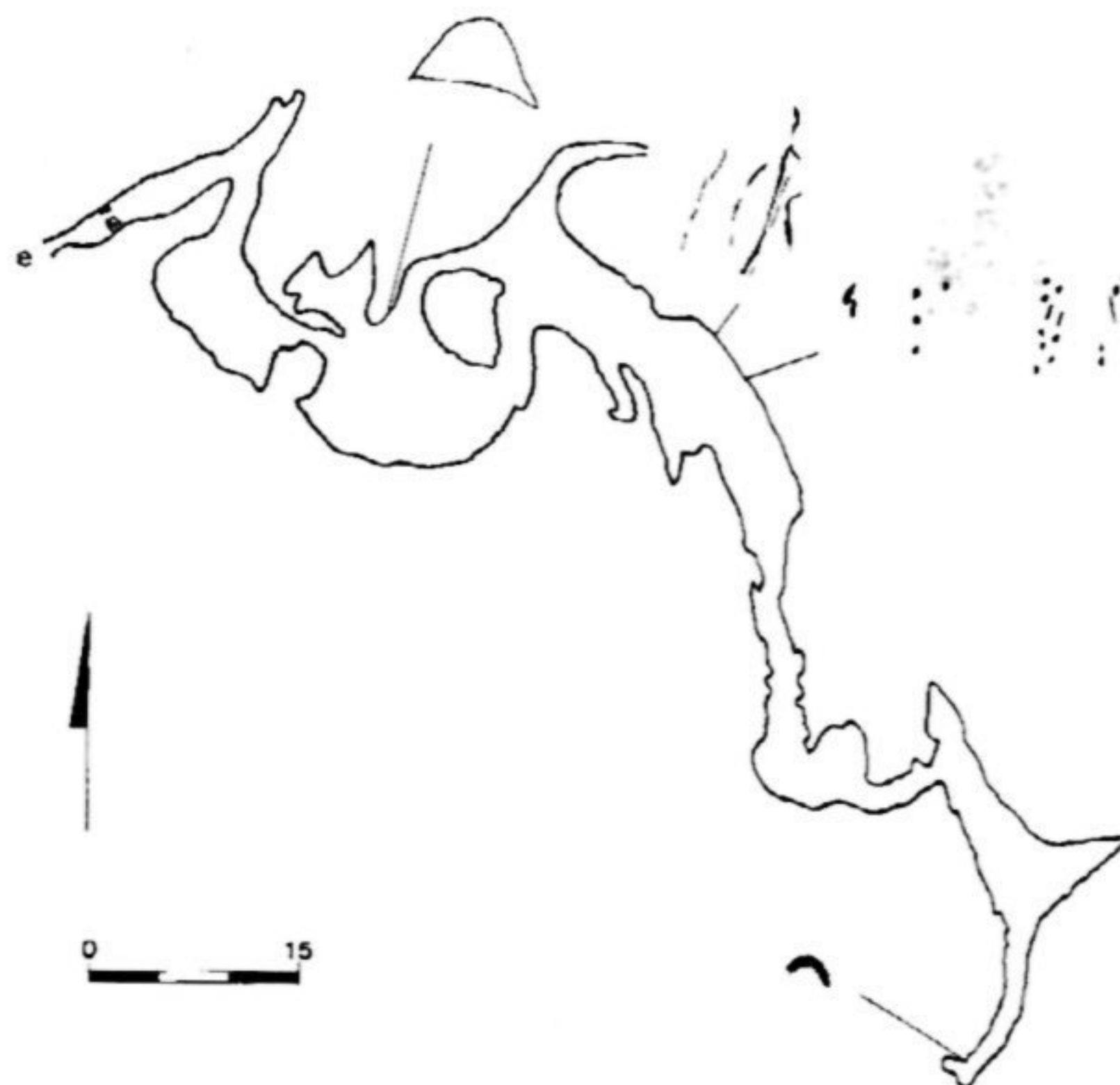


Fig 26. Cueva del Calero II

The first example of Palaeolithic art is on the left-hand wall in the main chamber. This is an engraving, roughly in the shape of a bell, cut with a deep clear line. It looks a little like the red bell-shaped vulvae in Cueva del Castillo, but is somewhat shorter and squatter.

More figures are found in another chamber in the central part of the cave, again on the left-hand wall. These begin with a number of black linear paintings, without any recognisable form, although various interpretations could be ventured, such as an animal's leg. A sample of the pigment was dated to approximately 25,000 BP, the oldest date for a cave painting in Cantabria. The same wall has groups of dots and lines both in red and black. First there are two short red lines, and a composition of four red dots. A vertical series of six black dots is parallel to another of four dots, and the final group is again in red.

The last painting is on the right at the final choke. It is a small arched line in red.

The AMS date sets the art of Cueva del Calero II in the Gravettian, and the compositions of dots and lines are also quite archaic, probably early Solutrean at least.

Montes, R. and Muñoz, E. 1996-7. Inventario Arqueológico del Municipio de Piélagos. *Memorias 1996-1997 de la A.C.D.P.S.* pp 45-56. Santander.

Muñoz, E & Morlote, J.M. 2000. Documentación arqueológica de la cueva del Calero II y la sima del Portillo del Arenal en Piélagos. In *Actuaciones Arqueológicas en Cantabria 1984-1999*, pp 263-266.

CUEVA DEL CASTILLO

Puente Viesgo

Located on the side of Monte Castillo, a conical limestone hill overlooking the River Pas, this cave is open to visitors, and is reached by road from the spa town of Puente Viesgo. The road continues as a track connecting the entrances to the other prehistoric caves on the same hillside: Chimeneas, Flecha, Pasiega and Monedas. Archaeological digs and show cave facilities have totally transformed the original appearance of El Castillo's entrance. At the start of the 20th century it was almost completely blocked by boulders fallen from the large rock overhang, and only a narrow, stooping passage was left into the vestibule, about 10m wide, but only 2 or 3m high. At the rear of the vestibule two small passages led into the first large interior chamber, known as the Great Hall. Neither of these was suitable for tourist visits, and they were later covered over and an artificial entrance was opened to the right. In the same way paths and steps were laid down throughout the cave, over 750m long, which have altered how it must have appeared to its prehistoric visitors.

Cueva del Castillo was first explored by Alcalde del Río on November 8th 1903, and was his greatest single discovery. As well as copying and studying the cave art, he started the excavations in the entrance. These were continued by the Institut de Paleontologie Humaine, between 1910 and 1914, under Obermaier and Breuil together with Alcalde del Río. They reached a depth of 18 m, thus emptying out the massive daylight chamber now crossed by visitors, and discovering a series of levels covering nearly 300,000 years, from the Acheulian period to the Bronze Age. In the early Magdalenian levels they found a number of deer scapulae with finely engraved heads of hinds, similar to engravings found on the cave walls. Since the 1980s, the stratigraphy is being studied anew by V. Cabrera. The art of Castillo was published in 1911. Since then new figures have been found, and contributions made by various authors, but no full revision of the cave has yet been completed.



Fig 27. Cueva del Castillo. figures on the left of the great hall, and in the second and third chambers.

The art of Cueva del Castillo is extraordinarily rich, grouped in panels throughout the cave, and including all kinds of figures; animals in red and black in differing styles, polychromes, and engravings, symbols of various kinds, and images of hands.

The first figures are engravings: a horse of simplified form drawn with deep lines, and a large block on the left of the Great Hall with a complex panel of superimposed hinds, caprids, bovids and horses, among a mass of other lines. The Great Hall also has the hinds engraved in a similar style to the mobiliary art on the scapulae, their jaws and necks filled with fine striated lines. Continuing straight ahead, a further hall has a bull in black, and a stag in red, headless and with just one antler.

Narrow passages leading deeper into the cave have a group of four horses in black with parts of their bodies, especially the forequarters, shaded in a similar way to the striated hinds. This passage also has a group of signs in red. They are bell-shaped, with a vertical line down the middle, and are associated with a long black line ending in a feather-like form. They are interpreted as vulvae, complemented by a male symbol.

A second chamber is reached, with a hind's head in red on the right, and with the figure of a bison on a stalagmite. The bison is in a vertical position, head upwards, and was created by using the natural shape of the stalagmite, with the addition of black paint. This figure is one of the few in the region that can be considered as a simple sculpture, although El Castillo has another figure where an eye and nostril were painted on a rock pendant to create an animal's head.

The next chambers have a series of paintings in black; the outlines of two bison, and a group of ibex and stags. There is also a small pony, its forequarters and part of its back shaded-in. The same area has a red tectiform, and engravings such as the large head of a possible deer, and a horse.



Fig 28. Cueva del Castillo, figures on the right of the great hall and in the final gallery.

The cave now enters the final passage, but first let us return to the Great Hall and examine the art to its right. The first important paintings in the cave are of a bison in red, positioned head downwards, and a complete horse. The same panel has heads of a stag and an ibex. Lower down and to the left, a group of paintings are superimposed. The oldest are a group of hands in red; and over these, two hinds in the same colour, and finally two bison. The bison are often considered as polychromes, as they consist of a black outline, with the red colour filling their bodies mostly provided by the older paintings. One of the bison's bodies is hunched up, making it especially reminiscent of the Altamira polychromes, unfortunately it is rather faint and seen with difficulty. These superimpositions were fundamental for dating the art of El Castillo. Breuil placed the older figures in the Aurignacian, and the bison in the late Magdalenian. For Leroi-Gourhan the figures ranged from his Style III (i.e. Solutrean) to early Style IV. Recently, absolute dates have been obtained for the bison: 13,000 BP. Another partial bison on the same wall is a little older: about 13,550 BP. They therefore seem to be somewhat younger than the figures in Altamira, but it is strange that a fourth bison in El Castillo has been dated several times, and three of the dates give a consistent result of about 10,600 BP; much too recent. Another date of 12,390 BP for this same figure is still significantly younger than the other bison.

Following the wall down, out of the Great Hall, a lower passage has the roof and walls decorated with hands, all negative images made by spraying red pigment around a hand pressed against the wall. 44 hands can be clearly seen (plus another 8 or 9 faint ones) and of these 35 are left hands. They are mostly strong, probably male, and there are no mutilated fingers. On the basis of the superimpositions, they are probably the oldest paintings in the cave, being subjacent not only to the hinds and bison, but also to the red dots and quadrilateral signs. This wide panel of hands also contains bison, outlined in a yellowish pigment, engravings of hinds, and red dots, quadrilaterals and other signs.

A more important group of signs is found a little further along the same passage, in an alcove on the right which is known as "Tectiform Corner". Here there are some ten rectangular or slightly curved quadrilateral signs in red. Their interiors are divided into different patterns, but these are usually based on a division into three main "fields". Exceptionally, two rectangles cross in an "X". The panel is completed with compositions of red dots, arranged in rows that are in turn grouped to make bands. One band has six rows, another five, other bands of four rows make a rough semi-circle, and bands of four and three rows form another cross.

As the passage goes on, it contains a tectiform of curving sides, below which there are a number of unusual oval shapes, and a horse in red with long ears bent forwards and arrows in its flank. The same wall has a red hind, in the "Ramales" style. A black horse in the same passage has been dated twice, to 16,980 and 19,140 BP. These are the first Solutrean dates to be obtained for Cantabrian cave art.

The passage becomes quite small and finally unites with the other series of passages and chambers which we first followed from the Great Hall. At this point, the final gallery is entered. One of the first figures on the right is the head of an auroch in red. This is followed by a series of large red discs in line, along more than 15 metres of the right hand wall. There are over 130 of these discs, organised initially in vertical series, but above all horizontally at regular spaces along the wall and finally in parallel bands. They must have been done by spraying the paint on the wall, rather than by daubing it on, and Breuil believed they were contemporary with the hands produced by the same technique. Other red lines and an "X" on the same wall have no apparent meaning. As the passage nears its end there is a group of engravings of two ibex and two horses. And El Castillo has one last exceptional painting: an elephant skilfully outlined in red, without eye or ear, and with one leg front and rear, a tail and a long trunk.

Alcalde del Río, H. 1906. *Las pinturas y grabados de las Cavernas Prehistóricas de la Provincia de Santander*.

Alcalde del Río, H., Breuil, H. and Sierra, L. 1911. *Les Cavernes de la Region Cantabrique*. Monaco.

Cabrera Valdes, M.V. 1984. El yacimiento de la cueva de El Castillo (Puente Viesgo, Santander). *Bibliotheca Praehistorica Hispana* XXII. Madrid.

Moure, A., González, C. Bernaldo, F. and Cabrera, V. 1996. Dataciones absolutas de pigmentos en cuevas cantábricas: Altamira, El Castillo, Chimeneas y Las Monedas. In *El Hombre Fósil 80 años después*. pp 295-314. Santander.

Moure Romanillo, A. and González Sainz, C. 2000. Cronología del Arte Paleolítico Cantábrico: Últimas aportaciones y Estado Actual de la Cuestión. *Actas del 3º Congreso de Arqueología Peninsular*, Vol. II pp. 461-473, Oporto

CUEVA DE LAS CHIMENEAS

Puente Viesgo

The cave was discovered in September 1953 by Alfredo García Lorenzo, a local government engineer in Santander, who was responsible for preparing the Puente Viesgo caves for tourism. He was convinced that another cave must exist on a geological fault, and began digging even though there were no signs of an entrance on the surface. The workmen reached the cave at a depth of 7 m. This was the upper level, where they found a number of narrow shafts (the "chimneys" which gave the cave its name). They descended one, 12m deep, and discovered the lower level, which contains the paintings. No archaeological materials were found apart from a few flints.

This is the second of the decorated caves in Monte Castillo. As described above, it is developed on two levels. The present entrance is via the upper level and a staircase was made to reach the lower level. The total length of the two levels is about 798 m. Prehistoric man would have entered through the lower level, via an entrance now choked with collapses and calcite. This original entrance leads to a passage about 80m long, which opens into a chamber about 10m wide; the location of most of the art.

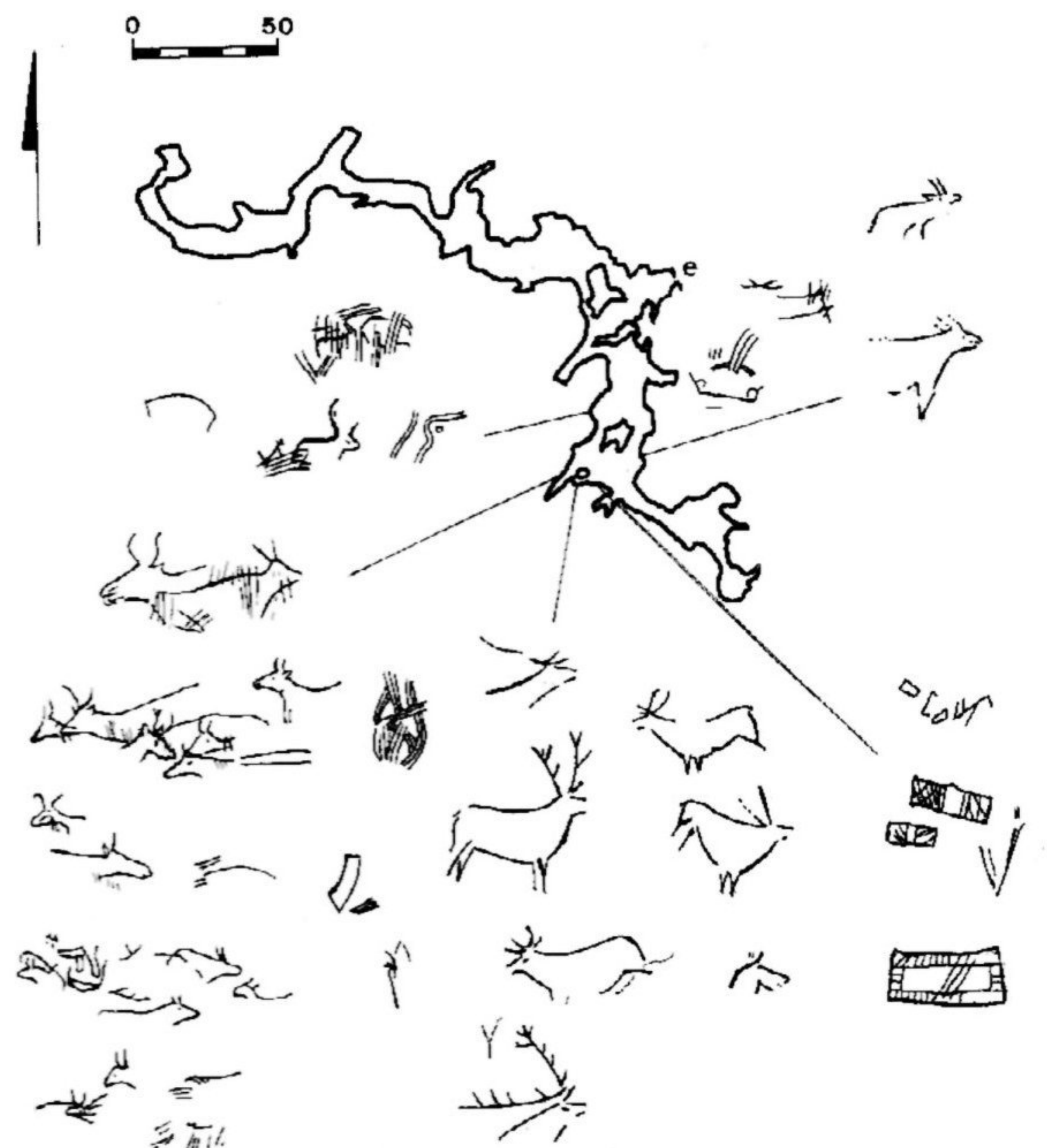


Fig 29. Cueva de las Chimeneas

Cueva de las Chimeneas contains three different groups of figures, produced with two quite different techniques. One of these is a series of engravings produced with a round-ended instrument, such as a stick or simply a finger, over a coating of mud on the roof and walls. The wide white lines of the engravings contrast with the natural light brown colour of their surroundings. The first such figures are located in the passage, and are a caprid and a stag. But the most significant engravings are concentrated on two horizontal ribs of rock in the roof, on the right of the chamber. The figures are engraved in line along both faces of each rib. Most of them represent the head and cervical-dorsal line of some 18 animals such as aurochs, deer, chamois and goats. There are also several abstract macaroni-type engravings made with the fingers.

The other group of figures is a series of paintings in black. The rear wall of the chamber, to the left of the area with the engravings, has a number of quadrilateral signs; these include simple rectangles, and others filled with criss-crossing lines, as well as strange signs made up of lines and zigzags. Another quadrilateral further to the left was engraved, and has a border decorated with short lines.

Black paint was also used for a group of animal depictions, located in a narrow passage behind the chamber. They are a horse's head; the heads, necks and antlers of two stags; and another four full figures of stags. These are supposed to show their antlers in different moments of their growth cycle, from very short to fully developed. The last one of the stags is the most complete, and qualifies as a true work of prehistoric genius. The antlers curve up and divide into three points each, the head is represented by two simple lines, one above and one below, which do not even meet at the muzzle, the body is a simple volume, and the four legs end above the hooves. Analysed in this way, the different parts of the animal are clearly stylised, but in fact they work together to create a perfectly harmonious painting. The left hand wall of the chamber mentioned above has the figure of an ibex, also in black.

The primitive form of the engravings, the quadrilaterals and even the simple outline drawings of the stags, were all considered as typical of Leroi-Gourhan's Style III, corresponding to the late Solutrean or early Magdalenian. They are only unusual in that black paint was used, whereas it is more common to find red figures in Style III, as in Covalanas and even Castillo. The absolute dates obtained have, in this case, created more confusion. A stag has been dated to 15,000 BP, which is a very similar date to a black hind in *La Hoya* in Altamira, and which corresponds to the Anglés Interstadial in the early Magdalenian. However, black marks in the panel of quadrilateral signs were a thousand years younger. This seems too recent a date for this kind of figure, and it is surprising that the art in the cave was not all produced at more or less the same time.

González Echegaray, J. 1974. *Pinturas y grabados de la cueva de las Chimeneas (Puente Viesgo, Santander)*. Monografías de Arte Rupestre No. 2, Barcelona.

Moure, A., González, C., Bernaldo, F. and Cabrera, V. 1996. Dataciones Absolutas de Pigmentos en Cuevas Cantábricas: Altamira, El Castillo, Chimeneas y Las Monedas. In *El Hombre Fósil 80 años después*, pp 295-314. Santander.

CUEVA DE LA FLECHA

Puente Viesgo

The cave was discovered in the 1950s when the road was being cut around the hillside connecting the different caves of Monte Castillo. The entrance was originally quite small, but the vestibule was later dug out, so that it is now between 2 and 3m high. Chalcolithic and Palaeolithic materials were found, and most significantly, a copper arrow head; which gave the cave its name (*flecha* = arrow). The art was found by C.A.E.A.P. in 1979.

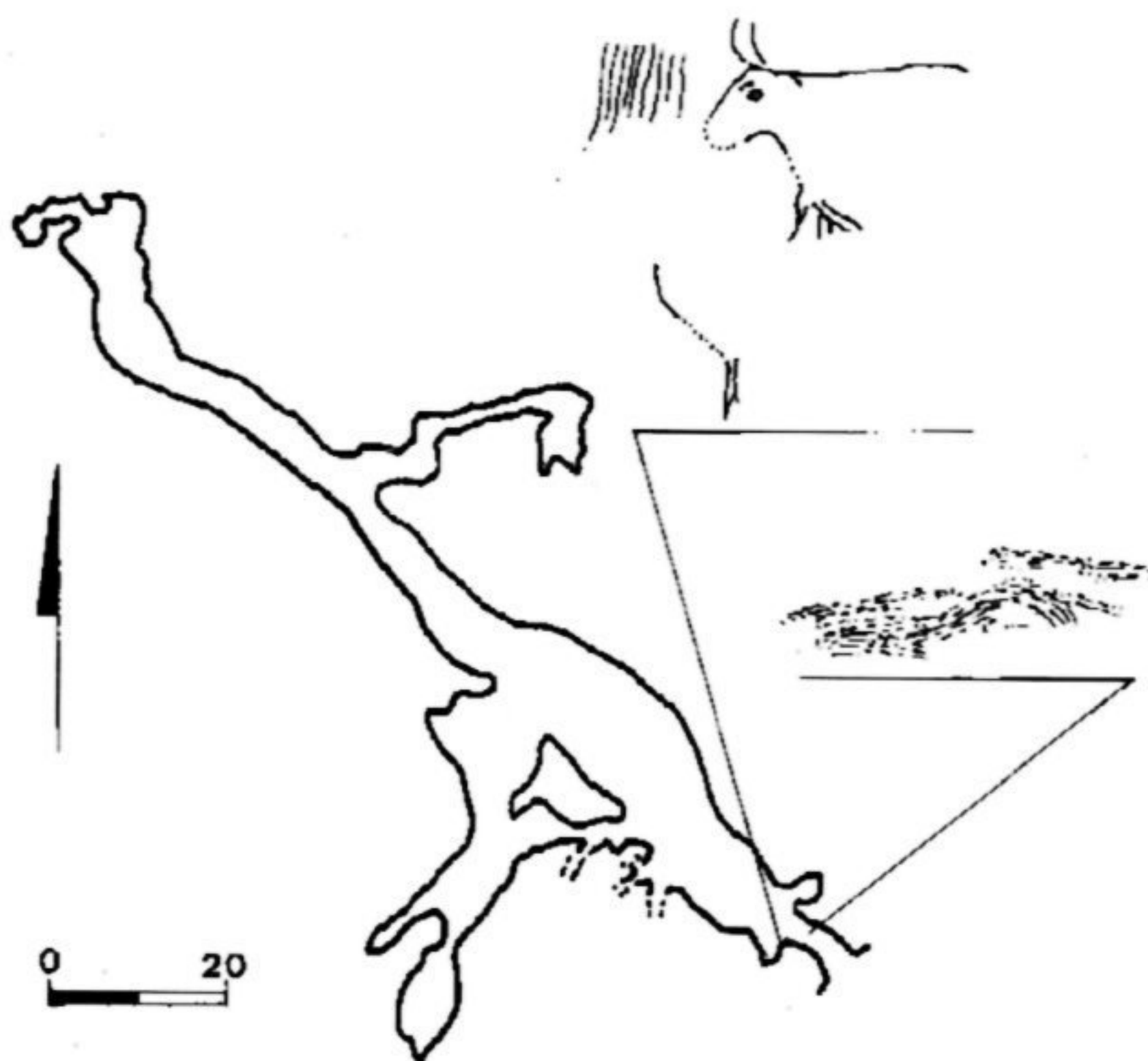


Fig 30 . Cueva de la Flecha

The vestibule narrows into a smaller opening, which leads into the interior cave, about 400m long. Although it is of generally quite large proportions, it is a humid cave, with large formations and boulder collapses impeding easy progress through its chambers.

Cueva de la Flecha has two kinds of figures. First, there is a group of macaroni on the vestibule roof. The bands of two or four lines form a panel of meanders and curves about 60cm long. They are now at a height of 3m above the floor but, as mentioned above, the floor was much higher before it was dug out.

The second panel is on the left at the start of the interior cave. The main figure is the front quarters of a bovid, with the head, eye and two horns clearly seen. On the left there is a group of nine parallel vertical lines about 8cm long, and below these a group of lines which could be interpreted as a bison's leg. These engravings have a rather fresh appearance, as they lack the patina normally acquired by old engravings, which means they are doubts about their authenticity. On the other hand they are partially covered with calcite, which is unlikely to have formed since the 1950s.

San Miguel, C. and others. 1993. Los grabados parietales de la cueva de la Flecha (Puente Viesgo, Cantabria). *Boletín Cántabro de Espeleología* N° 9, pp 35-38. Santander.

CUEVA DE LA PASIEGA

Puente Viesgo

H. Obermaier and P. Wernet were shown this cave on May 23rd 1911, on a day when heavy rain had halted the excavations at Cueva del Castillo. It was then studied by Obermaier, Breuil and Alcalde del Río in a publication of the Institut de Paleontologie Humaine in 1913. Since then many other figures have been identified, and described in short articles, at least five of which have been published between 1953 and 1996. In fact the cave has been comprehensively revised by researchers at the University of Cantabria, although their results have only been published in part. They have catalogued 301 animal figures, 148 abstract signs, as well as groups of dots and stains of pigment.

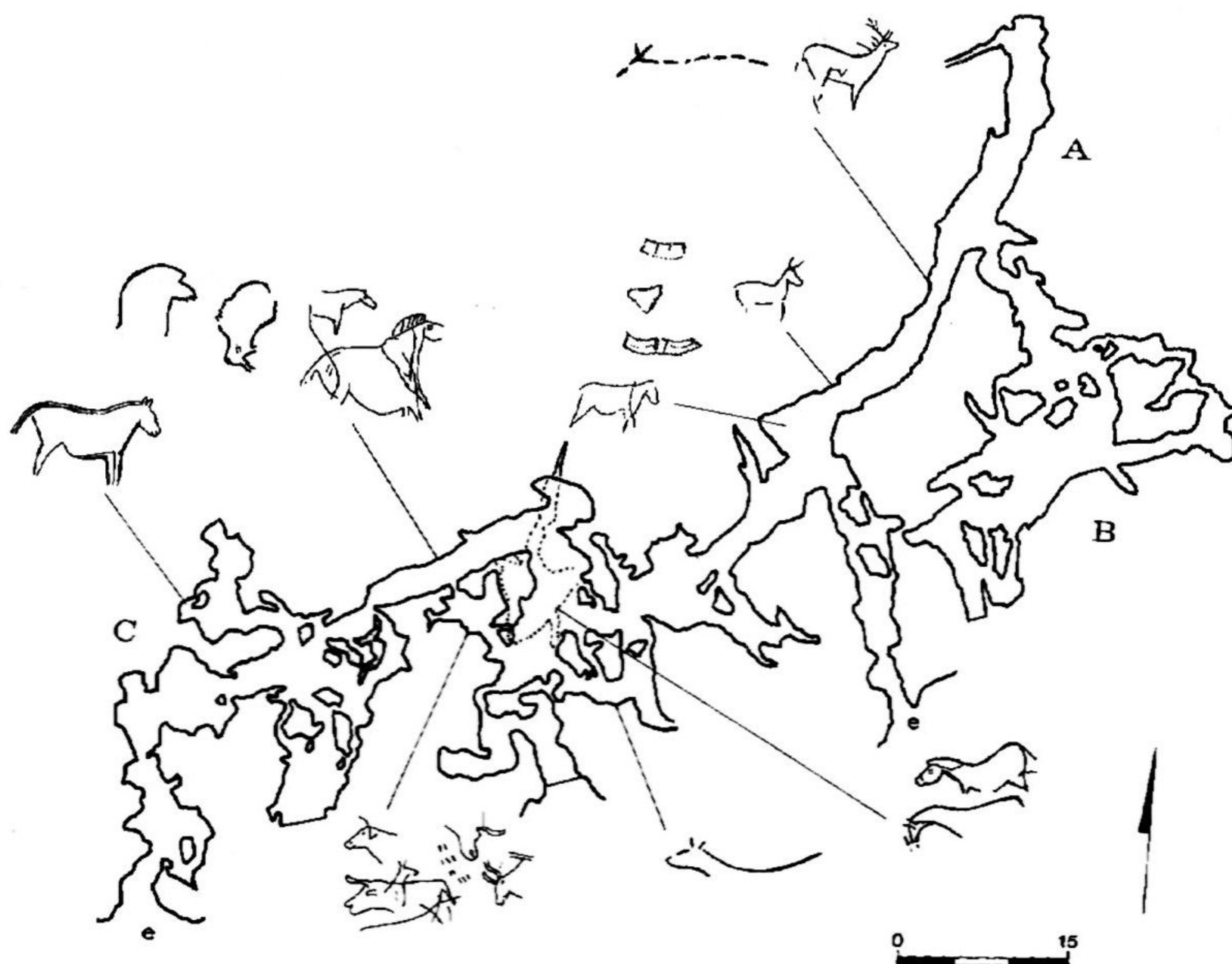


Fig 31. Cueva de la Pasiega. The complete cave.

The fourth of the caves of Monte Castillo, it originally had as many as six entrances, leading to a series of chambers linked by narrow and occasionally quite tortuous passages. The art is concentrated in three main areas known as galleries A, B and C, although other figures are found in the maze of linking passages between, known as Zone D. Since the discovery, most of the entrances have been covered over, and now only two are used; the first gives access to Galleries A and B, while the second enters Gallery C. When the cave was gated in the 1950s, digs were carried out in the entrances, and the materials found were attributed to three periods. The lowest layer had a Mousterian appearance, and this was overlaid by late Solutrean and early Magdalenian levels.

The entire cave contains over 200 figures, of enormous interest and variety, making this one of the most important caves in the region.

Gallery A: This is a slightly curved corridor, about 25m long and 3 or 4m wide. At its end it turns sharp left and becomes too tight. The roof and walls of the passage have over seventy paintings of animals and a large group of signs, distributed on both walls of the corridor and on cornices in its roof. The first figures on the left are a bison and a hind in red, produced by lines of dots, similar to the

paintings of Cueva Covalanas and other caves in the eastern side of Cantabria. The next panel has two horses and a stag, and hinds, stags and horses are the most common animals along this wall. Often only part of the animal is depicted; thus one of the stags consists only of the forehead, an eye, antlers and the cervical-dorsal line, and some of the horses are represented by their head and neck. One of the most complete figures is a large, long-bodied horse in reddish-brown, with some kind of spear piercing its rear-quarters. The opposite wall has a stag, similarly wounded with a spear which divides into three tails.

The greatest concentration of signs is in the final tight passage, in the form of red tectiforms: long rectangles or lozenge shapes filled with horizontal or vertical lines. It is worth pointing out that tectiforms were once believed to represent the roofs of huts, but here most of them are vertical. The end of the corridor also has a complex panel with more of these signs, horses, hinds, a bovid and two bison, one of them head downwards.

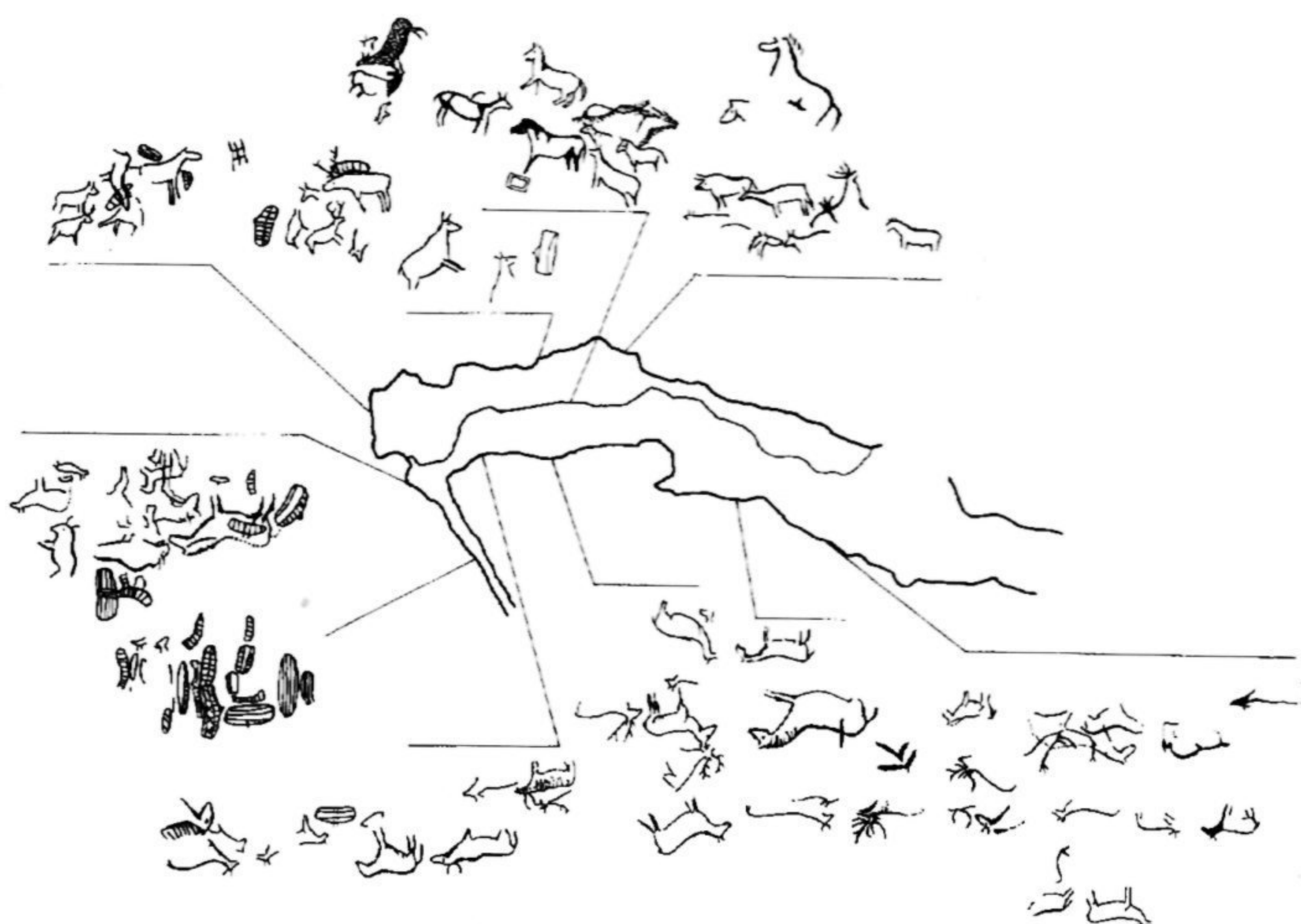


Fig 32. Cueva de la Pasiega. Gallery A

of these are represented only by their outlines, but others have their bodies fully coloured-in with large expanses of flat red-wash. Near them are two small finely-engraved horses. The most complete of these is a beautiful figure with all its details reproduced faithfully - its muzzle, eye, mane, four legs and tail, and its belly shaded with multiple lines. The other important paintings in this gallery are in an alcove on the right; a group of red claviforms with a roughly triangular shape, but with curving sides.

A narrow oxbow, or side-passage to Gallery B, contains more art. This passage is reached by climbing up to the left of the "inscription" mentioned above, and at its entrance it has another of the red claviforms. The next figures include engravings of hinds, and an ibex painted in red and engraved. This is just above a large engraving of a stag, apparently wounded and in pain; its head is held upwards and its mouth is open. Its antlers cut the legs of a very faint red horse. Another interesting panel has a stag positioned head downwards, crossed by another engraving of a hind's head. The passage now becomes very narrow, before opening into a small chamber, with further groups of fine engravings. These include ibex and a horse, and one complete caprid is a graceful figure, seemingly running or about to jump.



Fig 33. Cueva de la Pasiega. Gallery B

Gallery C: This area of the cave is connected to Galleries A and B by narrow passages, but nowadays it is reached by a separate entrance. It has another numerous collection of paintings; some of them are similar to those seen in the previous galleries, but others are quite unique. Probably the most spectacular is the large figure of a bison in brown and black. A true masterpiece, painted with confident sinuous lines, its head, which seems disproportionately large, almost takes on a human quality. Also outstanding are two hinds facing each other; the one on the left is depicted by its head and neck alone, the other also has the front part of the body and front legs. To the left of these, the head and front-quarters of a bull is an important figure, despite its dubious artistic quality, as it is polychrome, with a black outline and red interior. Another quite startling figure is a sign consisting of twelve undulating



Fig 33. Cueva de la Pasiega. Gallery C

of a wounded stag near the entrance to Gallery A, and figures of hinds represented by their head, ears and cervical-dorsal lines. There are more complete figures of horses, both in red and engraved.

This great variety of art must have been produced over a prolonged time, as the many superimpositions show. The earliest figures, such as the animals composed of dots in Gallery A, are Solutrean, whereas Magdalenian art is represented by the polychrome bull in Gallery C, the other animals using colour-wash, and the fine multiple-line engravings in Galleries B and C. Radiocarbon dates have been obtained for two of the black paintings in Gallery C. An ibex was dated to 13,800 BP, and a bison is somewhat more recent: about 12,000 BP.

Breuil, H., Obermaier, H. and Alcalde del Río, H. 1913. *La Pasiega à Puente Viesgo (Santander)*. Monaco.

González Echegaray, J. and Ripoll, E. 1953-54. Hallazgos en la cueva de la Pasiega (Puente Viesgo, Santander). *Ampurias* XV-XVI, pp 43-65.

González Echegaray, J. 1964. Nuevos grabados y pinturas en las cuevas del Monte del Castillo. *Zephyrus* XV, pp 27-35.

González Echegaray, J. and Moure, A. 1971. Representaciones inéditas en la cueva de la Pasiega (Puente Viesgo, Santander). *Trabajos de Prehistoria* 28, pp 401-405.

Balbín, R. and González Sainz, C. 1994. Un nuevo conjunto de representaciones en el sector D.2 de la cueva de La Pasiega (Puente Viesgo, Cantabria). *Museo y Centro de Investigación de Altamira*, Monografía No. 17, pp 269-280.

Balbín, R. and González Sainz, C. 1996. Las Pinturas y Grabados Paleolíticos del Corredor B.7 de la Cueva de la Pasiega (Cantabria). *El Hombre Fósil, 80 años después*, pp 271-294. Santander.

Moure Romanillo, A. and González Sainz, C. 2000. Cronología del Arte Paleolítico Cantábrico: Últimas aportaciones y Estado Actual de la Cuestión. *Actas del 3º Congreso de Arqueología Peninsular*, Vol. II pp. 461-473, Oporto

González Sainz, C. and Balbín, R. 2000 Revisión de las representaciones rupestres paleolíticas de la cueva del La Pasiega en el conjunto del monte Castillo. Topografía y documentación artística. In *Actuaciones Arqueológicas en Cantabria 1984-1999*, pp.69-73.

CUEVA DE LAS MONEDAS

Puente Viesgo

It seems that this cave had been known to one Isidoro Blanco since about 1920, and remembering it some thirty years later, he re-found it in April 1952 in the company of García Lorenzo and Felipe Puente, head guide at Cueva del Castillo. In this way it became the first discovery of cave art in Cantabria for 41 years, since precisely that of La Pasiega, just a hundred metres away. A number of artefacts were also recovered, especially a Bronze Age axe as well as pottery and other metal objects. Two other curious finds were made. One was a flint spearhead among the bones of a cave bear, suggesting that the bear had been wounded by the same spear, and carried it in its body. The other was a large number of bootprints on the floor throughout the cave. These were concentrated most at the top of a 23m pitch in one of the last chambers, and there 20 coins were found, with the date 1563. The same footprint was also seen at the bottom

violet lines one above the other; it is situated above a pit in the floor.

Gallery C is also known for its superimpositions of paintings and engravings. One such panel has two red claviforms, over which the outlines in black of a goat and a horse's head were painted, and over these there are multiple-line engravings of a horse and indeterminate animals. Another complex panel has a rare positive hand in black, overpainted by a horse's head in red and a magnificent painting of a whole hind in reddish-violet. Engravings of hinds cut all the figures.

Zone D, the series of chambers and passages linking Galleries A and C, has more animals and signs. They include the engraving



Fig 35. Cueva de las Monedas

of the pitch. And this story gave the cave its name, as *monedas* means coins.

This is the fifth and last cave in Monte Castillo, at the end of the track which goes round the hillside from Cueva del Castillo. It is 805m long and consists of a series of chambers, with large formations of stalagmites and flowstone. The paintings are, however, all located in one chamber to the left of the entrance.

The art of Cueva de las Monedas consists exclusively of paintings in black. The first figure is a triangular sign, next to a small composition of a reindeer, a bison in a vertical position, and two horses. Towards the right, there is another group of horses, one of which is headless. These are followed by a large reindeer, with an ibex below. Both of these are well proportioned, yet just above them is a rather childish drawing of a deer. Continuing to the right, there is another headless horse and a group of indeterminate animals. Practically the last figures on this wall are the most interesting; a complete horse in a vertical position and another reindeer. The horse has a small head, with a long neck, body and tail. It is drawn with clear late Magdalenian conventions; a line down its shoulder separates its body from its neck, and another line separates its back leg from its flank, and its flank from its belly. This type of internal line is known as an "M"-shaped ventral partition. The reindeer has some ten short lines under its neck, indicating the hair typical of the species.

Opposite these is one of the most puzzling figures in Cantabrian cave art. This is a large sign or signs of curving intertwined lines (among which it is just possible to imagine a human face of large round eyes) together with groups of parallel or criss-crossing straight lines. It is hard to understand what meaning it could have had, especially taking into account the amount of time and effort surely needed to produce it. To the right there are more signs, as well as a rare figure of a bear. It is artfully represented by a long line for its back and rump, and the head clearly detailed with ears, eye, muzzle and chin, but the limbs and lower part of the animal are completely missing. To the right of this is a caprid. This has an eye, two rear legs, but no front legs. Even so, it is a well-drawn figure, and curiously once again there is next to it another caprid completely out of proportion. The next figures are a small pony-like horse, and a group of overlapping figures including two horses and an ibex. A last horse is headless, but the back and neck of the animal uses the natural form of the rock. It is next to a final complex group of signs.

Although the figures of Las Monedas are all monotonous drawings in black, they raise several interesting points. One is the existence, just as in El Castillo, of a bison in a vertical position. As the image is repeated, it seems that it must have held some significance. Another is the relative frequency of headless, or acephalous, animals, in this case mainly horses. A final point is that the cave has several reindeer, which is not a common species in Cantabrian cave art. As it also has horses and bison, but lacks red deer, the paintings were associated with a particularly cold climatic phase, and in fact recently they have been dated by C14-AMS to about 12,000 BP, during the Dryas II, the last really cold phase at the end of the glaciation.

In any case it seems that this cave deserves a full revision, as a recent article has described a group of engravings on the left of the vestibule. This panel has a bison 52cm long, a mask, an ibex with long horns, and a small head of a hind.

Ripoll Perelló, E. 1972. *The Cave of Las Monedas in Puente Viesgo (Santander)*. Monographs on Cave Art N°1. Barcelona.

Cabrera, V. and Múzquiz, M. 2000. El arte rupestre de la cueva de las Monedas (Puente Viesgo). Resultados preliminares de las campañas de 1989-90. In *Actuaciones Arqueológicas en Cantabria, 1984-1999*, pp 145-146.

CUEVA DE HORNOS DE LA PEÑA

Tarriba (San Felices de Buelna)

Cueva de Hornos de la Peña was discovered by Alcalde del Río on October 27th 1903, and the art and archaeological deposit were studied by the *Institut de Paleontologie Humaine*. The stratigraphy had apparently been partially disturbed, but the excavators identified levels ranging from Mousterian, Aurignacian, Solutrean and Middle Magdalenian to Post-Palaeolithic remains.

Between 1971 and 1973 Peter Ucko, of the University of Southampton, led a team producing a new study of the cave. Whereas the original study published in 1911 included 27 figures, all except one being animals, Ucko recorded 140 representations, including a few more animals, but mostly indecipherable signs. He admitted that possibly not all of these were Palaeolithic.

The entrance, on the hillside above a steep valley, leads to an ample vestibule, the site of the excavation. A low passage then leads into the interior of the cave, which is about 150m long altogether.

The majority of the figures are engravings, forming one of the most important groups in the region. They are found in two distinct areas of the cave: the vestibule and the interior.

As originally published by Alcalde del Río, Breuil and Sierra, the vestibule had a group of three figures. These were a bison on a large block of limestone on the right of the entrance, and a horse and a caprid on the left-hand wall. This rare daylight group was assigned by Leroi-Gourhan to his Style II, in clear contrast with the interior art, included in early Style IV. Unfortunately the block of limestone, and the bison, were inadvertently destroyed when the cave was gated in the 1950s. The only evidence we have of it today is a rather distant photograph in *Les Cavernes de la Region Cantabrique*, which exceptionally does not even have a drawing of the figure. Ucko then showed that the caprid was mistakenly placed in the vestibule in that 1911 publication, and its real position was in one of the

final chambers. Even the horse seems to have suffered damage, and its head, clearly drawn in the original publication, is no longer visible. The loss is probably due to erosion of its calcite support. Breuil compared this figure with that on a bone object found in the excavation, and used it to justify an Aurignacian date for the figures in the vestibule. In fact, the only similarity between the cave art and the mobiliary art is that they both show the rear parts of a horse, but the treatment of the tail and the leg are quite different. In conclusion, little now remains of the vestibule group, and even the date given to it is questionable. Ucko has, however, identified the leg and hoof of another possible horse in this area.

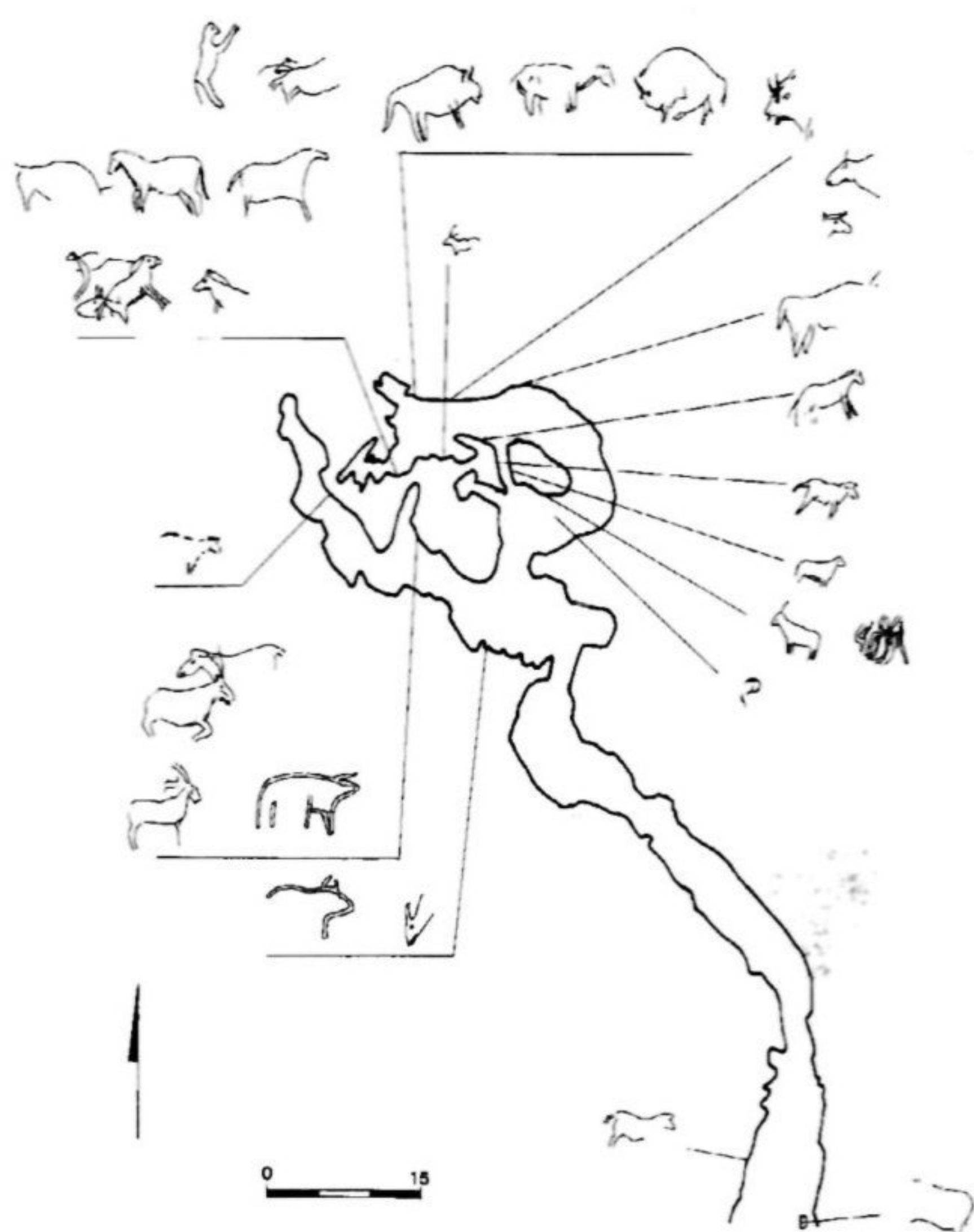
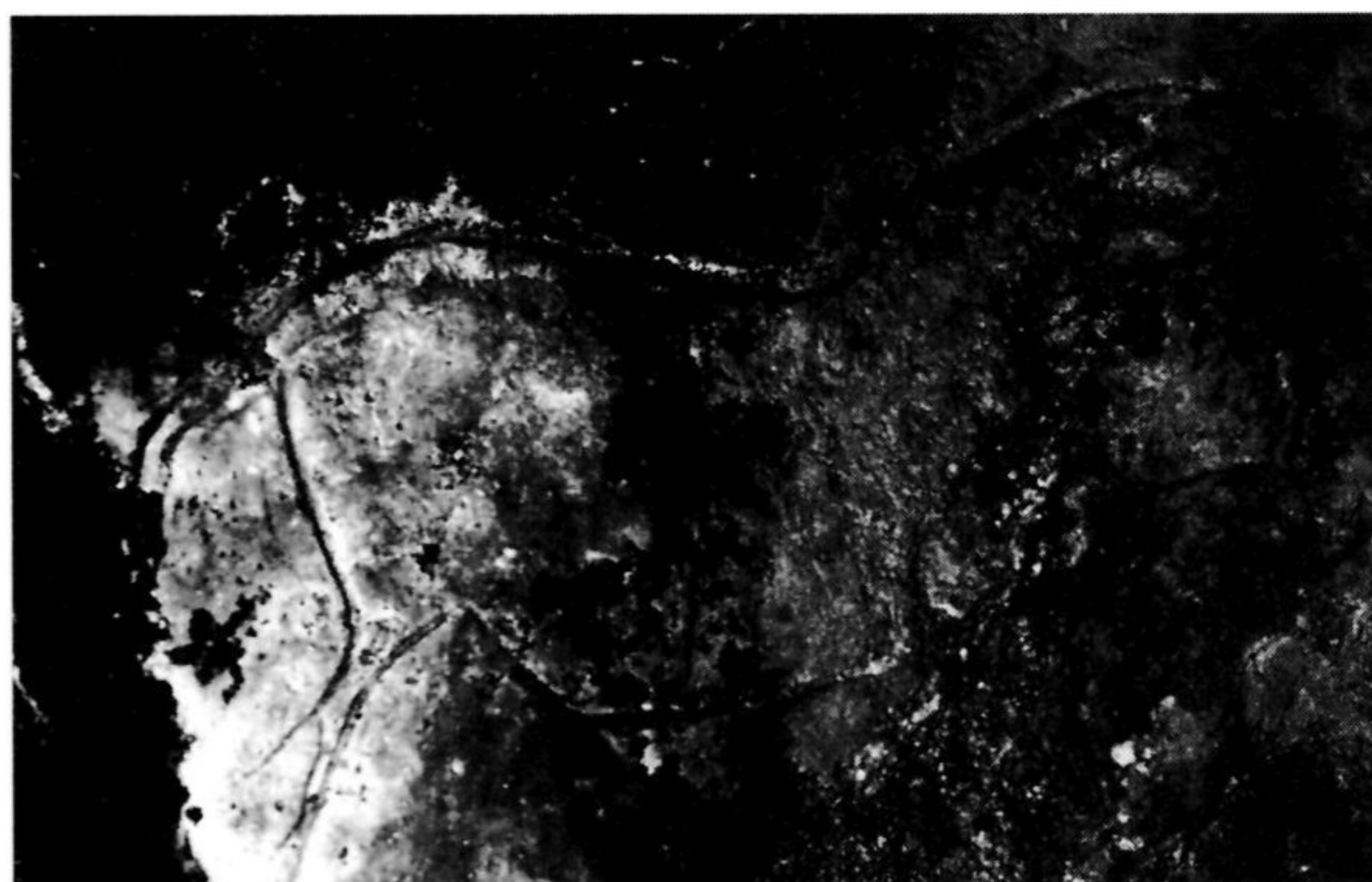


Fig 36. Cueva de Hornos de la Peña



Pic 13. The engraving of a horse in the entrance of Cueva de Hornos de la Peña

At the end of the low passage, which is about 25m long, the cave increases in size and divides into a complex, if somewhat short, series of chambers partitioned by large calcite formations. The disheartening state of the art in the vestibule persists in the interior. The obvious defects in the 1911 account are compounded by the fact that Ucko never published a systematic report of his research. He does make it clear, however, that his team were unable to confirm many of the figures studied in 1911. But there may be other explanations for this, apart from suspecting Alcalde del Río and Breuil of having taken insufficient care and used too much imagination. It seems that the cave was already disfigured by names scratched on the wall before 1911. Later the cave was used as a shelter during the Spanish Civil War, when it must have been damaged more severely. It was repaired during the 1950s, and it is possible that some of the engravings even had to be “restored”. It is therefore understandable that Ucko could not identify all the details given in *Les Cavernes de la Region Cantabrique*. The problem is that Breuil grouped the figures in different periods, and Leroi-Gourhan included them in early Style IV, based on details such as eyes, numbers of legs etc which can no longer be seen.

One of the first figures in the interior is a bovid engraved with wide lines in clay on the left-hand wall. In technique it resembles another bovid in one of the final chambers, and these are evidence of apparently quite a primitive art. Where the cave turns right, a stag is engraved on a calcite surface, and the same chamber has numerous indecipherable black marks. The main passage leading towards the interior has no figurative art, but a narrower passage connecting with the final chambers contains another primitive figure in clay, difficult to identify, and a finely engraved horse. The end of this passage has another horse.

Back in the main passage, which has groups of macaroni, the first figure is the head and front-quarters of a possible reindeer. The next is a finely engraved bovid; practically the whole body is represented. It is followed by the head of another bovid, ambiguously identified as either a bull or a bison. There is now a strange animal, clearly visible, yet not included in the original studies. In truth, considering its grotesque proportions, large oblong head, round body, and triangular rear leg, it may well be a modern falsification. The next panel contains the caprid originally given as being in the vestibule, and the head of a bovid. The following figures are two heads of bison and an almost complete bison. A characteristic of all three is the sinuous form of the horns, represented as a three-quarters view.

The final chamber has more macaroni, while the first figures are a horse and a bison. The latter is one of the finest engravings in the cave; the body is complete, and all four legs are shown. It has one horn, eye and ear, and also has two lines in front of its mouth which may represent either its tongue or its steaming breath. This detail is typical of other bison in Hornos de la Peña and other caves, such as Altamira. The next panel is one of the most complex. It contains numerous lines crossing over one another, among which the head of a horse facing left and a more complete horse looking right can be distinguished. But the most significant figure is an anthropomorph, typically monkey-like, with an up-raised arm, eye and pupil, a tail, and lines that may or may not represent a penis, depending on their interpretation.

Another interesting panel in the same area is formed by horses facing left and right, a bison, and macaroni. Breuil used stylistic differences in the animals to date them in different periods - Aurignacian, Solutrean or Magdalenian. For example, the horse facing

right is very simple, with only one leg front and rear. The other is more detailed, with all four legs and some multiple lines. Ucko was able to confirm that the bison cuts the lines of the horse facing right, and this cuts the macaroni. The horse facing left cuts the lines of the bison. In other words, the macaroni were drawn the first, followed by the horse facing right, the bison, and the last figure was the horse facing left. But this is only a relative chronology, to which no absolute values can be given.

The following panel is equally interesting. It contains a complete and detailed horse, the head of another horse with a rather ass-like appearance, and two sinuous lines which may represent a snake. Different tracings of this include, or omit, an eye, which is really the deciding factor in recognising this as an animal, and not just two lines. These engravings are again superimposed on macaroni, and just below the panel there is another horse; only the front part and the cervical-dorsal line are shown. The next figure in *Les Cavernes de la Region Cantabrique* was the head of a bison, which Ucko was unable to identify. Either Alcalde del Río and Breuil were interpreting natural fissures, or the figure has been almost completely destroyed by graffiti.

Returning to the first interior chamber after the low passage, another passage leads off on the left. This contains less art, and it seems to be the part of the cave which suffered the most from 20th Century vandalism. A horse is painted in discontinuous black lines, and there is a panel with two goats, and a horse. One of the goats was said to have a beard of finely engraved lines, but Ucko thought these were bat scratches on the cave wall. Another figure is a primitive bovid in clay, described by Breuil as wounded with a spear in its side. However Ucko found that the line representing the spear actually crossed the animal's body and finished as its horn.

The figures of Hornos de la Peña show an unusual (for Cantabria) predominance of horses, bison and oxen or aurochs over deer. These are steppe animals and possibly indicate that the art was produced during a climatic phase when conditions were too cold for woodland. The importance of horses and bison fits Leroi-Gourhan's ideas about the central position of these animals, but what is not so clear is his dating of the figures in the vestibule in Style II and the interior figures in early Style IV. On one hand the figures in the entrance cannot be dated easily, and on the other it is clear that there are several types of figures inside the cave. The oldest are probably the macaroni, and then the primitive bovids traced by fingers in the clay. Both these types may be older than the art in the vestibule. Of the other engravings, Breuil's affirmation that there are different styles, simplified or more detailed, does seem to be justified to a certain extent. The best and most complete of the figures use the technique of multiple lines for shading, and so these must be dated in the early or middle Magdalenian.

Alcalde del Río, H. 1906. *Las pinturas y grabados de las Cavernas Prehistóricas de la Provincia de Santander*.

Alcalde del Río, H., Breuil, H. and Sierra, L. 1911. *Les Cavernes de la Region Cantabrique*. Monaco.

Ucko, P. 1987. Débuts illusoires dans l'étude de la tradition artistique. *Bul. Soc. Préhistorique de l'Ariege*, Tome XLII, pp 15-81. France.

Ucko, P. 1989. La subjetividad y el estudio del arte parietal paleolítico. *Cien Años después de Sautuola*, pp 283-358. Santander.

CUEVA DE SOVILLA

San Felices de Buelna

This is a small cave, located only 10m from the road, and just above a small resurgence. Now only 8.5m long, its original length would have been about 15m, but the porch of the cave was destroyed by quarrying in the early 1950s. Furthermore, names scrawled on the wall had already seriously damaged the art before its discovery. Lichen had colonised part of the walls, and when this was cleaned off, more engravings were found.

Cueva de Sovilla was discovered by C.A.E.A.P. in 1987. As well as the cave art, it has a late or final Magdalenian deposit, with abundant flint and bone artefacts, including a fragment of a typical harpoon. A small piece of a sandstone plaque was found with the engraving of a head of an ibex.

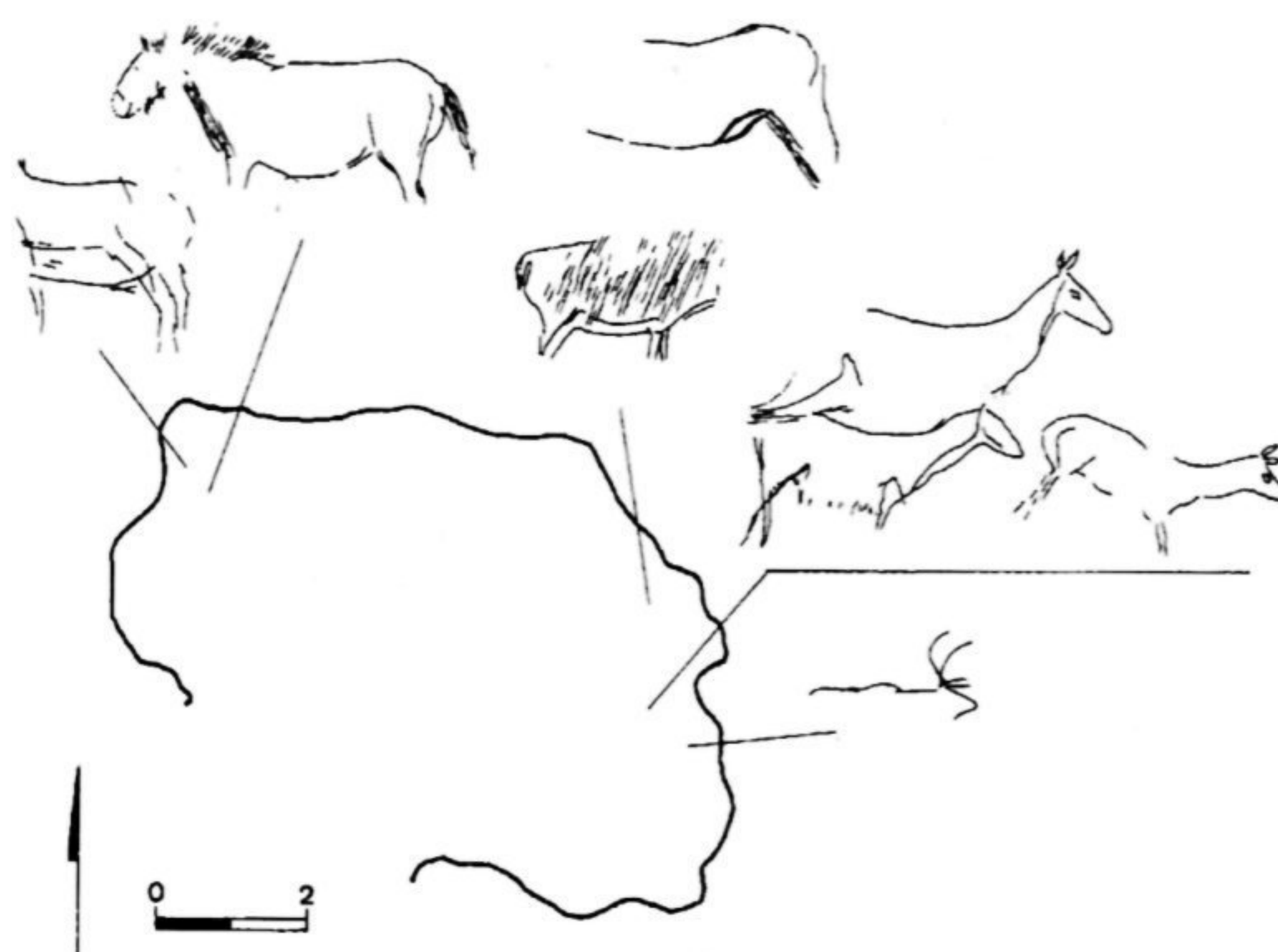


Fig 37. Cueva de Sovilla

The engravings in the cave are quite fine, and seen with difficulty due to their poor state of conservation. They form three groups, the largest panel being on the right of the chamber. The first figure is a possible reindeer, shown by its head, antlers, and cervical-dorsal line with a prominent hump marking its withers. It is next to other indeterminate lines.

The same panel also has two hinds next to a horse. The lower hind is the most complete, with two ears, an eye, and all four limbs. The other hind has two ears and an eye, but no legs. The horse's belly is shown as a series of short lines, depicting hair. It is quite likely that these three figures were all done by the same artist. A further two figures in this panel are headless. One probably represents a bison; its body filled with parallel lines, while the other cannot be identified.

The central group consists only of lines, although these may form signs. The third group is on the left of the chamber. Here the main figures are a horse and a possible hind. The horse is one of the most striking figures in the cave; its muzzle and mane are shown in detail, and its chest and tail are striated. Its legs are not finished, as they stop at a fissure in the rock. The hind is incomplete; again an *acephalous*, or headless, animal.

As these engravings have details such as the eyes, and use the technique of striated lines, they must be of Magdalenian age, and are probably contemporary with the cave's archaeological deposit, dated between 13,000 and 11,000 BP. The study of the cave also stresses the enormous gap there must be between the art that can be identified now and the original reality of the cave.

González Sainz, C., Montes, R. and Muñoz, E. 1994. La Cueva de Sovilla (San Felices de Buelna, Cantabria). *Zephyrus* XLVI, pp 7-36. Salamanca.

CUEVA DE CUDÓN

Cudón (Miengo)

The entrance lies within the village of Cudón, below a narrow side-road. It leads directly into a large passage that continues for over 500 m. The first part has a few short side passages. However, near its end a smaller semi-active passage can be reached on the right, there is a high-level series of passages also on the right, and then a lower stooping size passage on the left that extends below the main gallery. The total length of the cave is 2,014 m.

The cave was discovered by a local man in the 1930s, and it was studied by Alcalde del Río, who found a collection of Visigothic objects, including a bronze jug and a tray typical of those used in early Christian ceremonies. S.E.S.S. explored the cave in 1963, and they found the first evidence of Palaeolithic art; groups of macaroni in a small side passage. Another caver, Pedro R. Bilbao, found the negative image of a hand in the main passage. The cave was then studied by C.A.E.A.P. during a long period of time, and they have found and published the vast majority of the cave art. The vestibule had Palaeolithic deposits, and both prehistoric and medieval pottery has been found inside the cave.

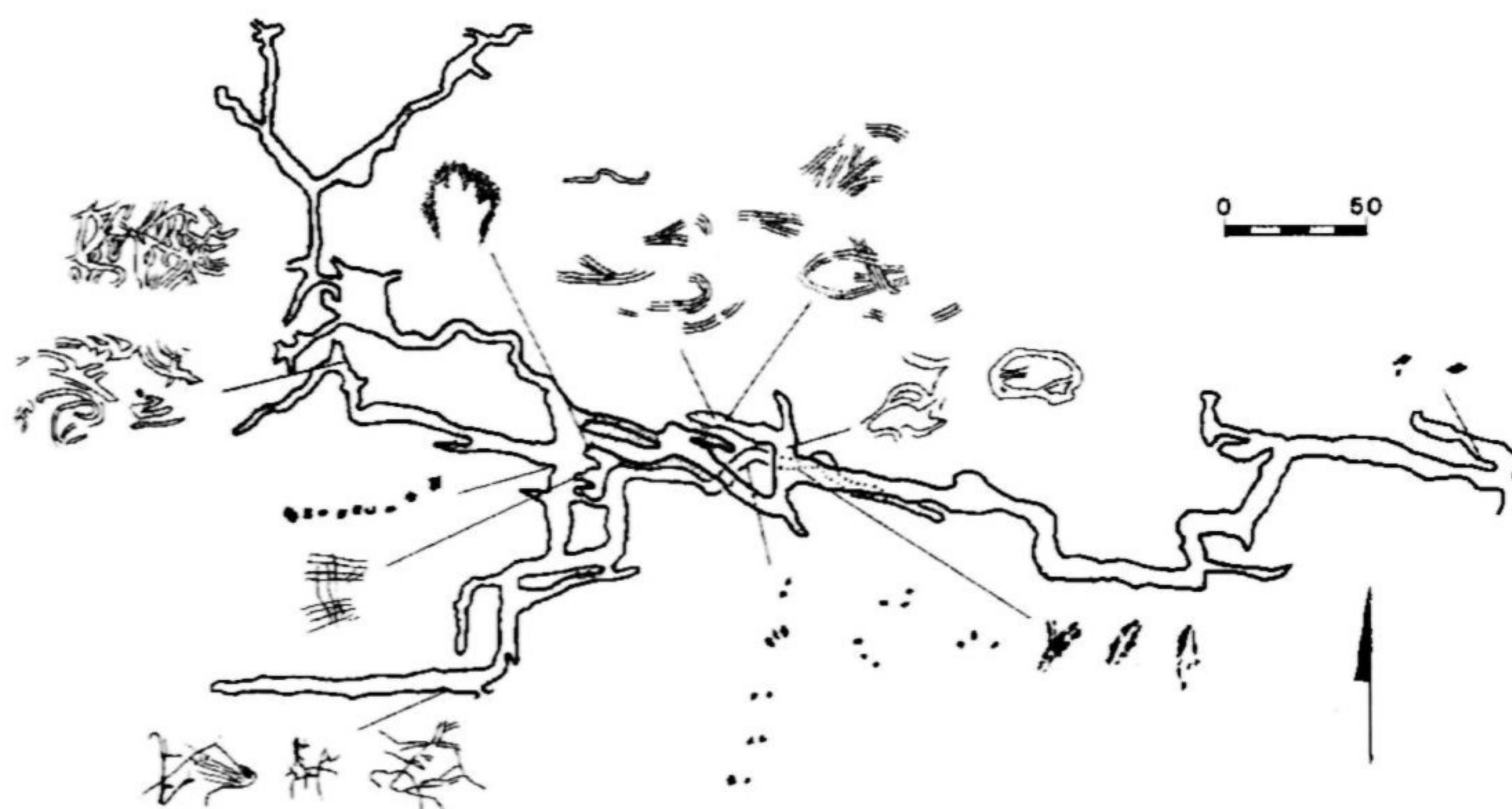


Fig 38. Cueva de Cudón

The art of Cueva de Cudón is extraordinarily complex, and E. Muñoz has documented some 79 panels, some of which are subdivided into numerous figures. They can be classified into: macaroni-type engravings, painted dots, and other paintings and engravings. The first type is found above all in the main passage and its side passages. In some cases finger pressure has removed the layer of clay on the wall to expose the lighter coloured rock surface. In this way a figure interpreted as a headless bovid was created, but most of the figures seem to be abstract designs.

About 440m from the entrance the passage widens into a large chamber where steps have been cut into a mud slope down. Here is found the negative image of a hand; in red and with mutilated fingers, except the index finger. A side passage on the right has a line of nine large violet-red dots.

The main passage continues with few examples of art, until it reaches the junction with the low passage on the left. Along its 200m length, the roof of this passage is decorated with large numbers of dots; an extraordinary demonstration of Palaeolithic tenacity. The

dots are mostly of red pigment, but black is also used, and one sign is composed of a red line and a black line which together make up an oval shape. The dots are generally grouped in twos or threes, and seem to have been done by applying the pigment with the fingers.

The last figures are found at the far end of the main passage, where a small entrance once existed. There is a group of deep engravings in a layer of calcite, among which the heads of a horse, hind and stag have been identified.

Muñoz, E., San Miguel, C. and Gómez, J. 1991. Avance al estudio del Arte Rupestre Paleolítico de la Caverna de Cudón. *Arquenas Arte Rupestre y Mobiliar* Vol. 1. pp 29-79. Santander.

CUEVA DE LA PILA

Cuchía (Miengo)

Cueva de la Pila was about 300m long, with one main passage about 2-3m high and 4-5m wide. It was located within a quarry, which completely destroyed the cave in the 1980s. Before this happened, the stratigraphy in the entrance passage was dug, finding Azilian and late Magdalenian levels. The latter contained an important number of bone assegaies and harpoons, decorated with figures of snakes, a horse and geometric designs. The cave also contained human skeletal remains and material of later periods.

The cave was known since the 1950s, but the paintings and engravings were discovered in the early 1980s by C.A.E.A.P., when the cave was already threatened with destruction.

The art of Cueva de la Pila was never studied fully. About 20m from the entrance, the left hand wall contained a panel of engravings, in the form of deep parallel lines, made with a wide-pointed object in a calcite surface. Nearly 100m from the entrance, the same wall had a second group of finer engravings, forming a grille of horizontal and vertical lines. Opposite these, an alcove in the right hand wall had a number of red paintings. These included a large dot and a group of sub-parallel lines. A few other smaller dots were found on the right hand wall near the end of the cave. Examples of both the engravings and the paintings were later removed from the wall before the destruction of the cave, and they were deposited in the Museum of Altamira at Santillana del Mar.

Fernández Acebo, V. and others. 1981. La cueva de la Pila. *Memorias de A.C.D.P.S.* 1980-91. pp 3-8. Santander.

Gutierrez Saez, C. and others. 1986/87. Arte Mueble Figurativo de la cueva de la Pila (Cuchia, Cantabria). *Ars Praehistorica* V/VI pp 221-234. Sabadell.

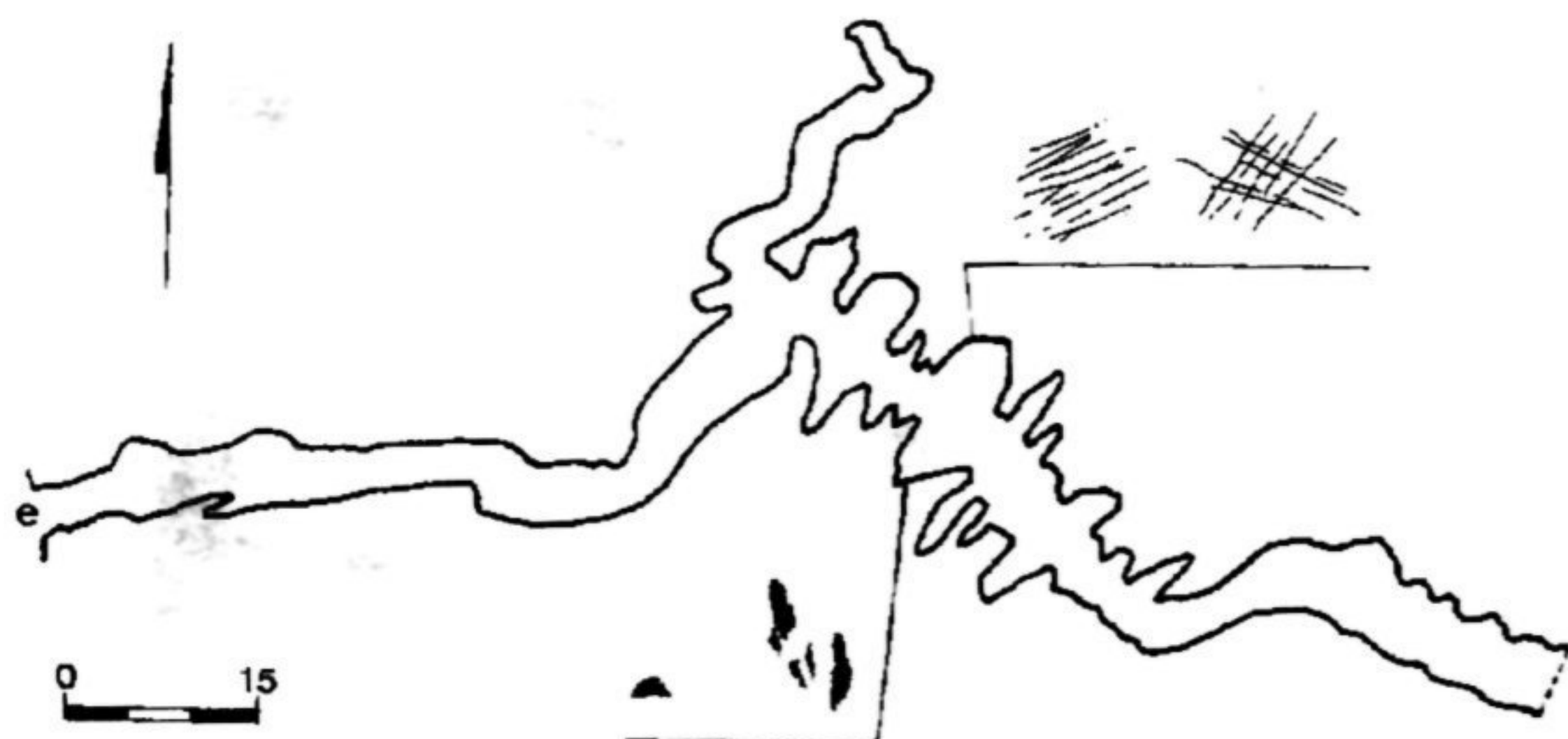


Fig 39. Cueva de la Pila



Fig 40. Cueva de las Brujas

CUEVA DE LAS BRUJAS

Suances

Archaeological deposits were discovered in Cueva de las Brujas at the end of the 19th Century, and a few years later the cave was the scene of a number of fake paintings. These were later chipped from the wall, but the marks left, as well as the modern graffiti and broken formations, give the cave a lamentable appearance. In 1980 C.A.E.A.P. found a series of engravings which are possibly prehistoric.

The entrance is at the top of a small field, not far from the houses of the coastal town of Suances. A slope leads down into a large chamber with two small passages on the left and straight ahead. The main passage slopes up on the right through a series of low chambers. Human skeletal remains have been found in the entrance, as well as fragments of Roman pottery.

The first group of engravings is on the right hand wall at the entrance. They consist of two panels of strongly engraved vertical parallel lines. In the first panel there are some twenty lines about 20cm long, while the second panel has over thirty lines, which are a little longer, with an average length of 32cm.

The second type are engravings of the kind known as "macaroni", produced by running fingers over a thin layer of clay on the cave

roof and wall. There are two panels; one is on the roof at the rear of the entrance chamber, at a height of 1.8m, and the other is at the start of the right hand passage, formed by 4 or 5 parallel lines about 45cm long. In both cases they form simple abstract designs.

González Sainz, C., Muñoz, E. and San Miguel, C. 1986. Prospección arqueológica de la cueva de las Brujas (Suances, Cantabria). In *Estudio del Arte Paleolítico*. Monografía No. 15, C.I.M.A. pp 215-231. Madrid.

CUEVA DE ALTAMIRA

Santillana del Mar

The entrance of Cueva de Altamira was discovered in 1868 by M. Cubillas, after his dog scrambled into the hole in chase of a fox. He then showed the cave to Marcelino Sanz de Sautuola. While the latter was digging in the cave between 1875 and 1879, he saw some of the series of black paintings, but it was his daughter who first noticed the bison on the roof of a low chamber. These were the first Palaeolithic cave paintings to be fully recognised as such, and caused the fierce controversy described in the Introduction. The cave was later studied by other prehistorians, especially Alcalde del Río, and Breuil and Obermaier, who produced the definitive study of the art of Altamira in 1935. A number of excavations in the vestibule have revealed early Magdalenian and late Solutrean stratigraphy. The cave was designated as a World Heritage site by UNESCO in 1985.

Cueva de Altamira is about 270m long. The Chamber of the Bison was originally a natural continuation on the left of the vestibule, but later work restricted the entrance to the chamber, separating it from the vestibule with large blocks of concrete. The cave continues through a series of chambers and passages leading to the narrow final passage, which is known as the *Cola de Caballo*, "The Horse's Tail". The most important side chamber is on the left-hand side of the cave, and is known as *La Hoya*, or Pit.



Fig 41. Cueva de Altamira. The first copy of the ceiling, by Sautuola.

The polychrome bison, some twenty of them, are positioned on bosses or protuberances in the roof which give volume and shape to their bodies. Part of their outlines, and details of their fur, eyes or horns were first engraved, then black pigment (made with charcoal) was used to complete their outlines, and finally the centre of their bodies was finished in red. Finally, some of the paint was carefully removed in order to show the shape of the bison's legs and other anatomical details. In this use of line and colour, the paintings show a greater mastery of technique than any other paintings in the region, but the prehistoric artist further displayed his genius by adapting the posture of each bison to the shape of the roof protuberances. In this way some of the bison are standing, while others are shown in repose, head curled downwards and legs folded under their bodies. One bison is lying in repose with its head turned, looking behind. In this case the head is on a different plane of rock, giving an even greater sense of volume. Another bison is galloping, and yet another is bellowing, head turned upwards. Both males and females are represented. One of the bison is headless and there are two unfinished figures, where the red colour-wash never seems to have been applied. They are quite large figures, over 1.5m long, yet the largest figure on the roof is an incredible practically life-size hind, legs stretched out, 2.25m long. The total length of the panel is about 18m, which means that, as the chamber was originally so low, it could never have been viewed as a whole.



Fig 42. Cueva de Altamira. the copy of the ceiling most often reproduced, by Cartailhac and Breuil.

Yet the bison are the product of only phase of decoration on the ceiling, which has so many figures that they are still not fully known, and Breuil and Obermaier occasionally recur to phrases such as “tangle of very fine engravings” or “medley of animals”. One interesting group of engravings is formed by a number of masked men, or anthropomorphs.

Some of the different phases are seen most clearly towards the back and the right of the chamber. Here we find a group of red claviforms, the type with curved sides with a protuberance midway along one side. There are also smaller black figures of horses, ibex and stags, and negative hand images in violet, and a positive hand print in red. There is a large group of engraved signs, formed by bundles of lines radiating out from a point; depending how you look at them, they resemble comets or straw roofs of huts. Two horses are painted in red colour-wash. They are lively energetic figures, with their legs outstretched as if running or jumping; they have rather small heads, contrasting with thick necks and manes. A third red horse has the black outline of a bison superimposed over it. The bison's head is adapted to the horse's neck, and the horse's head was partially rubbed out during the process of transforming the animal. This horse and others have smaller engravings superimposed, and there is still one more outstanding engraving, of a stag with long antlers, its head slightly raised, roaring. It faces an ibex, in an identical composition to the one in Cueva Grande in Castro Urdiales.

The other parts of the cave have many figures, although somewhat overshadowed by the bison. One of the first panels is of macaroni-type engravings which include a fine bull's head among the mass of lines. This is followed by a black ibex, and engravings of a horse, stags and a bison. A narrow oxbow passage contains a group of red ladder-shaped signs, while the right hand wall of the main passage has a number of engraved hinds and a stag. A lower side chamber on the left, *La Hoya*, has some paintings in black, including ibex, a hind and a bison. Just before the start of “The Horse's Tail”, clay surfaces are decorated with more macaroni.



Fig 43. Cueva de Altamira. the complete cave.

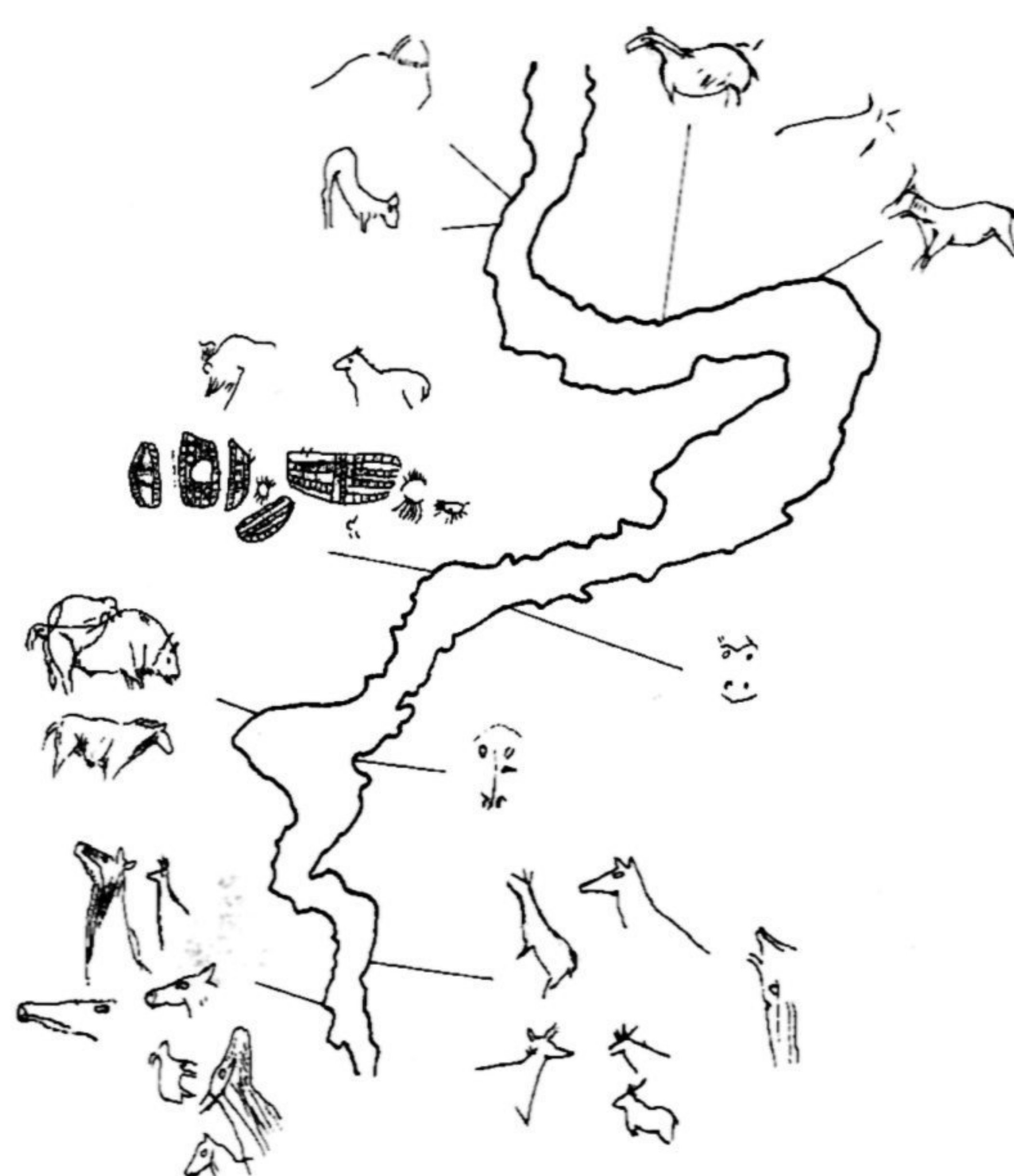


Fig 44. Cueva de Altamira. the final passage “The Horse's Tail”.

The final “Horse's Tail” has yet more figures, especially tectiforms in black, and faces or “masks” created by adding paint to natural forms of the rock. Engravings of bison, cervids and a horse complete the art of Cueva de Altamira.

The story of Altamira is also the story of its conservation. When Cartailhac and Breuil visited in 1902, they wrote a letter to a local newspaper warning about names and dates scrawled on the roof with candle smoke. But the greatest threat to the cave came from a quarry that had existed nearby in the 19th Century. Blasting had weakened the cave roof, and collapses occurred in 1924-25, while Obermaier was digging inside the cave. It was decided to support the roof with concrete pillars, and at the same time the floor of the chamber was lowered to make it easier for visitors to enter. Breuil warned in 1935 that some of the figures near the entrance had greatly deteriorated in the course of the previous thirty years. This process was accelerated when the multitudinous tourist visits, inside a chamber much reduced in size by the roof supports, began to alter the climate inside the cave. By 1977 some of the paintings were so obviously faded that the cave had to be closed. It was later reopened for restricted numbers of visits, but finally a replica has been built, as the central attraction of a large new museum.

Several of the figures have absolute AMS dates. The large polychrome bison average a date of about 14,800 BP, while a smaller bison on the same roof may be somewhat younger; between 13,500 and 13,100 BP. A deer from *La Hoya* was dated to 15,050, and a tectiform in the “Horse's Tail” to 15,440. The oldest painting is a simple black mark in the latter passage, at 16,480 BP. These dates concord, therefore with the Solutrean and Magdalenian layers in the entrance, and the age of the larger bison agrees quite well with a scapula, containing a fine, striated engraving of a hind, dated to 14,480 BP.

Sautuola, M. S. de, 1880. *Breves apuntes sobre algunos objetos prehistóricos de la provincia de Santander*. Santander.

Cartailhac, E. and Breuil, H. 1906. *La Caverne d'Altamira à Santillana près Santander (Espagne)*. Monaco.

Breuil, H. and Obermaier, H. 1935. *The Cave of Altamira at Santillana del Mar*. Madrid.

Moure, A., González, C., Bernaldo, F. and Cabrera, V. 1996. Dataciones Absolutas de Pigmentos en Cuevas Cantábricas: Altamira, El Castillo, Chimeneas y Las Monedas. In *El Hombre Fósil 80 años después*, pp 295-314. Santander.

CUEVA DE CLOTILDE

Quijas (Reocín)

Alcalde del Río and Breuil explored this cave in July 1906, and named it after one of the former’s daughters. It seems that the original name was Cueva de la Lora. In 1981 C.A.E.A.P. revised the art and located one or two new figures.

The cave has two entrances at the top of a cliff face overlooking the narrow gauge railway line. The original entrance is the larger one, and a smaller second entrance was opened and steps cut to make access safer. The first passage is about 5m wide, and leads down to a smaller passage on the right. This continues for nearly 300m, and the prehistoric engravings are found near its end.

All the engravings were produced by the simple technique of finger pressure over the layer of clay on the cave roof and wall. They are rather crude representations, in some case almost unrecognisable, although the best of them display certain conventions such as vertical lines or even cross-hatching infilling their bodies, which add considerably to the vigour of the images. Unfortunately, after their discovery many of the figures were partially obliterated by unknown persons running their hands over the soft clay.



Fig 45. Cueva de Clotilde



Pic 14. The engraving of a bovid in Cueva de Clotilde, partially destroyed by modern lines.

The first animal is a bovid, with two horns and vertical lines shading its body and rather wide front leg. It is followed by a second bovid, with only one horn and no shading inside its outline. The third figure is incomplete, as part of the clay surface with the body has fallen away from the wall. All we can now see is part of the back, the head and part of the front. Ambiguously it has a horn as well as a mane; but its discoverers classed it as another bovid. They also comment that they searched in vain for the fallen pieces of clay, and conclude that the small stream had washed away all trace of them.

Among these animals there are three signs. Three bands of parallel lines meet at the apex of a triangle; the figure they make is not too different from the tectiforms known in French caves, such as Bernifal (Dordogne). There is also a symbol roughly in the form of a feather; and three series of parallel lines are arranged in another triangular shape.

A strange figure with a curving line above and several zigzags below was classified as another bovid. The next figure is a carnivore, probably a feline; the head is represented, with open mouth, a large round eye, and some twenty lines forming the mane. This is the only animal in the cave with an eye. Just below this head, another bovid has two horns and head on a long neck and sausage-like body.

The last two drawings are the best in the cave. One is a well-proportioned bovid, whose complete body is given volume by internal vertical and horizontal lines. Its front legs give the animal a sense of movement. The second is another complete bovid, but with no belly-line as the second front leg is joined to the first rear leg. Both bovids have two horns, drawn with one “C”-shaped line, which was

apparently drawn last, on top of the head. While the bovids are all side-views, all facing right, the horns are seen as from the front: this effect is known as “twisted perspective”.

Breuil and Alcalde del Río considered the art of La Clotilde to be comparatively old, of Aurignacian age, based on the rather primitive technique and style. But later authors have claimed the figures could equally be Magdalenian.

Alcalde del Río, H., Breuil, H. and Sierra, L. 1911. *Les Cavernes de la Region Cantabrique*. Monaco.

CUEVA DE LA ESTACIÓN

Quijas (Reocín)

The entrance is just 20m away from Quijas railway station at the base of the limestone cliff which also contains Cueva de Clotilde. The cave is about 200m long, with gours and some low sections. The chamber with the engravings is about 120m from the entrance, in a drier part of the main passage, which then changes direction and reaches a deep pool.

Alcalde del Río and Breuil visited the cave in 1906, after the discovery of Cueva de Clotilde, but obviously did not see the examples of cave art, which were found on November 29th 1980 by E. Muñoz and C. San Miguel of C.A.E.A.P.

Nine figures have been identified. These were all produced with the same technique as the figures of Cueva de Clotilde; finger pressure over a layer of clay on the cave roof. Some have been covered with calcite, while others have been affected by modern graffiti, so it is possible that more figures existed originally.

The first seven figures are interpreted as various signs made up of lines which form obtuse or acute angles, or groups of parallel lines. Figure No. 8 is a snake-like design composed of a long line dissected perpendicularly by some twenty shorter lines. The ninth figure is a possible horse; its crude outlined form filled with parallel lines. San Miguel considered that the engravings could have been done by the same artist as in La Clotilde, as preparation for the more complex figures of the latter cave.

San Miguel, C. 1991. Las manifestaciones artísticas de la cueva de la Estación (Sta. Isabel de Quijas, Cantabria). *XX Congreso Nacional de Arqueología*, pp 81-93. Zaragoza.

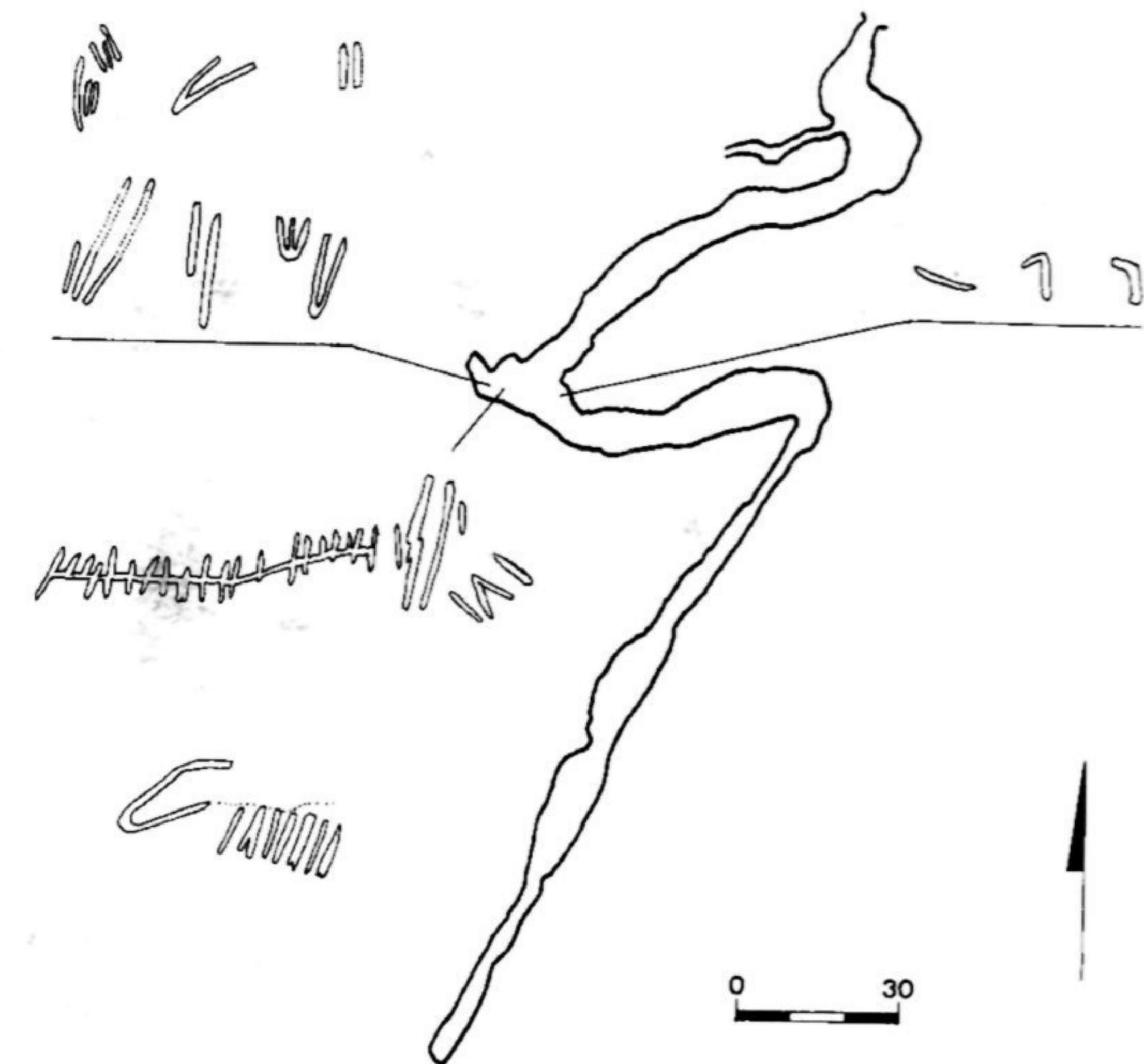


Fig 46. Cueva de la Estación

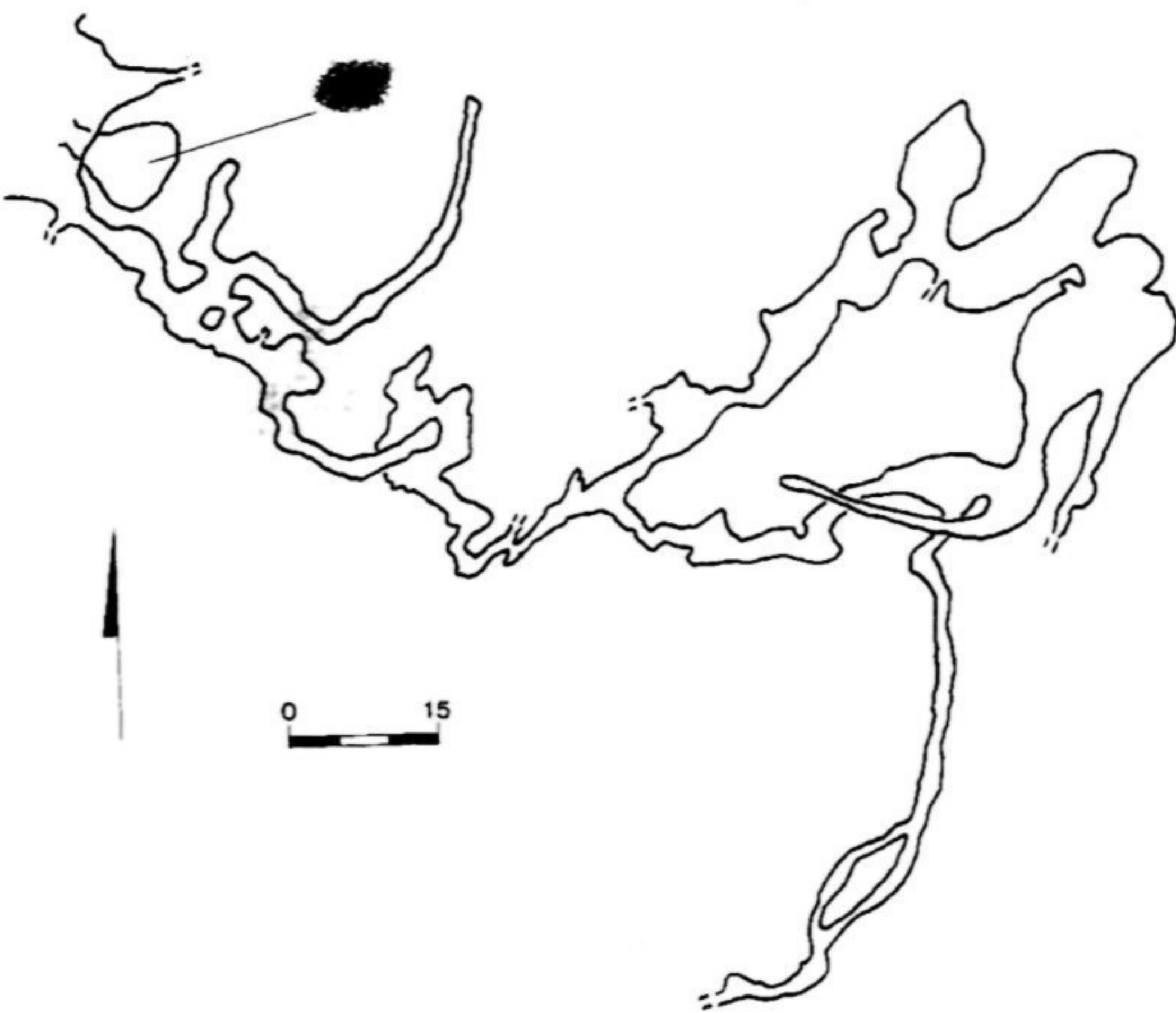


Fig 47. Cueva de Cualventi

CUEVA DE CUALVENTI

Oreña (Alfoz de Lloredo)

This cave has been visited since the 19th Century, and was dug by M. A. García Guinea between 1976 and 1990. Palaeolithic stratigraphy corresponding to the Magdalenian period was found, and the artefacts recovered include an exceptional antler staff with the figure of a stag engraved. The wall art was discovered during these excavations, in 1976-77.

The dig was in the large rock-shelter outside the entrance to a complex cave developed on several levels, nearly 1 km long.

Cueva de Cualventi has a single large round mark of red colour-wash. This is on the wall of a small chamber in the floor of the rock-

shelter. The way into the chamber was originally blocked by the prehistoric strata, and was opened up during the archaeological dig. This is a guarantee of the painting's Palaeolithic origin.

The chamber also has engraved lines, including a possible head of an ibex.

García Guinea, M.A. and Rincón, R. 1978. Primeros sondeos estratigráficos en la cueva de Cualventi. Excavaciones de 1976. *Revista Universidad de Santander*. N°1, pp 359-389. Santander.

García Guinea, M.A. 2000. Excavación arqueológica, protección y acondicionamiento del yacimiento de la cueva de Cualventi (Oreña, Alfoz de Lloredo). In *Actuaciones arqueológicas en Cantabria 1984-1999*, pp 15-18.

CUEVA REDONDA

La Busta (Alfoz de Lloredo)

Also known as Cueva del Perro, this cave is situated in a small *hum*, or isolated limestone hill, in fields near the village of La Busta. A total of seven entrances, opening on all sides of the hill, unite in a chamber about 15m long.

The examples of cave art were discovered in 1979 by members of C.A.E.A.P., and studied by E. Muñoz and C. San Miguel. The cave was also seen to contain Upper Palaeolithic remains, with flints, animal bones and shells.

Cueva Redonda has a group of engravings, all produced with a wide-pointed instrument on a surface of soft calcite.

Four panels have been differentiated. The first is a group of unconnected lines. The second, on a small stalactite, is a number of short, fine lines. Panel 3 similarly consists of several diagonal lines. The fourth panel is the most interesting one. Located near to the southern entrance, the head, horns and cervical-dorsal line have been identified of an animal considered as either a cervid or a bison.

The simplicity of the figures makes it impossible to assign them to any particular date or style.

San Miguel, C. 1990. Cueva Redonda o del Perro, La Busta (Cantabria). *Actas del V Congreso Español de Espeleología*, pp 242-246. Camargo-Santander.

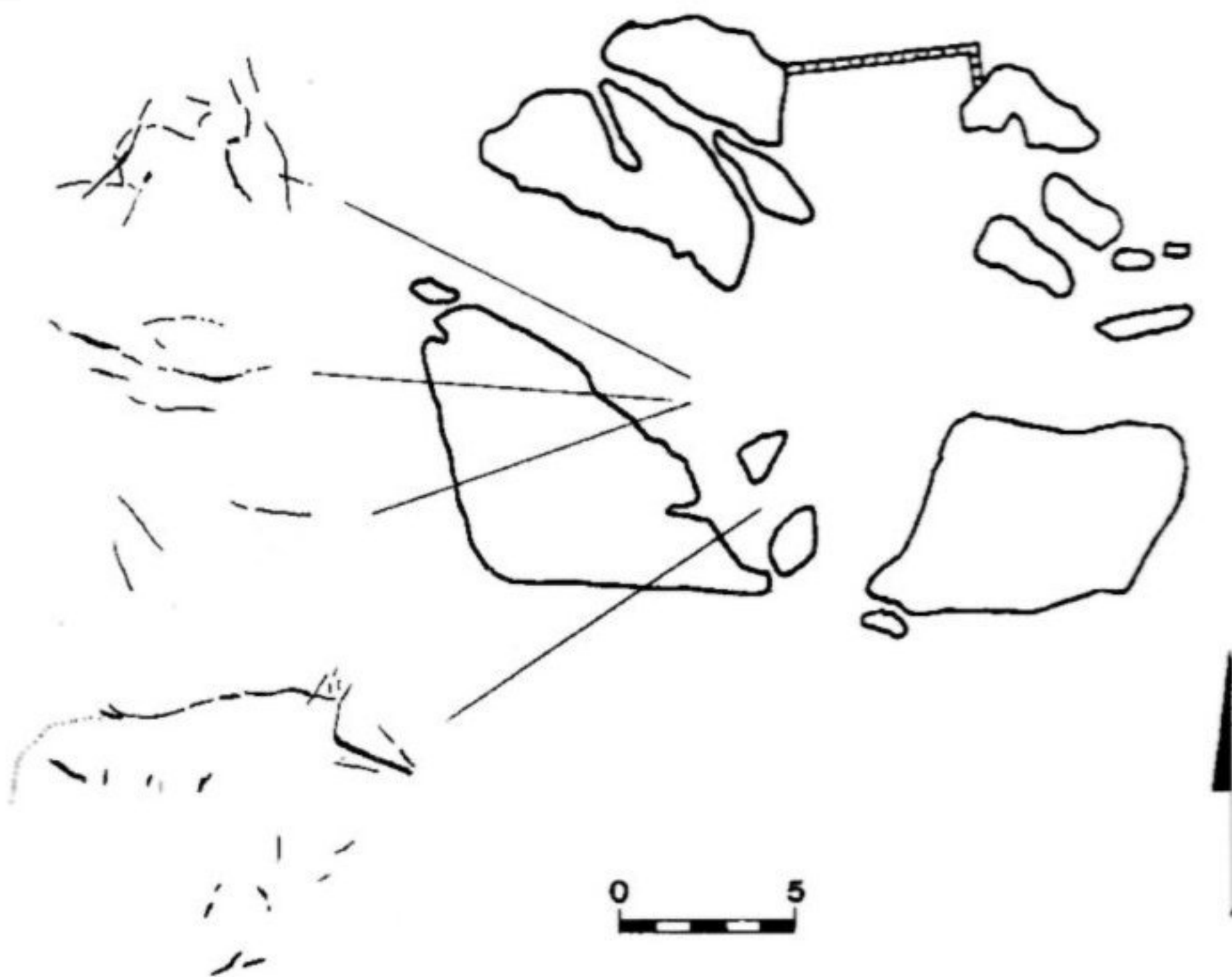


Fig 48. Cueva Redonda



Fig 48. Cueva del Linar

CUEVA DEL LINAR

La Busta (Alfoz de Lloredo)

This refers to the main entrances to a 7.5km long system. It is the sink in the base of the large karst depression containing the village of La Busta. Apart from the sink itself the first section of the cave has two other dry entrances. The cave then continues as a large river passage, with high-level passages connecting with two top entrances: Torca del Palombal and Torca del Hoyo Corbeján. The system has a depth of 179m.

Alcalde del Río explored the cave at the beginning of the 20th century. In the 1960s S.E.S.S. carried out the first speleological study at the same time as A. Moure and V. Gutiérrez carried out an archaeological dig in the first passage. The cave was seen to have a complete stratigraphy from the Lower Palaeolithic to the Magdalenian, and also had artefacts of the Bronze Age, Iron Age and Medieval period. The caving exploration continues today. The cave art was discovered in 1980 by E. Muñoz and C. San Miguel of C.A.E.A.P.

The prehistoric figures are all found near the third entrance, the highest and the furthest from the sink. A narrow side passage has a calcite false floor, left behind when the sediment beneath a layer of flowstone was washed away. It is possible to crawl into the space under the false floor, and the main group of engravings are seen on the ceiling i.e. the undersurface of the false floor. Among various indeterminate lines several figures have been distinguished. The first is the head of an ibex with long horns curving backwards. The second is a beautiful representation of the head of a chamois. The mouth, muzzle, eye and short horns are shown in perfect detail. The face and upper part of the neck are shaded with oblique lines. The next figure is interpreted as the full body of a bison, although it is only partially depicted. A horn, one eye, a large hunched back and tail, and one leg folded under its body can be seen. Next to this, lines interpreted as a venus, a female figure, which in this case is headless. The final recognisable figure is the head of an animal with ears

and short face, possibly a hare.

Another narrow passage in the same area of the cave has other unusual figures. Two restrictions in the passage are decorated with parallel horizontal engraved lines, creating what seem to be vulvae.

San Miguel includes the art of Cueva del Linar in Leroi-Gourhan's late Style IV, in the Magdalenian, due to the naturalism of the figures and the fact that in most cases only the heads are represented.

Muñoz, E. and San Miguel, C. 1991. El yacimiento en la galería de los grabados de la Cueva El Linar y su posible relación con las Manifestaciones Artísticas. *Arqueología Arte Rupestre y Mobiliar* Vol. 1, pp 79-88. Santander.

CUEVA DE LAS AGUAS

Novales (Alfoz de Lloredo)

The entrance of Cueva de las Aguas is on a wooded hillside, above a resurgence used as a water supply. The cave is developed as one main passage about 100m long. At its start, a ramp of flowstone slopes up on the left. The passage then slowly descends until it reaches a final boulder choke.

The paintings were discovered by Alcalde del Río in February 1909. In the early 1980s the University of Cantabria revised the cave and found another two engraved figures. The entrance is known to have Upper Palaeolithic sediments, and Bronze Age and medieval pottery have been found inside the cave.

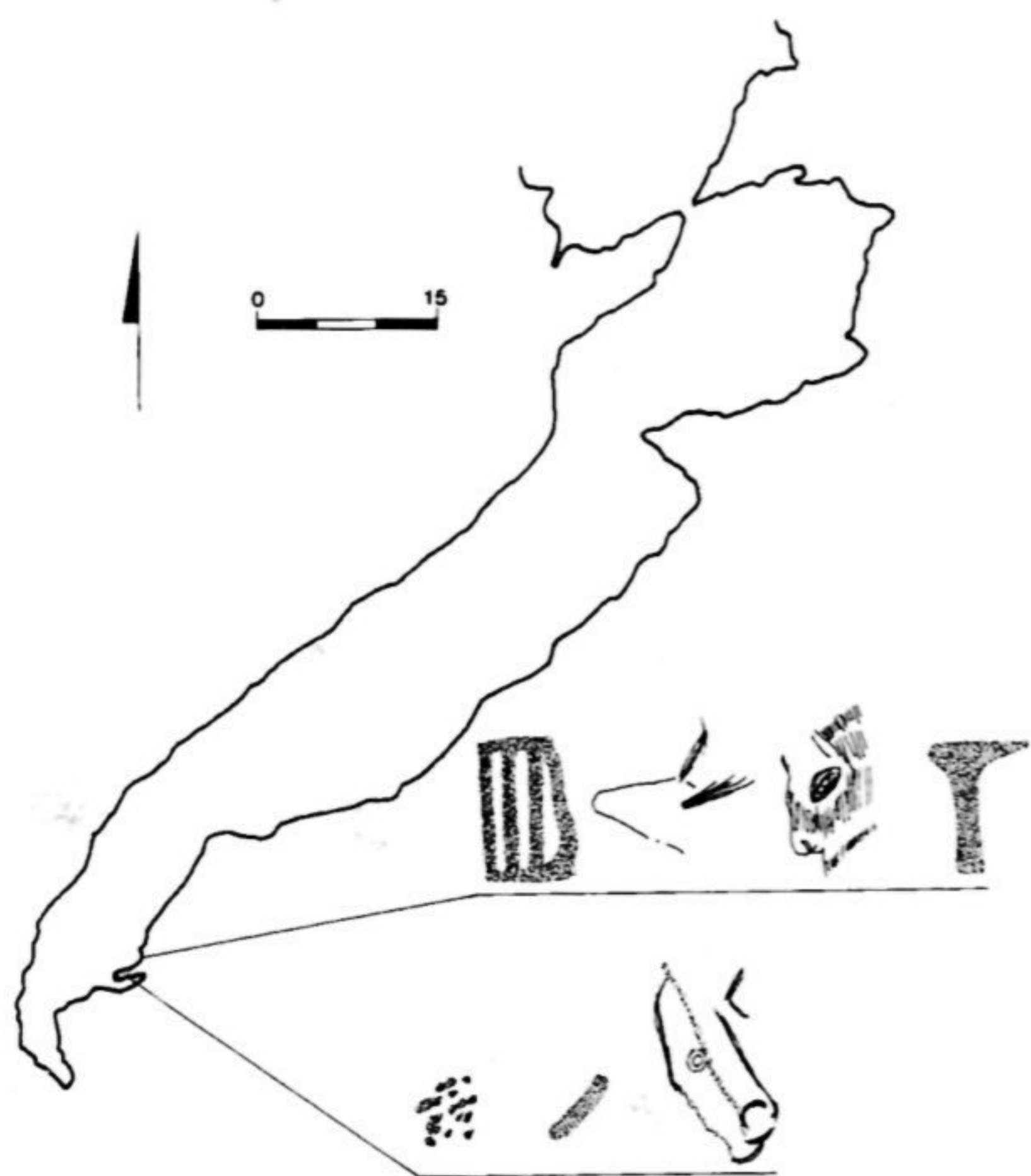
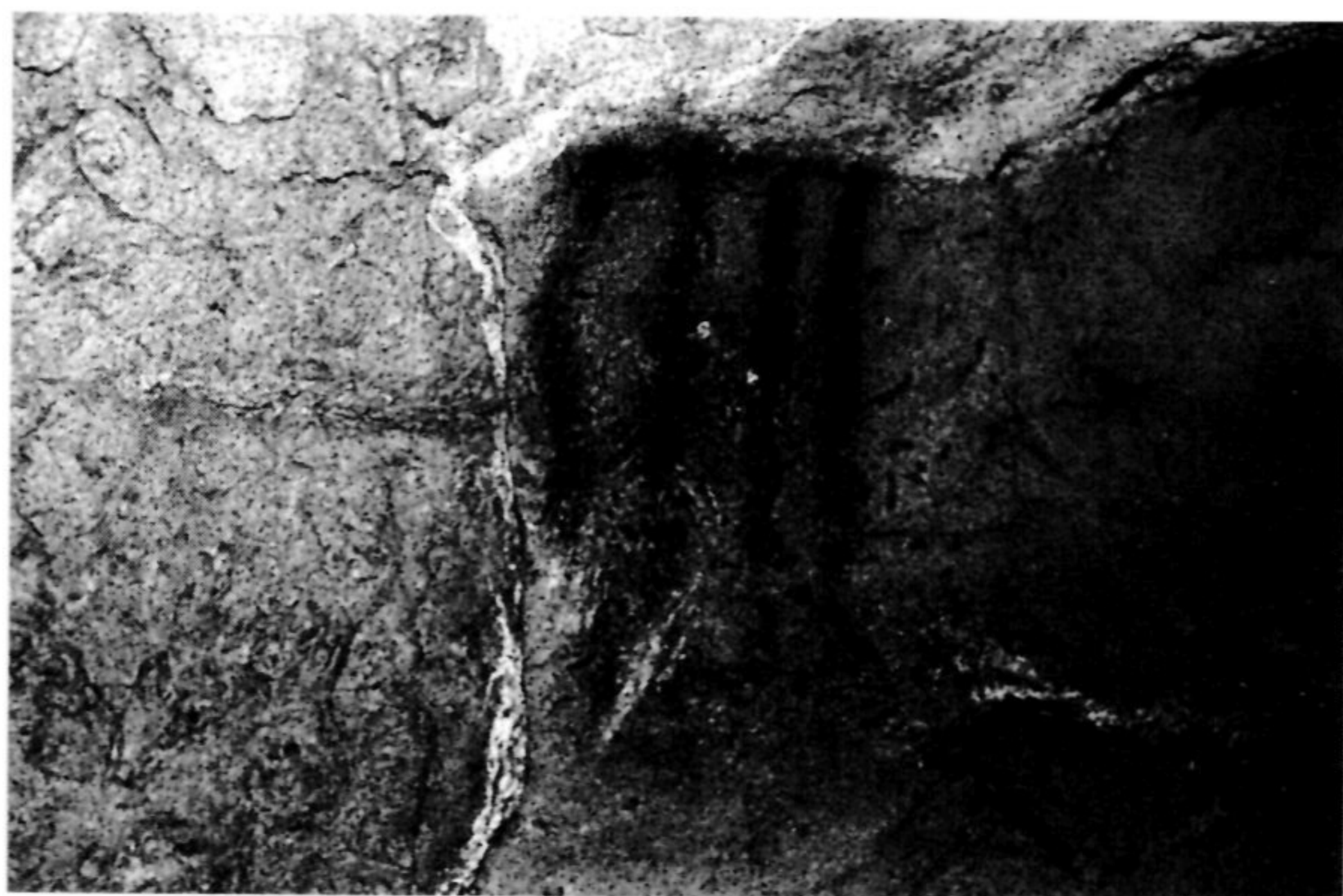


Fig 50. Cueva de las Aguas.



Pic 15. A red sign in Cueva de las Aguas.

The art is located in a series of alcoves on the left of the passage, near its end. The first figure is a vivid red sign in the form of a rectangle with two vertical interior lines. This is just 50cm from the engraving of a hind's head, 18cm long. The head is drawn as a simple outline, with no details at all, apart from the two ears, depicted with fine multiple lines. To the right there are two paintings of bison. The one above is a very diffuse red colour-wash, with its head engraved. Facing left, an eye, a nostril, two horns and hair are drawn. Below, the second bison is equally faint. Its body is 1.45m long, with a large humped back and two front legs. This group of paintings then concludes with a second sign: a "T"-shaped claviform. This is painted as an outline, in brownish-red.

The other figures are found in a crawl starting at the base of this wall. A fossil shell in the rock is filled with some twenty small red dots. Next to this, a short diagonal red line. And the final figure is a horse's head, 21cm long, using a calcite formation to which engraved lines were added. The calcite gives the figure a sense of volume, while details such as an eye and a nostril were engraved.

The bison, although greatly deteriorated, are comparable with those of Cueva de Altamira, in that both paint and engraving was used. Consequently the art of Cueva de las Aguas is attributed to the mid-Magdalenian, a time when the association of bison and horse is particularly relevant.

Alcalde del Río, H., Breuil, H. and Sierra, L. 1911. *Les Cavernes de la Region Cantabrique*. Monaco.

González Morales, M. and González Sainz, C. 1985. Nuevos grabados parietales en la cueva de las Aguas (Novales, Cantabria). *Caesaraugusta* 61-62 pp 57-65. Zaragoza.

CUEVA DEL PORTILLO I

Ruiloba

The entrance of this cave is only a short distance from the coast, and the resort of Comillas. The first chamber leads to a short crawl, which goes directly into a walking-height rift. This increases in size, with some spectacular flowstone formations and stalagmites. The passage then divides into a high level and a semi-active passage below. The total length is 600 m.

The cave painting was found during the caving exploration carried out by S.E.S.S., a Santander caving club, in 1981. The entrance chamber contains an Epipalaeolithic shell-midden.

The painting, the only one to be published, is a red disc on the right hand wall in the first section of the rift passage. There are reports that the cave has other examples of art, but these remain undocumented. They consist of remains of red paint near the disc, and engravings and red and violet dots in an upper level.

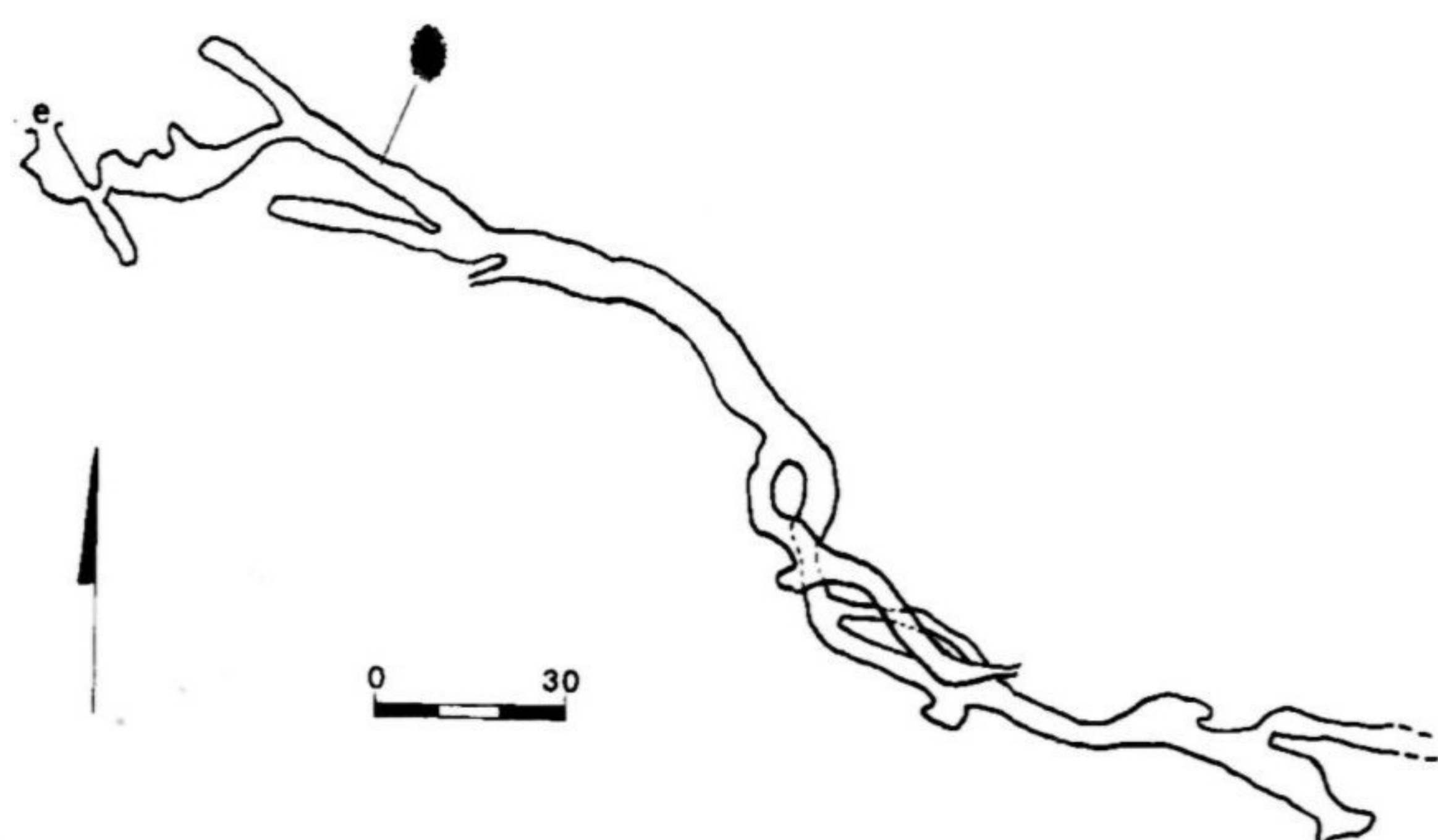


Fig 51. Cueva del Portillo I

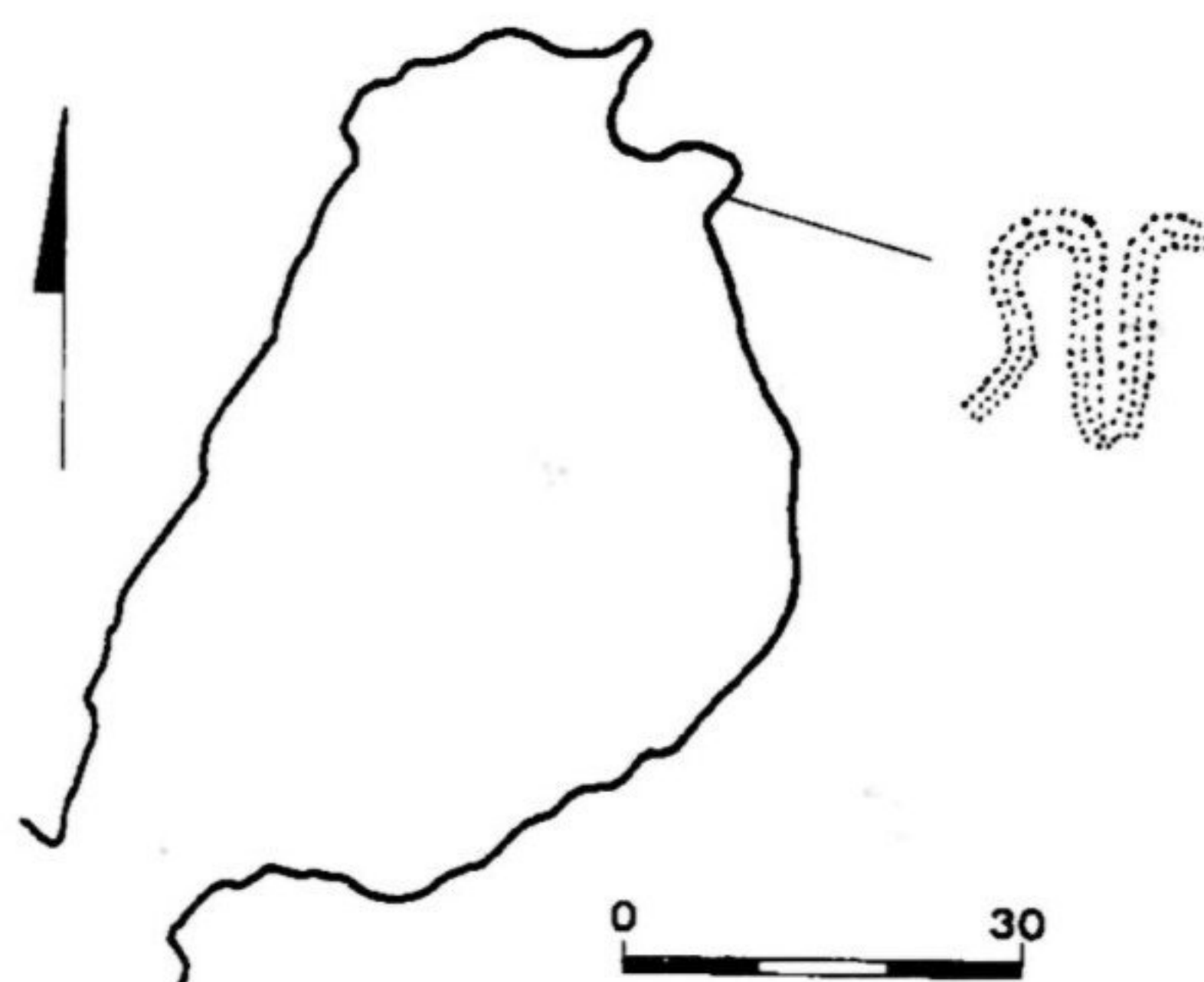


Fig 52. Cueva de la Meaza

CUEVA DE LA MEAZA

Ruiseñada (Comillas)

Cueva de la Meaza is basically one large chamber located on the north side of a karst depression. The entrance is about 6m wide and this widens inside to form a 40m diameter chamber. In its centre the floor consists of large boulders.

Alcalde del Río discovered its one documented figure on March 11th 1907. Since then different authors have indicated that the cave has more examples of cave art, but these have yet to be studied in full. The front part of the cave has prehistoric sediments, but no systematic digs have ever been performed. Mesolithic (or Asturian), Azilian, Magdalenian and Solutrean materials have been reported, and the cave is also known for the discovery by Calderón de la Vara in 1945 of a bone spear-head accompanying a Chalcolithic burial.

The figure found by Alcalde del Río is a sign in a small alcove at the rear of the chamber. This was formed by three rows of reddish-brown dots, which side-by-side make up a meandering band. Each of the three rows has about 75 dots. Starting on the right, the band curves and drops vertically downwards for about 50cm, then it turns upwards and reaches its original height. It bends downwards again, and finishes at a fissure in the cave wall. Its appearance has thus been compared with an anchor, or a snake emerging from the fissure. Unfortunately many of the dots are poorly conserved and difficult to see. The same wall has other dots, forming a curved line and other signs, but these figures are still pending study.

Just as the stratigraphy is poorly known, the sign has been dated in different ways, by associating it with one or other type of archaeological evidence in the cave. Thus, for Calderón it was of Azilian age, while Alcalde del Río, Breuil and Sierra dated it in the Magdalenian. But if it is equivalent to other signs made up of red dots, such as those in Cueva del Castillo or Cueva de Chufín, an earlier date, possibly in the Solutrean, is likely to be the correct one.

Alcalde del Río, H., Breuil, H. and Sierra, L. 1911. *Les Cavernes de la Region Cantabrique*. Monaco.

Anderez, V. 1953. La cueva prehistórica de la Meaza. *Miscelánea Comillas XIX*, pp 207-233.

Calderón de la Vara, V. 1955. Contribução ao estudo das pinturas rupestres epipaleolíticas. *Faculdade Católica de Filosofia da Bahia*.

CUEVA DE LA FUENTE DEL SALÍN

Muñorrodero (Val de San Vicente)

The art of La Fuente del Salín was discovered during the course of the speleological study of the cave by the Sociedad de Actividades Espeleológicas de Cantabria, on October 16th 1985.

The present entrance is a rising which can only be entered during prolonged periods of dry weather. The active passage is followed upstream for 25 m, to a junction with higher-level dry passages on the right. These rifts lead to the chamber with the paintings, near to what appears to be the original entrance, now blocked with boulders and flowstone. A hearth in this chamber was excavated and charcoal from it was dated to 22,340 BP.

The cave has a series of paintings in red; thirteen negative hands, two positive hands and other signs and dots.

The first hands are found on a pillar of rock. On one side it has two adult left hands in negative, and on the other a group of five hands, some of which include part of the forearm. There are three adults' hands (two left and one right) and two children's (left and right). As they are all quite close together, it seems that some or all of them must have been placed on the wall and had the paint sprayed around them at the same time. This act may therefore have represented some sort of family or tribal union.

The next group is in the lower part of the chamber. One is badly affected by rock breaking off the wall and by calcite. An adult's right hand is below, and a further adult's right hand is on the other wall. A left hand is in a small alcove, with another left hand near it. The last negative hand is on the ramp leading to the upper part of the chamber; again an adult's left hand.



Fig 53. Cueva de la Fuente del Salín



Pic 16. a group of hand images in Cueva de la Fuente del Salín

The upper passage has two positive hands. These are in dark red, within a large ochre stain over the wall. They are both adults' hands, one left and one right. The same passage has another rare figure, possibly a negative hand in black - a child's right hand. This passage also has groups of red dots.

The cave also has two signs. One is formed by three parallel bands of ochre. The other consists of two red lines meeting in an angle, on the left of the ochre stain.

The paintings are probably of a similar age to the hearth, in the late Gravettian, and most of the figures made use of the technique of spraying paint, developed about that time.

Bohigas, R. and others. 1985. Informe sobre el santuario rupestre paleolítico de la Fuente del Salín (Muñorrodero, Val de San Vicente, Cantabria). *Boletín Cántabro de Espeleología* 6, pp 81-98. Santander.

CUEVA DEL PORQUERIZO

Celis (Rionansa)

The entrance is located 300m to the south of the village of Celis, in a cliff over the River Nansa. It is about 3m wide, and leads to a 20m long passage with a small side passage on the left. The first part of the cave is occupied by an Upper Palaeolithic deposit about 30cm thick.

The cave was explored by the Speleo Club Cántabro, who also found the example of cave art in about 1977.

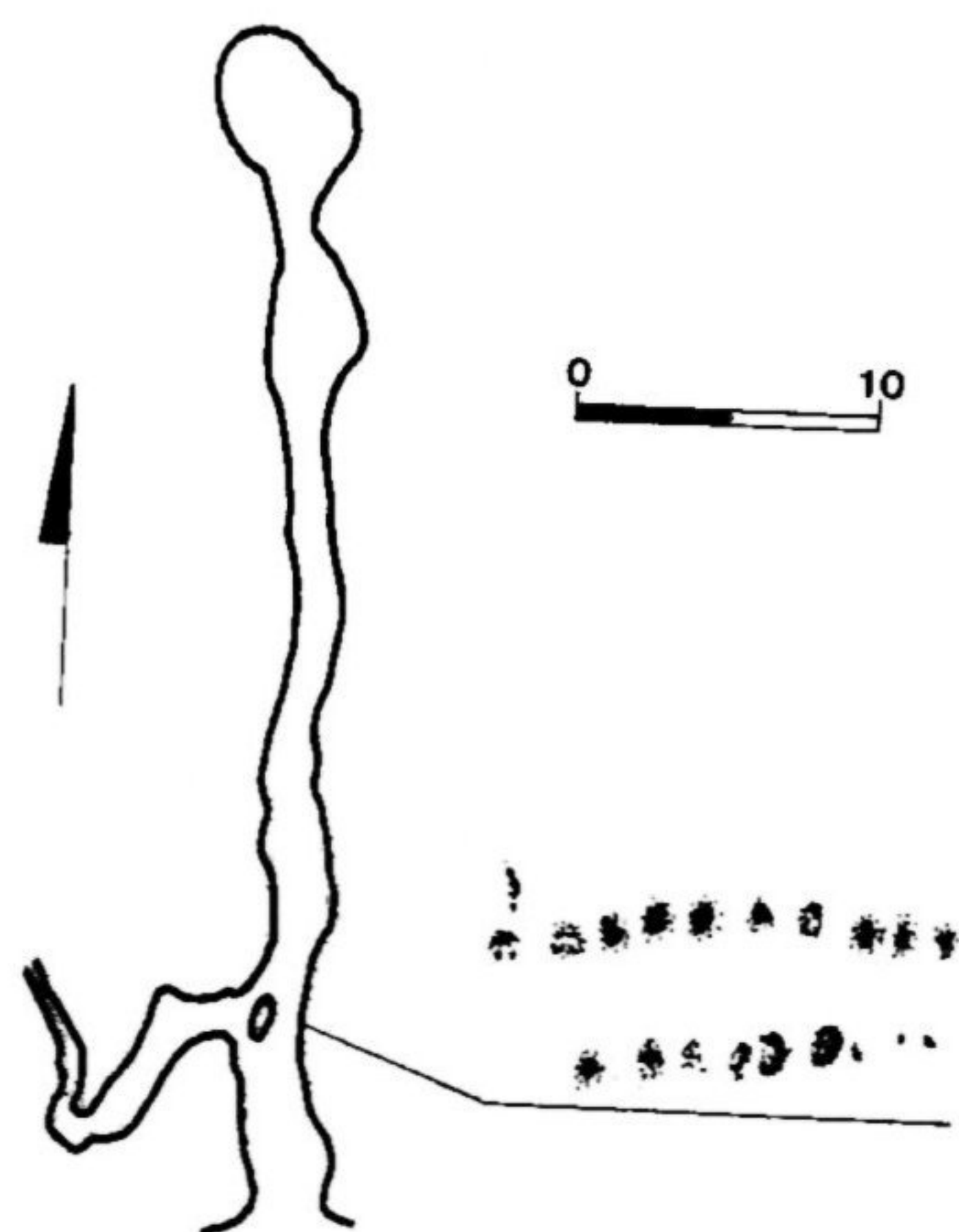


Fig 54. Cueva del Porquerizo

Cueva del Porquerizo contains just one figure, situated within a hollow in the right hand wall. This figure consists of a group of red dots arranged in two rows, one above the other. The top row, 25.8cm long, has nine clear dots and another one poorly conserved, while below four dots can be seen clearly with another five smaller and deteriorated dots.

As a group of dots, this painting is evidently related to similar, although more developed, paintings in the nearby Cueva de Chufín.

Speleo Club Cántabro, 1985. Nuevas cuevas de interés arqueológico en Rionansa. *Boletín Cántabro de Espeleología* 6, pp 21-28. Santander.

CUEVA DE CHUFÍN

Riclones (Rionansa)

The entrance of Cueva de Chufín, also called Cueva del Moro Chufín, is now located on the shore of Palombera reservoir. However, before this was built, its location would have been described as being at the confluence of two valleys. The cave consists of a vestibule 11m wide, followed by a crawl into a larger passage which slopes down until it reaches a lake: the flooded section of the cave, at the same level as the reservoir. The length of the main passage is about 50m.

The cave art was found by Manuel de Cos, on March 30th 1972. He informed Almagro Basch, the director of the National Archaeological Museum in Madrid, who then studied the art, as well as carrying out a dig in the vestibule, which had late Solutrean levels. A radiocarbon date of 17,420 BP was obtained for the deposit.

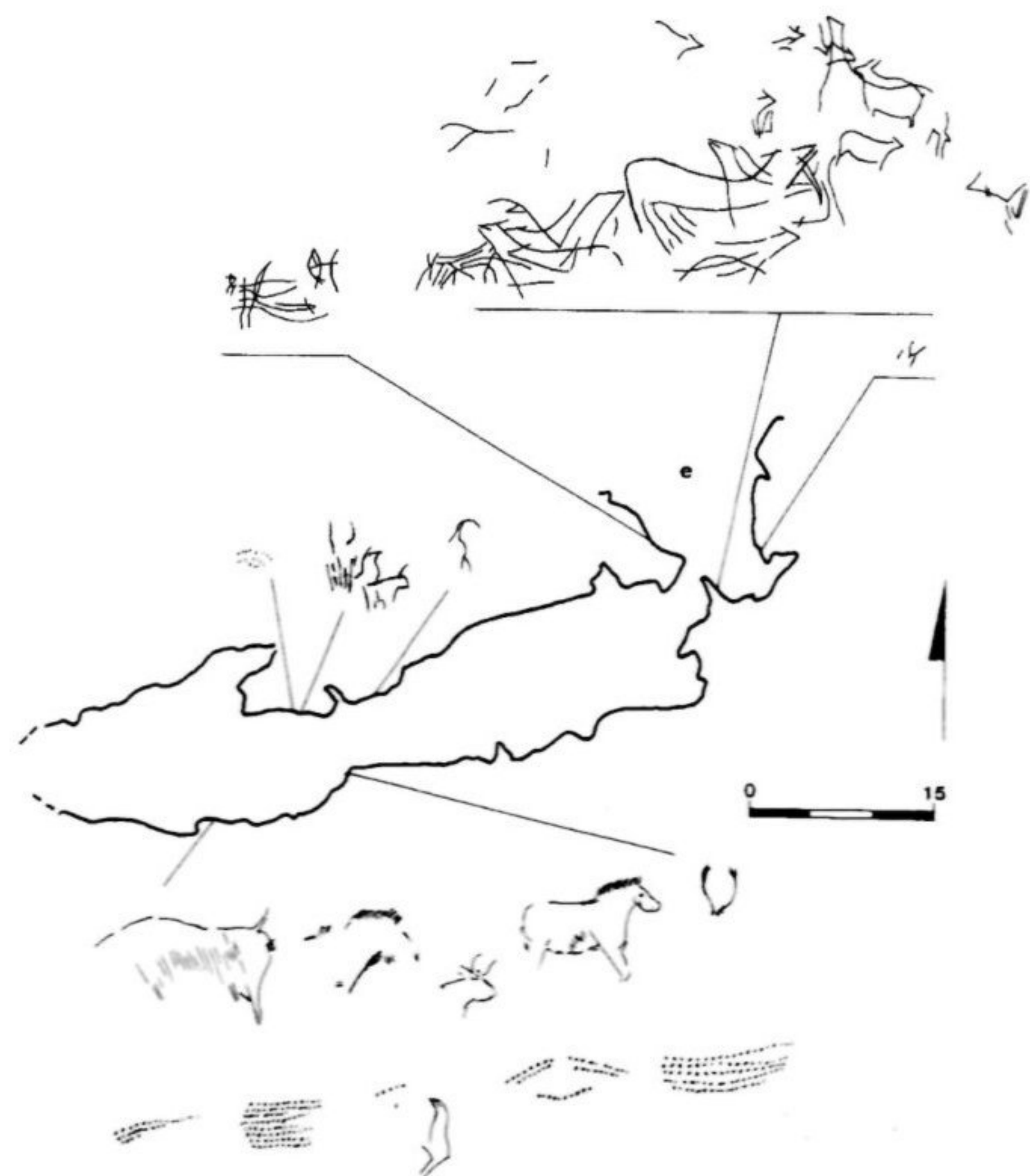


Fig 55. Cueva de Chufín

Cueva de Chufín has several interesting panels, and the first is a rare group of engravings in daylight, in the vestibule. The central panel is rather complex, with many superimpositions of deep, wide lines. Some eleven or twelve figures of caprids can be distinguished. Rather stylised in nature, in some cases they are depicted with just three lines: a short, straight line for the top of the head and a horn, a curving cervical-dorsal line, and a third line for the lower part of the head, neck and chest. The most complete animal in the panel, with two ears, the full body and one fore and rear limb represented, is believed to be a hind. The largest figure, 50cm long, was interpreted as a fallow deer. However, the engravings are really so stylised that they could all equally be either Caprids or hinds.

On the right and left of the vestibule, other panels of engravings have no recognisable figures, apart from a possible fish.

Inside the cave, the right hand wall has a number of red paintings, especially a group of a bovid, horse and seven lines or claviforms. The animals are simple outline figures, with only the head and forequarters represented. Near the lake there is another group of five vertical lines, and two rows of red dots.

The opposite wall has more important groups of dots, arranged in bands of three, five or eight rows. One of the longest bands has five rows, and a total of over 140 dots. These bands mostly form abstract patterns, but one of them surrounds a natural hollow in the wall and is thus interpreted as a vulva. The engraving of an anthropomorph is associated with these paintings.

There is also a series of fine engravings located on the wall below the dots. They are divided into three zones. The principal figure in Zone I is a horse, its mane drawn with multiple fine lines, and it is together with possible deer's antlers and a bull's head. Zone II has groups of lines including a possible venus, while Zone III has a caprid and an incomplete bovid.

Almagro considered that the deep engravings in the entrance belong to Leroi Gourhan's Style II, and are older than the interior fine engravings, corresponding to Style III. The latter would be contemporary with the late Solutrean stratigraphy in the vestibule. Paintings composed of dots are also typically of Solutrean age.

Almagro, M. 1973. Las pinturas y grabados de la cueva de Chufín. Riclones (Santander). *Trabajos de Prehistoria* Vol. 30, pp 9-67. Madrid.

Almagro, M., Cabrera, V. and Bernaldo de Quirós, F. 1977. Nuevos hallazgos de arte rupestre en Cueva Chufín. *Trabajos de Prehistoria* Vol. 34, pp 9-30. Madrid.

CUEVA DE MICOLÓN

Riclones (Rionansa)

This cave has a small entrance in a cliff-face next to the Palombera reservoir. The first passages form a small maze of narrow twisting crawls and squeezes which unite in the decorated chamber, about 2 or 3m in diameter. Beyond this point the passages increase in size, but the cave ends with a length of 441m.

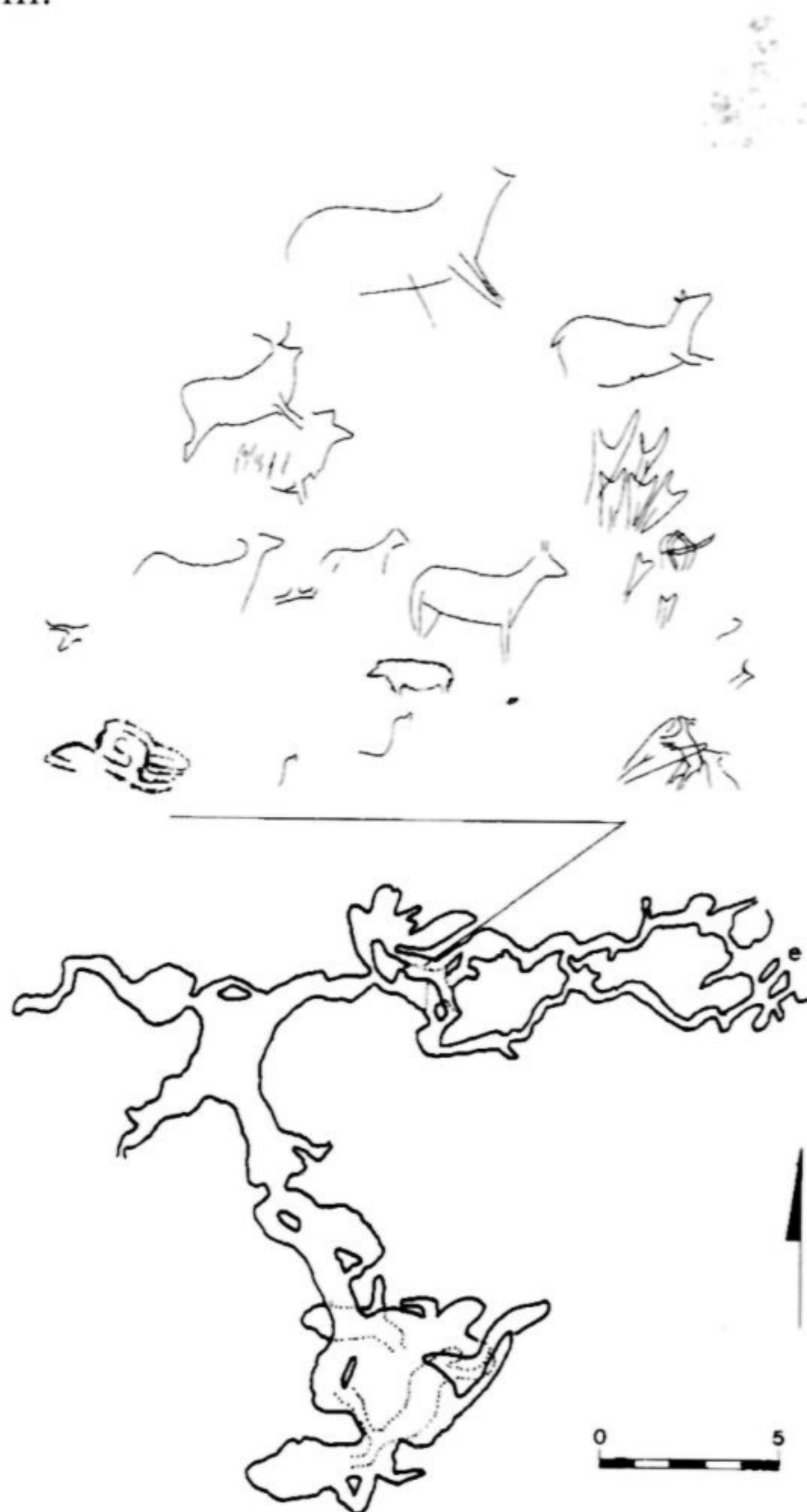


Fig 56. Cueva de Micolón

The local caving group, Speleo-Club Cántabro, discovered the examples of cave art in 1976 during their exploration of the cave. This was after the building of the reservoir, and if the water level had only been one or two metres higher, the entrance would have been flooded. The art was later studied by M. A. García Guinea. A single flint burin is the only prehistoric artefact to be recorded in the cave, although one wall has flint nodules which apparently have been mined.

Cueva de Micolón has both paintings and engravings. The paintings, in red ochre, include two curving lines, interpreted as incomplete horses, the outline of a bear, thought to be *Ursus spelaeus* and a possible second incomplete bear. There is also an interesting maze of lines forming an unusual type of tectiform 35cm long.

The engravings are more numerous. The first, on entering the chamber, are two small caprids. On the right there are now several groups of signs. One of these is a panel of intercrossing pairs of lines. The others are figures practically unique to Cueva de Micolón. They have a roughly triangular shape; the upper line is concave, and the two side-lines do not completely meet at the lower angle, where an interior vertical line is drawn. The cave has some eight of these signs, which may well be interpreted as vulvae. There are then several animal engravings; four hinds, a stag, another incomplete figure either hind or stag, and the heads of a stag and a bovid. Three of the animals appear to be running, while the others are standing.

A rock in the centre of the chamber holds a panel with one of the triangular signs, the head of a goat, and a complete running goat. Despite being only 20cm long, it is one of the most detailed figures in the cave, with an eye, two short horns and four legs all clearly represented.

García Guinea dated the art in the Solutrean-early Magdalenian period.

García Guinea, M.A. and Puente, M.A. 1982. El arte rupestre de la cueva de Micolón (Riclonos, Santander). *Sautuola III*, pp 29-52. Santander.

CUEVA DE TRASLACUEVA

Riclonos (Rionansa)

With its entrance at 800m above sea level, this is the highest decorated cave in the region. It has a relatively large vestibule, leading to small passages only 21m long. No archaeological deposit has been found.

The engravings of Cueva de Traslacueva were found during the exploration of the cave by the Speleo Club Cántabro in 1977.



Fig 57. Cueva de Traslacueva

There are several panels of engravings. The first are on the right of the vestibule, deeply marked lines in the calcite covering the wall. They form complex groups in which no complete figures can be distinguished. However, the interpretations made by their discoverers suggest that they include several cervical-dorsal lines possibly of caprids, a fish, and a “V”-shaped sign. The caprids are somewhat similar to those in the vestibule of Cueva del Chufín.

The final passage has a number of indeterminate figures, done with finer lines in a clay surface.

Speleo Club Cántabro, 1985. Nuevas cuevas de interés arqueológico en Rionansa. *Boletín Cántabro de Espeleología* 6, pp 21-28. Santander.

APPENDIX 1

OTHER CAVES WITH PALAEOLITHIC ART

This appendix is intended to summarise a number of caves which were not deemed suitable for inclusion in the main catalogue. This could be for several reasons. Firstly, some of them are recent discoveries which are still not fully studied or are unpublished, and therefore for which little information is available. Secondly there are sites which were mentioned in old reports, but whose art has not been seen since; and a third reason is that the art of some caves is of doubtful authenticity.

CUEVA DE LOS SANTOS (Sámano, Castro Urdiales). This cave is located near Cueva Grande. It has been explored by G.E.L.L. and in 1997, a small group of rock art was found. This consists of a small red mark in the vestibule of the cave, two red dots in the lower passage, and some possible macaroni engravings at the end of the main passage. There are, however, doubts whether these are genuinely prehistoric.

Molinero Arroyarbe, J.T. 2000. *Carta Arqueológica de Castro-Urdiales (Cantabria)*. Ayuntamiento de Castro Urdiales.

CUEVA DEL MORRO DEL HORIDILLO (Ventalaperra, Ramales de la Victoria). This is a small cave near Cueva de Pondra. The main passage is only 9m long, and at its end it has a circle of red paint, 20cm in diameter, as well as another three small red marks. Although the cave is not typical, the painting is considered as possibly Palaeolithic, due to the use of red paint, and its location near other caves with several red figures.

San Miguel, C. 1996. *Los Conjuntos Parietales Paleolíticos de las Cuevas del Arco, Pondra y Morro del Horidillo (Ramales de la Victoria, Cantabria)*. Trabajo de Investigación del Tercer Ciclo. Departamento de Ciencias Históricas. Universidad de Cantabria.

CUEVA DEL MIRON (Ramales de la Victoria). This cave, which has a massive entrance, is located between the two well-known cave art sites of Covalanas and Haza. It is currently being excavated by teams from the Universities of New Mexico and Cantabria, and layers dating from the Neolithic back to the Solutrean have been found. Incised engraved lines have also been discovered on a boulder and on both walls. No figure has been identified, but as the lines were covered by upper Magdalenian strata, their Palaeolithic authenticity is guaranteed.

Straus, L. G. and González Morales, M. 1996. Preliminary Excavations in El Mirón Cave. *Old World Archaeology Newsletter* Vol. XX, No. 1. pp 14-18.

CUEVA DE SAN CARLOS (or Cueva del Fortín) (Santoña). The entrance of this short cave, on the cliffs above the Bay of Santoña, has a small group of four vertical engraved lines, about 6cm long. It is therefore a relatively insignificant figure, whose authenticity cannot be proved.

Muñoz, E. and Gómez, J. 1988. Carta Arqueológica de Santoña. *Sautuola* V, pp 439-464. Santander.

CUEVA DE COFRESNEDO (Matienzo, Ruesga). A large fossil cave, where C.A.E.A.P. has found a few examples of Palaeolithic art. The vestibule has a number of signs in poorly-preserved red pigment, including a large rectangle. The interior of the cave has two red dots. These paintings have yet to be studied.

CUEVA DE LOS SANTOS (or Cueva del Becerral) (La Gándara, Soba). Cavers found a group of black paintings in the entrance vestibule in 1987. These were a horse and a circle on the right hand wall, with a bear and a horse on the opposite wall. These figures are, however, almost certainly fakes.

Bernaldo de Quirós, F., Bohigas, R. and Cabrera, V. 1987. Las pinturas rupestres de la Cueva de los Santos o del Becerral (La Gándara, Soba, Cantabria). *Bol. Cántabro de Espeleología* 8, pp 133 – 140. Santander.

CUEVA DE LOS MOROS (San Vitores, Medio Cudeyo). This group of figures is a new discovery of the C.A.E.A.P. The entrance has a red disc, while in the interior there are engravings including the rear part of an animal (possibly a deer), a horse in a vertical position associated with a triangular sign, and a complete bison.

CUEVA DEL OSO (Villanueva, Villaescusa). This cave is located below Cueva Morín, a well-known site with important Middle and Upper Palaeolithic deposits, and its possible examples of art were found by the excavators of that cave: J. González Echegaray and L. Freeman. The main figure could be the back and head of a horse, an engraving in the clay wall of a small side passage.

CUEVA DE LA LLOSA (Obregón, Villaescusa). C.A.E.A.P. found a small group of paintings and engravings in 1995. The former include a large animal outlined in red, two rectangles and a line of dots, while the engravings were done with a multitude of fine lines. The site is being studied by the University of Cantabria and the archaeological firm GAEM.

González Sainz, C. and Moure, A. 2000. La investigación reciente del Arte Paleolítico de la Región Cantábrica. Apuntes para un "Estado de la Cuestión". *Actas del 3º Congreso de Arqueología Peninsular*, Vol. II, pp 475-492. Oporto.

CUEVA DE LOS MOROS (Gornazo, Miengo). Discovered by C.A.E.A.P., this cave contains a large group of engravings done with a round-pointed instrument, especially a panel of vertical lines around an opening in the cave wall. The study of the art is incomplete.

CUEVA DEL JIBOSO (Quijas, Reocín). This cave is 150m long, and located next to the railway line near Cueva de Clotilde. In the 1950s it was reported as having a large red disc 50m from the entrance. But in recent visits the painting could not be found.

LA CUEVONA (Vinueva, Reocín). A long cave with several entrances. Alcalde del Río is supposed to have discovered a group of engravings done with a similar technique to those of Cueva de Clotilde, i.e. by finger pressure in clay. There were several animals, including a small bison. However the figures may have been destroyed, and certainly have not been seen since the 1950s despite numerous searches.

CUEVA DE LOS MARRANOS (Lamasón). This cave, about 320m long, was reported as having a group of paintings and engravings in a passage on the left of the vestibule. However the red dots are probably due to natural oxides in the rock, and the engravings appear to be modern.

APPENDIX 2

Acknowledgements for the cave surveys used in this catalogue.

Cueva Grande: G.E.L.L., Cueva de Juan Gómez: G.E.L.L., Cueva de la Lastrilla: G.E.L.L., Cueva del Cuco: S.E.S.S., Cueva de Urdiales: CETIMA-GAEM, Cueva del Arco A: CAEAP, Cuevas del Arco B and C: CAEAP, Cueva de Pondra: CAEAP, Covanegra-Sotarriza: ACDPS-CAEAP, Cueva del Cullalvera: J. Montoriol (1966), Cueva del Haza: Moure, A. and others (1987), Cueva de Covalanas: Moure, A. and others (1989), Abrigo de la Peña del Perro: CAEAP, Cueva del Otero: Echegaray, García Guinea and Begines (1966), Cueva del Cobrante: B.C.E.M., Cueva de los Emboscados: B.C.E.M., Cueva de Sotarriza: B.C.E.M., Cueva de Salitre: S.A.E.C., Cueva de la Garma: Arias, P. and others (1999), Cueva del Pendo: Montes, R. and others (1998), Cueva del Juyo: V. Fernández Acebo, Cueva de Santián: Canales and Membrado, Cueva del Calero II: ACDPS, Cueva del Castillo: E.C.G., Cueva de las Chimeneas: E.C.G., Cueva de la Flecha: E.C.G., Cueva de la Pasiega: Balbín and González Sainz (1994), Cueva de las Monedas: E.C.G., Cueva de Hornos de la Peña: Ucko, P. (1989), Cueva de Sovilla: CAEAP, Cueva de Cudón: SESS, Cueva de la Pila: V. Fernández Acebo, Cueva de las Brujas: González Sainz and others (1986), Cueva de Altamira: Ministerio de Cultura (1979), Cueva de Clotilde: GEIS C/R, Cueva de la Estación: SESS, Cueva de Cualventi: SESS, Cueva Redonda: CAEAP, Cueva de Linar: Sociedad Espeleológica Lenar, Cueva de las Aguas: Estany, Llop and Membrado, Cueva del Portillo I: SESS, Cueva de la Meaza: Alcalde del Río and others (1911), Fuente del Salín: S.A.E.C., Cueva de Porquerizo: S.C.C., Cueva de Chufín: Almagro, M. (1973), Cueva de Micolón: S.C.C., Cueva de Traslacueva: S.C.C., Abrigo de Socueva: Serna and Valle (2000).

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