

The most spectacular discovery is the one carried out in the cave of Church Hole, on the south side of the group of cavities of Creswell Crags. This cavity was dug in the 1870s by the Rev. Magens Mello and Sir William Boyd Dawkins. The recovered materials were classified by D. Garrod in 1926 as Creswellian and they are now related to numerous radiocarbon dates that locate this cultural horizon between 12 500 and 12 000 B.P.

In this cave we have now identified two decorated panels. In the first of them is recognised a male goat toward the left. The representation is 57.2 cm long from the muzzle to the croup, and 40.4 cm wide from the extremity of the horn to the end of the foreleg. It appears in semi-twisted perspective, that is to say the two horns are depicted, but of the rest of the duplicated elements, that is to say legs, ears or eyes, only one of them is shown. The groove, totally smooth, is relatively wide and not very deep.

In the second panel, located some 25 metres from the mouth, we have found two other engraved figures that possibly represent two birds facing each other. The one on the right only presents the area of the head and it possesses a very long neck, which one could associate with a crane-like bird or a swan. The silhouette on the left, with very elongated subtriangular tail, and a head that seems to present a curved beak, we could interpret as a bird of prey. The dimensions of these representations are around 30 cm wide by 32 cm long.

Stylistically all these figures can be placed in Style IV of André Leroi-Gourhan and as far as they can be dated without an exhaustive study, they are of the final phase of the glacial period, that is to say between 15 000 and 10 000 years before the present.

Although an initial study, and in the hope of new findings appearing soon, our discovery finally places Great Britain on the map of distribution of Palaeolithic rock art. Up to now the most northern example was the cave of Gouy, near the estuary of the river Seine in France, but Church Hole is approximately 500 km more to the north and this confirms the great importance and potentiality of the one group of Creswell Crags. This discovery opens up, also, new roads of study on the ways of life of some people that inhabited the very area next to the perpetual glaciers that covered the north of Europe. If the Cueva del Moro at Tarifa (Cadiz) that we found in the year 1994 is assumed to be the southernmost Palaeolithic art of Europe, now in 2003 Church Hole constitutes the northernmost Palaeolithic art of the Old Continent.

Sergio Ripoll, Paul Bahn and Paul Pettitt

Descubrimiento de arte paleolítico en el Reino Unido

El 14 de abril de 2003 un equipo interdisciplinary dirigido por el Dr. Sergio Ripoll director del Laboratorio de Estudios Paleolíticos (L.E.P.) integrado en el Instituto de Investigación de la Universidad Nacional de Educación a Distancia, en colaboración con los prestigiosos investigadores ingleses Dr.

Paul G. Bahn, freelance, y Dr. Paul Pettitt de la Universidad de Oxford, realizó el primer descubrimiento de arte rupestre paleolítico en Gran Bretaña.

El arte rupestre paleolítico está prácticamente generalizado en todo el Viejo Continente, aunque en determinadas zonas por varias circunstancias está ausente. La principal se debe a la existencia de una espesa capa de hielo de espesor variable que cubrió el Norte de Europa desde Dublín hasta Moscú llegando en algunos momentos hasta las actuales ciudades de Manchester, Leipzig o Varsavia. En otros casos se debe a la inexistencia de cuevas, por las condiciones geológicas del terreno. Por último hay otras zonas como las Islas Británicas donde, a pesar de existir abundantes cavidades, no se conocían hasta el momento representaciones de este tipo en el área que no estuvo ocupada por el hielo.

Debido a lo inexplicable de este vacío organizamos una visita para intentar comprobar, en algunas cavidades de diversas zonas, si las condiciones geológicas, medioambientales o el propio hombre habían sido las causas de su inexistencia. Con este objetivo prospectamos los conjuntos de Creswell Crags (Derbyshire), Paviland (Gales), Kent's Cavern (Cornualles) y Gough's Cave (Cheddar). En todas ellas se había documentado la existencia de depósitos arqueológicos encuadrables en el Paleolítico Superior. Por ahora el único lugar en que hay una clara evidencia de arte rupestre, es en algunas de las cuevas del conjunto de Creswell Crags. Por otra parte las únicas piezas de arte mueble conocidas en el Reino Unido proceden de estas cuevas: el protomos de caballo de Robin Hood Cave y el antropomorfo de Pin Hole Cave. Ambos se atribuyen al Creswelliense, cultura local paralelizable con el Magdaleniense Superior fechada en hace unos 12.000 años.

Partiendo de la idea de que parecía poco probable que existiera algún tipo de representación pintada, nos centramos en la búsqueda de grabados que plantean en general una mayor dificultad para su observación y reconocimiento. Por otro lado teníamos muy presente que todas estas cavidades ya habían sido estudiadas por prestigiosos investigadores durante casi un siglo y medio.

Con un sistema de iluminación apropiado y la experiencia acumulada por el estudio de numerosos conjuntos de arte paleolítico en la Península Ibérica, centramos nuestra atención en el conjunto de cavidades de Creswell Crags en el Derbyshire. Inmediatamente identificamos numerosos trazos grabados, muy dañados por graffiti, más o menos modernos, sobre todo en Robin Hood Cave y en la cercana cueva de Mother Grundy's Parlour, donde hemos localizado varias líneas incisas de difícil interpretación y, en el interior de una corta galería, la parte anterior de un caballo grabado en trazo bastante somero. Estos conjuntos están siendo actualmente estudiados en profundidad.

El hallazgo más espectacular es el realizado en la cueva de Church Hole, en el lado sur del conjunto de cavidades de Creswell Crags. Esta cavidad fue excavada en la década de 1870 por el reverendo Magens Mello y Sir William Boyd Dawkins. Los materiales recuperados fueron clasificados por D. Garrod en 1926, como Creswelliense y actualmente se poseen numerosas dataciones radiocarbónicas que sitúan este horizonte cultural entre 12.500 y 12.000 B.P.

En esta cueva hemos identificado por el momento dos paneles decorados. En el primero de ellos se reconoce un macho cabrío dispuesto hacia la izquierda. Se trata de una representación de 57,2 cm. de longitud desde el morro hasta la grupa, por 40,4 cm. de anchura desde la extremidad del cuerno hasta el final de la pata delantera. Aparece en perspectiva semitorcida, es decir están figurados los dos cuernos, pero del resto de los elementos pares, es decir patas, orejas u ojos, únicamente figura uno de ellos. El surco, totalmente patinado, es relativamente ancho y poco profundo.

En el segundo panel, situado a unos 25 metros de la boca, hemos hallado otras dos figuras grabadas que posiblemente representen dos aves en una posición enfrentada. La de la derecha únicamente presenta la zona de la cabeza y posee un cuello muy alargado, motivo por el que pensamos que podría asociarse con una grulliforme o con una anátida (cisne). La silueta de la izquierda, con una cola subtriangular muy alargada

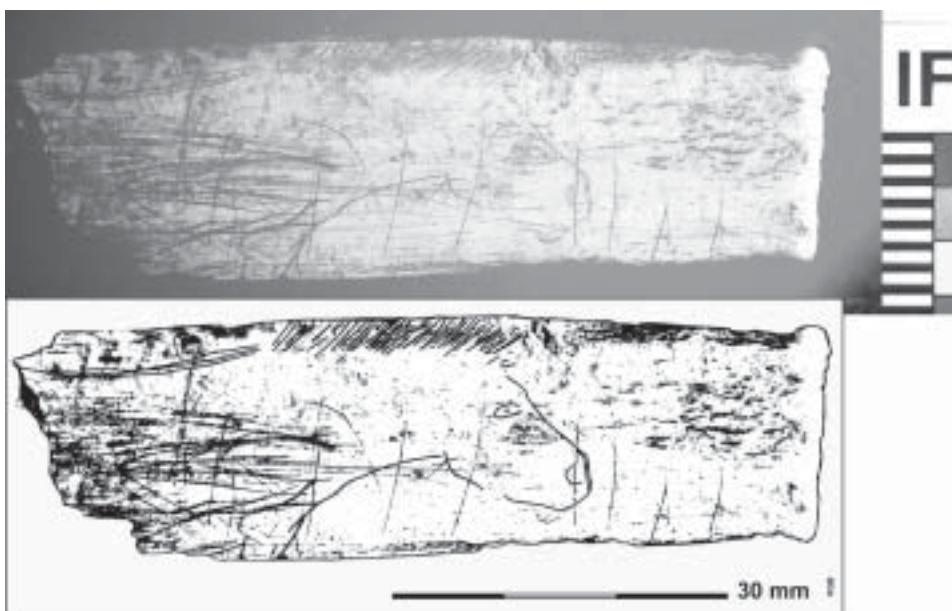


Figure 1. Equine engraving on rib fragment, presumed to be from the Creswellian of Robin Hood's Cave, Derbyshire, England, excavated in 1876.

y una cabeza que parece presentar un pico curvado, podríamos interpretarla como una rapaz. Las dimensiones de estas representaciones se sitúan en torno a los 30 cm. de anchura por 32 cm. de longitud.

Estilísticamente todas estas figuras se pueden encuadrar en un Estilo IV de André Leroi-Gourhan y por lo tanto pueden fecharse, a falta de un estudio exhaustivo, en la fase final del período glaciar, es decir entre 15.000 y 10.000 años antes del presente.

Nuestro descubrimiento, aún siendo una primicia y a la espera de nuevos hallazgos en breve, coloca por fin a Gran Bretaña en el mapa de distribución del arte rupestre parietal paleolítico. Hasta ahora el ejemplo más septentrional era la cueva de Gouy, cerca de la desembocadura del río Sena en Francia, pero Church Hole está aproximadamente 500 Km. más al norte y esto confirma la gran importancia y potencialidad del conjunto de Creswell Crags. Este hallazgo abre, además, nuevas vías de estudio sobre los modos de vida de unas gentes que habitaron una zona muy próxima a los glaciares perpetuos que cubrían el Norte de Europa. Si la Cueva del Moro en Tarifa (Cádiz) que encontramos en el año 1994 supuso el arte paleolítico más meridional de Europa, ahora en el 2003 Church Hole constituye el arte paleolítico más septentrional del Viejo Continente.

Sergio Ripoll, Paul Bahn y Paul Pettitt

Commentary: Palaeolithic cave art in Britain?

Some aspects of the above report need to be discussed and clarified. Besides the equine engraving on a rib fragment from Robin Hood's Cave (Fig. 1) and the anthropomorph from Pin Hole Cave, other palaeoart objects have also been recovered from the Creswell Crags. They include the engraved ivory point from Pin Hole Cave, not mentioned here even though it provides the best comparison with French materials (Armstrong 1925: Fig. 14a-d), two apparently engraved bone fragments from Mother Grundy's Parlour (Armstrong 1925: Fig. 15-2, Pl. 22-3), and a probable bone pendant fragment from

Church Hole Cave, whose chamfered edge is decorated with over a dozen evenly spaced notches (Dawkins 1877: Fig. 6).

The Creswell Crags palaeoart objects attributed to the very final Upper Palaeolithic have a chequered history. For instance at the time of excavation, in 1875/76, the bone with the horse image was claimed to have been planted, together with a tooth. Dawkins (1877) and Mello (1877) disagreed publicly about this matter and the question of the object's authenticity re-

mains unresolved. A similar piece, a fake, was later found near Sherborne and published by Smith Woodward (Farrar 1979; Sieveking 1980), who was also duped by the Piltdown finds about the same time. This piece of bone was later dated to 610 BP. Another of the many English Palaeolithic claims that have been rejected concerns the engraved horse mandible from Kendrick Cave, which is now considered to be much younger.

While the Creswellian at about 12 000 years BP is contemporary with the very final Magdalenian, its lithic typology seems to be more closely related to the Tjongerian of Holland and Belgium, the Hamburgian and subsequent Ahrensburgian of Holland and adjacent parts of Germany, and the Brommian of Denmark. These traditions are typologically almost Epipalaeolithic and already herald the appearance of the Mesolithic. So if the few rock art images reported here by Ripoll, Bahn and Pettitt are indeed of the Creswellian, which remains to be demonstrated, they only barely fit the description of Palaeolithic art. While this attribution may sound perfectly reasonable, it needs to be reiterated that, as Bahn himself has argued, co-occurrence at a site with Pleistocene occupation evidence does not make any rock art Palaeolithic. So far the three authors have offered no evidence for the proposed Pleistocene antiquity of these few figures, only opinions based on style as they perceive it.

In stating that Gouy was the northernmost Palaeolithic rock art site up to now, they overlook that in Bahn's own map of such sites, three are shown more northerly than Gouy: Mladez Cave, which he falsely claims to contain Pleistocene rock art (Bednarik in prep.), and Kapova and Ignatiev Caves in the Urals (Bahn and Vertut 1997: 43). In fact one of these sites is even further north than Creswell Crags, rendering at least the final claim false. This same map also reveals numerous examples of rock art sites Bahn

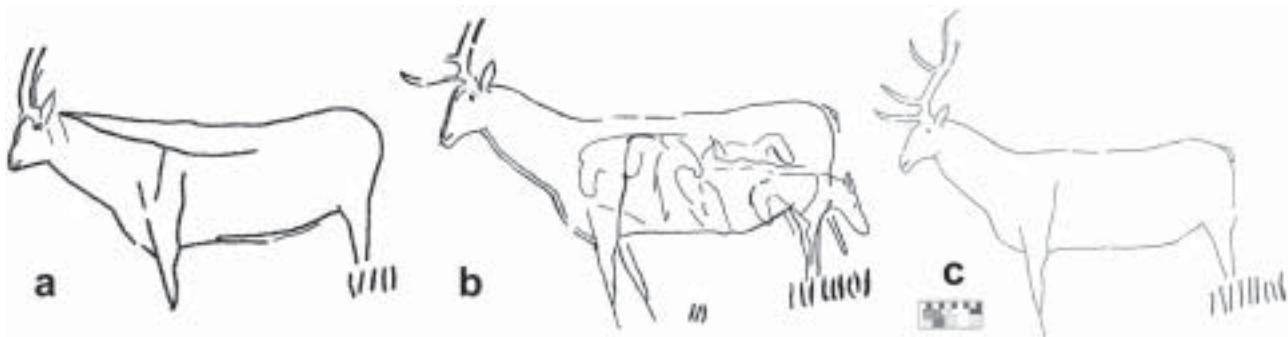


Figure 2. The first version of the Church Hole main figure (a), published in 2003; the second version of the same figure (b), published in 2004; and the third version, in 2005; all by the same recorders, Ripoll et al.

has previously attributed to the Upper Palaeolithic which are in fact younger. This is particularly obvious in the cases of Geißenklösterle and Hohle Fels in Germany, where no rock art has been found at all, despite numerous claims (Bednarik 2002). He also lists three Portuguese sites (Escoural, which is doubtful; and Côa and Mazouco, where no existence of Pleistocene rock art has been demonstrated) and such places as Siega Verde (certainly postdating the Roman period) and the Domingo Garcia group in Spain, which Ripoll also declares to be Palaeolithic. Another example is Ignatiev Cave, where a supposed mammoth motif has recently been dated to 7370 BP (Steelman et al. 2002).

Whilst this eagerness of pronouncing rock art sites as Pleistocene, even those that clearly are not, or possess no rock art all, certainly does not demonstrate that the authors are wrong with their present claim concerning two Creswell Crags sites, their claim will need to be subjected to thorough checking by scientific investigators before it can be considered further. We need to keep in mind that there have been false reports of Pleistocene rock art from Britain before. The earliest case on record was when in 1912 H. Breuil and W. J. Sollas thought they had found cave paintings in Bacon's Hole, in Wales. It turned out that the red stripes had been made by a workman eighteen years previously. The most spectacular case was that of the 'Palaeolithic' rock art found in the Wye Valley, because it found its way into a prestigious journal (Rogers 1981). It is interesting to note that it was the husband of the very same scholar that sealed the fate of the Sherborne fake who eventually debunked the Wye Valley rock art claim (Sieveking 1982).

At this point, an interesting claim has been made that Pleistocene rock art has been discovered in Britain, and it is not the first such claim made. Perhaps this one turns out to be valid, but at this stage there are many questions to be clarified. For instance, why should there be a Palaeolithic depiction of an ibex, a species not present in Britain at the time? Birds are exceedingly rare in authentic Palaeolithic cave art, and there are no swans at all. What is needed now is a thorough investigation of these sites by specialists

in micro-morphometry of engravings, modification processes of cave surface phenomena, and dating of engravings. I look forward to seeing this claim tested vigorously. [See postscripts below.]

Robert G. Bednarik
June 2003

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POSTSCRIPTS

1. Subsequent to writing this, I travelled to England in November 2003 to examine the Creswell Crags engravings together with a local cave art specialist, Professor Kevin Sharpe. He was advised by one of the team, Dr Pettitt, that our visit was not welcome. Readers can draw their own conclusions from this, but it is my impression that the discoverers of Britain's 'first Pleistocene cave art' are not very confident of the veracity of their claim.

2. January 2004. Ana María Gomar Barea from Spain has informed me that Ripoll, Bahn and Pettitt have made an error in claiming that they discovered Cueva del Moro at Tarifa (Cádiz) in 1994. That cave was found by the German speleologist Lothar Bergmann while he was collaborating on a project about the inventory of rock art in the area. For more information visit www.arte-sur.com.

3. The first publication on the Church Hole find was submitted a week after the discovery and was accepted by *Antiquity* the same day it was received, i.e. without refereeing. In it the discovery of three engravings of purported Palaeolithic age was reported, and the main figure described and illustrated as an ibex (Fig. 2a). The paper offered a long discussion of the significance of an ibex motif from Britain, where 'no ibex have been reported' (actually, ibex did exist in Britain).

4. A second publication followed a year later in *INORA*. The 'ibex' had become a 'stag' with now four legs rather than two (Fig. 2b). The number of Palaeolithic motifs had increased to 47, but most of those depicted appear to be natural features on the cave walls onto which the authors had merely projected their interpretations. Again, the report lacked any analytical information, such as data on grooves, micro-topography, weathering or patination, 'internal analysis' or archaeometric data.

5. May 2005: A critique by R. G. Bednarik in *INORA*, calling for proper documentation of the site, elicits an abusive response by Ripoll et al. They present yet another version of the animal figure, this time reverting to two legs and doubling the size of the antlers, as well as presenting many other changes (Fig. 2c). But they fail to address the topic of misidentification of natural features and provide none of the analytical details requested. Their fervent tone (greatly toned down by the editor) only serves to indicate their own uncertainties, and their inability to present proper scientific data. The issue is not whether any of the many markings in Church Hole are of the Creswellian, it is that so far no credible evidence to that effect has been presented, their mode of documentation is inadequate, and their mode of debate is unsatisfactory.

The Church Hole controversy continues

Ripoll, Muñoz, Pettitt and Bahn (2005) have responded to my concerns (Bednarik 2005) by heaping abuse on me, but without providing any of the scientific data I have suggested. They have also confirmed my proposition that both their first and the second recording of the zoomorph in Church Hole were inadequate (Fig. 2a and b), by providing us with

yet a third, again entirely different version of it (Fig. 3c). This time the figure has two legs rather than four, the antlers have grown to double the size, and there are many other changes. In the interest of maintaining contemporary rock art recording standards for crucial evidence I have to point out that the third recording attempt is, with due respect, still amateurish. My insistence that the authors improve their work is indeed, as they say, 'entirely predictable'; I have always sought to maintain high standards. But why should that be deemed malicious, as they have claimed? We are all capable of improving our work, and the work of these authors has great potential for improvement. Perhaps we can have a fourth and improved recording of the figure, perhaps this time it becomes again another species. When we do I shall claim some credit for having again contributed to improving the standards of these authors' recording endeavours.

Finding nothing else constructive in their response, I wish to broach the subject of 'dating' carbonate speleothems for the purpose of estimating the age of rock art in caves, because Ripoll et al. are proposing to employ it at Church Hole. Both methods used in this were introduced by me: the use of carbon isotope analysis in 1981, the use of uranium/thorium in 1982. My criticisms of my own early work in this are contained in a number of publications and I urge Ripoll et al. to avail themselves of this resource — not just to learn about the pitfalls, but also to learn how scientists are sometimes critical even of their own work (e.g. Bednarik 1998, 1999).

To summarise briefly: $^{230}\text{Th}/^{234}\text{U}$ analysis of reprecipitated calcium carbonate is very problematic. For instance, the first time it was used in rock art research, in Malangine Cave in South Australia, a very substantial, over 15-mm-thick layer yielded a result of $28\ 000 \pm 2000$ years BP. However, a split of the very same sample had a year previously given a carbon isotope age of 5500 ± 55 years BP. This provides an inkling of the distortions possible, and this very complex issue needs to be taken into account. Of even greater concern is that in the case of the Malangine Cave sample, the lamina measured many square metres, and many kilograms of sample were available. In Church Hole I anticipate that the sample is likely to be small and contaminated by mobile cations. If the secondary calcite had not been collected in bulk fragments of adequate size and mass, the results will be fairly meaningless. And if there is no checking by determining the radiocarbon content of the same flowstone deposit, even an otherwise sound result would only support a very weak proposition. To call it 'absolute proof', as Ripoll et al. do, is very careless indeed. It shows that they have yet to appreciate how precarious all scientific dating results are, and that an intimate understanding of the methods used and the qualifications applicable is absolutely essential. In science, proof does not exist. Sci-

ence is based on refutation, and as their response shows, these authors are not equipped to deal satisfactorily with attempts to refute.

Of particular concern are the apparently baseless claims that, apart from the 'ibex/deer' image, there are various sculpted or engraved animal figures which are clearly absent on the relevant photographs. It is regrettable that these unfounded claims have not been substantiated in Ripoll et al. (2005), despite my request to do so. Clearly there is some confusion about how much rock art there really is in Church Hole, and how much of that claimed in 2004 exists only in the minds of Ripoll et al.

In an effort to streamline debate about Church Hole I shall expect to see the following: justification for the claim that features such as their 'bear head' or 'bison head' are in fact anthropic modifications; quantified and microscopic evidence for the claim that some markings are much more ancient than others; details of sampling and processing of the speleothem sample they are 'dating'; final rather than 'preliminary' recordings of what they think they see

on the cave's walls; and a Marshack-style 'internal analysis' of selected features by binocular microscope.

I have no idea whether there is Pleistocene rock art in Church Hole or not; neither, it appears from their fervent and emotive response, as well as from the evidence they have offered, do Ripoll et al.

Robert G. Bednarik

October 2005

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A brief history of cave art research

ROBERT G. BEDNARIK

The history of the study of rock art in deep caves is widely regarded as having commenced with the discovery of the Palaeolithic art in Altamira, Spain, in 1879. However, cave art has been known to exist in various parts of the world practically since its creation. For instance, Neolithic art, Roman and later inscriptions in the vicinity of Palaeolithic cave art all suggest that the art was seen at these various times. Even much of the famous cave art of Lascaux is probably not of the Pleistocene, but may have been created in the Holocene, in response to earlier art. In 1458, Pope Calixtus III decreed that the religious ceremonies held in 'the Spanish cave with the horse pictures' had to cease. Although it is unknown which site he referred to, it was almost certainly a site of Palaeolithic art. This decree also implies the use of the ancient rock art in religious practices in late medieval times. By the 19th century, however, all knowledge of this rock art seems to have been lost, much to the detriment of its re-discoverer.

The life of Don Marcelino Santiago Tomás Sanz de Sautuola (1831-1888) was destroyed through his discovery of Palaeolithic art in Altamira. The archaeological establishment judged the cave art to be a crude joke or a hoax, and considered its discoverer to be either a charlatan or a dupe. De Sautuola produced immaculate publications in 1880 and 1882, trying in vain to secure acceptance of his find, but most of his opponents refused to even inspect the site (Sautuola, 1880). He died prematurely six years later, a broken and bitter man, in the full knowledge that he had made one of the greatest discoveries in the history of archaeology.

Léopold Chiron had found engravings deep in the French cave of Chabot already in 1878, and in 1890 found more in another site, Figuier. In 1883, François Daleau excavated engravings on a wall in Pair-non-Pair that had been covered by Ice Age sediments. However, de Sautuola's treatment by the discipline deterred others from publicising such new finds. In 1895, a bison engraving was discovered in the French cave La Mouthe. Emile Rivière, who had seen the Altamira paintings, then found more rock art in La Mouthe, and four years later a Palaeolithic lamp. Thus the evidence in favour of Palaeolithic rock art mounted, but full acceptance by the archaeological establishment did not occur until the end of the century.

At that time, a young Catholic priest had begun to develop a great fascination for the subject of European cave art. Abbé Henri Breuil was to dominate the field for the next six decades, and a great deal of

our knowledge of the Palaeolithic rock art traditions is attributable to his unparalleled life work (Breuil, 1952). His reign was followed by that of André Leroi-Gourhan (1965), after whose death Jean Clottes became the key scholar of Palaeolithic cave art. Throughout the 20th century, a stylistic sequence for the art was refined and honed by successive scholars. Its basis were the stylistic genres perceived by the leading researchers, which were often constructs of a very tenuous nature. Although significant changes were made to this stylistic sequence from time to time, it remained unchanged in its essential evolutionary basis. A distinctive development from the most simple and primitive to the most complex and ornate remained its most fundamental tenet until 1995, when it was refuted by Bednarik (1995). This was the result of new discoveries, most especially that of Chauvet Cave in France, whose dating by Clottes et al. (1995) demonstrated that the most sophisticated Palaeolithic cave art was also the earliest. During the 1990s, the introduction of direct dating of European cave art and the demise of stylistic dating, instances of fakes and rejections of scientific dating results prompted various controversies, culminating in 1995 in what Michel Lorblanchet later described as an earthquake in Palaeolithic rock art research.

Cave art is not, however, limited to Europe, it is found in all continents except Antarctica. A second tradition of Ice Age cave art occurs along the southern coast of Australia. The first site discovered was Koonalda Cave, presented by Alexander Gallus (1968). The scientific investigation and the recognition as a specific tradition of Australian rock art only began with the discovery of the Mt Gambier corpus in 1980 (Bednarik 1990). The first sites located there, Malangine and Koongine Caves, were subjected to direct dating of the rock art by Robert Bednarik in 1980. This was in fact the introduction of scientific dating of any form of rock art, whereas it took another ten years for direct dating techniques to be adopted by French cave art specialists. In contrast to the Franco-Cantabrian cave art chronology, the Australian cultural sequence has not given rise to controversy. This is because it has not been developed through stylistic constructs of individual archaeologists, but through scientific data obtained from substances physically related to the art, and through the identification of specific behavioural traces. In Australia, the Parietal Markings Project is responsible for the discovery of about 90% of all known sites, including all forty cave sites at Mt Gambier.

Another region noted for its cave art includes parts of Central America and the Caribbean islands. Specific clusters of sites occur in Cuba, Hispaniola (two specific concentrations) and in the general area of Belize, Guatemala and Yucatán Peninsula. The cave art of the last-mentioned region is attributed to the Maya and some twenty-two sites are currently known. This region has been studied especially by Andrea Stone (1995). The dozen or so sites in the Dominican Republic have been presented by Fernando Morban Laufer (1978). Minor numbers of cave art sites occur also on several other Caribbean islands. All cave art of this region is assumed to be well under 2000 years old.

Finally, a remarkable series of rock art sites has been located in several caves in the Kentucky-Alabama region of North America. They are popularly known as 'mud glyph caves' but the rock art, which is thought to be fairly recent, seems to occur on moonmilk rather than mud. This series, discovered since 1980, has been presented by Charles Faulkner (1986).

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