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Horse of the discovery of Siega Verda. Photo: Rodrigo de Balbín.

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Siega Verde and the open-air rock art of the northern Iberian Peninsula (Spain)

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ABSTRACT
Siega Verde was the third open-air rock art site to be discovered in the Iberian Peninsula, even before Côa and the controversy that followed that discovery. Its practicable size and the study carried out without any publicity allowed the analysis of a new reality that would change the interpretation of Palaeolithic art. From the start of the research, stylistic criteria were used to date the art in the absence of archaeological excavations. Although this has often been criticized, it meant that Siega Verde and Côa could be dated from Leroi-Gourhan's Style II onwards. Excavations at Fariseu, a site belonging to Côa in Portugal, have proved that hypothesis archaeologically, as well as supporting the applicability of Leroi-Gourhan's styles. Siega Verde is a good representative of Palaeolithic art in the open, on rocks by a river-bank or on prominent hills, but it is not the only form that can be catalogued as open-air rock art, because there are intermediate forms. These are found in cave entrances and in rock-shelters all over the Iberian Peninsula, especially in areas where little evidence of Palaeolithic art used to be known, such as on the southern Mediterranean coast and in Andalusia. This site possesses an exterior Upper Palaeolithic art ensemble, similar to the art found inside caves and of the same age, but in a different location. Formal relationships are usual inside and outside the caves and in both cases they represent a communicative code that did not need the dark and mystery to be expressed.

KEY WORDS
Palaeolithic art,
open air,
religion,
motifs,
communication.

RÉSUMÉ
Siega Verde et l'art rupestre de plein air du plateau nord de la Péninsule Ibérique (Espagne).
Siega Verde est le troisième site d'art rupestre en plein air découvert dans la Péninsule Ibérique, avant même celle de la Côa portugaise et toute la controverse qu'elle déclencha. Ses dimensions praticables et le travail effectué sans bruit nous ont permis d'appréhender une nouvelle réalité, qui pourrait changer l'interprétation de l'art paléolithique. Au début de notre étude, nous avons utilisé des critères stylistiques pour sa datation, en l'absence de fouilles archéologiques. Ces critères, aujourd'hui souvent critiqués, laissent à penser que les sites Siega Verde et Côa remontent, au plus tôt, au style II de Leroi Gourhan. Les fouilles de Fariseu, site de la Côa portugaise, soutiennent notre hypothèse, ainsi que l'applicabilité des styles de Leroi-Gourhan. Siega Verde représente bien l'art paléolithique à l'air libre, sur des roches de berges de rivière ou de collines, mais ce n'est pas la seule forme que nous puissions cataloguer comme art rupestre de plein air, car il existe des formes intermédiaires. Celles-ci s'observent à l'entrée de grottes ou dans des abris sous roche sur toute la Péninsule Ibérique, en particulier dans les zones où il y a habituellement peu de preuves d'art paléolithique, comme dans le Sud du Levant et en Andalousie. Notre site contient un ensemble artistique extérieur datant du Paléolithique supérieur, semblable à celui que l'on trouve à l'intérieur de grottes, du même âge, mais sur support différent. Des relations formelles à l'intérieur et à l'extérieur des grottes sont fréquentes et représentent, dans les deux cas, un code de communication qui n'a pas besoin d'obscurité ou de mystère pour s'exprimer.

MOTS CLÉS
Art paléolithique, art de plein air, religion, motifs, communication.

INTRODUCTION

Palaeolithic art was discovered by M. Sanz de Sautuola (1880) in Altamira, as everybody knows. This discovery was not easily accepted by a science that was in the process of establishing itself. The idea that our humanity lived during past geological times initially caused some reticence (Lartet & Christy 1865). But it was even more difficult to accept the artistic talent of humans who were not thought to possess sufficient mental capacity.

Therefore, Sautuola's discovery contested the ideas of official French science, a model of scientific conservatism (Cartailhac 1902; González & Moro 2002). Finally, with difficulty, French archaeologists acknowledged the reality and took possession of prehistoric art, so that France became the centre of the phenomenon, over other territories.

It has never been easy to understand the meaning of prehistoric art, and we still do not know everything. The interpretations usually derive from anthropological concepts at each moment in time. Thus, Palaeolithic art was interpreted as a magic-religious phenomenon, with the purpose of obtaining food. This would have involved some kind of Supreme Being who would sometimes have appeared in initiation ceremonies, introduced by a priest or shaman (Breuil 1952).

Art therefore became associated with religious ideas, as if our ancestors were incapable of pure artistic creation and needed to be motivated by religion. According to twentieth century terms, early humans were able to communicate their beliefs, which were useful for the maintenance of the group, but these necessarily derived from religious thought. This interpretation was conditioned by the place chosen for the representations: dark, difficult and mysterious caves. Therefore, our ideas about Paleolithic art were strongly affected by its localization in caves.

This interpretation took time to be accepted, but the idea became established with the same firmness as the previous reticence, creating an inertia that would also be difficult to change.

NEW DISCOVERIES, NEW IDEAS

This traditional conception prevented the acceptance of any other hypothesis. Prehistoric art must be linked to caves and religious ideas, creating a univocal view of the world.

The profound reappraisal carried out by Leroi-Gourhan (1971), following the research of his disciple Laming Emperaire (1962), proposed a procedure based on statistics, where the meaning of the art was inferred from relationships between motifs and with their setting. However, caves were still at the centre of their proposals while dual-sexual religion was the driving force behind the artistic expression. A. Laming's references to exterior sanctuaries were still linked to caves. This connection was so strong that motifs with an archaic appearance found in the open air could not possibly be Palaeolithic. This was the case of the art in North Africa.

With the discovery of Mazouco in 1981 by a team from the University of Porto (Jorge *et al.* 1981) (Fig. 1), the situation changed drastically. What had been found, horses engraved right on the banks of the river, was new; something not previously envisaged (Balbín & Bueno 2009). The find did not arouse much intellectual interest but eleven years later, after the discoveries of Domingo García (Balbín & Moure 1988), Fornols Haut (Sacchi 1988), Piedras Blancas (Martinez Garcia 1986-1987) and Siega Verde (Balbín *et al.* 1991), the site of Côa was found (Balbín 2009). Work by Portugese archaeologists led to a favorable disposition toward new ideas and made Côa the flag-bearer of open-air Palaeolithic art.

Fig. 1. — Engraved horse of the portuguese site of Mazouco. Scale bar: 20 cm.

However, Domingo García, Piedras Blancas, Fornols Haut and Siega Verde sites had already been found in the meantime. The first three were of a moderate size. Siega Verde, discovered and studied three years before Côa, was a more extensive ensemble, with great graphic variety and near to the Portuguese site. Its scientific contribution laid the foundations for a more general interpretation (Balbín 2009).

SIEGA VERDE

In 1989, Manuel Santonja, who was then the director of Salamanca Museum, saw the first open-air engraving at Siega Verde, a horse. After a visit the following day by Rodrigo de Balbín and Primitiva Bueno, when about another 15 figures were located, a team was formed to document the site.

This consisted of members of the Prehistory Department at the University of Alcalá de Henares, who studied the area until 2005 and documented 443 figures (Alcolea & Balbín 2006) (Figs 2, 3). The research was funded by the Government of Castilla y León. In 2010, the site was inscribed in UNESCO's World Heritage List, as an extension of the Côa valley property.

The site is located in the upper-middle course of the River Agueda, where it crosses the municipal districts of Villar del Ciervo and Villar de Argañán. Its geographic coordinates

Fig. 2. — Location of the Siega Verde site in the Iberian Peninsula, Spain.

are 40°41'35"N, 02°58'28"W, taken from the 1:50.000 map (Mapa Topográfico Nacional, Sheet no. 500, Villar del Ciervo) (Fig. 4).

The position of the site is strategic as it is on a ford across the river between the peneplain and the river basin. Towards

the north the river gradually cuts down until it reaches its confluence with the River Douro. This position did not go unnoticed by Palaeolithic groups, nor by the animals they hunted.

A very full survey was carried out, and this delimited an area about a kilometre long centred on the bridge connecting the village of Castillejo de Martín Viejo with Villar del Ciervo. In all, 29 groups of engravings were found, with all but Group XXIX on the left bank of the river.

Siega Verde is on the banks of the river, which has eroded Palaeozoic schist in a series of terraces. The lower level consists of river potholes with evidence of recent erosion at their base, where the engraved figures have suffered some deterioration. The structure of the valley bottom is rigid, which causes the rapid erosion of sediments and prevents the basic conservation of any archaeological deposits contemporary with the rock art.

The southern zone, with only five decorated surfaces, is about 300 m long between the first horse that was discovered (Fig. 5) and Pedrogordo water-mill. This was built in the Middle Ages and engraved rocks were used in its construction, which explains the scarcity of rock art in this zone.

The central zone, with the most figures, occupies 400 m towards the north. It is on the ford, where the road bridge was built in the early twentieth century, with one of the pillars supported on engraved rocks. The rock art panels generally face east, on vertical surfaces parallel to the river.

The northern zone forms the final 200 m of the site and contains Panels 54 to 91. They are all located on the left bank, except for Panel 91. Here many of the engravings are on flat horizontal surfaces.

Techniques

Today, the rock art at Siega Verde consists of engravings. However, it should be noted that pigments are poorly conserved in the open air and therefore cannot easily be seen. Some reddish outcrops of rock were engraved, which means that colours were important for the Palaeolithic artists (Alcolea & Balbín 2006: 187-188). Additionally, pigment analyses were performed in 2007 with the collaboration of the IPH in the Ministry of Culture, the results of which confirmed the presence of iron and manganese oxides in Panels 46, 48 and 49 (Fig. 6). The pigments also contained phosphates, apatite and silicates from clay (Balbín & Alcolea 2009). Several of these components are not natural in the area and therefore must have been brought from elsewhere to create the art. Paintings existed at Siega Verde and must have accompanied the engravings. The incised lines would have acted as outlines for the paintings.

The engravings were produced by incision and pecking. Horses and aurochs were pecked in the rock, like most of the complex signs. Incision was used for caprids, cervids and some signs, which appear in the central zone.

Pecking is the predominant technique. It was a common technique in the Palaeolithic despite affirmations to the contrary (Alcolea & Balbín 2006: 193-196). Studies by B. & G. Delluc (1991) have shown that it was used in caves. Pecked engraving can be direct or indirect. The direct technique produces irregular lines of mediocre quality. The abrasion is made after pecking. The forms are mainly linear and sometimes make use of natural shapes of the rock. More visible, almost pictorial forms are produced. The thickness of the lines and changes in the colour of the rock when they were engraved would have created colour differences with the surrounding wall.

Incised engravings make up 26.18% of the total and are technically simpler. Incised and pecked engravings appear in similar percentages. No group amounts to more than 10% among the animals, of which horses, stags and indeterminate quadrupeds are predominant. Other animals rarely comprise more than 5%. The most frequent signs are lines, with a percentage of 31.89%.

Most cervids were incised. Reindeer and ibex were only pecked, like the claviforms and dots, whereas circular shapes were usually pecked.

No important differences are seen from the situation in caves. Pecking was a technique employed by Palaeolithic artists both inside and outside caves. The techniques and compositions at Siega Verde are Palaeolithic and different from later styles of rock art.

Subject matter

The fauna represented at Siega Verde consists of the typical animals in Europe at that time, including equids (Fig. 5), aurochs (Fig. 7), bison, deer (Fig. 8), reindeer (Fig. 9), megaceros (Fig. 10) and caprids (Fig. 11). Some less common species are also found, such as a woolly rhinoceros (Fig. 12), a canid (Fig. 7), bears (Fig. 13) and felines (Fig. 11), in small numbers. The percentages resemble the general proportions in European Palaeolithic art, with no significant difference from the percentages inside caves.

Some human figures also appear (Fig. 14), just as they are found in caves in the interior of the Iberian Peninsula, like Los Casares, La Hoz and La Griega (Balbín & Alcolea 1992: 420; Alcolea & Balbín 2003b: figs 5, 7; Corchón 1997: fig. 194-1-2), and in the open air at Ribeira de Piscos of Côa (Baptista 2001: figs 4, 5).

The animals correspond to the late Pleistocene climate, with extensive steppe vegetation and milder micro-climates (Alcolea & Balbín 2003a). Cold-adapted species, and others that can tolerate a wider range of temperatures, such as deer, are represented. The animals to be depicted were selected for cultural and not strictly environmental reasons.

The fauna that was represented is the same inside and outside caves, corresponding to cold climates but with different adaptability. At Siega Verde, reindeer, bison and rhinoceros were depicted in the northern zone and their simultaneous presence is due to different chronologies. In any case, aurochs lived in the same environment as bison, and in cold periods the latter gathered in the same places as deer.

The complex abstract motifs correspond to spatial, chronological and cultural criteria. Their interpretation as ethnic markers (Leroi-Gourhan 1983) has been confirmed at Siega Verde, with the interior of the Iberian Peninsula possessing its own system.

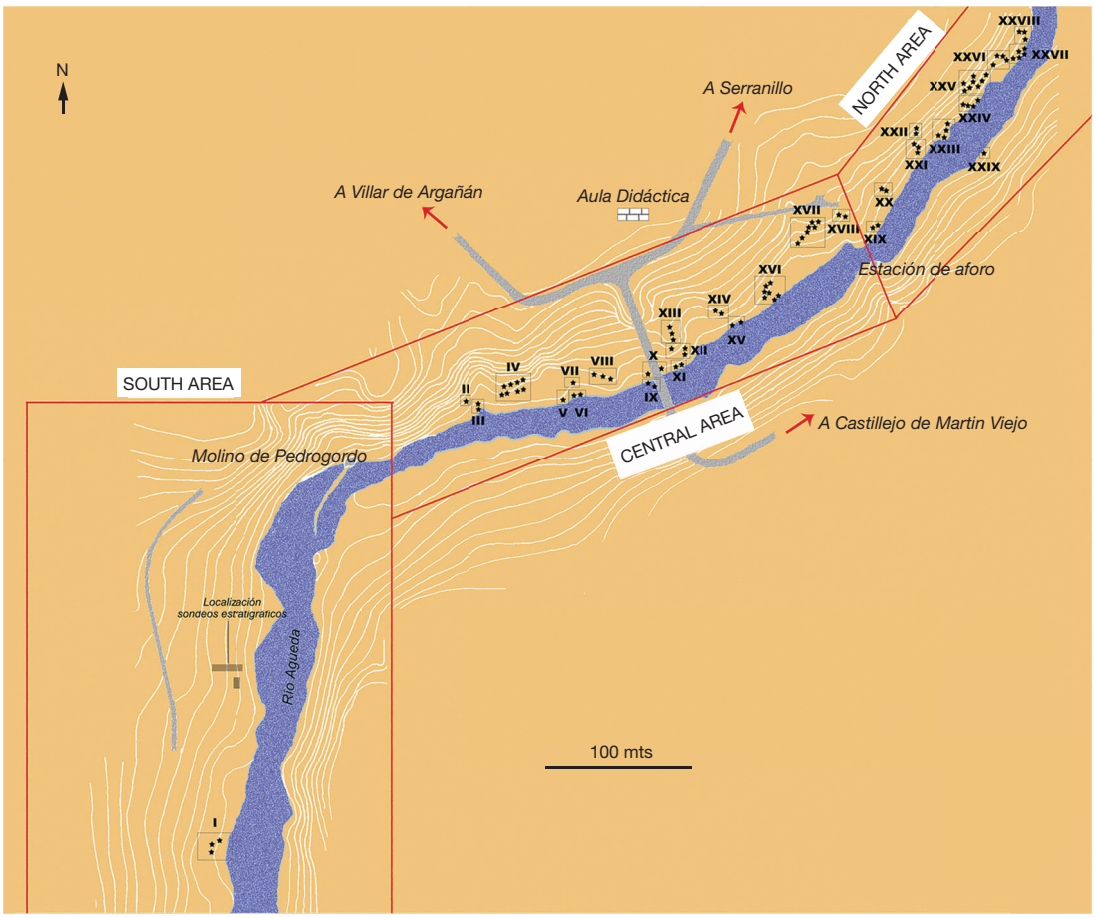

Fig. 3. — Organization of the decorated ensembles of Siega Verde.

Fig. 4. — View of the Siega Verde place from the south.

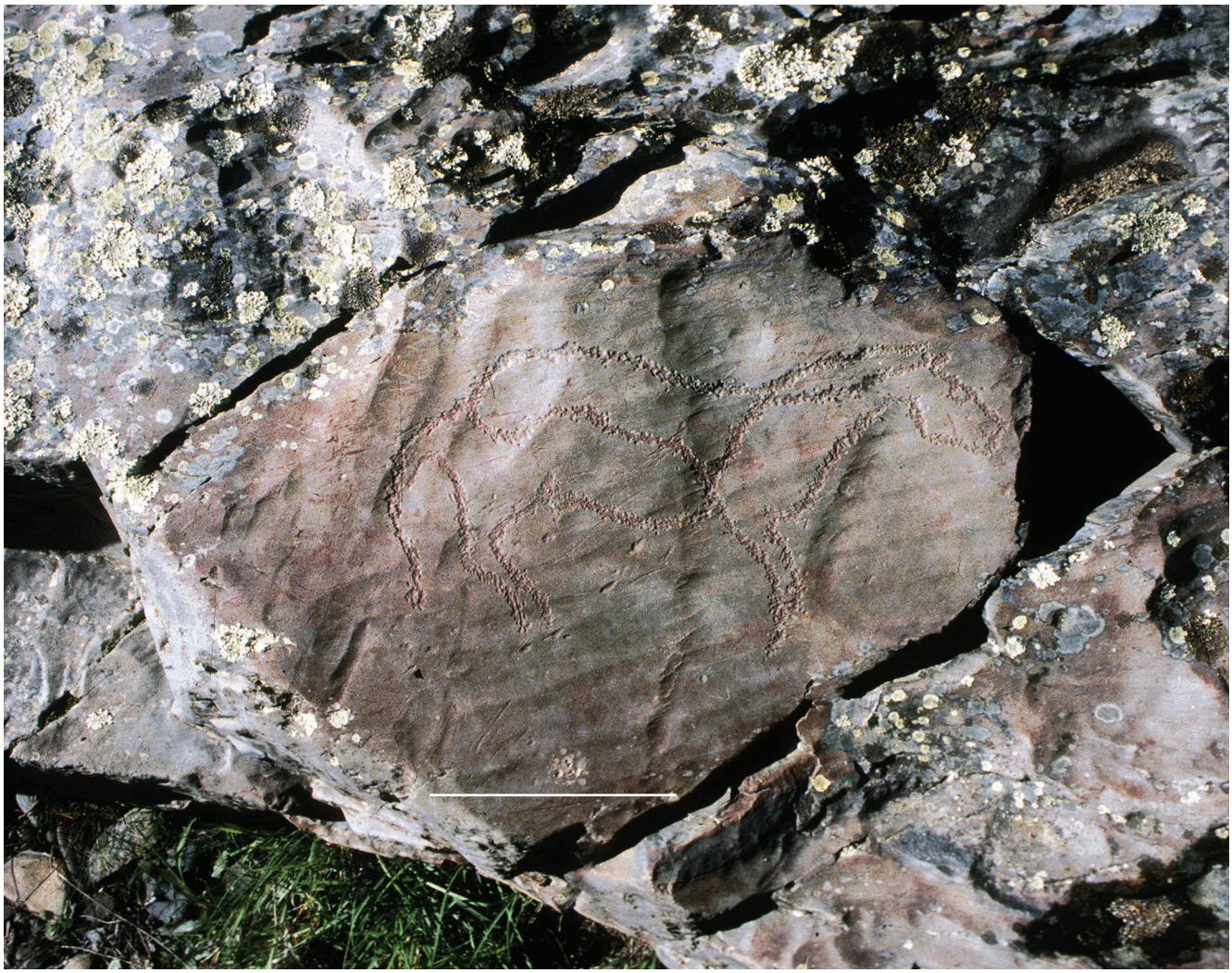

Fig. 5. — Horse of the discovery of Siega Verde. Scale bar: 10 cm.

Fig. 6. — Site of the colorant sample panel 48 of Siega Verde. Scale bar: 10 cm.

Fig. 7. — Auroch and horses of Panel 32 of Siega Verde. Scale bar: 10 cm.

Fig. 8. — Detail of deer of the Panel 51 of Siega Verde. Scale bar: 5 cm.

Fig. 9. — Reindeer and horse of Panel 67 of Siega Verde. Scale bar: 10 cm.

Fig. 10. — Megaceros of the Panel 13 from Siega Verde. Scale bar: 10 cm.

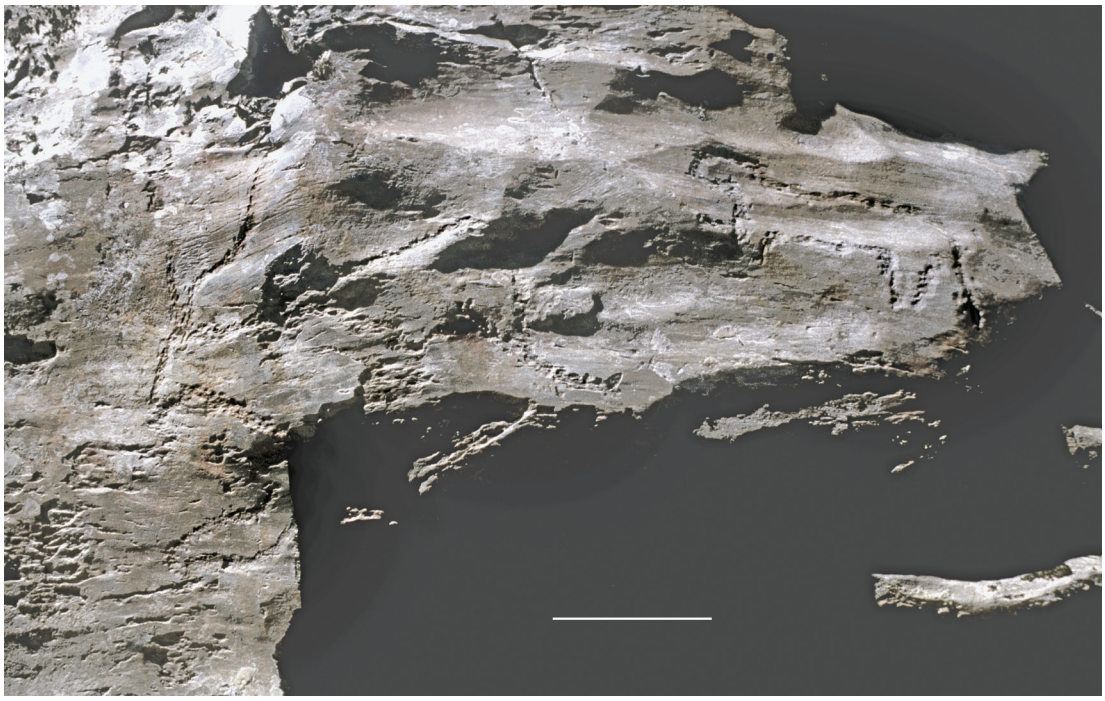

Fig. 11. — Feline and goat of the Panel 82 from Siega Verde. Scale bar: 10 cm.

Fig. 12. — Woolly rhinoceros of the Panel 69 from Siega Verde. Scale bar: 10 cm.

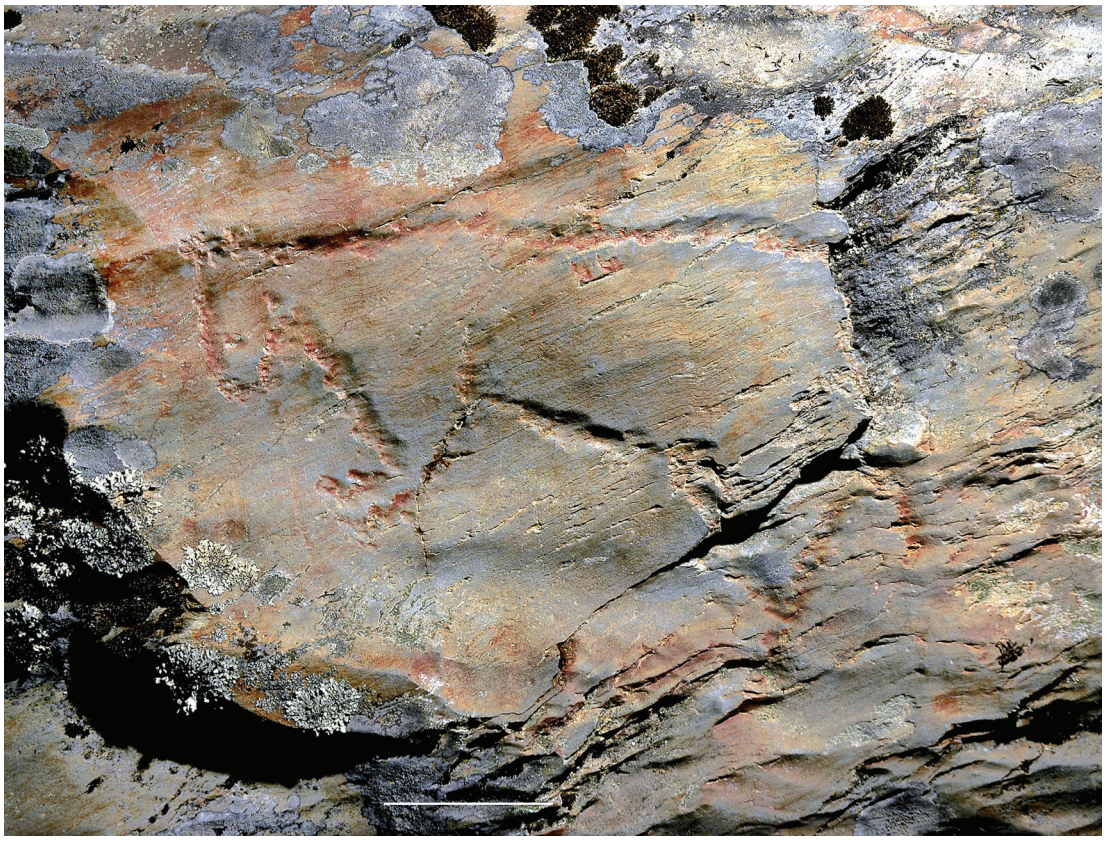

Fig. 13. — Bear of Panel 81 of Siega Verde. Scale bar: 10 cm.

Fig. 14. — Anthropomorph of the Panel 13 of Siega Verde. Scale bar: 10 cm.

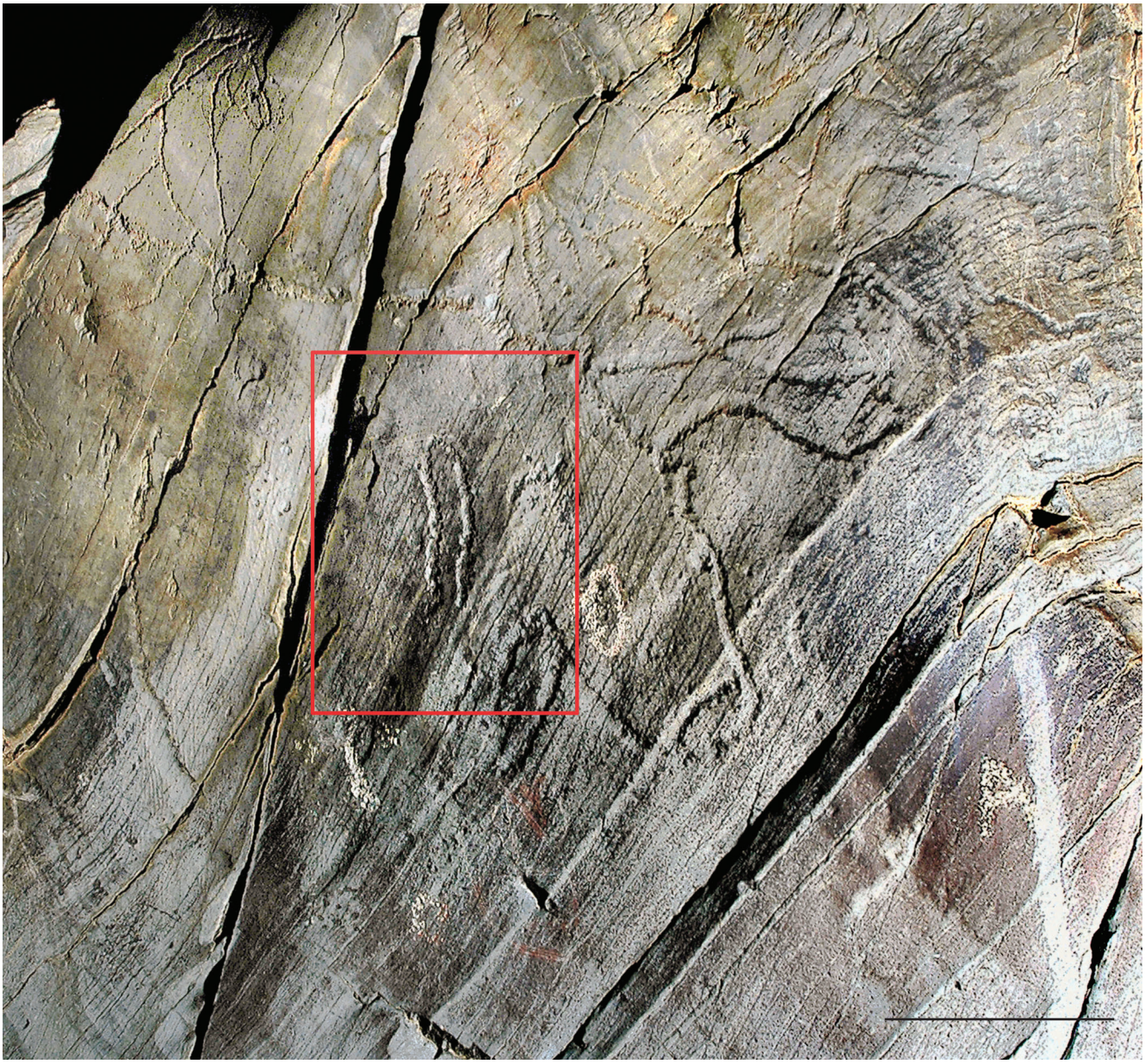

Fig. 15. — Oval sign on bovid of the Panel 21. Scale bar: 10 cm.

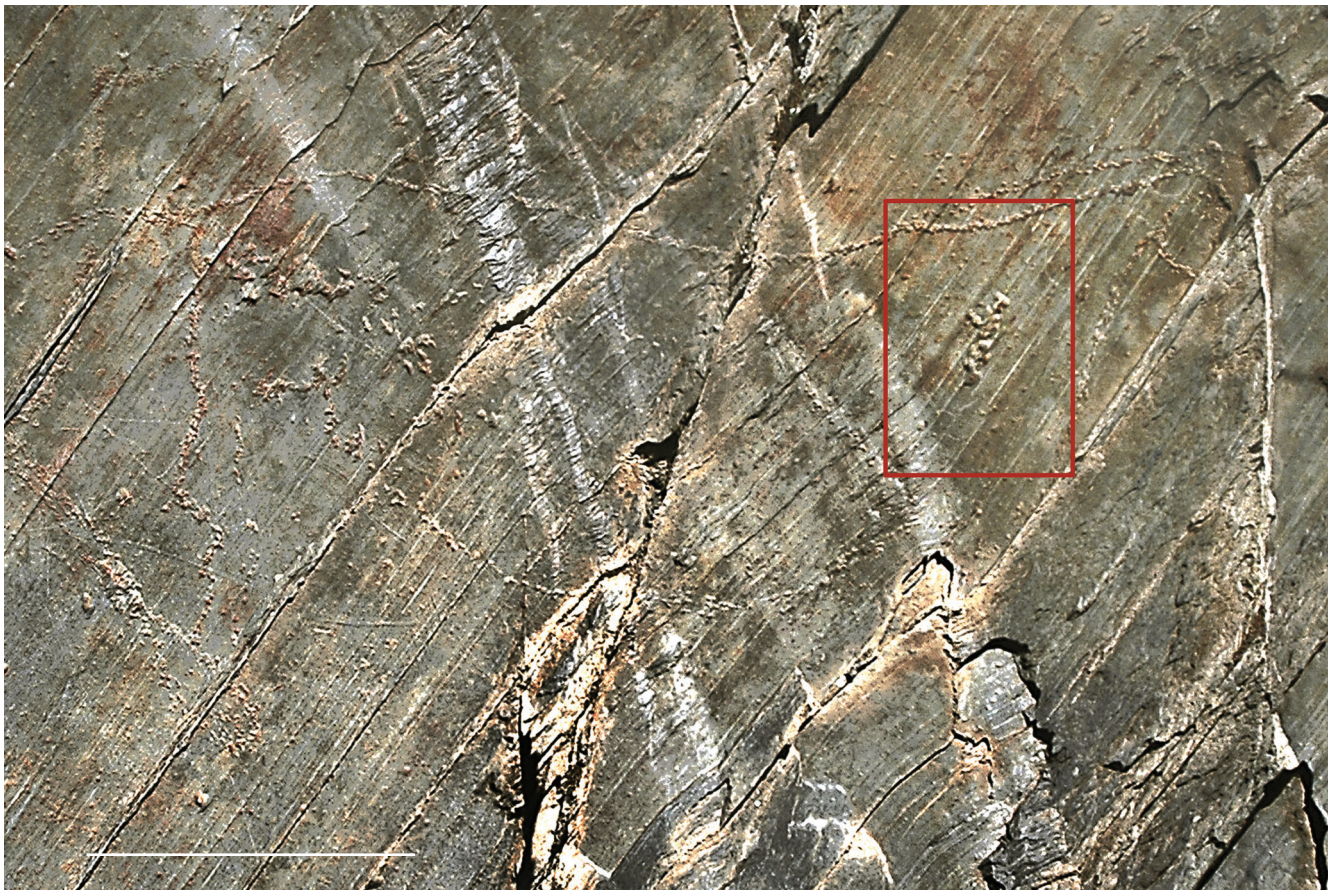

Fig. 16. — Claviform on horse of the Panel 51. Scale bar: 20 cm.

Fig. 17. — Rhinoceros of the cave of Los Casares. Scale bar: 20 cm.

Fig. 18. — Feline from the cave of Los Casares. Scale bar: 50 cm.

Fig. 19. — Fariseu engraved wall. Scale bar: 50 cm.

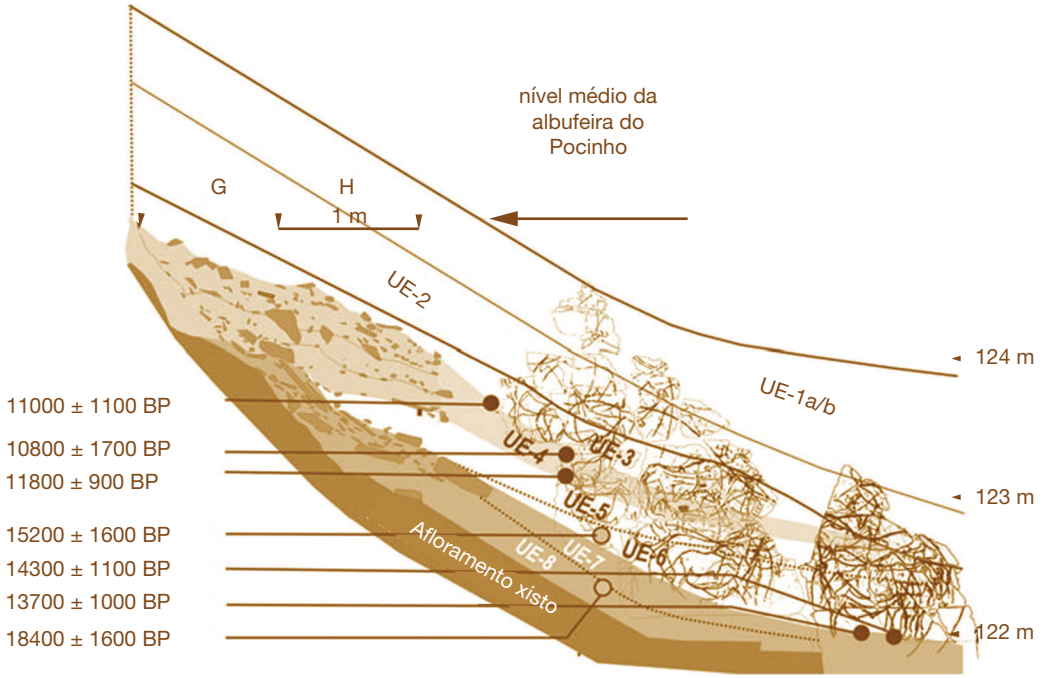

Fig. 20. — Stratigraphy of the excavation of Fariseu from Aubry 2009: fig. 7.1.1-2.

Fig. 21. — Engraved plate with stag from the superior levels of Fariseu from Aubry 2009: fig. 7.1.3-7 – Fariseu u.S. 4, Carré e-80 ua. Scale bar: 1 cm.

Fig. 22. — Red deer from vale de Jose Esteves, Côa. Scale bar: 5 cm.

Fig. 23. — Style V figures of Panel 48 of Siega Verde. Scale bar: 3 cm.

FIG. 24. — View of the Zezere and Molino Manzanez sites.

Fig. 25. — View of the Fornols Haut and Piedras Blancas locations.

Fig. 26. — Engravings from the Asli Bu Kerch site in the Western Sahara. The unit of measurement for the scale bar is the centimeter.

Fig. 27. — Outdoor paleolithic aurochs of the Qurta Nilotic Place from Huyge *et al.* 2011. Scale bar: 50 cm.

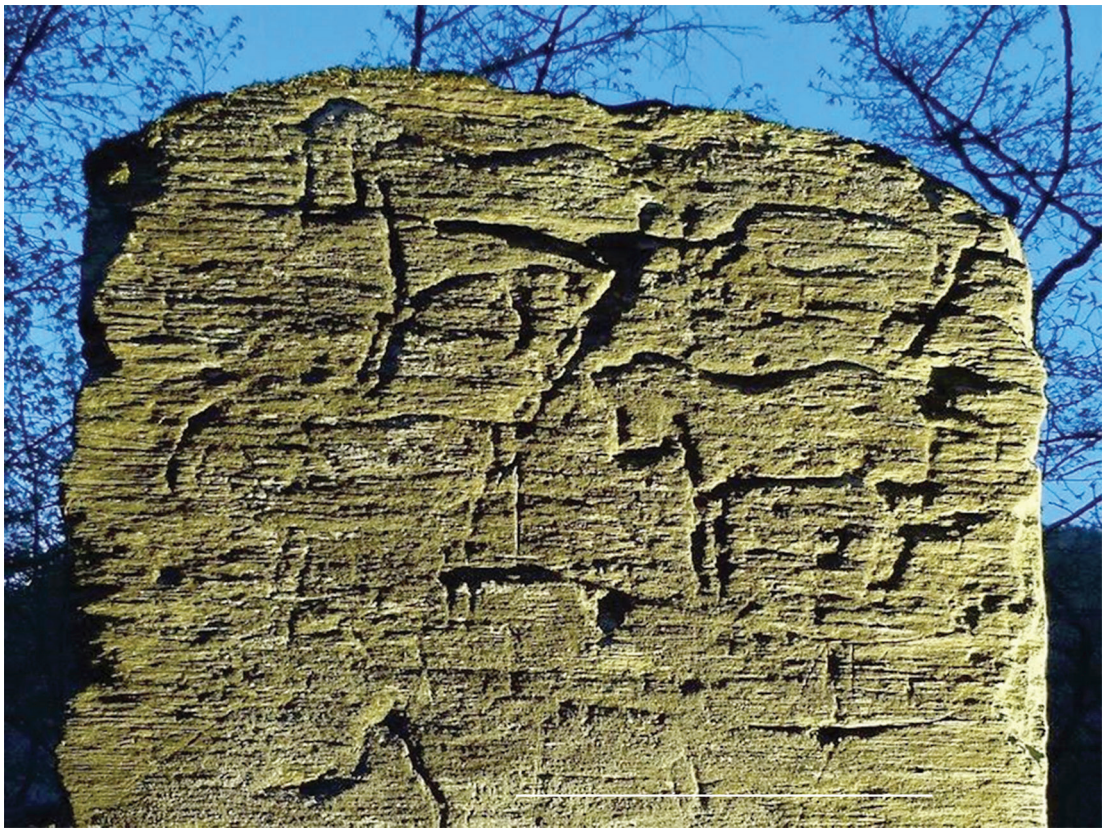

Fig. 28. — Engraved horses of the german site of Hunsrück from Welker 2016. Scale bar: 50 cm.

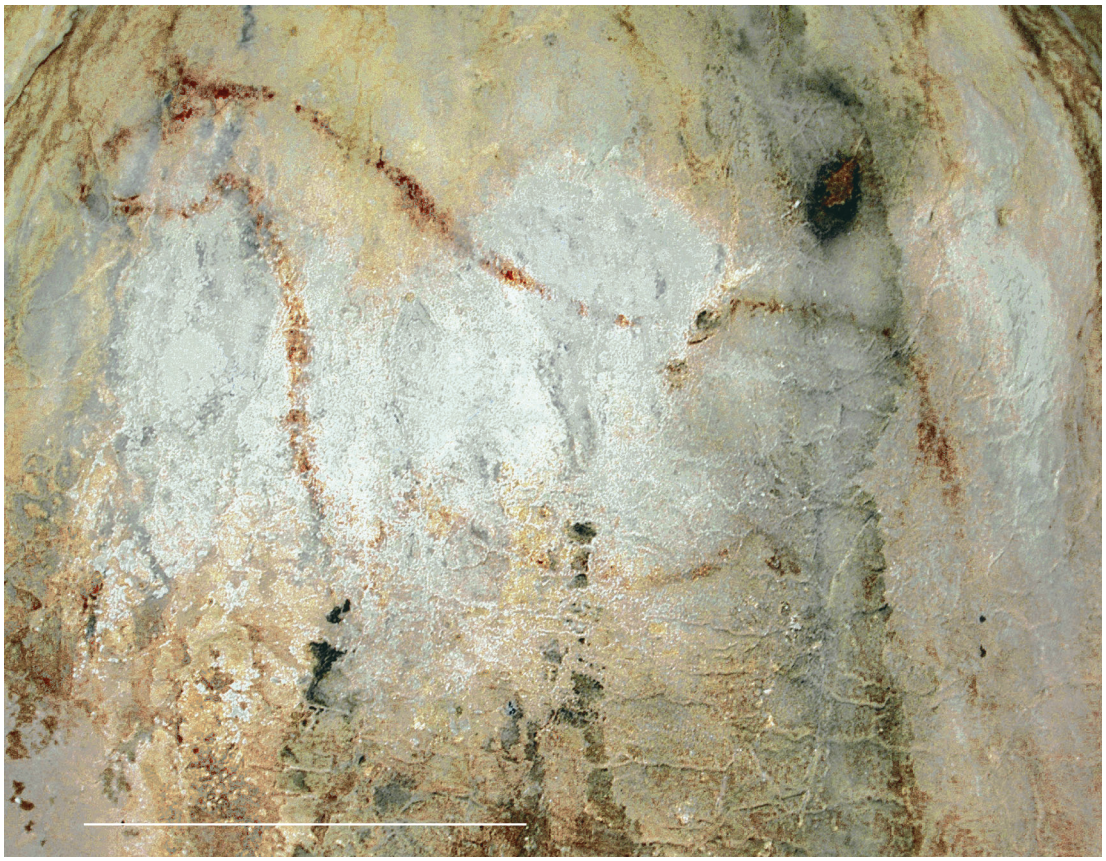

Fig. 29. — Painted horse of the murcian cave of Jorge. Scale bar: 50 cm.

Fig. 30. — Painted horse of the ambrosio cave, Almeria. Scale bar: 50 cm.

Fig. 31. — Engraved and painted horse of the Cueva del Moro, Cadiz. Scale bar: 50 cm.

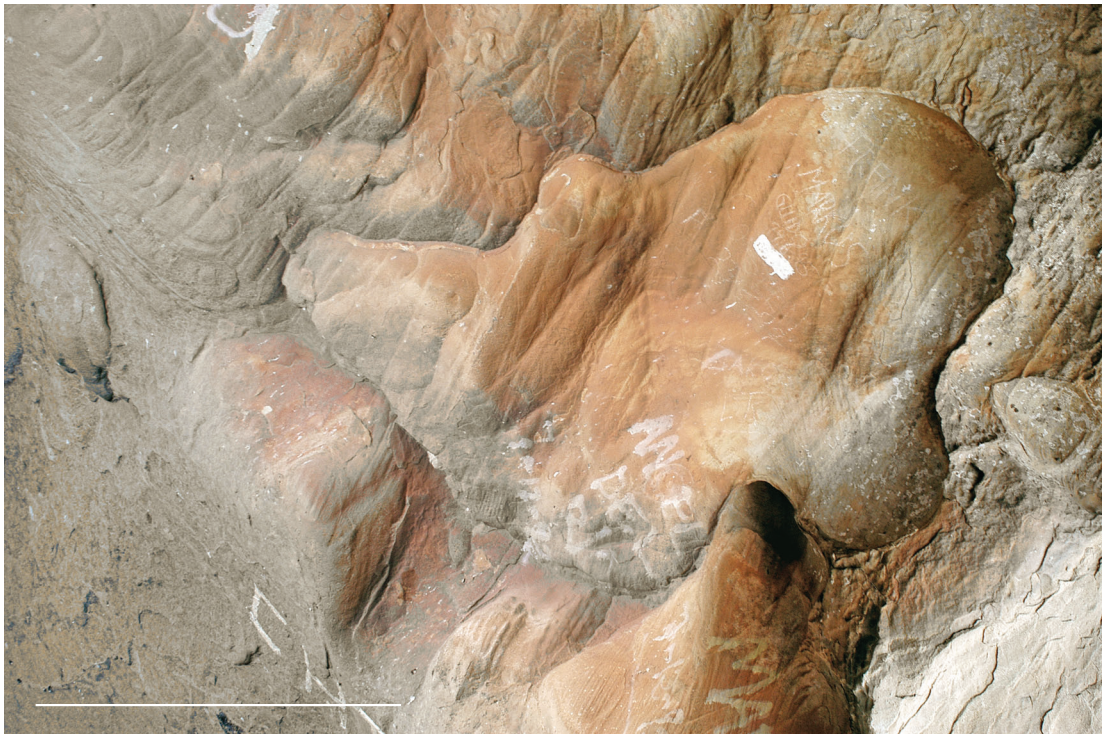

Fig. 32. — Great engraved auroch of the Cueva del Moro, Cadiz. Scale bar: 50 cm.

Fig. 33. — Engraved bison of the cave of Santo Adriano, Asturias. Scale bar: 10 cm.

A few signs are very simple, such as single lines, zigzags and lattices. However, there are also circular and oval shapes and claviforms. The former are mainly open; they usually consist only of the outline, without any fill, and are associated with the bovids (Fig. 15).

Claviforms are always pecked, and consist of a vertical line with a lateral protuberance. They resemble the model of the late series in Style IV (González Sainz 1993: 45). This is rather late for the examples at Siega Verde, but older examples are known in caves (Pike *et al.* 2012). It is possible that the signs had a prolonged use although they began early. They are associated with horses (Fig. 16).

STYLE

Style refers to a way of organising the physical characteristics of an object in order to describe it. It assumes that some of them predominated in a particular time and they are able to characterise the object. It is a common procedure in History of Art, in which it has produced important results, and that is probably why A. Leroi-Gourhan transferred the method to Palaeolithic art. The criteria of formal characterisation can be applied to any material element and are often used to define the stages of a culture, by pointing out the most characteristic objects and their predominance. The different periods in the Upper Palaeolithic and other stages of Prehistory have been established in that way.

In the absence of other procedures and for personal intellectual convictions, the chronology of the rock art at Siega Verde has been organised according to Leroi-Gourhan's styles. This approach also achieved good results in the first cataloguing of the art at Côa; later corroborated by the excavations at Fariseu.

Pecked animals tend to be larger than the incised figures, but the technical preferences vary from one species to another.

The representations are usually reduced to their outlines and tend to emphasise the area of the head. The limbs received less attention and were omitted or sketchily represented.

The bodies are quite elongated, especially in the case of the large pecked figures. Few details are shown, although this depends on the zone of the site. Where they are represented, they are generally in the head.

The perspectives are usually absolute profile, or oblique bi-angular as characterised by Leroi-Gourhan (1983). In some cases, absolute profile, horns in correct perspective and legs in twisted perspective are combined in the same figure, such as in the large stag in the northern zone. The figures depicted in straight bi-angular perspective are the most important ones. Movement is nearly always partial and true coordinated animation is not achieved.

Equids and bovids are the most numerous species and the least animated. Cervids display greater animation and caprids even more. Felines and bears are depicted with a degree of movement. The largest and most abundant animals are the most static whereas the least numerous compensate for their scarcity with animation, especially in the northern zone.

A few figures, some horses, bovids and isolated examples of deer and ibex, exhibit an archaic appearance, similar to the scarcely evolved type at Foz Côa. They resemble figures in caves in the interior of the Iberian Peninsula, such as La Griega, Los Casares and El Reno (in their oldest phase). The other figures are similar to representations at such open-air sites as Domingo García, Mazouco and Zézere, as well as in the caves in the Central System. The exotic animals, like the woolly rhinoceros and felines, appear in advanced phases. The former animals are irrelevant in Iberian prehistoric art, with the exception of the figure in Los Casares (Balbín & Alcolea 2002; Alcolea & Balbín 2003b: fig. 16) (Fig. 17).

The felines are quite schematic, but in the Castilian Plateau some clear examples are known at Los Casares (Balbín & Alcolea 1994) (Fig. 18) and with reservations at La Griega (Corchón 1997: table 1). They seem to be characteristic of Palaeolithic art on the Plateau, because in northern Spain they are practically restricted to Tito Bustillo (Balbín *et al.* 2003: fig. 58). Bears are unusual figures in the Iberian Peninsula, and again the best examples in the north are in Tito Bustillo (Balbín *et al.* 2003a).

Anthropomorphs form a significant group on the Castilian Plateau (Alcolea & Balbín 2003b: 227-228) and also in northern Spain. They include the well-known figures in Los Casares, as well as at La Hoz (Alcolea & Balbín 2003b: figs 5-8) and La Griega, where two examples have been documented (Corchón 1997: table 1). Two similar anthropomorphs have been identified at Ribeira de Piscos (Baptista 2001: figs 4, 5).

The subject matter at Siega Verde is original and characteristic of the Plateau. Stylistic similarities with Palaeolithic art on the Mediterranean coast became diluted over time, if they ever existed, and only a few archaic figures suggest plausible relationships. The similarities with the northern coast of Spain are more numerous and useful to establish a stylistic chronology.

CHRONOLOGY

The Palaeolithic age of the ensembles at Côa was disputed for mainly political and economic reasons. The reports issued by Bednarik (1995a, b) and Watchman (1995), which proposed a Holocene age for the Côa engravings, should be understood in that sense. In 2009, the former author turned to Siega Verde and used similar arguments to propose a modern age for the ensemble at that site (Bednarik 2009).

Those proposals were refuted by Zilhao (1995) who clearly explained Bednarik's errors. The Portuguese prehistorian criticised the experimental and unreliable methods that he had used and his lack of knowledge of the archaeological context of inland Iberia. We might add that the absence of extinct fauna is not a criterion to prove the recent age of a rock art site. In that case, most of the caves acknowledged as Palaeolithic would have to be reconsidered. The opposite argument is valid: the presence of extinct fauna is an appropriate age criterion when they appear. Several examples have been identified at Siega Verde, which invalidates the Australian scholar's reasoning.

While no direct dates are available for Siega Verde, Leroi-Gourhan's procedure (1971) has been used, although it is now questioned in some quarters. This matter has already been discussed (Alcolea & Balbín 2007). It has been noted that radiocarbon dates have partially ratified the French scholar's chronology but the problems with ^{14}C dating (analysis of few figures, sampling errors, significant proportion of incoherent dates) prevent it from replacing stylistic and archaeological methods.

The styles are useful, although like everything in life, they can be improved. At the present time, we can refer to an archaic, pre-Magdalenian, style and a recent, Magdalenian one. This approach suffers from the defect that once again we are using the names of material cultures to refer to art leaving an intermediate, pre-Magdalenian but not archaic stage in the limbo. We advocate envisaging three artistic periods, of which the intermediate stage is the hardest to define, partly by exclusion.

To continue the reply to Bednarik, the interior of the Iberian Peninsula contains a good Upper Palaeolithic archaeological context. As explained by Zilhao (1995: 114), late Ice Age occupations are known in the centre of the Castilian Plateau, for example at La Dehesa (Fabián Garcia 1997), dated in the late Magdalenian. Pre-Solutrean and Solutrean sites, such as Peña Capón Rock-shelter in Guadalajara (Alcolea *et al.* 1997; Yravedra *et al.* 2016) are also known. Sites to the north of the Douro include Mucientes in Valladolid (Martín *et al.* 1986) and La Cantera Caves in León (Neira *et al.* 2006). These seem to belong to a time in the late Upper Pleistocene. The Magdalenian sequence at Estebanvela Rock-shelter in Segovia (Cacho *et al.* 2012) has been added to the data known at Verdelpino (Moure & López 1979) and in the river-terraces around Madrid (Alcaraz *et al.* 2012). In recent years, research by the University of Zaragoza has documented several Upper Palaeolithic sites in the Ebro valley. Among these, Gato 2, Vergara/Alejandre, Bolichera and Peña del Diablo, in the basin of the River Jalón, demonstrate the existence of Magdalenian populations in inland Iberia (Utrilla *et al.* 2006).

In the Douro basin itself, Upper Palaeolithic deposits have been recorded at Quinta da Granja, Quinta da Barca, Quinta da Barca Sul, Olga Grande and Cardina (Aubry & Sampaio 2008; Aubry 2009; Aubry *et al.* 2010, 2017a, b, 2018). At the latter site, levels are dated from the Gravettian to the Magdalenian, with the latest information in 2018 citing materials belonging to the Middle Palaeolithic. Solutrean remains have been found at the site of Olga Grande. Moreover, Gravettian levels covered engravings at Penascosa (Aubry 2009).

At Fariseu, in the Côa valley, occupation levels have been located since 1999 covering a wall decorated with engravings. According to OSL/TTL dating, these were produced from before 18.400 BP, until 11.000 BP (Figs 19; 20). Their style, like most of the figures in Côa, corresponds to the archaic phase, and the excavation has confirmed the archaeological dating of the whole

open-air graphic ensemble. Previously, in 1992 and 1995, this chronology had been proposed for the oldest engravings in the Douro valley based on stylistic considerations (Balbín & Alcolea 1992; Balbín 1995).

The first phase in the area coincides with the oldest art in the caves on the Castilian Plateau, such as La Griega and El Reno. A second, mainly Magdalenian, phase is represented by the central zone in Siega Verde, Domingo García, some figures in Côa, Los Casares, La Hoz, El Niño, El Turismo and the final part in El Reno cave. The last phase in the artistic sequence is found in the northern zone at Siega Verde and in the most recent figures in the caves of Los Casares and La Hoz (Balbín & Alcolea 2001).

As explained for the site of Fariseu, the sequence continued until 11.000 BP, in the transition to the post-Palaeolithic era (Fig. 21). Until very recently, the existence of the Azilian was not acknowledged in the centre of the Iberian Peninsula and Portugal, but opinions appear to have changed (Aubry *et al.* 2017b). We proposed some time ago (Bueno *et al.* 2009) that the Palaeolithic artistic cycle did not come to an end with the arrival of the Holocene but continued in what we have called Style V, following the terminology of Roussot (1990).

Fariseu is a key site that confirms this continuity, which appears in several other sites in inland Iberia (Bueno *et al.* 2009). Numerous ensembles are known at sites in the north of Côa, such as Vale de José Esteves (Fig. 22), and in some panels at Siega Verde (Fig. 23).

Most figures at Siega Verde belong to the intermediate phase of Palaeolithic art and are therefore neither archaic nor recent. The general canon, with certain disproportion between the body and the head, where the former anatomical part is often elongated, the lack of details or interest in the limbs, plus limited animation and predominance of absolute profiles, closely matches the criteria of Leroi-Gourhan's Style III (1971: 252).

However, more advanced characteristics also appear; such as ventral, chest-facial or head dividing lines and a smoother dorsal line, which indicate a later stage of Style III, when body dividing lines become more common (Barandiarán 1973: 347).

The site of Siega Verde was in use over a long period of time, which would correspond to the late Solutrean and early Magdalenian in northern Spain. In stylistic terms, decoration continued from Leroi-Gourhan's Style II-III, to reach the transition to the early Style IV and later. Most of the decoration must have been carried out between 18.000 and 15.000 BP. A few figures correspond to an earlier time, while others reach 14.000 BP, a time in the Middle Magdalenian in northern Spain (González Sainz 1989: 169, fig. 59). Finally figures produced in the Palaeolithic-Epipalaeolithic transition are superimposed on the previous representations and belong to what has been termed Style V in the Douro valley.

SIEGA VERDE IN THE CONTEXT OF OPEN-AIR PALAEOLITHIC ART

The route of caves finds an equivalent in river valleys, which are sometimes linear like at Siega Verde, or more complex, like the Côa valley. The guiding line of cave passages is marked in the open air by water-courses that take the observer along a path where a narrative and sequential proposal is displayed.

The discourse is expressed on the stone pages that we call panels, joined together in chapters that we call groups. The procedure must have been the same inside caves, although their groups and panels are less easily differentiated than they are in the open air, where the divisions between pages and paragraphs are delimited more clearly.

The programme persists with a narrative that is respected despite the passing of time. The contents therefore endure and remain valid, while they undergo greater or lesser changes, depending on the needs of the human groups. Paragraphs are deleted and some concepts are changed significantly.

Côa, Siega Verde, Zézere, Molino Manzánez (Fig. 24), Erjas, Arroyo de las Almas and La Salud correspond to the fluvial model, with some variations in orientation, proximity to the water-course, number of figures and lithological conditions. The geomorphology of the valley causes differences in the organisation of the graphic ensemble and the distance of the panels from the river.

In some cases, as at Mazouco, the upper part of the decorated area, the most distant part from the river bed, has been conserved, as the rest of the valley flooded by a reservoir. The water very probably covers an important Palaeolithic site like a shroud.

Sites on hills, such as Fornols Haut, Domingo García and Piedras Blancas (Fig. 25), are organised in another, possibly less evident way. Each of the sites follows its own procedure, with some elements in common. Fornols appears to be a residual site, with only two decorated outcrops facing the peak of Monte Canigó in the French Catalan Pyrenees. The figures are small, drawn with incised engraving and representing exclusively ibex and birds. The limitations in the subject matter and techniques indicate that it cannot be the full site and is probably a partial sample of what originally existed. The figures are oriented towards a route of communication before reaching the heights of the Pyrenees, but the site is not expressive enough for a definitive reconstruction.

Domingo García in Segovia demonstrates the continuity of graphic sites over time and between cultures. The most apparent figures are post-Palaeolithic in age and cover almost all the schist surfaces on San Isidro Hill, at 912 m above sea level. The Palaeolithic motifs are less numerous and are mostly incised engravings. Both incised and pecked figures have been respected from the time they were produced until the present. This shows that their discourse was known, but did not interfere with the later representations.

We do not know how many figures were originally drawn at Domingo García, among other reasons, the stones and those on nearby hills, were quarried as building materials. However, what has survived is characteristic of a high site overlooking the landscape, with motifs that mostly face south, the Central System mountain range and surrounding routes.

Piedras Blancas, in the Filabres range in Almería, is organised in a comparable way to Domingo García, at 1400 m above sea level, above a large valley and opposite the Sierra Nevada. It has still not been studied in full, but what is known is

organised in the form of a fan in an intermediate-upper area. The figures again face towards the south, probably because that was a route of communication for people and animals. At the sites in Segovia and Almeria, water-courses are a long way from the site, and their strategic position derives from their high location, overlooking the landscape and ways of communication.

It may seem excessive to refer to routes in Palaeolithic times, but it is evident that animal and human groups moved across known passes and ways, knowledge that may have been used for human benefit.

Fluvial sites possess advantages for human habitat in their surroundings, and this is seen clearly in Côa, where sites like Cardina and Fariseu are a short distance from a water-course. It is reasonable to suppose that occupations would have lasted longer next to a river than on a hill, where human presence would be occasional but reiterated. We do not know what the discourse was on hills and in valleys, but the sites, as well as the contents, were different, especially if we assume that the choice of site was connected to the represented motifs.

The motifs are basically the same on high and low ground, in the open-air and in caves, and the meaning would also be the same. However, the accumulation, the internal links, organisation, relation with the rock surfaces and the contents of pages and chapters, panels and ensembles are never identical and need to be studied in detail.

Côa is a fluvial site, and the motifs are not only located by the main river, but also along its tributaries. Portuguese prehistorians have carried out an interesting study of the position and orientation of the panels and images. This shows the fundamental round of the sites, the relationships between them and the complex discourse used by this layout (Aubry & Sampaio 2008). As far as we know today, the organisation of the sites next to a water-course is clearer than high altitudes sites, despite the natural difficulties of understanding the phenomenon.

NUMERICAL ASSESSMENT

We do not know how many figures were depicted inside caves nor how many were represented in the open air. Indeed, as has been demonstrated in the caves of Tito Bustillo and La Pasiega (Balbín *et al.* 2017), whenever a known site is restudied, the number of figures increases. We ourselves published 98 representations in the main panel at Tito Bustillo (Balbín & Moure 1982). Our latest study in the same area has identified 192 motifs, simply by applying modern criteria and methods. The counts are variable and increase with further investigation.

At Siega Verde, 443 motifs have been identified, including naturalistic figures, signs and less determinate elements. If we add this number to the figures at Côa and other open-air sites that have been studied, the total is 4345 figures (Santos 2017: 474), twice as many figures as those studied by Leroi-Gourhan (1971) in his magnum opus, which came to a total of 2151. The corpus studied by the French prehistorian was clearly neither exhaustive nor definitive, but these figures give a frame of reference by which to compare the abundance of open-air art. Bahn (1995) remarked some time ago that open-air art would be more abundant than cave art and if we add the semi-exterior or intermediate panels, the majority would be overwhelming. Communication in the open must have been the usual custom in the Upper Palaeolithic.

It has already been noted that the association of rock art with limestone areas is an incorrect simplification. That limits human expansion to small parts of the territory, which archaeological research does not support. Graphic expression is an important marker of the occupation of a territory, but it is not the only one. In any case, if we enlarge the areas in which Palaeolithic motifs may have been produced, this territory more closely matches reality. If we also take into account that rock art continued over time, in Style V and afterwards, it becomes clear that large human groups occupied the territory over many millennia.

Few Upper Palaeolithic non-graphic material remains have been found in the Spanish-Portuguese frontier with rock engravings. However, numerous human burials dated between the tenth and fifth millennia BC have been found in the Sado valley (Peyroteo Stjerna 2016). This population did not appear from out of nowhere. Before that time, large human groups marked the territory with their motifs on both sides of the Spanish-Portuguese border, from the Palaeolithic to the first part of the Holocene. These were not isolated bands in ceaseless movement across the region, but organised groups that occupied the territory, which they managed through their images during the millennia. The first were the ancestors of the second, and the second were heirs of the first in terms of symbols, culture and management of the territory. We can envisage the continuity of large human groups who lived in the same places over long periods of time.

This does not mean that the people always remained tied to the same centres but, as demonstrated in the archaeology of northern Spain, there were aggregation places as well as main and subsidiary sites. The group that decorated the stones at Siega Verde must have been smaller than the Côa group, but still in contact with the Côa. The site by the River Agueda received most of the graphic information in the transition from the Solutrean to the Magdalenian.

PALAEOLITHIC ART IN THE OPEN AIR: SPATIAL DISTRIBUTION

Palaeolithic art in the open air is usually located on schist or greywacke rocks. This means that finds are normally made on those rocks and it is on those outcrops that Palaeolithic art should be sought. They are excellent rock types for the production and conservation of engravings, but not the only ones that hold rock art. Granite is another, but conservation is more difficult and depends on a series of additional conditions, such as the location, exposure to atmospheric agents and the composition of the rock itself, for the engravings to remain.

Quartzite can similarly hold engravings, but its hardness means that it is not an appropriate rock for them. The opposite

is true of limestone, which is too soft to maintain engravings on its surface for many millennia, unless they are protected in rock-shelters.

In Iberia, schist surfaces are usually intermediate or small in size, and this conditions the dimensions of the figures, which on average are smaller than in cave art. This is not always the case, however, as the size of representations is highly variable in both the exterior and the interior. The traditional view conceived large proportions for Palaeolithic figures, which must necessarily be located inside caves. This axiom alone ruled out the existence of Palaeolithic art in the open air, because of its location and the size of rock outcrops. In the past not many figures were known in the open air, but some had been documented, mainly outside the Iberian Peninsula.

Examples of open-air rock art were known in North Africa, mostly on ancient rocks, with a volcanic origin or otherwise. When this type of art was first catalogued in the early twentieth century (Flamand 1921), the lack of resemblance to the model of cave art meant that it was dated in post-Palaeolithic times, without a more detailed analysis.

Quite a few years ago, one of us proposed an older age for some stages of Saharan art (Balbín 1975) (Fig. 26), partly using the arguments put forward by Mori (1965). Separating the Iberian Peninsula from North Africa was unrealistic when contacts existed between the two sides of the Strait at many times throughout prehistory. Nevertheless, rock art in North Africa was always attributed to a more recent period because of the different kinds of surfaces on which it was located.

Today we possess reliable data proving that Palaeolithic art existed to the south of Europe, in North Africa and further south, and now Palaeolithic art in the open air is precisely that which most interests us (Huyge *et al.* 2011) (Fig. 27). The door was finally opened to Palaeolithic art on different types of surfaces in Europe as originally demonstrated by the discovery of open-air representations at Mazouco.

The different forms of Palaeolithic art have now been discovered in many varied and distant places in the world, including Africa (Bahn 2016), but their appearance in Old Europe, indicates that open-air decoration is not a southern phenomenon but much more widespread, also in the north at the German site of Hunsrück (Welker 2016) (Fig. 28).

When we speak of open-air art, we make another incorrect generalisation. We should say that it is found strictly in the open and with a limited composition. It has already been noted that many different kinds of rocks may have been used, but several variants also exist in regard to exposure to the elements. There are many intermediate forms that are neither caves nor outcrops in the open. These are the small rock-shelters, often formed by aeolian weathering in limestone.

These rock-shelters are home to many Palaeolithic representations in the east, south and even in the north of Spain. Except in the north, the depictions are usually painted, with some exceptions such as Abric d'en Meliá in Valltorta, the first rock-shelter with Levantine art where Palaeolithic engravings have also been identified (Martínez-Valle *et al.* 2003). In Cieza and Almeria, the decorations are painted (Salmerón *et al.* 1999) (Fig. 29) and sometimes engraved and depicted, as in Ambrosio Cave (Fig. 30), in this case accompanied by important Solutrean and Magdalenian deposits (Ripoll *et al.* 1994).

In Cadiz, there is a large group of sites near the Strait of Gibraltar. The sites were in use for a very long time, as Palaeolithic decoration is sometimes covered by Schematic figures. One of the most interesting ensembles is in Cueva del Vencejo Moro (Mas *et al.* 1995), which contains a panel with large engraved or painted, in the case of the main horse figures, accompanied by the image of a bull where a natural shape was engraved (Figs 31; 32). It is in Tarifa, opposite the coast of Africa, with which it must have been in contact throughout prehistory, like the neighbouring Gibraltar.

In the north of Spain, intermediate sites are very common in the centre of Asturias and the west of Cantabria. Above all, large concentrations of archaic ensembles have been documented in the Nalón and Trubia valleys (Rodriguez & Barrera 2014; Adán *et al.* 2014 (Fig. 33).

The sites remain and so do the representations and the people, who maintain the inheritance of ancient symbols in their culture. The perpetuation of images and territories is seen most clearly in those places although the system obviously existed in many other less visible locations.

FINAL REFLECTION

Siega Verde is one of the most important rock art sites in the Iberian Peninsula and therefore in the whole of western Palaeolithic art. It is framed perfectly within the rock art of the region and only differs from Côa in terms of chronology. The style of the figures is characteristic of the time, both in open air representations and in cave records, and its specific variants are due to the rock surfaces and not to its belonging to a different artistic cycle. The landscape was also used differently and its layout must have followed the general pattern in the open air Upper Palaeolithic rather than the art in caves. Caves were one more location for Palaeolithic art, not the only nor even the main location. The darkness and mystery of caves were not determining factors in the graphic message.

Siega Verde belongs in the general systems of open-air graphic representation in the Upper Palaeolithic, of which the largest concentration is known along the Spanish-Portuguese modern border. This is a result of the current state of research, which should be expanded in the future. So far, open air Palaeolithic images have been documented in the south-east of the Iberian Peninsula, in the middle Douro valley, on the French side of the Pyrenees, in Germany and in Africa. If we add the painted and engraved representations in rock-shelters protected from the elements, the number of Palaeolithic ensembles outside caves increases considerably, distributed all throughout Iberia and beyond the peninsula.

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