# The Quaternary Rock Art of the Côa Valley (Portugal)

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### 1. Introduction

The Côa Valley region contains the longest rock art cycle known in Western Europe. Even though the first Palaeolithic engravings were found at the end of 1991, they were announced only in November 1994 (Jorge, 1995; Rebanda, 1995). Their study began in 1995 (Baptista and Gomes, 1995; Zilhão, 1997). Throughout that year, intensive surveys of the schist rocks along the banks of the Côa River and its tributaries revealed hundreds of engravings, mostly of Palaeolithic typology (Zilhão, 1997; Baptista, 1999a).

The engraved rocks thus found were mostly located within the area that was to be submerged by the waters of a large dam, already under construction at the time. Furthermore, the first engravings were immediately considered of Upper Palaeolithic origin. These facts generated a fierce controversy all through 1995, often being the cover theme of the major Portuguese media, and of some international press as well (Jorge, 1995).

The engravings soon became the most significant set of open-air Palaeolithic rock art in the World, their scientific value being undeniable, and were finally saved from the inevitable destruction that would follow the construction of the dam. The new Portuguese Government, elected in October 1995, decided to stop the dam project, an unprecedented and unique decision that involved an enormous disbursement of public funds as compensation to the dam contractors. Apart from preserving the Côa Valley's remarkable rock art, this decision would also be a formidable impetus for the reorganisation of Portuguese archaeology.

Thus, in the wake of this controversy, the IPA (Instituto Português de Arqueologia — Portuguese Institute of Archaeology) was created in May 1997, under the Ministry of Culture, including amongst its departments the CNART (Centro Nacional de Arte Rupestre — National Rock Art Centre) and the PAVC (Parque Arqueológico do Vale do Côa — Côa Valley Archaeological Park). Both have their head offices at Vila Nova de Foz Côa, a small town in the less developed interior of Portugal that became famous due to the nearby Côa Valley engravings. The international acknowledgement of the Côa Valley rock art would reach its peak in December 2, 1998, with its inclusion in UNESCO's World Heritage List.

The study and survey of the rock art carried out in the region since 1995, and particularly since the creation of CNART and PAVC, have allowed us to identify and systematise a long rock art cycle in the Côa area. This cycle features two major groups, separated by more than 10 000 years: an Upper Palaeolithic group and an Iron Age group. However, examples of rock art from the intermediate periods are also known. From a typological point of view, they may be considered as dating to between the Epipalaeolithic (although no sites or habitats from this age are known to exist in the area) or the Early Neolithic and the Bronze Age, suggesting an actual occupation of the region throughout most of the Holocene (Baptista, 1983; Aubry and Carvalho, 1998). Up to the time of writing (May 2000), the inventory comprises 264 separate panels featuring rock art from all these periods.

# 2. The Quaternary cycle of the Côa Valley

The Quaternary art, surely the most important and meaningful, begins at an undetermined moment of the Upper Palaeolithic, probably during the Gravettian, and extends, in terms of style, into the Solutrean and Magdalenian. Listed below are the 24 sites that have been identified up to now, with a total of 164 rocks featuring motifs that may be integrated in this early stage: more than one thousand engravings and some paintings, the latter in much smaller number (Fig. 1).

Site	Panels	Site	Panels
Vale da Casa	I	Broeira	3
Vale de Cabrões	6	Meijapão	2
Vermelhosa	9	Rego da Vide	4
Vale de José Esteves	12	Canada do Inferno	29
Alto da Bulha	I	Canada do Amendoal	2
Foz do Côa	I	Vale de Videiro	I
Quinta das Tulhas	I	Vale de Figueira	4
Canada da Moreira	2	Fariseu	5
Ribeira de Urros	I	Ribeira de Piscos	23
Vale de João Esquerdo	I	Quinta da Barca	25
Moinhos de Cima	5	Penascosa	22
Vale de Moinhos	2	Faia	2

We are sure that future surveys, especially in the neighbouring valleys and in the Côa's small tributaries, will identify further panels of art. On the other hand, the waters of the Douro River dams, particularly Pocinho, must also be hiding panels that have not been sighted yet. We would stress that in 1982 and 1983, 23 panels featuring motifs mostly from the Later Iron Age were found, along with others dating from the Chalcolithic and the Bronze Age, within the dam's area of influence (Baptista, 1983, 1999a).

In technical terms, the Quaternary motifs are mostly engraved, the techniques varying between pecking and incision, with abrasion and scraping being used sometimes. Pecking is normally indirect, thus contributing to the better quality of the motifs, which were often previously outlined using fine line incisions. As for the incised motifs, single and multiple line techniques were used, the latter being apparently characteristic of the later period of the cycle. There are nevertheless some figures whose execution combined two or more techniques, and it is extremely difficult to ascribe a precise chronology to any of these specific techniques.

The discovery at the Faia site (the upstream limit of the rock art area) of some rare motifs that were engraved and painted (Fig. 2) suggests that many of the remaining engravings may also have been painted, the pigments having disappeared because they were exposed to the elements, without any protection. The painted elements of Faia are associated with engraved figures of aurochs and, though placed side by side with painted Neolithic or Chalcolithic schematic figures, are definitely Palaeolithic. This is proven by the fact that they represent some of the animals' attributes, such as the two parallel lines representing the mouth and nostrils, with a transversal line showing the limit of the muzzle. At Faia, these lines are painted only, but they are present as engravings in the aurochs depicted at many other Côa sites. Thus, only artists who were familiar with the graphic conventions of the Upper Palaeolithic could have made them.

Figure 3 synthesises the statistical distribution of the techniques (and motifs), based upon 31 selected rocks from the sites of Canada do Inferno, Rego da Vide, Ribeira de Piscos, Penascosa, Quinta da Barca, Faia and Vale de Cabrões. The pattern revealed probably applies to the whole Côa Quaternary complex, with only some minor changes in detail.

From a typological point of view (Fig. 3), the Quaternary motifs are similar to those featured in the parietal art of the Iberian Peninsula and the Franco-Cantabrian region. Some of its conventions are even repeated here, but there are some original features as well, like the representation of multiple heads. The motifs are mostly zoomorphic, with scarce signs and rare human representations, in two rocks located close to the river mouth at Piscos. The figures are either isolated or associated, there being no floral representation of the ground (Baptista 1999a, p. 130-131). The animals, represented in the typical naturalistic style of the Upper Palaeolithic, appear to be floating in an idealised space, obeying conventions that are repeated in several periods, a fact well demonstrated by the technical study of the motifs. This is why, in almost all of the animals represented, the extremity of the legs is never shown, each pair of legs being reduced to a single leg. On the other hand, the heads, and horns, when they exist, are represented with much greater care.

The archaeofauna depicted at Côa is the large herbivores, characteristic of the western Meseta's Upper Palaeolithic ecosystems. Four main species are represented: Equidae, Bovidae, Capridae and Cervidae. There is a notorious absence of typically cold fauna (there are only three chamois, recently identified at rock no. 1 of Fariseu) and of birds. The Cervidae are fewer in number, and are apparently more typical of the later phases. A few representations of fishes and other undetermined or simply sketched (and thus hard to identify) animals complete the bestiary of Côa's art. The species represented here are the same, after all, as those appearing in the few caves featuring Palaeolithic art on the Meseta, a region with a similar climate, far from the glacial rigours of the Franco-Cantabrian region. They are also the same as those represented on the schist rocks of the neighbouring site of Siega Verde, which shares similar features with Côa, and the few other open air sites with Palaeolithic art identified in the Meseta (Balbín et al., 1991; Balbín and Alcolea, 1994; Balbín et al., 1996; Ripoll and Municio, 1999).

The themes of Côa's Quaternary art have been recently enriched by the discovery of a few human representations in two rocks close to the mouth of the Piscos River. One of them, the first to be identified, in rock no. 2 of Piscos (Fig. 4), is the most recent figure in a rich stratigraphic sequence. This, together with the style and depictive features, allows us to classify it as Magdalenian. The remaining figures, also incised, are grouped on the same rock (no. 24 of Piscos) and have not been yet totally drawn and studied. These are strange figures, with grotesque, animal-like faces, but distinctively anthropomorphous. One of the representations (Fig. 5), with a pointed head and a protuberant face, combines animal and human features, as if it was wearing a dog-like or feline mask. The absence of arms (merely suggested), the pose and the orientation make it similar to the human figure in rock no. 1, the chronology of both being probably the same.

As in cave art, some signs may occur, associated with the zoomorphic figures, even if only rarely and always with an uncertain meaning: the zigzag line associated with a small horse in rock no. 2 of Piscos (Fig. 4), or the scalariform associated with an aurochs, vertically engraved on rock no. 6 of Vale de Cabrões (Baptista 1999a, p. 136-137). The remaining, well-identified signs are of tectiform type, comets, dots and lines.

# 3. The superimpositions

One of the most notorious characteristics of the Palaeolithic artists, apparently developed during the early stage of the Côa art, is the tendency to superimpose motifs in the higher parts of the panels — certainly ritualised and somewhat sacred spaces within the context of the panel and the valley. Rich figurative stratigraphies were thus created, some of great complexity, as in rock no. 1 of Quinta da Barca (Baptista 1999a, p. 114-115), rock no. 1 of Fariseu (Figs. 8 and 9), and rock no. 3 of Penascosa (Fig. 7). Their archaeological disassemblage provides us with a better understanding of the relative chronology of the motifs and of their stylistic evolution, on one hand, and, on the other, with a better understanding of the meaning(s) of Côa's Palaeolithic art and of the very concept of "scene" or "composition", which seems to have been acquired quite early, despite what has been stated many times in the past.

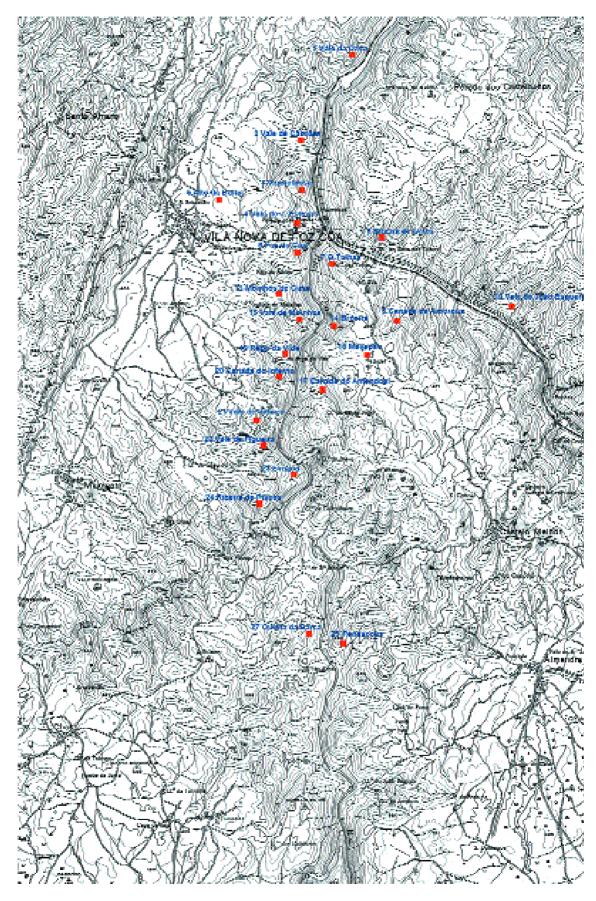
This intentional accumulation of motifs seems to happen only at the main sites, where pecking is the dominant technique, all of them located on the banks of the Côa River. This feature is less noticeable in the neighbouring valleys, and particularly in the small tributaries close to the Côa's mouth, where incisions are predominant. The distributional analyses we have been carrying out show that the more densely engraved, and predominantly pecked sites are located on the four ancient fluvial beaches of the Côa's final sector: Penascosa and Quinta da Barca, Foz de Piscos, Fariseu and Canada do Inferno (Baptista and Marcos García, 1999). The study of rock no. 1 of Fariseu (Figs. 8 and 9), briefly presented below, shows that these superimpositions do not reflect a very long period of time. They may even all belong to the same artistic horizon, quite probably Gravettian. This naturally nuances the chronological meaning of the superimpositions and places limits on their use for the establishment of stylistic chronologies.

As an example, let us briefly analyse some aspects of the stratigraphies and figurative grammars of rock no. 1 of Canada do Inferno (Fig. 6), rock no. 3 of Penascosa (Fig. 7), rock no. 2 of Ribeira de Piscos (Fig. 4) — the latter featuring superimpositions of incised motifs only, which is more unusual — and rock no. 1 of Fariseu (Figs. 8 and 9).

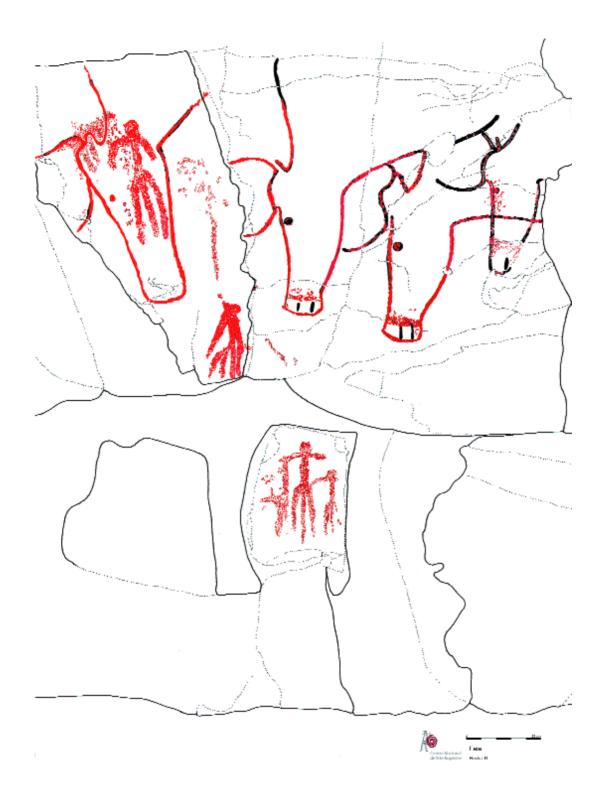
The sequences of superimposed motives show an intentional, and apparently structured accumulation in all of these rocks, regarding either the operative space of each panel, or the location and topographic distribution of the engravings within the panels.

In the panel of rock no. I of Canada do Inferno (Fig. 6), smooth and perfectly vertical, considering the ancient course of the river, the meaning of the composition is rendered by the intentional accumulation of motifs, in a very reduced operative space. The composition, possibly structured during a somewhat short period, is rendered by the apparent superimposition-association between the animals that compose the fundamental triad of the Côa's Art: Equidae-Capridae-Bovidae, accumulated in the same operative space. In this rock's earliest stage, there are only fine line motifs with simple contours, one of which — an aurochs — already seems to have two heads, a very ancient feature at Côa. These aspects agree with the same figurative sequences of rock no. I of Fariseu (Figs. 8 and 9), where the oldest engravings are likewise simple-contour, incised motifs, there being several pecked animals with two heads, apparently Gravettian.

The choice of the upper part of rock no. I of Canada do Inferno seems to be related to the transformation of the landscape into a monument by means of the rock art. If we picture this sector of the river as it would have been during Palaeolithic times, i.e., without the high water levels caused by the Pocinho dam, the upper part of this panel would be the dominating point of a chaotic group of boulders, featuring several engraved panels, on a steep river bank. This perspective was lost, but it just might have determined the choice of the panel and of its upper part as a favoured operative space for the engraving.



 $_{\mbox{\scriptsize FIG. I}}$  – Location of the 24 sites featuring palaeolithic rock art in the Côa region.



 $_{FIG. 2}$  – Rock no. 6 of Faia, with a group of four aurochs from the same execution phase, engraved by pecking and abrasion and painted with ochre. Note the simultaneous use of painting and engraving techniques, especially in the two central animals. Compare the style of the head and horns with the ox from phase 4 of rock no. 3 of Penascosa.

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FIG. 3 – Statistical table of the typologies and execution techniques used in the Côa's art, based on 31 selected rocks from the sites of Canada do Inferno (C. I.), Rego de Vide (R.V.), Ribeira de Piscos (R. P.), Penascosa (P.), Quinta da Barca (Q. B.), Faia (F.) and Vale de Cabrões (V. C.). FIL – Fine Line • PIC – Pecking • ABR – Abrasion • MIX – Mixed • G. P. – Engraving and Painting

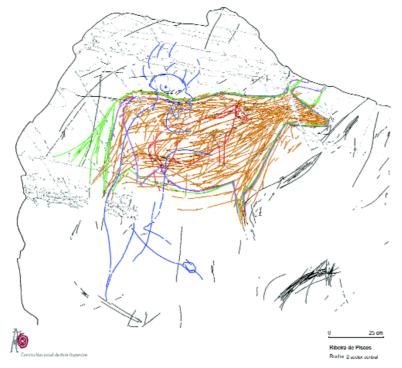


FIG. 4 – Upper sector of rock no. 2 of Ribeira de Piscos. The human figure is the most recent.



#### FIG. 5 – Part of the upper sector of rock no. 24 of Piscos, featuring a complete human figure.

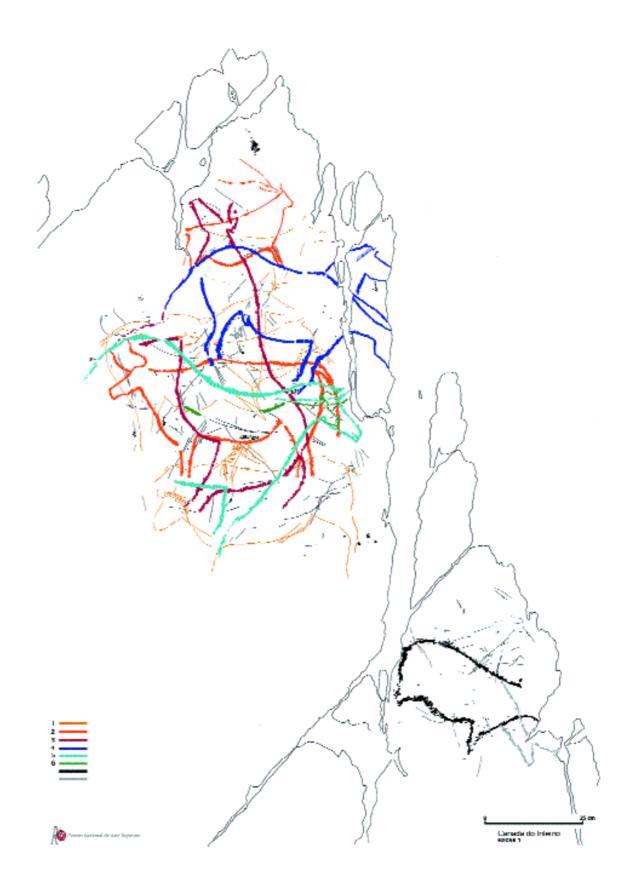
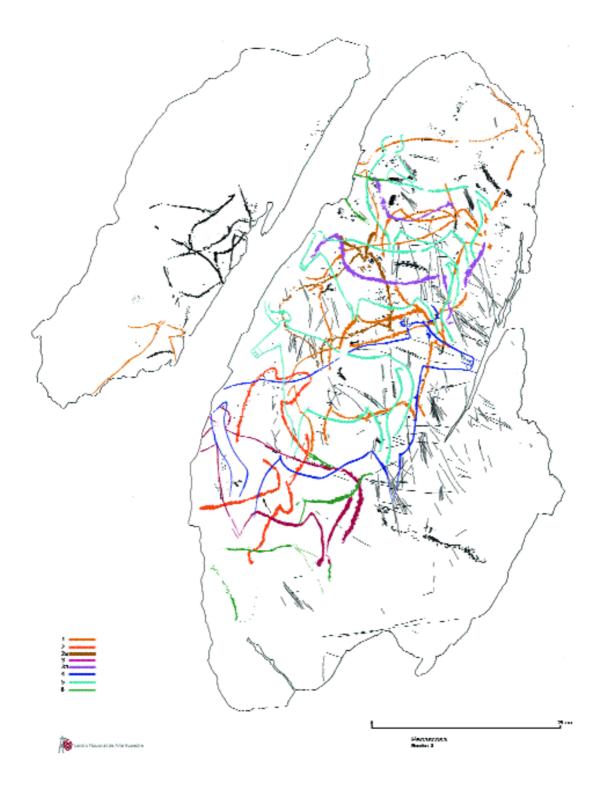


FIG. 6 – Rock no. 1 of Canada do Inferno: disassemblage of the figurative stratigraphy.



 $_{\rm FIG.\,7}$  – Rock no. 3 of Penascosa: disassemblage of the figurative stratigraphy.

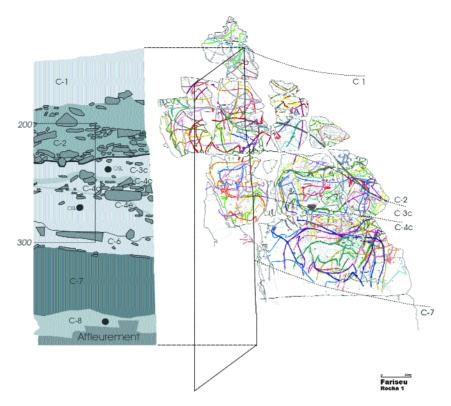
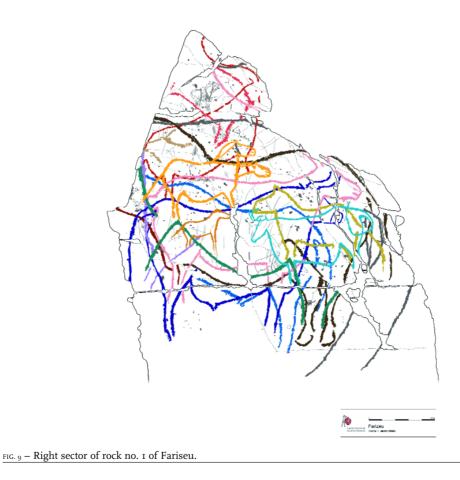


FIG. 8 – Central sector of rock no. 1 of Fariseu, featuring the correspondence between the engraved panel and the stratigraphy of the sediments covering it (over 2 metres deep). Levels C1 and C2 are Holocene, the rest are upper Pleistocene (according to Thierry Aubry and CNART. Drawing by Fernando Barbosa).



## 4. Fariseu

Located between Foz de Piscos and the site of Vale Figueira, rock no. 1 of Fariseu (Figs. 8 and 9) is one of the keys to the systematisation of the Côa's Quaternary art. We knew only the upper part of this rock — in 1995, some pecked lines belonging to incomplete or partially destroyed animals had already been found. Taking advantage of the low water levels during December 1999, the location was excavated by a PAVC team, under Thierry Aubry. The panel could then be fully studied by the CNART team. For the first time in the Côa Valley, it was possible to study engravings sealed by Pleistocene sedimentary and archaeological layers. The latter contained industries dating to the Gravettian or Proto-Solutrean and the Magdalenian by Thierry Aubry. N. Mercier and H. Valladas are carrying out absolute datings of several samples by TL and OSL, the results being expected by the end of 2000. F. Sellami is also performing other micro-morphological studies. All this will provide us for the first time with a *post quem* chronology for an engraved panel and will be a precious element not only for the relative chronology of the Côa's Palaeolithic art but also for the systematisation of open-air rock art in the region.

Sediments dating from the upper Pleistocene, judging from the geological stratigraphy sealed almost two thirds of this rich engraved panel. The oldest layers sealed the engravings of the rock's lower portion. Considering this fact, as well as the panel's strong artistic homogeneity and almost complete absence of patina in the motifs covered by layers 4 to 6, we estimate that the engravings in this panel were made during the same period, in a relatively short time, and are probably all Gravettian. This is a critical issue for the relative chronology of Côa's art, from now on.

All the engraved fauna identified at other locations of the Côa Valley is represented in this Fariseu panel, and a new animal also shows up here — the chamois, featuring its distinctive short horns. There are several animals with two heads, this graphic animation technique thus being in use at least since Gravettian times. Two horses, an aurochs and a chamois feature two heads. This confirms the Gravettian chronology proposed for the ancient phase of rock no.1 of Canada do Inferno (one incised aurochs with two heads), but will force us to review other chronological proposals for animals featuring two and even three heads found on other rocks (Baptista, 1999a, p. 36-37).

The intentional superimposition of motifs was carried out during a relatively short time. This applies particularly to the pecked motifs. The panels located close to this Fariseu rock were used only to a small extent, though they have surfaces that would have been very adequate. There is therefore a clear choice of certain surfaces, where the engravings were being superimposed, during periods that were not as long as we initially thought. The selective nature of the use of this panel is further demonstrated by the fact that the artists, who also intentionally placed in it a small quartzite pebble tool, excavated an artificial hole in its central part.

There are not many incisions in this panel, and most have superimposed pecked images. The type of motifs not featured in this panel — multiple-line and striated incisions — must be considered more recent. We still propose a chronology not too distant from the earliest Magdalenian — yet a plaque decorated with multiple-line incised figures was found in Fariseu's final Magdalenian archaeological layer, suggesting that this particular technique may have survived until the end of the Palaeolithic.

Some of the engraved lines have been reused or refreshed by the different artists. This apparently leads to contradictions in the study of superimpositions, when some motifs are superimposed upon others, which are simultaneously superimposed upon the former. This aspect had already been studied at rock no. I of Quinta da Barca and only occurs in these richer panels. No painting remains have been detected, in spite of the fact that the panel seems to have been rapidly covered by sediments right after its last stage of engraving. The exceptional conservation of most of the figures is due to this fact, the conditions for the study of the engraving techniques thus being excellent.

### 5. Conclusion

Panels like rock no. 1 of Quinta da Barca, and the above-mentioned rocks nos. 3 of Penascosa and 1 of Canada do Inferno feature the same type of superimpositions, and are probably entirely Gravettian, instead of representing phases of decoration from different periods. In fact, the main period of engraving in the whole Côa Valley Quaternary cycle seems to be the Gravettian. This is also the better-represented period in the campsite excavations carried out so far by Thierry Aubry's team.

In fact, intensive surveys have identified more than 30 open-air Pleistocene formations with Upper Palaeolithic habitats, featuring industrial complexes of pebble and flint tools dating from precisely the same periods as the engravings, judging from stylistic parallels. At one of these sites, some lithic objects that could have been used as hammers were found. They feature robust triangular points, showing wear traces typical of percussion on schist. They were found in levels dating from the early Gravettian, at the Olga Grande Palaeolithic campsite, and might be related to the first period of the Côa's art. Meanwhile, and in the absence of organic materials, these chronologies have been supported by TL dating of 14 fragments of heated quartzite, from the camp fires found at the Cardina 1, Olga Grande 4 and Quinta da Barca Sul sites. The effective occupation of the region during several phases of the Upper Palaeolithic is thus demonstrated, namely regarding the early and late Gravettian, the upper Solutrean, and the final Magdalenian phase (Baptista and Aubry, 2000).

In short, we can now say that the Côa's Quaternary art begins in the Gravettian, if not earlier, and that this initial phase is one of great artistic vigour. The first motifs seem to be simple-line incised contours of animals (ancient stages of rocks 1 of Fariseu and Canada do Inferno), apparently isolated. Soon after, there is a clear predominance of figures executed by pecking or by abrasion with U or V shaped lines, superimposed onto the first incisions and placed in strategically selected panels (rocks no. 1 of Quinta da Barca; rocks no. 1, 11 and 26 of Canada do Inferno; rock no. 3, 4, 5 and 6 of Penascosa; rock no. 1 of Fariseu; etc.). The animals are superimposed in what seems to be a very particular type of intentional association. Some of the figures were recreated or reused. In this period, the full typical bestiary of the Côa's art is already present. Its main stylistic peculiarities are systematised — the presence of some animals featuring multiple heads and even legs, the representation of one leg per pair, among other aspects. Their distribution area is predominantly the Côa valley, between Faia (the upstream limit) and Canada do Inferno/Rego da Vide (Fig. 1). This area defines the most archaic Palaeolithic "sanctuary", turned into a monument by the huntergatherers of Gravettian and Proto-Solutrean times.

During the second-best represented Palaeolithic period, the dense superimpositions of pecked animals lose their importance and the single- or multiple-line incised figures (particularly the does, other animals being engraved as well) become predominant. The "monument area" seems to be displaced towards the mouth of the Côa and adjacent tributaries of the Douro. The chosen rocks are now a few panels on the steep banks of small streams. There are far fewer superimpositions, though they still occur on very spe-

cial panels, like rock no. 2 of Piscos. The human figures, so far only identified close to the mouth of the Piscos stream, belong to this period (late Solutrean/early Magdalenian) or to the upper Magdalenian.

The Quaternary cycle ends at an undetermined moment of the Magdalenian. The abovementioned presence of a decorated plaque, found in the upper layers of the Fariseu excavation and dated from the "end of upper Pleistocene" by Thierry Aubry (2000, p.4), suggests that the Quaternary artistic cycle lasted until the very end of the Ice Age. A great deal of work remains to be done before a full systematisation is achieved. This can only be achieved by means of new surveys and excavations in the region — there are certainly other sites to be found like the one excavated close to rock no. 1 of Fariseu.

In rock no. 3 of Penascosa (Fig. 7) there is also an accumulation structured in the same way, even though the disposition within the panel's operative space is different. The stratigraphic disassemblage of the six engraving "phases" shows that there is already a composition in the first phase, but it is non-scenic, for the animals seem to ignore each other, as if floating in space. It is a group of four ibex, all identical in style and apparently performed during a single episode. There was to be another composition involving animals of the same species, but only in the rock's final phase, as if sealing the panel. The remaining motifs, distributed between phases one and six, would be superimposed during a period that was not as long as we initially thought, and which featured some important stylistic characteristics. Thus, the horse-head from phase two features a style that might be considered Solutrean or older, according to parallels from cave art and the stratigraphy of Parpalló. In the same way, the style of the aurochs, particularly the technique used to represent the horns, might also be considered Solutrean. Regarding the two ibex facing each other, they are from different phases (two and six) but the older motif (the ibex on the left) is reused in the composition of a characteristic theme of Middle Magdalenian mobiliary art. However, it is probably older here, when one considers the aspects mentioned below, concerning rock no. 1 of Fariseu.

Furthermore, in the upper part of rock no. 2 of Piscos (Fig. 4), there is a set of superimposed, incised motifs, with a figurative stratigraphy that we consider extremely significant, though its disassemblage is somewhat problematic. The first engraving, almost completely hidden under the others, is a possible doe, the body filled-up with multiple lines. On top of it, three aurochs are engraved, precisely in the same operative space and with contours almost exactly superimposed, making the analysis quite difficult. A small horse was engraved afterwards, featuring a zigzag sign at the mane, and finally the phallic human figure. Judging from parallels with other multiple line representations - the does from Cantabrian mobiliary art (especially Altamira and Castillo) and the plaques from Parpalló - these motifs may appear at Côa during a period between the later Solutrean and the earliest Magdalenian. On this rock, they represent the first phase of this sector of the panel. The small horse, compared with the other Equidae from Côa, is probably Magdalenian, judging by the head. At the top of the figurative stratigraphy, the human figure probably also belongs to an undetermined period of the Magdalenian, in agreement with the chronology of this type of Quaternary anthropomorphous figures, as identified in mobiliary and cave art. Human representations featuring similar characteristics can be found at Sous-Grand-Lac, Altamira and La Marche.

 \* CNART (Centro Nacional de Arte Rupestre).• Av. Gago Coutinho, 19 • 5150 Vila Nova de Foz Côa • Portugal. Drawings: CNART

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