



ABOVE Recent excavation work in the Côa Valley has found a wealth of Upper Palaeolithic images densely covering a rock surface over 6m long. A fallen block, found within the oldest identified archaeological layer near the panel, has been refitted (top right of the panel).

Into the daylight

Portugal's Côa Valley contains Europe's greatest collection of open-air Ice Age images. Across 17km, there are currently more than 530 known panels bearing several thousand figures. A major new discovery there is of particular importance as **Thierry Aubry**, **Fernando Barbosa**, **Luís Luís**, **André Santos**, and **Marcelo Silvestre** explain.

The discovery of paintings in the Spanish cave of Altamira in 1879 generated intense discussion concerning not only the abilities of Ice Age humans to produce realistic images of animals on cave walls, but also the feasibility of their preservation down to the present day. Even so, it was over a century before the hypothesis that Palaeolithic populations also produced such representations on open-air rocks was accepted. In 1981, some researchers dared to propose that the rock art at Mazouco, close to the Spanish border in north-eastern Portugal, dated to the Upper Palaeolithic. It consisted of a horse motif, deeply carved into a metamorphic rock's flat vertical surface. The image was formally and thematically similar to cave art, which, since the Altamira debate, was attributed to the Upper Palaeolithic.

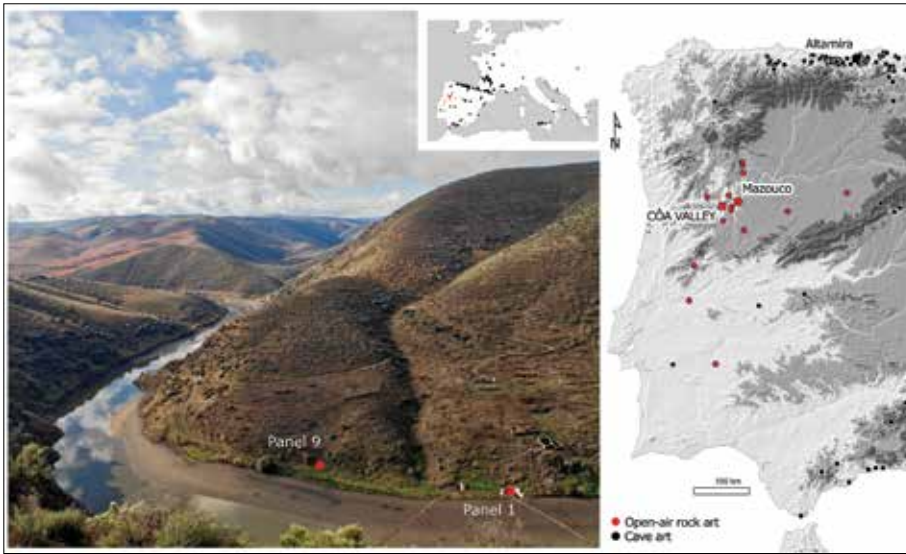
During the 1990s, when direct radiocarbon dating was beginning to be applied to cave art, new discoveries of open-air rock art were multiplying in Spain and Portugal, but also in France's eastern Pyrenees. By 1994, when the Côa Valley rock art came to light during the construction of a hydroelectric dam, its magnitude became impossible to ignore. Open-air rock art could no longer be seen as a rare exception to the cave-art rule. Indeed, some specialists proposed that it was probably the norm, and the importance of imagery in caves had been exaggerated due to exceptional preservation. Even so, a few doubted this open-air art's attribution to the Upper Palaeolithic, thus prolonging the

Altamira debate. It was argued that it could be a localised and late expression of Mesolithic hunters, or even the work of modern millers in an independent reinvention of cave art. The direct radiocarbon dating attainable from charcoal figures preserved inside caves is impossible for open-air engravings, and the attempts to date organic fragments preserved on the carved rocks produced incongruous results.

Meanwhile, several Upper Palaeolithic settlement sites were found along the Côa (a tributary of the Douro), a region where they had never previously been sought out, and so the stylistic dating of the rock art was accepted. The dam project was abandoned. In 1996 an archaeological park was created, and in 1998 the Côa Valley Upper Palaeolithic rock art sites were inscribed on UNESCO's World Heritage List.

New support for the dating of the Côa Valley rock art arrived just one year after the international recognition of the archaeologists' efforts to preserve it. Paradoxically, the crucial evidence would be found under the waters of another dam's reservoir. In December 1999, the construction of a bridge connecting Portugal and Spain had led to the temporary lowering of the reservoir level of the Pocinho dam on the Douro, downstream from the Côa. The low water levels enabled the excavation of panel 1, which normally lay submerged at Fariseu, several kilometres from the mouth of the Côa.

As the excavation unfolded, it was possible to see in daylight,



LEFT Excavations along the scenic Fariseu meander of the Côa river have uncovered the two open-air rock art panels – panel 1, in 1999, and panel 9, the focus of excavations earlier this year. The maps show the location of Palaeolithic cave art, open-air rock art, and portable art further afield.

for the first time in thousands of years, a large superimposition of figures dating from the Upper Palaeolithic. Several archaeological layers covering the panel contained remains typologically attributable to the Upper Palaeolithic. The geoarchaeological study concluded that these layers were in situ, which was confirmed by dating heated stones (using Thermoluminescence) found inside them, and calculating the last time the sediments were exposed to sunlight (using Optical Stimulated Luminescence). The results ranged between about 18,000 and 12,000 years ago, and put an end to the open-air rock art debate by proving that it was contemporary with Upper Palaeolithic cave art. At the same time, the different phases of the Côa Valley rock art were refined. There are four major artistic phases, the oldest dating to the Gravettian period (c. 30,000 years ago) and the latest to the Azilian (c. 12,000 years ago).

Bigger picture

Early this year we carried out new excavations on another part of the Fariseu meander, about 100m upstream from panel 1. We focused on panel 9, where a pecked line had been recorded in the 2000s. Unlike panel 1, its higher position on the hillside meant we could excavate without needing to lower the reservoir. Twenty years after the first excavation, we unearthed a buried rock panel, at least 6m long, revealing that the pecked line was only one part of something larger.

The line that prompted the excavation turned out to be the back of a 3.5m-long male aurochs, the largest representation in the whole Côa Valley, easily surpassing previous records. Its size is only matched by Lascaux's black bulls. Enclosed within it were several other smaller depictions, namely a hind, an ibex, and a cow followed by its calf.

A second sub-panel is still partially covered by unexcavated sediments. Nevertheless, it is already possible to identify a dense superimposition of figures, such as female aurochs, stags, and horses, similar to other compositions known to belong to the older phase of the Côa Valley rock art.

As had already been observed on Fariseu's buried panel 1, the pecked and abraded lines do not bear the patina typical of long-exposed panels in the valley. The lines in the lower areas are still white and fresh, and lay flush with the oldest identified archaeological layer. For the first time, we were also able to replace a fallen engraved block, found within this layer, from a

heavily weathered upper portion.

Further excavation and study will allow us to add more detail to these preliminary results, while luminescence dating promises a more accurate date for the oldest phase of the Côa Valley's rock art. For the moment, when compared to panel 1, the sediments point to a Gravettian or Solutrean date (c. 30 – 23,000 years ago) for the superimposed compositions.

The discovery of this panel with around 20 animal representations covered by sediment shows the hidden potential of the Côa Valley. Moreover, it adds new elements to our knowledge of the diversity in symbolic expression of Palaeolithic societies, in which open-air images clearly played a very important role. ■

BELOW The upper part of panel 9 is decorated with an imposing pecked image of a male aurochs, over 3.5m long. Within the outline of the aurochs are smaller depictions of animals, including a cow followed by its calf (marked by the letter A).



FURTHER INFORMATION

The authors are with the Fundação Côa Parque – Parque Arqueológico e Museu do Côa, arte-coa.pt/en/
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