

## BETWEEN HEROES OR DEITIES? IRON AGE SACRIFICIAL AGENCIES DEPICTED IN ROCK 6 FROM MONTE DE PORREIRAS (NORTHWEST PORTUGAL)

### *¿Entre héroes y deidades? Actos de sacrificio de la Edad del Hierro grabados en la Roca 6 del Monte de Porreiras (Noroeste de Portugal)*

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**ABSTRACT:** The aim of this work is to publish the rock engravings of Monte das Porreira 6, located in the council of Paredes de Coura, in the Northwest of Portugal. The study was based on photogrammetric surveys and subsequent contrast recurring to geometric distance determination.

It is a profusely decorated rock with a long diachrony of carving. The initial phase includes Classical Atlantic Art, integrated in the regional Neo-Chalcolithic period. The second phase includes representation of several types of equids, horsemen, and antenna-hilted daggers. Based on parallels for such weapons, it is possible to integrate these motifs between the Late Bronze Age and an Early Iron Age of North-western Iberia.

It is also possible to observe a change from an abstract grammar, during the first phase, to a figurative grammar, in which we can identify a narrative related to human and animal sacrifices, associated with the use of antenna-hilted daggers. These depictions recall a symbolism reminiscent of Strabo's writings, including bronze objects containing sacrificial scenes. The final phase of engraving indicates new symbolic changes, with valorisation of isolated actions perpetrated by horsemen, carrying throwing weapons, which may be a representation of a deity or hero.

*Key words:* Rock Art; Protohistory; Religion; Antenna-hilted Daggers; Sacrificial Actions; Deities or Heroes?

**RESUMEN:** El objetivo de este trabajo es publicar los grabados rupestres del Monte das Porreira 6, situado en Paredes de Coura, en el NO de Portugal. El estudio se ha basado en un levantamiento fotogramétrico y el posterior contraste con la determinación de la distancia geométrica.

Se trata de una roca profusamente decorada con una larga diacronía de grabados. La fase inicial incluye el arte atlántico clásico, integrado en el Calcolítico Reciente. La segunda fase incluye la representación de équidos,

jinetes y puñales con mango de antenas. Basándose en los paralelos de dichas armas, es posible integrar estos motivos entre la Edad de Bronce Final y la Edad de Hierro Inicial.

También es posible observar el paso de una gramática abstracta, durante la primera fase, a una gramática figurativa, en la que se puede identificar una narrativa relacionada con los sacrificios humanos y de animales, asociada al uso de puñales con mango de antenas. Estas representaciones evocan un simbolismo que recuerda a los textos de Estrabón y objetos de bronce que contienen escenas de sacrificio. La última fase del grabado indica nuevos cambios simbólicos, con la valorización de acciones aisladas perpetradas por un jinete, portando un arma arrojadiza, que pueden representar a una divinidad o a un héroe.

*Palabras clave:* Arte Rupestre; Protohistoria; religión; puñales con mango de antena; actos sacrificiales; ¿deidades o héroes?

## 1. Introduction<sup>1</sup>

This article results from fieldwork conducted in the Monte de Porreiras, municipality of Paredes de Coura, district of Viana do Castelo, Northwest Portugal, as part of the project *Engraved equids from the basins of rivers Minho and Ancora, Northwest Portugal. From inventorying to study and interpretation*, developed by the first author of this work –LC–, which, in turn, is part of the collective project *Rock Art from the Bronze and Iron Ages of Northern Portugal: from inventory to interpretation and dissemination-ProART*, developed by the three first authors.

The relevance of the publication of Rock 6 from Monte de Porreiras is related to the unprecedented nature of several of its motifs, in particular the presence of antennae-hilted daggers or swords in association to quadrupeds and anthropomorphs. In addition to the possibility that the representation of these weapons enables chronological-cultural integration of the motifs associated with them, wherein the narrative character of the represented scenes should be underlined, making it possible to draw parallels with ceremonies described in written

sources or depicted in bronze objects. This rock also has an engraved mounted equid, whose horseman carries a javelin in a throwing position. This scene indicates a later chronology to the previous motifs, and also contributes to a better individualisation of Iron Age art and religion.

Rock 6 from Monte das Porreiras is also important, since it contributes to the equines dating from Iberian Northwest Rock Art. However, this is also a controversial theme, once there are three different chronological proposals. One supports that equines were engraved between the end of the 3<sup>rd</sup> and the beginning of the 2<sup>nd</sup> millennia BC and that they are contemporary to abstract circular compositions from Atlantic Art (Peña and Rey, 1993: 11-50; Fábregas *et al.*, 2011: 29-51). Another one defends the idea that, although being domesticated during the 3<sup>rd</sup> millennium BC, horses have only been mounted in the beginnings of the 1<sup>st</sup> millennium BC –from IX-VIII centuries onwards–. Ridding scenes would date back from that, or later phase, although contemporary to circular motifs, and corresponding, that way, to a second moment of Atlantic Art, a style that would have a long chronology (Santos-Estévez, 2008a: 51; 2008b: 140-152). The third one considers that most of the engraved equines present in the Iberian Northwestern façade correspond to an ideology and imaginary later than Atlantic Art, beginning to be engraved between the end of Chalcolithic/beginning of Bronze Age, and the end of Iron Age. This would explain the wide stylistic diversity, and the different thematic associations in which they occur. It also considers that there is a sudden split between Atlantic Art, only composed by abstract motifs –Classical Atlantic Art– and figurative

<sup>1</sup> The authors would like to give special thanks to C. Verde, for his availability in showing them the engraved rock. They would also like to thank the Landscape, Heritage and Territory Laboratory-Lab2PT, by providing the necessary funds for developing the fieldwork within the framework of the project *Rock Art from the Bronze and Iron Ages of Northern Portugal: from inventory to interpretation and dissemination-ProART*, developed by the three first authors. The first author is developing his Master's dissertation entitled *Engraved equids in the basins of the rivers Minho and Ancora. From inventorying to study and interpretation*, framed within that collective project.

motifs (Bettencourt, 2019: 135-148).

The attempt to interpret some of the scenes engraved in the rock, at least the more figurative scenes, begins with the premise that an engraved outcrop cannot be viewed solely as a kind of canvas, upon which someone simply engraved a symbol. Instead, it should be viewed as an important instrument, where a certain individual or a group of individuals used to communicate to the world and supernatural entities –serving as a kind of portal– (Whitley, 2011: 102).

## 2. Location and Physical and Environmental Context

Located about 7 km north of the town of Paredes de Coura, in the district of Viana do Castelo, in Northwest Portugal, the Monte de Porreiras is about 600 metres above sea level, located in the Union of Parishes of Porreiras and Insalde (Fig. 1).

Among the set of identified rocks distributed in the area, this article will focus on Rock 6. It occupies the south-eastern slope of Monte de Porreiras, near the Porreiras stream, an affluent of the upper section of the river Coura, that is a tributary of the river Minho.

According to the Geological Chart of Portugal, sheet 1-c, in Caminha, scale of 1/50 000, produced by the General Direction of Geological Services and Mines, and its explanatory text (Teixeira and Perdigão, 1962), the subsoil consists of porphyroid granites with medium to fine coarse, light coloured quartzites, that are abundantly visible from the surface. The nearby soils are rich in wolfram, that are extracted in the mines of São Silvestre, in Ferreiras,

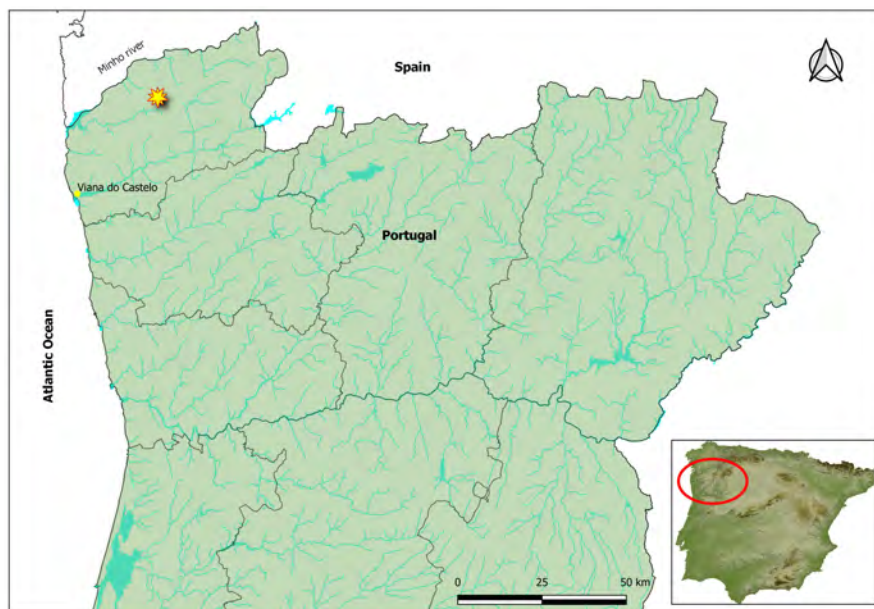


FIG. 1. Location of Rock 6 from Monte de Porreiras in North Portugal and in the Iberian Peninsula.

less than 3 km northwest, and Chão do Virialho, in Tairão, about 10 km north. Tin was certainly often found in these veins. At about 15 km northeast there are several mineralisations of tin in the extreme northern section of the Serra d'Arga, between Arga de Baixo and Covas.

The vegetation covering the hill is mainly formed by shrubs –predominantly heather, gorse and ferns– although it is possible to see several intrusive tree species, including small eucalyptus trees. A few hundred metres from the area considered in this study, there is a large scar visible on the hill, caused by a granite quarry, that is now deactivated.

According to records, the geomorphology of the terrain includes steep and medium slopes, offering broad visibility over the valley of the Porreiras stream, to the south, southeast and east; also, the nearby Monte de São Silvestre, to the northwest; the Monte do Castro, to the southwest; the Monte da Pena, to the south-southwest; the Monte da Rapa, to the southeast; over the valley of stream Porreiras, to the south; and to the summit of the Monte de Porreiras, to the north. On the horizon, to the east, it is possible to see the Serra do Soajo mountain range (Fig. 2).



FIG. 2. *Physical and environmental context of Rock 6 in Monte de Porreiras and its visibility to the surroundings: 1) North view; 2) South view; 3) West view; 4) East view;; this fourth image also shows the huge quantity of outcrops at the slope where the engravings were carved.*

### 3. Archaeological Context

On the southwest slope of the Monte de Porreiras, and near to Rock 6, there are, at least, nine more engraved outcrops with some, rare motifs that can be classified within the category of so-called Classic Atlantic Rock Art, including concentric circles, semicircles, grooves, and cup marks, and also figurative motifs with a more recent chronology, such as podomorphs, equids, horsemen, segmented circles, among other motifs that reveal Christian symbolism.

Nearby, and throughout the region, there are other traces of prehistoric and protohistoric occupation. From the Neolithic period which is broadly linked to Atlantic Art, it is possible to refer the megalithic monuments of Chã das Porreiras (Silva, 2007, 2015) and the stelae of the Casa do Casal, in

Insalde (Gomes, 2006). Ascribed to the Late Bronze Age, a hoard of palstave axes was recovered from the southeast base of the Alto da Coguluda, at Cabuludas (Silva, 1993: 45-82). There are no traces of any Iron Age settlement – ‘castro’ – nearby, although the region has places names, such as ‘castelinho’ and ‘crasto’, that are usually related to the existence of such settlements.

### 4. Methodology

The study of Rock 6 implied cleaning its surface, and the description of the archaeological site in an individual datasheet, including georeferencing, physical and environmental context, lithological and morphological features of the engraved outcrop, spatial distribution of the engraved

motifs, technical analysis to ascertain their carving methods, description, measurement and orientation of the motifs, and their state of conservation. A photographic record was also produced, at different times of the day, and so as the systematic recording of the engraved outcrop to produce photogrammetric models.

Photogrammetric processing was carried out, with 187 images collected during the fieldwork, using an application based on Structure from Motion –sfm– technology –*Agisoft Metashape version 1.7.6*–. After the image matching step, a dense point cloud was obtained. In a 0 to 255 confidence scale, provided by the application, all the points with confidence values lower than 2 were eliminated. A final dense cloud, in ‘ultra-high-quality’ was obtained, with a total of 310 150 814 points. A mesh was obtained from the dense cloud, using a Delaunay triangulation. After eliminating the excess geometry at the edges of the model and several areas without engravings, a mesh with 68 796 691 faces was obtained. To simplify further model processing and analysis, the mesh was reduced to 20 000 000 faces. The dense cloud and the 3D mesh were calibrated to an actual metric scale, using a 50 cm ruler, placed before the photographs were taken and visible in at least 25% of them. The final calibrated model was exported in an Alias Wavefront object format –.obj–.

To contrast the engravings made on the rock, the geometric distance technique was used, in an integrally georeferenced 3D environment, using a customised cartesian metric referential (Dinis *et al.*, 2020: 6-25).

The 3D mesh was then duplicated, one maintained in its original form and the other smoothed with a Laplacian filter –without any alteration to the geometric position in the cartesian frame–. The original surface and the smoothed surface were then processed to determine the distances between the two geometries, using the Cloud Compare application. This procedure made it possible to isolate and contrast the low reliefs on the original surface. By using colour scales, applied to the spectrum of distances obtained, it was possible to interactively

colour and contrast the low reliefs from the base of the engravings. This technique permits interactive visualisation of the coloured model with the possibility of full 3D rotation, facilitating visualisation of the rock blocks with engravings that have complex volumetric shapes. The final contrasted model was then rendered using a customised z axis that is the best option for displaying all the engravings in the xy plane that best frames them. Simultaneously the model used, besides the coloured surface with the geometric distances, a second 3D model, shaded with light direction with azimuth 315° and inclination 45°, is used to simulate the illuminated physical rock, by using a virtual light source with the same parameters.

The final georeferenced image was imported into a geographic information system tool –QGIS v. 3.22 software– for vectorisation of the graphic elements, and to identify the spatial distribution of the outcrop recorded on a hypsometric map, to understand its physical context and its spatial interrelations with other archaeological remains that exist in the area.

## 5. Rock 6

### 5.1. Physical features

Rock 6 from Monte de Porreiras is a porphyroid granite outcrop, from medium to fine coarse grain, lightly grey. This particular outcrop is in a poor state of conservation, due to several evidence of thermal exfoliations caused by forest fires in the area, especially in its western section. This physical alteration made it difficult to study the surface of the outcrop. It should also be mentioned that its original colour was also observed, by comparison with portions of similar granite, not subject to thermal stress in the vicinity, generating slightly darker stains.

The rock surface presents an irregular contour, with a slight slope, to a certain extent accentuated to the southeast, which matches the geomorphology of the local terrain. Its levelled surface has some small, inexpressive and partial natural fractures



FIG. 3. Rock 6 from Monte de Porreiras viewed from the Southeast.

—diaclasses—. It measures 2,9 metres from east to west, and about 2 metres from south-southeast to north-northwest. On its top, the outcrop presents a slight elevation of about 0,60 metres in relation to the ground. The surface is profusely carved, except in its extreme edges, to the northeast and east (Fig. 3).

Due to its positioning, that is visible from afar in the slope of the Monte de Porreiras, and with good visibility overlooking the valley, this outcrop was engraved in order to be seen from the front, forging a dialogue with the middle slope, in particular, with the hill that it occupies, its ridge line and the sky.

### 5.2. Formal and technical characteristics of the motifs

On the basis of direct observation and the generated photogrammetric models, it was possible to

distinguish three distinct moments of engravings in this outcrop according to parallels and superimpositions observed between the motifs. Although all the motifs seem to have been carved using the technique of pecking, followed by abrasion, with grooves that demonstrate ‘u’ profiles, their width and depths reveal many differences, with larger grooves in the abstract motifs, and deeper and thinner grooves in the equestrian scene. At least in three motifs that are identified to include weapons —antenna-hilted swords or daggers, and javelins— the use of low relief technique may be considered (Fig. 4).

#### 5.2.1. First phase of engraving

In the westernmost edge of Rock 6, i.e. to the left of the observer when facing the outcrop, one can observe circular motifs of an abstract character,



FIG. 4. *Photogrammetric model of Rock 6 in Monte de Porreiras.*

that are very characteristic of Classic Atlantic Art. It is possible to discern what looks like a concentric circle, with two loops superimposed by another concentric circle with two loops, with a central cup mark, whose external loop is extremely irregular. This is crossed by an irregular groove, which extends to the north and northwest of this composition, linked to a semicircle attached to the concentric circles. Between the first and the second loop of the concentric circles, several cup marks are visible. From each groove that extends to the south there seem to be reticulated motifs, which are barely visible due to the fact that they correspond to an extremely damaged section of the rock. These motifs flank a specie of imperfect ellipse, with a reticulated motif in the interior, topped by two semicircles, one of which is also subdivided. From the last semicircle there is a bifurcated groove that heads to the

upper section of the outcrop. There is also a groove to the west of this motif.

The grid patterns occur in megalithic art<sup>2</sup> (Bettencourt, 2013b: 149-154; Santos *et al.*, 2017: 25-57; Silva *et al.*, 2017: 63-76) and they are also present, in articulation with circular motifs, in several open air engraved contexts in the Northwest of Portugal (Girão, 1925: 81-95; Silva and Alves, 2005: 189-219; Bettencourt *et al.*, 2012: 47-62)<sup>3</sup>. For this

<sup>2</sup> For example, in the Mamoa de Leira de Mamas, Braga (Bettencourt, 2013b), in the Dolmen de Antelas, Oliveira de Frades (Santos *et al.*, 2017: 25-57), in the Dolmen da Aliviada 1 and in the Mamoa 4, Alagoas, both in Arouca (Silva *et al.*, 2017: 63-76, among others).

<sup>3</sup> For example, in the Bouça da Cova da Moura 1 and in the Bouça da Cova da Moura 3, Maia (Twohig, 1981: 49-55; Silva and Alves, 2005: 189-219; Bettencourt *et al.*, 2012) or Pedra Escrita de Serrazes, São Pedro do Sul (Girão, 1925: 81-95; also Alves, L. B.: *The Movement of*



FIG. 5. First phase of engraving. Painting over the 3D model obtained by photogrammetry.

reason, they were included in this set of motifs, that correspond to the first and earlier phase of the rock engraving (Fig. 5).

### 5.2.2. Second phase of engraving

At a central area of the outcrop there is a scene that involves a zoomorphic motifs –probably bovines and/or ovicaprids–, weapons –swords and/or daggers– and anthropomorphs. In the upper north-west section, it is possible to see an anthropomorph in a twisted perspective, that handles what looks to be a baton or stick, on the right hand, and something semi-circular on the left hand –a shepherd?–, that seems to confront or control the larger quadruped of

this composition. This motif, although engraved in a schematic mode, has larger antlers compared to the other depicted zoomorphic figures. Could this be a bovine, a billy-goat or a ram? Above this there is another bovid, also schematically depicted, that seems to be moving in a contrary direction from the anthropomorph, as if running from the human figure.

In the central area of the outcrop, there is an anthropomorph holding a weapon with its left hand, in this case, the handle of a large antenna-hilted sword or a dagger –about 0,40 metres long– that is pointed towards the rear part of an eventual ovicaprid, indicating its death. This anthropomorph also handles a small object difficult to interpret, in its right hand –a dagger?–. Above the quadruped there is another similar representation, aligned in the same direction. On the side of this scene, there are two more ovicaprids, between which there is a reclined anthropomorphic figure, with open arms,

*Signs. Post-glacial Rock Art in North-Western Iberia.* PhD thesis presented in 2003 in the University of Reading, pp. 223-226).





FIG. 6. *Second phase of engraving. Painting over 3D model obtained by photogrammetry.*

as if it was dead. This figure uses an object in its left arm that is difficult to identify. On the northeast side there are four antenna-hilted swords or daggers with well-defined grooves, almost suggesting a low relief technique. One of these weapons is pointed towards a natural shaft on the rock, as if entering it, and another one is isolated from the rest, in the northeast section of the composition, heading to a cup mark –a cavity or dimple–. A third weapon is pointed towards the back of what is supposed to be another motionless schematic ovidaprid, whose head, ears and tail are represented by well-defined grooves. This also suggests the death of the animal. At the bottom of the engraved surface, in the south, there are also another two big antenna-hilted swords or daggers pointed towards the same quadruped, one of which is pointing to its back and the other one to its head, nullifying it, as if it was cutting. Could this be the meaning of the cup mark

that occurs just above the animal's front limbs? Near these swords or daggers, to the north, there is another figure that is difficult to interpret.

To the southwest, and in a peripheral area of the engraved surface, it is also possible to see one or two schematic quadrupeds that seem to be moving towards the herd.

At the top of this scene, it is possible to see another antenna-hilted sword or dagger, another schematic quadruped and perhaps another anthropomorph holding a baton or stick (Fig. 6).

### 5.2.3. Third phase of engraving

This final phase of engraving is materialised by a sub-naturalistic equid, whose head, body, and tail are represented by double grooves. This equid is mounted bareback by a rider represented in a twisted perspective. The rider is holding, in its right



FIG. 7. *Third phase of engraving. Painting over the 3D model obtained by photogrammetry.*

arm, a javelin with a lozenge blade or point, in a throwing position. Its left arm is extended towards the neck of the animal, holding the reins. The rider is heading towards the northeast.

This is the last motif that the observer can see better when directly facing the outcrop. This is not solely due to its well-defined grooves, since they are deepened and less eroded, but also because of its central location at the top of the outcrop. Its inclusion in the final phase of engraving is demonstrated by the superimposition of the javelin's handle over the handguard of the antenna-hilted sword or dagger that is engraved near to it (Fig. 7).

## 6. Data Discussion and Interpretation

The first main conclusion that can be drawn from the work developed on Rock 6 is its long diachrony of use. As we have seen above, analysis to the

iconographic, stratigraphic and spatial distribution of the engraved motifs in the outcrop reveal that it is possible to identify three main phases of engraving and three distinct types of grammar added over time.

In relation to the first phase of engraving, the oldest phase, is related to circular motifs, associated to grooves and cup marks and an abstract and reticulated motif that is difficult to interpret. These motifs are typically from Classical Atlantic Art. This style can emerge at the end of the 5<sup>th</sup> millennium BC or beginning of the 4<sup>th</sup> millennium BC, that is, the regional Middle/Late Neolithic period, according to parallels with motifs related to Northwest megalithic art (Alves, 2009; Bettencourt, 2013a; Cardoso, 2015; Alves and Reis, 2017)<sup>4</sup>, although it is

<sup>4</sup> Also Alves, *op. cit.* n. 3 and Cardoso, D. (2015): *Arte atlântica do Monte de S. Romão (Guimarães) no contexto da arte rupestre pós-paleolítica da bacia do Ave, Noroeste Português*. PhD thesis presented in 2015 in the Univ. of Trás-os-Montes and Alto Douro.

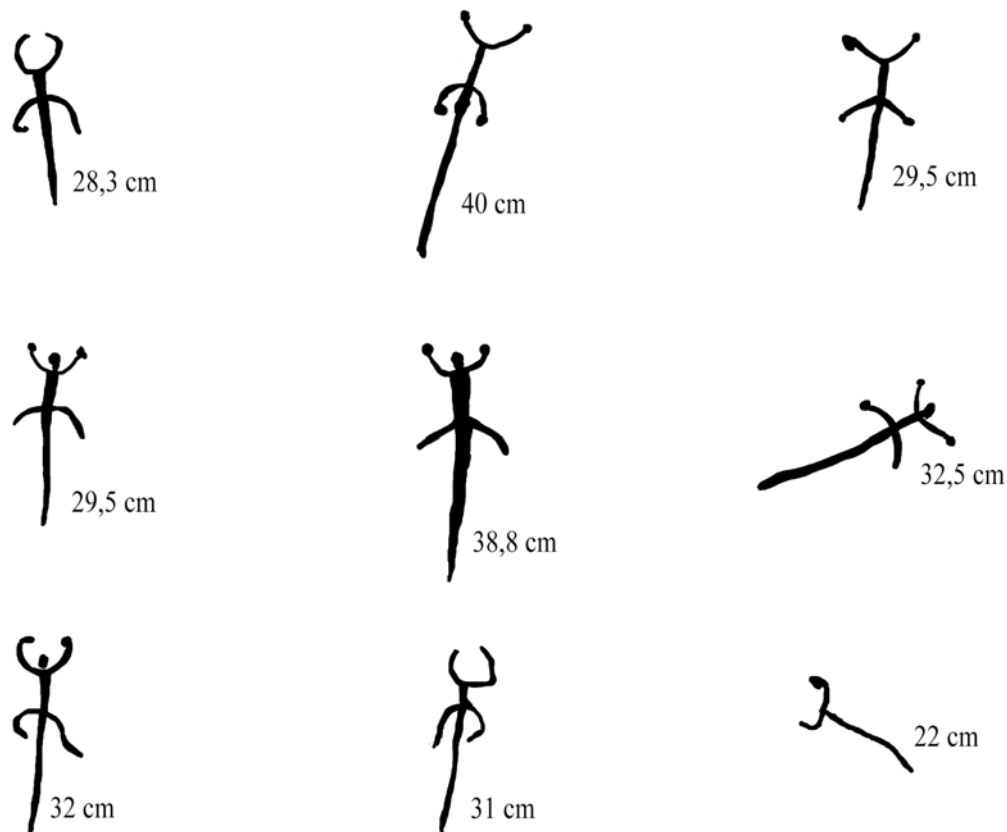


FIG. 8. *Tracing of the antenna-hilted swords or daggers represented on Rock 6 and their respective lengths.*

accepted that it was used during the 3<sup>rd</sup> millennium BC, that is, in the regional Chalcolithic period.

A second phase of engraving is related to the addition of motifs in the central section of the outcrop. This includes schematic representations that, however, allow to identify most of the figurative engravings. There are representations of anthropomorphs, weapons, and quadrupeds that, although schematic, seem to represent several animals (bovids and ovicaprids), according to their dimensions, and morphology of tail, back, and head, some of which horned. In relation to weapons, without considering the shepherding baton or the stick carried by the anthropomorphs, all the remaining depictions have parallels with real weapons, although their schematic appearance, in specific terms, are linked to the category of antenna-hilted swords or daggers. The chronology of these weapons, although

covering a broad time span, is more recent than the circular compositions, with which they do not seem to have any dialoguing connection. It can therefore be assumed that they were engraved during the later reuse of the place. These swords or daggers have a wide and marked part of the handle –the antenna– with a pommel that ends in a cylindrical, circular or frustoconical shape.

There are variable dimensions of the engraved weapons, at least eight in total. The biggest weapon is 0.40 metres long and the smallest is 0.22 metres long. This indicates that they were carved using real dimensions, considering the bigger to be a short sword, and the remaining to be daggers<sup>5</sup> (Fig. 8).

<sup>5</sup> This assumption considered all the dimensions of antenna-hilted daggers found in Os Castros, Taramundi, Asturias, 0.243 metres long (Villa, 2009b); Chao Sanmartín, Asturias, 0.386 metres (Villa, 2009a); Viladonga, Lugo,



FIG. 9. A) antenna-hilted dagger from *Os Castros, Taramundi, Asturias* (Villa, 2009b); B) antenna-hilted dagger from *La Peña Grande-Couboeira* (photography from Museo Arqueológico Nacional, 2015); c) antenna-hilted dagger with iron and bronze blade from *Castro de Chao Samartín* (Villa, 2009a).

One interesting feature of the carved weapons is related to the dimensions of the rain-guard, which is extremely exaggerated in relation to the length of the blade. This intensifies the anthropomorphic nature of the handles, since the raised arms of some of the anthropomorphs may indicate prayers or that they are able to establish contact with deities, suggesting the magic or religious power of these weapons.

Although tendentially these objects are considered to date from the early regional Iron Age (Savory, 1951: 3-4; Almagro Gorbea, 1976: 453-477; Ruiz-Gálvez, 1980: 85-112; Silva, 1983-1984: 121-129), recent data makes it possible to situate them between the regional Late Bronze Age and the end of the Iron Age, without being absent from

0.156 metres (Chamoso Lamas, 1977; Ruiz-Gálvez, 1980); Río Mero, Burgo, A Coruña, 0.266 metres (Ruiz-Gálvez, 1980); San Cibrán de Las (Ourense), 0.350 metres (López Cuevillas; 1923; Savory, 1949; Ruiz-Gálvez, 1980), and one from Santa Tegra, Pontevedra, only 0.150 metres long (López Cuevillas, 1946-1947).

the contexts of the Roman period that are sometimes difficult to interpret.

In the Northwest Iberian Peninsula these can occur in bronze, with a bronze handle and an iron blade, or an iron handle and a bronze blade (Fig. 9). The latter are considered to be more recent –from between the 4<sup>th</sup> and 1<sup>st</sup> centuries BC– by González-Ruibal (2006-2007: 229), although the author does not exclude the persistence of daggers, made entirely of bronze, in ritual contexts.

The oldest specimen was found at *Os Castros*, in *Taramundi*, *Asturias*, entirely made of bronze. Vegetal matter taken from the scabbard enabled <sup>14</sup>C dating, calibrated at 2 Sigma, from between the 14<sup>th</sup> and 9<sup>th</sup> centuries BC, that is, the regional Late Bronze Age (Villa, 2009b: 106-107). The dagger from the *Monte do Castro*, in *Ribadumia*, *Pontevedra*, has an iron handle, and is dated between the 2<sup>nd</sup> and 1<sup>st</sup> centuries BC<sup>6</sup>.

<sup>6</sup> In <https://pontevedraviva.com/xeral/41281/encuentran-punal-antena-yacimiento-monte-castro/>.

Although they are rare, these weapons have also been found in the Centre and South of Portugal, such as a dagger found in the Castro de Chibanes, in Palmela, where “handhold of an antenna-hilted dagger, in copper alloy, of the ‘Santa Trega’ type, with an iron blade”<sup>7</sup>, was dated from between the 2<sup>nd</sup> century BC and the middle of the 1<sup>st</sup> century BC (Soares *et al.*, 2019: 87).

Considering the above and the schematic nature of the carvings, we can only consider that this scene was engraved during the 1<sup>st</sup> millennium BC, probably at the end of the regional Bronze Age or the beginning of the Iron Age, at a time when these weapons would have been a novelty. In support of this hypothesis, it can be underlined that the older antenna-hilted swords and daggers –made entirely of bronze– would have been found, preferentially, in ritual contexts –deposited in rivers and shelters/caves–, in contrast with the iron weapons or those with iron blades, which were often found in hill-top forts –‘castros’–, according to González-Ruibal (2006-2007: 228). To the first group we can also add the dagger made entirely of bronze from La Peña Grande, near Castro de Couboeira, Lugo, mentioned by Cartailac (1886), Villaamil y Castro (1907: 82-161), Almagro Basch (1940), López Cuevillas (1946-1947: 543-589) and usually incorrectly associated as being from the hilltop fort –‘castro’–.

Although several authors have defended the low offensive character of these weapons, which have been fundamentally interpreted as display objects, symbolising power and prestige (González Ruibal, 2006-2007; Villa, 2009a: 174-175), in Rock 6 from Monte de Porreiras these weapons have been associated, for the first time, to ritual practices, in particular to actions related to animal sacrifices and, eventually, to human sacrifices, although some seem to materialise depositions, since they are associated to shafts and cup marks. This may represent a narrative of evocation, and celebration of some kind of ritual action and depositions, in which

<sup>7</sup> Translated from the original: “empunhadura, em liga de cobre, de punhal de antenas de tipo ‘Santa Trega’ com lâmina de ferro” (Soares *et al.*, 2019: 87).

antenna-hilted swords and daggers played a central role.

Although such a phenomenon is not associated to the territory of *Lusitania*, but rather to the *Gallaecia*, according to Alarcão (2009) this kind of ceremony is reminiscent of the description made by Strabo in Book III of his *Geography*, in a quote dedicated to the native people of Lusitania, in which he states that “... They subsist principally on the flesh of the goat, which animal they sacrifice to Ares, as also prisoners taken in war, and horses. They likewise offer hecatombs of each kind after the manner of the Greeks”<sup>8</sup>.

The bronze artifacts representing sacrifices in the Northwest Iberian Peninsula, generically included in the regional Late Iron Age, include domestic animals –goats, sheep, oxen, boars and pigs–, anthropomorphs, weapons, and objects –torcs and situlas–. There is one specific object, held on deposit in the Instituto Valencia de Don Juan, Madrid, that represents an anthropomorph holding a dagger or a sword executing a ram (Armada and García Vuelta, 2003: 47-75). Although it has distinct combinations, with a wider number of artifacts compared to the ones represented in Rock 6 from Monte de Porreiras, it should be underlined that this rock includes three elements –different kinds of animals, anthropomorphs and weapons–. In this sense, it is possible to ask if what was carved in this rock might correspond to a similar version of the narratives represented in those votive bronzes, but from an earlier moment in time?

Armada and García Vuelta (2003: 172) also quote several epigraphic sources from the Centre-North and Centre-Interior of Portugal that “... show that sacrificial rituals were held in the Iberian Peninsula, in which animals were offered to various divinities in a combined and hierarchical manner”. In another article it is proposed that although this kind of ritual has similarities to the *suovetaurilia*,

<sup>8</sup> Translated from the original: “... Comem sobretudo carne de bode e é um bode que sacrificam a Ares, e também cativos de guerra e cavalos; e fazem ainda hecatombes de cada espécie, à maneira grega” (Strabo, *Geography*, Book III, in Deserto and Pereira, 2016: 64).

it was probably practiced by the communities of Western Iberia before the Roman presence, probably since the Bronze Age (Armada, 2015; Armada *et al.*, 2019: 55-71). This seems to be documented at the sanctuary of Cabeço da Frágua, Sabugal, where, during roman period, an outcrop was engraved with an inscription narrating sacrificial rites of animals associated to indigenous deities (Tovar, 1966-1967: 237-268). Archaeological excavations allowed to identify three non-domestic phases of occupation. The oldest, dating from the end of Late Bronze Age/beginning of Iron Age; an intermediate, between the 4<sup>th</sup> and the 3<sup>rd</sup> centuries and the 1<sup>st</sup> century BC; and a third one, until the 1<sup>st</sup> century BC (Santos and Schattner, 2010: 89-108). Rock 6 of Monte de Porreiras seems to reinforce the hypothesis of the antiquity of this kind of rites in the Northwest of Iberia.

To which deities were these sacrificial acts made? Although this is a difficult question to answer, the context of this outcrop should be considered, which may be viewed as a random act. It is located on a medium slope of a rocky mountain, between the valley of the Porreiras stream, and the high meadows that are suitable for shepherding. Besides this, there is no known settlement in the immediate vicinity. In view of this data, one of the hypotheses is that this place materialised the cult to ‘*Crougiai*’, ‘the (lord) of the hills’ or ‘the one who lives in the hills’, a deity that is thought to be protective to farmers and shepherds, presuming that the “... Gallaecian counterposed the hirsute woods and bushes, and the desert space of rocky calved mounts, to the ‘domesticated’ space from settlements and lands surrounding them”<sup>9</sup> (Alarcão, 2009: 107).

<sup>9</sup> Translated from the original: “*Callaeci* contrapunham, ao espaço ‘domesticado’ dos povoados e das terras de ao redor dos castros, o espaço hirsuto dos bosques e matos e o espaço deserto de montes calvos ou fragosos” (Alarcão, 2009: 107). Although the cult to Reve arrived to the basin of river Minho, so as its interrelation to water, river currents, ‘mythical plains’, warlike activities and tutelary nature, as the ‘provision of subsoil health’ (*cf.* synthesis of Brañas, 2007: 377-443), it does not seem to be adequate to the physical context of the finding, reason why there should

During the third and final phase of engraving, the number of motifs is clearly restricted, switching from a collective scene with anthropomorphs on foot, to an individual scene of horse-riding, recurring to an iconography that seems to valorise a hero or a deity, carrying a throwing spear –a javelin, whose use, warlike or venatory, is not known–. The quadruped is now represented in a more sub-naturalistic manner, in the upper section of the outcrop, precisely in the line of the observer’s view, partially superimposing an antenna-hilted dagger.

Similar scenes are common in Rock Art from the 2<sup>nd</sup> Iron Age, from the Eastern part of the Trás-os-Montes region and the Alto Douro region, in Portugal, in particular in the valleys of the rivers Douro and Côa (Baptista, 1983: 57-69; 1999; Luís, 2008: 415-438; 2009: 213-240; 2010: 53-67), although the way of representing them is manifestly distinct, both in relation to the form and the technique and solutions. The same can be said about the engraved outcrops from Castelinhos, in Torre de Moncorvo, considered to date from the regional Iron Age, but frequently decontextualised, or in a secondary deposition (Neves and Figueiredo, 2015: 1589-1605).

In the Northwest Iberian Peninsula, the horseback riders represented in the gold diadems from Moñes, Piloña, in Asturias, Spain (García Vuelta and Perea, 2001: 3-23; Schattner, 2012), or from the frieze from the chapel of Formigueiro, Chaos de Amoeiro, in Ourense, Spain (Arizaga *et al.*, 2007: 87-129), are different from what is represented in this case, due to the absence of a throwing weapon or weapon, respectively, which must be considered within the framework of other imagery. The representation of an equestrian figure in Rock 6 from Monte de Porreiras, due to the singularity of the motif, condenses a male narrative that surely would be easily identifiable by the users of such communication codes at that time. Chronologically speaking, it certainly dates from the regional Iron Age and later than the second phase of engraving. But we should not exclude the

be some caution about considering sacrifices engraved in the studied outcrop as consecrated to this deity.

hypothesis that it might be from the regional Late Iron Age, due to the parallels that it shows with iconography from the Trás-os-Montes Region, although this must be subject of confirmation.

## 7. Concluding Remarks

The study of this engraved rock allowed a better understanding of the long diachrony of the set of engravings, and the superimposition of new meanings that were added over time. From abstract circular compositions of classical Atlantic art from the Neo-Chalcolithic period, it is possible to see that the rock was revisited and reused, according to figurative and narrative assumptions that comprise an alternative approach of constructing the place, marking the space and materialize social communication. This reinforces the hypothesis raised by one of the authors of this paper –AMSB– which argues that from the end of the Bronze Age, and during the Iron Age, that is, between the end of the 2<sup>nd</sup> millennium BC and during the 1<sup>st</sup> millennium BC, rock engravings tend to appear, integrated in narrative scenes, although sometimes the engraved motifs are recorded in a schematic fashion (Bettencourt, 2019: 135-148).

Spatial analysis of the distribution of the motif of Rock 6 from Monte de Porreiras, and its individualisation within three different periods in time, differentially distributed across the engraved surface of the rock, made possible to interpret the second and the third phases of the carvings occurred in parallel with metallic objects, based on written sources, and other sets of Rock Art in the Iberian Peninsula.

The presence of swords and/or antenna-hilted daggers which were associated, during the first phase of engraving, to animal and human sacrifices, demonstrates the importance of Rock Art to interpret the function of these kinds of weapons, and also of the interpretation and study of Protohistoric religion in the Northwest Iberian Peninsula. It is also important to highlight the physical and archaeological contexts of the role assumed by Rock

6 from Monte de Porreiras, as a significant working methodology for articulation of the engraved motifs with certain Protohistoric *Gallaecia* deities, identified using other known sources.

According to the third phase of engraving, it is also understood an alteration of the imaginary of the motifs throughout Protohistory, in parallel to valorisation of armed horsemen carrying throwing weapons –Heroes? Deities?–. These are representations of other kind of narratives that are extremely complex to interpret.

The study of this engraved rock also illustrates the importance of the networks of places during Protohistory, specifically, from the Iron Age in Northwest and Northern Portugal, frequently and mainly focusing on the study of settlement.

## Bibliography

- ALARCÃO, J. (2009): “A religião de Lusitanos e Calaios”, *Conimbriga*, 48, pp. 81-121.
- ALMAGRO BASCH, M. (1940): “El hallazgo de la ría de Huelva y el final de la Edad del Bronce em el Occidente de Europa”, *Ampurias*, 2, pp. 85-143.
- ALMAGRO GORBEA, M. (1976): “La espada de Entrambasaguas. Aportación a la secuencia de las espadas del Bronce en el Norte de la Península Ibérica”. En *XI Aniversario del Centro de Estudios Montañeses*, 3, pp. 453-477.
- ALVES, L. B. (2009): “O sentido dos signos. Reflexões e perspectivas para o estudo da arte rupestre do pós-glaciar no norte de Portugal”. In DE BALBÍN, R. (ed.): *Actas Arte Prehistórico al aire libre en el Sur de Europa*. Madrid: jCYL, pp. 381-413.
- ALVES, L. B. and REIS, M. (2017): “As gravuras rupestres do Monte Faro (Valença, Viana do Castelo). Um exemplo maior das Arte Atlântica peninsular”, *Portugalia*, n.s., 38, pp. 49-86.
- ARIZAGA, Á.; FÁBREGA-ÁLVAREZ, P.; AYÁN, X. and RODRÍGUEZ PAZ, A. (2007): “A apropiación simbólica da cultura material castrexa na paisaxe cultural dos Chaos de Amoeiro (Ourense, Galicia)”, *Cuadernos de Estudios Gallegos*, 53 (119), pp. 87-129.
- ARMADA, X. L. and GARCÍA VUELTA, O. (2003): “Bronces con motivos de sacrificio del área noroccidental de la Península Ibérica”, *Archivo Español de Arqueología*, 76 (187-188), pp. 47-75.

- ARMADA, X. L.; GARCÍA VUELTA, O. and SEOANE, C. (2019): "Cultural interaction in times of conflict: metals and ritual in the hillforts of north-western Iberia (2<sup>nd</sup>-1<sup>st</sup> centuries BC)". In FONTES, L.; CRUZ, G. and ALVES, M. (eds.): *Cultural Interactions and Changing Landscapes in Europe (2<sup>nd</sup> century BC/2<sup>nd</sup> century AD)*. Boticas: Câmara Municipal, pp. 55-71.
- BAPTISTA, A. M. (1983): "O complexo de gravuras rupestres do Vale da Casa (Vila Nova de Foz Côa)", *Arqueologia*, 8, pp. 57-69.
- BAPTISTA, A. M. (1999): *No tempo sem tempo. A arte dos caçadores paleolíticos do Vale do Côa*. Vila Nova de Foz Côa: CNART/PAVC.
- BETTENCOURT, A. M. S. (2013a): *A Pré-história do Noroeste Português/The Prehistory of the North-western Portugal*. Territórios da Pré-história em Portugal, vol. 2. Braga-Tomar: CEPHAR-CITCEM.
- BETTENCOURT, A. M. S. (2013b): "Tumulus of Leira das Mamas, Lamas, Braga/O monumento megalítico de Leira das Mamas, Lamas, Braga". In BETTENCOURT, A. M. S.: *A Pré-história do Noroeste Português/The Prehistory of the North-Western Portugal*. Territórios da Pré-história em Portugal, vol. 2. Braga-Tomar: CEPHAR-CITCEM, pp. 149-154.
- BETTENCOURT, A. M. S. (2019): "Equídeos nos montes do Noroeste Português. Narrativas míticas gravadas nas rochas". In PEREIRA, A. (ed.): *O Garrano: contributos da investigação histórico-arqueológica, antropológica e equestre para a sua valorização*. Viana do Castelo: Municipal Council, pp. 135-148.
- BETTENCOURT, A. M. S. (2021): "West Iberian Bronze Age halberds in rock art sites: several ontological considerations". In BETTENCOURT, A. M. S.; SANTOS-ESTÉVEZ, M. and SAMPAIO, H. A. (eds.): *Weapons and Tools in Rock Art. A World Perspective*. Oxford: Oxford, pp. 113-139.
- BETTENCOURT, A. M. S.; ALVES, L. B.; RIBEIRO, A. T. and MENEZES, R. T. (2012): "Gravuras rupestres da Bouça da Cova da Moura (Ardegães, Maia, Norte de Portugal), no contexto da Pré-história Recente da bacia do Leça", *Gallaecia*, 31, pp. 47-62.
- BRAÑAS, R. (2007): "Entre mitos, ritos y santuarios. Los dioses galaico-lusitanos". In GONZÁLEZ GARCÍA, F. J. (ed.): *Los pueblos de la Galicia céltica*. Madrid: Akal, pp. 377-443.
- CARTAILLAC, É. (1886): *Les Ages Préhistoriques de L'Espagne et du Portugal*. Paris: Ch. Reinwald, Libraire.
- CHAMOSO, M. (1977): "La escavación del Castro de Vila-donga y la problemática que plantean sus resultados". In *Actas Coloquio Internacional sobre el Bimilenario de Lugo*. Lugo, pp. 41-46.
- DESERTO, J. and PEREIRA, S. H. M. (2016): *Estrabão, Geografia. Livro III: introdução, tradução do grego e notas*. Coimbra: Univ. de Coimbra.
- DINIS, A. P.; RIBEIRO, J.; DINIS, A. M. and HENRIQUES, R. (2020): "Levantamento morfológico no sítio arqueológico do Crastoeiro, em Mondim de Basto (Norte de Portugal), com recurso a métodos clássicos e digitais", *Oppidum*, 12, pp. 6-25.
- FÁBREGAS, R.; PEÑA, A. and RODRÍGUEZ RELLÁN, C. (2011): "Río de Angueira 2 (Teo, A Coruña). Un conxunto excepcional de escenas de monta", *Gallaecia*, 30, pp. 29-51.
- GARCÍA VUELTA, O. and PEREA, A. (2001): "Las diademas-cinturón castreñas: el conjunto con decoración figurada de Moñes (Villamayor, Piloña, Asturias)", *Archivo Español de Arqueología*, 74, pp. 3-23.
- GIRÃO, A. (1925). "Arte rupestre em Portugal (Beira Alta)", *Biblos*, 1, pp. 81-95.
- GOMES, M. V. (2006): "A estela de Casa de Insalde (Paredes de Coura)", *O Arqueólogo Português*, série 4, 24, pp. 267-288.
- GONZÁLEZ RUIBAL, A. (2006-2007): *Galaicos: poder y comunidad en el Noroeste de la Península Ibérica (1200 a.C.-50 d.C.)*. Brigantium, 18-19. A Coruña: Museu Arqueológico e Histórico da Coruña.
- LÓPEZ CUEVILLAS, F. (1946-1947): "Armería posthallstática del Noroeste hispánico", *Cuadernos de Estudios Gallegos*, 2, pp. 543-589.
- LUÍS, L. (2008): "Em busca dos cavaleiros com cabeça de pássaro: perspectivas de investigação da proto-história no Vale do Côa". In DE BALBÍN, R. (ed.): *Arte Prehistórico al aire libre en el Sur de Europa*. Madrid: JCYL, pp. 415-438.
- LUÍS, L. (2009): "Per petras et per signos": A arte rupestre do Vale do Côa enquanto construtora do espaço na Proto-história". In SANABRIA, P. J. (ed.): *Lusitanos y vettones: los pueblos prerromanos en la actual demarcación Beira Baixa-Alto Alentejo*. Cáceres: Junta de Extremadura, pp. 213-240.
- LUÍS, L. (2010): "A construção do espaço numa sociedade proto-histórica: a arte rupestre do vale do Côa". In OLIVEIRA, F.; OLIVEIRA, J. and PATROCÍNIO, M. (eds.): *Espaços e Paisagens Antiguidade Clássica e Heranças Contemporâneas. História, Arqueologia e Arte*. Humanitas Suppl. Coimbra: CECH, vol. 3, pp. 53-67.
- NEVES, D. and FIGUEIREDO, S. S. (2015): "Quinhentas placas gravadas da Idade do Ferro do sítio fortificado do Castelinho (Nordeste Portugal): temas figurados e



- padrões de distribuição”. In COLLADO, H. and GARCÍA ARRANZ, J. (eds.): *Actas XIX International Rock Art Conference-IFRAO, 2015*. Arkeos, 37. Tomar, pp. 1589-1605.
- PEÑA, A. and REY, J. M. (1993): “El espacio de la representación. El arte rupestre galaico desde una perspectiva territorial”, *Revista de Estudios Provinciais*, 10, pp. 11-50.
- QUESADA-SANZ, F. (1997): *El armamento ibérico. Estudio tipológico, geográfico, funcional, social y simbólico de las armas en la Cultura Ibérica (siglos VI-I a.C.)*. Montagnac: Monique Mergoïl.
- RUIZ-GÁLVEZ, M. L. (1980): “Consideraciones sobre el origen de los puñales de antenas gallego-asturianos”. In *Actas Seminario de Arqueología do Noroeste Peninsular*. Guimarães: Sociedade Martins Sarmento, vol. 1, pp. 85-112.
- SANTOS, A. T.; CRUZ, D. J. and BARBOSA, A. F. (2017): “Gravuras e pinturas em dólmenes: o ‘grupo de Viseu’ de E. Shee (1981) trinta anos depois”. In CRUZ, D. J. (ed.): *Actas Mesa-Redonda ‘A Pré-história e a Proto-história no Centro de Portugal: avaliação e perspectivas de futuro’ (Mangualde, 2011)*. Estudos Pré-históricos, 17. Viseu: Centro de Estudos Pré-históricos da Beira Alta, pp. 25-57.
- SANTOS, M. J. C. and SCHATTNER, T. G. (2010): “O santuário do Cabeço da Fráguia através da arqueologia”, *Iberografias*, 6, pp. 89-108.
- SANTOS-ESTÉVEZ, M. (2008a): *Petroglifos y paisaje social en la Prehistoria Reciente del Noroeste de la Península Ibérica*. Tapa, 38. Santiago de Compostela: Instituto de Estudos Galegos Padre Sarmiento.
- SANTOS-ESTÉVEZ, M. (2008b): “A new proposal for the chronology of Atlantic Rock Art in Galicia (NW Iberian Peninsula)”. In NASH, G. and CHILDREN, G. (eds.): *The Archaeology of Semiotics and the Social Order of Thinks*. BAR Intern. Ser., 1833. Oxford: Archaeopress, pp. 140-152.
- SAVORY, H. N. (1951): “A Idade do Bronze Atlântico no Sudoeste da Europa”, *Revista de Guimarães*, 61, pp. 3-4.
- SCHATTNER, T. G. (ed.) (2003): *Die lusitanisch-galläkischen Kriegerstatuen*. Madrider Mitteilungen, 44-1. Mainz am Rhein.
- SILVA, A. C. F. (1983-1984): “A Cultura castreja no noroeste de Portugal. Habitat e cronologias”. In *Actas do Colóquio Inter-Universitário de Arqueologia do Noroeste. Homenagem a Rui de Serpa Pinto*. Portugalia n. s., 4-5. Porto, pp. 121-129.
- SILVA, A. M. S. P. and ALVES, L. B. (2005): “Roteiro de arte rupestre do Noroeste de Portugal”. In HIDALGO, J. M. (ed.): *Arte rupestre Prehistórica do Eixo Atlântico*. Vigo: Eixo Atlântico, pp. 189-219.
- SILVA, A. M. S. P.; LEITE, J.; LEMOS, P. and FIGUEIREDO, M. (2017): “Rock art places and contexts at Gralheira Massif (Central-NW Portugal): a general overview”. In BETTENCOURT, A. M. S.; SANTOS, M.; SAMPAIO, H. and CARDOSO, D. (eds.): *Recorded Places, Experienced Places. The Holocene Rock Art of the Iberian Atlantic North-West*. Oxford: Archaeopress, pp. 63-76.
- SILVA, M. F. M. (1993): “Contributos para o estudo do Bronze Final na bacia superior do rio Coura”, *Cadernos de Arqueologia e Património*, 2/3, pp. 45-82.
- SILVA, M. F. M. and SILVA, C. A. G. (2007): *Carta arqueológica de Paredes de Coura*. Paredes de Coura: Câmara Municipal.
- SOARES, J.; SILVA, C. T.; DUARTE, S.; PEREIRA, T. R. and SORIA, V. (2019): “Aspectos da presença militar romano-republicana no Castro de Chibanês (Palmeira)”, *Revista Portuguesa de Arqueologia*, 22, pp. 79-93.
- TEIXEIRA, C. and PERDIGÃO, J. C. (1962): *Carta Geológica de Portugal na escala 1/50000-1c (Caminha)*. Lisbon: Serviços Geológicos de Portugal.
- TOVAR, A. (1966-1967): “L’inscription du Cabeço das Fráguas et la langue des Lusitaniens”, *Études celtiques*, 11 (2), pp. 237-268.
- TWOHIG, E. S. (1981): “A pedra decorada de Ardegães de Águas Santas”, *Arqueologia*, 3, pp. 49-55.
- VILLA, Á. (2009a): “Puñal de antenas. Chao Samartín”. In VILLA, Á.: *Museo Castro de Chao Samartín. Catálogo*. Oviedo: Gob. Principado de Asturias, pp. 174-175.
- VILLA, Á. (2009b): “Puñal de antenas con fragmento de vaina y conter. Os Castros”. In VILLA, Á.: *Museo Castro de Chao Samartín. Catálogo*. Oviedo: Gob. Principado de Asturias, pp. 106-107.
- VILLAAMIL Y CASTRO, J. (1907): “Produtos de la metalurgia gallega em tempos remotos”, *Boletín Comisión Provincial de Monumentos Histórico Artísticos de Orense*, 3 (53), pp. 82-161.
- WHITLEY, D. (2011; 2<sup>nd</sup> edit.): *Introduction to Rock Art Research*. Abingdon: Routledge. DOI: <https://doi.org/10.4324/9781315426013>.

