



PUBLIC IMAGES, PRIVATE READINGS: MULTI-PERSPECTIVE APPROACHES TO THE POST-PALAEOLITHIC ROCK ART

PROCEEDINGS OF THE XVII UISPP WORLD CONGRESS
(1–7 SEPTEMBER 2014, BURGOS, SPAIN)

Volume 5 / Session A11e

Edited by
**Ramón Fábregas Valcarce and
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Archaeological field survey in the *Erqueyez* site (Western Sahara): new discoveries of rock art

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Abstract

Here we present preliminary results from an archaeological survey carried out in the Erqueyez Lemgasem archaeological site, massif located in the Western Sahara. During the field survey numerous taffonis with rock art were located in the area as well as described in previous studies. The study was supported by a cooperation project between Saharawi and Spanish researchers.

Key words: *Western Sahara, field survey, taffoni, rock art*

Résumé

Dans ce travail nous présentons les résultats préliminaires de la campagne de prospections archéologiques réalisée dans le site de Erqueyez Lemgasem, au Sahara Occidental. Cette dernière a permis d'augmenter le nombre de cavités ornées de peintures rupestres. Divulguées dans diverses publications jusqu'à nos jours. Le travail de recherche a été effectué dans le cadre d'un projet de coopération entre chercheurs espagnols et sahraouis.

Mots-clés: *Sahara Occidental, prospection, taffoni, peintures rupestres*

1. Introduction

We present the results of an archeological survey campaign that was implemented in the archeological site of Erqueyez (Western Sahara). This survey was developed in the framework of a research and cooperation project.

Apart from finding new *taffonis* with rock art, the experience carried out has made a breakthrough in the formation of a group of local archaeologists in order to achieve the objective of carrying out research projects in a position of equality with respect to the numerous researchers of international teams that work in the area of the Western Sahara.

As a result of previous exploration work carried out by different research teams it is possible to find published articles and monographs about numerous taffonis with rock art (Pastor y Carrión, 1996, p. 47-48; Soler *et al.* 1999; Muñiz, 2005, p. 6-11; Soler, 2007, p. 107-420). However, dimensions and geological features of this massif favor the existence of a large number of taffonis and small cavities that are likely to harbor paintings, conditioning in this way the existence of many areas still without prospect, especially in the western slope of the rocky massif.

In this way, the objective of the archaeological intervention carried out by Saharawi and Spanish archaeologists was to intensively explore areas that had not previously been prospected and to increase the knowledge about the graphic demonstrations of the massif of Erqueyez.

2. Geographical and geological synthesis

If we look at the previous works that have been developed within this study area (region of Zemmour) we observe that the names used to refer to the zone vary sometimes. The most recurrent terms are Rekeiz Lemgasem (Soler, 2007, p. 107) or Erqueyez (Muñiz, 2005, p. 1), both based on transcripts of the local language.

The limits of this region are not well defined. It is located in the north east of the Western Sahara, and it also occupies part of Mauritania. Its northern boundary is located in the region of the Saguia El Hamra and its southern limit would be located to the east of the city of Dakhla, formed by several topographic elevations such as the Um Dreiga, Kab Ennaga and Negyir along the plains and valleys of Bir Nazaran.

In general, the climatology of the area coincides with that of the Western Sahara, being characterized by the short duration of the wet season and the presence of torrential rains. If you look at the scenery that surrounds the Erqueyez massif, it is possible to recognize natural watercourses or “uadis” formed by episodes of heavy rainfall as well as the generation of deep canyons, as a product of the sporadic rains.

The area of the Zemmour is characterized by the presence of small elevations, such as the one that shapes the Erqueyez massif, which stands out among the vast plains that surround the place (Fig. 1). The massif describes an elongated shape from south west to north east, with a height that ranges from approximately 600 m and 400 m at its southwestern and northeastern extremities, respectively. Its



FIGURE 1. VIEW OF THE WEST SIDE OF THE MASSIF OF ERQUEYEZ LEMGASEM.

longitudinal axis is about 14 km, being much more narrow the transverse axis, with distances ranging between 0.5 and 1 km (Fig. 1).

The landscape that surrounds the massif of Erqueyez does not present the classic image of the sandy desert formed by dunes, but an extensive flatness, known as stony desert or hamada. The existence of underground water and low rainfall maintain the local vegetation composed of shrubs and grasses. Part of this vegetation is the Talha, a tree of the family of Acaciae that is characterized by its large spines.

The knowledge of the geology of the area is crucial, due to the existence of several geological formations which host panels with graphic demonstrations.

The Western Sahara territory is located in the west African platform. This platform is composed of rocks that were formed more than 2000 Million year ago. Those rocks were eroded long before the Precambrian period and represent pieces of a primitive continental crust.

This platform is covered by sedimentary deposits formed during intermittent events of accumulation and rising, being afterwards folded and eroded as a result of active tectonic processes (Guiraud *et al.* 2005, p. 92). At the end of the Precambrian period, the orogeny that causes the formation of the Mountain Chain of the AntiAtlas promoted an intense process of metamorphism and a series of tectonic movements resulting in the fracturing of the oldest basement and the appearance of rock cracks and the generation of magmatic processes (Hefferan *et al.* 2000, p. 91).

The stratigraphic sequence of the massif of Erqueyez is constituted by a lower unit composed of granite rocks and dated as Precambrian in age (>600 M.y.). Above this interval, a sedimentary interval is reported, mainly composed of quartzarenite being dated as Ordovician in age (440-590 M.y.). This upper stratum is thought to have been formed under relatively shallow marine conditions, affected by metamorphism processes after their emplacement.

During the Late Paleozoic, these materials were folded and exposed to processes of erosion and weathering as a result of climatic variations at that time. Such erosional processes promoted the generation of cavities, the increase of fissures as consequence of rock dissolutions, or the detachment of blocks, favouring the occurrence of protected areas where extensive repertoire of panels with graphic demonstrations are located, and that nowadays form the whole rock art of Erqueyez.

These cavities in the rock hosting the paintings are called taffonis. Their origin is due to processes of physical and/or chemical weathering of the rocks. In the massif of Erqueyez, the wind shock may constitute an important factor to take into account for the taffonis generation. This, the wind would contribute significantly, throughout the transport of numerous grains of quartz that may impact on the rocky surface eroding the substrate.

Simultaneously, the extreme thermal amplitude reported in the area may induce the fracturing of rocks, since during the day they support very high temperatures and expand themselves, while by night the temperature drops and the rock collapses, producing the onion skin weathering effect.

3. New discoveries of rock art in the West area

During the prospecting work there were located about thirty unpublished rock shelters with cave paintings. The majority of them were found in the west face of the massif, which is the least prospected area, as has been highlighted in the introduction to this document.

In our research we have selected eight rock shelters, because they have the best preserved paintings. The variables that caused a better conservation of these paintings are related to the fact that they are located in places more shielded from the erosive agents (Fig. 2).

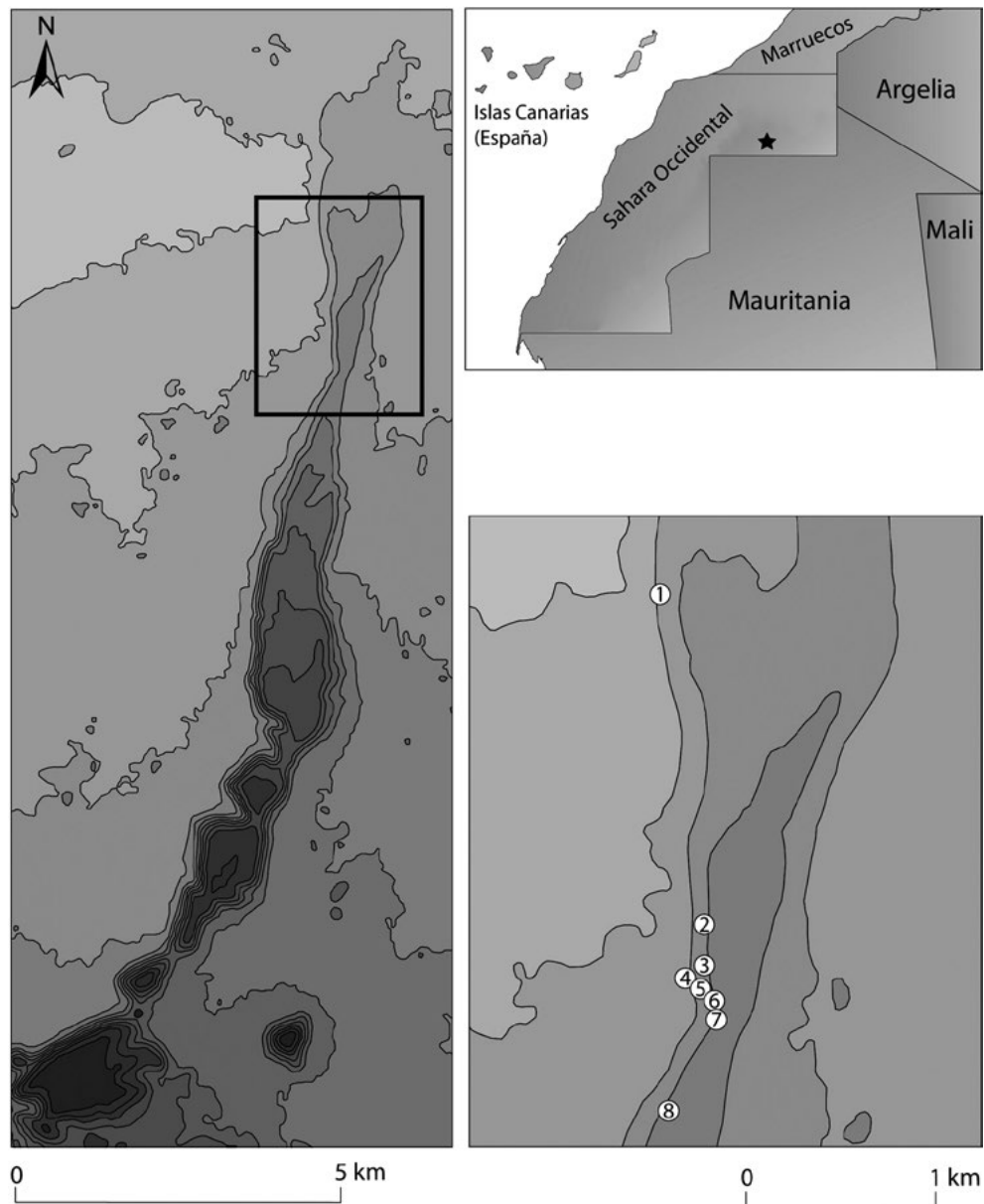


FIGURE 2. MAP SHOWING THE LOCATION OF THE SHELTERS DESCRIBED IN THIS PAPER.

3.1 Description of the rock art

The criteria that we used for the description of the paintings are aspects related to its location in the rock shelter, their morphology, color, and conservation status.

Shelter 1

This rock shelter is prominent because it has a large number of motives represented, having been able to count up to fourteen figures that stand out for their good state of conservation in comparison with the rest of the cavities chosen in this work. The paintings are located in the central area of the panel constituting a scene where there are some indefinite strokes, animals and human figures.

The human figures presents some specific features very little present in the whole graphic demonstrations in *Erqueyez*. Those are very stylized figures and even excessively elongated, comparable with the *tazina* style (Soler, 2007, p. 634; Fraguas, 2009, p. 98) (Fig. 3 and 4A) that appear in an attitude of running, by going to the right side of the panel. Along with these very well plotted figures where you can observe the garnet stroke and the fill, there is another painting conducted in a very schematic manner and lighter in color.

With regard to the animal figures they vary in their size and composition, but they are still figures of large dimensions (20 x 10 cm approx.), and possibly gazelles, arranged in row. They are blurring as they move toward the right of the panel (Fig. 4 C and D). The first of these animal figures is located next to the human figures, and it is a silhouette that only preserves part of the body, hind legs and neck. Isolated from this group of gazelles there is a garnet painting of an animal that could be identified as a bird (Fig. 4 B).



FIGURE 3. DETAIL OF GRAPHIC MANIFESTATIONS OF HUMAN FIGURES IN SHELTER 1.

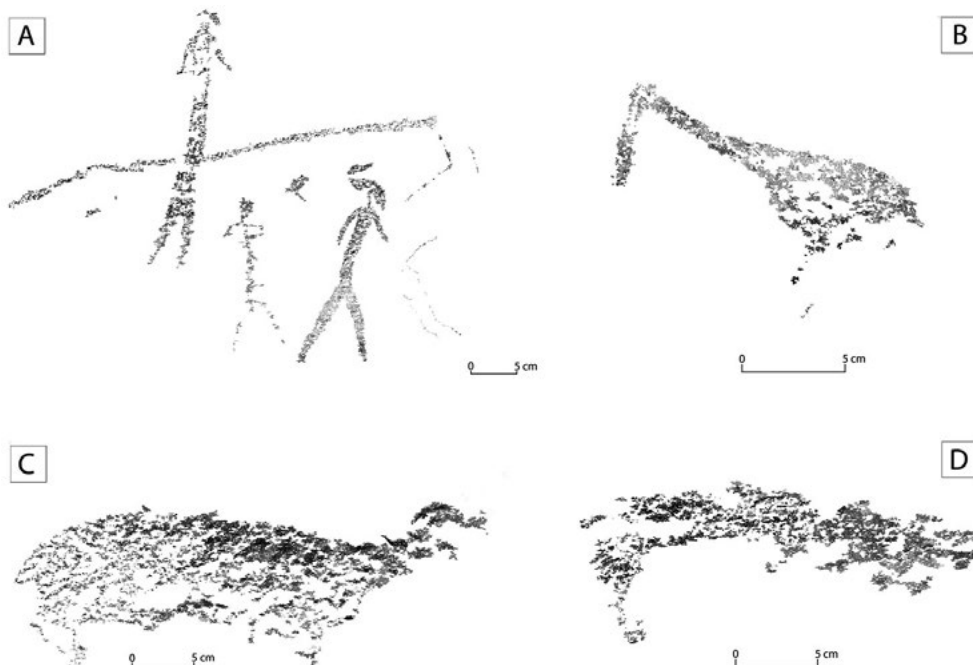


FIGURE 4. CALQUE OF THE REPRESENTATIONS THAT ARE DOCUMENTED IN SHELTER 1.

The rest of the paintings of this small cave are indeterminate lines in a poor state of conservation. It stands out a long line that presents a stroke slightly arched, of approximately one centimetre thick and lighter in color to the rest of the figures. This line overlaps one of the human figures described above (Fig. 4 A).

In summary, in addition to exceptional paintings in *Erqueyez*, this complex panel offers different forms of representation and colors, which might indicate that we are faced with graphical demonstrations carried out in different historical moments.

Shelter 2

Despite its surface (5 x 3 m approximately), we only found the representation of two human figures, one as opposed to the other and in an attitude of movement, without being able to specify the action that is taking place. Both are located in the middle area of the shelter and are made in dark red color using a fine contour and filled of the same tone in a uniform manner (Figs. 5 and 6).

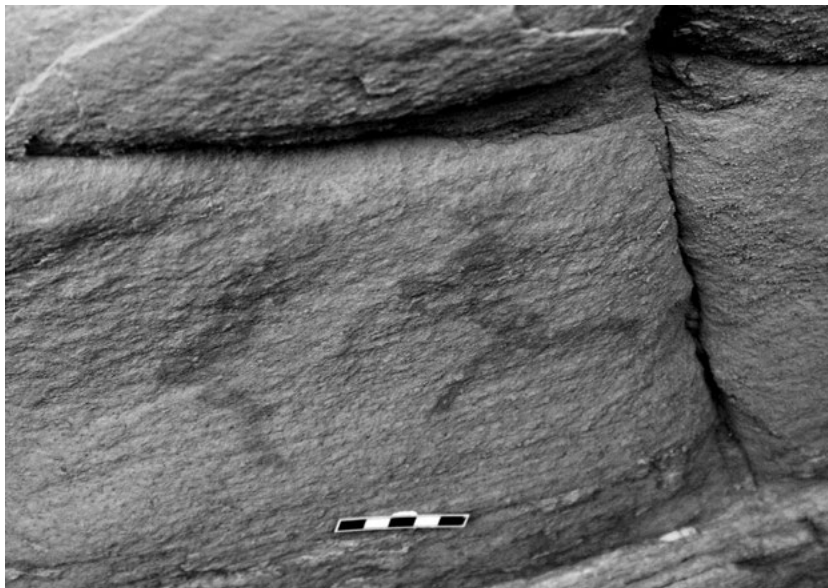


FIGURE 5. DETAIL OF GRAPHIC MANIFESTATIONS OF HUMAN FIGURES IN SHELTER 2.

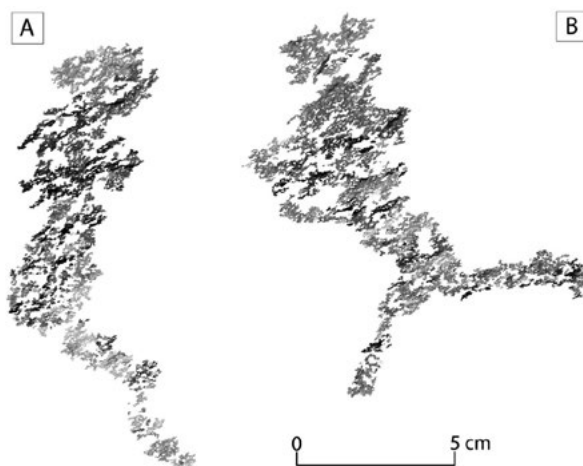


FIGURE 6. CALQUE OF THE REPRESENTATIONS THAT ARE DOCUMENTED IN THE SHELTER 2.

Shelter 3

Looking at the location of this shelter, it is located in the upper platform that forms the Erqueyez massif and it is oriented to the south, while the rest of previously described cavities in this work are in the west and in the rocky outcrop. The two figures in red represented in this *taffoni* have a very poor conservation status, as it is not currently possible to determine the reason and if they are animal or human figures (Fig. 7).

Shelter 4

All the motives are located in an area of difficult access and the paintings are in a shelter with a very small space between the floor and ceiling (approximately 0.5 m). There are two representations of ostriches very well plotted, one above the other, in dark maroon color.

In spite of the fact that the paintings are sheltered from erosive agents, they present simultaneously blurred areas and other areas in very good condition. Morphologically they are much similar to the figures of ostrich documented in other shelters that are described later, presenting in this case a better state of preservation (Figs. 8 and 9).

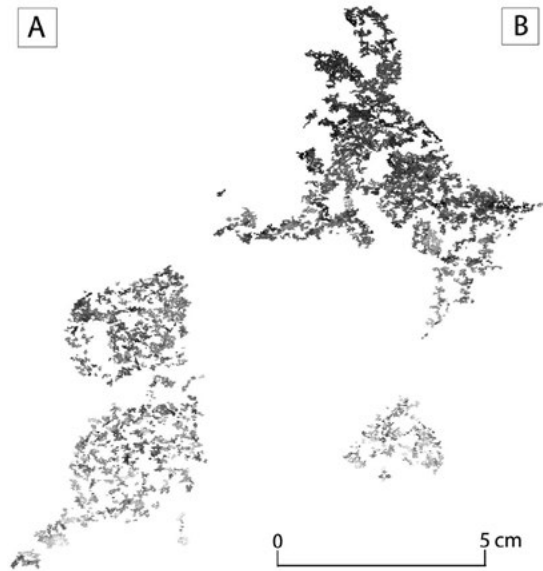


FIGURE 7. CALQUE OF THE REPRESENTATIONS THAT ARE DOCUMENTED IN THE SHELTER 3.

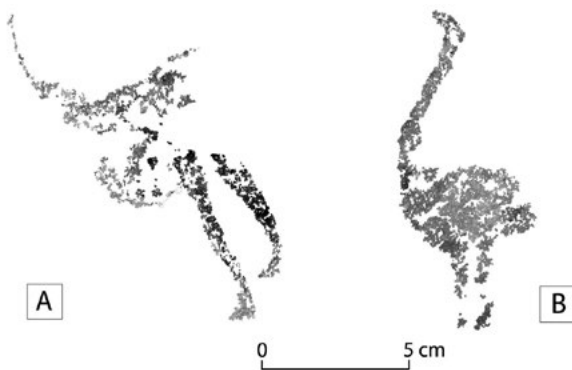


FIGURE 9. CALQUE OF THE REPRESENTATIONS THAT ARE DOCUMENTED IN THE SHELTER 4.



FIGURE 8. DETAILS OF GRAPHIC MANIFESTATIONS OF ANIMALS FIGURES IN SHELTER 4.

Shelter 5

In this cave it highlights the peculiar morphology of its *taffoni*, formed by the action of wind erosion on a large block detached from the ledge and transported by gravity to its location. We found five

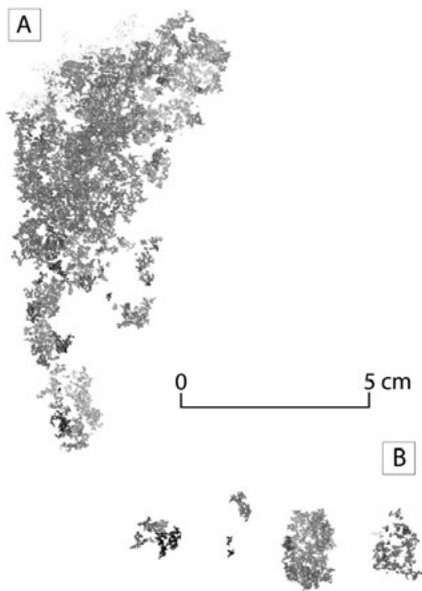


FIGURE 10. CALQUE OF THE REPRESENTATIONS THAT ARE DOCUMENTED IN THE SHELTER 5.

maroon motives, one of greater size (approximately 10 cm) and the other four in fingering form. The paintings are affected by erosive agents as flaking of the panel, solar radiation or wind action, which makes identification of the figures depicted (Fig. 10).

Shelter 6

The *taffoni* presents a number of motives that show different degrees of conservation, while some so corrupted that it has not been able to make the digital tracing or establish the motive represented. With regard to the motives that were analyzed in more detail, there are several animal figures, five in total, identified as ostriches. All of them are incomplete preserved, and only the lower extremities are still visible in three of them (Fig. 11 C, D and E) and neck and head in the remaining (Fig. 11 A and B).

Shelter 7

The morphology of the shelter determines that some of their motives are located in an area of difficult access. To collect information about them we had to lie down on the floor of the *taffoni*, as the paintings were located on the roof in a space delimited by a height less than a meter. Those paintings were protected of erosive agents, such as solar radiation and wind action providing its good conservation status.

The representation group is formed by two animal figures (Fig. 13 B and C) and a human in a departure attitude (Fig. 13 A). It is remarkable that this human figure is carrying an object behind his back. The animal figures have very stylish extremities and a great level of detail in the representation of elements such as the tail (Fig. 12 and 13).

Superimposed on one of these animal figures there is the silhouette of an animal figure painted in black with a very fine line and higher dimensions than the rest of the motives (Fig. 13 D). Both the overlay as the technique for preparing this figure reveals a more recent chronology. By now we cannot determine the time elapsed between the developments of the two figures.

The characteristics of this figure seem to lead to the conclusion that it is a representation

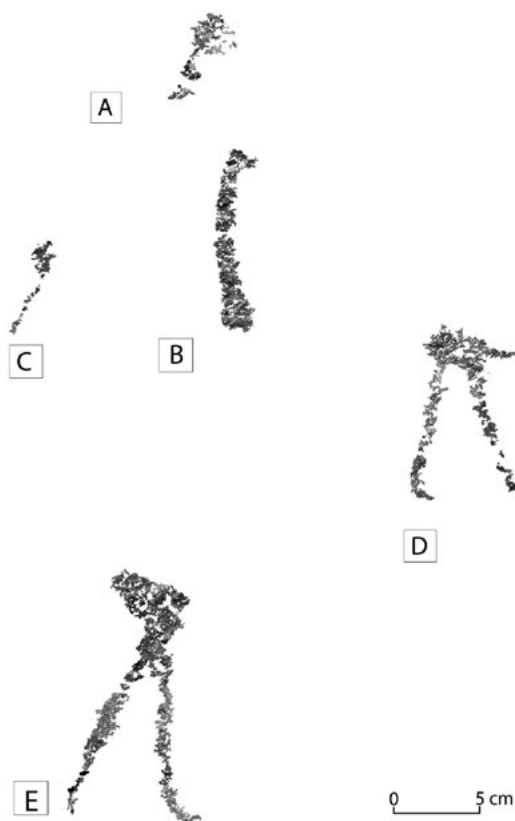


FIGURE 11. CALQUE OF THE REPRESENTATIONS THAT ARE DOCUMENTED IN THE SHELTER 6.

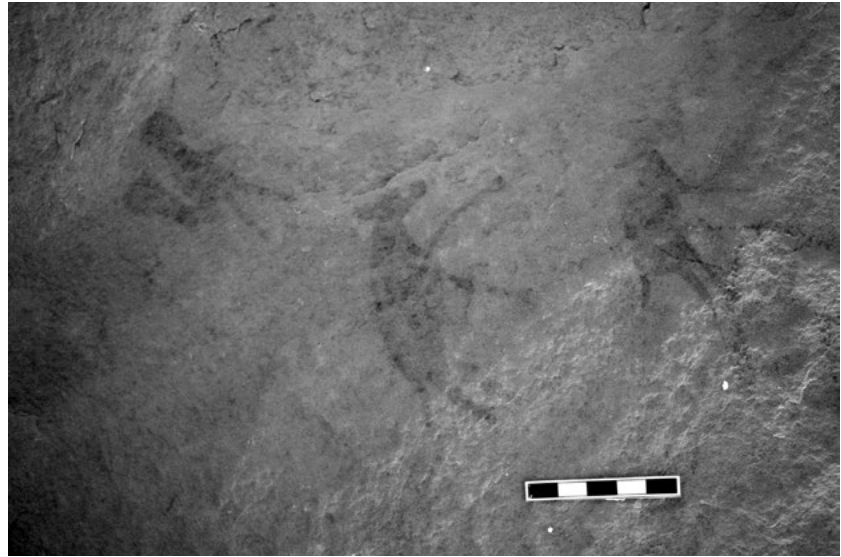


FIGURE 12. DETAIL OF GRAPHIC DEMONSTRATIONS IN THE SHELTER 7.

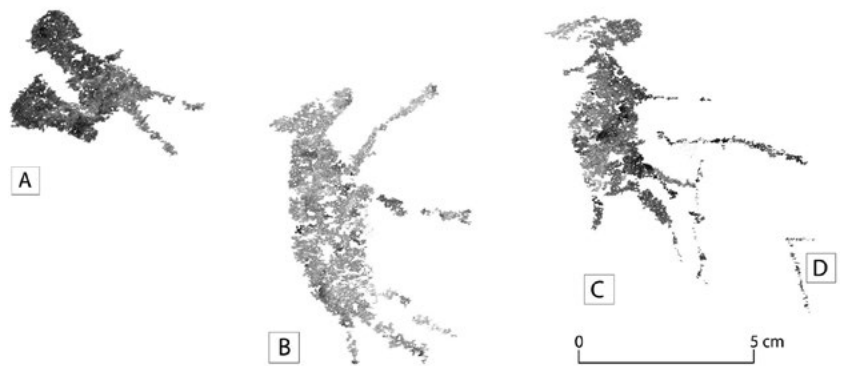


FIGURE 13. CALQUE OF THE REPRESENTATIONS THAT ARE DOCUMENTED IN THE SHELTER 7.

of a gazelle. The head, neck and the top of the spine have been drawn with a thin line, obviating the extremities and the lower part of the body. Next to this figure and below of the described above we document a representation in red, whose shape and state of conservation does not allow us to identify the motive represented. Due to the small space between the ground and the panel, located on the roof, we have not been able to obtain a suitable photographic documentation of these last two motives described nor the panel in its entirety.

Finally, in a more external *taffoni* area, we found a series of fine lines, similar to those documented in the first shelter described in this document, and a fingering figure in dark maroon color.

Shelter 8

This is a shelter of small dimensions, approximately two meters of panel, where we have documented two typologies of manifestations; one consisting of fine linear strokes and the other with two motives whose conservation status does not allow us to infer the represented figure (Fig. 14). It should be noted that being on the inside of the shelter, we have an ideal point of observation of the flatland that surrounds the *Erqueyez* massif, which is framed by the morphology of this *taffoni* (Fig. 15).

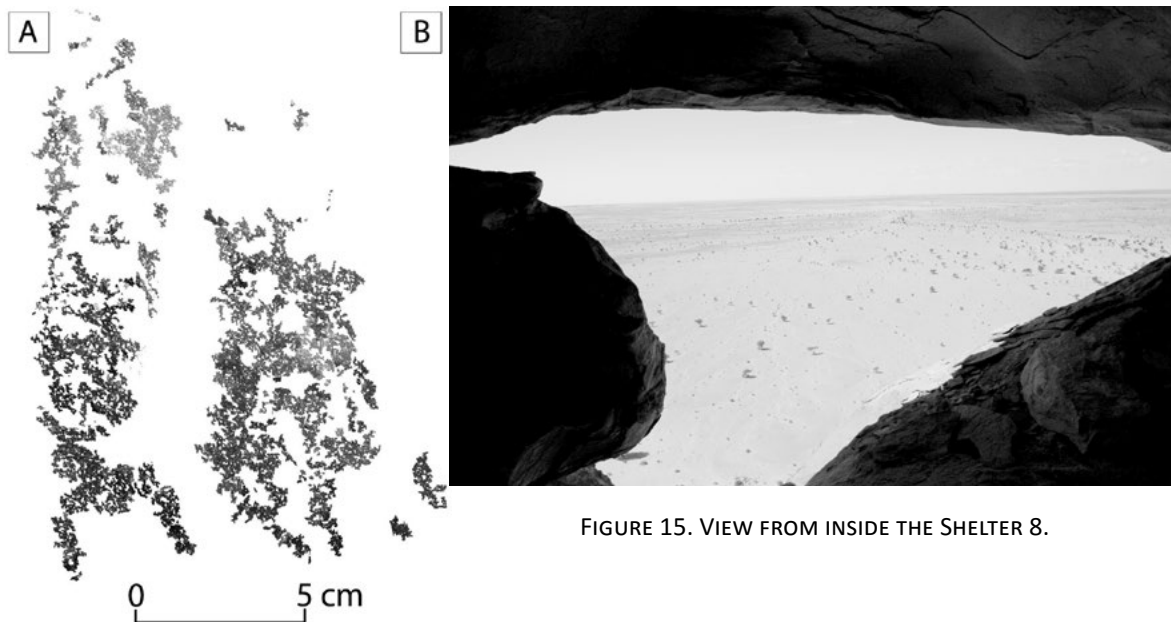


FIGURE 14. CALQUE OF THE REPRESENTATIONS THAT ARE DOCUMENTED IN THE SHELTER 8.

FIGURE 15. VIEW FROM INSIDE THE SHELTER 8.

4. Conclusions and prospects

Prospecting in the framework of the *Cooperation Project for Local Staff Training to offer Guide Services and Interpretation of the Archaeological Site of Erqueyez (Western Sahara)*, have made possible to us to document new rock shelters, within the limits of this archeological complex, and connecting to those who had already been released in previous publications.

In the motives described in this work, we can find human figures, animals, delicate strokes and representations unable to identify by now. Another typology present in the manifestations of the *Erqueyez* graphic that has not been documented on this occasion in any panel, is the impression of hands in positive (Muñiz, 2005, p. 9).

In relation to the colors that were used the predominant is the red color, except for the animal figure made with a fine black line described in the shelter 7. If we look at the set of graphic demonstrations of *Erqueyez*, we can observe that the red color is the one that presents the highest proportion, even so we also find motives that combine this with white color and to a lesser extent in black colour.

In connection with the graphical demonstrations identified as human figures, there are attitude of movement for various actions, in some of them complemented with hauling of some objects, such as is the case of the shelter 7, and the carrying of headdress, as in the shelter 1.

The human figures accompanied by an object are frequently found not only in the set of graphic demonstrations documented throughout the massif of *Erqueyez*, but in many stations of rock art. In their research works in the Levantine Iberian Peninsula various researchers have been interpreted elements with similar characteristics as an archer quiver for the transport of arrows (Blasco, 1974, p. 50; Domingo, 2005, p. 168). Even so, we cannot rule out the possibility that it could be another type of objects, such as baskets for the transport, agricultural work and harvest or something to carry child.

In regard to headdress, it seems to be related to the representation of symbolic actions such as dances or elements of personal adornment, and whose ethnographic parallels in the two cases are very numerous, as is the case of the Karo of Ethiopia or the Surma and Mursi that inhabit in the Omo Valley, on the border of Ethiopia and Sudan.

Linked to the motives of animal figures, the identification of the represented taxa constitutes a tool of great interest in paleoenvironmental reconstruction of the territory at the time of production of the graphics demonstrations. Studies carried out in the past on a broader sample of motives in the massif of *Erqueyez*, have revealed that a big number of the animals represented are giraffes (*Giraffa camelopardalis*) and gazelles (*Gazella spp.*). Other animals that appear in the shelters are cattle (*Bos taurus*), ostriches (*Struthio camelus*), elephants (*Loxodonta africana*), rhinoceros and some taxa identified as belonging to the group of antelopes (*Tragelaphus strepsiceros*, among others) and carnivores (*Canidae* and *Felidae*, *Hyenidae*) (Pleguezuelos and Sanchez, 2003, p. 164-165). In the case of the small caves described in this work, the animals were composed mainly by caprinae, gazelles or ostriches.

One variable that have been demonstrated to be on a recurring basis throughout this work- and also expressed in various summaries made by other researchers in the area- is the problem of a chronological allocation of the graphics documented in the area of study. Up to now we do not have an absolute dating of the paintings. Proposals for a chronological order have been carried out based on the study of the fauna represented or comparing styles and shapes with other figures of North Africa (Soler, 2006, p. 21; Soler *et al.* 2006, p. 137). In this way it has been determined that the pictorial activity have had its start about 3800 BP and persisting until a change of era. Most of the representations of the area would belong to the Zemmur prehistoric period (Soler, 2007, p. 648-650).

In addition, up to date there have been no documented in an accurate way any places of habitat of susceptible populations that could make the graphical demonstrations. We have only identified some areas related to the manufacture of utensils or lithic objects of adornment. In our survey we document and describe graphical symbols and we were able to observe remnants of lithic industry on the floor of some of the *taffonis*, that means a carving activity. We documented laminar nuclei, as well as some sheets along the remains of carving and technological process as strikers. Associated with these materials we also observed the presence of ceramic fragments and remnants of ostrich egg shell. These egg shells are related to beads made in this material and we found finished products and elements in manufacturing stage.

As a whole and in response to the characteristics of the materials documented, they would be associated with epipaleolithics and neolithic contexts.

However, in the case of observations on surface material and taking into account the fact that the territory has a series of exceptional qualities that motivated a long occupation of this space by various populations over time, we have to take into account several premises when we want to associate these industries to the graphical demonstrations.

For that reason it is necessary to emphasize on the study of the areas of lithic production or adornment objects through the realization of archaeological explorations. This is to determine the possible chrono-cultural relationship of these shelters with graphic demonstrations and move forward in the knowledge of the societies that lived there.

The prospecting activity described in this work highlights the need to continue in the line of recognition of the terrain, since new graphic demonstrations have been documented in areas that had been previously prospected. This is related to the complex orography that presents the massif of *Erqueyez* but also with other factors which must be taken into account, such as the incidence of light on the small caves at different hours of the day that could cause good or bad visibility conditions for

paintings. At the same time, although we focused our research in remote areas, the extension of the massif causes that there are still areas that have not been prospected with intensity.

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