

Contribution of rock art petroglyphs to the classification of the Lopé National Park as a mixed World Heritage site (Gabon - West central Africa):

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Introduction

Rock engravings represent a particularly rich and moving dimension of prehistory. They seem to constitute one of the first, frustrated and clumsy scriptures that man in his desire to express himself, has entrusted to the rock in an eternal message. These petroglyphs thus represent a kind of documentary film on the spiritual aspirations of prehistoric peoples.

We will present the rock art within the regional framework peculiar to West Central Africa and then discuss the rock engravings of the valley of Ogooué.

We will explain how the rock engravings contributed to the classification of the Lopé National Park as a World Heritage Site.

1. Rock Art petroglyphs in West Central Africa

In Central Africa, in contrast to the large Saharan, Sahelian or South African rock areas, rock art petroglyphs is rather rare, confining itself to the current research on the edges of the great forest on the Congo basin, contact zone between the large equatorial forest and the savannahs.

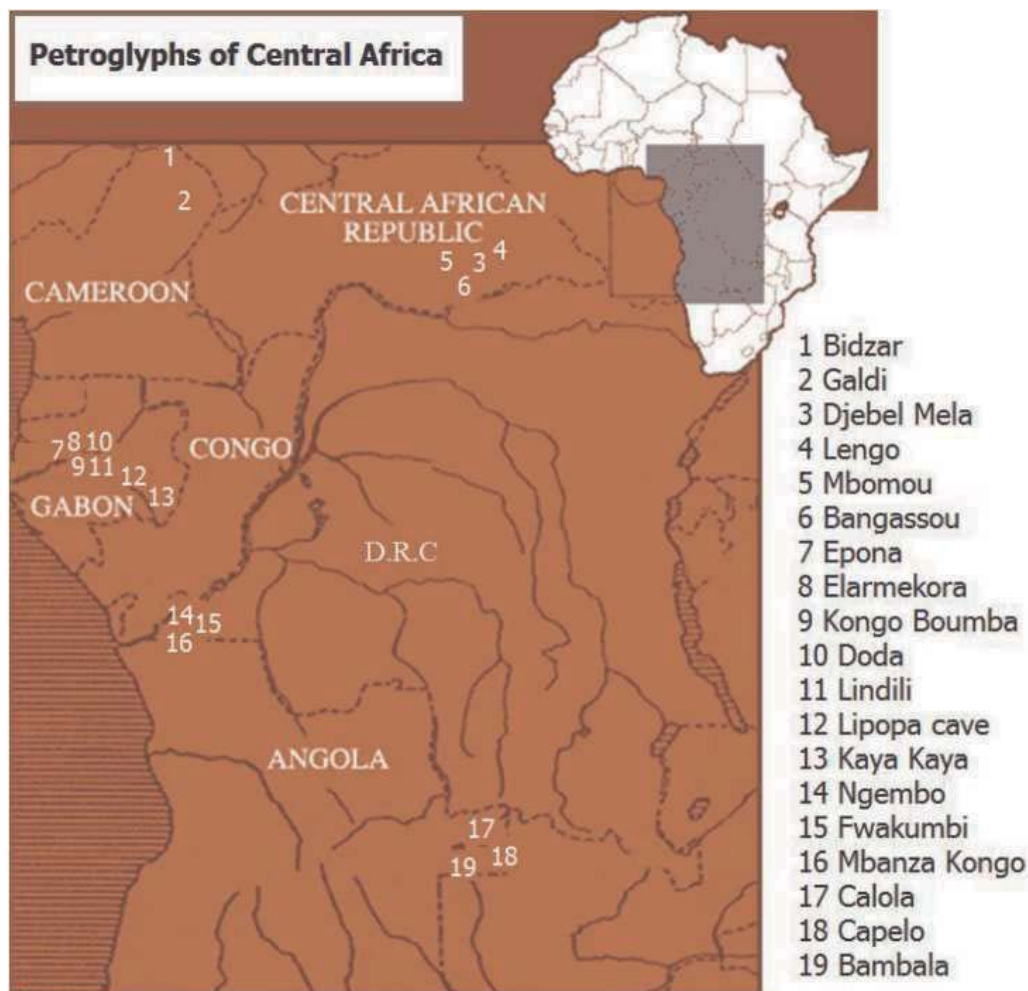


Figure 1. Localization of rock art petroglyphs in west central Africa

In Cameroon we have the site of Bidzar (Marliac 1981) and the engraved slabs of Galdi in Adamaoua (Tchandeu 2016), in RCA the sites of Djebel Méla in the valley of upper Kotto and those of Lengo, Mbomou, Bangassou in the region of Bakouma (Bayle des Hermans 1975) but also in the DRC, the engraved rocks of the Bas-Congo region (Nenquin 1959), the engraving sites of Ngembo and Fwakumbi in the Lovo massif (Van Moorsel 1964; Heimlich 2017), and in Angola, the region of Mbanza Kongo, The Calola, Capelo and Bambala Rock Formations in the Upper Zambezi Valley (Ervedosa 1980).

2. Rock art petroglyphs in Gabon

The discovery of the first rock engravings in 1987, witnesses of millennial cultures, allowed



Figure 2. Location of petroglyphs sites on the Ogooué valley in Gabon

a new look to the history of the country (Oslisly 1988). These discoveries were confined respectively to the middle valley of the Ogooué precisely in the area of Otoumbi, the Lopé National Park and in the high valley of the Ogooué on the site of Kaya Kaya (Oslisly 1993, 1997). In 2015, during a multidisciplinary expedition conducted on the caves of Lastoursville, small engravings are reported in the cave of Lipopa (Oslisly 2015).

Since 1995, archaeological exploration in the Lopé National park has made it possible to recognize new engraved rocks, some of which constitute the archeological trail of Doda.

In 2007, rock carvings from the middle valley contributed significantly to the Lopé National Park World Heritage List as a mixed site nature/culture of Unesco.

2.1. The rock engravings of World Heritage Lopé- Okanda

It is in the heart of Gabon, on rocky mounds dominating the river of the Ogooué middle valley that, since 1987, nearly 1680 engraved representations have been recognized (Oslisly 1988; 1992; 1993; 1996; 1997 Oslisly & Peyrot 1993). The study of the traces seems to indicate that they were carried out using iron tools, which are about 2000 years old.

The geological setting chosen for these engravings is very particular. With regard to current research, engravers have only favoured the formation of quartzite sandstones; thus knowledge of the spatial development of this geological formation is essential for the pursuit of new prospections. It is in this precise geological unit, on the middle course of the Ogooué river, that more than 1680 engravings are distributed, in two zones some forty kilometers distant.

The western zone of Otoumbi includes about 670 engraved representations, spread over the sites of Elarmékora and Epona.

2.1.1. The Elarmekora area

The site is located on the pavements of outcrops of paragneiss above the river and consists of about 240 petroglyphs. Each figure has been first roughed out with barely visible, fine rectangular lines, followed by the probable use of metal chisels. This was subsequently pecked to produce thousands of small, homogeneous, cup-shaped depressions of great sharpness which exclude the use of stone tools.

The apparent animal motifs convey an impression of an art of hunting symbolism. Most of them are associated with triangular motifs resembling projectile heads of assegai. Although no intentional layout is apparent in the location of the figures, they are grouped into five topographic zones (Oslisly 1988).

Zone A. This is the main concentration, in which more than 120 motifs have been found. Some of them occur in isolation but most belong to one of eight distinctive groups. The triangular form is the most frequent (60%), both with and without shaft. Animal motifs (21%) depict small quadruped animals and probably lizards. They are sometimes closely associated with triangular motifs which is suggestive of a hunting symbolism.

Zone B. This group is about 15m to the west of zone A. It consists of about 30 figures of which 53% are triangles. A dozen small lines, probably sharpening grooves, seem to support the hypothesis of the use of iron chisels. About 6 m lower, five triangular forms are arranged



Figure 3. Association of triangular motif and animal forms from the Elarmékora site



Figure 4. Lizard form from Elarmékora

around a small motif we interpret as a hoe, which would make it the only known depiction of a non-hunting implement at this site.

Zone C. On a 250 m-high summit, there are 23 well-made concentric circles (85%) and a unique seven-petal rose motif, together with a figure evoking interpretation as an insect with a giant head. About 10m to the east, three figures stand out among others of a group. Two are of lizard

form, the third is reminiscent of a tortoise carapace.

Zone D. Located on a large pavement on the north-east slope of the spur occur 42 pecked motifs, almost all of which are circles.

Zone E. A group of seven figures, including two animal motifs.

2.1.2. The Epona area

Adjacent to a gallery forest, 3 km south of Elarmékora, are ovoid rocks bearing more than 410 rock art petroglyphs on their surfaces. These blocks of paragneiss occur in three groups on the gentle slopes of a savannah hill. Once again, single or concentric circles are the most abundant motifs (98%). Small circles appear arranged around a large circle, and sometimes concentric circles are arranged in the fashion of flower petals. Five lizard-like forms contrast with the predominant circle motifs and there is a figure resembling a throwing knife. In central Africa, the throwing knife (single or double bladed) is the specific weapon of the Bantu populations (Fig.5).



Figure 5. Throwing knives with a concentric circle

2.1.3. The Kongo Boumba area

At 40 km to the east of Elarmékora, a total of more than 1010 petroglyphs were discovered in the Lopé national park. The Kongo Boumba art occurs on numerous piled blocks of rock along the banks of the Ogooué river with Kongo Boumba sites 1 to 7, Ibombi 1 and 2, Doda rock circuit and Lindili 1.

Subspherical boulders of paragneiss very likely eroded by the combined processes of weathering and fluvial action of the river in the distant past. Groups of geometric figures are found on many of them. Nearly all motifs are circles, spirals, concentric circles, lines of circles arranged chain-like, and dissected circles. Chain arrangements predominate (35%), and they range in length from about 2 m to 5 m when diverging like the branches of a candelabrum. We also noted the presence of various meandering lines similar to snakes near the chains of small circles.

As in Elarmékora, the rock art petroglyphs were made with iron tools, as demonstrated by the homogeneity and sharpness of individual peck marks on this very tough rock. Traces of surface flaking are evident, and exfoliation may lead to the loss of these petroglyphs which are an important testimony of the cultural past of the Ogooué valley.

Kongo Boumba 1 site. On a savannah hill slope, three piles of ovoid boulders overlook a gallery

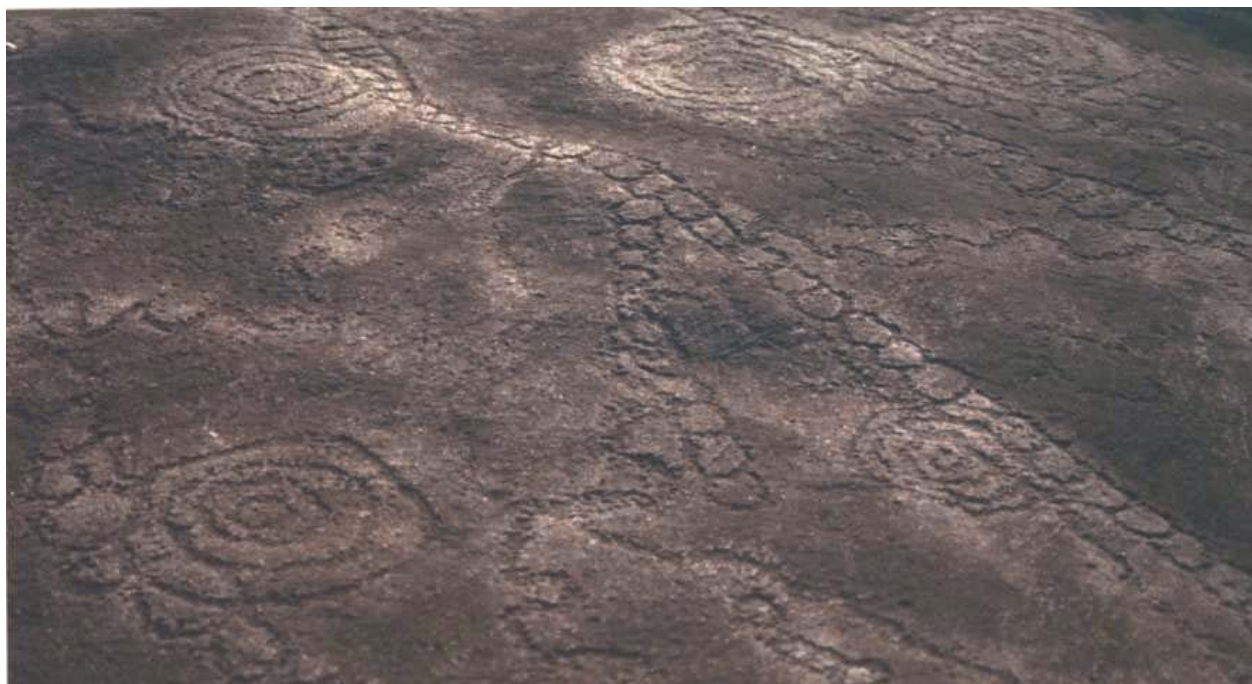


Figure 6. Concentric circles and chains of circles from Kongo Boumba1



Figure 7. Composition of circles and concentric circles

forest, as in Epona. Sixteen of the blocks bear a total of about 130 petroglyphs. On one of them, an area of nearly 9 square meters presents a large composition made of circles and serpentine lines, combined with spirals and concentric circles(Fig.6).

Kongo Boumba 2 site. On a flat paragneiss dome, this newly-found group of rock art petroglyphs comprising about 30 figures among which concentric circles predominate. We also discovered the first cruciform representation here, next to two lizard forms.

Kongo Boumba 3 site. Three small rocks reveal some petroglyphs: roughly pecked circles, concentric circles, a lizard-like shape and probably a double-bladed throwing knife.

Kongo Boumba 4 site. Overlooking a forest is a group of boulders bearing more than 30 pecked circle rock art petroglyphs, together with seven lizard-like figures.

Kongo Boumba 5 site. Looking down upon a path, two enormous rocks present flat surfaces with

rock art petroglyphs. On rock A, two zoomorphs are found, one above a net-like maze, while Rock B bears two lizard-like figures and round pecked areas.

Kongo Boumba 6 site. corresponds to a single rock block with about fifteen figures recorded. The very altered engraved representations are predominantly circular

Kongo Boumba 7 site. Two huge pyramid-shaped boulders rise above the savannah. There are 164 figures on rock A and 52 on rock B.

On rock A, one of the most beautiful engraved compositions can be seen on the western part, with 5 concentric circle arches, rambling lines, chains of circles, simple circles and sketches of stitched shapes. The north face contains engraved figures, most of them made by cupular picketing, grouped into three concentrations consisting of simple circular representations, sometimes assembled.

Rock B, more imposing by its size, offers on its southern face a large composition of circles and concentric circles. In the southern part of the western face, there are 28 simple circles and 3 concentric circles. (Fig.7)

Ibombi 1 site

It is a set of large rocks scattered on a flat surface overlooking the river of ten meters, five rocks have 25 engravings.

Rock A reveals two concentric circles, one with an appendix, a curved line, a concentric half-circle, and circular shapes spikes.

Rock B is a large tabular rock on which we discover a few scattered engraved representations of which unformed pickings, three simple circles adjoining four engraved lines and a concentric circle on which other circular shapes are grafted. There are also many fine lines of grooving or sharpening that intersect perpendicularly natural furrows of the rock.

Rock C is a rocky dome that offers some circular stakes and others more difficult to classify.

The **rock D**, proposes three complex engraved representations with digitations, constructed essentially from stakes.

Rock E is located a little away from other engraved rocks; it shows three piquet figures, a small concentric circle and a superb cruciform representation built from a circle.

Ibombi 2 site

This tabular rock has an exceptional number and variety of engravings (65). Note the fresco of lizard-like figures along the edges of this important rock, whilst on the upper surface there is a series of throwing knives and small axes as well as single and concentric circles.

The rock engravings from the Doda circuit

Since December 1994, the hiking trail to discover the engraved rocks has been accessible to tourists. It corresponds to a series of engraved rocks on which we discover more than 182 rock engravings spread over 1800 m (Oslisly 2011).

Rock 1. The rock of throwing knives. This collection of engravings has a specific theme: throwing knives with oval blades, handles and spurs. The pecking is deep round the outlines of the engravings while inside many cup-like depressions appear. The large figure that dominates the knives resembles figures from the celebrated Kota and Mahongwe relicts.

Rock 2. The Civet rock. This large slab of rock shows animal figures, engraved on the rock



Figure 8. Lizard-like representation

face with thousands of small pits representing the animals as tanned skins. These zoomorphic figures are remarkably realistic.

Rock 3. The Mysterious rock. This large group consists of a strange mixture with geometric figures beside oval forms with many cup marks inside, concentric circles and two zoomorphic figures. Belonging to a universal theme, concentric circles are usually interpreted to represent celestial cycles where they symbolize the passage of time.

Rock 4. The six legged lizard. This type of figure which can be either zoomorphic or anthropomorphic appears quite frequently in African iconography. This engraving develops in harmony with the rock and its position suggests a special significance.

Rock 5. The rock of bees. This small collection of engravings shows once again throwing knives with particularly prominent spurs. Throwing knives are the commonest weapons shown in central African rock art. Notice the overlay of two figures: a dotted hoe on a throwing knife which suggests two periods of engraving.

Rock 6. The rock of lizards. This rock shows the best collection of engravings of the Doda site. This magnificent collection of engravings show pecked animal figures with, at the centre, a superb lizard-like representation. (Fig.8)

Rock 7. The sun rock. Among the scattered of engravings on the first rock, a circular figure with sun-like rays in its interior. On the other rock, throwing knives, linked concentric circles and animal-like figures display one of the richest and complex compositions of engravings.

The Lindili Site

Located 8 km south of the cultural area of Kongo Boumba, a rocky hillock rises above a marsh. More than 20 figures are engraved on its rock surfaces. They comprise, on the one hand, circles including a chain of 11 concentric circles, and on the other hand, pecked zones and meandering lines.

At the present time, the Ogooué valley contains the major part of the sites, with the discovery of more than 1680 recorded petroglyphs, essentially on paragneiss rocks. This open air rock art seems closely related to its geological environment, being distributed in savannah enclave landscapes which occasionally abound with rock outcrops.

As is the case for the majority of open air rock art sites, the age of the art is not obvious. Various

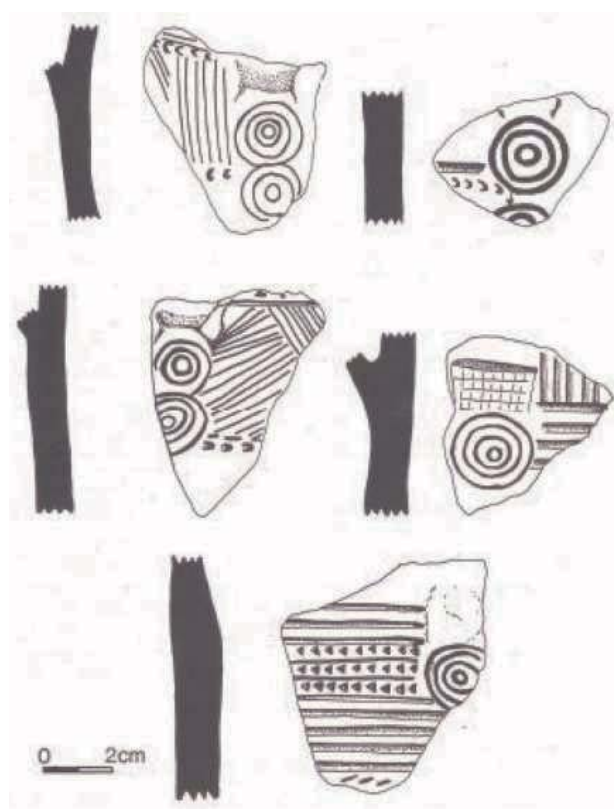


Figure 9. Rim shards with concentric circles decoration

factors are relevant in considering the age of the petroglyphs: the condition of the rock surface and the natural weathering of the figures; the techniques used by the engravers; and the archaeological environment.

These approaches are limited, however, since oral tradition as well as history are silent about the petroglyphs, which are ignored by the contemporary local population. Thus it is difficult to determine the antiquity of the art. By considering the patina on the figures and the fact that they were certainly made with iron chisels (Oslisly 1993), and according to the chronology of the Iron Age which is well known in the middle Ogooué valley, we would expect the age of the petroglyphs to lie somewhere between 2500 and 1800 years BP (Oslisly & Peyrot 1992).

The archaeological site closest to the Elarmékora hill rock art petroglyphs is about 200 m from them. It consists of an occupation deposit of the Iron Age (1850 BP), with slags and ceramic fragments bearing decorations made of concentric circles like those found on the nearby rock outcrop. In addition, an accumulating body of radiocarbon dates (2300 - 1800 BP) around the beginning of the Christian Era indicates a flourishing Iron Age occupation of this region (Oslisly and Peyrot, 1992).

The same can be said of the Kongo Boumba sites with their numerous concentric circles, motifs that can also be found in the decorations of the ceramics (Fig.9) of the Okanda tradition (Oslisly 1993, 2001) in the same area, from the second century B.C. (2110 BP) to the second century C.E. (1840 BP) on the sites Okanda 2 and 5, and Lindili 1.

Rock art is intimately linked to the geological environment as engravings were made only on quartzite sandstone. The predominance of symbolic and abstract motifs in Gabonese rock art leads to the belief that they were related to expression of magical or mystical preoccupations, although for a minority of the figures, the more prosaic interpretation is that they were solely figurative or narrative art related to weapons and hunting.

These rock engravings appear as one of the most interesting dimensions of the Iron Age of the middle valley of the Ogooué and take on an inestimable value because they are the only transcribed iconographic manifestation.

The engraved art represents a vast outdoor museum and an exceptional legacy that provides insights into the myths, beliefs and preoccupations of the inhabitants of the Ogooué valley. This rich cultural heritage seems to have been left by the iron-working populations which originated with the migrations of Bantu peoples about 2000 years ago.

2.2. The Lopé national park, a Case Study

Archaeological research in the Lopé area really began in 1982. Very soon the researchers realized that this region contained an exceptional cultural heritage with a long chronological sequence since the early Stone Age. All the stadiums are represented, the early, middle and late stone ages, the Neolithic stage, the early and late iron ages. The first rock engravings were discovered in 1987, which will further enrich the cultural heritage of the Lopé.

In 1992 an European Union program called ECOFAC (ECOSystème Forestier d'Afrique Centrale) was set up in the Lopé reserve. Its aim was to develop the reserve's infrastructures, start a vegetation study program and also contribute to a better knowledge of the prehistory of the Ogooué Middle Valley for ecotourism purposes. It was in 1994 that we created a path of discovery of the rock engravings, in this case the circuit of Doda. The tour is framed by eco-guides to protect the engravings while enhancing them.

The research carried out on the vegetation and the fauna have found that the reserve of the Lopé has an exceptional natural potential with a very rich biodiversity, many large emblematic animals (elephants, buffaloes, gorillas, chimpanzees, mandrills, panthers...), a high rate of endemism, a natural succession of ecosystems from the mature forest to the secondary forest and then the unexpected presence of a forest/savannah mosaic in a context of interesting geological features intersected by the Ogooué river.

It was thus in 2002 that we were able to inscribe the Lopé reserve on the World Heritage List. In 2002, a presidential order to preserve certain exceptional regions of the gabonese territory, created a network of 13 national parks, including the Lopé reserve.

It's at the end of 2004 that we initiated the file for classification at the World Heritage. Since the archaeological cultural heritage of the Lopé National Park is already exceptional for its cultural diversity over the long time, we proposed the Lopé file for a site mixed nature culture;

At the national level, in January 2006 the Ministry of Culture has classified by decree in historical sets, the engravings zones of Elarmékora, Epona, Doda as well as the archaeological

zones of Otoumbi, Junkville, Mokékou and Iboundji.

The Lopé-Okanda file was later proposed to World Heritage according to two cultural criteria and two natural criteria:

Criterion (iii) To bear unique or at least exceptional witness to a living or extinct cultural tradition or civilization.

Criterion (iv) To provide a prominent example of a type of architectural, technological or landscape construction or assembly that illustrates a significant period or periods in human history.

Criterion (ix) To be eminently representative examples of ongoing ecological and biological processes in the evolution and development of terrestrial, aquatic, coastal and marine ecosystems and plant and animal communities.

Criterion (x) To contain the most representative and important natural habitats for the in situ conservation of biological diversity, including those where endangered species of outstanding universal value from a science or conservation perspective survive.

In June 2007, the Lopé National Park with its 8 historic sites was inscribed as a mixed site - culture and nature on the UNESCO World Heritage List under the name “Ecosystem and relict cultural landscape of Lopé-Okanda (Gabon)”.

Conclusion

It is clear that the process of World Heritage ranking is long because it must meet very specific criteria, demonstrate an exceptional and universal character that often results in a diversity of research, a large number of publications (40 publications on archeology and rock art of Lopé) and numerous lectures on the subject.

Over the past five years, many rock art sites have been proposed for inclusion on the World Heritage List. Their evaluation has given rise to some challenges, as the ability to demonstrate outstanding universal value requires extensive research and sufficiently detailed studies. Considerable resources are generally required to ensure the analysis, data collection and conservation of rock art sites

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