

Review of: "Environmental Representations in Rocky Records in National Parks in Southeastern Piauí – Brazil"

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Potential competing interests: No potential competing interests to declare.

The article begins with an innovative perspective consisting in the relationship between human beings and their environment based on the study of rock art, from the reconstruction of the relevant environmental conditions associated with the period in which the representations were made, which involves a multidisciplinary work. However, throughout the text a series of hypotheses and interpretations are presented that lack tangible arguments, since there is no material information from the archaeological record to support them.

From the beginning there is no notion of how many sites, panels and motifs were analyzed in each area, nor what were the variables used in the study of both engravings and rock paintings, which does not allow us to have a clear corpus of study. On the other hand, although there is a fairly complete theoretical framework to support certain ideas, these fall down in the absence of a material parallel, although in the same text it is stated that *"The fieldwork and the research done by Almeida (2011) allowed that rock painting can be more considered as an instrument in the reconstruction of an environment in the past time. This statement could be reached through comparisons, analysis, and interpretations of zoomorph rock painting."* (pp. 14). This comparison and analysis are not stated in the text.

Furthermore, the chronological context in which the motifs were made is not specified, which does not allow us to identify whether diachronic elements are truly being compared. Only an extensive temporal range for the rock art of Serra da Capivara National Park is presented, ranging from 50,000 to 6,150 years BP, despite the fact that, as mentioned in the same text, this first date has been highly questioned and even invalidated.

On the other hand, it is usually mentioned that, by the mere fact of representing phytomorphic and zoomorphic elements, these are important for the notion of subsistence and other aspects of daily life. However, in the absence of representation's details, this hypothesis is meaningless, considering also that, in other parts of South America, it has been possible to determine from the study of the faunal component in different archaeological contexts, that certain elements indispensable for the subsistence of the early groups were scarcely represented in rock art (e.g. Aritgas et al., 2016; Aschero and Isasmendi 2018, Cordero et al., 2019, among others).

Specific observations:

- 1) Species that are not currently found in both sectors but were supposedly represented in the paintings/engravings are not detailed.
- 2) The elements/variables that were used to determine species in the rock art are not detailed, considering also that, in

the case of zoomorphs, according to the photographs presented and their information (e.g. Figure 9, page 16), the motifs tend to schematization rather than naturalism.

3) In Figure 8, what were the criteria for defining that it was a "White-tailed deer"?, considering that the supposed representation of the horns does not differ from the rest of the phytomorph motifs described above, and that there are no further analyses regarding the superimposition and/or recycling of the motifs (Nash, 2012; Re, 2016). There is no mention of how the motifs could have been constructed.

4) Another argument given to establish the importance of the human-environment relationship consists inscenes where zoomorphs are mixed with phytomorphs and anthropomorphs. However, it is not specified how many scenes of this type exist, if they are recurrent, etc.

5) On page 15 it is said that the scenes of anthropomorphs with phytomorphic elements are interpreted as rituals, but no tangible elements are provided to support this interpretation, so it remains in the plane of assumption.

On the other hand, the following is suggested:

1) Modify Figure 1 by adding the sites with rock art identified in both areas, as well as a north and a general map of Brazil.

2) Include scale in all motif photographs, as well as specify the area where they are located (Serra das Confusões National Park or Serra da Capivara National Park).

3) Delete Figure 2.

4) Include a chronological framework section of the occupations associated with the rock art, as well as the study corpus, methodology used in the analysis of the motifs and results.

5) Restructure the order of the article, since there is information presented at the end (description of certain sites of Serra das Confusões) that should be included at the beginning in a background section, in addition to detailing whether each site has been registered or only identified.

6) Include summary tables with the number of sites and representations analyzed.

7) Standardize the information of the individualized sites, and include some sites from Serra da Capivara National Park.

8) Include photos in good resolution, because, for example, Figure 12 looks blurry.

9) In the general photographs of panels (e.g., Figures 12, 13 and 14) indicate the representations mentioned in the caption.

10) In figure 15, image A, the red circle mentioned in the caption is not included.

11) Eliminate the section "The indiginous people: environment and rock art", since it is not related to the rest of the paper.

