

PROJECT CENTRAL (BAHIA, BRAZIL): ROCK ART IN THE CHAPADA DIAMANTINA UPLANDS

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RESUMO: Iniciado em 1982, o Projeto Central cobre uma área de 105.000 m² com o seu epicentro no município de Central, no coração da caatinga. Um dos objetivos do projeto é estudar as milhares de pinturas rupestres da área, das quais aquelas com representações de mamíferos tem sido estudadas detalhadamente desde 1987 (Beltrão e Lock, 1988). Sítios no quartzito pré-cambiano, no município de Morro do Chapéu na borda nordeste da Chapada Diamantina, contém considerável número de pinturas, principalmente mamíferos (veados), seguido por antropomorfos e pássaros. Nestes sítios 94% das pinturas representam "Biomorfos em ação"¹ e 6% das figuras² são "biomorfos estáticos"³.

Na porção noroeste da chapada, em contraste, nas pinturas encontradas nos municípios de Central, Xique-xique, Uibaí e Gentio de Ouro, existe sempre uma diversidade de zoomorfos, entretanto um ou outro pode predominar. Aqui, além disso, 96% representam figuras isoladas de "biomorfos estáticos", enquanto 4% de "biomorfos de ação". A cor vermelha chapada, técnica de cor sólida predomina em ambas as áreas. Nesta área, especialmente nos sítios dos "canyons" de quartzitos, o estilo é Serra Azul, na tradição geométrica descrita por Guidon (1980) e as pinturas são chefiadas pelos mamíferos, alguns do Pleistoceno. Nos sítios e borda da nordeste da chapada, também em quartzito quatro tradições

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1. "Action"biomorphs: biomorph figures appearing in group or singly with indications of locomotion or gestures.
2. Figure: we prefer to use this term when referring to rock paintings of figures because, according to its definitions, it best suits our proposals for morphological analysis of these representations.
3. "Static"biomorphic figure: this terms defines all and any upright biomorph figures lacking indications of locomotion or gestures. Wen distant from the others we add the will add word "isolated" (Isolated "static"biomorphic figures).

estão representadas: Planalto (Prous, 1981), Nordeste (guidon, 1975, 1978-80 e 1981), São Francisco (Prous, 1981) e Geométrica, estilo Búzios (Beltrão et alii, 1990). Nossa interpretação preliminar sugere que, no nordeste da chapada, o homem pré-histórico buscou representar a relação entre o céu e a terra e, na porção nordeste, a relação entre homens e animais.

Project Central, inaugurated in December 1982, covers an area of 270,000 sq. km. (105,000 sq. miles), embracing almost the entire state of Bahia, Brazil.

Work has included detailed investigation of 11 sites in the northwestern portion of the Chapada (11°03" to 11°19" lat. S and 42°04" to 42°28" long W) and 8 at its northeastern edge (11°26" lat. S and 41°12" long W).

Paintings at sites in the northeast part of the Chapada, in the municipality of Morro do Chapéu (Fig. 1), are predominantly of mammals (deer), followed by anthropomorphs and birds (rheas). Approximately 94% depict "action" biomorphs, 6% are of "static" biomorphic figures.

In the northwest of the Chapada, by contrast, in paintings found in the municipalities of Central, Gentio do Ouro, Xique- Xique and Uibaí (Fig. 1), there is always a diversity of zoomorphs, although one or another may predominate. Here, moreover, 96% of the biomorphic paintings depict "static" biomorphic figures and 4%, "action" biomorphs. In both areas the color most used is red, applied in flat, solid areas.

These statistics relate to biomorphs alone and not to the total number of figures. Some geometric forms were mentioned in this paper as appearing in association with biomorphs, composing panels. This only occurs in the northeastern portion of the Chapada however. In the northwest, no geometric forms were encountered forming groupings or associated with biomorphic figures. For this reason, the geometric forms were not included in our calculations.

In the northwestern part, especially in quartzite canyons, we had identified the Serra Azul Style (Beltrão & Lima, 1988) in the Geometric Tradition (Guidon, 1980). Mammals, some Pleistocene, predominate, in association with geometric forms. Also in the northwest, in

the limestone caves and rockshelters of this area, but also in the quartzite canyons, we had recognized the Búzios Style (Beltrão *et alii*, 1990), in the same Geometric Tradition, where the geometric forms represent celestial bodies or astronomical events.

We later perceived the need, in both areas, to distinguish, alongside the Geometric Tradition proper, an Astronomical Tradition in which the geometric forms represent celestial signs, symbols, bodies or events. The Serra Azul (early) and Búzios (recent) styles, form part of this latter tradition.

It must be stressed that our intention is not to deny the existence of the Geometric Tradition, which also occurs in Central, but to present what to us seems to be a new situation in the Archeological Region of Central.

In the northeast of the Chapada, on quartzite, there are elements of at least 5 traditions: Planalto (Prous, 1981); Northeast (Guidon, 1975, 78, 80, 81); Geometric (Guidon, 1980); São Francisco (Prous, 1981); and Astronomical (Beltrão, 1991).

Choice of Terminology

After analyzing several terms used in Rock Art, from the points of view of both archeology and the plastic arts, we realized for instance that the term *graphics* (Pessis, 1984) was not appropriate to the subject-matter of our research as it refers to geometric forms (signs and symbols), since according to Cavalcanti (1981), "graphics" is defined as the way in which an artist expresses himself by means of lines and strokes resulting in abstract forms, or even as a possible form of "hieroglyphic writing", similar to and inspired by oriental ideograms.

The same author also maintains that, in the plastic arts, the term began to be used more widely from the 60s onwards with the abstractionist artistic and cultural movement. This emerged in periods of crisis in major cities, first in France, then spread throughout Europe to the United States, among other countries, in the form of "painted murals" or the famous wall graffiti so widespread today in Brazil, especially Rio de Janeiro and São Paulo. Others define the term "graphics" succinctly as a representation of ideas by way of writing.

The principal purpose of this paper is to analyze biomorphic figures and the term thus adds nothing to the approach taken here. It will be applied to another type of rock art figure, mentioned previously, which also occurs in the Archeological Region of Central: these pictorial representations of signs and symbols may be described as "graphics" and will be discussed at greater length in another paper.

In the same way, the term "*scene*" – widely used in studies of Rock Art, but already contested (Pessis, 1984) – was replaced by "*action*" (Pessis, 1984), where the action is movement. Also, we shall use the term "action biomorph" for those biomorphs showing signs of locomotion and/or gestures, and "*static* biomorphic figure" for biomorphs lacking signs of locomotion. When the latter are separated from the grouping, we shall add the word "isolated", and call them "isolated 'static' biomorphic figures". The term "static" was chosen for lack of any biological term to denote absence of locomotion in vertebrates. We had great difficulty in establishing this criterion for differentiating between "action" and "static", since Pessis (1984) defines *isolated biomorphic graphics* as being "the only graphics which, on their own, can represent a movement" ... "This *key pose* is an arbitrary category for comparison which corresponds to the resting attitude a living creature can adopt, involving a minimum of muscle movements". Neither does this fit our situation since a "minimum of muscle movement" could include reflex activity of the autonomous nervous system and, at the sites in question, several mammal representations lack any sign of locomotion, a function performed by the central nervous system. In this region, we also found representations which are not of biomorphs, such as comets with tails formed by wavy lines, suggesting movement.

We thus felt the need to adopt terminology of our own with which to express the perspective of our study, and chose to adopt terms whose use involves less controversy.

The astronomical tradition

In the Archeological Region of Central, it is the Astronomical Tradition which we feel enables us to go furthest towards an interpretation of what lies hidden behind rock art. It facilitates detection of

true associations between geometric and biomorphic forms, the possible existence of signs and symbols, the close relationship that prehistoric man established between the heavens and the earth, and so on.

The geometrics in the Astronomical Tradition may be analyzed as sets of paintings linked to the skies (Beltrão *et alii*, 1990) or as elements of these same sets of paintings, separate images used in a conventional manner by prehistoric man (Beltrão & Luce, 1990).

In the northwest portion of the Chapada Diamantina, most of the biomorphs associated with astronomically-motivated geometrics form "static" images, while some represent "action" (figures in groups or in isolation).

Another important fact is the presence of pictorial representations of Pleistocene animals (Beltrão & Locks, 1990).

"Action" biomorphs

The groups ("action") in the northwest portion of the Chapada are good examples of the close relationship prehistoric man established between the heavens and the earth in the Astronomical Tradition.

We would like to emphasize here that, although sets of astronomically-motivated geometric forms also represent "action", in this study we shall only discuss geometric forms when in association with biomorphs.

As an example of the Serra Azul Style, the oldest in the Astronomical Tradition, we chose a panel, representing a short-faced bear, *Arctodus (Pararctotherium) brasiliense* (Lund, 1841), found in a canyon at the Fonte Grande II site in the municipality of Uibaí, in the highest part of a steep-sided river valley.

The figure of the bear (Fig. 2) was formed by smudges of blue-black surrounded by a thick outline in red. This worn, blue-black/red bichrome combination is found in what appear to be the earliest contexts (Beltrão & Lima, 1986).

The bear was represented (sitting or standing?) with its forelimbs raised. The representation in itself is significant because the bear is a Pleistocene animal whose presence suggests a cold climate, very different from the region's present semi-arid climate. Equally important

is the fact that the same thick line used to outline the bear was repeated, intentionally superimposed over the animal, this time in 4 practically parallel, straight and curved strokes, in order to represent the apparent trajectory of the moon.

The bear is not the only Pleistocene animal represented in association with astronomically-motivated geometric forms. The *Paleolama major* (Liais, 1872), like the bear, an animal of cold climates, also appears in association with what may be the moon. There is also a representation of a Pleistocene horse, *Hippidion principale* (Lund, 1841), in association with a lizard (Fig. 3) which probably symbolizes the sun, although this association is not yet quite clear.

The paintings of Pleistocene animals, such as the short-faced bear and the paleolama in association with the moon, can be assigned quite early dates.

One example of the moon being represented like this, the "Lunar Calendar" (Marshack, 1984), was found engraved on an animal bone at the Blanchard rockshelter in France and dated at around 30,000 B.P.

The rare isolated representations found in the northwest portion, among them the figure of a running deer (Fig. 4) found at the Fonte Grande II, site, depict some kind of locomotion (jumping, running, etc.).

In the Northeast of the Chapada, "action" portrays behavior types of *Blastocerus dichotomus* (Illiger, 1815), the Marsh Deer. Examples are: mating (Fig. 5A); pursuit of the doe by the stag (Fig. 6A); stags fighting (Fig. 6B), etc. (Beltrão & Locks, 1991). Also, a group of rheas walking (Fig. 5B) and stylized and/or more realistic anthropomorphs, showing moments taken from daily life, such as ceremonies, dance and hunt rituals (Figs. 5C; 6C, D and E; and 7A, B, C, and D).

"Static" biomorph figures

In the Archeological Region of Central, the lizard is a ubiquitous figure, appearing both in quartzite canyons, and in limestone caves and rockshelters.

Lizards are represented in several ways, generally painted in red (also in yellow or white), and normally as seen from above. At times the representations are stylized, with carefully detailed claws; at others, they are more schematic line drawings. Between these two extremes

can be found various gradations. At times the lizard is represented vertically in a peculiar manner, with accentuated forelegs which end in a point. The form is always one-dimensional and solid and the paint was applied with strokes that are narrow, short and very close together.

At the Toca do Chico Eduardo site, in the municipality of Xique-Xique, there is a row of these lizards looking like "cutouts" (Fig. 8) on the end wall of a limestone cave.

At a site at Vacaria, also in the region of Xique-Xique but about 10 or 12 miles from Chico Eduardo, a single lizard was painted (Fig. 9), carefully executed in the same fashion, with the paint applied in the same way, the same color and so on, as if taken from the series at Chico Eduardo. It is not on a limestone wall, however, but on a narrow quartzite bench in a canyon.

The fact that the vertical painted lizard was reproduced with such care at both locations, regardless of the type of site, seems to indicate a concern more with the form of the lizard than with the site and, thus, the intention of communicating something specific; consequently, a convention.

Among the "static" figures, the lizard represented at these sites shows not only how complicated the interpretation of a type of "static" image can be, but also how an isolated "static" figure can be loaded with meaning (Beltrão & Luce, 1990).

As the figure of a lizard is always related to some type of astronomical representation, the convention would thus be linked to some astronomical phenomenon.

The lizard figure does in fact appear, associated with the sun which records the solstice (Fig. 10), in the Toca do Cosmos in the municipality of Xique-Xique (Campos *et alii*, 1985).

The lizard not only could be the symbol for the sun – remember, by the way, that "*lagartear*" today means to warm oneself in the sun, like a lizard (*lagarto* in Portuguese) – but could also represent a convention at a more complex level, one that would constitute a precondition for more abstract use of the sign or symbol, a situation closer to that of writing (Beltrão & Luce, 1990).

At the Capim Grosso site, in the municipality of Gentio do Ouro, the moon is shown over the head of a zoomorph (an armadillo, Fig. 11), denoting a close association between the two figures.

The only isolated figure found to date in the northeastern part of the Chapada is the head of a *Blastocerus dichotomus* (Illiger, 1815), the Marsh Deer (Fig. 12). There are "static" biomorphs in a panel (Fig. 13) comprising a Marsh Deer in yellow, a primate and an ("action") anthropomorph carrying an artefact which could possibly be a throwing spear. The two latter figures are painted in red and superimposed on the Marsh Deer.

At different sites, members of the felid family appear with the same sign or symbol above the tail. In a previous study (Beltrão, 1990), we suggested that these signs or symbols could be astronomical.

Conclusion

In both the northwestern and northeastern portions of the Chapada Diamantina uplands there is great disparity between the number of "action" biomorphs and the number of "static" biomorph figures. The number of the latter in the northwest is apparently minimal.

The "action" figures, even in small numbers, may reveal important paleontological, paleoecological and cultural data. In the same way, certain isolated "static" biomorph figures may be loaded with astronomical and other meanings.

One very particular aspect of our research is the realization that prehistoric man was the first archeo-astronomer.

Elements of the Astronomical Tradition predominate in the northwestern area, while in the northeast the Planalto Tradition predominates, followed by the Northeast Tradition and, rarely, elements of the Geometric, São Francisco and Astronomical Traditions.

Of all the biomorphic paintings found in the northeastern portion of the Chapada, 94% are "action" biomorphs and 6% are isolated "static" biomorphic figures. In the northwest, by contrast, 96% of the representations are isolated "static" biomorphic figures and 4% are "action" biomorphs.

In the northeast, representations of deer predominate, while in the northwest there is a greater diversity of zoomorphs.

In the northeast, it seems to us there is a preference for representing animal morphology and behavior ("action" biomorphs) while, in the northwest, locomotion is absent ("static" figures), suggesting a

greater concern with form (external morphology), in most cases, associated with signs or symbols.

Our preliminary interpretations suggest that, in the northwestern area of the Chapada Diamantina, prehistoric man sought to show the relationship between the Heavens and the Earth and, in the northeast, that between Man and Animals.

Translated by Peter Lenny

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ABSTRACT: *Project Central (Bahia, Brazil): Rock art in the Chapada Diamantina Uplands.* — Inaugurated in 1982, Project Central covers an area of 105,000 square miles with its epicenter in the municipality of Central (at the heart of the *caatinga*). One aim of the project is to study the thousands of prehistoric rock paintings in the area, of which those depicting mammals have been studied in detail since 1987 (Beltrão & Locks, 1988). Sites on Precambrian quartzite, in the municipality of Morro do Chapéu at the northeastern edge of the Chapada Diamantina uplands, contain a remarkable number of paintings, mostly of mammals (deer), followed by anthropomorphs, and birds (rheas). At these sites, 94% of the paintings represent "action" biomorphs¹ and 6% of the figures² are "static" biomorphs³.

In the northwestern portion of the Chapada, by contrast, in paintings found in the municipalities of Central, Xique-Xique, Uibaí and Gentio do Ouro, there is always a diversity of zoomorphs, although one or another may predominate. Here, moreover, 96% depict isolated "static" biomorphic figures, while 4% are "action" biomorphs. The color red and flat, solid-color technique predominate in both areas. In this area, especially at sites in its quartzite canyons, the style is Serra Azul, in the Geometric tradition described by Guidon (1980), and the paintings are chiefly of mammals, some of them Pleistocene. At sites at the northeastern edge of the Chapada, also on quartzite, at least four traditions are represented: *Planalto* (Prous, 1981), *Northeast* (Guidon, 1975, 1978-80 and 1981), *São Francisco* (Prous, 1981), and *Geometric - Búzios style* (Beltrão *et alii*, 1990). Our preliminary interpretations suggest that, in the northwest of the Chapada Diamantina, prehistoric Man sought to represent the relationship between the heavens and earth and, in the northeastern portion, the relationship between Man and animals.

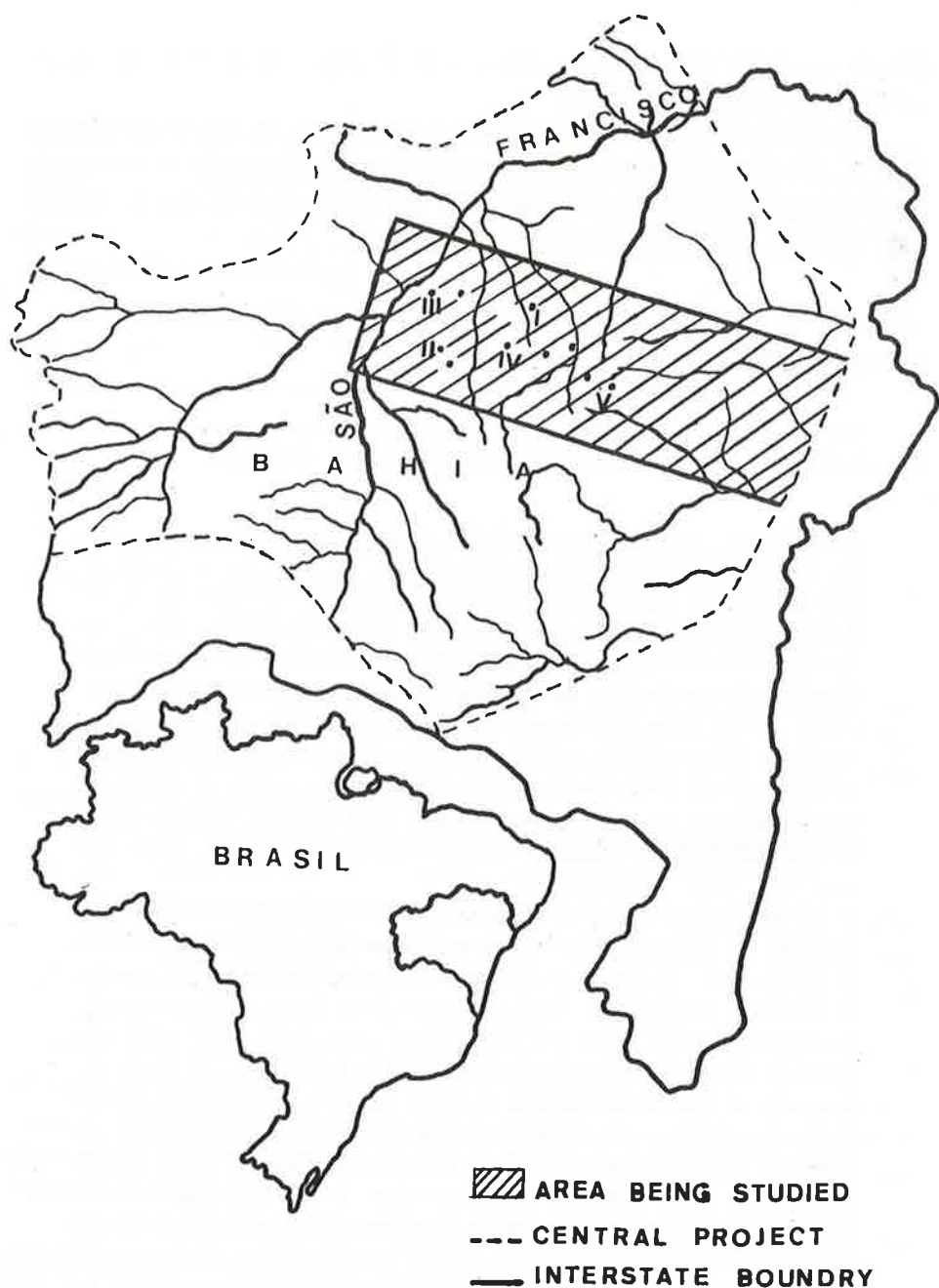


Fig. 1 - Location of municipalities in the northwest of the Chapada Diamantina uplands: I - Central; II - Gentio do Ouro; III - Xique-Xique; and IV - Uibaí; and in the northeast: V - Morro do Chapéu.

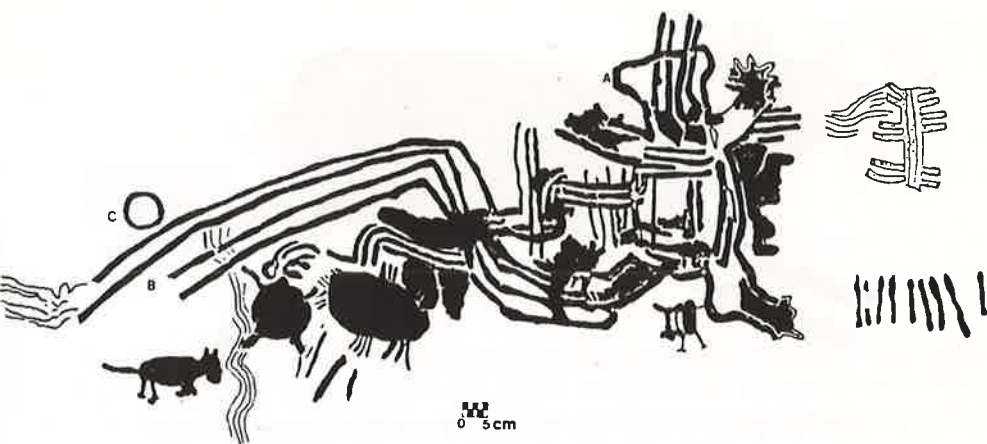


Fig. 2 - Panel with polichrome work (red, yellow and blue-black) found at Fonte Grande II (municipality of Uibaí). A - short-faced bear; B - 4 practically parallel, straight and curved lines, intentionally superimposed in order to represent the apparent trajectory of the moon (C).

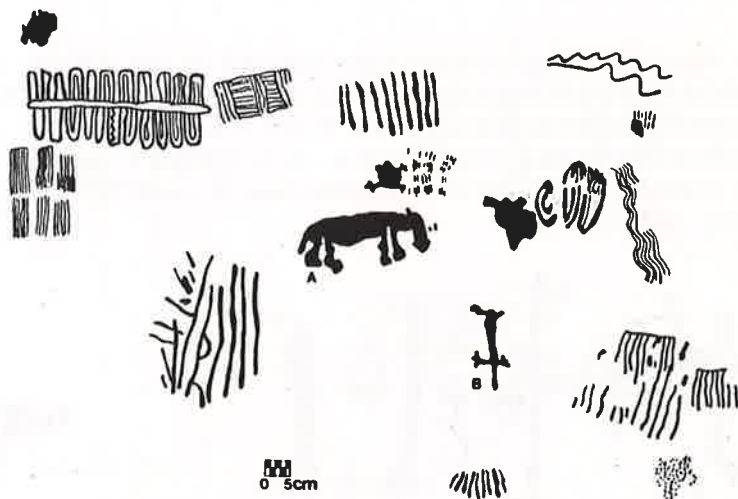


Fig. 3 - Panel containing zoomorphs in flat, solid red, found at Fonte Grande II, municipality of Uibaí. A - extinct horse, associated with a lizard (B) which probably symbolizes the sun.

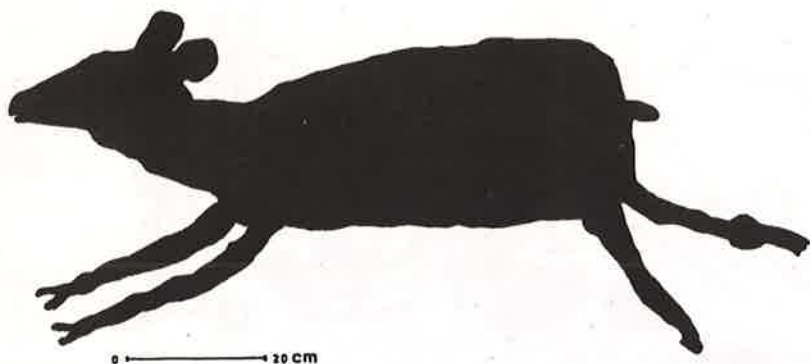


Fig. 4 - Deer jumping, in flat, solid red, found at Fonte Grande II, Uibaí.



Fig. 5 - Panel containing representations executed in the different manners encountered at the Toca da Lagoa da Velha: flat, solid yellow (C, D, H, M, R and S); flat, solid red (T); outline in yellow (A, B, E, F, G, I, J, L, N, O, P and Q). A to H - group of Marsh Deer running. I to L - mating. A, B, F, H and J - does. C, G, I and L - stags. D and M - fawns. We also identified rheas: N - cock; O, P and Q - hens; and R and S - anthropomorphs.



Fig. 6 - Rock painting in flat, solid red, found at the Toca da Lagoa da Velha. Marsh Deer: A - stags fighting; B - stag pursuing doe; C and D - does. E to I - stylized anthropomorphs.



Fig. 7 - Panel with flat, solid-color, bichrome work in red and yellow, found at the Toca da Lagoa da Velha. Contains a variety of biomorphic figures: A to E - Marsh Deer does; F to L - stylized or more realistic anthropomorphs, showing scenes from daily life, such as: ceremonies, dance rituals, etc.; M - rhea.



Fig. 8 - Row of lizards in flat, solid red, looking like "cutouts" found at the Toca do Chico Eduardo, municipality of Xique-Xique.

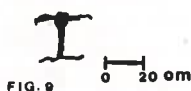


Fig. 9 - Lizard in flat, solid red, found at the Vacaria site in the municipality of Xique-Xique and similar to the lizard series at the Toca do Chico Eduardo.

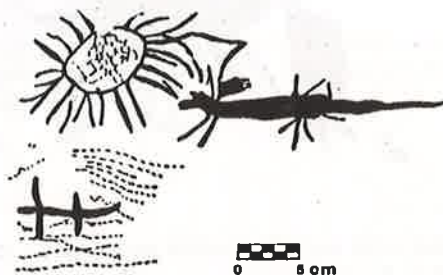


Fig. 10 - Lizard in flat, solid red, found at the Toca do Cosmos, municipality of Xique-Xique, which seems to be associated with the sun, marking the solstice.

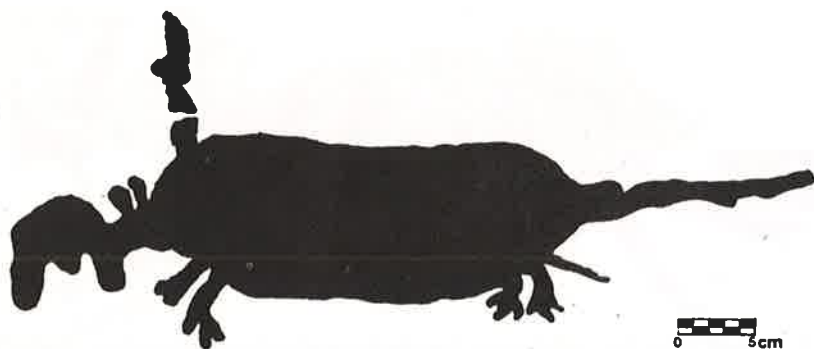


Fig. 11 - Armadillo, in flat, solid red, with representation of the moon in front of the head, found at the Capim Grosso site, municipality of Gentio do Ouro.



Fig. 12 - Head of Marsh Deer in flat, solid red, found at the Toca da Lagoa da Velha.

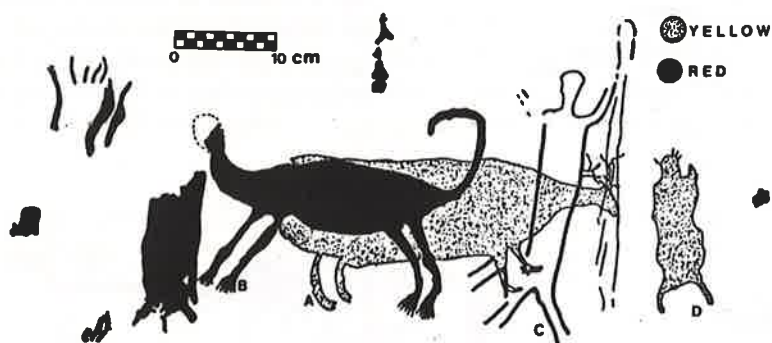


Fig. 13 - Panel with superimposition and various techniques found at the Toca da Lagoa da Velha: A - Marsh Deer stag in flat, solid yellow; B - primate superimposed on Marsh Deer, in flat, solid red; C - red outline anthropomorph, possibly holding a throwing spear, superimposed on Marsh Deer; D - anthropomorph in flat, solid yellow.

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