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ROCK INSCRIPTIONS IN BRAZIL.¹

BY JOHN C. BRANNER.

IN 1876 I visited Aguas Bellas, a small town in the interior of the province of Pernambuco, and about a hundred miles from the coast, for the purpose of examining localities said to contain the remains of extinct mammals.

The fossils were found at and in the vicinity of a cattle ranch known as Lagôa da Lagea, eight leagues east of Aguas Bellas. During the time spent at this place I learned of several rocks in the vicinity bearing inscriptions which, it was said, no man could read. I took time to visit the most convenient of these localities and to make careful drawings of the markings, the characteristic ones of which are here represented (Plates xxxiv-vi).

The first place visited for this purpose was a small farm about a league from Lagôa da Lagea, known as Cacimba Circada. The rock found at this place, together with its inscription, is shown at *k* (Plate xxxiv). This rock is a gneiss boulder of decomposition, about 10' × 6' × 6', lying upon the bed rock near the Rio Garanhunzinho. On the right, as one faces the inscription, is an asterisk a foot in diameter, made by four lines crossing each other at equal angles, while the remainder of the inscription on the left consists of three rows of marks or indentations that run down from near the top

¹ The present contribution is intended to supplement the work begun by my friend and teacher, the lamented Professor Ch. Fred. Hartt, who was deeply interested in the archaeological and ethnological work yet to be done in Brazil. It was while working upon the Imperial Geological Commission of Brazil, and under his directions, that these observations were made.

The NATURALIST for May, 1871, contains an article by Professor Hartt upon Brazilian rock inscriptions.

of the rock about two and one-half feet to where a portion of the block has split off from the lower left corner, probably carrying away part of the inscription. It is impossible to determine the exact number of these points, for some of them, especially those next the top, have become very indistinct through the weathering of the face of the rock. The inscriptions appear to have been made by pecking with stone implements, and in the case of the asterisk the stone was rubbed up and down the line until the furrows were well polished. After being ground out these points and lines were painted, the color now having a dull red or brown appearance.

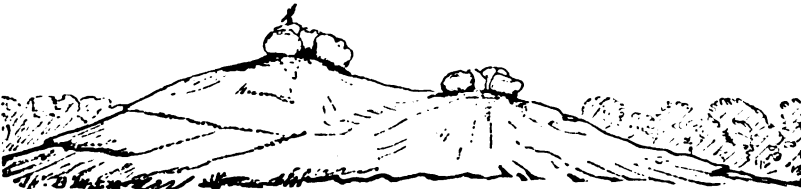
The next place visited was Pedra Pintada (painted stone) which is located upon a stream (during the rainy season) taking its name from the marked stones—Rio da Pedra Pintada.¹ It is said to be ten leagues from Aguas Bellas, twelve from Garanhuns and nine from Papacaça. There are here about forty designs engraved, and part of them both engraved and painted upon the large blocks of gneiss on the banks, and upon the flat smooth rock in the dry bed of the stream. There is a cascade about twenty-five feet high just here, and at the foot of it a pot-hole, now filled up, which is about fifteen feet wide by as many deep, and to the presence of which these inscriptions are possibly due, as I shall show. The forms of the inscriptions are shown in the figures, which are drawn to scale, and I need not describe them in detail. Figs. *a*, *b*, *c*, *d*, *e*, *f*, *r* and *s* are engraved on the bed rock of the stream above the cascade. These are not painted, and if they ever were, the paint has been washed off by the stream charged with sand and gravel. Many of these are becoming indistinct, some of them have almost entirely disappeared, while others have doubtless disappeared altogether. The concentric chipping of the rock, so common in the tropics, has also removed some of the inscriptions both in the bed of the stream and upon the banks.

The engraving appears to have been done like that at Cacimba Circada, by pecking and grinding with stones having thin rounded edges. After being thus polished these marks were painted, the color now showing as a dull red or brown. In some cases the points and lines are combined as is shown in *e* and *f*. The ar-

¹ Lower down this stream is called Riacho dos dois Riachos, and flows into the Ipanema at Sant' Anna, which enters the São Francisco about midway between Traipú and Pão d'Assucar.

rangement of points in parallel vertical lines is rather frequent, occurring several times here (Fig. *v*), as well as at Cacimba Circada (Fig. *k*), and at Sant' Anna (Fig. *x*). There are several such rings as that shown at *e*, one of them having thirty-four points instead of thirty-six, while others are broken, or the points are too indistinct to be determined. There are two asterisks of eight rays, one associated with other markings (Fig. *v*) and another one independent, while still another asterisk has twenty rays (Fig. *p*). The only figure that seems to be intended to represent anything is Fig. *r*, which appears to be a rude representation of a spear-head. Part of Fig. *o* might be supposed to represent a fish, but I fancy that whatever resemblance there may be is accidental. The resemblance between some of these designs and some given by Professor Hartt¹ from the Amazon region is noteworthy, especially that of the spiral shown in *h* and that of the circle with the point at the center, such as are shown at *j*.

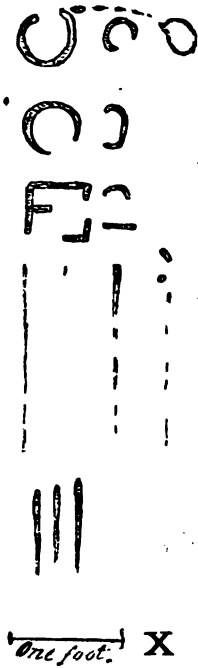
Returning from Aguas Bellas to the Rio Sao Francisco by way of the village of Sant' Anna, in the province of Alagôas, at half a league from this latter place I found the figures shown at *x* inscribed upon the side of a large gneiss boulder of decomposition. These figures are both cut and painted, and have the same dull red color as those at Pedra Pintada. There are other marks upon the vertical faces of this and of the other boulders of the group, evidently made by the same hands. These are simply polished spots varying in size from one to two feet in diameter. They are, for the most part, nearly round, but some of them are oblong, and none of them are more than about a quarter of an inch in depth—most of them not so deep, and are all painted. The stones upon which these inscriptions are made, as has already been stated, are gneiss boulders of decomposition, about a dozen in number, from six to twelve feet in height, and are grouped together upon the summit of a little hill of solid gneiss, as shown in the accompanying sketch.



The boulders near Sant' Anna, Province of Alagôas.

¹ AMERICAN NATURALIST, May, 1871.

The inscription *x* is upon the largest and most prominent of these boulders, while many, though not all the others, have polished places upon their sides such as I have described. During dry weather there is no water in the immediate vicinity, though the Ipanema¹ is only about a mile distant.



Sant' Anna inscriptions.

It should be noted that these inscriptions, as well as many others which I heard of through this part of the country, are all upon these large stones, and generally in some such prominent place.² One inscription in particular was mentioned to me by several persons, all of whom gave substantially the same account of it. This inscribed rock is near Agua Branca, twelve leagues above Piranhas and ten leagues from the falls of Paulo Affonso, on the *Fazenda da Caisára*, and is known as the *pedra navio*, or ship stone. It is said to be a large and nearly round boulder, standing upon a very narrow base upon the solid rock, and to have all its sides covered with Indian inscriptions.³

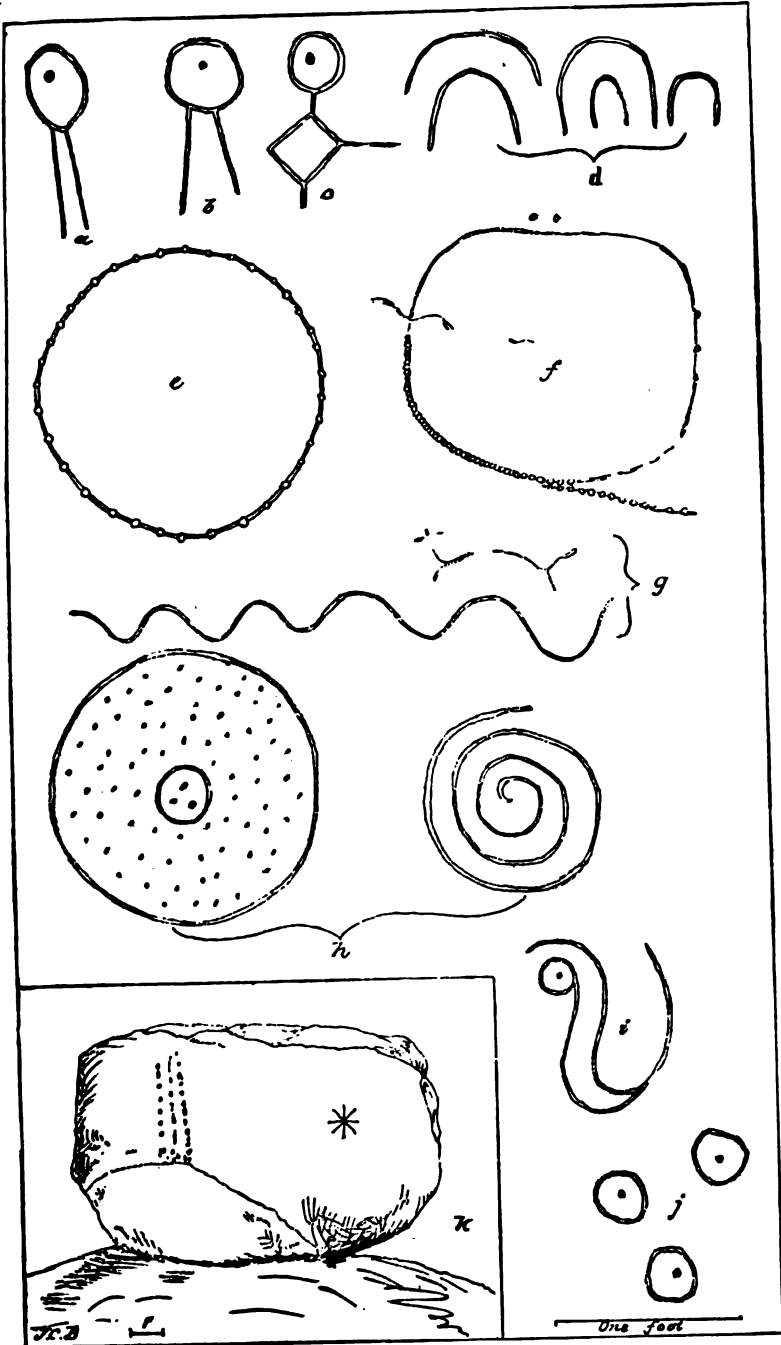
Through this part of the country, where the archæan rocks form a wide belt between the plateaus of the interior and the Cretaceous and Tertiary beds near the coast, these boulders of decomposition are not uncommon, and almost every one that I have seen has had some sort of artificial marks upon it, generally too badly eroded to be defined, but sufficiently distinct to leave no doubt concerning their origin.

Of the figures themselves I am unable to suggest any definite explanation. The explanations given by the people in the vicin-

¹ Not "Panema" as the geographies give it.

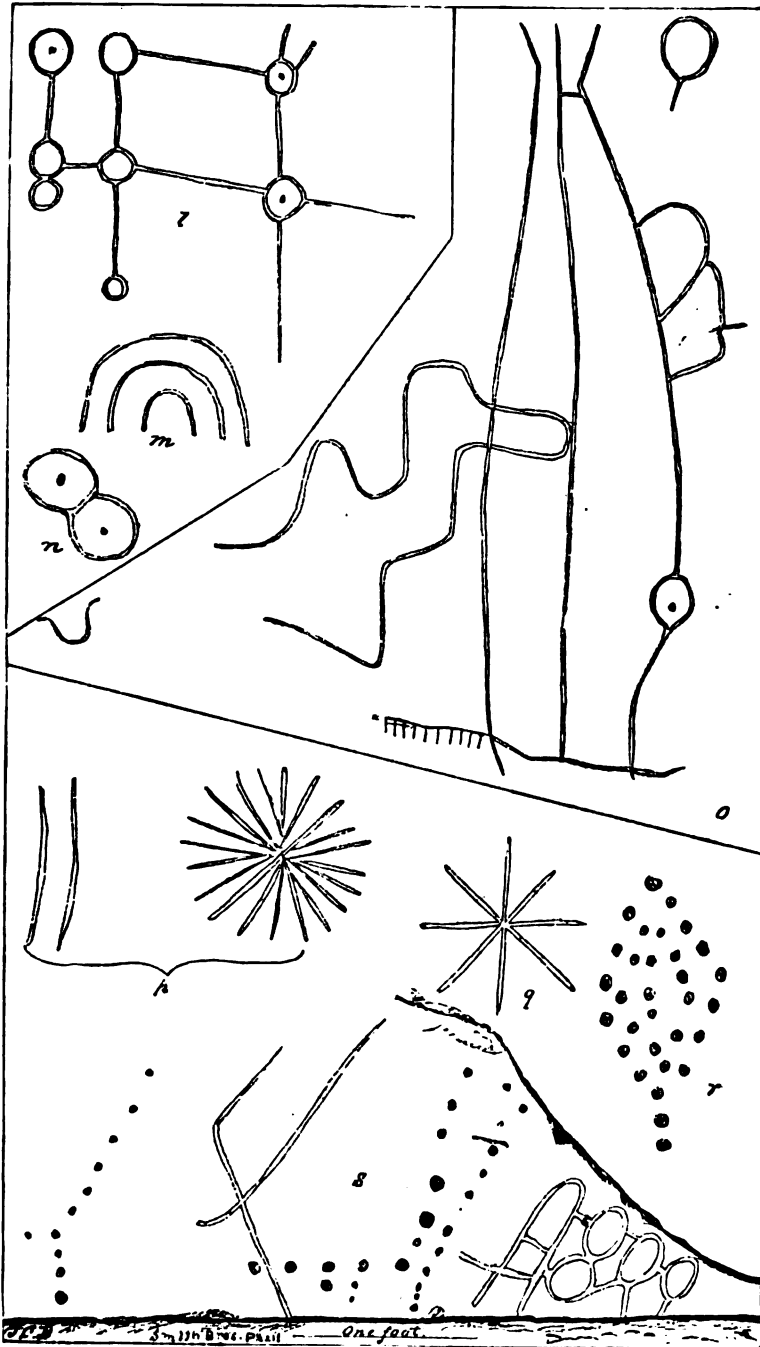
² The inscribed rocks at Ereré described by Professor Hartt are also prominent ones.

³ I was told that there are extensive rock inscriptions further up the Rio São Francisco at Salgueiro on the Rio Quixába and at Ouricury, both in the western part of the province of Pernambuco. On the road between Diamantina and Beribery, in the province of Minas Geraes, are some rude Indian paintings of animals upon a ledge of rock. These latter I have seen, but had no opportunity of sketching them.



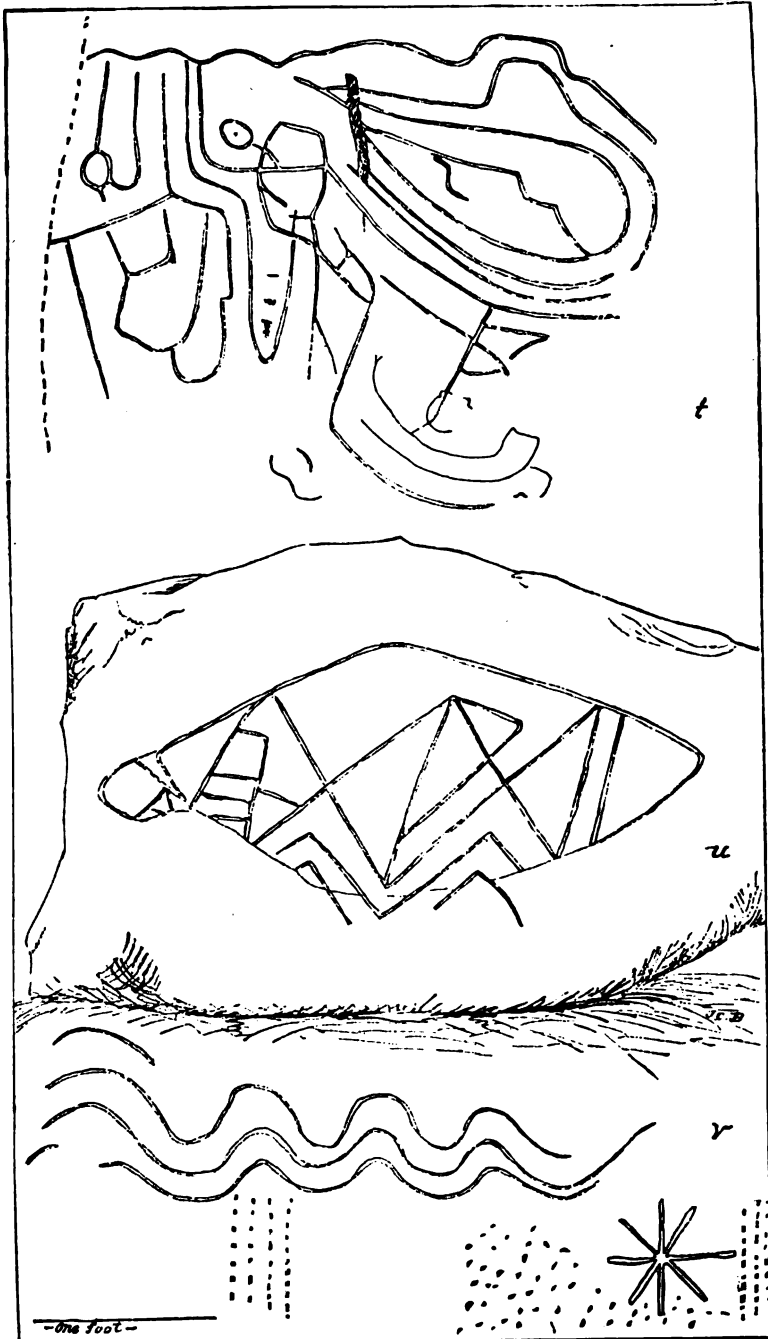
Brazilian Rock Inscriptions.





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ity throw no light upon the subject. Some think they were made by the Dutch when they held the country about Pernambuco in the early part of the seventeenth century, but the general impression is that they refer to some treasure hidden in the neighborhood. This idea led a former proprietor of the country about Pedra Pintada to make diligent search for this supposed treasure, and he even cleaned out the great pot-hole at the foot of the cascade, but without finding anything.

It is to be noted, however, as far as I have observed, that these inscriptions are always near the water, or near a place where water is likely to be found late in, if not quite through the dry season.¹ At Pedra Pintada the pot-hole below the fall has water in it long after the stream proper has dried up, the Ipanema has never been known to dry up entirely at Sant' Anna, while *Cacimba Circada* (fenced spring) takes its name from a spring at that place. This occurrence of the inscriptions in the neighborhood of water might admit of more than one explanation. If they have no other relation to the water itself, they happen to be in these localities because these are the places where the original inhabitants of the country would naturally live during the dry season, which is here nearly half the year, and indeed a part of these inscriptions at least—those in the bed of the stream—must have been made during the dry season. I am, however, inclined to the opinion that a part if not all these markings refer in some way to the water supply which is so uncertain in this region of great drouths. Exactly in what way, whether as records of seasons, or as petitions or offerings to the powers supposed to bring rain, it is idle now to speculate. To one visiting this section during the dry season, which lasts from August till January, there is no more natural explanation. The whole country is parched except the cacti and a very narrow strip bordering the now dry beds of the streams. Beyond these threads of gradually disappearing green one may travel for leagues and leagues without seeing a sign of water, and when, as not infrequently happens, the dry season is prolonged, the suffering of man and beast is extreme. The cattle subsist upon the pulp of the cacti that grow here

¹ There can be no confusing these markings with the holes made in large stones by Indians grinding their corn, and which also occur near the water. Many excellent examples of these mortar holes were found by me at the foot of the *Pão d'Asucar*, on the *Rio São Francisco*. They are made in the upper surface of large fragments of rock near the river.

abundantly, while the herdsmen obtain water for them by digging holes in the sand of the river beds wherever water may be found in this manner. If the drouth still continues beyond this stage, the cattle are driven toward the coast to where water may be had, or they are left to perish of thirst.¹

Without experience of such circumstances it is, perhaps, not easy to realize the force of the argument, but after riding for days through this region with a tropical sun blazing overhead, the atmosphere so dry that it seems to parch one's very vitals, and the heat from the glaring white sand quivering upwards to a cloudless sky, the thin *catinga* forest shriveled and still, with not a sign of animal life save the metallic stridulation of an occasional grasshopper, and after passing now and then a whole day without water, one realizes the importance which savage races, dwelling in such a country, would attach to a stream or pool where water could be had during the dry season.

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THE AMBLYPODA.

BY E. D. COPE.

(Continued from page 1121, November number.)²

PANTODONTA.

THERE is known as yet but a single family of this suborder, the Coryphodontidæ. Its representatives have been found in the lower lacustrine Eocene beds in Europe and North America in considerable abundance. About twenty species have been described, of which three have been found in England and France, and the remainder in the Rocky Mountain region of North America. They form a curious and interesting group of hoofed Mammalia which did not survive the Lower Eocene time, except in their probable descendants, the Dinocerata. The characters of the suborder have already been given in the NATURALIST, page 1111.

Five genera of the Coryphodontidæ are known from dental characters. Two of these, Coryphodon and Bathmodon, are known in their skeletal structure, the first-named very thoroughly.

¹ The circumstances under which I found the remains of extinct mammals in this region lead me to believe that their extermination was caused by long drouths over great areas.

² The explanations of Fig. 7 (p. 1115) should read four-ninths nat. size; not two thirds nat. size.