

## LEISHMANIAE IN THE VISCERA OF PORCUPINES FROM THE STATE OF PIAUÍ, BRAZIL

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### SUMMARY

The Authors describe amastigotes found in the spleen or liver smears of two porcupines (probably *Coendou prehensilis prehensilis*) from the State of Piauí, Northeastern Brazil. The parasites are regarded as belonging to a species of *Leishmania* proper to the porcupines.

During a survey of simian malaria carried out in the State of Piauí, Northeastern Brazil, in December 1971, a porcupine was accidentally shot and was dealt in the same way as the primates: blood was obtained by cardiac puncture for the preparation of thick and thin smears to be examined for hematozoa, and prints were made with a piece of spleen for the search of parasites or malarial pigment.

No parasites were seen in the blood smears, but in the spleen smears many amastigotes were found.

The porcupine had been shot in Mata do Cafundó, a forest in the municipality of José de Freitas. The animal's skin and skull were not preserved for identification, but we believe it to be *Coendou prehensilis prehensilis* (Linnaeus), because in VIEIRA's catalogue of Brazilian Mammals<sup>3</sup> this race of porcupine is the only one recorded in the Northeastern States, all other seven species or races being present either in the Amazon Region or the Central and Southern States.

In the spleen prints one amastigote was apparently inside a macrophage, but all others were free, extracellular. They varied in shape and size, as seen in Fig. 1; a few were round, some were oval or pear-shaped, but most were ellipsoidal and very elongate. The measures of thirty forms on camera-lucida drawings were, in micra:

	Average	Maximum	Minimum
Length . . . . .	6.1	10	3.8
Width . . . . .	3.4	4.8	1.9

By Giemsa's stain, the cytoplasm is pale blue, with a variable number of vacuoles (often numerous) of diverse sizes. The nucleus, round or oval, stains pink. The kinetoplast, rod-shaped, small and delicate, is dark red and usually close or very close to the nucleus. A pale area in the site of the flagellar reservoir is conspicuous in most forms.

To further study this parasite we tried, unsuccessfully, to obtain living porcupines

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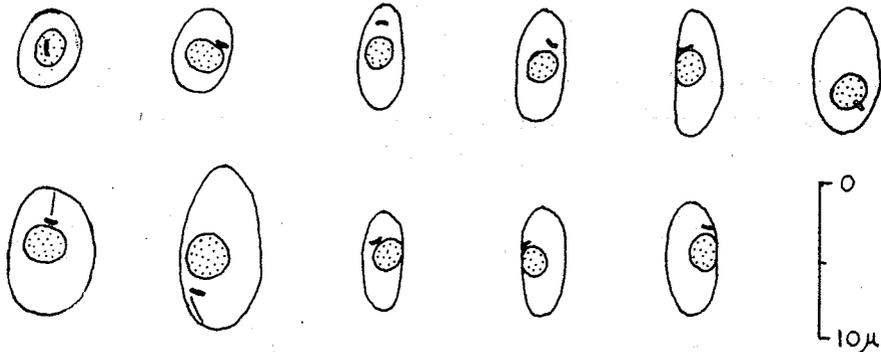


Fig. 1 — Amastigotes found in the viscera of the porcupines, showing variation in size and shape of body and appearance of kinetoplast. Camera-lucida drawings.

from the same locality. However, in February 1973 we received material from another specimen also shot in Mata do Cafundó: no parasites were found in the blood smears or in the prints of skin, spleen, lung or kidney, but in the liver prints amastigotes similar to those above described were detected.

These amastigotes can be easily distinguished from those of *Trypanosoma cruzi* — a flagellate already recorded in neotropical porcupines — by the size and shape of the kinetoplast, which is much larger and thicker in *T. cruzi*, and from the human species of *Leishmania*, by the larger size of the elongate body and the smaller kinetoplast. The amastigotes could eventually represent a hitherto unknown developmental stage of some other trypanosome, but no trypomastigotes were seen in the blood smears or in the blood present in the smears of the viscera of the porcupines. We are more prone to regard the present parasite as a *Leishmania* proper to the porcupines. HERRER<sup>1</sup> described as *Leishmania hertigi* a new species very frequently present in the skin of the Panamanian appearance *Coendou rothschildi*. The general appearance of the conspicuously elongated amastigotes is similar to that of the forms now seen in *Coendou prehensilis*, but HERRER's parasites are apparently smaller, since their measures are given as 3.5 to 4.1  $\mu$  in length by 1.2 to 2.5  $\mu$  in width, and the kinetoplast is described as "frequently rounded", not rod-shaped; although cultures were at times obtained from the spleen, liver and bone-marrow of *C. rothschildi*, HERRER<sup>2</sup> regards his parasite as a cutaneous *Leishmania*. Since the skin prints of our

porcupines were too poor, the fact that they showed no amastigotes does not necessarily mean these were not present. Due to this, we are not certain to be dealing with a parasite different from that found in Panama, and are not giving it a specific name until other porcupines from Piauí can be more properly examined.

#### RESUMO

#### *Encontro de leishmânias em vísceras de coandús do Estado do Piauí, Brasil*

Os Autores descrevem amastigotas encontrados em esfregaços de baço ou fígado de dois coandús (provavelmente *Coendou prehensilis prehensilis*) caçados na Mata do Cafundó, Município de José de Freitas, Piauí. Julgam que os parasitos pertencem a uma espécie de *Leishmania* própria dos coandús.

#### REFERENCES

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