

NATURAL INFECTION OF RED HOWLER-MONKEYS, *ALOUATTA SENICULUS STRAMINEA*, WITH *PLASMODIUM BRASILIANUM*, IN THE STATE OF AMAZONAS, BRAZIL

Leonidas M. DEANE (1) and Flávio Barbosa de ALMEIDA (2)

S U M M A R Y

A new host for *Plasmodium brasilianum* in Brazil was found in a forest near Manaus, the red howler-monkey *Alouatta seniculus straminea*.

Examining monkeys shot in forests along the road linking the city of Manaus to Itacoatiara, in the State of Amazonas, we found quartan-like malaria parasites identified as *Plasmodium brasilianum* in red howlers, *Alouatta seniculus straminea*. Of 18 specimens examined until the end of March 1967, two were parasitized. Both were adult females killed near kilometer 165, one on January 20 and the other on March 17. Parasitemia was moderate and pigment was detected in spleen smears.

Along the same road we had previously found other species of monkeys infected with *P. brasilianum*³: brown capuchins, *Cebus apella apella*; red-faced spider-monkeys, *Ateles paniscus paniscus*; and red-backed sakis, *Pithecia chiropotes*. In other areas of the State of Amazonas we had previously detected *P. brasilianum* in black-faced spider-monkeys, *Ateles paniscus chamek*³, in *A. paniscus paniscus*⁵ and in grey woolly-monkeys, *Lagothrix lagotricha*⁴. The original description of *P. brasilianum* by GONDER & BERENBERG-GOSSLER was based on forms found in the blood of a bald-uacari, *Cacajao calvus*, from the State of Amazonas⁷. And in Southern Brazil this plasmodium has been also found in brown howler-monkeys, *Alouatta fusca*, from the States of São Paulo and Santa Catarina².

The present finding raises to seven the number of species or varieties of monkeys known to harbour *P. brasilianum* in Amazonas, and to eight in Brazil.

Other howler-monkeys have been found infected with *P. brasilianum* in foreign countries: in Panama, *Alouatta palliata* and *A. villosa*, respectively by CLARK¹ and GALINDO⁶; and in Venezuela SERRANO⁸ has recently found this parasite in one *Alouatta seniculus straminea* caught in the jungle along River Caura, Orinoco Basin, State of Bolivar.

RESUMO

Infecção natural de guaribas vermelhos, Alouatta seniculus straminea, por Plasmodium brasilianum, no Estado do Amazonas

P. brasilianum foi encontrado em guaribas, *A. seniculus straminea*, em floresta à margem da estrada Manaus-Itacoatiara, constituindo êsses macacos novos hospedeiros do parasita no Brasil.

São referidos os outros macacos amazônicos e os do Sul do Brasil, bem como os guaribas estrangeiros naturalmente infetados por êsse plasmódio.

Work performed with financial help from the World Health Organization

(1) Associate Professor of Parasitology, Faculdade de Medicina, Universidade de São Paulo, Caixa Postal 2921, São Paulo, Brasil

(2) Zoology Division, Instituto Nacional de Pesquisas da Amazônia, Manaus, Amazonas, Brasil

DEANE, L. M. & ALMEIDA, F. B. de — Natural infection of red howler-monkeys, *Alouatta seniculus straminea*, with *Plasmodium brasilianum*, in the State of Amazonas, Brazil. *Rev. Inst. Med. trop. São Paulo* 9:359-360, 1967.

REFERENCES

1. CLARK, H. C. — Progress in the survey for blood parasites of the wild monkeys of Panama. *Amer. J. Trop. Med.* 11:11-20, 1931.
2. DEANE, L. M.; DEANE, M. P. & FERREIRA Neto, J. — Studies on transmission of Simian Malaria and on a natural infection of man with *Plasmodium simium* in Brazil. *Bull. W.H.O.* 35:805-808, 1966.
3. DEANE, L. M.; FERREIRA Neto, J. & CERQUEIRA, N. L. — Observações preliminares sobre malária de macacos no Estado do Amazonas. *Rev. Brasil. Biol.* 26:405-412, 1966.
4. DEANE, L. M. & OKUMURA, M. — Infecção natural do macaco barrigudo, *Lagothrix lagotricha* do Amazonas por plasmódio do tipo *brasilianum*. *Rev. Paul. Med.* 66:296-297, 1965.
5. DEANE, L. M. & OKUMURA, M. — Infecção natural de macacos coatá, *Ateles paniscus* do Amazonas por *Plasmodium brasilianum*. *Rev. Paul. Med.* 68:56-57, 1966.
6. GALINDO, P. — In Dunn, F. L. & Lambrecht, F. L. — The hosts of *Plasmodium brasilianum*. Gonder & Berenberg-Gossler, 1908. *J. Parasit.* 49:316-319, 1963.
7. GONDER, R. & BERENBERG-GOSSLER, H. — Untersuchungen über Malaria-plasmodien der Affen. *Malaria Lpz.* 1:47, 1908.
8. SERRANO, J. A. — Infección natural de un araguato, *Alouatta seniculus straminea*, por *Plasmodium brasilianum* en Venezuela. *Acta Cient. Venezol.* 18:12-15, 1967.

Recebido para publicação em 4/7/1967.