

Communication

[Comunicação]

Brown-throated three-toed sloth (*Bradypus variegatus* Shinz, 1825) as a new host for *Leiuris leptocephalus* (Rud., 1819) Leuckard, 1850

[Preguiça comum (*Bradypus variegatus* Shinz, 1825) como novo hospedeiro de *Leiuris leptocephalus* (Rud., 1819) Leuckard, 1850]

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Sloths of the *Bradypus* genus (Bradypodidae) live in the tropical forests of Central and South America. Three species are found in Brazil: *Bradypus torquatus* Illiger, 1811; *Bradypus tridactylus* Linnaeus, 1758; and *Bradypus variegatus* Shinz, 1825. The literature shows scarce information about these species, currently listed in the Appendix II of CITES (UNEP-WCMC, 2007). In Brazil, few studies have been carried out on the helminth fauna of sloths of the genus *Bradypus*. Vicente et al. (1993) reported the occurrence of helminths in the species *B. variegatus* and *B. tridactylus*, which is the best known host.

This work reports the occurrence of *Leiuris leptocephalus* (Rud., 1819) Leuckard, 1850 in a specimen of *B. variegatus* found in the Northern coastal region of Ubatuba, São Paulo State, Brazil.

In October 2005, a female sloth of the species *B. variegatus* was sent to the Ubatuba Aquarium/Argonaut Institute for Coastal and Marine Conservation. The animal was found entangled with an electric wire and had received a 13,000-volt shock, and died soon after the beginning of the treatment. At necropsy, the gastrointestinal tract was removed and the esophagus, stomach, and small and large intestines were separately analyzed.

The helminths were collected, fixed in warm AFA solution, and cleared with phenol. Morphologic and morphometric analysis were performed with a computer system for image analyses (QWin Lite 3.1 - Leica). The samples were later deposited at the Helminth Collection of the Instituto de Biociências, at Universidade Estadual Paulista (CHIBB-UNESP), Botucatu, São Paulo State, Brazil. Only helminths of the Nematoda Class were found in the small intestine of the specimen, and were identified as *L. leptocephalus*.

Taxonomic summary

Family Spirocercidae Chitwood and Wehr, 1932
Leiuris leptocephalus (Rud., 1819) Leuckard, 1850

(Sin: *Strongylus leptocephalus* Rud. 1819; *Spirorptera leptocephala* Schneider, 1866; *Spirocercella brasiliensis* Twaite, 1928; *Simondsia leptocephalus* Lopez-Neyra, 1951)

Host: *Bradypus variegatus* Shinz, 1825

Locality and collection date: Bonete beach region, Ubatuba city- North coast of São Paulo State - Brasil, 23°32'19,40"S; 45°11'06,57"O. on October 25, 2005

Intensity of infection: one host with 23 parasite specimen

Site of infection: small intestine

Voucher specimens deposited: CHIBB n° 1671-1672

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Measurements: (n= 7) The morphometric characteristics were:

Females (n= 3): body 32.1mm (29.03-34.0) length and 0.616mm (0.563-0.647) width; vestibule 0.143mm (0.126-0.160) length; esophagus divided into anterior muscular, 0.401mm (0.382-0.426) length and posterior glandular 4.13mm (3.94-4.32) length; the distance from the cephalic papillae to anterior extremity 0.36µm (0.34-0.40); the distance from the nerve ring to the anterior extremity 0.68mm (0.65-0.71); the distance from the vulva to the anterior extremity was 13.31mm (12.98-13.64); the distance from the anus to the posterior end 0.23mm (0.22-0.25); eggs 0.044mm (0.040-0.045) length and 0.024µm (0.021-0.029) width.

Males (n= 4): body 17.21mm (16.75-17.69) length and 0.384mm (0.368-0.410) width; vestibule 0.010mm (0.098-0.120) length; esophagus divided into anterior muscular, 0.33mm (0.32-0.34) and posterior glandular 2.99mm (2.88-3.23); the distance from the cephalic papillae to the anterior extremity 0.29mm (0.27-0.30); the distance from the nerve ring to the anterior extremity 0.56mm (0.54-0.59); the two unequal spicules 1.74mm (1.67-1.79) length and 0.47mm (0.43-0.52) length; gubernaculum 0.054mm (0.051-0.056) length and cloaca 0.315mm (0.307-0.324) length.

Records: little is known about the helminth fauna of hosts of the genus *Bradypus* and the few literature reports available refer generally to hosts of the species *B. tridactylus*. In Brazil, only the nematode *Dirofilaria incrassata* (Molin, 1858) Sandgraund, 1938 was reported for the species *B. variegatus*

(Vicente et al. 1993). For *B. tridactylus*, other helminths have been reported: *Dipetalonema spiralis* (Molin, 1860) Sandgroud, 1938; *Dirofilaria freitasi* Mendonça, 1948; *Dirofilaria incrassata* (Molin, 1858) Sandgroud, 1938; *Leiuris pereirai* Gomes & Vicente, 1970; *Paraleiuris locchii* Vaz & Pereira, 1929; *Paraleiuris vazi* Vicente & Gomes, 1971; *Physocephalus gracilis* (Rud., 1819); *Physocephalus leptocephalus* (Rud., 1819); and *L. leptocephalus* (Vicente et al. 1993; Vaz e Pereira, 1929).

The morphometric analysis of males revealed a smaller length and width than those reported in the literature for the species, whereas dimensions of the muscular esophagus, specula, and cloaca were larger than those usually reported. In females, total width and length, muscular esophagus, and eggs were smaller than those reported in the literature, and length of the glandular esophagus was larger. These results may reflect variations of the specimens collected and did not interfere with the identification of the species collected. The morphometric data add to the knowledge of the morphologic variability of the sloth parasite *L. leptocephalus*.

This report shows *B. variegatus* as a new host to *L. leptocephalus*, also representing the first time that parasites are found in this host in the Southeastern region of Brazil, contributing to the knowledge of the helminth fauna of Brazilian sloths.

Keywords: *Bradypus variegatus*, nematoda, *Leiuris leptocephalus*, sloth, Brazil

RESUMO

Vinte e três espécimes de *Leiuris leptocephalus* (Rud., 1819) Leuckard 1850 (Spiroceridae) foram recuperados do intestino delgado de uma fêmea de preguiça comum, *Bradypus variegatus* Shinz 1825 (Bradipodidae), em Ubatuba, estado de São Paulo. Os dados demonstram maior variabilidade morfológica em relação aos dados da literatura, o que contribui para a caracterização morfológica desse nematódeo. Essa comunicação corresponde ao primeiro relato de *B. variegatus* como hospedeiro de *L. leptocephalus*.

Palavras-chave: *Bradypus variegatus*, nematoda, *Leiuris leptocephalus*, preguiça comum, Brasil

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