

Short Communication

First occurrence of *Cruorifilaria tubero cauda* Eberhard, Morales & Orihel, 1976 (Spirurida, Filarioidea) in *Hydrochaeris hydrochaeris* (Linnaeus, 1766) (Rodentia, Hydrochaeridae) in the municipality of Juiz de Fora, Minas Gerais, Brazil

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Abstract: The purpose of this work is to report the occurrence and supply biometric data on *Cruorifilaria tubero cauda* Eberhard, Morales & Orihel, 1976 (Spirurida, Filarioidea) in *Hydrochaeris hydrochaeris* (Linnaeus, 1766) (Rodentia, Hydrochaeridae) in the municipality of Juiz de Fora, Minas Gerais, Brazil. The specimens of *C. tubero cauda* were found in the blood vessels of the kidneys of two capybaras, with mean intensity of $7 \pm 4,24$ parasites per host. No macroscopic lesions were observed in the kidneys. This is the first report of this nematode species in *H. hydrochaeris* from the municipality of Juiz de Fora.

Key words: *Cruorifilaria tubero cauda*, Nematoda, *Hydrochaeris hydrochaeris*

Resumo: Primeiro registro de *Cruorifilaria tubero cauda* Eberhard, Morales & Orihel, 1976 (Spirurida, Filarioidea) em *Hydrochaeris hydrochaeris* (Linnaeus, 1766) (Rodentia, Hydrochaeridae) no município de Juiz de Fora, Minas Gerais, Brasil. A proposta deste estudo foi registrar a ocorrência e fornecer dados da biometria de *Cruorifilaria tubero cauda* Eberhard, Morales & Orihel, 1976 (Spirurida, Filarioidea) em *Hydrochaeris hydrochaeris* (Linnaeus, 1766) (Rodentia, Hydrochaeridae) no município de Juiz de Fora, Minas Gerais, Brasil. Os espécimes de *C. tubero cauda* foram encontrados nos vasos sanguíneos dos rins de duas capivaras com intensidade média de $7 \pm 4,24$ parasitos por hospedeiro. Lesões macroscópicas não foram observadas nos rins. Este é o primeiro registro desta espécie de nematóide em *H. hydrochaeris* no município de Juiz de Fora.

Palavras-chave: *Cruorifilaria tubero cauda*, Nematoda, *Hydrochaeris hydrochaeris*

Hydrochaeris hydrochaeris (Linnaeus, 1766) (Rodentia, Hydrochaeridae), popularly called capybara, is a generalist herbivore with semi-aquatic habits and a good swimmer (ALHO *et al.*, 1987). The animal can be found from Panama to the Uruguay River Basin in northern Argentina, and is widely

distributed throughout Brazil, in habitats composed of water, pasture and forest (ALHO, 1986).

Nematodes of the species *Cruorifilaria tubero cauda* Eberhard, Morales & Orihel, 1976 (Spirurida, Filarioidea) have been reported as capybara parasites in Colombia (EBERHARD *et al.*, 1976;

MORALES *et al.*, 1978; YATES & HELLNER, 1989), Venezuela (CAMPOS-AESEN & PLANAS-GIRON, 1986) and Brazil (ARANTES *et al.*, 1985; COSTA & CATTO, 1994; NASCIMENTO *et al.*, 2000). In Brazil, the occurrence of *C. tubero cauda* has been registered in capybaras only in the states of Mato Grosso do Sul (ARANTES *et al.*, 1985; COSTA & CATTO, 1994; NASCIMENTO *et al.*, 2000) and São Paulo (ARANTES *et al.*, 1985).

The objective of this study is to report the occurrence of *C. tubero cauda* in capybaras in the municipality of Juiz de Fora (21°25'35''S; 43°20'50''W), in the state of Minas Gerais, and to provide biometric data on the specimens studied.

The nematodes were collected from two capybaras that had been accidentally killed. The animals were necropsied according to UENO & GONÇALVES (1988). The parasites were fixed in AFA and placed in alcohol 70°GL, with 10% glycerin. For identification, they were clarified with glacial acetic acid, mounted on slides under slide covers, and observed under an optical microscope. Identification was according to EBEHARD *et al.* (1976).

The morphology of the two specimens studied agrees with the description of *C. tubero cauda* made by EBEHARD *et al.* (1976). The females (n=4) had total length between 27,50 and 31,02 mm (28,91 ± 1,62), width at the esophagus-intestine junction between 165,00 and 240,00 µm (196,25 ± 35,44), esophagus length between 1,55 and 1,79 mm (1,67 ± 0,16), distance from the vulva (Fig. 1A) to the anterior end (Fig. 1B) between 1,79 and 2,43 mm (2,15 ± 0,26), and tail length (Fig. 1C) between 200,00 and 230,00 µm (218,75 ± 14,36). The males (n=3) had total length between 17,72 and 19,02 mm (18,15 ± 0,75), width at the esophagus-intestine junction of between 135,00 and 150,00 µm (141,66 ± 7,63), esophagus length between 1,43 and 1,56 mm (1,47 ± 0,07), tail length (Fig. 1D) between 145,00 and 155,00 µm (150,00 ± 5,00), large spicule length between 290,00 and 315,00 µm (306,66 ± 14,43) and small spicule length between 50,00 and 60,00 µm (55,00 ± 5,00). The ratio between spicules was 5,56 : 1. The specimens of *C. tubero cauda* in this study had smaller body measurements when compared to those described by EBEHARD *et al.* (1976), except for the ratio between spicules, which was greater here.

Specimens of *C. tubero cauda* were found parasitizing the blood vessels of the kidneys of the capybaras examined. This nematode species, when described by EBEHARD *et al.* (1976), was found in the blood vessels of the kidneys, lungs and heart of capybaras in Colombia.

There are reports of vascular damage caused by *C. tubero cauda* in capybara kidneys, lungs and hearts (MORALES *et al.*, 1978; CAMPOS-AESEN & PLANAS-GIRON, 1986; NASCIMENTO *et al.*, 2000). In the present study, the kidneys parasited by *C. tubero cauda* did not show any visible macroscopically injury.

The mean intensity of *C. tubero cauda* in the capybara kidneys in the present study was 7 ± 4,24 parasites per host. In Brazil, COSTA & CATTO (1994) recorded a mean intensity for *C. tubero cauda* of 8 parasites per host, and NASCIMENTO *et al.* (2000) observed a mean intensity of 20,70 parasites per host. The mean intensity of *C. tubero cauda* in the present study agrees with that found by COSTA & CATTO (1994) in capybaras from the Pantanal (wetlands) of the state of Mato Grosso do Sul.

The occurrence of vascular lesions in the kidneys may be a consequence of high intensities of *C. tubero cauda*, as was observed by NASCIMENTO *et al.* (2000) in capybara kidneys in the Pantanal of Mato Grosso do Sul. These lesions were not observed by COSTA & CATTO (1994), nor were they in the present study, in which the parasite intensities were comparatively lower. The work records for the first time the occurrence of *C. tubero cauda* in kidneys of capybaras in the state of Minas Gerais, Brazil.

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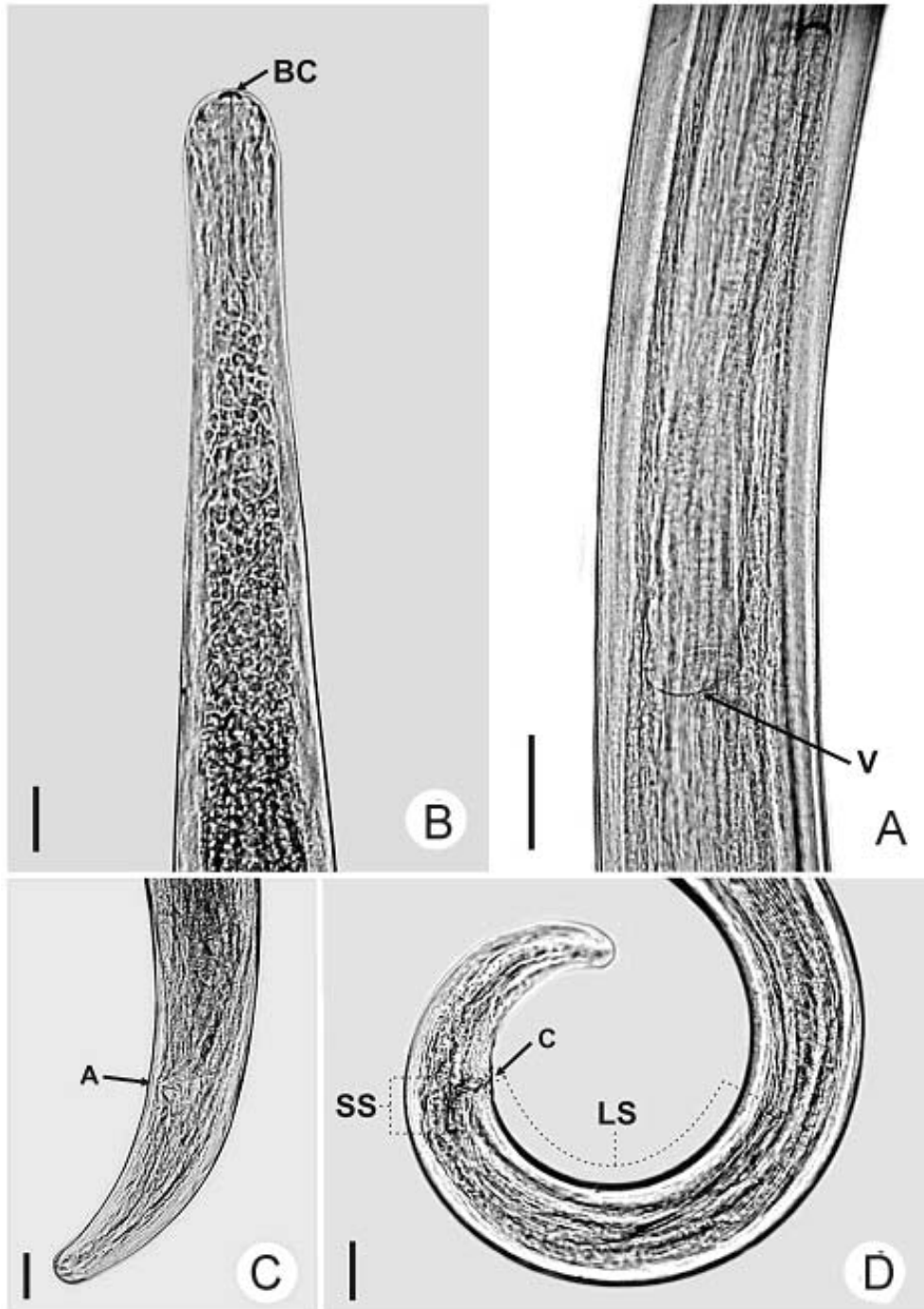


Figure 1. *Cruorifilaria tubero cauda* – (A) vulva region – ventral view; (B) Anterior region of a female– side view; (C) tail of the female – side view; (D) tail of the male – side view. (scale bar = 100 μ m) (A – anus; C – cloaca; BC – buccal capsule; SS – short spicule; LS – long spicule; V – vulva).

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