

**MORPHOLOGICAL ASPECTS OF *Vexillata* sp. (NEMATODA: ORNITHOSTRONGYLIDAE)
PARASITE OF *Clyomys laticeps* (RODENTIA: ECHIMYIDAE) FROM PANTANAL
MATOGROSSENSE, BRAZIL, BY SCANNING ELECTRON MICROSCOPY**

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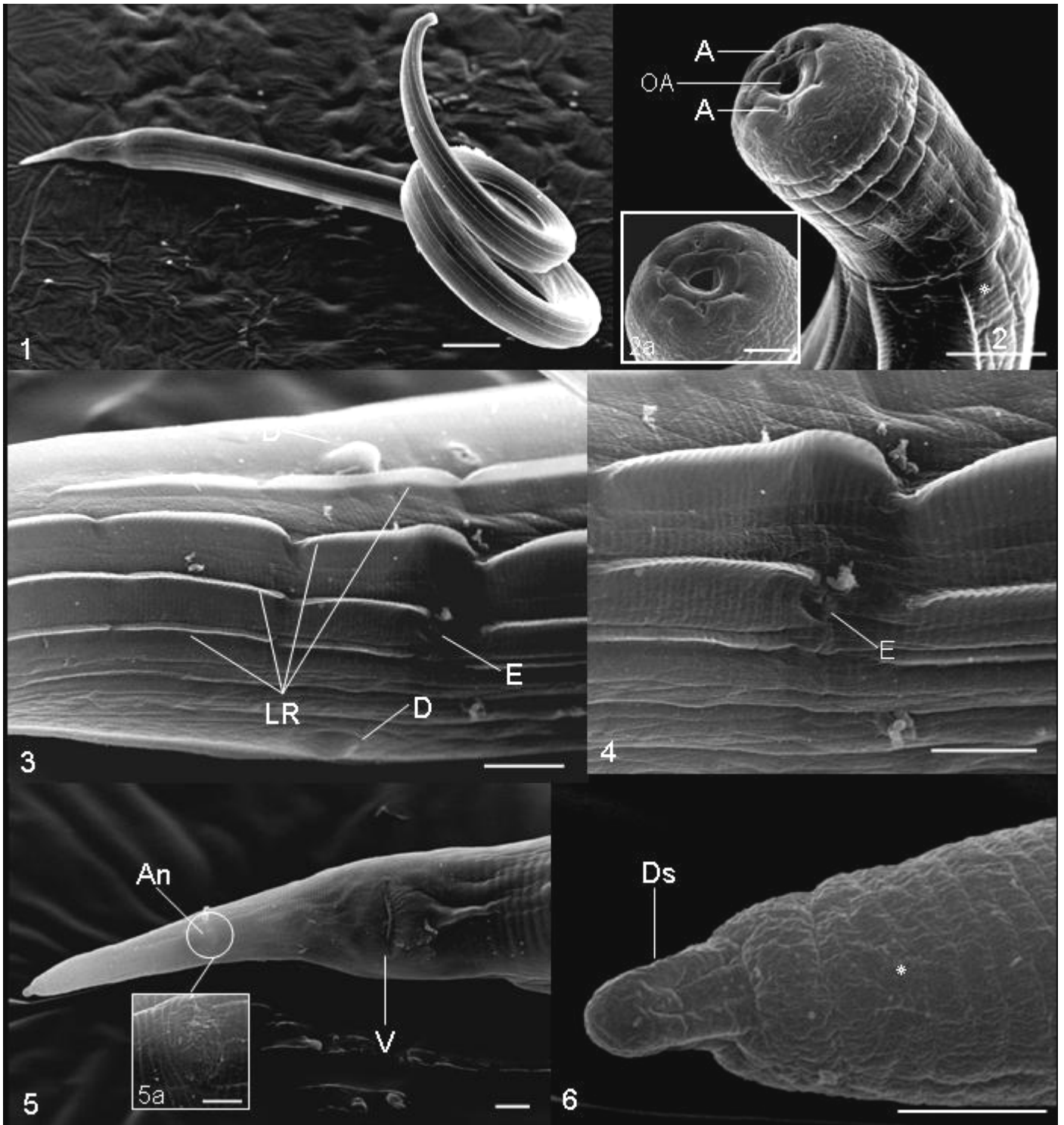
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The genus *Vexillata* Travassos, 1937 includes species parasites of the small intestine of rodents of the families Geomyidae and Heteromyidae in North and South America [1-3] and Leporidae (rabbit) in North America [3]. Species of *Vexillata* are characterized by a synlophe with well-developed carene frontal or sub-frontal axis of orientation [4], a symmetric copulatory bursa with well-developed lateral lobes and arrangement of bursal rays 2-2-1 (Durette-Desset, 1971) or 2-1-2 [1] [5]. The purpose of the present work was to analyze *Vexillata* sp. from the spiny rat *Clyomys laticeps*, a small semi-fossorial rodent [6] by scanning electron microscopy (SEM) adding new morphological taxonomic features to its description.

Specimens of *C. laticeps* were trapped in the Rio Negro Farm (19° 34' 54" S, 56° 14' 62" W) sub region of Nhecolândia, Mato Grosso State, Brazil, (this region is known as Pantanal Mato-Grossense) in a collaboration between the Laboratório de Biologia de Helminthos Otto Wucherer and Laboratório de Biologia e Parasitologia de Mamíferos Silvestres Reservatórios, and were authorized by the Instituto Brasileiro de Recursos Naturais Renováveis (IBAMA)-License numbers: CGFAU 11261/09. In this report, only females were analysed. The nematodes were collected from the small intestine of rodents, washed in 0,9 % NaCl solution, fixed in hot AFA (2% glacial acetic acid, 3% formaldehyde, and 95% of 70° ethanol) and preserved in the same solution. washed in 0.1 M cacodylate buffer pH 7.2, post fixed in a solution containing 1% OsO₄, in 0.1M cacodylate buffer plus 0.8% potassium ferricyanide pH 7.2 for 1 hour. Then they were dehydrated in a graded series of ethanol (30-100%), critical point-dried in CO₂ sputter-coated with gold and examined using a scanning electron microscope (Jeol JSM-5310) at 25 Kv. *Vexillata* sp. females are small (measuring about 250 µm) and ventrally coiled (Fig. 1). SEM images clearly show the dome shaped anterior end with the tri-radiated oral opening in its center and two amphids around it (Fig. 2 and 2a). The cuticle in this region was smooth (Fig. 2). Along the nematode body the cuticle was transversally striated (Fig. 2), with longitudinal ridges that aroused just posterior the cephalic cuticular constriction (Figs. 2, 3 and 4). Only in the cervical region the cuticle was transversally rough without striations (Fig. 2). The excretory pore and derids are well developed and located at the anterior third of the nematode body (Fig. 3 and 4). The female caudal region was conical ending in a digitiform projection and ventrally bent (Fig. 5 and 6). The dorsal region presented longitudinal ridges not prominent that vanish near the caudal tip (Figs. 5 and 6). The vulva was a single fissure closer to anal opening and both are located near the tail ending (Fig. 5). Due to the superiority of SEM over LM in terms of resolution and three dimensional view for determination of the taxonomical characters of Nematodes, we could confirm the previous assignment of these parasites to the genus *Vexillata*. Analyses of the males are being carried and may allow the classification to the species level.

References:

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Figures 1 – 6: Scanning Electron Microscopy of females of *Vexillata* sp. 1 – *Vexillata* sp. showing a small and coiled body with longitudinal cuticular ridges (Bar 100 μ m). 2 – Cephalic region showing oral aperture (OA) surrounded for two amphids (A), and the transversally striated cuticle (asterisk) (Bar 10 μ m). 2 – Face view of cephalic region (Bar 5 μ m). 3 – Anterior region showing longitudinal cuticular ridges (LR), deirides (D) and excretory pore (E) (Bar 10 μ m). 4 – Detail of deirides (D), excretory pore (E) and longitudinal cuticular ridges (LR) (Bar 10 μ m). 5 – Caudal region showing vulva (V), anus (An) and tail end (Bar 50 μ m). Figure 5a – Detail of vulva (Bar 10 μ m). 6 – Tail end showing digitiform terminal structure (Ds) (Bar 5 μ m).