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The genus *Paradorylaimus* Andrássy, 1969 (Nematoda: Dorylaimida) with description of three new species from Ecuador

LARA ORSELLI, MIRELLA CLAUSI & MARIA TERESA VINCIGUERRA[1]
Department of Biological, Geological and Environmental Sciences, University of Catania (Italy)
[1] *Corresponding author. E-mail: vincimar@unict.it*

Abstract

Three new species of *Paradorylaimus* Andrássy, 1969, found in moss and litter of natural environments of Ecuador are described. *P. andinus* **sp. n.** is characterized by 1.65–2.26 mm long female body, lip region set off by a depression, odontostyle 26.5–32. 5 µm long and 3.0–4.5 µm wide; pre-rectum 1.1–2.4 anal body diameters long in female and 1.2–2.3 in male; 0–3 pre-vulval and 0–5 postvulval papillae; spicules 60–80 µm long; 13–14 ventral supplements; female tail elongate-filiform, 6–10 anal body diameters long; male tail short, 0.7–1 cloacal body diameters long, dorsally convex, with a marked ventral concavity and blunt terminus. *P. longicaudatus* **sp. n.** is characterized by 1.78–2.14 mm long female body, lip region slightly set off by a depression, odontostyle 30–32.5 µm long and 2.0–3.5 µm wide; pre-rectum 1.3–2.3 anal body diameters long in female and 2–3.5 in male; paravulval papillae absent; spicules 44.5–62.5 µm long; 11–13 ventral supplements; female tail elongate-filiform, 11–16 anal body diameters long; male tail short, 0.8–0.9 cloacal body diameters long, convex conoid, with blunt terminus. *P. flagellicaudatus* **sp. n.** is characterized by 1.65–1.73 mm long female body, lip region continuous, odontostyle 19–24 µm long and 2–2.5 µm wide; pre-rectum 1.8–2.6 anal body diameters long in female and 2.4 in male; spicules 45 µm long; 10 ventral supplements; female tail elongate-filiform, 25–26 anal body diameters long; male tail short, conoid, 0.8 cloacal body diameters long. The authors support the validity of the genus *Paradorylaimus*, provide an updated diagnosis and furnish a compendium of the main morphometric parameters of its species and a key to them.

Key words: Morphology; *Paradorylaimus andinus* **sp. n.**; *Paradorylaimus longicaudatus* **sp. n.**; *Paradorylaimus flagellicaudatus* **sp. n.**; taxonomy

Introduction

During a survey of nematode fauna from Ecuador, conducted on March 1996 by Prof. Francesco Lombardo of University of Catania, some populations which could easily be attributed to the genus *Paradorylaimus* Andrássy, 1969 were found, which turned out to be new species. Three of them are here described and named while the fourth, due to the scarcity of specimens and to the absence of males, is described as *Paradorylaimus* sp. During this study we were faced with the problematic nature of the identity of the genus *Paradorylaimus*, which has been a subject of controversy. The final part of our paper, therefore, is devoted to a discussion and updated definition of the genus *Paradorylaimus* and of its species.

Materials and methods

Soil and litter samples were collected from the rhizosphere of grasses and mosses at a depth of 10–20 cm in various natural habitats of Ecuador. Nematodes were fixed on the spot with cold 4% formalin, extracted in the laboratory by washing and centrifugation of the soil and litter samples and transferred to anhydrous glycerin according to de Grisse's (1969) method. Permanent slides were made and the nematodes were examined using a LEICA model DMRB light microscope. Drawings and measurements were made using a drawing tube attached to the microscope and with the aid of Adobe Photoshop CS5; photographs were taken with a LEICA EC3 camera. The positions of pharyngeal gland nuclei were calculated following Andrássy's formula (Andrássy, 1998).

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