



Three new and a known species of Tylencholaimoidea (Nematoda: Dorylaimida) from Singapore

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Abstract

Three new and a known species of soil-inhabiting nematodes belonging to the superfamily Tylencholaimoidea Filipjev, 1934 are described and illustrated from Singapore. *Tantunema enigmatum* n. sp. is characterised by having 0.33–0.41 mm long body; angular, distinctly offset lip region; well developed circumoral sclerotization; odontostyle slender with aperture about one-fourth of its length; simple rod-like odontophore; anterior part of pharynx slender, weakly muscular, expanding abruptly into a cylindroid basal bulb, constriction present between two parts of pharynx; expanded portion divisible into a short conical, less muscular anterior part and a posterior muscular cylindrical part with thickened inner lining; lumen of the posterior one-third of expanded portion distinctly widened and thickened; mono-opisthodelphic female genital system and short hemispheroid tail. *Dorella shamimi* n. sp. is characterised by having 0.58–0.62 mm long body; continuous lip region with indistinct labial papillae; labial disc absent; 10–10.5 µm long odontostyle with a large pad-like muscular structure attached on ventral side of posterior half of its length extending to the anterior part of the odontophore; odontophore asymmetrical with round, transparent, knob-like thickening; pharynx with a short terminal oval bulb; mono-prodelphic female genital system with a short post-uterine sac; short conoid tail, with rounded terminus, and males with 18–18.5 µm long, simple arcuate spicules and a single ventromedian supplement. *Tylencholaimus singaporensis* n. sp. is characterized by having 0.35–0.47 mm long body; distinctly offset, cap-like lip region, 4.5–5.5 µm long, slender odontostyle, simple rod-like odontophore with small but distinct basal knobs, pharyngeal expansion abrupt, mono-prodelphic genital system with no post-uterine sac, and short hemispheroid tail with distinct terminal caudal pore. *Tylencholaimus intermedius* Peña-Santiago & Coomans, 1996 is reported for the first time from Singapore.

Key words: description, Dorylaimida, *Dorella shamimi* n. sp., new species, Singapore, *Tantunema enigmatum* n. sp., taxonomy, Tylencholaimoidea, *Tylencholaimus singaporensis* n. sp.

Introduction

During August–September 2003, first author (WA) collected soil samples from different localities in Singapore on the invitation of the Raffles Museum of Biodiversity Research, the University of Singapore, to initiate the identification and inventory of the soil-inhabiting nematodes occurring in the natural forest of Singapore. Several species of soil-inhabiting nematode have already been described from this collection (Ahmad & Mushtaq, 2004; Ahmad *et al.*, 2004, 2005; Ahmad, 2007). The present paper deals with the description of three new and a known species of Tylencholaimoidea.

Material and methods

The nematodes were extracted from soil samples by Cobb's sieving and decantation and modified Baermann's funnel technique. Nematodes obtained in clear water were killed and fixed in hot 4% formalin, dehydrated to glycerine by a slow method (Seinhorst, 1962) and mounted on slides in anhydrous glycerine. Measurements