



Four new species of the genus *Mesodorylaimus* Andrassy, 1959 (Nematoda: Dorylaimida) from India

UZMA TAUHEED & WASIM AHMAD¹

Section of Nematology, Department of Zoology, Aligarh Muslim University, Aligarh-202 002, India

¹Corresponding author. E-mail: ahmadwasim57@yahoo.co.in

Abstract

Four new species of soil-inhabiting nematodes belonging to the genus *Mesodorylaimus* Andrassy, 1959 are described and illustrated from India. *Mesodorylaimus khasianus* n. sp. is characterized by having body length 1.05–1.14 mm in females and 0.94–1.09 mm in males; lip region offset by a slight constriction; odontostyle 10–12 µm long; pharyngeal expansion gradual; transverse vulva; presence of an additional pair of sclerotized pieces at vagina; tail long with rounded terminus; and males with simple dorylaimoid spicules 32–34 µm long, and seven to eleven regularly spaced ventromedian supplements. *Mesodorylaimus noreasus* n. sp. is characterized by having body length 1.65–1.74 mm in females and 1.42–1.61 mm in males; lip region truncate, offset by slight depression; odontostyle 14–16 µm long; pharyngeal expansion gradual; transverse vulva, elongate attenuated tail with rounded terminus and males with simple dorylaimoid spicules 42–43 µm long, nine regularly spaced ventromedian supplements and short conoid tail with rounded terminus. *Mesodorylaimus spicatus* n. sp. is characterized by having body length 0.81–1.14 mm in females and 0.86–1.1 mm in males; lip region offset by slight depression; odontostyle 10.0–12.5 µm long; pharyngeal expansion gradual; transverse vulva, small spicate tail with rounded terminus and males with simple dorylaimoid spicules 28–33 µm long, seven to nine regularly spaced ventromedian supplements and short conoid tail with rounded terminus. *Mesodorylaimus bomdillaensis* n. sp. is characterized by having body length 0.73–0.81 mm; lip region offset by slight depression; “double” guiding ring; odontostyle 10 µm long; pharyngeal expansion gradual; transverse vulva; thin, long tongue-like structure at intestine-prerectum junction and tail long filiform with pointed terminus.

Key words: description, Dorylaimida, India, *Mesodorylaimus bomdillaensis* n. sp., *Mesodorylaimus khasianus* n. sp., *Mesodorylaimus noreasus* n. sp., *Mesodorylaimus spicatus* n. sp., taxonomy

Introduction

Soil samples collected mainly from north-eastern states of India yielded a very rich nematode fauna from this biodiversity hot spot. Several species of soil-inhabiting nematodes have already been described from this collection (Baniyamuddin & Ahmad, 2006, 2006a, 2007, 2009, Naz & Ahmad, 2009, Ahmad *et al.*, 2010). The present paper deals with the description of three new species of the genus *Mesodorylaimus* Andrassy, 1959 from this collection. A fourth new species of this genus collected from Aligarh is also included in this paper.

Material and methods

The nematodes were extracted from soil samples by Cobb's (1918) 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 slow method (Seinhorst, 1962) and mounted on glass slides in anhydrous glycerine. Measurements were taken using an ocular micrometer and drawings were made using a drawing tube attached to the 80i Eclipse Nikon DIC microscope and photographs were taken using DS-Fi 1 camera. Positions of pharyngeal gland nuclei were calculated using Andrassy's (1998) formula.