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A new and three known species of the genus *Tylencholaimellus* Cobb in M.V. Cobb, 1915 (Nematoda: Dorylaimida) from Changbai Mountain, China

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Abstract

A new and three known species of the genus *Tylencholaimellus* Cobb in M.V. Cobb, 1915 are described from Changbai Mountain, Northeast China. *Tylencholaimellus sinensis* n. sp. species is characterized by having a medium sized body (L= 1.1–1.3 mm); outer cuticle with fine transverse striations; inner layer distinctly striated; radial refractive elements abundant; labial disc absent; lip region offset by constriction; lips rounded and amalgamated; odontostyle 18–19 µm, odontophore 7–8 µm, combined length 25–27 µm; anterior uterine sac 0.8–1.6 mid body diameters long; mono-opisthodelphic female genital system with small anterior uterine sac; transverse vulva and short conoid tail. *Tylencholaimellus striatus* Thorne, 1939, *T. montanus* Thorne, 1939 and *T. cinctus* Orr & Dickerson, 1965 are described for the first time from this region of the world.

Key words: Changbai Mountain, China, known species, new species, taxonomy, *Tylencholaimellus*

Introduction

Changbai Mountain (126° 55'–129° 00' E; 41° 23'–42° 36' N) is located in the northeast part of China at the border with North Korea. Altitudes range from 720 to 2691 m above sea level (a.s.l.), mean annual temperature from 3 to -7°C, and mean annual precipitation from 679 to 1330 mm. Vegetation consists of deciduous forest, mixed coniferous-broadleaved forest, dark-coniferous spruce-fir forest, dark coniferous spruce forest, birch forest and alpine tundra. The plant species comprise European, Siberian and central Chinese species, and include 1,800 species of vascular plants (Zhang *et al.*, 2003; Zhao *et al.*, 2004; Tong *et al.*, 2010). The variations in climate and vegetation of Changbai Mountain make it a special habitat for soil-inhabiting nematodes. As no data on the nematode fauna in this habitat are available, we plan to carry out a thorough systematic study of soil-inhabiting nematodes from Changbai Mountain. The present paper is the first in a projected series, documenting three known and a new species of the genus *Tylencholaimellus* Cobb in M.V. Cobb, 1915 from this region.

Material and methods

The nematodes were extracted from soil samples by Cobb's (1918) sieving and decantation technique and by a modified Baermann's funnel technique. Nematodes so obtained were killed and fixed with hot 4% formalin, dehydrated to glycerin by a slow evaporation method, and mounted in anhydrous glycerin on slides. Measurements were taken using an ocular micrometer and line illustrations were made using a drawing tube attached to a Nikon Optiphot-2 microscope. Photographs were taken with a digital camera attached to a Nikon Eclipse 80i DIC microscope.