Prodorylaimus filamentus sp. n. and Eutobrilus longicaudatoides sp. n.
(Nematoda) from Lake Baikal, Russia

VLADIMIR G. GAGARIN¹ & TATYANA V. NAUMOVA²
¹Institute of Inland Water Biology, Russian Academy of Sciences, Borok, 152742, Yaroslavl Province, Russia.
E-mail: gagarin@ibiw.yaroslavl.ru
²Limnological Institute, Siberian Branch of the Russian Academy of Sciences, Irkutsk, 664033, Russia. E-mail: tvnaum@lin.irk.ru

Abstract

Two nematode species found in Lake Baikal, Russia are described. Prodorylaimus filamentus sp. n. is morphologically close to P. longicaudatoides Altherr, 1968 and P. kralli Tsalolikhin, 1975. The new species can be separated from P. longicaudatoides by the longer body (L = 4.89–6.06 mm versus L = 2.0–3.5 mm), relatively longer tail (c′ = 18.4–25.0 versus c′ = 14–18), longer odontostyle (60–65 µm long versus 32–37 µm long), presence of double and wide guiding ring and longer spicules (89–90 µm long versus 70–78 µm long). It can also be separated from P. kralli by the longer tail (c = 4.3–6.0, c′ = 18.4–25.0 versus c = 7.0–8.0, c′ = 11–16), lower “vulva-anus to tail length” ratio (1.6–2.2 versus 2.5–3.0), shorter odontostyle (60–65 µm long versus 75–80 µm long). Eutobrilus longicaudatoides sp. n. is closely related to E. anguiculus Tsalolikhin, 1977, but is clearly distinct in the shorter outer labial setae (9–10 µm long or 45–52% of the labial region diameter versus 15–20 µm long or 50–60% of the labial region diameter), shorter tail (males, c = 4.5–6.3, c′ = 15.1–16.7, versus males, c = 7.4–10.4, c′ = 8–9, females, c = 5.0–7.7, c′ = 10–12), smaller number of supplements (5 versus 6) and shorter spicules (47–53 µm long versus 66–68 µm long).

Key words: descriptions, Eutobrilus longicaudatoides sp. n., free-living freshwater nematodes, Lake Baikal, new species, Prodorylaimus filamentus sp. n., taxonomy

Introduction

Lake Baikal in Russia is the deepest lake on Earth and is a unique freshwater body inhabited by endemic fauna. Recently, 73 nematode species representing 30 genera have been reported from this lake (Gagarin & Naumova, 2010a, b, c, d, 2011a, b, c; Shoshin, 2010; Shoshin & Tsalolikhin, 2001; Tsalolikhin, 1980, 1983). Ten species of the genus Eutobrilus Tsalolikhin, 1981 (including the new species described below) have been described from Lake Baikal, most of them found in the littoral zone (Shoshin & Tsalolikhin, 2001; Gagarin & Naumova, 2011b). Moreover, there are four species of the genus Prodorylaimus Andrássy, 1959 (P. kralli Tsalolikhin, 1975, P. eliavai Tsalolikhin, 1977, P. kukuy Tsalolikhin, 1977, P. filamentus sp. n.) inhabiting the lake.

Material and methods

Nematodes were collected in Lake Baikal in two localities: Academical Ridge, on 3 October 2009 (at 389 m depth), and a mud volcano “Malen’kii” (near settlement Bolshoe Goloustnoe), on 20 June 2010 (at 1368 m depth). Both samples were collected by the bottom-dredge “Ocean”. The samples contained numerous free-living nematodes, including the two species described herein. Nematodes were fixed by standard methods, and mounted in glycerin-jelly on permanent slides (Tsalolikhin, 1980). All observations were made using an Olympus CX-21 light microscope. Photographs were taken using an Axiovert 200 ZEISS light microscope fitted with a Pixera Penguin 600CL camera, located in the General Instrumental Center of the Limnological Institute, Siberian Branch of the Russian Academy of Sciences.