A new species of free-living nematodes (Enoplida: Enchelidiidae) from the mangrove wetlands of China

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Introduction

Belbolla is a genus of the family Enchelidiidae that belongs to the Enoplida. The genus Belbolla was renamed by Andréassy (1973) to replace the previously used name Bolbella Cobb, 1920, because Bolbella was a homonym to Bolbella Giglio-Toss, 1915 (Orthoptera - Mantidae). The common characteristic features of the genus Belbolla are the presence or absence of ocelli; a large and narrow buccal cavity divided into two parts; the presence of three teeth, of which one ventro sublateral is the largest tooth; and the presence of a series of bulb-like muscular pharynx swellings (4 to 10) in the posterior section of pharynx (Warwick & Platt, 1998). So far, 20 valid species of this genus have been recorded (Rho et al., 2020; Wang et al., 2022).

Descriptions and discussions

Genus Belbolla Andréassy, 1973

Belbolla mangrove sp. nov. (Figure 1, Figure 2, Table 1)

Belbolla mangrove sp. nov. was characterized mainly by four pharynx bulbs; gubernaculum small and with dorsocaudal apophysis; and precloacal supplements weakly developed. The new species Belbolla mangrove sp. nov. had a length of 1454 μm, with slender body, and the anterior and posterior body ends narrowed (Fig. 1).

Buccal cavity was large but narrow, and was separated into two chambers by cuticular ring. Six short inner labial setae and six outer labial setae were found. Ten cephalic setae in a circle. Amphids fovea was pocket-like, located at the level of mid-buccal chambers. Ocelli were absent. Many cervical setae were scattered over the anterior region of the pharynx, up to 4-5 μm long. The pharynx was 327 μm long and corresponding diameter was 52 μm, muscular and expanded gradually, and posteriorly modified into four pharynx bulbs. The cardia were short and conoid.

Belbolla mangrove sp. nov. and B. vietnamica both had four pharynx bulbs. However, the new species discovered in this study differed from B. vietnamica in five aspects: (1) the ocelli (absence vs. presence); (2) the shape of proximal spicules ends (blunt and round vs. strongly bent), (3) the shorter gubernacular dorsocaudal apophysis (6-7 μm vs. 16-19 μm); (4) the precloacal supplements (weakly developed vs. well developed); and (5) the terminal setae (without vs. with three terminal setae).

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