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A new species of the genus *Tripylina* Brzeski, 1963 (Nematoda: Enoplida: Trischistomatidae) from Zhejiang Province, eastern China

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Abstract

Tripylina zhejiangensis n. sp. is described and illustrated from Zhejiang province, eastern China. It has a robust body, smooth cuticle with numerous pores, two small subventral teeth in the posterior part of the large triangular dorsal tooth, one ventral-median seta in the cervical region and a pair of setae on the tail. Females are characterized by a body length of 1325–1573 µm, a = 23.3–31.2, b = 5.5–6.6, c = 13.6–19.4, c' = 2.7–3.6 and V = 61.1–68.1%. Small subunit (SSU) and D2/D3 expansion segments of large subunit (LSU) of ribosomal DNA were used to analyze the phylogenetic relationships of sequenced species in the genus *Tripylina*. *Tripylina zhejiangensis* n. sp. varied significantly from other related nematodes both in morphological characterizations and phylogenetic analyses.

Key words: Description, morphology, molecular, phylogeny, taxonomy, *Tripylina*

Introduction

Nematodes in the genus *Tripylina* Brzeski, 1963 are considered to be large-sized predators and are recorded from all continents (Yeates 1972; Tsalolikhin 1983; Brzeski & Winiszewska-Ślipińska 1993; Andrásy 2008; Zhao 2009; Cid del Prado-Vera *et al.* 2010; Tahseen & Nusrat 2010; Asghari *et al.* 2012; Cid del Prado-Vera *et al.* 2012). Retention in the intestine of consumed nematodes (e.g. *T. ixayocensis* Cid del Prado-Vera, Ferris, Nadler & Lamothe-Agrumedo 2012) is considered to be evidence of predation (Cid Del Prado-Vera *et al.* 2012). The key features of nematodes in this genus include having six long and four short cephalic setae in a single whorl, a prodelphic and reflexed gonad without a post-vulval sac and curved tails in both sexes (Zullini 2006). Zhao (2009) divided them into two groups based on the position of the subventral teeth.

The genus *Tripylina* has received increasing attention since the reordering of the taxonomic classification, both for the order Triplonchida (De Ley & Blaxter 2004; Zullini 2006; Bik *et al.* 2010) and Enoplida (Andrásy 2008; Zhao 2011; Cid Del Prado-Vera *et al.* 2012). During the past decade, new research on this genus has led to an increase in the number of species from six to nineteen (Zhao 2009; Tahseen & Nusrat 2010; Asghari *et al.* 2012; Cid del Prado-Vera *et al.* 2012; Xu *et al.* 2013). However, *T. ymyensis* Tahseen & Nusrat 2010 and *T. puxianensis* Xu *et al.* 2013 are the only two species reported from China. Their distribution is confined to north China (*T. ymyensis* from Beijing, *T. puxianensis* from Shanxi). In this study, a new species in the genus *Tripylina* is described from Hangzhou, Zhejiang province, in eastern China.

Material and methods

Nematode sampling, extraction and processing. Soil samples were collected from around the roots of indigenous