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A new species of the genus *Tripylina* Brzeski, 1963 (Nematoda: Enoplida: Trischistomatidae) from Shanxi province, China

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Abstract

Tripylina puxianensis n. sp. is described and illustrated from Shanxi province, China. It is characterized by having a triangular dorsal tooth, pointing towards the ventral side, anterior to two sub-ventral teeth, with dorsal and sub-ventral teeth similar in shape and size; one ventromedian seta in the cervical region; vulva with protruding lips, absence of post-uterine sac; and a pair of setae on the tail; male not found; female body length 1048–1331 μm , $a = 25.5\text{--}33.8$, $b = 5.5\text{--}6.2$, $c = 14.4\text{--}23.1$, $c' = 2.1\text{--}3.5$ and $V = 56.1\text{--}68.5\%$. The phylogenetic relationships among species in the genus *Tripylina* were analyzed using data from the SSU (small subunit) and D2/D3 expansion segments of the LSU (large subunit) rDNA. These analyses confirmed that *T. puxianensis* n. sp. is different from other members of the genus for which sequences are available.

Keywords: Description, new species, morphology, morphometrics, molecular, SSU, LSU, phylogeny, taxonomy, Nematoda, *Tripylina*.

Introduction

The genus *Tripylina* Brzeski, 1963 was classified in the family Tripylidae de Man, 1876, which is attributed to either the order Triplonchida (De Ley & Blaxter 2004; Zullini 2006) or Enoplida (Andrássy 2007; Zhao 2011). Recently *Tripylina* and *Trischistoma* Cobb, 1913 were attributed to the family Trischistomatidae Andr ssy, 2007 (Zhao 2011). Nematodes in the genus *Tripylina* are found in aquatic and soil habitats rich in organic matter. Currently 18 species are known from all continents (Yeates 1972; Tsalolikhin 1983; Brzeski & Winiszewska-Ślipińska 1993; Andr ssy 2007, 2008; Zhao 2009; Cid del Prado-Vera *et al.* 2010; Tahseen & Nusrat 2010; Moslehi *et al.* 2010; Asghari *et al.* 2012; Cid del Prado-Vera *et al.* 2012). These are *T. arenicola* (de Man 1880) Brzeski, 1963, the type species, and 17 other species: *T. sheri* Brzeski, 1963, *T. macroseta* (Vinciguerra & La Fauci 1978) Tsalolikhin, 1983, *T. stramenti* (Yeates 1972) Tsalolikhin, 1983, *T. ursulae* (Argo & Heyns 1973) Tsalolikhin, 1983, *T. longa* Brzeski & Winiszewska-Ślipińska, 1993, *T. yeatesi* Zhao, 2009, *T. kaikoura* Zhao, 2009, *T. tearoha* Zhao, 2009, *T. manurewa* Zhao, 2009, *T. tamaki* Zhao, 2009, *T. valiathani* Tahseen & Nusrat, 2010, *T. myyensis* Tahseen & Nusrat, 2010, *T. gorganensis* Asghari, Pourjam, Heydari, Zhao & Ramaji, 2012, *T. bravoae* Cid del Prado-Vera, Ferris, Nadler & Lamothe-Agrumedo, 2012, *T. ixayocensis* Cid del Prado-Vera, Ferris, Nadler & Lamothe-Agrumedo, 2012, *T. tlamincaensis* Cid del Prado-Vera, Ferris, Nadler & Lamothe-Agrumedo, 2012 and *T. montecilloensis* Cid del Prado-Vera, Ferris, Nadler & Lamothe-Agrumedo, 2012.

The genus *Tripylina* is characterized by having the cephalic setae (six longer and four shorter setae) arranged in a single circle, a prodelphic and reflexed gonad, and by lacking a post-vulva uterine sac. The cuticle is not striated and the tails of both sexes are anteriorly conical, posteriorly cylindrical, and strongly bent (Zullini 2006).