A new species and a new record of *Trischistoma* Cobb, 1913 (Nematoda: Enoplida: Trischistomatidae) from Shanxi Province, China

YU MEI XU¹, ZENG QI ZHAO¹²* & JIAN MING WANG¹*

¹ Laboratory of Nematology, Department of Plant Pathology, Agronomy College, Shanxi Agricultural University, TaiGu, 030801, China. Email: ymxu0310@163.com; jm.w@sohu.com

² Landcare Research, Private Bag 92170, Auckland Mail Centre, Auckland 1142, New Zealand. Email: ZhaoZ@landcareresearch.co.nz

* Corresponding authors: ZhaoZ@landcareresearch.co.nz; jm.w@sohu.com

Abstract

This paper describes a new species and gives a new record and a re-description of a known species of *Trischistoma* Cobb, 1913. *Trischistoma taiguensis* sp. nov. is characterized by having one pair of caudal setae on the tail; female body length of 562–699 µm, a = 35–42, b = 4.1–4.7, c = 11–14, c' = 3.9–4.6 and V = 79–82%. For the first time, *Trischistoma pellucidum* Cobb, 1913 is recorded from Shanxi Province, China. The phylogenetic relationships among species in the genus *Trischistoma* were analyzed using data from the SSU (small subunit) and D2/D3 expansion segments of the LSU (large subunit) rDNA sequences. These analyses confirmed that *T. taiguensis* sp. nov. and *T. pellucidum* differ from other known members of the genus for which sequences are available in GenBank.

Keywords: SSU, LSU, morphology, morphometrics, phylogeny, taxonomy, *Trischistoma taiguensis* sp. nov., *T. pellucidum*

Introduction

The genus *Trischistoma* Cobb, 1913 was originally placed in the family Tripylidae, attributed to the order Triplonchida (De Ley & Blaxter 2004; Zullini 2006). Recently, *Trischistoma* was assigned to the family Trischistomatidae and the order Enoplida (Andrássy 2007; Zhao 2011).

*Trischistoma* is characterized by having the body bent dorsad in the posterior part, six longer outer labial setae and four shorter cephalic setae separated in two circles, a prodelphic female genital tract, vulva located far posterior, very large spermatozoa, spicules not completely surrounded by a muscle layer, and few or no supplements (Andrássy 2006).


To date, *Trischistoma monohystera* is the only species reported for the genus *Trischistoma* from China (Zhao 2011). Here, descriptions and illustrations are given for a new species, *T. taiguensis* sp. nov., and a new record of *T. pellucidum* Cobb, 1913. In addition, two molecular phylogenetic analyses, based on partial SSU and D2/D3 sequences, are presented.
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