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## New Zealand species of the genus *Tripyla* Bastian, 1865 (Nematoda: Triplonchida: Tripylidae). II: Two new, a known species and key to species

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### Abstract

This paper describes three species of the genus *Tripyla* from New Zealand and provides a key to species based on the morphology of females. *Tripyla daviesae* **sp. nov.** is characterized by its short body length (L = 1143–1363 µm), relatively anterior vulva (V = 50–51%), and the length of the gubernaculum (13–17 µm). *Tripyla tirau* **sp. nov.** is characterized by its relatively posterior vulva (V = 55.5–59.5%), relatively short body length (930–1214 µm) and relatively short tail ( $c = 7.9$ – $9.8$ ). *Tripyla affinis* de Man, 1880 was recorded from New Zealand but without a detailed description which is provided here. In addition, the phylogenetic relationships among the species were analyzed using data from the near full length small subunit (SSU) of the ribosomal rRNA genes, and confirmed that *T. daviesae* **sp. nov.** and *T. tirau* **sp. nov.** are distinct from all other species for which sequences are available.

**Key words:** Description, new species, morphology, morphometrics, molecular, SSU, phylogeny, taxonomy

### Introduction

Nematodes of the genus *Tripyla* Bastian, 1865 (Tripylidae de Man, 1876) are found in soil and limnic habitats (Brzeski 1963; Brzeski & Winiszewska-Ślipińska 1993; Tsalolikhin 1983; Zullini 2006; Andrassy 1985, 2006, 2007, 2008). The genus currently consists of twenty-nine valid species *sensu* Cid Del Prado Vera *et al.* (2010). These include the type species *Tripyla glomerans* Bastian, 1865 and 28 other species (*T. affinis* de Man 1880, *T. alaeicaudata* Cid del Prado Vera, Ferris & Nadler 2010, *T. aquatica* Brzeski & Winiszewska-Ślipińska 1993, *T. bioblitz* Zhao 2009, *T. cornuta* Skwarra 1921, *T. crassa* Alekseev & Bestalannaya 1990, *T. dubia* Gagarin 1997, *T. dybowski* Tsalolikhin 1976, *T. elegantula* Brzeski & Winiszewska-Ślipińska 1993, *T. filicaudata* de Man 1880, *T. glosaria* (Gagarin 1994) Andrassy 2007, *T. infra* Brzeski & Winiszewska-Ślipińska 1993, *T. pulchella* Andrassy 2007, *T. italica* Tsalolikhin 2003, *T. koreana* Winiszewska-Ślipińska, Brzeski, Choi & Kim, 2000, *T. longicaudata* Nesterov 1979, *T. magna* Altherr & Delamare Deboutteville 1972, *T. minuta* (Brzeski 1963) Brzeski & Winiszewska-Ślipińska 1993, *T. napaensis* Cid del Prado Vera, Ferris & Nadler 2010, *T. pygmaea* Micoletzky 1922, *T. scandinavica* Andrassy 2007, *T. setifera* Bütschli 1873, *T. sibirica* Gagarin 1993, *T. subterranea* Tsalolikhin 1976, *T. tenuis* Brzeski 1964, *T. terricola* Brzeski & Winiszewska-Ślipińska 1993, *T. tropica* Cid del Prado Vera, Ferris & Nadler 2010 and *T. vulvata* Andrassy 1977).

Based on morphology, *Tripyla* can be divided into two distinct groups: (1) with long tails (de Man's ratio  $c < 5$ ) and (2) with short tails (de Man's ratio  $c > 5.9$ ) (Tsalolikhin 2003). Recent molecular phylogenetic studies suggest that the short-tailed group of *Tripyla* comprises two separate clades: (1) with long cephalic setae (the six long cephalic setae  $> 5$  µm), and (2) with short cephalic setae (the six long cephalic setae  $< 5$  µm) (Zhao 2009; Zhao & Buckley 2009).

Three species of the genus—*T. affinis*, *T. filicaudata* and *T. bioblitz*—have been recorded from New Zealand