



Two new species of *Trigonotylus* (Hemiptera: Heteroptera: Miridae: Stenodemini) from western Canada and northwestern United States

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Abstract

Two new species of stenodemine Miridae from western Canada and the United States are described. *Trigonotylus exilis* **n. sp.** from British Columbia to northern California and Utah, and *T. setosus* **n. sp.** from northern British Columbia, Yukon Territory, and adjacent northern Northwest Territories and Alaska are documented. A key to the species of *Trigonotylus* from this study region is provided to allow identification of the included fauna. Host plant species are identified. Lactic acid is proposed as an alternative to potash as a dissection medium for male genitalia.

Key words: Hemiptera, Heteroptera, Miridae, Stenodemini, *Trigonotylus*, new species, Canada, key

Introduction

Further research on collections of Canadian Heteroptera has resulted in the discovery of two new species of *Trigonotylus* Fieber, 1858 from western Canada and the United States. The systematics of *Trigonotylus* is well established (Schwartz, 2008) and the taxonomy is presented in revisions, including keys to species, for the world (Carvalho and Wagner, 1957), China (Zheng, et al. 2004), Palearctic Region (Golub, 1989), and North America (Kelton, 1970, 1971). The new species described herein can not be accommodated under any known species construct.

A key to species of the Yukon Territory, British Columbia, adjacent Northwest Territories and Alaska, as well as the northwestern United States is included and the new species are diagnosed, and described with the male genitalia, and the dorsal habitus is documented by photographs and line illustrations.

Material and methods

Collection and museum abbreviations used in the text are as follows: AMNH—American Museum of Natural History, New York, NY (R.T. Schuh); CNC—Canadian National Collection of Insects, Agriculture and Agri-Food Canada, Ottawa, ON (R.G. Foottit); RBCM—Royal British Columbia Museum, Victoria, BC (R.A. Cannings); UBC—Spencer Entomological Collection, Beaty Biodiversity Museum, University of British Columbia, Vancouver, BC (K.M. Needham); and USNM—National Museum of Natural History, Smithsonian Institution, Washington, DC (T.J. Henry); WSU—Washington State University, Pullman, WA (R.S. Zack). The distribution map was created using SimpleMapp (Shorthouse, 2010).

It is standard practice to dissect male mirid genitalia in 10% NaOH or KOH (see Forero, 2008 for a summary of this technique). Instead all the dissections for this project were prepared using lactic acid as follows. The entire abdomen was removed and placed in a depression of a CoorsTek 60427 spot plate. Approximately 15 drops of full strength 85% lactic acid and 10 drops of distilled H₂O were then added to the depression. The spot plate was placed