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A new subgenus and species of *Topomyia* (Diptera: Culicidae: Sabethini) based on a remarkable male mosquito from Sabah, Malaysia

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Abstract

Miyagiella Harbach, **subgen. nov.**, is introduced as a new subgenus of *Topomyia* Leicester for a remarkable male mosquito, *Topomyia discors* Harbach, **sp. nov.**, from Sabah, Malaysia. A diagnosis of the subgenus is provided that features unique anatomical characters of the genitalia of the holotype male. *Miyagiella* is very distinct from the two previously recognised subgenera of *Topomyia*, but is perhaps more closely related to the nominotypical subgenus than to subgenus *Suaymyia* Thurman. Salient differences that distinguish the three subgenera are contrasted; the holotype male of *To. discors* is described and its unique genitalia are illustrated.

Key words: Mosquitoes, *Miyagiella*, new subgenus, taxonomy, *Topomyia discors* **sp. nov.**

Introduction

The new subgenus and species named and described here are based on a unique male mosquito discovered among other mosquitoes collected in a light trap hung at the edge of a small stand of bamboo in northern Sabah of Malaysian Borneo. Other collections made at and in the vicinity of the site were examined for additional specimens, but none were found. The genitalia of the single specimen are so remarkably different than those of all other species of *Topomyia* Leicester that the species cannot be placed in either of the two currently recognised subgenera, *Suaymyia* Thurman and *Topomyia sensu stricto*, which are based on features of the forelegs and genitalia of males (Thurman, 1959).

Materials and methods

This study is based on a single male mosquito captured in an un-baited CDC light trap (see *Holotype* below). The specimen was point-mounted on an insect pin and its genitalia were dissected, cleared in 5% NaOH for 2 h at 50°C and mounted in Euparal on a microscope slide. The pinned specimen was examined under simulated natural light with an Olympus SZ6045 stereomicroscope. The dissected genitalia were studied and illustrated with an Olympus BX50 compound microscope fitted with differential interference contrast optics and a camera lucida. Digital images of the genitalia were taken with a Canon 550D digital camera mounted on a Leica M125 stereomicroscope; Helicon Focus version 3.03 software (Helicon Soft Ltd, Kharkov, Ukraine) was used to obtain extended-focus images. Anatomical terminology and abbreviations used in the descriptions and illustrations, respectively, follow Harbach & Knight (1980, 1982), revised and updated by Harbach (2014).

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