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A review of the Oriental species of *Cothornobata* Czerny (Diptera, Micropezidae, Eurybatinae)

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Abstract

The Oriental species of the genus *Cothornobata* Czerny are reviewed, with a revision of the species occurring in the northern Oriental region, and descriptions of the following 16 new species from China and Vietnam: *C. atra* **sp. nov.**; *C. breviseta* **sp. nov.**; *C. bubengensis* **sp. nov.**; *C. curva* **sp. nov.**; *C. elegantula* **sp. nov.**; *C. fusca* **sp. nov.**; *C. ingensfurca* **sp. nov.**; *C. longifurca* **sp. nov.**; *C. longigonitea* **sp. nov.**; *C. mentogensis* **sp. nov.**; *C. paieroi* **sp. nov.**; *C. pugnoa* **sp. nov.**; *C. shuimanensis* **sp. nov.**; *C. uniseta* **sp. nov.**; *C. vietnamensis* **sp. nov.**; *C. zhanga*e **sp. nov.** *Cothornobata nigrigenu* Enderlein is newly reported from China and *Nestima meijerei* (Frey) is given as a new combination for *Cothornobata meijerei* Frey. A key to the 19 Oriental species of the genus is provided.

Key words: Diptera, Micropezidae, Eurybatinae, *Cothornobata*, Oriental

Introduction

The genus *Cothornobata* Czerny is the largest genus of Eurybatinae, with 28 species including 16 newly described here. *Cothornobata*, the only eurybatine genus known from China and Vietnam, differs from other genera of Eurybatinae known from the Oriental Region in having neither a postmetacoxal bridge nor a transverse depression between the postpronotal lobes (McAlpine, 1975). *Cothornobata* is further distinguished from the similar Australasian genus *Crepidochetus* by its subparallel postocellar bristles (strongly convergent in *Crepidochetus*), uniformly pigmented scutum (with a conspicuous transverse silver band in *Crepidochetus*). *Metopochetus* Enderlein, the only other Australasian eurybatine genus that lacks a postmetacoxal bridge, is a distinctive group characterized by a median occipital tubercle and the loss of the axillary fascicle (a tight comb of setae on the upper calypter of other micropezids, including *Cothornobata*). Note, Evenhuis *et al.* (2008) clarified the status of the name *Sphaericocephala*, a nomen nudum.

Most *Cothornobata* species, including the type of the genus, are part of the well-defined northern Oriental (Vietnam-China) clade revised here, but the genus also includes six species from Australia (McAlpine, 1998), one species (*C. taeniata* (Macquart)) from the Mascarene Islands (Barraclough, 1992), and one species (*C. viriata* (Enderlein)) from Sumatra (Enderlein, 1922). *C. viriata* differs widely from the northern Oriental clade revised here, but it is included in the key to Oriental species (on the basis of descriptions and external characters of type specimens only) to render the key complete for the Oriental Region. The genus as a whole is poorly defined, but the northern Oriental clade is characterized by a number of distinctive features including blackish or brownish apices on the mid and hind femora and an elongate genital fork usually armed with modified basal and medial tubercles. We here describe 16 new species (10 from China, 6 from Vietnam), and provide a key to all 19 Oriental species. We also examined photographs of the type specimen of *Cothornobata meijerei* Frey from Java, and note that it has a postmetacoxal bridge, plumose aristae, apical ventral spinules on the mid femur, and an undeveloped postscutellum. It thus looks like *Crosa sensu* McAlpine 1975, treated as a junior syonym of *Nestima* by McAlpine 1998. The generic classification of the Eurybatinae is in need of revision from the types so, although we are confident that this species is not *Cothornobata,* its treatment as *Nestima meijerei* (Frey) is tentative.

Material and methods

Morphological terminology follows Cumming & Wood (2009) and Marshall (2011) (see figures 2, 4, 7, 9, 14, 17). McAlpine (1998) is followed in naming the wing bands, with the addition of the term “distal band” for a band incorporating the preapical and apical bands. The genital fork (Fig. 7D), a two-armed posteromedial process of male sternite 5, is important for species diagnosis. The inner surfaces of its arms are described using the terms “basal tubercle” for processes near the base, and “medial tubercle” for swellings or processes near the middle; sternite 5 anterior to the bifurcation of the genital fork is referred to as the “base”.

Genitalic preparations were made by removing the male abdomen posterior to segment 4, or the oviscape of the female, and heating it in lactic acid at 120°C for 15–25min. Spermathecae and associated structures were exposed either by opening the side of the oviscape or by everting the oviscape and removing them from the apex of the oviscape prior to staining in 95% alcohol with 15% fuchsin acid for 20–30s. After examination in glycerin, dissections were transferred to glycerine and stored in microvials pinned below the specimens (spermathecae and