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Five new species of *Ptychoptera* Meigen with a key to species from China (Diptera: Ptychopteridae)

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Abstract

Five new species of genus *Ptychoptera* Meigen are described from China: *Ptychoptera bannaensis* sp. nov., *P. lii* sp. nov., *P. lushuiensis* sp. nov., *P. qinggouensis* sp. nov. and *P. wangae* sp. nov. A key to the known species of *Ptychoptera* in China is presented.

Key words: Diptera, Ptychopteridae, *Ptychoptera*, China

Introduction

Family Ptychopteridae includes tipulid-like slender flies. It includes three genera, *Ptychoptera* Meigen, 1803, *Bittacomorpha* Westwood, 1835 and *Bittacomorphella* Alexander, 1916, in two subfamilies, Ptychopterinae Shiner and Bittacomorphinae Alexander (Nakamura & Saigusa 2009). This family includes about 75 species, of which approximately 67 species belong to genus *Ptychoptera* (Rozkošný 1997; Zwick & Starý 2003; Hancock *et al* 2006; Nakamura & Saigusa 2009; Young & Fang 2011; Kang *et al* 2012).

Ptychoptera, a distinctive genus, can be distinguished by a combination of the following characters: flagellum with 13 segments; wing membrane usually with infuscation; M well developed, with two branches. It has been recorded worldwide with about 30 species distributed in the Palearctic region, 12 in the Nearctic, 15 in the Oriental, nine in the Afrotropical and only one in the Neotropical (Alexander & Alexander 1973; Rozkošný 1992; Krzeminski & Zwick 1993; Zwick & Starý 2002; Zwick & Starý 2003; Nakamura & Saigusa 2009; Ujvárosi, Kolcsár & Török 2011). There is no record in the Australasian region.

The following 6 species were known to occur in China (Alexander 1924, 1935, 1937; Yang 1996; Yang & Chen 1995, 1998): *Ptychoptera bellula* Alexander, 1937; *P. clitellaria* Alexander, 1935; *P. formosensis* Alexander, 1924; *P. gutianshana* Yang *et* Chen, 1995; *P. longwangshana* Yang *et* Chen, 1998; and *P. xinglongshana* Yang, 1996. In the present paper, we add five new species to the Chinese fauna. A key to the males of species of *Ptychoptera* known to China is presented.

Material and methods

Structural terminology is based primarily on Nakamura and Saigusa (2009). Genitalia were prepared by macerating the apical portion of the abdomen in cold 10% NaOH for 12–15 hours. Specimens were examined and illustrations prepared by using a ZEISS Stemi 2000-C stereomicroscope. Photomicrographs were captured on the same stereomicroscope with a Canon EOS-450D. After examination the abdomen was transferred to fresh glycerine and stored in a microvial pinned below the specimen. Type specimens are deposited in the Entomological Museum of China Agricultural University, Beijing, China.