Zootaxa 2428: 37–46 (2010)
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

Four new species and two new records of *Polyplectropus* from China (Trichoptera: Polycentropodidae)

HUA ZHONG[1], LIAN-FANG YANG[1, 3] & JOHN C. MORSE[2]

[1]*Department of Entomology, Nanjing Agricultural University, Jiangsu, 210095, China*
[2]*Department of Entomology, Soils, and Plant Sciences, Clemson University, Clemson, SC, 29634-0315, USA. E-mail: jmorse@clemson.edu*
[3]*Corresponding author. E-mail: lfyang@njau.edu.cn*

Abstract

Four new species and 2 new records of the genus *Polyplectropus* Ulmer from China are described and illustrated. The new species include *Polyplectropus cubitalis* Zhong and Yang **sp. nov.**, from Guizhou, *Polyplectropus subteres* Zhong and Yang **sp. nov.**, from Jiangxi and Zhejiang, *Polyplectropus tridentatus* Zhong and Morse **sp. nov.**, from Guangxi, and *Polyplectropus tianmushanensis* Zhong and Yang, **sp. nov.**, from Zhejiang. Two species, *Polyplectropus ahas* Malicky and Chantaramongkol, 1993, and *Polyplectropus anakgugur* Malicky, 1995, are newly recorded from China, bringing the number of Chinese *Polyplectropus* species to 28. The newly recognized *Polyplectropus anakgugur* Group is probably monophyletic, as evidenced by ventromesal lobes of the inferior appendages short, positioned only at the bases of the inferior appendages.

Introduction

The genus *Polyplectropus* was established by Ulmer (1905) based on *Polyplectropus flavicornis* from Brazil (Li and Morse, 1997). One hundred and eighty-four species are known by the end of 2009 from all over the world except the West Palearctic Region (Malicky 2008, Zhong *et al.* 2008, Morse 2009), with most species diversity in the Oriental Region (OL, 115 species, with 1 species distributed in both Oriental and East Palearctic Regions) and the Neotropical Region (NT, 53 species), with a total of less than 20 species distributed in the Australasian (AU), Afrotropical (AT), East Palearctic (EP), and Nearctic Regions (NA). Twenty-two species presently have been documented from China (Zhong *et al.*, 2008).

Chamorro-Lacayo studied all the New World species of *Polyplectropus*, and confirmed that they belong to a monophyletic group. The monophyly was based on a comprehensive generic-level phylogeny of Polycentropodidae (Chamorro-Lacayo 2009); she also thought that there are many differences between the New World species and Old World species and believed the Old World species are distinct from the New World species (Chamorro-Lacayo personal communication, 2008). Li and Morse (1997) analyzed the Chinese *Polyplectropus* and established the *P. inaequalis* Group (5 species in OL, 1 species in both OL and EP).

Flint suspected that many Old World species of "*Polyplectropus*" are not true congenerics, not belonging to the same monophyletic group as the New World species (Flint, 1968). We also were unable to identify synapomorphic features of Old World *Polyplectropus*. However, by comparing the Chinese species with descriptions of the other species in the OL and EP Regions, 2 consistently diagnostic features were found in OL and EP species, although they are not unique globally: 1) the intermediate appendages of X are absent and 2) the subphallic sclerite, originating in the phallocrypt, is mostly trough-like with a broad, plate-like bottom.

The *Polyplectropus anakgugur* Group is newly recognized as monophyletic by the possession of the following synapomorphy: ventromesal lobes of inferior appendages are short, positioned only at the bases of the inferior appendages (the inferior appendages of these species resemble those of *Cyrnellus*). This species group includes 6 species: *P. cubitalis* **sp. nov.**; *P. subteres* **sp. nov.**; *P. ahas* Malicky and Chantaramongkol

Accepted by R. Holzenthal: 18 Mar. 2010; published: 16 Apr. 2010