



## A second species of *Bittacus* Latreille, 1805 (Mecoptera: Bittacidae) from Hainan Island, China

JING CHEN<sup>1</sup> & BAOZHEN HUA<sup>1,2</sup>

<sup>1</sup>Key Laboratory of Plant Protection Resources and Pest Management of the Ministry of Education, Entomological Museum, Northwest A & F University, Yangling, Shaanxi 712100, China. E-mail: chenjing@nwsuaf.edu.cn, huabzh@nwsuaf.edu.cn.

<sup>2</sup>Corresponding author. E-mail: huabzh@nwsuaf.edu.cn.

### Abstract

*Bittacus diaoluoshanus* sp. nov., the second species of Bittacidae (Mecoptera) from Hainan Island, China is described from Diaoluoshan National Forest Park. The new species is separated from other hangingflies of *Bittacus* by two crossveins below pterostigma; four tawny brown spots each at ORs, FRs, OM, and the distal end of CuP; one tawny stripe along apical margin from pterostigma to beyond apex; absence of Av; and male epandrial appendages subquadrangular at lateral aspect.

**Key words:** Insecta, Mecoptera, Bittacidae, *Bittacus*, Hainan Island, China

### Introduction

The family Bittacidae of Mecoptera are generally called hangingflies, because the adults usually hang their body from leaves or twigs of trees or shrubs with their prehensile forelegs and catch flying insect prey with their mid- and hindlegs (Tan & Hua 2006; Dunford & Somma 2008). They are distinctive in having three pairs of raptorial legs, each with a large single claw at the end of the tarsus (Byers 2002; Tan & Hua 2008b), and for being unable to stand on a surface (Cheung et al. 2006). Among the 18 extant genera in Bittacidae (Tan & Hua 2009a, 2009b), the genus *Bittacus* Latreille, 1805 is the largest and the most widely distributed taxon, consisting of 140 known species. Of these, 26 are reported from China, but only one species is described from Hainan Island (Tan & Hua 2008a; Penny 2011).

Hainan Island is the second largest island and the southernmost province of China, situated in the South China Sea in the tropical region. The mecopteran fauna is poorly documented on Hainan Island (Cheng 1957; Hua & Chou 1998). Since the first species of scorpionfly, *Neopanorpa pulchra* Carpenter, 1945 (Panorpidae) was reported, three additional species of panorpids have been described from the island by Hua & Chou (1998): *N. hainanica*, *N. hualizhongii*, and *Panorpa insularis*. The first Hainan island hangingfly species, *Bittacus hainanicus* Tan & Hua, 2008 (Tan & Hua 2008a), was reported from the Bawangling Nature Reserve and Wuzhishan Mountain. During the Biological Resource Expedition (Insect Group) to Hainan Island and Xisha Islets in 2008, more specimens of *Bittacus* were collected from the Diaoluoshan National Forest Park and were determined as a new species to science. We herein describe it and discuss its differences and similarities to *B. hainanicus* from the same island and *B. monastyrskiyi* Bicha, 2007 from Vietnam. The type specimens are preserved in the Entomological Museum, Northwest A & F University, China [NWAU].

### *Bittacus diaoluoshanus* Chen & Hua, sp. nov.

(Figs 1–4)

**Holotype:** ♂, China: Hainan Island, Diaoluoshan (alt. 910 m), 26 May 2008, coll. Qiang Fu, deposited in NWAU.

**Paratypes:** 13 ♀♀ 11 ♂♂, same data as holotype, deposited in NWAU.