



## New species of *Hybos* Meigen from Northwest China (Diptera: Empidoidea, Hybotinae)

ZHU LI<sup>1</sup>, NING WANG<sup>2,4</sup> & DING YANG<sup>3</sup>

<sup>1</sup>Beijing Museum of Natural History, Beijing 100050, China

<sup>2</sup>Institute of Grassland Research, Chinese Academy of Agricultural Sciences, Hohhot, Inner Mongolia 010010, China

<sup>3</sup>Department of Entomology, China Agricultural University, Beijing 100193, China

<sup>4</sup>Corresponding author. E-mail: wangningis@163.com

### Abstract

The species of the genus *Hybos* Meigen from Northwest China are reviewed. The following five species are described as new to science: *Hybos elongatus* **sp. nov.**, *H. flavitibialis* **sp. nov.**, *H. projectus* **sp. nov.**, *H. qinlingensis* **sp. nov.**, and *H. xii* **sp. nov.** A key to the 17 species of the genus *Hybos* from Northwest China is provided.

**Key words:** Diptera, Hybotinae, *Hybos*, new species, China

### Introduction

Adults of the genus *Hybos* Meigen, 1803, and in China usually occur in somewhat dry mountainous habitats. It is highly diversified in Asia. This genus is distributed worldwide with 212 known species, of which 14 species are distributed in the Palaearctic Region and 176 species in the Oriental Region (Yang *et al.* 2007; Yang 2008; Li & Yang 2009; Shi *et al.* 2009; Huo *et al.* 2010; Jiang *et al.* 2011; Yang & Li 2011; Plant 2013; Shamshev *et al.* 2013). The major references dealing with the Palaearctic and Oriental species of the genus *Hybos* are as follows: Brunetti (1920); Chvála (1983); Chvála & Kovalev (1989); Frey (1938, 1953, 1954); Melander (1928); Plant (2013); Shamshev *et al.* (2013); Smith (1965, 1975); Saigusa (1963, 1965); Yang & Yang (2004).

Northwest China includes the provinces of Xinjiang, Qinghai, Tibet, Ningxia, Gansu, Shaanxi and Inner Mongolia of the Palaearctic Region, except for southern Tibet which belongs to the Oriental Region. The countries of Mongolia, Russia, Kazakhstan, Kyrgyzstan, Tajikistan, Afghanistan, Pakistan, Nepal, Burma, and Bhutan neighbour this area of northwest China. The 85 known Chinese species were reviewed by Yang & Yang (2004), but *Hybos* from Northwest China remains poorly known with only 12 recorded species (Yang & Yang 1987, 2004; Li & Yang 2009). In the present paper, five new species are added to the fauna of Northwest China. A key to the species of *Hybos* from Northwest China is provided.

### Material and methods

The type specimens are deposited in the Entomological Museum of China Agricultural University, Beijing (CAU). Morphological terminology follows McAlpine (1981), Cumming & Wood (2009) and Sinclair & Cumming (2006). The following abbreviations are used: acr = acrostichal seta(e), ad = anterodorsal seta(e), av = anteroventral seta(e), dc = dorsocentral seta(e), mv = mid-ventral seta(e), npl = notopleural seta(e), oc = ocellar seta(e), pd = posterodorsal seta(e), ppn = postpronotal seta(e), prsc = prescutellar seta(e), psa = postalar seta(e), pv = posteroventral seta(e), sc = scutellar seta(e).

**Type material.** HOLOTYPE ♂, CHINA, Shaanxi, Ningshan (N33°18'44.05" E108°18'34.73"), Xunyangba Town, 1365 m, 2013.VIII.12, Y.Q. Xi. PARATYPES 2 ♂, Shaanxi, Ningshan (N33°18'44.05" E108°18'34.73"), Xunyangba Town, 1365 m, 2013.VIII.12/13, Y.Q. Xi.

**Distribution.** China (Shaanxi).

**Etymology.** The specific name refers to the collector Yuqiang Xi.

**Remarks.** This new species is somewhat similar to *H. xishuangbannaensis* Yang & Yang from Yunnan, but can be easily separated from it by the following characters: wing tinged brownish; pterostigma distinct, dark brown; right surstylus widely rounded with spinose marginal setae and an inner process. In *H. xishuangbannaensis*, the wing is not tinged brownish; the pterostigma is indistinct, brownish; and the right surstylus has no inner process and marginal denticles (Yang & Yang 2004).

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