



## Two new species of *Empis* (*Planempis*) from Oriental China, with an updated key to species of China (Diptera: Empidoidea)

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### Abstract

Two species, *Empis* (*Planempis*) *tianmushana* sp. nov. and *E. (P.) zhuae* sp. nov., from Zhejiang province of Oriental China are described as new to science. An updated key to the known species of the subgenus *Planempis* from China is presented.

**Key words:** Diptera, Empididae, *Planempis*, new species, Oriental China

### Introduction

*Planempis* Frey, 1953 is a moderately large subgenus of the genus *Empis* Linnaeus with 37 known species, which are distributed in the Palearctic and Oriental regions (Yang *et al.* 2007; Wang *et al.* 2010). The subgenus is characterized by the male cercus much enlarged often with a flattened dorsal surface and bifurcated into long dorsal and short ventral arms extending beyond the epandrium (Saigusa 1992; Shamshev 2002). Shamshev (2002) described or redescribed six species and proposed a key to all known species except *E. frauscheri* Strobl from Austria and Romania. The major references dealing with species of *Planempis* are Collin (1941), Frey (1953, 1954, 1955), Saigusa (1964, 1992), Dageron & Chvala (2002), Shamshev (2002), Wang *et al.* (2010), and Saigusa (2012). Six species of *Planempis* are currently known to occur in China (Yang *et al.* 2007; Wang *et al.* 2010).

In the present paper, two new species are described from Oriental China, based on specimens collected by Dr. Yajun Zhu and Dr. Weihai Li in Tianmushan Mountain of Zhejiang in April and May, 2011. An updated key to the known species of *Planempis* from China is presented.

### Material and methods

The type specimens are deposited in the Entomological Museum of China Agricultural University, Beijing. Terms used for adult structures and male genitalia follow those of McAlpine (1981) and Sinclair and Cumming (2006) respectively. The following abbreviations are used: acr = acrostichal seta(e), ad = anterodorsal seta(e), av = anteroventral seta(e), d = dorsal seta(e), dc = dorsocentral seta(e), h = humeral seta(e), npl = notopleural seta(e), oc = ocellar seta(e), pd = posterodorsal seta(e), presc = prescutellar seta(e), psa = postalar seta(e), pv = posteroventral seta(e), sa = supra-alar seta(e), sc = scutellar seta(e).

### Taxonomy

#### Key to species (males) of the subgenus *Planempis* from China

(modified from Wang *et al.* 2010)

- |   |   |   |
|---|---|---|
| 1 | Frons linear or eyes contiguous, without marginal setulae; body black ..... | 2 |
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