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Identification key to species of *Thrips* genus from China (Thysanoptera, Thripidae), with seven new records

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Abstract

An illustrated key is provided to distinguish the 33 species of genus *Thrips* recorded from China, including seven species not previously recorded from this country.

Key words: *Thrips*, Thripidae, China, identification

Introduction

The genus *Thrips* is one of the most species-rich genera of the Thysanoptera, with almost 280 species listed worldwide (Mound, 2011). Several species in the genus are well known as pests of various crops, both directly and as virus vectors (Marullo & Mound, 2002), therefore identification of members of this genus is of considerable practical importance. All members of the genus lack a pair of setae on the head in front of the first ocellus (ocellar setae pair I), and they all have paired ctenidia on tergite VIII posteromesad to the spiracles. Other characters, such as number of antennal segments and setae on the fore wing veins, and number of discal setae on the sternites are variable between species (Palmer, 1992; Nakahara, 1994; Mound & Masumoto, 2005).

Keys are now available for the identification of species of genus *Thrips* from many parts of the world: Europe and Mediterranean—zur Strassen (2003); North America—Nakahara (1994), Hoddle *et al.* (2009); Afro-tropical Region—Mound (2010); Asia and Australasia—Palmer (1992), Mound & Masumoto (2005), Mound & Azidah (2009). For China, there are two published identification keys for the species of this genus: Han (1997) dealt with 21 species from mainland China plus one species from Taiwan; Wang (2002) dealt with 18 species from Taiwan, of which 11 had been included by Han. To the 29 species included in these two publications should also be added three further species listed by Feng (1992), a publication that was not mentioned by either Wang or Han. However, out of this total of 32 species some are now considered to be synonyms. For example, Han listed *hukkineni*, but that is now considered a synonym of *trehernei*, and *fusca* Moulton is now considered a species of *Stenchaetothrips* (Palmer, 1992). Similarly, *taiwanus* that was listed by Wang is now considered a synonym of *parvispinus*. Moreover, two further species listed by Wang cannot be distinguished satisfactorily—*inferus* Chen is possibly the same as *coloratus*, and *kotoshoi* (Moulton) is possibly the same as *vitticornis*. These two species are therefore not included in the new key to species of *Thrips* from China given below.

In China the Palaearctic and Oriental regions overlap, resulting in an abundant insect fauna. Biogeographically, seven regions can be recognized in China, the North-East, Northern China, Mongolia-Xinjiang, Tibetan, South-West, Central China and South China. The last three of these are considered part of the Oriental region. Southwestern China, with its heavily dissected terrain and varied local climates, supports a particularly rich flora (http://foc.bio-mirror.cn/; Xu Z-F, 2009).

The objective of the present paper is to provide an illustrated identification key to the 33 species of genus *Thrips* recorded from China. Descriptive notes are also given on seven species of this genus that have been found recently and were not previously recorded from this country (Table 1). The specimens, mounted on slides, are preserved in Yunnan Agricultural University.

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