Notes on the genera *Sinophasma* Günther, 1940 and *Pachyscia* Redtenbacher, 1908 (Phasmatodea: Diapheromeridae: Necrosciinae), with the description of four new species from China

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Abstract

A list and key to the species of *Sinophasma* Günther, 1940 and *Pachyscia* Redtenbacher, 1908 are provided. Four new species, *Sinophasma bii* sp. nov., *S. daoyingi* sp. nov., *S. guangdongensis* sp. nov. and *Pachyscia heishidingensis* sp. nov., from China are described and illustrated. One new synonym and one new combination are established: *Sinophasma rosarum* Chen & He, 2008 is shown to represent the female of *S. jinxuense* Chen & He, 2008 (syn. nov.); and *Pachyscia longicauda* (Bi, 1990) (comb. nov.) is transferred from *Sinophasma*. The male of *Pachyscia dilatata* (Chen & He, 2004) is described for the first time.

Key words: Necrosciinae, *Sinophasma*, *Pachyscia*, *Sinophasma bii*, *Sinophasma daoyingi*, *Sinophasma guangdongensis*, *Pachyscia heishidingensis*, China, new species, new synonym, new combination, description of unknown sex, key

Introduction

The genus *Sinophasma* was established by Günther (1940: 240) for four newly described Chinese species. The major revisionary work was provided by Chen and He (2008). *Sinophasma* is mainly distributed over China, and Taiwan (Hennemann et al. 2008; Chen & He 2008) and *S. vietnamense* Chen & Chen, 1999 from North Vietnam is the only species known from outside China. This paper describes three new species, *S. bii* sp. nov., *S. daoyingi* sp. nov. and *S. guangdongensis* sp. nov., found in the Yunnan, Zhejiang and Guangdong Provinces, China. The former species is the first *Sinophasma* known from Yunnan which extends the distribution of the genus further to the southwestern part of China. Further material examined revealed one synonym: *S. rosarum* Chen & He, 2008 is shown to represent the female of *S. jinxuense* Chen & He, 2008 (syn. nov.). Currently twenty-five species are recognized in *Sinophasma* and a list and key to the species of *Sinophasma* is provided.

*Pachyscia* Redtenbacher, 1908 is a small genus of Necrosciinae Brunner von Wattenwyl, 1893. The range of distribution is from Guizhou of China [the most northern distribution] to the tropics of Vietnam in the Oriental region. This paper describes one new species, *P. heishidingensis* sp. nov., from China and a new combination, *P. longicauda* (Bi, 1990) (comb. nov.) which is transferred from *Sinophasma* Günther. A first description is given for the male of *P. dilatata* (Chen & He, 2004). A list and key to all species of the genus is provided.

The type specimens and material mentioned in this study are deposited in China Agricultural University, Beijing, China (CAU), Institute of Zoology, Chinese Academy of Sciences, Beijing, China (IZCAS), Shanghai Entomological Museum, Chinese Academy of Sciences, Shanghai, China (SEM), Shanghai Normal University, Shanghai, China (SNU), Museum of Biology, Zhongshan (Sun Yat Sen) University, Guangzhou, Guangdong, China (ZSU) and the private collection of Ho Wai-Chun George, Hong Kong, China (GH). Measurements of the new taxon are only given to the Holotype (HT) and selected Paratype (PT).

For the distribution of each species in the checklist, the Chinese provinces, certain metropolitan areas, administrative regions and Taiwan have been abbreviated as follows: