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Taxonomy of the genus *Hybridolinus* Schillhammer (Coleoptera: Staphylinidae: Philonthina) from China

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Abstract

Two new species of the genus *Hybridolinus* from China are described: *H. baoxingensis* Li & Zhou **sp. n.** from Sichuan and *H. fengyangshanus* Li & Zhou **sp. n.** from Zhejiang. The aedeagi as well as morphological details of *Hybridolinus decipiens* Schillhammer, 1998 and *Hybridolinus smetanai* Schillhammer, 2003 are illustrated. An updated identification key to species is provided and the zoogeographical pattern of species distribution is discussed. The types of the new species are deposited in the Institute of Zoology, Chinese Academy of Sciences (IZ-CAS).

Key words: Coleoptera, Staphylinidae, Staphylininae, Philonthina, Palaearctic, China, taxonomy, new species, geographical distribution, scanning electron microscopy

Introduction

Schillhammer (1998) erected the genus *Hybridolinus* and designated *H. daliensis* Schillhammer, 1998 from China as the type species of the genus. The genus *Hybridolinus* is a relatively small taxonomic group in the subtribe Philonthina and only ten species had been reported before our study; all these species were found to occur only in South China (Schillhammer 1998, 2000, 2003, 2005, 2008; Herman 2001; Smetana 2004). In this paper, two new species of *Hybridolinus* are described based on specimens deposited in the Institute of Zoology, Chinese Academy of Sciences (IZ-CAS): *Hybridolinus baoxingensis* Li & Zhou **sp. n.** from Sichuan and *H. fengyangshanus* Li & Zhou **sp. n.** from Zhejiang. Thus, in the genus *Hybridolinus*, the total number of species is now twelve. The aedeagi, as well as morphological details of two already described species, *H. decipiens* Schillhammer, 1998 and *H. smetanai* Schillhammer, 2003, are also illustrated. A revised identification key to species is provided and the geographical distribution of all species of *Hybridolinus* is illustrated.

Material and methods

Specimens were relaxed in warm water (60–70°C) for about 7–10 hours, then cleared in 10% KOH for 5 minutes, and transferred in 75% alcohol. Cleared specimens were dissected to observe morphological details of the 8th–10th abdominal segments and male aedeagus. After examination, the body parts were stored permanently in glycerin for future studies. Observations and drawings were done under a compound microscope (Zeiss). For scanning electron microscopy (SEM) studies, specimens were fixed in 4% formaldehyde, post-fixed in 1% OsO_4, dehydrated through ethanol series and acetone, and dried to critical point. The specimens were coated with gold and examined with a Hitachi S-570 scanning electron microscope

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