



Three new species of the genus *Quedius* (subgenus *Microsaurus*) from China (Coleoptera: Staphylinidae: Staphylinini: Quediina)

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Abstract

Three new species of the subgenus *Microsaurus* Dejean, 1833 of the genus *Quedius* Stephens, 1829 are described based on specimens collected from China: *Q. (Microsaurus) bilobus* sp. nov. and *Q. (Microsaurus) varius* sp. nov. from Sichuan, and *Q. (Microsaurus) cornutus* sp. nov. from Yunnan. Line drawings and color illustrations of adults and genitalia of the new species are provided.

Key words: Coleoptera, Staphylinidae, Quediina, *Quedius*, *Microsaurus*, new species, China

Introduction

Microsaurus Dejean, 1833 is the largest subgenus of the genus *Quedius* Stephens, 1829 in the subtribe Quediina (Staphylininae, Staphylinini) and mainly occurs in the Holarctic and Oriental regions. Before this study, more than 300 species were described, of which 130 were recorded to occur in China. A great proportion of the *Microsaurus* species were described by Smetana (1995a, b, c, 1996 a, b, c, 1997 a, b, c, 1999 a, b, c, 2001 a, b, c, 2002, 2004, 2006, 2007, 2008a, b, 2009, 2010, 2012, 2013).

Our last contribution to the subgenus *Microsaurus* Dejean was a taxonomic study on the Chinese fauna that reported eight species from China (Cai *et al.*, 2015). This study is a continuation of the same project and describes here three new species from China: *Quedius (Microsaurus) bilobus* sp. nov. and *Q. (Microsaurus) varius* sp. nov. from Sichuan, and *Q. (Microsaurus) cornutus* sp. nov. from Yunnan. For all new species we provide line drawings and color illustrations of the adults and their genitalia.

Material and methods

Specimens were relaxed in warm water (60°C) for 5–8 hours for dissection of the abdominal segments VIII–X and the genitalia. After examination, the dissected body parts were glued back to the mounting cards for future study. Observation, dissection and measurements were performed using a stereo microscope (Zeiss SteREO Discovery V20). Images of the adults and genitalia were captured with an AxioCam MRc 5 camera attached to a Zeiss Axio Zoom.V16 Fluorescence Stereo Zoom Microscope, and photomontage was performed in Zen 2012 (blue edition) imaging software. Inkscape V0.91 was used to make the line drawings. The abdominal tergites and sternites were entirely flattened for the line drawings to make the illustrations more distinguishable among species.

The specimens examined, including types, were deposited in the Institute of Zoology, Chinese Academy of Sciences (IZ-CAS).

Terminology and abbreviations. Morphological terminology followed Smetana (1971), Smetana & Davies (2000), and Zhao & Zhou (2010).

The following abbreviations are used in the text: BL = body length (from apex of clypeus to apex of abdominal