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Two new species of *Xanthophius* Motschulsky (Coleoptera: Staphylinidae, Staphylininae, Xantholinini) from China with notes on *X. filum* (Kraatz)

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Abstract

This paper studies the taxonomy of the genus *Xanthophius* Motschulsky, 1860 (Coleoptera: Staphylinidae, Staphylininae, Xantholinini). Two new species are described from China: *Xanthophius unidentatus* sp. n. from Yunnan, Zhejiang, Guangxi and Hainan, and *X. gutianshanensis* sp. n. from Zhejiang. The number of species of *Xanthophius* therefore increased to eight. The elaborate structures of the everted endophallus of *X. filum* (Kraatz, 1859) is described for the first time and illustrated with a color plate. A key to eight species and their geographical distribution map are provided. The type specimens of the new species are deposited in the Institute of Zoology, Chinese Academy of Sciences (IZ-CAS).

Key words: Coleoptera, Staphylinidae, Xantholinini, *Xanthophius*, new species, key to species, distribution map

Introduction

The Xantholinini is a large rove beetle group of more than 110 genera (Bordoni 2007; Herman 2001), and considered as one of the six tribes in the subfamily Staphylininae (Coleoptera: Staphylinidae) by most modern taxonomists (Assing, 2000; Newton, Thayer, Ashe, & Chandler, 2000; Herman, 2001; Zhou, 2005; Chatzimanolis, Cohen, Schomann, & Solodovnikov, 2010). The genus *Xanthophius* Motschulsky, 1860 originally included only one species, *X. serpentarius* Motschulsky, 1860. Bordoni (2002) transferred two species, *Leptacinus filum* Kraatz, 1859 and *L. angustus* Sharp, 1874, to this genus and described *X. benguetensis*. Later, Bordoni (2005) transferred *Leptacinus luridipennis* MacLeay, 1873 to this genus and described *X. minor*. Thus, the *Xanthophius* Motschulsky included six species before our study.

In this paper we described two new species from China: *Xanthophius unidentatus* sp. n. from Yunnan, Zhejiang, Guangxi and Hainan, and *X. gutianshanensis* sp. n. from Zhejiang (type depository of the new species: Institute of Zoology, Chinese Academy of Sciences). The total number of species of *Xanthophius* Motschulsky, 1860 therefore increases to eight. Additionally, we describe the elaborate endophallic structures of *X. filum* (Kraatz, 1859) (Fig. 9) and *X. gutianshanensis* sp. n. (Fig. 4), which provide additional characters for the diagnosis of *Xanthophius* species.

Material and methods

Specimens were relaxed in warm water (60 °C) for about 5–8 hours, then cleared in 10% KOH for 5 minutes, and transferred to 75% alcohol. The cleared specimens were dissected for morphological studies of the abdominal segments VIII–X and the aedeagus. After examination, the body parts were stored permanently in glycerine for future studies. Observations and drawings were done using a compound microscope (ZEISS Stemi 2000-C). Color photographs were taken with a Nikon D300 and the final deep focus images were created with the stacking software Helicon Focus 3.10. The specimens used in this study, including the types of the new species, are deposited in the Institute of Zoology, Chinese Academy of Sciences (IZ-CAS).