



<http://dx.doi.org/10.11646/zootaxa.3647.1.10>

<http://zoobank.org/urn:lsid:zoobank.org:pub:9A9D1488-0FC8-45B4-98B8-59FD74AF2729>

Description of a new species and record of *Bactrocera* Macquart (Diptera, Tephritidae) from China

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Abstract

One new species, *Bactrocera* (*Zeugodacus*) *anala* Chen et Zhou, sp.nov, and one newly recorded species, *B. (Z.) armillata* (Hering, 1938), from China are described and illustrated. The male of *B. (Z.) armillata* (Hering) was discovered for the first time and as a result the species is moved from subgenus *Bactrocera* to subgenus *Zeugodacus*. In addition, the morphological differences and comparing illustrations of *B. (Z.) adusta* (Wang et Zhao) and *B. (Z.) biguttata* (Bezzi), are provided.

Key words: Tephritidae, *Bactrocera*, new species, new record, China

Bactrocera Macquart is the largest genus in the family Tephritidae with more than 500 described species arranged in 28 subgenera (Hardy, 1973; Drew, 1989; Liang *et al.*, 1993; Wang, 1996; White and Hancock, 1997, 2004; White and Evenhuis, 1999; Drew and Hancock, 2000; Drew, 2004; Chen *et al.*, 2011, 2012). It is also one of the most economically important groups within the family. Here, we described and illustrated one new species, *Bactrocera* (*Zeugodacus*) *anala* Chen et Zhou, sp.nov, and one newly recorded species, *B. (Z.) armillata* (Hering, 1938), from China. The male of *B. (Z.) armillata* (Hering) was discovered for the first time, and the slight concavity of sternite V indicates that it should be placed in subgenus *Zeugodacus* rather than subgenus *Bactrocera*. In addition, *B. (Z.) adusta* (Wang et Zhao) is a closely related species to the new species, however, it had been questioned as the synonym of *B. (Z.) biguttata* (Bezzi) (White & Hancock, 1997). In order to clarify this doubtful point, the morphological differences and comparing illustrations of *B. (Z.) adusta* (Wang et Zhao) and *B. (Z.) biguttata* (Bezzi) are provided.

B. (Z.) anala, *B. (Z.) armillata*, *B. (Z.) adusta*, *B. (Z.) biguttata*, together with *B. (Z.) assamensis* White, 1999 and *B. (Z.) gansuica* Chen, Han et Zhou, 2012, share the following morphological characters: scutum mostly black with two narrow lateral postsutural yellow vittae and one narrow median postsutural yellow vitta (only occasionally invisible), scutellum with two lateral yellow marks and a black medial mark extending from base to apex or largely black with two small lateral yellow spots, wing with very narrow costal band and a distinct apical spot, legs usually with extensive black markings. These species appear to be closely related, but the relationships between them need further study before any definite conclusions are deduced.

Morphological terminology generally follows White *et al.* (1999) and McAlpine (1981). Lengths of body and wing were measured in millimeters. The following acronyms are used for specimen depositories: **BMNH** (The Natural History Museum, Cromwell Road, London SW7 5BD, England, UK), **IZCAS** (Institute of Zoology, Chinese Academy of Sciences, Beijing, 100101, P. R. China), **NRS** (Naturhistoriska Riksmuseet, Sektionen för entomologi, Stockholm S-10405, Sweden), **YNCIQ** (Yunnan Entry-Exit Inspections and Quarantine Bureau, Yunnan Kunming 650228, P. R. China), **ZSI** (Zoological Survey of India, National Zoological Collection, India).