



Four new species and a new record of *Villa* Lioy, 1864 from China (Diptera: Bombyliidae)

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Abstract

The following four new species of the genus *Villa* Lioy from China are described: *Villa aspros* **sp. nov.**, *Villa aquila* **sp. nov.**, *Villa obtusa* **sp. nov.**, and *Villa flavida* **sp. nov.** One species, *V. cingulata* (Meigen, 1804), is recorded from China for the first time. A key to the species of the genus from China is presented.

Key words: Diptera, Bombyliidae, *Villa*, new species, China

Introduction

The genus *Villa* Lioy belongs to the tribe Villini of subfamily Anthracinae (Hull, 1973). It is easily identified by the following characters: wing mostly hyaline, at most with a narrow basicostal infuscation, male often with silvery scales at base of wing; thorax usually with extensive yellowish hairs; abdomen with a more or less distinctly banded pattern and one or more pairs of tufts of black scales at sides; antenna with flagellum cone-shaped or onion-shaped (Greathead and Evenhuis, 1997). *Villa* includes 267 known species, of which 76 species are from the Palaearctic Region and 29 species are from the Oriental Region (Evenhuis and Greathead, 1999; Du, Yang C., Yao and Yang D., 2008). The following six species are known to occur in China: *V. aurepilosa* Du & Yang C., 1990, *V. fasciata* (Meigen, 1804), *V. hottentotta* (Linnaeus, 1758), *V. ovata* (Loew, 1869), *V. panisca* (Rossi, 1790), *V. xingjiangana* Du, Yang C., Yao & Yang D., 2008.

In the present paper five species (4 newly described and illustrated here; *V. aquila*, *V. aspros*, *V. flavida*, and *V. obtusa*, and one previously described, *V. cingulata* (Meigen)) are added to the fauna of China. A key to the species of the genus from China is presented.

Material and methods

The specimens were studied and illustrated with ZEISS Stemi 2000-c. Genitalic preparations were made by macerating the apical portion of the abdomen in cold 10% NaOH for 12–15 h, after examination it was transferred to fresh glycerine and stored in a microvial pinned below the specimen. The wing photographs of adults were taken with a digital camera (Canon 450D). Type specimens of new species are deposited in the Entomological Museum of China Agricultural University, Beijing (CAU). The following abbreviations are used: *ad*—anterodorsal, *av*—anteroventral, *pd*—posterodorsal, *pv*—posteroventral.