



A review of *Megachile* (*Chelostomoda*) Michener (Megachilidae: Megachilini) known from China with the description of a new species

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Abstract

The Chinese species of *Megachile* (*Chelostomoda*) Michener, 1962, are treated in this paper. *Megachile* (*C.*) *guangxiense* sp. nov. is described and illustrated. A checklist of the known Chinese species, distribution records, and an updated identification key are provided. The type specimens of *M. guangxiense* are deposited in the Insect Collection of the Institute of Zoology, Chinese Academy of Sciences, Beijing, China (IZCAS, Beijing).

Key words: *Megachile* (*Chelostomoda*), taxonomy, species checklist, floral association, distribution

Introduction

Michener erected *Chelostomoda* as a subgenus of *Chalicodoma* in 1962. He gave the diagnosis of *Chelostomoda* as follows: “body small, slender, parallel-sided, coarsely sculptured; posterior part of thorax as well as transverse tergal grooves as in both subgenera *Hackeriapis* and *Chelostomoides*; pitted zone at base of propodeum present only laterally; tergal grooves not fasciate; terga with apical pubescent fasciae; head not much developed posteriorly; lateral ocellus being little nearer eye than margin of vertex; preoccipital ridge sharp but not carinate; pronotal lobe carinate” (Michener, 1962: p.25). Michener (1965) provided a full description and illustrations of the subgenus *Chalicodoma* (*Chelostomoda*), including figures of male genitalia and sterna. Michener (2000) rearranged the classification of the tribe Megachilini, placing all nonparasitic Megachilini in the genus *Megachile*, therefore assigning *Chelostomoda* as a subgenus of *Megachile*. Michener (2007) noted that at least 14 specific names have been included in *M. (Chelostomoda)*, and that this subgenus ranges from China and Japan south to the Solomon Islands, and northern Queensland (Australia), westward throughout Indonesia and Southeast Asia to India.

Wu (2005) described two new species of *M. (Chelostomoda)* from China. Wu (2006) recorded and gave a key to the four Chinese species (four males, two females) of the subgenus. Baker & Engel (2006) considered *Megachile saphira* Cameron, 1907 to be a junior synonym of *M. ulrica* Nurse, 1901, and placed *M. ulrica*, *M. lefroma* Cameron, *M. albolineata* Cameron, *M. funnelli* Cockerell, and *M. bougainvillei* Cockerell in the subgenus *M. (Chelostomoda)*. Gonzalez (2008) explored the relationships among the 58 subgenera of *Megachile* Latreille *s. l.* by means of a cladistic analysis of adult external morphological characters. Gonzalez proposed a phylogenetic-based classification for the genus, and suggested grouping its subgenera into four genera (*Chalicodoma*, *Megachile*, *Matangapis*, and *Thaumatostoma*), a generic classification similar to that still followed by some authors (e.g., Ornos et al. 2007), although his results have not been widely accepted by other researchers. Ascher & Pickering (2011) listed 20 species of the subgenus *M. (Chelostomoda)* worldwide.

Material and methods

The specimens examined in this study are deposited in the Insect Collection of the Institute of Zoology, Chinese Academy of Sciences, Beijing, China (IZCAS). The specimens were examined with a Leica M10 (Germany)