



Description of two new species of *Walkerella* (Pteromalidae, Otitesellinae) from China with a key to species of the genus

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Abstract

Walkerella is an Old World genus of non-pollinating fig wasps in the subfamily Otitesellinae (Chalcidoidea, Pteromalidae). It is the most widely distributed genus of the subfamily, though there has been only six known world species. This paper describes two new species associated with the host *Ficus* subsection *Conosycea* of section *Urostigma*, subgenus *Urostigma* in Xishuangbanna, China. The two new species, *Walkerella nigrabdomina* Ma & Yang **sp. nov.** and *W. curtipedis* Ma & Yang **sp. nov.**, are described from specimens reared from *Ficus pisocarpa* and *Ficus curtipes*, respectively. A key to all described species of *Walkerella* found is provided.

Key words: fig wasps, taxonomy, comparison, Xishuangbanna

Introduction

Walkerella Westwood is classified in the subfamily Otitesellinae of Pteromalidae (Hymenoptera: Chalcidoidea) (Bouček 1988, 1993; Rasplus *et al.* 1998; Westwood 1883). There are currently fifteen described genera in Otitesellinae (Noyes 2012). *Walkerella* is recorded widely throughout the Oriental and Australasian regions, and it has also been introduced to the Palaearctic, Nearctic and Neotropics. Only six *Walkerella* species have been described to date. Species of *Walkerella* are typically associated with the host *Ficus* (Moraceae) subsection *Conosycea* of section *Urostigma*, subgenus *Urostigma*. Girault (1916) described *Walkerella dubia* (Girault) based on a single female from Java and stated it was reared from *Lecanium viride* (= *Coccus viridis* (Green)) (Hemiptera: Coccidae), but the other five described species are all non-pollinating fig wasps and the identity and host relationships of *W. dubia* needs clarification. *Walkerella benjamini* Joseph and *W. jacobsoni* Grandi are both Oriental in distribution, the former associated with *Ficus benjamina* and the latter with *F. subcordata* (Grandi 1921; Joseph 1957; Wiebes 1974). *Walkerella temereria* Westwood is distributed in the Nearctic and Oriental regions along with its host *F. bengalensis* (Bouček 1993; Joseph 1957; Joseph & Abdurahiman 1969; Westwood 1883), whereas *W. kuruandensis* Bouček (Oriental, Palaearctic and Australian) and *W. microcarpae* Bouček (Oriental, introduced to Palaearctic and Nearctic) are both associated with *F. microcarpa* (Bouček 1988; Chen *et al.* 1999; Grandi 1921; Priyadarsanan 2000; Wiebes 1974; Xu *et al.* 2005).

Wasps of Otitesellinae occur only in smaller-sized figs, probably because their ovipositors are rather short. Some members of the subfamily, such as *Walkerella* species, use their ovipositors to penetrate the fig wall and lay eggs without entering the fig cavity (Beardsley 1998; Bouček 1988; Wang *et al.* 2009, 2010). These do not have a smooth head and pronotum with tooth-like tubercles, unlike species that do enter figs to oviposit.

We found two new species of *Walkerella* in Xishuangbanna, China. Here we provide detailed descriptions and photographs of the new species and, for the first time, provide a key to all species of *Walkerella* associated with figs.