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Review of the paper wasps of the *Parapolybia indica* species-group (Hymenoptera: Vespidae, Polistinae) in eastern parts of Asia

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Abstract

Nine species of the *Parapolybia indica* species-group in eastern parts of Asia are reviewed. Four new species are described: *P. flava* **sp. nov.** (Vietnam), *P. crocea* **sp. nov.** (Japan), *P. nana* **sp. nov.** (Vietnam), and *P. albida* **sp. nov.** (Vietnam). *Parapolybia indica* (de Saussure, 1854), *P. bioculata* van der Vecht, 1966 and *P. tinctipennis* (Cameron, 1900) are redescribed. The status is reinstated for *P. fulvinerva* (Cameron, 1900), **stat. resurr.** and *P. tinctipennis* (Cameron, 1900), **stat. resurr.** and new status is proposed for *P. bioculata* van der Vecht, 1966, **stat. nov.** *Parapolybia tinctipennis* (Cameron, 1900) is newly recorded from China, Vietnam and Laos. The key to species is given. The nests of *P. indica*, *P. bioculata*, *P. tinctipennis*, *P. flava* and *P. crocea* are remarked.

Key words: Ropalidiini, new species, new records, social wasp, East Asia

Introduction

Parapolybia de Saussure, 1854 is one of the four genera in the Old World endemic polistine tribe Ropalidiini. While the wasps of the ropalidiine genera other than *Parapolybia* are predominantly tropical and subtropical in their distribution, *Parapolybia* wasps are in general more temperate, spreading northwards well beyond the Tropic of Cancer. They are distributed in the Middle East, the Indo-Papuan region and East Asia, from Turkey in the west to New Guinea in the east, and to the Korean Peninsula and Honshu Island of Japan in the northeast. Two species, *P. escalerae* (Meade-Waldo, 1911) and *P. persica* (Meade-Waldo, 1911), are known to occur only in the Middle East, and the other four species currently treated as valid, *P. indica* (de Saussure, 1854), *P. varia* (Fabricius, 1787), *P. takasagona* Sonan, 1944 and *P. nodosa* van der Vecht, 1966, occur mainly in the eastern parts of Asia.

Van der Vecht (1966) intensively studied the taxonomy of the East-Asiatic and Indo-Papuan *Parapolybia* wasps and divided the Oriental *Parapolybia* “species” into two groups in a form of key-to-species. That is, one includes only *P. indica* and is characterized with the female occipital carina reaching the mandibular bases (Fig. 1) and the male terminal antennal flagellomere prominently elongated [*P. indica* species-group]; the other includes *P. varia* and *P. nodosa* and is characterized by the female occipital carina obliterated ventrally (Fig. 2) and the male terminal antennal flagellomere not prominently elongated, less than 3 × as long as its basal width [*P. varia* species-group]. *Parapolybia takasagona*, which van der Vecht (1966) overlooked (see Kojima & Carpenter 1997), also has the female complete occipital carina and the male prominently elongated terminal flagellomere (Yamane *et al.* 1995; Kojima *et al.* 2011). Some or all of the four species described herein as new to science may correspond to van der Vecht’s (1966) “typical *Parapolybia indica*”.

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