



The flower bug genus *Montandoniola* Poppius (Hemiptera: Heteroptera: Anthocoridae) from Indonesia, with descriptions of two new species

KAZUTAKA YAMADA^{1,4}, TOSHIYA HIROWATARI¹, WAYAN SUSILA² & SHÛJI OKAJIMA³

¹Entomological Laboratory, Graduate School of Life and Environmental Sciences, Osaka Prefecture University, Gakuen-chô 1-1, Sakai, Osaka, 599-8531 Japan. E-mail: yamada-kazutaka-1@mt.tokushima-ec.ed.jp, KY; hirowat_t@envi.osakafu-u.ac.jp, TH

²Department of Plant Protection, Faculty of Agriculture, Udayana University, Denpasar, Bali, Indonesia

³Laboratory of Insect Resources, Faculty of Agriculture, Tokyo University of Agriculture, Funako 1737, Atsugi-shi, Kanagawa, 243-0034 Japan. E-mail: okajima@nodai.ac.jp

⁴Corresponding author: Tokushima Prefectural Museum, Bunka-no-mori Park, Mukôterayama, Hachiman-chô, Tokushima, 770-8070 Japan (present address)

Abstract

Three species of the genus *Montandoniola* Poppius are reported, including two new species described from Bali: *M. moraguesi* (Puton), *M. ishikawai* n. sp., and *M. bellatula* n. sp. A key to distinguish the three Indonesian species is provided, with photographs and illustrations of important features of the two new species.

Key words: Hemiptera, Heteroptera, Anthocoridae, Orini, *Montandoniola*, new species, Indonesia

Introduction

The genus *Montandoniola* Poppius, belonging to the family Anthocoridae (sensu stricto) and the tribe Orini, is represented by only three species, including the tropicopolitan *M. moraguesi* (Puton, 1896), which is an effective predator of Cuban laurel thrips in various localities of the world (Poppius 1909, 1910; Lattin 2000; Postle *et al.* 2001). *Montandoniola sawtellese* Postle, Steiner and Goodwin, 2001, from New South Wales, Australia, is a candidate for biological control agent (Postle *et al.* 2001). The species of *Montandoniola* are considered to include natural enemies against agricultural pests such as thrips. In order to use these insects in biocontrol it is necessary to inventory them. However, there is no sufficient taxonomic study of the *Montandoniola* in the Oriental Region. In Indonesia, only *M. moraguesi* has been recorded, from Java (Péricart, 1972).

During recent continuous surveys in Indonesia by one of us (Okajima), Dr. Ishikawa (Tokyo University of Agriculture), and their colleagues, three species of *Montandoniola* were collected. One of them was identical with *M. moraguesi*. The other two represent undescribed species collected from the flowers of evergreen trees by sweeping. In this paper, these two new species are described and illustrated; and *M. moraguesi* is diagnosed. A key to distinguish the three Indonesian species is also given.

Materials and methods

All specimens were preserved in 80% ethyl alcohol, then dried and mounted for study. Examination and illustration of the detailed external structures were made from specimens macerated in 5% hot KOH solution for