



## A review of the genus *Mystrium* (Hymenoptera: Formicidae) in the Indo-Australian region

JOCHEN H. BIHN<sup>1,2</sup> & MANFRED VERHAAGH<sup>2</sup>

<sup>1</sup>Department of Animal Ecology, University of Marburg, Karl-von-Frisch-Str. 8, 35032 Marburg, Germany.  
E-mail: bihn@staff.uni-marburg.de

<sup>2</sup>Department of Entomology, State Museum of Natural History Karlsruhe, Erbprinzenstr. 13, 76133 Karlsruhe, Germany.  
E-mail: manfred.verhaagh@smnk.de

### Abstract

Indo-Australian species of the amblyoponine ant genus *Mystrium* Roger are reviewed. Three species are recognized in the region, and two of them, which were found in Indonesia (Papua and West Papua Province), are described as new species: *Mystrium maren* **sp. nov.** and *Mystrium leonie* **sp. nov.** Worker diagnoses and illustrations of the three species and a tabular key are given.

**Key words:** Formicidae, Amblyoponinae, *Mystrium*, Indo-Australian, Indonesia

### Introduction

The genus *Mystrium* Roger is morphologically very peculiar within the poneromorph subfamily group and has the following combination of characteristics: the very wide head; spatulate or squamate hairs on the head; and long, narrow mandibles with a double row of teeth on the inner margins. Monophyly of the genus is strongly supported by a recent molecular phylogenetic study (Saux *et al.* 2004). Besides their bizarre morphology *Mystrium* ants have also evolved some unique biological traits. They have a unique defense mechanism in which they snap their mandibles to generate a powerful strike (Gronenberg *et al.* 1998; Moffett 1986). Molet *et al.* (2006) demonstrated that, in some species of *Mystrium* known from Madagascar, normal queens are replaced by wingless reproductives which are smaller than workers. Because *Mystrium* are rarely encountered, information on their general biology, ecology and behavior remains sparse. They are presumably predaceous like other species of the subfamily Amblyoponinae, although no direct evidence is available (Brown 1960).

The genus was erected by Roger (1862) with the description of the queen of *M. mysticum*. There are few species, all of which occur in the rainforests of the Old World. Most species are found in tropical Africa: six of them are restricted to Madagascar (and its adjacent islands, i.e. the Malagasy region sensu Bolton 1994) and one is recorded from continental Africa. *Mystrium camillae* Emery 1889 is widespread in the Indo-Australian region. Xu (1998) recently described *M. oculatum* from southern China, but we do not regard it as a distinct species. Since the first revision of Menozzi (1929) only Brown (1960) made some revisionary notes on the genus. Here we describe two new species of *Mystrium* from Papua and West Papua Province, Indonesia, and provide a review of the species known from the Indo-Australian Region.