



## Revision of the ant genus *Calyptomyrmex* (Hymenoptera: Formicidae) in South-east Asia and Oceania

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### Abstract

The South-east Asian and Oceanian fauna of the ant genus *Calyptomyrmex* is revised. Sixteen species are known from this region, 14 of which are newly described. These include *asper* sp. n., *beccarii* Emery, *caledonicus* sp. n., *danum* sp. n., *fragarus* sp. n., *fritillus* sp. n., *grammus* sp. n., *lineolus* sp. n., *loweryi* sp. n., *ocullatus* sp. n., *rectopilosus* Dlussky & Radchenko, *retrostriatus* sp. n., *ryderae* sp. n., *sabahensis* sp. n., *sparsus* sp. n. and *taylori* sp. n. The names *emeryi* Forel and *glabratus* Viehmeyer are synonymised under *beccarii*, the only widespread species in the region. All species are associated with rainforest habitats and most have been collected a limited number of times.

**Key words:** Hymenoptera, Formicidae, *Calyptomyrmex*, taxonomy, new species, Indo-Pacific

### Introduction

Members of the genus *Calyptomyrmex* are rare ants which are most often encountered as ground foragers or in leaf litter collected from the surface of the ground. They are most commonly encountered in rainforests where they forage singly or in small numbers (Bolton, 1981) but they can occasionally be found in other forested situations as well. The few nests that have been found were in rotten wood (Shattuck, 1999; Taylor, 1991) or directly in soil (Bolton, 1981). Workers are often covered with a layer of soil, the enlarged and often spatulate hairs presumably assisting in the retention of this camouflaging material. Similar behaviours are known in many species of basicerotines as well as *Stegomyrmex* (Holldobler & Wilson, 1986), this behaviour being convergent as these groups are not closely related. The majority of species of *Calyptomyrmex* are known from only limited numbers of collections, with even the most common having been collected fewer than 20 times. Although this rarity makes estimates of true distribution patterns problematic, it appears that most species have restricted ranges while only a single species has become widespread.

Biogeographically, *Calyptomyrmex* is known from Africa and India east to New Caledonia (Guenard, 2009). Baroni Urbani (1975) revised the fauna of the Indian subcontinent and Bolton (1981) the Afrotropical species while this study investigates the fauna of South-east Asia and eastward. This revision adds 14 new species, bringing the total known for the genus to 28 (Bolton *et al.*, 2006). Taylor (1991) provided an overview of the Australian fauna, synonymised the only Australian-based name with the widespread species *beccarii* and outlined seven undescribed Australian species (although none were formally named). Six of these species are described here, along with an additional species, bringing the total number of species known from Australia to eight (*beccarii* Emery, *fragarus* sp. n., *fritillus* sp. n., *grammus* sp. n., *lineolus* sp. n., *ocullatus* sp. n., *sparsus* sp. n., *taylori* sp. n.). The remaining new species include one from Malaysia and the Philippines (*loweryi* sp. n.), five from Malaysia (*asper* sp. n., *danum* sp. n., *retrostriatus* sp. n., *ryderae* sp. n., *sabahensis* sp. n.) and one from New Caledonia (*caledonicus* sp. n.).

The South-east Asian fauna is similar in diversity to that of Australia, with eight species so far known (*asper* sp. n., *beccarii* Emery, *danum* sp. n., *loweryi* sp. n., *rectopilosus* Dlussky & Radchenko, *retrostriatus* sp. n., *ryderae* sp. n., *sabahensis* sp. n.), one of these (*beccarii*) being shared with Australia. Given that many of these species are known from only single or a few collections it is likely that additional species exist which are yet to be encountered. Only single species are known from Papua New Guinea (*beccarii*) and New Caledonia (*caledonicus*).