


With my best wishes


Revision of the *Iridomyrmex calvus* Species-group (Hymenoptera : Formicidae)

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Abstract

The *calvus* species-group of the ant genus *Iridomyrmex* Mayr is defined for the first time and revised at the species level. Fifteen species are placed in three complexes within the group, with eleven species newly described. The group consists of the following species: *I. albitarsus* Wheeler; *I. anderseni*, sp. nov.; *I. anteroinclinus*, sp. nov.; *I. argutus*, sp. nov.; *I. calvus* Emery; *I. cappoinclinus*, sp. nov.; *I. cephaloinclinus*, sp. nov.; *I. hesperus*, sp. nov.; *I. mimulus*, sp. nov.; *I. notialis*, sp. nov.; *I. obsidianus* Emery; *I. occiduus*, sp. nov.; *I. prismatis*, sp. nov.; *I. rufoinclinus*, sp. nov.; and *I. viridigaster* Clark. A lectotype is designated for *I. calvus* Emery. A key to species is included and distributions and biologies are summarised.

Introduction

The ant genus *Iridomyrmex* Mayr was recently redefined and its status within the subfamily Dolichoderinae clarified (Shattuck 1992a, 1992b). Unfortunately, the species-level classification within the genus is currently poorly understood and identifications are difficult. In the present study 15 species of *Iridomyrmex* are examined and grouped together in the newly defined *calvus* group. The group is composed of three complexes and is distributed throughout Australia, as well as New Caledonia, Norfolk Island and Lord Howe Island. Although the group is widespread, most species are infrequently collected and are known from only a limited number of specimens. Morphologically, the species are fairly diverse for members of *Iridomyrmex*, showing variation in overall size and shape, body colour and pilosity. Biologically, little detailed information is available for most species; however, most are probably general predators/scavengers and they are known to occupy a wide range of habitats. Most species nest in soil, although some nest in dead wood or arboreally. Diurnal foraging seems to be the rule, although several species decrease or stop foraging during the middle of the day and restrict activity to nest excavation and maintenance (even during relatively cool weather).

Taxonomic Status of *Iridomyrmex* and Diagnosis of the *Iridomyrmex calvus* Group

For the current status and identification of *Iridomyrmex*, see Shattuck (1992a, 1992b, 1993). The *I. calvus* group, here proposed for the first time, contains four previously described species together with 11 newly described. The four earlier species have not been closely associated prior to this study. Species placed in the group can be diagnosed by the configuration of the frontal carinae, which are curved throughout their entire length (Fig. 1), and are never sinuate (Figs 2, 3). An apparently related species group containing *I. vicinus* Clark is superficially similar to the *I. calvus* group, but has the frontal carinae arched posteriorly and anteriorly and approximately straight medially, rather than being arched throughout their length.