



# Article

## Revision of the Australian species of the ant genus *Anochetus* (Hymenoptera: Formicidae)

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### Abstract

The Australian species of the ponerine ant genus *Anochetus* are revised. Fourteen species are known from Australia with eight described here for the first time (*alae* n. sp., *armstrongi* McAreavey, *avius* n. sp., *graefferi* Mayr, *isolatus* Mann, *paripungens* Brown, *rectangularis* Mayr, *renatae* n. sp., *rufolatus* n. sp., *rufostenus* n. sp., *turneri* Forel, *veronicae* n. sp., *victoriae* n. sp., *wiesiae* n. sp.). Twelve are endemic to Australia while two are shared with Australia's northern neighbours. Most species are restricted to tropical regions with only two known from southern Australia. While the majority of species are found in forested habitats, ranging from rainforest to dry sclerophyll woodlands, in southern regions they extend into drier shrub and bush dominated sites.

**Key words:** Australia, Formicidae, Hymenoptera, *Anochetus*, new species

### Introduction

The ponerine genus *Anochetus* contains 94 described species which are found worldwide in tropical and warm-temperate regions (Bolton *et al.*, 2006; Guénard, 2011). There are an additional eight species known from fossils. Within Australia 14 species are known, the majority of these being found in northern, tropical and subtropical regions with a limited number occurring in more southern areas. They are closely related to *Odontomachus*, sharing many morphological and behavioural characteristics (Brown, 1976; Brady *et al.*, 2006; Ouellette *et al.*, 2006). Brown (1978) revised the world fauna, providing extensive taxonomic and biological notes, while the Malagasy species were recently examined by Fisher *et al.* (2008). Andersen (2000) provides an overview of the Australian fauna as understood at that time, with notes on general distribution patterns and habitat preferences.

Within Australia these ants form small nests, usually with fewer than 100 workers, in soil, in termite nests, under logs and in rotten wood. They are predacious on small invertebrates with some species known to specialise on termites, using their trap-like jaws and sting to capture and subdue prey (Shattuck, 1999). In addition, one of the southern species, *A. renatae*, may also take some seeds as husks and other plant refuse have been found around their nests (Heterick, 2009, reported as *A. armstrongi*). Workers of *Anochetus* commonly forage in leaf litter and are less frequently found in the open (Fig. 1), especially when compared to workers of the closely related genus *Odontomachus*.

The Australian species of *Anochetus* occur primarily in forested habitats ranging from rainforest through to dry situations such as *Callitris* forest, mulga woodland and mallee. However, in drier regions *Anochetus* species can be found in more open habitats such as bluebush steppe and chenopod shrubland although these taxa appear to occur at lower densities (based on frequency of encounters during sampling programs) compared to those in forested locations. Far North Queensland holds the majority of Australian species, with nine known from Cape York Peninsula. Four species extend down the east coast into southern Queensland while three species occur in the Top End, the Kimberley region of Western Australia and extreme north-eastern New South Wales. In the drier Gulf Country as well as cooler southern regions only single species are known (Fig. 2, based on the regions proposed by Barlow, 1985).