

ANTS OF THE AUSTRALIAN GENUS *MESOSTRUMA* BROWN (HYMENOPTERA: FORMICIDAE)

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Abstract

Mesostruma is redefined and reviewed. Six species are recognised:—*M. browni* Taylor, *M. eccentrica* sp. n., *M. exolympica* sp. n., *M. laevigata* Brown, *M. loweryi* sp. n., and *M. turneri* (Forel). *Epopostruma monstrosa* Viehmeyer, previously assigned to *Mesostruma*, is reassigned to *Epopostruma* as an unrecognisable species, its holotype being so damaged.

INTRODUCTION

The endemic Australian dacetine ant genus *Mesostruma* Brown, 1945, was first revised by W. L. Brown Jr. in 1952. Two species were recognised: *M. turneri* (Forel) (Mackay district, Queensland) and *M. laevigata* Brown (Sea Lake, Victoria). At the same time Brown tentatively transferred the enigmatic species *Epopostruma monstrosa* Viehmeyer (Trial Bay, New South Wales) to *Mesostruma*, though commenting that its original description was hopelessly inadequate. An additional species, *M. browni* Taylor, with type locality near Berry, New South Wales, was later added to the genus (Taylor 1962).

Three further new species are described below from material collected in southeastern Australia during recent years, and *Epopostruma monstrosa* is re-assigned to its original genus.

Although the tally of recognised species has doubled since 1962 *Mesostruma* is obviously still poorly known. Two species, *M. turneri* and *M. loweryi* sp. n., have been collected only once; *M. browni* is known from several scattered localities in eastern New South Wales; *M. laevigata* and especially *M. eccentrica* sp. n. apparently range widely in the Mallee districts of southeastern New South Wales, Victoria and South Australia; and *M. exolympica* sp. n. is known only from two widely separated areas, the Australian Capital Territory near Canberra, and the Mt. Lofty Ranges near Adelaide.

All adequately documented samples are from dry sclerophyll woodland or forest and the several available colony series were taken from the soil under or between stones. Most records are from Berlese funnel samples of leaf-litter and surface soil or sand.

This study attempts to exemplify the taxonomic procedures advocated by Taylor and Beaton (1970). It aims simply to name and diagnose the known species of *Mesostruma*, and to do this in the most succinct and orderly manner possible. It is not presented as a general systematic review in the broad sense. Such a study would not be possible using the uncomprehensive collections and data now available. The paper depends greatly on scanning electron micrographs for portrayal of specific characters, with verbal descriptions reduced to minimal diagnoses. Its general approach, though more mechanical than usual, is entirely adequate for the formal requirements of nomenclatorial taxonomy and species identification, and I consider the results more accessible and effective than would have been possible using conventional procedures. Application of the scanning electron microscope should allow a major procedural breakthrough for descriptive taxonomy of ants and insects of many other groups.

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