

Second species in the Australian ant genus *Peronomyrmex* Viehmeyer (Hymenoptera: Formicidae)

Steven O Shattuck^{1*} and Simon Hinkley²

¹CSIRO Entomology, GPO Box 1700, Canberra, ACT 2601, Australia.

²Museum Victoria, GPO Box 666E, Melbourne, Vic. 3001, Australia.

Abstract A second species of the rare Australian ant genus *Peronomyrmex* is described from Victoria. This new species, *P. bartoni*, represents only the third time the genus has been collected, the previous records being the holotype of *P. overbecki* Viehmeyer from north-eastern New South Wales and a collection, subsequently lost, from northern Queensland.

Key words Australia, Formicidae, Hymenoptera, new species, *Peronomyrmex*.

INTRODUCTION

Until recently, the Australian ant genus *Peronomyrmex* Viehmeyer has been known from only a single collection consisting of a single worker from north-eastern New South Wales. While a second series had been collected from northern Queensland, it was lost before it could be studied in detail (Shattuck 1999). The original specimen was described by Viehmeyer (1922) in the newly established genus *Peronomyrmex* as *P. overbecki*. The taxonomic placement of *Peronomyrmex* within the subfamily Myrmicinae was discussed by Brown (1948, 1949), and Taylor (1970) redescribed and illustrated *P. overbecki* and reviewed its probable relationships.

In this paper, we describe a second species of the genus recently discovered in central Victoria by the junior author. This new species, *P. bartoni*, supports the generic concept developed by Taylor (1970) and followed by Shattuck (1999), and extends the known distribution of the genus southward by some 1000 km.

Peronomyrmex Viehmeyer 1922: 212

Diagnosis. Antennae 11-segmented; in side view, petiole and postpetiole with high, conical, pointed nodes, the shape of which is unique among the Australian ant fauna. For additional characters, see Taylor (1970).

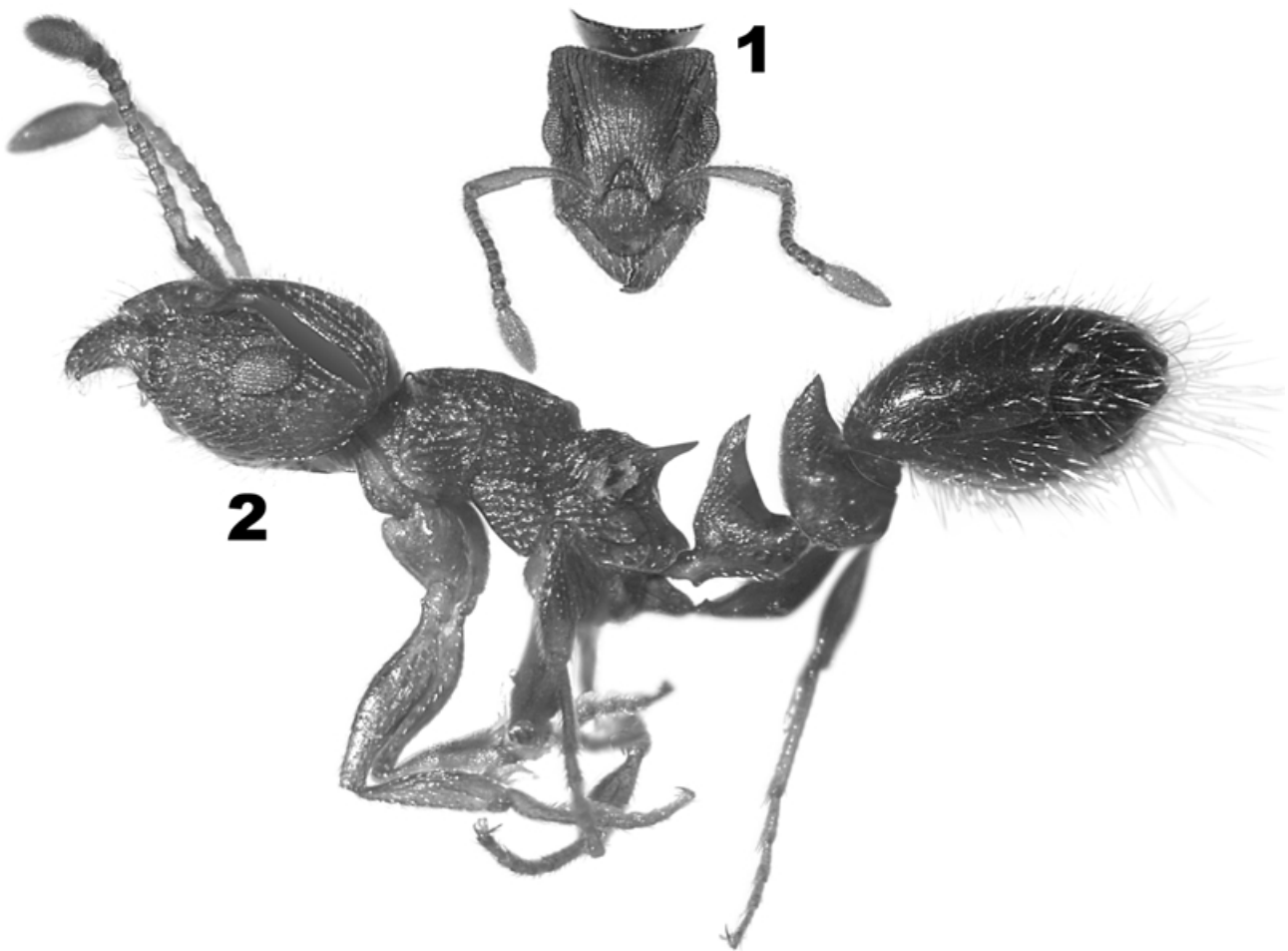
Peronomyrmex bartoni sp. n. (Figs 1,2)

Types. *Victoria.* Holotype worker, Inglewood Flora Reserve, 36°32'25"S 143°51'47"E, approximately 4 km north of Inglewood, 14.xi–17.xii.1995, S. Hinkley and P. Lillywhite (Museum Victoria, Type Number T17337); paratype: 1 worker, Wehla State Forest, 36°38'49"S 143°36'35"E, approximately 24 km WSW of Inglewood, 2.xi–6.xii.1995, S. Hinkley and P. Lillywhite (Australian National Insect Collection).

Description. Total length 4.3 mm; maximum head length 1.04 mm; maximum head width (behind eyes) 0.84 mm; maximum diameter of eye 0.24 mm; scape length 0.62 mm; cephalic index 81; scape index 74; width across pronotal humeri 0.64 mm; Weber's length of thorax 1.21 mm; dorsal petiole width 0.26 mm; maximum petiole height 0.56 mm; dorsal postpetiole width 0.40 mm; maximum postpetiole height 0.62 mm. Head capsule (Fig. 1) with distinct, longitudinal rugae, those on dorsal surface between antennal scrobes essentially straight, those on lateral surface ventral of eyes slightly wavy, those on underside weakly developed and absent medially; area between rugae with indistinct striations or punctations. Dorsal surface of mesosoma (Fig. 2) with distinct longitudinal rugae and a limited number of randomly placed short transverse rugae connecting longitudinal rugae, underlying surface with indistinct, irregularly shaped punctations and/or striations. Lateral regions of mesosoma similar to dorsal surface but with longitudinal rugae less well defined and more wavy. Petiole and postpetiole with indistinct microsculpturing resulting in a slightly matte appearance. Gaster smooth, shiny and with microreticulate sculpturing. Entire head covered with suberect, bluntly pointed hairs. Mesosoma lacking erect hairs but with scattered appressed hairs. Petiole and postpetiole with abundant appressed hairs. Gaster with 2 sets of abundant, scattered, elongate hairs, 1 set essentially perpendicular to the surface, other set raised at about a 30° angle with the surface. Colour chestnut-brown, petiole and postpetiole slightly infuscated, gaster dark red-black.

Remarks. While matching the previously described species in most ways, this species differs as follows: overall body size slightly longer; scape shorter (scape index 74 vs 87); longitudinal rugae well developed and distinct on head and mesosoma; erect hairs absent from dorsum of mesosoma, petiole and postpetiole, those on gaster longer and more abundant; anterior face of petiole essentially flat (strongly concave in *P. overbecki*) and postpetiole broader, its anterior face more convex and its posterior face more concave (both faces straighter in *P. overbecki*).

*Author to whom correspondence should be addressed (email: steve.shattuck@csiro.au).



Figs 1,2. Holotype worker of *Peronomyrmex bartoni*: (1) head; (2) mesosoma.

The single workers of this species were collected in pitfall traps at two locations in central Victoria, the Inglewood Flora Reserve and the Wehla State Forest. Muir *et al.* (1995) describe the Inglewood Flora Reserve as in the Sandstone-rise Broombush Ecological Vegetation Class and the area is dominated by *Eucalyptus viridis* (green mallee). It has an average rainfall of 400–500 mm and a mean altitude of 194 m. The Wehla State Forest, approximately 25 km from the first site, is in the Box Ironbark Ecological Vegetation Class. This area has a mean rainfall of 400–600 mm and an altitude of 220 m. It consists of generally open forest and at the specific collection site is dominated by *Eucalyptus leucoxylon* (yellow gum) and *E. microcarpa* (grey box). The ground layer is sparse and the understorey open and shrubby. **Etymology.** The species is named for Percy Barton, grandfather of SH.

ACKNOWLEDGEMENTS

This species was collected while undertaking a project funded by a grant to A Bennett, R MacNally and AL Yen (Museum Victoria) from the Land and Water Resources Research and Development Corporation and Environment Australia. Alan

Andersen (CSIRO Sustainable Ecosystems) and an anonymous reviewer provided useful comments on the manuscript.

REFERENCES

- Brown WL Jr. 1948. A preliminary generic revision of the higher Dacetini (Hymenoptera: Formicidae). *Transactions of the American Entomological Society* **74**, 101–129.
- Brown WL Jr. 1949. Revision of the ant tribe Dacetini. IV. Some genera properly excluded from the Dacetini, with the establishment of the Basicerotini new tribe. *Transactions of the American Entomological Society* **75**, 83–96.
- Muir AM, Edwards SA & Dickins MJ. 1995. *Description and conservation status of the vegetation of the box-ironbark ecosystem in Victoria. Flora and Fauna Technical Report no. 136.* Department of Conservation and Natural Resources, East Melbourne.
- Shattuck SO. 1999. *Australian Ants, their Biology and Identification.* Monographs on Invertebrate Taxonomy, vol. 3. CSIRO Publishing, Collingwood.
- Taylor RW. 1970. Characterization of the Australian endemic ant genus *Peronomyrmex* Viehmeier (Hymenoptera: Formicidae). *Journal of the Australian Entomological Society* **9**, 209–211.
- Viehmeier H. 1922. Neue Ameisen. *Archiv für Naturgeschichte (A)* **88**, 203–220.