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Archie McArthur

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Images: *Camponotus punctiventris* and *Camponotus spinitarsus*. AntWeb Casent 0905244. Available from http:/antweb.org. Accessed 29 May 2014. Photographers: Zach Liebermann and Will Ericson resp.

Front cover photo: Camponotus nigriceps, minor worker

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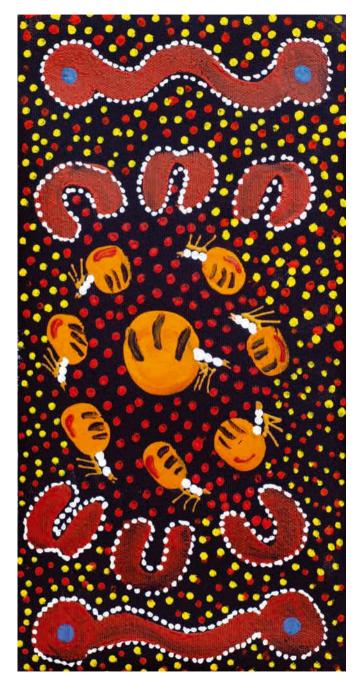
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CONTENTS

Page

Acknowledgements	2
"Honey pot" ants and mulga	4
Known localities of <i>Camponotus</i> species in Australia	6
Foreword	7
The genus Camponotus	8
Frigate Novara	9
Camponotus terebrans on sand	1
Identifi ation of a Camponotus specimen	1
Castes	1
Scale, images	1
Nest entrances	1
Relationship with plants	1
Relationship with other insects	1
Avoiding predators	1
Nuptial fli hts	1
Locations of type specimens examined	1
Sub family Formiciniae	1
Key to genera in sub family Formicinae	2
Keys to 7 groups of Australian Camponotus species	2
Data for identifying species in Group 1	2
Data for identifying species in Group 2	2
Data for identifying species in Group 3i	2
Data for identifying species in Group 3ii	3
Data for identifying species in Group 4	3
Data for identifying species in Group 5	3
Data for identifying species in Group 6	3
Data for identifying species in Group 7	3
Gallery and description of ants	4
Glossary of terms	1
References	1
Index to pages of species images	1



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Yerrampe, Honey Ants, acrylic on canvas, by Marjorie Wheeler, Western Arrernte, Ntaria community (Hermannsburg), MacDonnell Ranges, Northern Territory, 2009 (Private collection). ۲

A guide to Camponotus Ants of Australia

The 'honey-pot' ant

For thousands of years, indigenous people of Central Australia used the "honeypot" ant as a source of food (see painting previous page). These ants live in tunnels in the ground near mulga trees (see photo of typical mulga woodland on right). Aboriginal women using digging sticks forage for the ants with swollen abdomens. They hold the fore part of the ant in their fingers and suck out the contents of the swollen abdomen - nearly a millilitre of honey. These ants, known as "repletes", are a caste within the colony. In times of plenty the minor workers known as the "forager caste" gather honey from the mulga leaves (phyllodes - see photo) and on returning to the nest, regurgitate it into the mouths of the repletes. The abdomens of the repletes become so distended they are unable to move (see photo where scale line = 1 mm). In times of drought, the repletes share their crop contents with their nest-mates and eventually return to their normal size.

A droplet of honey can sometimes be seen at a gland on the phyllode of mulga near its base as shown in the photo. The relationship between this ant and the mulga is mutualistic in that the ant community benefits from acquiring food while the mulga benefits from having its leaves (phyllodes) protected from leaf-eating insects by the ants.

Honey from "honey-pot" ants was analysed by Badger (later Sir Geoffrey) et al. 1956, where the ratio fructose : glucose was found to be 0.67, quite different from European bee honey.



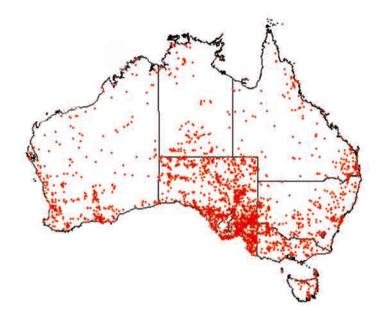
Mulga woodland, Burt Plain, Central Australia. Photo: P.A. Clarke, 2007.



The ant was described as *Camponotus inflatus* by Sir John Lubbock in 1880.



Phyllode of mulga showing honey droplet.



Map of the 5000 localities of specimens of *Camponotus*, revealing the vast collections in the South Australian Museum, referred to in this Guide.

FOREWORD

Archie McArthur has been contributing to the biodiversity discovery and description program at the South Australian Museum for a couple of decades, but he came to this part of his career having already run an agricultural enterprise for most of his life. Not unexpectedly these two aspects of his life are not unrelated. Indeed his abiding interest in ants, those marvellous social insects which have a quite varied reputation amongst Australians, formed this link in quite a functional and academic way.

Ants are a dominant component of the Australian arid zone fauna, a fact that anyone who has camped in a tent in our deserts can attest to. Ants carry out ecological functions that in other deserts might be done by rodents for instance. Their ubiquity, abundance and diversity make them useful in environmental assessment, but their usefulness is limited by the availability of tools for their identifi ation.

Despite being common and obvious, the true diversity of Australia's ants is yet to be determined adequately and described. This is not an ambition without considerable challenges, but the availability of find guides for the identifination of our fauna often provides a substantial boost in effort because competent find guides engage the broader community who bring ants from all corners of the realm to the attention of taxonomists.

For his first field guide Archie focused on a ubiquitous group of ants, the genus *Camponotus*. Certain species of this genus are famous as honey-pot ants, both of culinary, spiritual and artistic interest to Aboriginal Australians. Having admirably completed the task of providing a field guide to the *Camponotus* ants of South Australia, Archie realised that a larger and more ambitious task lay ahead of him: providing one for the whole continent!

While Archie's contributions to the field of entomological taxonomy are to be found in the many descriptions of newly discovered species he has published in the scientific literature, his broader contribution to an appreciation of our ants has been his ability to involve volunteers, friends and colleagues in collecting ants from across the continent.

As an individual Archie is both admired by and inspires his colleagues at the South Australian Museum with his unbounded enthusiasm for ants.

While publishing a book that deals with a continental fauna will be personally satisfying for Archie, it is at the same time inspirational for other biologists and immensely useful for the wider community.

Hopefully his third book, a comprehensive guide to the *Camponotus* ants of Australia, will likewise inspire young biologists, naturalists and environmental workers to explore the biology of these ants that they can now identify with far more certainty than was previously possible.

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Professor Steve Donnellan Chief Researcher

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THE GENUS CAMPONOTUS

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In 1861, soon after the return to Europe of the Austrian Scientific xpedition from a round the world voyage in His (Austrian) Majesty's Ship Novara, Gustav L. Mayr, in the Naturhistorisches Museum, Vienna, established the genus *Camponotus*. He included *Camponotus aeneopilosus* Mayr which had been collected by the Expedition in Sydney. The ant family (Formicidae) has been divided into eight subfamilies in Australia. The genus *Camponotus* is placed in Formicinae and how to recognise this subfamily is shown on page 18.

How to recognise *Camponotus* from the other eleven genera in this subfamily in Australia is shown on page 19. (For more details of Formicidae family and genus see Greenslade 1979 and Shattuck 1999 and for descriptions of *Camponotus* species from other parts of Australia see McArthur 2007.)

Colonies of *Camponotus* comprise many sterile females (workers), at least one egg laying female (queen), and a number of winged males and winged females which are waiting to leave the nest for their annual nuptial flight. A few records of dates of nuptial flights are shown on page 16.

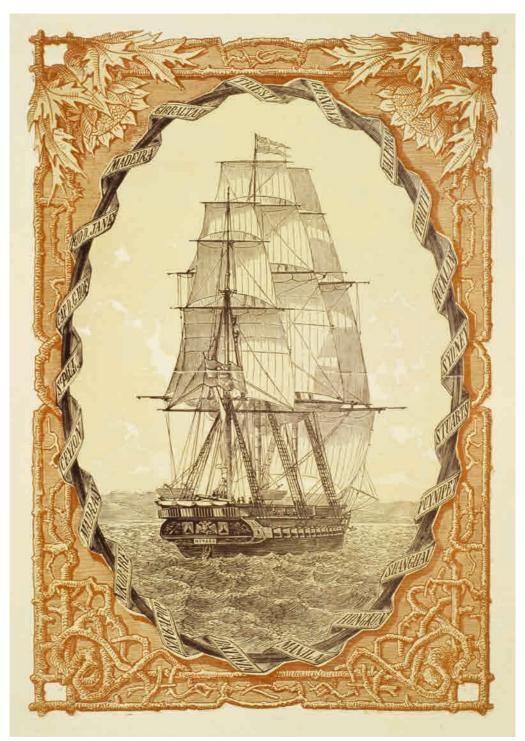
Camponotus workers divide into castes for performing the tasks associated with the maintenance of a complex living organism. The variation in shape, colour and size of the castes in a colony of *Camponotus* workers makes the identifi ation of species much more difficult compared with identifi ation of species where all workers are identical. This key is based on characters of minor workers except where stated.

Colonies of *Camponotus* species vary in size: some species are widespread, others are confi ed to small areas, some are in sandy soil, others in heavier soil. Most species excavate nests in the soil, some have nests above ground constructed of carton material and some in rotten logs. Two species live in galleries in branches of trees, where major workers with their flat truncated heads guard the entrance to *t*heir nest (McArthur & Shattuck, 2001). Most *Camponotus* species are nocturnal

but some forage diurnally. Species of *Camponotus* are known to have mutual relationships with butterflies (raby, 2000), to assist in revegetating disturbed sites by transporting seed (McArthur, 2003) and to have lived for 23 years (Haskins, 1992).

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Magnif[ation of 20x to 80x is required to interpret this key.



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From Karl von Scherzer: Reise der Österreichischen Frigate Novara um die Erde. Bd. 1, 2. Aufl., Wien 1864. Foto Schumacher, Naturhistorisches Museum Wien.



Camponotus terebrans major, medium and minor worker castes gathering syrup sprayed on sand in Beachport Conservation park.

BASIC UNITS OF CLASSIFICATION

"Species" is the basic unit of classifi ation of ants and in this Guide, species are considered as groups of interbreeding populations which do not interbreed with other groups (Mayr 1942). About 1400 species of *Camponotus* from the world have been described and of these, about 143 species have been observed in Australia.

The genus *Camponotus* and 11 other genera comprise the subfamily Formicinae, page 21, which with other sub families form family Formicidae (the ants), which with other families form the order Hymenoptera (ants, bees, wasps), which with other orders form the class Insecta, which with other classes form the phylum Arthropoda, which with other phyla form the animal kingdom Animalia.

The exoskeleton of ants is composed of adjoining plates of hard material, the integument, as in the body of modern aircraft but some plates have a flexible cuticle between them. These plates have names eg. clypeus etc as shown on Page 179.

IDENTIFICATION OF A CAMPONOTUS SPECIMEN, procedure for.

1. With magnifi ation >10, go to pages 24 and 25, then select the group which resembles the specimen.

2. Go to that group on pages 26 - 39.

3. Select a species.

4. Go to pages 40 - 177 to confi m identifi ation.

CASTES

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Most ants seen outside their nest are sterile females and they are known as minor, medium and major workers. Th s key is based on characters of minor workers except on pages 124 and 126. In some species of *Camponotus* their size increases gradually from the smallest minors to the largest majors and they are known as polymorphic. Other species are dimorphic and lack mid sized workers. Minor workers are the food gatherers and are most frequently encountered away from the nest. Medium workers are involved with domestic duties while the larger major workers stay closer to the nest and defend it. Males and fertile females begin their lives with wings as shown on page #).

IMAGES

Species are represented by photographs in front (of head) view and lateral view of minor workers and where available, similar photographs of major workers are shown. Where possible, photos of identifi d specimens are shown because of their better diagnostic qualities but where these were not available, photos of type specimens have been included. Images of two species were taken from the www and are acknowledged on Page 2 and other photos were taken by the author.

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Scale lines = 1 mm.

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GENERAL BIOLOGY

Camponotus ants play an important role in the environment. This section explores relationships with soil, nest entrances, plants, and other insects, as well as avoiding predators and nuptial flights.

1. NEST ENTRANCES



Camponotus aurocinctus

At Ngarkat Conservation Park in sandy soil. The spoil from the excavation has been placed in a lunette shaped mound a few cm from the entrance. Photo: R. S. Bungey.



Camponotus ceriseipes

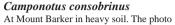
At Mullewa, Western Australia in sandy soil. The spoil from the excavation has been deposited evenly on a mound surrounding the entrance which is indicated.



Camponotus clarior

At Danggali Conservation Park. The entrance to the nest is indicated. It is about 1 metre above ground in a branch of a mallee directly above the apex of the cone of sand which over many years had been excavated from the nest. The particular branch of the mallee has been hollowed out by another insect and is didgeridoo-like. The ant colony lives in the soil surrounding the mallee.





At Mount Barker in heavy soil. The photo was taken in the autumn just prior to the entrance being sealed up from inside, presumably because the colony was settling down for the winter. Photo R. J. Lavigne



Camponotus gasseri

At Ferguson Conservation Park. These ants nest in trees in galleries hollowed out by another insect, usually a species of termite particularly in red gums. In the photograph, the head of a major worker can be seen guarding the entrance. Photo: G.Weber.



Camponotus gouldianus

At Danggali Conservation Park in heavy soil in swale. The entrance is indicated and is near the top of a turret made of clay. During flooding, water would not penetrate the nest until the depth exceeded 50 mm.



Camponotus evae zeuxis

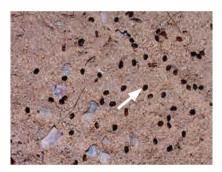
At Kimba. These ants make a carton nest above ground usually in *Triodia* and have a distinctive smell of coconut. Photo: J. Grund.

2. RELATIONSHIPS WITH PLANTS.

Many ant species transport seed, particularly when it is plentiful, sometimes across distances of over 100 metres. Some species store it for consumption later and in this process most of the seed is eaten and does not get a chance to germinate but a few seeds do germinate after being discarded along the route to the nest. *Camponotus terebrans* is known to transport the seeds of *Acacia sophorae* from its source towards its nest and in the process it bites off and swallows the *oleosome* of the seed. Removal of the *oleosome* does not affect germination of the seed. These ants appear to have no desire to eat the seed. The seed is discarded some distance from its source and is capable of germination The ant and the plant mutually benefit – the ant receives food and the plant has its sphere of influence increased. In Beachport Conservation Park many hundred hectares of sand-drift (a result of by rabbit devastation in the early 20th century) has been revegetated by *Camponotus terebrans* transporting seeds of *Acacia sophorae*. *Camponotus terebrans* is generally the first ant to colonise sandy sites that have been disturbed by earth moving eg rabbits, mining.



Camponotus terebrans transporting seed of *Acacia sophorae* towards its nest in Beachport C.P.



Acacia sophorae seed transported by Camponotus terebrans on sand in Beachport.



Seed of *Acacia sophorae* attached to its pod by the oleosome in Beachport C.P.



Young plants of *Acacia sophorae* stabilising sanddrift in Beachport C.P.

3. RELATIONSHIPS WITH OTHER INSECTS

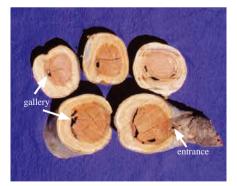
Camponotus gasseri.

Many red gums in South Australia are hosts to colonies of *Camponotus gasseri*. Often the head of a major worker may be seen blocking and guarding the entrance to the nest as shown on page 13. The 'door keeper' uses its head like a cork to close the circular entrance, the diameter of which is only slightly greater than the worker's head. The heads of major workers and queens are more or less circular in cross section with the anterior portion truncated, flat and often deeply and coarsely sculptured, camouflaging the entrance when it is blocked. When the 'doorkeeper' moves further in from the entrance, there is enough space to allow a nest mate to pass in or out. Major workers act as living doors they have evolved a characteristic flat or phragmotic face (from Greek phragmos, 'fence' or 'fencing in'). It appears that workers wishing to gain entry communicate to the 'door keeper' and do so by making contact with its clypeus or mandibles, as all other sensitive parts, notably the eyes and antennae, are too far out of reach to receive stimuli from outside the entrance. It is generally believed that Australian ants are incapable of excavating the hard wood and that the galleries are constructed by termites.

The photos show sections of a red gum tree *Eucalyptus camaldulensis* felled for road widening at Glen Osmond and once home for a colony of *Camponotus gasseri*. The colony comprised 1 wing-less female (the queen), 1242 major and minor workers, several winged females and 1 winged male. The length of the gallery was about 40 cm with an average diameter of about 1 cm.



Colonies of *Camponotus gasseri* occupy galleries hollowed out by other insects in branches of trees.



Sections of log of *Eucalyptus camaldulensis* occupied by a colony of *Camponotus gasseri*.

Camponotus consobrinus, Camponotus nigriceps and *Camponotus terebrans* have symbiotic relationships with *Ogyris* spp butterflies as described in Braby 2000.

4. AVOIDING PREDATORS

In the north east of South Australia, *Camponotus terebrans* has been observed to use tunnels to travel from its nest to a food tree, presumably to avoid predation. The tunnel is about 10 mm in diameter and is constructed in sand about 30 mm below the surface. On the surface, just above the tunnel, a low mound of sand is conspicuous, as shown in the photo. On excavating below the mound, *Camponotus terebrans* could be seen travelling to and fro in the tunnel. The tunnel in the photo connected a nest near the centre of the dry creek to a Coolabah tree on the bank.



5. NUPTIAL FLIGHTS

The annual life cycle of *Camponotus* begins with a nuptial flight when young winged males and winged females from all the colonies of a species fly off. Mating takes place in the air and the young queen stores the semen she has collected in a special sac. The males soon die while the young queen, if she survives predation, searches for a suitable nest site and if successful, discards her wings, digs a hole, starts laying eggs and establishes a new colony. Caryl P Haskins collected a queen near Sydney and put her in an artificial nest in New York, USA, where for 23.2 years, using her stored semen from when she was mated, she produced many off-spring.

Dates of Nuptial fights of some Camponotus species observed in South Australia.

Species	Locality	Collector	Date
Camponotus consobrinus	Belair	S. A. Parker	20/1/91
Camponotus consobrinus	Upper Sturt	A. Smith	22/1/92
Camponotus consobrinus	Salisbury	J. Knight	28/12/94
Camponotus consobrinus	Tusmore	H. Mincham	11/1/95
Camponotus consobrinus	Stirling	R. Foster	31/1/98
Camponotus consobrinus	Warrawong	R. G. Simms	15/2/97
Camponotus consobrinus	Nailsworth	L. Belotti	18/1/98
Camponotus consobrinus	Welland	R. Glatz	12/1/98
Camponotus consobrinus	Houghton	J. Rathbone	10/2/01
Camponotus consobrinus	Dernacourt	J. Rathbone	5/01/02
Camponotus consobrinus	Mount Barker	R. Lavigne	6/02/05
Camponotus consobrinus	Fullarton	P. Horton	20/12/07
Camponotus claripes	Mount Barker	R.J. Lavigne	26/04/06
Camponotus gouldianus	Calperum	G. L. Howie	3/10/96
Camponotus evae zeuxis	Kimba	J. Grund	3/10/96
Camponotus piliventris	Mount Barker	R. J. Lavigne	28/03/05
Camponotus terebrans	Kangaroo Is.	A. Young	23/10/06



Camponotus terebrans Female above and Male below with arrows pointing to ocelli which are not possessed by workers other than largest majors. Included is a posterior view of its penis enlarged.

TYPE LOCATIONS.

Adelaide = South Australian Museum, Adelaide, Australia.

Basel = Naturhistorisches Museum Basel, Switzerland.

Berlin = Museum fur Naturkunde an der Universität Humboldt zu Berlin, Germany.

Canberra = Australian National Insect Collection, Canberra, Australia.

Geneva = Muséum d'Histoire Naturelle, Geneva, Switzerland.

Genoa = Museo Civico di Storia Naturale "Giacomo Doria", Genoa, Italy.

Harvard = Museum of Comparative Zoology, Cambridge, Mass., USA.

London = British Museum (Natural History), London, U.K.

Melbourne = National museum of Victoria.

Oxford = Oxford University Museum, Oxford, UK.

Perth= Western Australian Museum Perth, Australia.

Vienna = Naturhistorisches Museum, Vienna, Austria.

SUBFAMILY FORMICINAE.

Formicinae have an anus fringed with short setae



Photo of *Camponotus aurocinctus*. The enlargement shows its anus, a multi function orifice fringed with short setae through which offensive chemicals are also sprayed. *Camponotus* have no sting.



Photo of a member of sub-family Myrmeciinae (a non Formicinae ant) and its sting.

Some species of ants in primitive subfamilies have retained stings, inherited from their ancestors. The sting is used in defence and in anaesthetising and capturing prey. Ants in the subfamily Formicinae including *Camponotus* are more advanced and have replaced the sting with an orifice through which chemical substances are sprayed onto the prey. It is fringed with short setae as shown with *Camponotus aurocinctus* above.



FORMICINAE ANTS HAVE ONE NODE AND NOT TWO.

Photo of a member of sub-family Myrmicinae (a non Formicinae ant) showing its two nodes.

KEY TO GENERA IN SUBFAMILY FORMICINAE (following Greenslade 1979)

Antennae with 12 segments (including scape) — page 21 Antennae with 11 segments (including scape)



Stigmacros worker. The angle of the propodium is armed with a couple of teeth



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Acropyga worker. Very small overall with small compound eyes each with less than 40 facets, palps short, uncommon



Plagiolepis worker. Small brownish.

KEY TO GENERA IN SUBFAMILY FORMICINAE (cont.)

Antennae attachment distant from anterior margin of clypeus — Page 23 – Antennae attachment close to anterior margin of clypeus



Paratrechina worker. A few pairs of stout long erect setae on propodeum and mesosoma.



Myrmecorhynchus worker. Head elongate, mandibles with at least 7 teeth in smallest workers. Popodeal spiracle circular.



Melophorus worker. Propodeal spiracle elongate. J shaped setae under head.



KEY TO GENERA IN SUBFAMILY FORMICINAE (cont)

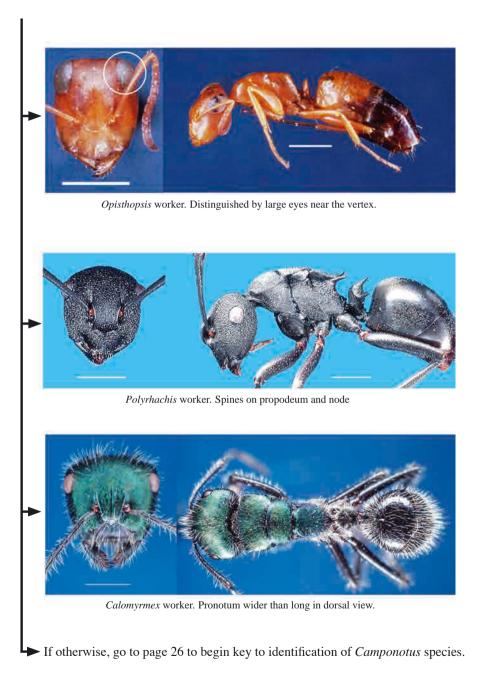


Notoncus worker. Frontal carinae mostly straight. There are two groups of species: one most common in South Australia and has projections on anterior dorsum whereas in the other group it is smooth.



Prolasius worker. Smooth and glossy. The propedeal spiracle is circular and is situated at the corner of the declivity.

KEY TO GENERA IN SUBFAMILY FORMICINAE (cont)

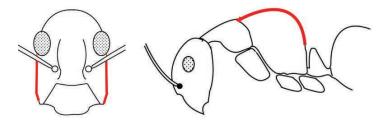


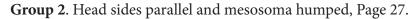
Group of species of Camponotus in Australia (minor workers).

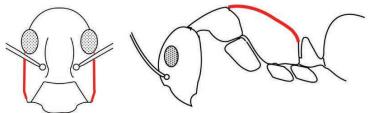
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Group 1. Wide front carina, Page 26.

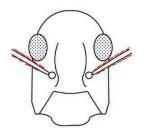




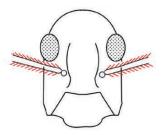


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Group 3. Head sides parallel and mesosoma straight e.g. below



Group 3i. Short setae on scape raised $< 30^{\circ}$, Page 28.

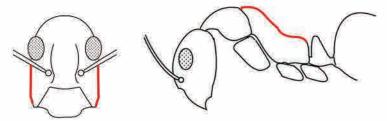


Group 3ii. Short setae on scape raised >30°, Page 30.

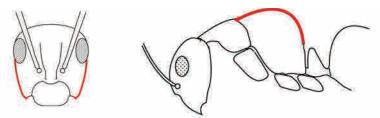
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Groups of species of *Camponotus* in Australia (minor workers) in side view with their group number.

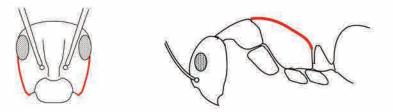
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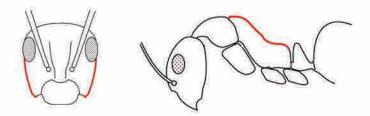
Group 4. Head sides parallel, mesosoma concave, Page 32.



Group 5. Head sides tapering, mesosoma humped, Page 34.



Group 6. Head sides tapering and mesosoma elongated, Page 36.



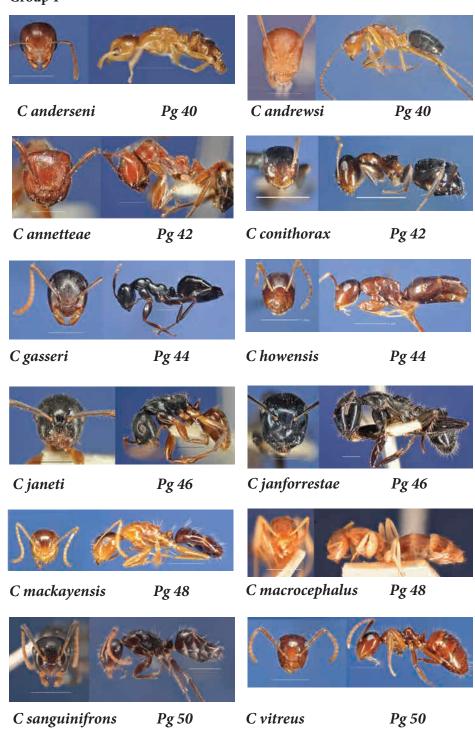
 (\blacklozenge)

Group 7. Head sides tapering and mesosoma concave, Page 38.

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Group 2









C claripes inverallensis Pg 52



C cowlei

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C guidae



C minimus





C scratius

Pg 58



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Pg 58



Pg 60 C woodroffeensis

CAMPONOTUS ANTS AUST 11 jul.indd 27

Group 3i



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Pg 62

C consobrinus Pg 62



C fieldellus

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Pg 64



Pg 64



C judithmorrisae









C loweryi

Pg 68



Pg 68



C nigroaeneus

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Group 3i





Pg 70

C rufus





C scratius nuntius



Pg 74



C spinitarsus

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C stefani

Pg 76

Pg 78



C subnitidus





C tricoloratus



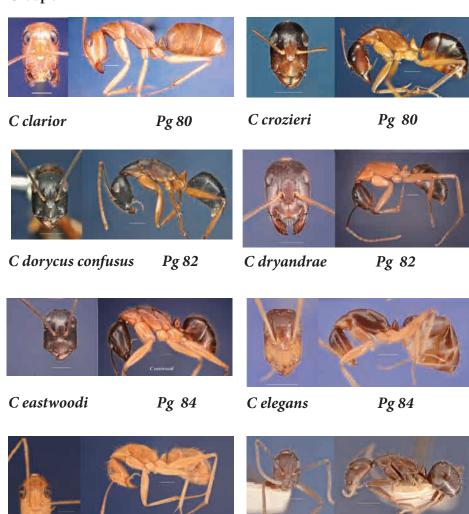
C wiederkehri



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Group 3ii



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Pg 86





C humilior

Pg 88

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Group 3ii

C longideclivis





Pg 88 C nigriceps

Pg 90



Cnigroaeneus xuthus Pg 90



C novaehollandiae Pg 92



C pallidiceps

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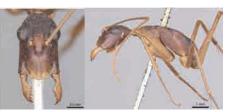






C spenceri





C subnitidus famelicus Pg 96



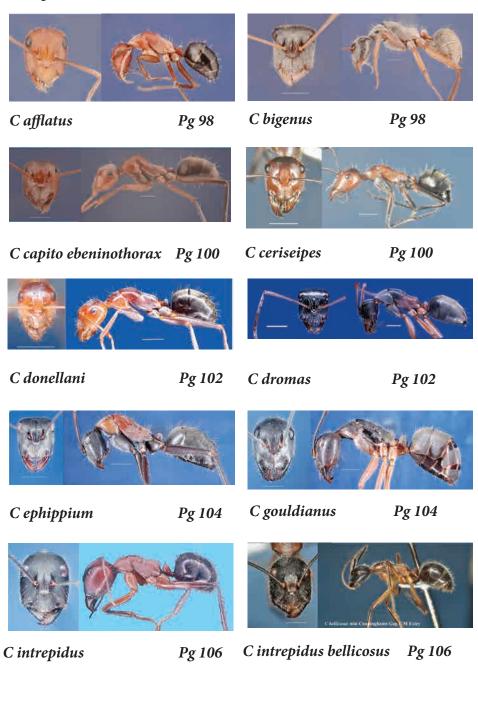
C terebrans

Pg 96

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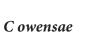
C longifacies



C molossus

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Pg 110

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Pg 108



C perjurus





C prosseri

Pg 112



C rufonigrus

Pg 114

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C versicolor Pg 114

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C macareaveyi

Pg 128









C rubiginosus





C rudis

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C thadeus





C tristis

Pg 138



C oetkeri voltai Pg 130



C punctiventris Pg 132



- C simpsoni
- Pg 134

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C triodiae





C walkeri

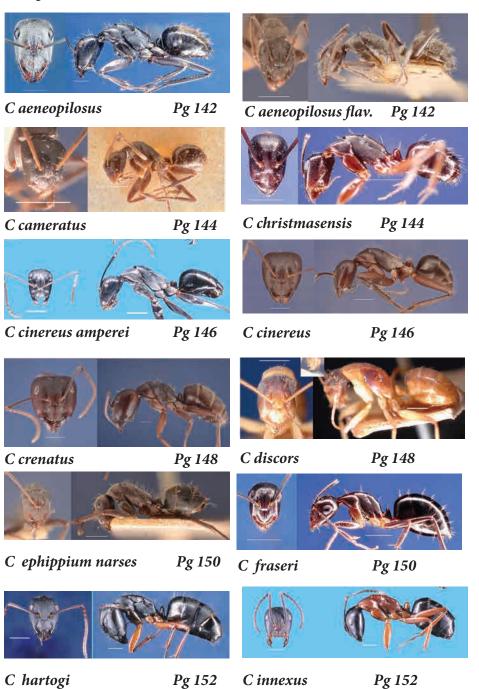




C walkeri bardus

Pg 140

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Group 6



C marcens

- Pg 154
- C oxleyi





C peseshus

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Pg 156



Pg 156



C pitjantjatarae









C scotti

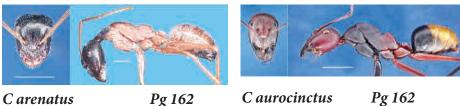
Pg 160



C tasmani

Pg 160

Group 7



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C arenatus

Pg 162

Pg 162



C capito

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Pg 164



Pg 164



C ezotus

Pg 166







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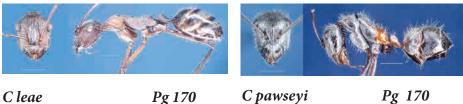
C froggatti

Pg 168

C horni

Pg 168

Group 7





Pg 170

Pg 170



C pellax

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Pg 172





Pg 172



C sponsorum

Pg 174



Pg 174



C whitei

Pg 176

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Group I, species with widely separated frontal carinae and enlarged fore-femurs.

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Camponotus anderseni McArthur & Shattuck 2001. Type location: Adelaide. Type locality: Leaders Ck, NT, 12°12'S 131°06'E.

Minor worker. Head sides: weakly convex, tapering, much wider behind than front. Vertex: weakly convex. Eye: large, nearer mandibles than vertex. Clypeus, anterior margin: convex. Integument, head: glossy Setae, scape: indistinct Setae, gena: absent. Setae, gula: absent. Setae, mesosoma: absent. Node: front and back convex, summit blunt.

Camponotus andrewsi Donisthorpe 1936.

Type location: Oxford. Type locality Christmas I., 10°27'S 105°18'E.

Minor worker.
Head sides: straight, tapering, much wider behind than front.
Vertex: convex.
Eye: large, between centre and vertex.
Clypeus, anterior margin: projecting with concavity bounded by obtuse angles.
Integument, head: glossy.
Setae, scape: indistinct.
Setae, gena: present.
Setae, gula: absent
Setae, mesosoma: a few at propodeal angle.
Node: front and back straight, equidistant, summit convex.

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A guide to Camponotus Ants of Australia



Camponotus anderseni

Major worker (top image) Minor worker (bottom image)



Camponotus andrewsi

Minor worker

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Group I, species with widely separated frontal carinae and enlarged fore-femurs.

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Camponotus annetteae McArthur & Shattuck 2001. Type location: Adelaide. Type locality: Cairns, Q, 16°53'S 145°45'E.

Minor worker. Head sides: weakly convex, parallel. Vertex: weakly convex. Eye: near vertex. Clypeus, anterior margin: convex. Integument, head: glossy, punctate. Setae, scape: erect. Setae, gena: present. Setae, gula: present. Setae, mesosoma: plentiful, erect, short < eye length. Node: front concave, back convex, summit sharp.

Camponotus conithorax Emery 1914.

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Type location: Genoa. Type locality: Vanuatu, 17°44'S 168°19'E.

Minor worker. Head sides: convex, slightly wider at back than front. Vertex: mostly flat. Eye: towards vertex. Clypeus, anterior margin: evenly convex. Integument, head: glossy, reticulate. Setae, scape: indistinct. Setae, gena: only a few adpressed. Setae, gula: absent. Setae, mesosoma: a few adpressed. Node: blunt.

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Camponotus annetteae

Minor worker



Camponotus conithorax

Major worker (top image) Minor worker (bottom image)

Group I, species with widely separated frontal carinae and enlarged fore-femurs.

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Camponotus gasseri Forel 1894. Type location: Geneva. Type locality: Perth, WA, 31°57'S 115°51'E.

Minor worker. Head sides: strongly convex near circular. Vertex: convex. Eye: well back. Clypeus, anterior margin: convex. Integument, head: glossy, reticulate. Setae, scape: indistinct. Setae, gena: absent. Setae, gula: absent. Setae, mesosoma: very sparse. Node: thick, summit convex.

Camponotus howensis Wheeler 1927.

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Type location: Adelaide. Type locality: Lord Howe Is, NSW, 31°33'S 159°55'E.

Minor worker. Head sides: strongly convex near circular. Vertex: convex. Eye: between vertex and head centre. Clypeus, anterior margin: convex. Integument, head: glossy, reticulate. Setae, scape: indistinct Setae, gena: adpressed. Setae, gula: absent. Setae, mesosoma: absent. Node: front convex, back straight, summit sharp.

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Camponotus gasseri

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Major worker (top image) Minor worker (bottom image)



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Camponotus howensis

Major worker (top image) Minor worker (bottom image)

CAMPONOTUS ANTS AUST 11 jul.indd 45

Group I, species with widely separated frontal carinae and enlarged fore-femurs.

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Camponotus janeti Forel 1895. Type location: Geneva. Type locality: Mackay, Q, 21°09'S 149°11'E.

Minor worker. Head sides: convex. Vertex: convex. Eye: near centre. Clypeus, anterior margin: straight. Integument, head: finely punctate. Setae, scape: long, near erect. Setae, gena: sparse. Setae, gula: sparse. Setae, mesosoma: long, scattered. Node: front convex, back straight, summit sharp.

Camponotus janforrestae McArthur & Shattuck 2001.

Type location: Canberra.. Type locality: Cairns, Q, 16°55'S 145°46'E.

Minor worker. Head sides: nearly straight, tapering to the front. Vertex: convex. Eye: behind centre. Clypeus, anterior margin: crenulated. Integument, head: glossy. Setae, scape: near erect. Setae, gena: plentiful. Setae, gula: plentiful. Setae, mesosoma: plentiful, long > eye-length. Node: thick, convex.

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Propodeum dorsum: flat.

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Camponotus janeti

Major worker (top image) Minor worker (bottom image)



Camponotus janforrestae

Minor worker

Group I, species with widely separated frontal carinae and enlarged fore-femurs.

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Camponotus mackayensis Forel 1902. Type location Canberra.

Type locality: Mackay, Q, 21°09'S 149°11'E.

Minor worker. Head sides: straight, strongly tapering to front. Vertex: convex. Eye: just posterior to head centre Clypeus, anterior margin: convex. Integument, head: glossy, reticulate. Setae, scape: indistinct. Setae, gena: a few adpressed. Setae, gula: a few adpressed. Setae, mesosoma: a few long erect, mostly near angle. Node: thick, summit convex. Propodeum dorsum: saddle shaped.

Camponotus macrocephalus Ericshon 1842.

Type location: Vienna. Type locality: Low Head, T., 41°04'S 146°48'E.

Minor worker. Head sides: strongly convex near circular. Vertex: convex. Eye: between vertex and head centre. Clypeus, anterior margin: convex. Integument, head: glossy, reticulate. Setae, scape: indistinct. Setae, gena: adpressed. Setae, gula: absent. Setae, mesosoma: absent. Node: front convex, back straight, summit sharp.

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Camponotus mackayensis

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Major worker (top image) Minor worker (bottom image)



Camponotus macrocephalus

Major worker (top image) Minor worker (bottom image)

CAMPONOTUS ANTS AUST 11 jul.indd 49

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Group I, species with widely separated frontal carinae and enlarged fore-femurs.

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Camponotus sanguinifrons Viehmeyer 1925. Type location: Berlin. Type locality: Trial Bay, NSW, 30°53'S 153°04'E.

Minor worker. Head sides: strongly convex near circular. Vertex: convex. Eye: between vertex and head centre. Clypeus, anterior margin: convex. Integument, head: glossy, reticulate. Setae, scape: adpressed. Setae, gena: sparse erect and adpressed. Setae, gula: sparse erect and adpressed. Setae, mesosoma: few long, scattered. Node: thick, summit convex. Major worker: gena with short clavate setae.

Camponotus vitreus Smith 1860

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Type location: Oxford. Type locality: Becan Is., Indonesia, 0°30'S, 127°30'E.

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Minor worker. Head sides: convex. Vertex: weakly convex. Eye: near vertex. Clypeus, anterior margin: convex. Integument, head: glossy. Setae, scape: plentiful erect. Setae, gena: plentiful. Setae, gula: sparse adpressed. Setae, mesosoma: plentiful, eye-length. Node: high, thin, summit blunt.



Camponotus sanguinifrons

Major worker (top image) Minor worker (bottom image)



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Camponotus vitreus

Major worker (top image) Minor worker (bottom image)

Group 2. Head sides parallel, mesosoma convex.

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Camponotus claripes Mayr 1876. Type location: Vienna. Type locality: Australia.

Minor worker. Head sides: long, straight, parallel. Vertex: mostly flat. Eye: large. Clypeus, anterior margin: projecting, weakly concave. Integument, head: glossy. Setae, scape: raised about 30°. Setae, gena: present. Setae, gula: a few adpressed, a few erect in majors. Setae, mesosoma: sparse, erect. Node: front convex, back straight, summit sharp.

Camponotus claripes inverallensis Forel 1910.

Type location: Geneva. Type locality: Inverall, NSW, 29°47'S 151°07'E.

Minor worker. Head sides: long, straight, parallel. Vertex: mostly flat. Eye: large. Clypeus, anterior margin: projecting, weakly concave. Integument, head: glossy. Setae, scape: raised about 5°. Setae, gula: a few erect. Setae, mesosoma: sparse, erect. Node: front convex, back straight, summit sharp.

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Camponotus claripes

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Major worker (top image) Minor worker (bottom image)



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Camponotus claripes inverallensis

Major worker (top image) Minor worker (bottom image)

Group 2. Head sides parallel, mesosoma convex.

Camponotus cowlei Froggatt 1896. Type location: Sydney. Type locality: Oodnadatta, SA, 27°33'S 135°27'E.

Minor worker. Head sides: long, straight, parallel. Vertex: mostly straight. Eye: large. Clypeus, anterior margin: projecting, convex. Integument, head: glossy, reticulate. Setae, scape: raised about 20°. Setae, gena: present. Setae, gula: present. Setae, mesosoma: sparse, erect. Node: front straight and convex, back straight, summit sharp.

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Camponotus gibbinotus Forel 1902..

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Type location: Geneva. Type locality: Broome, WA, 17°58'S 122°14'E.

Minor worker. Head sides: weakly convex, same width at front and back. Vertex: mostly straight Eye: between vertex and centre. Clypeus, anterior margin: projecting, concave. Integument, head: glossy. Setae, scape: adpressed. Setae, gena: absent. Setae, gula: long setae absent, a few short setae near neck. Node: front convex, back straight, summit sharp ()



Camponotus cowlei

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Major worker (top image) Minor worker (bottom image)



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Camponotus gibbinotus

Minor worker

Group 2. Head sides parallel, mesosoma convex.

Camponotus guidae McArthur 2007. Type location: Adelaide. Type locality: McLaren Flat, SA, 35°13'S 138°35'E.

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Minor worker. Head sides: weakly convex, same width at front and back. Vertex: mostly straight. Eye: nearer centre than vertex. Clypeus, anterior margin: projecting, straight. Integument, head: glossy, reticulate. Setae, scape: indistinct. Setae, gena: very sparse. Setae, gula: present. Setae, mesosoma: sparse, erect. Node: front convex, back straight, summit blunt.

Camponotus minimus Crawley 1922.

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Type location: Oxford. Type locality: Mundaring Weir, WA, 31°57'S 116°10'E.

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Minor worker. Head sides: mostly straight, parallel. Vertex: mostly straight. Eye: near head centre. Clypeus, anterior margin: convex Integument, head: glossy. Setae, scape: absent. Setae, gena: absent. Setae, gula: absent. Setae, mesosoma: sparse. Node: thin, summit blunt.



Camponotus guidae

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Major worker (top image) Minor worker (bottom image)



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Camponotus minimus

Major worker (top image) Minor worker (bottom image)

Group 2. Head sides parallel, mesosoma convex.

Camponotus samueli McArthur 2008. Type location: Adelaide. Type locality: Ngarkat CP, SA, 35°44'S 140°40'E.

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Minor worker. Head sides: straight. Vertex: mostly straight. Eye: large just above head centre. Clypeus, anterior margin: convex. Integument, head: glossy. Setae, scape: adpressed. Setae, gena: present. Setae, gula: sparse erect setae, a few adpressed. Setae, mesosoma: sparse, erect. Node: front convex, back straight, summit blunt.

Camponotus scratius Forel 1907.

()

Type location: Berlin. Type locality: Fremantle, WA, 32°04'S 115°45'E.

Minor worker. Head sides: convex, parallel. Vertex: weakly convex. Eye: nearer vertex than centre. Clypeus, anterior margin: convex. Integument, head: glossy, sparsely punctate. Setae, scape: adpressed. Setae, gena: present. Setae, gula: present. Setae, mesosoma: sparse. Node: thin, summit sharp.

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Camponotus samueli

Major worker (top image) Minor worker (bottom image)



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Camponotus scratius

Major worker (top image) Minor worker (bottom image)

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Group 2. Head sides parallel, mesosoma convex.

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Camponotus woodroffeensis McArthur 2008. Type location: Adelaide. Type locality: Mt. Woodroffe, SA, 26°18'S 132°15'E.

Minor worker. Head sides: straight, scarsely tapering. Vertex: weakly convex. Eye: large, near vertex. Clypeus, anterior margin: convex. Integument, head: glossy, reticulate. Setae, scape: adpressed. Setae, gena: absent. Setae, gula: absent. Setae, mesosoma: long very sparse. Node: thin, summit sharp.

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Camponotus woodroffeensis

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Major worker (top image) Minor worker (bottom image) 61

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Group 3i. Head sides parallel, mesosoma elongate, scapes without erect setae.

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Camponotus churchetti McArthur 2008. Type location: Adelaide. Type locality: Taylorville, SA, 34°06'S 139°58'E.

Minor worker. Head sides: long, straight, parallel. Vertex: partly straight. Eye: large, between centre and vertex. Clypeus, anterior margin: convex. Integument, head: glossy. Setae, scape: indistinct. Setae, gena: sparse flat-lying. Setae, gula: sparse. Setae, mesosoma: one or two, erect. Node: thick. Front with obtuse angle, back straight, summit blunt.

Camponotus consobrinus Erichson 1842.

Type location: Berlin Type locality: Mount Horror, T, 41°02'S 147°43'E.

Minor worker. Head sides: weakly convex, parallel. Vertex: mostly straight. Eye: between vertex and centre. Clypeus, anterior margin: projecting, concave with 90° corners. Integument, head: glossy. Setae, scape: raised to 20 ° Setae, gena: absent. Setae, gula: absent. Setae, mesosoma: erect, sparse, scattered. Node: front mostly convex, back straight, summit sharp. Front of gaster lighter colour than posterior.

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Camponotus churchetti

Major worker (top image) Minor worker (bottom image)



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Camponotus consobrinus

Major worker (top image) Minor worker (bottom image)

Group 3i. Head sides parallel, mesosoma elongate, scapes without erect setae.

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Camponotus fieldellus Forel 1910. Type location: Berlin, Geneva. Type locality: Tennant Creek, NT, 19°33'S 134°14'E

Minor worker. Head sides: slightly tapering, straight. Vertex: weakly convex. Eye: in corners. Clypeus, anterior margin: convex Integument, hidden by white pubescence. Setae, scape: adpressed. Setae, gena: absent. Setae, gula: absent. Setae, mesosoma: > eye-length plentiful, erect. Node: front and back parallel.

Camponotus insipidus Forel 1893.

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Type location: Berlin, Geneva. Type locality: East Wallaby Is. WA., 28°26'S 113°43'E

Major worker.(from Forel 1893). Head: widened behind, wider than long. Teeth: Six. Clypeus, anterior margin: convex. Integument, glossy, fine punctations. Pilosity: similar to C walkeri. Node: almost square, sharp, superior border weekly indented.



Camponotus fieldellus

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Major worker (top image) Minor worker (bottom image)



Camponotus insipidus

Major worker (top image) Minor worker (bottom image)

CAMPONOTUS ANTS AUST 11 jul.indd 65

Group 3i. Head sides parallel, mesosoma elongate, scapes without erect setae.

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Camponotus judithmorrisae McArthur 2008. Type location: Adelaide. Type locality: Hallett Cove, SA, 35°04'S 138°30'E.

Minor worker. Head sides: weakly convex, parallel. Vertex: weakly convex. Eye: small, near corners of head. Clypeus, anterior margin: convex, crenulated. Integument, head: glossy, reticulate. Setae, scape: adpressed. Setae, gena: erect, sparse. Setae, gula: present. Setae, mesosoma: plentiful, erect. Node: front and back parallel.

Camponotus lividipes Emery 1887.

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Type location: Genoa. Type locality: Trial Bay, NSW, 30°53'S 153°04'E.

Minor worker. Head sides: straight. Vertex: weakly convex. Eye: between vertex and centre. Clypeus, anterior margin: projecting, weakly concave with rounded corners. Integument, head: glossy. Setae, scape: adpressed. Setae, gena: sparse, erect. Setae, gula: present. Setae, mesosoma: long sparse. Node: front and back convex, summit blunt.



Camponotus judithmorrisae

Major worker (top image) Minor worker (bottom image)



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Camponotus lividipes

Major worker (top image) Minor worker (bottom image)

67

Group 3i. Head sides parallel, mesosoma elongate, scapes without erect setae.

 (\blacklozenge)

Camponotus loweryi McArthur & Adams 1996 Type location: Adelaide. Type locality: Tipperary Dam , SA, 33°14'S 140°43'E.

Minor worker. Head sides: straight, parallel. Vertex: weakly convex. Eye: nearer vertex than centre. Clypeus, anterior margin: anterior margin projecting with central concavity and sharp corners. Integument, head: finely reticulate. Setae, scape: adpressed. Setae, gena: absent. Setae, gula: present. Setae, mesosoma: erect, < 30, front and back. Node: front convex, back straight, summit blunt.

Camponotus malleensis McArthur 2007

Type location: Adelaide. Type locality: Ngarkat CP, 35°44'S 140°40'E.

Minor worker. Head sides: straight. Vertex: mostly straight. Eye: between vertex and centre. Clypeus, anterior margin: projecting, concave, acute corners. Integument, head: glossy. Setae, scape: adpressed. Setae, gena: sparse. Setae, gula: sparse. Setae, mesosoma: 50 erect scattered. Node: front convex, back straight, summit blunt.

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A guide to Camponotus Ants of Australia



Camponotus loweryi

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Major worker (top image) Minor worker (bottom image)



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Camponotus malleensis

Major worker (top image) Minor worker (bottom image)

CAMPONOTUS ANTS AUST 11 jul.indd 69

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Group 3i. Head sides parallel, mesosoma elongate, scapes without erect setae.

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Camponotus nigroaeneus Smith 1858. Type location: Geneva. Type locality: Melbourne, V, 37°49'S 144°58'E.

Minor worker. Head sides: straight. Vertex: convex. Eye: near vertex. Clypeus, anterior margin: convex. Integument, head: finely punctate, sparse pubescence. Setae, scape: adpressed. Setae, gena: absent. Setae, gula: absent. Setae, mesosoma: erect >20. Node: thick, posterior straight, longer than anterior, summit convex. Pubescence: plentiful, dense yellow on gaster.

Camponotus palkura McArthur 2007.

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Type location: Adelaide. Type locality: Streaky Bay, SA, 32°48'S 134°13'E.

Minor worker. Head sides: straight, wider at the back. Vertex: short, straight. Eye: nearer head centre than vertex. Clypeus, anterior margin: projecting, convex. Integument, head: glossy. Setae, scape: indistinct. Setae, gena: absent. Setae, gula: present. Setae, mesosoma: erect >50. Node: thick, front convex, back straight, summit blunt. ()

A guide to Camponotus Ants of Australia



Camponotus nigroaeneus

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Minor worker



Camponotus palkura

Major worker (top image) Minor worker (bottom image) 71

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Group 3i. Head sides parallel, mesosoma elongate, scapes without erect setae.

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Camponotus rufus Crawley 1925. Type location: Oxford. Type locality: WA.

Minor worker. Head sides: straight, wider at front than back. Vertex: convex. Eye: large. Clypeus, anterior margin: wide, near straight. Integument, head: glossy. Setae, scape: adpressed. Setae, gena: absent. Setae, gula: absent. Setae, mesosoma: <5. Node: long, front and back weakly convex, summit blunt.

Camponotus scratius nuntius Forel 1907

Type location: Hamburg. Type locality: Dirk Hartog Brown, WA, 25°45'S 113°03'E.

Minor worker. Head sides: straight. Vertex: convex Eye: near vertex. Clypeus, anterior margin: convex. Integument, head: glossy, finely reticulate. Setae, scape: adpressed. Setae, gena: absent Setae, gula: absent Setae, mesosoma: very sparse. Node: front mostly convex, back straight, summit blunt.

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Camponotus rufus

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Minor worker



Camponotus scratius nuntius

Major worker (top image) Minor worker (bottom image) ۲

 (\blacklozenge)

Camponotus simulator Forel 1915. Type location: Berlin, Geneva. Type locality: Atherton, Q, 17°16'S 145°29'E.

Minor worker Vertex: convex. Eye: large. Clypeus, anterior margin: convex. Integument, head: glossy, reticulate. Setae, scape: some raised to 40°. Setae, gena: plentiful. Setae, gula: plentiful. Setae, mesosoma: <10 long erect, plentiful short curved. Node: front with obtuse angle, back straight, summit convex.

Camponotus spinitarsus Emery 1920.

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Antweb Casent 0905244 Type locality: Cooktown,, Q, 15°28'S 145°15'E. Type location: Genoa (major worker).

Major worker Head sides: weakly convex, parallel. Vertex: mostly straight. Eye: between frontal carinae and vertex. Clypeus, anterior margin: projecting, near straight, crenulate. Integument, head: sparsely punctate. Setae, scape: adpressed. Setae, gena: long, plentiful. Setae, gula: long, plentiful. Setae, mesosoma: long, < 50 scattered. Node: thick, sides convex, summit blunt.



Camponotus simulator

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Major worker (top image) Minor worker (bottom image)



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Camponotus spinitarsus

Major worker

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Camponotus stefani McArthur 2007.

Type location: Adelaide. Type locality: Jamestown, SA, 33°12'S 138°36'E.

Minor worker Head sides: straight, long, evenly spaced. Vertex: convex. Eye: between vertex and centre. Clypeus, anterior margin: convex. Integument, head: partly hidden by fine white pubescence. Setae, scape: adpressed. Setae, gena: absent. Setae, gula: absent. Setae, mesosoma: <10 long, plentiful white pubescence. Node: thick, front and back mostly straight, summit blunt.

Camponotus subnitidus Mayr 1876.

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Type location: Vienna Type locality: Peak Downs, Q, 22°56'S 148°05'E,

Minor worker. Head sides: straight, slightly wider in front than rear. Vertex: convex. Eye: near vertex Clypeus, anterior margin: evenly convex. Integument, head: finely punctate. Setae, scape: adpressed. Setae, gena: present. Setae, gula: present. Setae, mesosoma: long erect < 15, short adpressed scattered. Node: long, symmetrical, sides straight, summit convex.

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Camponotus stefani

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Major worker (top image) Minor worker (bottom image)



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Camponotus subnitidus

Minor worker

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Camponotus tricoloratus Clark 1941. Type location: Melbourne. Type locality: Mildura, V, 34°11'S 142°10'E.

Minor worker. Head sides: straight, slightly wider in front than rear Setae, gena: absent. Setae, gula: present Setae, scape: indistinct. Setae, mesosoma: very few. Clypeus: anterior margin strongly convex. Node: long, summit sharp, front and back near straight.

Camponotus wiederkehri Forel 1894

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Type location: Vienna. Type locality: Charters Towers, Q, 20°05'S 146°16'E.

Minor worker. Head sides: convex. Vertex: convex. Eye: near vertex. Clypeus, anterior margin: convex. Integument, head: very fine pubescence. Setae, scape: adpressed. Setae, gena: sparse short. Setae, gula: erect long. Setae, mesosoma:< 25 long scattered. Node: front and back equally convex, summit blunt.



Camponotus tricoloratus

Minor worker



Camponotus wiederkehri

Major worker (top image) Minor worker (bottom image)

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 (\blacklozenge)

Camponotus clarior Forel 1902. Type location: Geneva. Type locality: Bendigo, V, 36°46'S 144°17'E.

Minor worker. Head sides: weakly convex, parallel. Vertex: convex. Integument: glossy. Eye: mid-way between vertex and head centre. Clypeus anterior margin: central concavity with acute corners. Setae, gena: plentiful. Setae, scape: erect. Setae, gula: plentiful. Setae, mesosoma: long, > 50. Node: symmetrical, front and back convex, summit blunt.

Camponotus crozieri McArthur & Leys 2006.

Type location: Adelaide. Type locality: Townsville, Q, 19°16'S 146°49'E.

Minor worker. Head sides: straight, parallel. Vertex: convex. Integument: glossy. Eye: midway between head centre and vertex. Clypeus anterior margin: projecting, wide, weakly convex. Setae, gena: plentiful. Setae, scape: raised about 45.° Setae, gula: plentiful. Setae, mesosoma: long erect front and back. Node: Front mostly convex, back straight, summit blunt.

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Camponotus clarior

Minor worker



Camponotus crozieri

Major worker (top image) Minor worker (bottom image)

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Camponotus dorycus confusus Emery 1887. Type location: Genoa. Type locality: Dory Is, Indonesia, 0°52'S 135°5'E.

Minor worker. Head sides: straight, parallel. Vertex: convex. Integument: finely reticulate. Eye: large, midway between head centre and vertex. Clypeus anterior margin: projecting, straight with square corners. Setae, gena: plentiful. Setae, scape: raised to about 45°. Setae, gula: plentiful. Setae, mesosoma: long erect front and back. Node: back mostly straight, summit blunt.

Camponotus dryandrae McArthur & Adams 1996

Type location: Perth. Type locality: Dryandra State Forest, WA, 32°47'S 116°58'E.

Minor worker. Head sides: weakly convex, parallel. Vertex: convex. Integument: finely reticulate. Eye: nearer vertex than head centre. Clypeus anterior margin: projecting, concave with acute corners. Setae, gena: absent. Setae, gena: absent. Setae, scape: raised about 45.° Setae, gula: plentiful Setae, mesosoma: >20 erect, mid-length front and back; short, erect, scattered. Node: tapering, front and back mostly straight, summit convex.

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Camponotus dorycus confusus

Major worker (top image) Minor worker (bottom image)



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Camponotus dryandrae

Major worker (top image) Minor worker (bottom image)

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Camponotus eastwoodi McArthur & Adams 1996. Type location: Adelaide. Type locality: South Grafton , NSW, 29°42'S 152°56'E.

Minor worker. Head sides: straight, parallel head width = head length. Vertex: convex. Integument: finely reticulate. Eye: near vertex. Clypeus anterior margin: projecting, concave with acute corners. Setae, gena: plentiful. Setae, scape: raised up. Setae, gula: plentiful. Setae, mesosoma: long and short, erect front and back. Node: Thick, sides near straight, summit concave

Camponotus elegans Forel 1902.

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Type location: Geneva. Type locality: Wellsend, NSW, 32°56'S 151°46'E.

Minor worker. Head sides: straight, parallel. Vertex: mostly straight. Integument: glossy, finely reticulate. Eye: large. Clypeus anterior margin: deeply concave with sharp corners. Setae, gena: plentiful. Setae, scape: raised about 45.° Setae, gula: plentiful. Setae, mesosoma: sparse long erect and plentiful short raised up. Node:Thick, front convex, back straight, summit blunt. Dorsum of propodeum: straight. ()



Camponotus eastwoodi

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Major worker (top image) Minor worker (bottom image)



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Camponotus elegans

Major worker (top image) Minor worker (bottom image)

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Camponotus extensus Mayr 1876. Type location: Geneva.

Minor worker. Head sides: straight, parallel. Vertex: strongly convex. Integument: glossy, finely reticulate. Eye: large, near vertex Clypeus anterior margin: projecting, wide, weakly convex. Setae, gena: plentiful. Setae, scape: raised about 45.° Setae, gula: plentiful short. Setae, mesosoma: plentiful erect front and back. Node: Front convex, back straight, summit convex.

Camponotus fieldeae Forel 1902.

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Type location: Geneva. Type locality: Charters Towers, , 20°05'S 146°16'E.

Minor worker Head sides: convex. Vertex: convex. Integument: matte, finely punctate. Eye: near vertex. Clypeus anterior margin: weakly convex, wide. Setae, gena: plentiful. Setae, scape: raised about 45°. Setae, gula: plentiful. Setae, mesosoma: few long erect front and back, a few short between. Node: front mostly convex, back straight, summit blunt.



Camponotus extensus

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Major worker (top image) Minor worker (bottom image)



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Camponotus fieldeae

Major worker (top image) Minor worker (bottom image)

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Camponotus humilior Forel 1902 Type location: Canberra. Type locality: Cairns, Q, 16°55'S 145°46'E.

Minor worker Head sides: straight, parallel. Vertex: convex. Integument: finely punctate. Eye: near vertex. Clypeus anterior margin: long, straight, square corners. Setae, gena: plentiful. Setae, scape: 60°. Setae, gula: few. Setae, mesosoma: plentiful erect front and back. Node: front and back mostly straight, summit blunt.

Camponotus longideclivis McArthur & Adams 1996

Type location: Perth. Type locality: Dryandra State Forest, WA, 32°47'S 116°58'E.

Minor worker Head sides: weakly convex. Vertex: mostly straight. Integument: glossy. Eye: midway between head centre and vertex. Clypeus anterior margin: projecting, concave with acute corners. Setae, gena: absent. Setae, scape: raised about 45° Setae, gula: absent. Setae, mesosoma: few, scattered. Node: front mostly convex, back straight, summit blunt.

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Camponotus humilior

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Major worker (top image) Minor worker (bottom image)



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Camponotus longideclivis

Major worker (top image) Minor worker (bottom image)

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Camponotus nigriceps Smith 1858. Type location: London.

Minor worker. Head sides: weakly convex. Vertex: convex. Integument: glossy. Eye: near vertex. Clypeus anterior margin: projecting, widely concave, corners acute. Setae, gena: present. Setae, scape: raised about 45.° Setae, gula: present. Setae, mesosoma: > 100 short and long evenly distributed. Node: Thick, front mostly convex, back straight, summit blunt.

Camponotus nigroaeneus xuthus Forel 1915.

Type location: Geneva. Type locality: Kimberley, WA, 20°38'S 120°18'E.

Minor worker Head sides: very weakly convex. Vertex: straight. Integument: finely punctate. Eye: near vertex. Clypeus anterior margin: very wide, straight. Setae, gena: present. Setae, scape: raised about 45°. Setae, gula: present. Setae, mesosoma: < eye-length, scattered on front and back of dorsum.

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Node: front mostly convex, back straight, summit blunt.

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Camponotus nigriceps

Major worker (top image) Minor worker (bottom image)



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Camponotus nigroaeneus xuthus

Minor worker

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Camponotus novaehollandiae Mayr 1870.

Type location: Vienna. Type locality: Rockhampton, Q.

Minor worker Head sides: straight, parallel. Vertex: convex. Integument: finely punctate. Eye: near vertex. Clypeus anterior margin: anterior margin wide, weakly crenulate. Setae, gena: present. Setae, scape: raised about 45°. Setae, gula: present. Setae, mesosoma: long, scattered on front and back of dorsum. Node: front mostly convex, back straight, summit blunt.

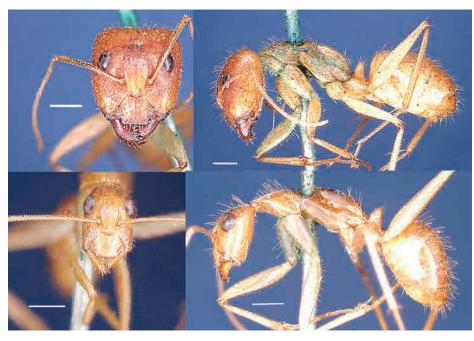
Camponotus pallidiceps Emery 1887

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Type location: Genoa. Type locality: Mt Victoria, NSW, 33°35'S 150°15'E.

Minor worker. Head sides: very weakly convex. Vertex: convex. Integument: glossy reticulate. Eye: near vertex. Clypeus anterior margin: projecting, weakly concave, rounded corners. Setae, gena: absent. Setae, scape: raised up, about 45°. Setae, gula: absent. Setae, mesosoma: > 30 long and short, scattered. Node: front weakly convex, back straight, summit blunt.

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Camponotus novaehollandiae

Major worker (top image) Minor worker (bottom image)



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Camponotus pallidiceps

Minor worker

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Camponotus prostans Forel 1910. Type location: Vienna. Type locality: Lion Mill, WA,

Minor worker. Head sides: very weakly convex. Vertex: straight. Integument: glossy, finely reticulate. Eye: near vertex. Clypeus anterior margin: anterior margin projecting, concave, corners acute. Setae, gena: absent. Setae, gena: absent. Setae, scape: raised up, about 45°. Setae, gula: present. Setae, mesosoma: >20 long and short, scattered front and back. Node: front mostly convex, back straight, summit blunt.

Camponotus spenceri Clark 1930

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Type location: Melbourne. Type locality: Paisley Bluff, SA, 23°42'S 132°40'E.

Minor worker. Head sides: straight. Vertex: weakly convex. Integument: reticulate. Eye: near vertex. Clypeus anterior margin: projecting, straight square corners. Setae, gena: absent. Setae, scape: raised to about 45.° Setae, gula: present. Setae, mesosoma: > 20, long, scattered front and back. Node: front weakly convex, back straight, summit blunt.



Camponotus prostans

Major worker (top image) Minor worker (bottom image)



Camponotus spenceri

Major worker (top image) Minor worker (bottom image)

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Camponotus subnitidus famelicus Emery 1887.

Type location: Genoa. Type locality: Adelaide, SA, 34°56'S 138°36'E.

Minor worker Head sides: straight, long. Vertex: convex. Integument: widely punctate. Eye: near vertex. Clypeus anterior margin: projecting, strongly convex. Setae, gena: absent. Setae, gena: absent. Setae, scape: indistinct. Setae, gula: sparse. Setae, mesosoma: erect, very sparse. Node: From Emery "node is crowned in an erect pyramidal point cf. obtuse in *C.subnitidus*".

Camponotus terebrans Lowne 1865

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Type location: London. Type locality: Sydney, NSW, 33°53'S 151°12'E.

Minor worker Head sides: weakly convex, parallel. Vertex: convex. Integument: glossy. Eye: near vertex. Clypeus anterior margin: projecting, strongly convex. Setae, gena: sparse. Setae, scape: > 60°. Setae, gula: present including J shape. Setae, mesosoma: >50, near eye-length, scattered. Node: front and back mostly convex, summit blunt.

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Camponotus subnitidus famelicus Minor worker



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Camponotus terebrans

Major worker (top image) Minor worker (bottom image)

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Group 4. Head sides parallel, mesosoma with a concavity.

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Camponotus afflatus Viehmeyer 1925. Type location: Berlin. Type locality: Killalpaninna, SA, 28°36'S 138°34'E.

Minor worker. Head sides: strongly convex. Vertex: convex. Integument: reticulate. Eye: near vertex. Clypeus anterior margin: widely convex. Setae, gena: absent. Setae, scape: indistinct. Setae, gula: sparse. Setae, mesosoma: few. Node: thick, front and back convex, summit blunt.

Camponotus bigenus Santschi 1919.

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Type location: Basel. Type locality: Townsville, Q, 19°16'S 146°49'E.

Minor worker. Head sides: straight. Setae, gena: plentiful. Setae, gula: plentiful. Setae, scape: indistinct. Setae, mesosoma: long plentiful, evenly spaced. Setae, short adpressed: widely spaced hiding integument. Node: convex. Integument, forehead: hidden. Clypeus: anterior margin convex. Eye: close to flat, at vertex.



Camponotus afflatus

Minor worker



 $(\blacklozenge$

Camponotus bigenus

Minor worker

Group 4. Head sides parallel, mesosoma with concavity.

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Camponotus capito ebeninithorax Forel 1915.

Type location: Geneva. Type locality: Australia.

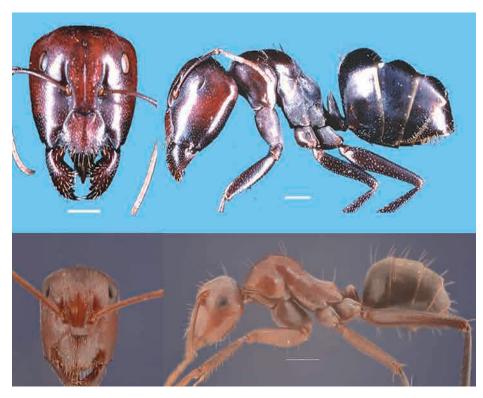
Minor worker. Head sides: weakly convex. Vertex: convex. Integument: some pubescence. Eye: near vertex. Clypeus anterior margin: convex. Setae, gena: absent. Setae, scape: indistinct. Setae, gula: present. Setae, mesosoma: long, sparse, scattered. Node: thick, front and back convex, summit blunt.

Camponotus ceriseipes Clark 1938.

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Type location: Melbourne. Type locality: Reevesby Is, SA, 34°32'S 136°17'E.

Minor worker. Head sides: straight. Setae, gena: present. Setae, gula: present, with some J shape. Setae, scape: indistinct. Setae, mesosoma: eye-length, sparse, evenly spaced. Node: thick, summit convex. Integument: glossy with fine pubescence. Clypeus: anterior margin convex.



Camponotus capito ebeninithorax

Major worker (top image) Minor worker (bottom image)



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Camponotus ceriseipes

Minor worker

Group 4. Head sides parallel, mesosoma with concavity.

Camponotus donnellani Shattuck & McArthur 2002. Type location: Adelaide. Type locality: Kings Creek, NT, 24°22'S 131°27'E.

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Minor worker. Head sides: straight, parallel. Vertex: convex. Integument: reticulate, pubescence. Eye: near vertex. Clypeus anterior margin: widely convex. Setae, gena: present. Setae, scape: indistinct. Setae, gula: present, with some J shape. Setae, mesosoma: eye-length, sparse, evenly spaced. Node: straight in front, otherwise convex.

Camponotus dromas Santschi 1919.

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Type location: Basel. Type locality: Townsville, Q, 19°16'S 146°49'E.

Minor worker. Head sides: straight, parallel. Vertex: weakly convex. Integument: covered with fine pubescence. Eye: at corners. Clypeus anterior margin: convex. Setae, gena: sparse. Setae, scape: sparse. Setae, gula: sparse. Setae, mesosoma: eye-length, sparse. Node: thick, summit convex.

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Camponotus donnellani

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Minor worker



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Camponotus dromas

Major worker (top image) Minor worker (bottom image)

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Group 4. Head sides parallel, mesosoma with concavity.

Camponotus ephippium Smith 1858.

Type location:London. Type locality: Adelaide, SA, 34°56'S 138°36'E.

Minor worker. Head sides: near straight and parallel. Vertex: weakly convex. Integument: covered with fine pubescence, hiding integument. Eye: at corners. Clypeus anterior margin: straight, corners obtuse. Setae, gena: sparse. Setae, scape: indistinct. Setae, gula: sparse. Setae, mesosoma: <eye-length, plentiful, dense, evenly spaced. Node: thick, summit convex.

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Camponotus gouldianus Forel 1922.

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Type location: Geneva. Type locality: Sea Lake, V, 35°30'S 142°51'E.

Minor worker. Head sides: weakly convex and parallel. Vertex: convex. Integument: matte. Eye: at corners. Clypeus anterior margin: convex. Setae, gena: plentiful. Setae, scape: > 45°. Setae, gula: plentiful. Setae, mesosoma: <eye-length, > 100. Node: thick, summit blunt.



Camponotus ephippium

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Major worker (top image) Minor worker (bottom image)



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Camponotus gouldianus

Major worker (top image) Minor worker (bottom image)

Group 4. Head sides parallel, mesosoma with concavity.

Camponotus intrepidus Kirby 1819.

Type locality: Australia.

Minor worker. Head sides: weakly convex, parallel. Vertex: convex. Integument: punctate. Eye: midway between vertex and centre. Clypeus anterior margin: projecting, centre near straight. Setae, gena: plentiful. Setae, scape: plentiful. Setae, gula: plentiful. Setae, mesosoma: :< eye-length, plentiful. Node: front straight and convex, back straight, summit blunt.

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Camponotus intrepidus bellicosus Forel 1902.

Type locality: Sydney, NSW, 33°51'S 151°13'E.

Minor worker. Head sides: weakly convex, parallel. Vertex: convex. Integument: punctate. Eye: midway between vertex and centre. Clypeus anterior margin: Setae, gena: plentiful. Setae, scape: plentiful. Setae, gula: plentiful. Setae, mesosoma: :< eye-length, plentiful.

Node: front straight and convex, back straight, summit blunt.

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Camponotus intrepidus

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Major worker (top image) Minor worker (bottom image)



Camponotus intrepidus bellicosus

Major worker (top image) Minor worker (bottom image)

Group 4. Head sides parallel, mesosoma with concavity.

Camponotus johnclarki Taylor 1992. Type locality: Melbourne. Type locality: Ludlow, WA, 33°37'S 115°29'E.

Minor worker. Head sides: weakly convex, parallel. Vertex: convex. Integument: glossy. Eye: at corners. Clypeus anterior margin: convex. Setae, gena: plentiful. Setae, scape: plentiful. Setae, gula: plentiful. Setae, mesosoma: < eye-length, plentiful. Node: long, front straight, back and summit straight joined by an obtuse angle.

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Camponotus longifacies McArthur 2003.

Type locality: Adelaide. Type locality: Narrandra, NSW, 34°27'S 146°22'E.

Minor worker. Head sides: straight, parallel. Vertex: flat, convex corners. Integument: fine white pubescence. Eye: nearer centre than vertex. Clypeus anterior margin: convex. Setae, gena: absent. Setae, scape: indistinct. Setae, gula: sparse. Setae, mesosoma: < eye-length, about 12. Node: thick, summit long.

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Camponotus johnclarki

Minor worker



Camponotus longifacies

Major worker (top image) Minor worker (bottom image) 109

Group 4. Head sides parallel, mesosoma with concavity.

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Camponotus molossus Forel 1907. Type locality:Perth. Type locality: Buckland Hill, WA, 32°01'S 115°46'E.

Minor worker. Head sides: weakly convex, parallel. Vertex: convex. Integument: punctate. Eye: nearer centre than vertex. Clypeus anterior margin: convex. Setae, gena: plentiful, short erect. Setae, scape: 45°. Setae, gula: plentiful. Setae, mesosoma: < eye-length, >>100. Node: thick, summit blunt.

Camponotus owensae Shattuck & McArthur 2002.

Type locality: Adelaide. Type locality: Yumbarra CP, SA, 31°39'S 133°33'E.

Minor worker. Head sides: straight, parallel. Vertex: convex. Integument: fine white pubescence. Eye: near vertex. Clypeus anterior margin: convex. Setae, gena: plentiful. Setae, scape: indistinct. Setae, gula: few. Setae, mesosoma: eye-length, sparse front and back. Node: thick, mostly convex.

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Camponotus molossus

Minor worker



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Camponotus owensae

Minor worker

Group 4. Head sides parallel, mesosoma with concavity.

Camponotus perjurus Shattuck & McArthur 2002. Type locality: Canberra. Type locality: Cosmo Newberry, WA, 27°51'S 123°31'E.

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Minor worker. Head sides: convex, weakly tapering to front. Vertex: convex. Integument: glossy. Eye: midway between vertex and centre. Clypeus anterior margin: near straight. Setae, gena: absent. Setae, scape: indistinct. Setae, gula: absent. Setae, mesosoma: > eye-length, sparse. Node: long, front straight, back and summit mostly convex. Neck joins head well below vertex.

Camponotus prosseri Shattuck & McArthur 2002

Type location: Canberra. Type locality: Streaky Bay, SA, 32°48'S 134°13'E.

Minor worker. Head sides: straight. Setae, gena: present. Setae, gula: present, with some J shape. Setae, scape: indistinct. Setae, mesosoma: eye-length, sparse, evenly spaced. Node: thick, summit convex. Integument: glossy with fine pubescence. Clypeus: anterior margin convex.

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Camponotus perjurus

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Minor worker



Camponotus prosseri

Minor worker

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Group 4. Head sides parallel, mesosoma with concavity.

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Camponotus rufonigrus Shattuck & McArthur 2002. Type locality: Canberra. Type locality: Cambrai, SA, 34°39'S 139°17'E.

Minor worker. Head sides: straight, parallel. Vertex: convex. Integument: reticulate. Eye: midway between vertex and centre. Clypeus anterior margin: projecting, crenulated. Setae, gena: present. Setae, scape: indistinct. Setae, gula: present, including J shaped. Setae, mesosoma: >10 eyelength, scattered. Node: thick, front and back straight, summit convex.

Camponotus versicolor Clark 1930.

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Type locality: Perth. Type locality: Emu Rocks, WA, 30°51'S 123°10'E.

Minor worker. Head sides: convex, parallel. Vertex: convex. Integument: matte. Eye: near head centre. Clypeus anterior margin: projecting,convex Setae, gena: present. Setae, scape: indistinct. Setae, gula: present including J shaped. Setae, mesosoma: few, short, erect. Node: very thick, summit weakly concave.



Camponotus rufonigrus

Minor worker



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Camponotus versicolor

Minor worker

Camponotus adami Forel 1910. Type location: Geneva. Type locality: Bombala, NSW, 36°56'S 149°17'E.

Minor worker. Head sides: weakly convex, tapering. Vertex: convex. Integument: glossy, reticulate. Eye: large, near vertex. Clypeus anterior margin: widely convex. Setae, gena: none erect, a few adpressed. Setae, scape: < 20°. Setae, gula: absent. Setae, mesosoma: a few eye-length erect. Node: front convex, back mostly straight, summit blunt.

 (\blacklozenge)

Camponotus andyyoungi McArthur 2008.

Type location: Adelaide. Type locality: Kimba, SA, 33°08'S 136°25'E.

Minor worker. Head sides: wide, strongly convex. Vertex: straight. Integument: glossy, reticulate. Eye: large, near vertex. Clypeus anterior margin: projecting, widely convex. Setae, gena: a few adpressed. Setae, scape: raised 30°. Setae, gula: present. Setae, mesosoma: long, erect, <20, scattered. Node: narrow, front convex, back mostly straight, summit sharp.

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A guide to Camponotus Ants of Australia



Camponotus adami

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Major worker (top image) Minor worker (bottom image)



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Camponotus andyyoungi

Major worker (top image) Minor worker (bottom image)

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Camponotus arcuatus aesopus Forel 1907. Type locality: Rockhampton, Q, 23°22'S 150°31'E.

Minor worker. Head sides: strongly convex, scarcely tapering. Vertex: straight. Integument: glossy, reticulate. Eye: between centre and vertex. Clypeus anterior margin: convex with narrow concavity. Setae, gena: absent. Setae, scape: plentiful, erect. Setae, gula: absent. Setae, mesosoma: plentiful, eye-length, erect. Node: narrow, front convex, back mostly straight, summit sharp.

 (\blacklozenge)

Camponotus arcuatus Mayr 1876.

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Type location: Geneva. Type locality: Kalgoorlie, WA, 30°45'S 121°28'E.

Minor worker. Head sides: straight, strongly tapering. Vertex: convex. Integument: matte, reticulate, sparse pubescence. Eye: large, between centre and vertex. Clypeus anterior margin: convex with narrow concavity. Setae, gena: present. Setae, scape: adpressed. Setae, gula: sparse. Setae, mesosoma: erect, short, < 20.

Node: narrow, front and back mostly straight, summit convex.

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A guide to Camponotus Ants of Australia



Camponotus arcuatus aesopus

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Major worker (top image) Minor worker (bottom image)



Camponotus arcuatus

Major worker (top image) Minor worker (bottom image)

Camponotus armstrongi McAreavey 1949. Type location: Melbourne. Type locality: Nyngan, NSW, 31°34'S 147°12'E.

Minor worker. Head sides: strongly convex, tapering. Vertex: straight. Integument: glossy, reticulate. Eye: large, near vertex. Clypeus anterior margin: widely convex. Setae, gena: none erect, a few adpressed. Setae, scape: 30°. Setae, gula: a few. Setae, mesosoma: long, erect, <30, scattered. Node: front convex, back mostly straight, summit sharp.

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Camponotus darlingtoni Wheeler 1934.

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Type location: Perth. Type locality: Margaret River, WA, 33°57'S 115°04'E.

Minor worker. Head sides: straight, narrow, weakly tapering to front. Vertex: straight. Integument: reticulate. Eye: small, midway between vertex and centre. Clypeus anterior margin: projecting, widely convex. Setae, gena: absent. Setae, scape: <20°. Setae, gula: absent. Setae, mesosoma: very sparse. Node: thick, front flat below, summit widely convex.



Camponotus armstrongi

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Major worker (top image) Minor worker (bottom image)



Camponotus darlingtoni

Major worker (top image) Minor worker (bottom image)

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Camponotus eremicus Wheeler 1915. Type location. Harvard. Type locality: Everard Ranges, SA, 23°34'S 133°49'E.

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Minor worker. Head sides: convex, strongly tapering to front. Vertex: concave. Integument: glossy, reticulate. Eye: midway between vertex and centre. Clypeus anterior margin: projecting, crenulate. Setae, gena: absent. Setae, scape: : <20°. Setae, gula: absent. Setae, mesosoma: long erect, one or two. Node: front and back straight, summit sharp. Viewed from above, propodeum is sharp.

Camponotus esau Forel 1915.

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Type location. Geneva. Type locality: Cedar Creek, Q, 15°39'S 145°15'E.

Minor worker. Head sides: straight, strongly tapering to front. Vertex: convex. Integument: partly hidden by pubescence. Eye: near corners. Clypeus anterior margin: widely convex. Setae, gena: erect, sparse, adpressed plentiful. Setae, scape: <20°. Setae, gula: erect, sparse, adpressed plentiful. Setae, mesosoma: erect, long, <10. Node: front convex, back flat, summit blunt.



Camponotus eremicus

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Minor worker



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Camponotus esau

Minor worker

Camponotus evae Forel 1910.

Type location. Geneva. Type locality: Cape York Peninsula. 10°41'S 142°32'E.

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Minor worker. Head sides: weakly convex, strongly tapering to front. Vertex: straight. Integument: finely punctate. Eye: near corners. Clypeus anterior margin: projecting, widely convex. Setae, gena: sparse. Setae, scape: <20°. Setae, gula: sparse. Setae, mesosoma: eye-length, >50, erect, scattered. Node: front and back mostly flat, summit blunt.

Camponotus evae zeuxis Forel 1915.

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Type location. Geneva. Type locality: Broome, WA, 17°58'S 122°14'E.

Minor worker. Head sides: convex, strongly tapering to front. Vertex: convex. Integument: glossy, finely reticulate. Eye: near corner. Clypeus anterior margin: convex. Setae, gena: very sparse. Setae, scape: : >60°, plentiful. Setae, gula: sparse. Setae, mesosoma: Node: front and back weakly convex, summit sharp.

Camponotus evae zeuxis and *Camponotus lownei* (pg 126) are closely related, best separated by head sides of a major worker

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Camponotus evae

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Major worker (top image) Minor worker (bottom image)



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Camponotus evae zeuxis

Major worker (top image) Minor worker (bottom image) 125

Camponotus inflatus Lubbock 1880. Type locality: Uluru, NT, 25°20'S 131°02'E.

Minor worker. Head sides: weakly convex, tapering to front. Vertex: near straight. Integument: finely punctate. Eye: near corners. Clypeus anterior margin: weakly projecting, widely convex. Setae, gena: absent. Setae, scape: <30°. Setae, gula: sparse. Setae, mesosoma: long erect > 20, scattered. Node: front convex, back mostly straight, summit blunt.

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Camponotus lownei Forel 1895.

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Type location. Geneva. Type locality: Mackay, Q, 21°09'S 149°11'E.

Minor worker. Head sides: weakly convex, tapering to front. Vertex: near straight. Integument: glossy. Eye: near corners. Clypeus anterior margin: projecting, widely convex. Setae, gena: absent. Setae, scape: <30°. Setae, gula: sparse. Setae, mesosoma: Node: thin, front and back mostly straight, summit sharp.

Camponotus lownei and *Camponotus evae zeuxis* (pg 124) are closely related, in major workers, (a) has head sides parallel, (b) has head sides tapering.

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Camponotus inflatus

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Major worker (top image) Minor worker (bottom image)



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Camponotus lownei

Major worker (top image) Minor worker (bottom image)

Camponotus macareaveyi Taylor 1992. Type location. Canberra. Type locality: Trial Bay, NSW, 30°53'S 153°04'E.

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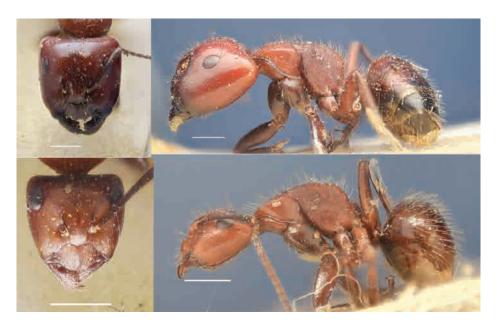
Minor worker. Head sides: convex, tapering to front. Vertex: straight. Integument: reticulate. Eye: near corners. Clypeus anterior margin: projecting, widely convex. Setae, gena: absent. Setae, scape: 30°. Setae, gula: absent. Setae, mesosoma: about eye-length, erect > 50, scattered. Node: front mostly convex, back straight, summit blunt.

Camponotus michaelseni Forel 1907.

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Type location. Canberra. Type locality: Mundaring Weir, WA, 31°57'S 116°10'E.

Minor worker. Head sides: convex, tapering to front. Vertex: straight. Integument: glossy, reticulate. Eye: between vertex and centre. Clypeus anterior margin: weakly projecting, weakly concave. Setae, gena: absent. Setae, scape: <30°. Setae, gula: absent. Setae, mesosoma: absent. Node: front and back straight, summit very sharp.



Camponotus macareaveyi

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Major worker (top image) Minor worker (bottom image)



Camponotus michaelseni

Major worker (top image) Minor worker (bottom image)

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Camponotus oetkeri Forel 1910. Type location. Geneva. Type locality: Tennant Ck, 19°39'S 134°11'E.

Minor worker. Head sides: convex, tapering to front. Vertex: straight. Integument: glossy. Eye: about eye-length from corners. Clypeus anterior margin: mostly straight. Setae, gena: absent. Setae, scape: indistinct. Setae, gula: absent. Setae, mesosoma: absent. Node: front and back straight, summit sharp.

Camponotus oetkeri voltai Forel 1913.

Type location. Geneva Type locality: Tasmania.

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Minor worker. Head sides: nearly straight, tapering to front. Vertex: convex. Integument: finely reticulate. Eye: near corners. Clypeus anterior margin: straight, crenulate, corners obtuse. Setae, gena: plentiful. Setae, scape: <30°. Setae, gula: sparse. Setae, mesosoma: plentiful. Node: front mostly convex, back straight, summit sharp.

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Camponotus oetkeri

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Major worker (top image) Minor worker (bottom image)



Camponotus oetkeri voltai

Major worker (top image) Minor worker (bottom image)

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Camponotus punctiventris Emery 1920. Type location. Genoa. Type locality: Kamerunga, Q, 16°53'S 145°41'E.

Minor worker. Head sides: straight, tapering to front. Vertex: convex. Integument: finely punctate. Eye: nearer vertex than centre. Clypeus anterior margin: crenulate. Setae, gena: present. Setae, scape: <30°. Setae, gula: present. Setae, mesosoma: few, long, scattered. Node: front and back mostly straight, summit convex.

Camponotus rubiginosus Mayr 1876.

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Type location: Vienna. Type locality: Peak Downs, Q, 22°56'S 148°05'E.

Minor worker. Head sides: weakly convex, tapering to front. Vertex: convex. Integument: glossy, reticulate. Eye: large, near corner. Clypeus anterior margin: projecting, widely convex. Setae, gena: present. Setae, scape: long, plentiful, >30°. Setae, gula: present. Setae, mesosoma: long, > 50. Node: front and back mostly straight, summit sharp.

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Camponotus punctiventris

Minor worker



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Camponotus rubiginosus

Minor worker

Camponotus rudis McArthur 2003. Type location: Canberra. Type locality: Condobolin, NSW, 33°05'S 147°09'E.

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Minor worker Head sides: straight, tapering to front. Vertex: convex. Integument: reticulate. Eye: near corner. Clypeus anterior margin: widely convex. Setae, gena: sparse. Setae, scape: indistinct. Setae, gula: sparse. Setae, mesosoma: sparse. Node: front and back mostly straight, summit blunt.

Camponotus simpsoni McArthur 2003.

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Type location: Adelaide. Type locality: Cape Wellington, WA, 15°09'S, 124°50'E.

Minor worker. Head sides: weakly convex, tapering to front. Vertex: nearly straight. Integument: finely reticulate. Eye: near corner. Clypeus anterior margin: widely convex. Setae, gena: absent. Setae, scape: >30°, plentiful. Setae, gula: absent. Setae, mesosoma: >10, long, pointing forward, scattered. Node: thin, front and back mostly straight, summit sharp.

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Camponotus rudis

Minor worker



Camponotus simpsoni

Major worker (top image) Minor worker (bottom image)

Camponotus thadeus Shattuck 2005. Type location: Canberra. Type locality: York Peninsula. Qld, 10°51'S 142°27'E.

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Minor worker. Head sides: straight, tapering to front. Vertex: near straight. Integument: finely punctate. Eye: near corners. Clypeus anterior margin: weakly projecting, mostly straight. Setae, gena: present. Setae, scape: <30°. Setae, gula: sparse. Setae, mesosoma: hundreds, long, pointing forward, yellow. Node: front convex, back mostly straight, summit blunt.

Camponotus triodiae McArthur 2009.

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Type location: Adelaide. Type locality: Uno Station, SA, 32°41'S 136°43'E.

Minor worker. Head sides: nearly straight, tapering to front. Vertex: weakly convex. Integument: glossy. Eye: nearer vertex than centre. Clypeus anterior margin: strongly projecting, near straight crenulate. Setae, gena: absent. Setae, scape: <30°. Setae, gula: sparse. Setae, mesosoma: erect, <eye-length, < 10. Node: front convex, back mostly straight, summit sharp. ()



Camponotus thadeus

Minor worker



Camponotus triodiae

Major worker (top image) Minor worker (bottom image) 137

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Camponotus tristis Clark 1930. Type location: Melbourne. Type locality: Eradu, WA, 28°42'S 115°02'E.

Minor worker. Head sides: straight, tapering to front. Vertex: straight. Integument: reticulate. Eye: small, near corners. Clypeus anterior margin: projecting, near straight, obtuse angles. Setae, gena: absent. Setae, scape: indistinct. Setae, gula: absent. Setae, mesosoma: < 10, about eye-length. Node: front and back mostly straight, summit sharp.

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Camponotus walkeri Forel 1893.

Type location: Berlin. Type locality: Baudin Island, WA, 14°08'S 125°36'E.

Minor worker.

Head sides: straight, tapering to front.

Vertex: convex.

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Integument: glossy. Eye: near corner.

Clypeus anterior margin: projecting, convex.

Setae, gena: absent.

Setae, scape: indistinct.

Setae, gula: absent.

Setae, mesosoma: few.

Node: front convex, back mostly straight, summit sharp.



Camponotus tristis

Major worker (top image) Minor worker (bottom image)



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Camponotus walkeri

Minor worker

139

Camponotus walkeri bardus Forel 1910.

Type location: Geneva. Type locality: Perth, WA.

Major worker.

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Head: not present.

Integument: glossy. Forel described in French "reticulation more feeble on pronotum.Clypeus anterior margin: Forel front of trapezoidal lobe much longer than type.Setae, mesosoma: sparse.Node: side view: thin, front convex back mostly straight, summit sharp.Node: rear view: summit convex with central sharp point". (French translation by Jill Ridley)

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Camponotus walkeri bardus

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Major worker

Group 6. Head sides tapering, mesosoma elongate.

Camponotus aeneopilosus Mayr 1862. Type location: Vienna. Type locality: Sydney, NSW, 33°53'S 151°13'E.

Minor worker. Head sides: straight, parallel. Vertex: mostly straight. Integument: matte. Eye: small. Clypeus anterior margin: convex. Setae, gena: sparse. Setae, scape: adpressed. Setae, gula: absent. Setae, mesosoma: < 15, scattered. Node: front mostly convex, back mostly straight, summit convex. Gaster: with yellow pubescence.

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Camponotus aeneopilosus flavidopubescens Forel 1902.

Type location: Geneva. Type locality: NSW.

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Minor worker. Head sides: weakly convex. Vertex: convex. Integument: matte. Eye: near vertex. Clypeus anterior margin: convex. Setae, gena: present. Setae, scape: < 20°. Setae, gula: flat-lying, present. Setae, mesosoma: < 15, scattered. Node: thick. Summit convex.



Camponotus aeneopilosus

Major worker (top image) Minor worker (bottom image)



Camponotus aeneopilosus flavidopubescens

Minor worker

143

Group 6. Head sides tapering, mesosoma elongate.

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Camponotus cameratus Viehmeyer 1925. Type location: Berlin. Type locality: Trial Bay, NSW, 30°53'S 153°04'E.

Minor worker. Head sides: straight, strongly tapering to front. Vertex: convex. Integument: reticulate. Eye: large. Clypeus anterior margin: wide, convex. Setae, gena: adpressed. Setae, scape: < 20°. Setae, gula: adpressed. Setae, mesosoma: < 15, scattered. Node: front and back mostly straight, summit convex.

Camponotus christmasensis McArthur 2008.

Type location: Adelaide. Type locality: Christmas Rocks, SA, 36°21'S 140°21'E.

Minor worker. Head sides: straight, weakly tapering to front. Vertex: mostly flat. Integument, forehead: glossy, reticulate. Eye: large. Setae, gena: absent. Clypeus: anterior margin, wide, convex. Setae, gula: absent. Setae, scape: < 20° Setae, mesosoma: < 10, long, scattered. Node: front and back mostly straight, summit convex.

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Camponotus cameratus

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Major worker (top image) Minor worker (bottom image)



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Camponotus christmasensis

Major worker (top image) Minor worker (bottom image)

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Group 6. Head sides tapering, mesosoma elongate.

Camponotus cinereus Mayr 1876. Type location: Vienna. Type locality: Peak Downs, Q. 22°56'S 148°05'E.

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Minor worker. Head sides: convex, tapering to front. Vertex: weakly convex. Integument: plentiful adpressed. Eye: near vertex. Clypeus anterior margin: weakly convex. Setae, gena: absent. Setae, scape: < 20°. Setae, gula: absent. Setae, mesosoma: < 10, long, mostly front and back. Node: front and back straight, summit convex.

Camponotus cinereus amperei Forel 1913.

Type location: Geneva. Type locality: Sea Lake, V, 35°30'S 142°51'E.

Minor worker. Head sides: convex, tapering to front. Vertex: convex. Integument: finely striate. Eye: near vertex. Clypeus anterior margin: weakly convex. Setae, gena: absent. Setae, scape: indistinct, < 20°. Setae, gula: absent. Setae, mesosoma: < 10, long. Node: thick, front and back straight, summit convex. Mandibles: black with red front teeth.

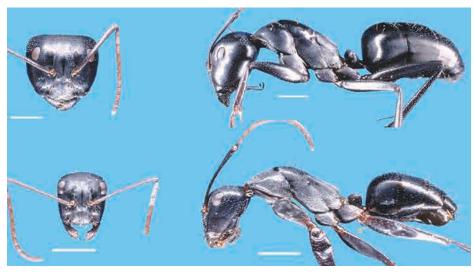
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Camponotus cinereus

Major worker (top image) Minor worker (bottom image)



Camponotus cinereus amperei

Major worker (top image) Minor worker (bottom image)

Group 6. Head sides tapering, mesosoma elongate.

Camponotus crenatus Mayr 1876. Type location: Vienna. Type locality: Rockhampton, Q, 23°22'S 150°31'E.

Minor worker. Head sides: convex slightly tapering. Vertex: straight. Integument: finely punctate. Eye: nearer vertex than centre. Clypeus anterior margin: projecting concave with a weak central concavity. Setae, gena: absent. Setae, scape: slightly raised. Setae, gula: absent. Setae, mesosoma: about 30 long. Node: front and back convex, summit blunt.

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Camponotus discors Forel 1902.

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Type location: Geneva. Type locality: Tennant Creek, NT, 19°39'S 134°12'E.

Minor worker. Head sides: straight, parallel. Vertex: convex. Integument: glossy. Eye: nearer vertex than centre. Clypeus anterior margin: convex. Setae, gena: absent. Setae, scape: indistinct. Setae, gula: absent. Setae, mesosoma: few, erect. Node: front and back convex, summit blunt.



Camponotus crenatus

Minor worker



Camponotus discors

Major worker (top image) Minor worker (bottom image) 149

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Group 6. Head sides tapering, mesosoma elongate.

Camponotus ephippium narses Forel 1915.

Type location: Geneva. Type locality: Kimberley, WA, 15°50'S 128°26'E.

Minor worker. Head sides: straight, tapering to front. Vertex: convex. Integument: adpressed setae. Eye: in corner. Clypeus anterior margin: anterior margin straight, obtuse angles. Setae, gena: present. Setae, scape: < 20°. Setae, gula: sparse. Setae, mesosoma: long, scattered. Node: thick, front and back flat, summit convex.

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Camponotus fraseri McArthur 2008.

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Type location: Adelaide. Type locality: Marino CP, SA, 35°03'S 138°30'E.

Minor worker. Head sides: straight, tapering to front. Vertex: convex. Integument: glossy. Eye: large, near vertex. Clypeus anterior margin: projecting, widely convex. Setae, gena: absent. Setae, scape: distinct, about 30°. Setae, gula: absent. Setae, mesosoma: < 10, erect. Node: front and back mostly flat, summit blunt.

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Camponotus ephippium narses

Major worker (top image) Minor worker (bottom image)



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Camponotus fraseri

Minor worker

Group 6. Head sides tapering, mesosoma elongate.

Camponotus hartogi Forel 1902. Type location: Geneva. Type locality: Yarra Districts, V, 37°49'S 144°58'E.

Minor worker. Head sides: convex, tapering to front. Vertex: near flat. Integument: matte. Eye: nearer vertex than centre. Clypeus anterior margin: projecting with a central concavity. Setae, gena: present. Setae, scape: indistinct. Setae, gula: absent. Setae, mesosoma: plentiful, scattered. Node: front mostly convex, back straight, summit blunt.

 (\blacklozenge)

Camponotus innexus Forel 1902.

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Type location: Geneva. Type locality: Bong-Bong, NSW, 31°33'S 159°04'E.

Minor worker. Head sides: convex, tapering to front. Vertex: near flat. Integument: matte. Eye: nearer vertex than centre. Clypeus anterior margin: projecting with a central concavity. Setae, gena: present. Setae, scape: indistinct. Setae, gula: absent. Setae, mesosoma: plentiful, scattered. Node: front mostly convex, back straight, summit blunt.



Camponotus hartogi

Major worker (top image) Minor worker (bottom image)



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Camponotus innexus

Major worker (top image) Minor worker (bottom image)

CAMPONOTUS ANTS AUST 11 jul.indd 153

Group 6. Head sides tapering, mesosoma elongate.

Camponotus marcens Forel 1907. Type location: Geneva. Type locality: Mundaring Weir, WA, 31°57'S 116°10'E.

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Minor worker. Head sides: straight, weakly tapering to back. Vertex: convex. Integument: glossy. Eye: nearer vertex than centre. Clypeus anterior margin: projecting widely convex. Setae, gena: sparse. Setae, scape: indistinct. Setae, gula: absent. Setae, mesosoma: about 10 long leaning forward. Node: thick, front and back mostly convex, summit blunt.

Camponotus oxleyi Forel 1902.

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Type location: Geneva. Type locality: Bong Bong, NSW, 34°33'S 150°23'E.

Minor worker. Head sides: convex, tapering to front. Vertex: convex. Integument, finely punctate. Gaster with overlapping short setae. Eye: small. Clypeus anterior margin: scarcely projecting with central concavity. Setae, gena: present. Setae, scape: indistinct. Setae, mesosoma: about 10, erect, short, scattered. Setae, gula: present.

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Node: long, front mostly convex, back flat, summit blunt.



Camponotus marcens

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Major worker (top image) Minor worker (bottom image)



Camponotus oxleyi

Major worker (top image) Minor worker (bottom image)

Group 6. Head sides tapering, mesosoma elongate.

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Camponotus peseshus Bolton 1995

Type location: Berlin. Type locality: Trial Bay, NSW, 30°53'S 153°04'E.

Minor worker. Head sides: straight, weakly tapering to front. Vertex: weakly convex. Integument: glossy. Eye: nearer vertex than centre. Clypeus anterior margin: projecting widely convex. Setae, gena: absent. Setae, scape: < 30°. Setae, gula: absent. Setae, mesosoma: about 10 long leaning forward. Node: front mostly convex, back flat, summit blunt.

Camponotus philwardi McArthur 2008.

Type location: Canberra. Type locality: Eccleston, NSW, 32°16'S 151°30'E.

Minor worker. Head sides: weakly convex, strongly tapering to front. Vertex: near flat. Integument: punctate. Eye: between vertex and centre. Clypeus anterior margin: projecting, a deep concavity near obtuse angles. Setae, gena: present. Setae, scape: < 30°. Setae, gula: sparse. Setae, mesosoma: about 20 long. Node: front mostly convex, back flat, summit blunt.

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Camponotus peseshus

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Major worker (top image) Minor worker (bottom image)



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Camponotus philwardi

Major worker (top image) Minor worker (bottom image)

157

Group 6. Head sides tapering, mesosoma elongate.

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Camponotus pitjantjatarae McArthur 2003. Type location: Adelaide. Type locality: Mt. Lindsay, SA, 28°04'S 130°11'E.

Minor worker. Head sides: weakly convex, tapering to front. Vertex: straight. Integument: finely punctate. Eye: at vertex. Clypeus anterior margin: projecting widely convex. Setae, gena: present. Setae, scape: <30°. Setae, gula: absent. Setae, mesosoma: <20, long, erect, scattered. Node: front and back flat, summit convex.

Camponotus postcornutus Clark 1930.

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Type location: Perth. Type locality: Bungulla, WA, 31°37'S 117°35'E.

Minor worker. Head sides: convex, tapering to front. Vertex: near straight. Integument: glossy. Eye: near vertex. Clypeus anterior margin: weakly projecting, convex. Setae, gena: sparse. Setae, gena: sparse. Setae, gula: sparse. Setae, gula: sparse. Setae, mesosoma: about 10 long, mostly in front. Node: thick, summit convex. In side view, corners at back of head extended "horn like". ()



Camponotus pitjantjatarae

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Minor worker



Camponotus postcornutus

Major worker (top image) Minor worker (bottom image)

CAMPONOTUS ANTS AUST 11 jul.indd 159

Group 6. Head sides tapering, mesosoma elongate.

Camponotus scotti McArthur 2003. Type location: Adelaide. Type locality: Scott Creek, SA, 35°04'S 138°42'E.

Minor worker. Head sides: convex, tapering to front. Vertex: weakly convex. Integument: finely punctate, partly covered by pubescence. Eye: near vertex, small. Clypeus anterior margin: projecting, weakly convex. Setae, gena: absent. Setae, scape: <20°. Setae, gula: absent. Setae, mesosoma: eye-length, erect, a few at front and back. Node: front and back mostly straight, summit convex.

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Camponotus fasmani Forel 1902.

Type location: Vienna. Type locality: South Australia.

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Minor worker. Head sides: straight, strongly tapering to front. Vertex: straight. Integument: hidden by pubescence. Eye: small, at vertex. Clypeus anterior margin: convex, wide. Setae, gena: plentiful. Setae, scape: 30°. Setae, gula: plentiful. Setae, mesosoma: > 100 erect, scattered. Node: thick, convex.

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A guide to Camponotus Ants of Australia



Camponotus scotti

Major worker (top image) Minor worker (bottom image)



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Camponotus fismani

Major worker (top image) Minor worker (bottom image) ۲

Group 7. Head sides tapering, mesosoma with a concavity.

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Camponotus arenatus Shattuck & McArthur 2002. Type location: Canberra. Type locality: Hambidge CP, SA, 33°24'S 135°55'E.

Minor worker. Head sides: straight, tapering to front. Vertex: mostly straight. Integument: glossy, reticulate. Eye: midway between vertex and centre. Clypeus anterior margin: a wide convexity. Setae, gena: present. Setae, gena: present. Setae, scape: < 10°. Setae, gula: a few, J shaped. Setae, mesosoma: few short erect, mostly on propodeum. Node: thick, low, summit widely convex.

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Camponotus aurocinctus Smith 1858.

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Type location: London. Type locality: Adelaide, SA, 34°56'S 138°36'E.

Minor worker. Head sides: convex, tapering weakly. Vertex: convex. Integument: wide spread pubescence. Eye: small, about eye length from corner. Clypeus anterior margin: projecting, convex. Setae, gena: absent but present on mandibles. Setae, scape: flat, indistinct. Setae, gula: present, including J shaped. Setae, mesosoma: <10, short, erect. Node: thick, low, summit flat.



Camponotus arenatus

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Major worker (top image) Minor worker (bottom image)



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Camponotus aurocinctus

Major worker (top image) Minor worker (bottom image)

Group 7. Head sides tapering, mesosoma with a concavity.

Camponotus capito Mayr 1876. Type location: Vienna. Type locality: Peak Downs, Q, 22°56'S 148°05'E.

Minor worker. Head sides: straight, tapering to front. Vertex: convex. Integument: glossy, fi ely reticulate, wide spread pubescence. Eye: near vertex. Clypeus anterior margin: projecting, convex. Setae, gena: a few adpressed. Setae, scape: adpressed. Setae, gula: adpressed. Setae, mesosoma: few. Node: front and back straight below, convex above, summit blunt.

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Camponotus chalceus Crawley 1915

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Type location: London. Type locality: Yallingup, WA, 33°39'S 115°01'E.

Minor worker. Head sides: weakly convex, tapering to the front. Vertex: convex. Integument: glossy. Eye: nearer vertex than centre. Clypeus anterior margin: widely convex. Setae, gena: erect, present. Setae, scape: adpressed. Setae, gula: erect, present. Setae, mesosoma: about 20, erect, scattered. Node: front and mostly straight, summit convex.



Camponotus capito

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Major worker (top image) Minor worker (bottom image)



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Camponotus chalceus

Major worker (top image) Minor worker (bottom image)

Group 7. Head sides tapering, mesosoma with a concavity.

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Camponotus ezotus Bolton 1995.

Type location: Berlin. Type locality: Trial Bay, NSW, 30°53'S 153°04'E.

Minor worker. Head sides: convex, tapering to front. Vertex: weakly convex. Integument: fi ely punctate. Clypeus: anterior margin projecting with a deep concavity. Setae, gena: present. Setae, scape: a few raised to about 60°. Setae, gula: present. Setae, mesosoma: plentiful, erect, > eye length, scattered. Node: front straight below, back straight, convex above. Eye: small.

Camponotus fergusoni McArthur 2003.

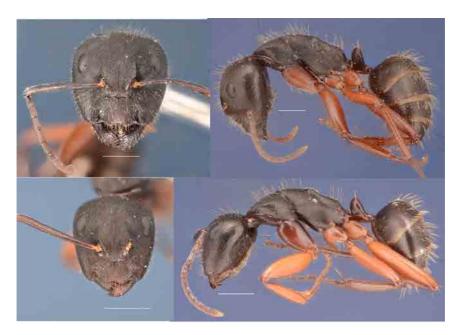
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Type location: Adelaide. Type locality: Ferguson CP, SA, 34°56'S 138°36'E.

Minor worker. Head sides: straight, tapering to front. Vertex: straight. Integument: plentiful pubescence. Eye: eye-length from vertex Clypeus anterior margin: projecting, crenulated, centre near straight. Setae, gena: sparse. Setae, scape: adpressed. Setae, gula: sparse. Setae, mesosoma: < 10 long erect, plentiful pubescence. Node: thick, front short, back straight, summit widely convex.

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Camponotus ezotus

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Major worker (top image) Minor worker (bottom image)



Camponotus fergusoni

Major worker (top image) Minor worker (bottom image)

167

Group 7. Head sides tapering, mesosoma with a concavity.

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Camponotus froggatti Forel 1902. Type location: Geneva. Type locality: Wollongbar, NSW, 34°26'S 150°53'E.

Minor worker. Head sides: straight, tapering to front. Vertex: weakly convex. Integument: glossy. Eye: large. Clypeus anterior margin: weakly projecting Setae, gena: absent. Setae, scape: indistinct, < 20° Setae, gula: absent. Setae, mesosoma: sparse, long erect. Node: front and back straight below, widely convex above.

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Camponotus horni Kirby 1896.

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Type location: Canberra. Type locality: Palm Creek, 14°50'S 130°49'E.

Minor worker. Head sides: straight, tapering to front. Vertex: convex. Integument: glossy partly hidden by pubescence. Eye: protruding, at corners. Clypeus anterior margin: convex. Setae, gena: present. Setae, scape: indistinct, < 20°. Setae, gula: present. Setae, mesosoma: plentiful. Node: thick, front and back straight below, pointed above.



Camponotus froggatti

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Major worker (top image) Minor worker (bottom image)



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Camponotus horni

Major worker (top image) Minor worker (bottom image)

169

Group 7. Head sides tapering, mesosoma with a concavity.

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Camponotus leae Wheeler 1915. Type location: Harvard. Type locality: Flat Rock Hole, SA, 26°18'S 132°08'E.

Minor worker. Head sides: weakly convex, tapering to front. Vertex: straight. Integument: coarsely punctate. Eye: near corners. Clypeus anterior margin: convex. Setae, gena: present. Setae, scape: indistinct, >40°. Setae, gula: present. Setae, mesosoma: >20 Node: thick, front and back straight below, summit near flat.

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Camponotus pawseyi McArthur 2003.

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Type location: Adelaide. Type locality: Canunda, SA, 37°39'S 140°16'E.

Minor worker. Head sides: straight, strongly tapering to front. Vertex: convex. Integument: hidden by pubescence. Eye: near vertex. Clypeus anterior margin: projecting convex. Setae, gena: present. Setae, scape: indistinct, < 20°. Setae, gula: present. Setae, mesosoma: >50 erect, scattered. Node: thick, front and back straight below, convex above.



Camponotus leae

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Minor worker



Camponotus pawseyi

Major worker (top image) Minor worker (bottom image)

CAMPONOTUS ANTS AUST 11 jul.indd 171

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Group 7. Head sides tapering, mesosoma with a concavity.

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Camponotus pellax Santschi 1919 Type location: Basel. Type locality: Townsville, Q, 19°16'S 146°49'E.

Minor worker. Head sides: straight, strongly tapering to front. Vertex: convex. Integument: glossy. Eye: at corner. Clypeus anterior margin: projecting, convex. Setae, gena: absent. Setae, scape: indistinct, < 20°. Setae, mesosoma: plentiful, long erect. Node: thick, summit flat.

Camponotus setosus Shattuck & McArthur 2002

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Type location: Canberra. Type locality: Manning River, WA, 32°01'S 115°53'E.

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Minor worker. Head sides: straight, weakly tapering to front. Vertex: convex. Integument: mostly hidden by pubescence. Eye: midway between vertex and centre. Clypeus anterior margin: projecting, mostly straight. Setae, gena: present. Setae, scape: indistinct, mostly flat. Setae, gula: present. Setae, mesosoma: erect, >100, eye-length. Node: thick, summit convex.



Camponotus pellax

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Minor worker



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Camponotus setosus

Minor worker

Group 7. Head sides tapering, mesosoma with a concavity.

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Camponotus sponsorum Forel 1910. Type location: Geneva. Type locality: Tennant Creek, NT, 19°39'S 134°11'E.

Minor worker. Head sides: straight, tapering to front. Vertex: weakly convex. Integument: glossy. Eye: near corners. Clypeus anterior margin: projecting, convex, crenulate. Setae, gena: absent. Setae, scape: indistinct, < 20°. Setae, gula: absent. Setae, mesosoma: long, > eye-length, few. Node: front and back straight below, convex above.

Camponotus suffusus Smith 1858

Type location: London. Type locality: Victoria.

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Minor worker. Head sides: convex, tapering to front Vertex: convex. Integument: fi ely punctate. Eye: near corners. Clypeus anterior margin: projecting, convex, crenulated. Setae, gena: plentiful. Setae, scape: plentiful, erect. Setae, gula: plentiful. Setae, mesosoma: ,< eye length, > 50, scattered. Node: front and back near straight, summit near sharp.



Camponotus sponsorum

Major worker (top image) Minor worker (bottom image)



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Camponotus suffusus

Minor worker

Group 7. Head sides tapering, mesosoma with a concavity.

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Camponotus whitei Wheeler 1915.

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Type location: Harvard. Type locality: Flat Rock Hole, SA, 26°18'S 132°08'E.

Minor worker. Head sides: weakly convex, tapering to the front. Vertex: flat. Integument: deeply punctate. Eye: near vertex. Clypeus anterior margin: convex Setae, gena: plentiful. Setae, scape: plentiful. Setae, gula: plentiful. Setae, mesosoma: plentiful erect, long and short. Node: thick, mostly convex.

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Camponotus whitei

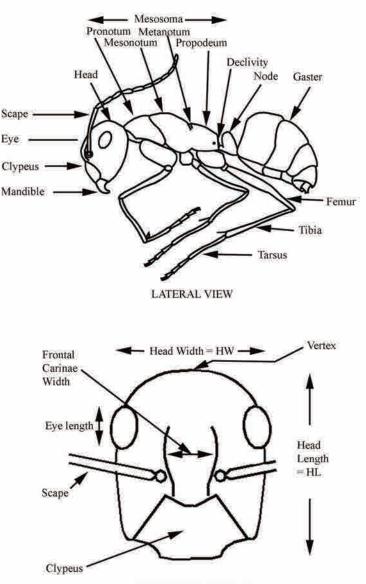
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Major worker (top image) Minor worker (bottom image)

GLOSSARY OF TERMS

Anterior clypeal margin	Portion of clypeus covering mandibles.
Caste	Queen, male, major, medium, or minor worker.
Crenulate	Indented.
Declivity	Posterior of mesosoma.
Dimorphic	Species lacks medium worker caste.
Dorsum	Upper surface of mesosoma.
Frontal carinae	Two long ridges near centre of head.
Gaster	Abdomen.
Genae	Cheeks.
Gula	Underside of head.
Integument	Outer surface.
Mandibles	Jaws.
Mesonotum	Second segment of mesosoma.
Node	Segment between mesosoma and gaster. Situated on petiole.
Polymorphic	Species with workers of varying sizes.
Pronotum	Front section of mesosoma.
Propodeum	Posterior section of mesosoma.
Pubescence	Fine flat-lying short setae.
Punctate	Indented.
Scape	Elongate base segment of antenna.
Setae	Hair
Tibiae	Segment of leg below femur.
Truncate	Abrupt.
Vertex	Top of head.

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FRONT VIEW OF HEAD

Drawings of a *Camponotus* ant. The exoskeleton consists of number of curved plates, some of which are fused together whilst others are joined by a flexible membrane. Groups of these plates form into four sections, viz. the head, the mesosoma (comprising the pronotum mesonotum and propodeum), the petiole (with its node) and the gaster. The form of these plates and length and inclination of the hair are useful characters for defining species.

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CAMPONOTUS ANTS AUST 11 jul.indd 179

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CAMPONOTUS SPECIES IN AUSTRALIA AND THEIR AUTHORS.	GROUP	PAGE
Camponotus adami Forel 1910		116
Camponotus aeneopilosus Mayr 1862		142
Camponotus aeneopilosus flavidopubscens Forel 1902	6	142
Camponotus afflatus Viehmeyer 1925	4	98
Camponotus anderseni McArthur & Shattuck 2001	1	40
Camponotus andrewsi Donisthorpe 1936	1	40
Camponotus andyyoungi McArthur 2008	5	116
Camponotus annetteae McArthur & Shattuck 2001	1	42
Camponotus arcuatus Mayr 1876	5	118
Camponotus arcuatus aesopus Forel 1907	5	118
Componotus arenatus Shattuck & McArthur 2002	7	162
Camponotus armstrongi McAreavey 1949	5	120
Camponotus aurocinctus Smith 1858	7	162
Camponotus bigenus Santschi 1919	4	98
Camponotus cameratus Viehmeyer 1925	6	144
Camponotus capito Mayr 1876	7	164
Camponotus capito ebeninothorax Forel 1915	4	100
Camponotus ceriseipes Clark 1938	4	100
Camponotus chalceus Crawley 1915	7	164
Camponotus chistmasensis McArthur 2008	6	144
Componotus churchetti McArthur 2008	3i	62
Camponotus cinereus Mayr 1876	6	146
Camponotus cinereus amperei Forel 1913	6	146
Camponotus cinereus notterae Forel 1907	*	
Camponotus clarior Forel 1902	3ii	80
Camponotus claripes Mayr 1876	2	52
Camponotus claripes inverallensis Forel 1910	2	52
Camponotus conithorax Emery 1914	1	43
Camponotus consectator Smith 1858	*	
Camponotus consobrinus Erichson 1842	3i	62
Camponotus cowlei Froggatt 1896	2	54
Camponotus crenatus Mayr 1876	6	148
Camponotus crozieri McArthur & Leys 2006	3ii	80
Camponotus cruentatus aspera Monozzi 1925	*	
Camponotus darlington Wheeler 1934	5	120
Camponotus discors Forel 1902	6	148

A Guide to Camponotus Ants of Australia

CAMPONOTUS SPECIES IN AUSTRALIA AND THEIR AUTHORS.	GROUP	PAGE
Camponotus donnellani Shattuck & McArthur 2002	4	102
Camponotus dorycus confusus Emery 1887	3ii	82
Camponotus dromas Santschi 1919	4	102
Camponotus dryandrae McArthur & Adams 1996	3ii	82
Camponotus eastwoodi McArthur & Adams 1996	3ii	84
Camponotus elegans Forel 1902	3ii	84
Camponotus ephippium Smith 1858	4	104
Camponotus ephippium narses Forel 1915	6	150
Camponotus eremicus Wheeler 1915	5	122
Camponotus esau Forel 1915	5	122
Camponotus evae Forel 1910	5	124
Camponotus evae zeuxis Forel 1915	5	124
Camponotus extensus Mayr 1876	3ii	86
Camponotus ezotus Bolton 1995	7	166
Camponotus fergusoni McArthur 2003	7	166
Camponotus fieldellus Forel 1910	3i	64
Camponotus fieldeae Forel 1902	3ii	86
Camponotus fraseri McArthur 2008	6	150
Camponotus froggatti Forel 1902	7	168
Camponotus gasseri Forel 1894	1	44
Camponotus gibbinotus Forel 1902	2	54
Camponotus gouldianus Forel 1922	4	104
Camponotus guidae McArthur 2007	2	56
Camponotus hartogi Forel 1902	6	152
Camponotus horni Kirby 1896	7	168
Camponotus howensis Wheeler 1927	1	44
Camponotus humilior Forel 1902	3ii	88
Camponotus inflatus Lubbock 1880	5	126
Camponotus innexus Forel 1902	6	152
Camponotus insipidus Forel 1893	3i	64
Camponotus intrepidus Kirby 1819	4	106
Camponotus intrepidus bellicosus Forel 1902	4	106
Camponotus janeti Forel 1895	1	46
Camponotus janforrestae McArthur & Shattuck 2001	1	46
Camponotus johnclarki Taylor 1992	4	108
Camponotus judithmorrisae McArthur 2008	3i	66

CAMPONOTUS SPECIES IN AUSTRALIA AND THEIR AUTHORS.	GROUP	PAGE
Camponotus leae Wheeler 1915	7	170
Camponotus lividipes Emery 1887	3i	66
Camponotus longideclivis McArthur & Adams 1996	3ii	88
Camponotus longfacies McArthur 2003	4	108
Camponotus loweryi McArthur & Adams 1996	3i	68
Camponotus lownei Forel 1895	5	126
Camponotus macareaveyi Taylor 1992	5	128
Camponotus mackayensis Forel 1902	1	48
Camponotus macrocephalus Erichson 1842	1	48
Camponotus malleensis McArthur 2007	3i	68
Camponotus marcens Forel 1907	6	154
Camponotus michaelseni Forel 1907	5	128
Camponotus minimus Crawley 1922	2	56
Camponotus molossus Forel 1907	4	110
Camponotus nigriceps Smith 1858	3ii	90
Camponotus nigroaeneus Smith 1858	3i	70
Camponotus nigroaeneus xuthus Forel 1915	3ii	90
Camponotus novaehollandiae Mayr 1870	3ii	92
Camponotus oetkeri Forel 1910	5	130
Camponotus oetkeri amperei Forel 1910	*	
Camponotus oetkeri voltai Forel 1913	5	130
Camponotus owensae Shattuck & McArthur 2002	4	110
Camponotus oxleyi Forel 1902	6	154
Camponotus palkura McArthur 2007	3i	70
Camponotus pallidiceps Emery 1887	3ii	92
Camponotus pawseyi McArthur 2003	7	170
Camponotus pellax Santschi 1919	7	172
Camponotus perjurus Shattuck & McArthur 2002	4	112
Camponotus peseshus Bolton 1995	6	156
Camponotus philwardi McArthur 2008	6	156
Camponotus pitjantjatarae McArthur 2003	6	158
Camponotus postcornutus Clark 1930	6	158
Camponotus prosseri Shattuck & McArthur 2002	4	112
Camponotus prostans Forel 1910	3ii	94
Camponotus punctventris Emery 1920	5	132
Camponotus rubiginosus Mayr 1876	5	132

CAMPONOTUS SPECIES IN AUSTRALIA AND THEIR AUTHORS.	GROUP	PAGE
Camponotus rudis McArthur 2003	5	134
Camponotus rufonigrus Shattuck & McArthur 2002	4	114
Camponotus rufus Crawley 1925	3i	72
Camponotus samueli McArthur 2008	2	58
Camponotus sanguinifrons Viehmeyer 1925	1	50
Camponotus scotti McArthur 2003	6	160
Camponotus scratius Forel 1907	2	58
Camponotus scratius nuntius Forel 1907	3i	72
Camponotus setosus Shattuck & McArthur 2002	7	172
Camponotus simpsoni McArthur 2003	5	134
Camponotus simulator Forel 1915	3i	74
Camponotus spenceri Clark 1930	3ii	94
Camponotus spinitarsus Emery 1920	3i	74
Camponotus sponsorum Forel 1910	7	174
Camponotus stefani McArthur 2007	3i	76
Camponotus subnitidus Mayr 1876	3i	76
Camponotus subnitidus famelicus Enery 1887	3ii	96
Camponotus subnitidus longinodis Forel 1915	*	
Camponotus suffusus Smith 1858	7	174
Camponotus suffusus bendigensis Forel 1902	*	
Camponotus tasmani Forel 1902	6	160
Camponotus terebrans Lowne 1865	3ii	96
Camponotus thadeus Shattuck 2005	5	136
Camponotus tricoloratus Clark 1941	3i	78
Camponotus triodiae McArthur 2009	5	136
Camponotus tristis Clark 1930	5	138
Camponotus versicolor Clark 1930	4	114
Camponotus vitreus Smith 1860	1	50
Camponotus walkeri Forel 1893	5	138
Camponotus walkeri bardus Forel 1910	5	140
Camponotus whitei Wheeler 1915	7	176
Camponotus wiederkehri Forel 1894	3i	78
Camponotus woodroffeensis McArthur 2008	2	60
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