A TAXONOMIC REVISION OF THE CAMPONOTUS WIEDERKEHRI AND PERJURUS SPECIES-GROUPS (HYMENOPTERA: FORMICIDAE)

by S. O. SHATTUCK* & A. J. McARTHUR**

Summary


The Camponotus wiederkehrii and perjurus species groups are defined for the first time and revised at species level. Thirteen species are included in the wiederkehrii species group, six of which are newly described while four previously valid species are synonymised. These species include arenatus sp. nov., aurocinus (Smith) (and its new synonym midas Foggatt), ceriseipes Clark, donnellani sp. nov., gouldianus Forel, owenae sp. nov., postcomatus Clark, prosseri sp. nov., rufonigrus sp. nov., setosus sp. nov., terebrans (Lowne) (including its synonyms testaceipes Smith, latrunculus victoriensis Santschi and myopus Clark), versicolor Clark and wiederkehrii Forel (with its new synonyms denticulatus Kirby, latrunculus Wheeler and wiederkehrii lucidior Forel). The perjurus species group contains the single rare species perjurus sp. nov.

KEY WORDS: Hymenoptera, Formicidae, Formicinae, species-group, Camponotus.

Introduction

In this paper we revise species of ants in the newly defined wiederkehrii and perjurus species groups of the genus Camponotus. Fourteen species are recognised, seven of which are described for the first time; four previously valid species are treated as synonyms. These groups are restricted to Australia and contain species which range from common to rare and from widespread to restricted in distribution. They are most abundant and species rich in semi-arid regions and all are apparently ground nesting. Taxonomically, the species treated here were previously placed in the subgenera Myrmophyta, Myrmosaurus, Myrmoturba and Tanaemyrmex, placements which were made when the species were originally described and have not been discussed since. During this study it has become quite clear that the current subgeneric classification within Camponotus is chaotic and near-worthless. Species here placed in the wiederkehrii species group share similarities in overall body shape and size including the placement of the compound eyes and the configuration of the mesosoma and petiole. In addition, all share a cluster of elongate hairs on the base of the mentum. This cluster is unique in the genus and strongly suggests they are monophyletic. At present, the higher-level classification within Camponotus is poorly understood and until the entire genus is examined more closely, it is inappropriate to speculate on relationships among species. Camponotus gouldianus is associated with a leafhopper and C. terebrans is associated with a butterfly. For an overview of the subfamily (Formicinae) and genus (Camponotus) in Australia see Shattuck (1999).

Methods

Measurements

Size and shape characters were quantified and are reported as lengths or indices. Measurements were made with a stereo microscope using a dual-axis stage micrometer wired to digital readouts. The following measurements and indices are reported.

CI Cephalic index: HW/HL.

HL Maximum head length in full face view, measured from the anterior-most point of the clypeal margin to the midpoint of a line drawn across the posterior margin of the head.

HW Maximum head width in full face view excluding the eyes.

ML Mesosomal length measured from the anterior margin of the pronotal collar to the posterior extension of the propodeum lobes.

MTL Maximum length of mid tibia, excluding the proximal part of the articulation which is received into the distal end of the femur.

SI Scape index: SL/HW.

SL Length of the scape (first antennal segment) excluding the basal neck and condyle.

Location of material examined

AMSA, Australian Museum, Sydney, New South Wales; ANIC, Australian National Insect Collection, Canberra, ACT; BMNH, The Natural History Museum, London, UK; MCZC, Museum of
**CAMPONOTUS WIEDEKERI AND PERIJURUS SPECIES GROUPS**

1. **acrocinctus** complex: Includes *C. arenatus*, *acrocinctus*, *owersea*, *setosa* and *venerabilis*. This complex is defined by the presence of a distinct and angular metanotal groove in minor workers which is depressed (sometimes only slightly) below the anterior region of the pronotum (Figs. 21, 22).

2. **cereisepis** complex: Includes *C. cereisepis*, *donnelianii*, *proserri* and *rubefacens*. In this complex the posterior section of the mesonotum is weakly but distinctively convex immediately anterior to the metanotal groove (more so in minor workers) and the metanotal groove in minors varies from a distinct angle to a shallow concavity (Figs. 12, 14, 18, 34, 36).

3. **postcornutus** complex: Includes *C. postcornutus*. In this complex the entire mesosoma in minor workers is strongly arched, lacks a metanotal groove and the posterior face of the propodeum is only weakly differentiated from the dorsal face (Fig. 31); in major workers the posterior corners of the head taper rearwards into blunt protuberances (Figs. 28, 29).

4. **techrans** complex: Includes *C. gothodorus*, *techrans* and *wiedekeri*. In this complex the posterior section of the mesonotum is flat (or nearly so) immediately anterior to the metanotal groove and the metanotal groove in minor workers is absent or weakly developed (Figs. 23, 47, 58).

**Definition of the C. perjurus species group**

This species group is recognised by having the head produced upwards so that its attachment to the pronotum is well below its upper margin (Fig. 61). It has a reduced number of hairs on the pronotum compared to species of the *wiekekeri* group, appearing more broadly rounded at the angle of the transverse suture on the propodeum. This group contains a single species, *C. perjurus*, described below.

**Key to the workers of the Camponotus wielkeri species group**

1. Erect hairs present on all surfaces of thelicae...2
2. Erect hairs absent from outer surfaces of thelicae, inner surface with a double-row (although depressed pubescence may be present)...4
3. Metanotal groove in minor worker a distinct but sometimes indistinct (Fig. 42) only found in the Kimberley region of Western Australia (Fig. 43)...setosus Metanotal groove in minor worker weakly developed (Fig. 23) or absent (Fig. 47); known only from southern Australia (Figs. 24, 48)...

3. Number of erect hairs on propodeum greater than 40; pubescence on head and gaster abundant and with individual hairs overlapping; summit of petiolar node in profile rounded in minor workers (Fig. 23), a blunt angle in major workers (Fig. 21)...

4. Dent of petiolar node on head and gaster sparse and with individual hairs generally non-overlapping or at most only slightly overlapping; summit of petiolar node in profile angular in both minor and major workers (Figs. 21, 22)...

5. Entire mesosoma in lateral view weakly arched, lacking a metanotal groove and with the posterior face of the propodeum only weakly differentiated from the dorsal face (Figs. 29, 31); posterior corners of head of major worker tapering rearwards into blunt protuberances (Figs. 28, 29)...

6. Metanotal groove in minor workers absent (Fig. 58) or angular (Fig. 14) and always even with the anterior region of propodeum; metanotal groove in major workers a broad, shallow angle found in the *cereisepis* species group. Dorsum of petiolar node in minor angular or broadly rounded, the anterior face at most only slightly shorter than the posterior face (Fig. 14); petiolar node in majors angular above (Fig. 12)...

7. Metanotal groove in minor workers distinct and particularly pronounced, differing from the red-black to black...

8. Elongate (overlapping) and dense pubescence present, Summit of head, mesosoma, gaster and thelicae...owersea **Short (non-overlapping) and scattered pubescence present on dorsal of head, mesosoma, gaster and thelicae**...

9. Anterior region of mesosoma red-black to black, similar in colour to propodeum; metanotal groove in minors distinct...
and depressed well below the anterior region of propodemeum (Figs 8, 9).......\textit{auricinctus}.

First and second gastric torgles red, distinctly lighter in colour than the reddish black propodemeum; metanotal groove in minors weakly to moderately depressed below the anterior region of the propodemeum (Figs 52, 53)......\textit{versicolor}.

9. Posterior section of mesonotum flat (or nearly so) immediately anterior of metanotal groove; metanotal groove absent or weakly developed in minors (Fig. 58); anterior clypeal margin in majors projecting with a straight central region separated from lateral regions by distinct angles (Fig. 55).........\textit{wiederkheri}.

Posterior section of mesonotum weakly but distinctly convex immediately anterior of metanotal groove (more so in minors, less so in majors); metanotal groove varying from a distinct angle to a shallow concavity in minors (Figs 14, 18, 36); anterior clypeal margin in majors broadly convex across entire width (Fig. 11)..............\textit{rubrisignus}.

10. Propodemeum with at most 4 elongate erect hairs which are limited to the angle between the dorsal and posterior faces.........\textit{donnellani}.

Propodemeum generally with more than 10 erect hairs which are always scattered along the entire dorsal surface.........\textit{austricinctus}.

11. Metanotal groove well defined and angular (Fig. 39); black head contrasting with red mesonotum.........\textit{austricinctus}.

Metanotal groove a weakly defined concavity (Figs 14, 36); head same colour as mesonotum (both either red or black).........\textit{rubrisignus}.

12. Scapes relatively short (in minors, SL < 1.5) (Fig. 15); petiolar node of minors generally more upright and narrower (Fig. 14).......\textit{cortesei}.

Scapes relatively long (in minors, SL > 1.4) (Fig. 15); petiolar node of minors generally lower and broader (Fig. 36).......\textit{proseri}.

\textbf{Species of the \textit{C. wiederkheri} species group}

\textit{Camponotus arenatus} sp. nov. (FIGS 2-4)

\textbf{Material Examined}


\textbf{Paratypes.} Two minor workers, same data as holotype (ANIC, SAMA).

\textbf{Other material examined}

\textit{Northern Territory:} 15km S Alice Springs (PJM).

\textit{South Australia:} Cowell (BBL); Maralinga (FGF);

Yumbarna CP, 26km N Inla Rock Waters (HOW).

\textit{Western Australia:} 20mi. W Sandstone on Mt. Magnet Rd. (AMD & MJD).

\textbf{Yumbarna CP, 26km N Inla Rock Waters (HOW).}

\textbf{Western Australia:} 20mi. W Sandstone on Mt. Magnet Rd. (AMD & MJD).

\textbf{Camponotus wiederkheri and \textit{Periurus} species groups}

\textbf{Territory} and west-central \textit{Australia} (Fig. 4).

The only biological information is provided by the single worker collected by B. B. Lowery. It was swept from mallees on red sand.

\textbf{Etymology}

From \textit{arena}, alluding to the sandy nature of the known collection sites of this species.

\textit{Camponotus arenatus} (F. Smith) (FIGS 5-10)

\textit{Fornica arenicola} Smith, 1858: 39.


\textit{Camponotus nitida} Froggatt, 1896: 390; Clark, 1930; 22 (queen described, worker redescribed).

\textit{New synonymy.}

\textit{Camponotus} sp. 8 – Imai et al., 1977: 369.

\textbf{Material examined}

\textit{Camponotus nitida}. Worker holotype or syntypes from Adelaide, \textit{South Australia}. A single specimen (minor worker) in BMNH is labelled as the type of this species. However, this specimen was acquired in 1870, several years after the original description was published. It is currently not known whether the acquisition date is in error or the type specimen is lost. For the purposes of this study, this specimen is considered a type specimen for this name.

\textit{Camponotus nitida}. Syntypes from Illunarta, \textit{Northern Territory} (1 worker, missing from pronotum and 1 queen in AMSA; 7 workers, 1 queen and 1 male in MCZ; 1 worker in MMVA; 3 workers in BMNH (with an additional 6 workers labelled as “C. arenulosa, Horn Coll., 96-37” and bearing a Type label).

\textbf{Other material examined}

\textbf{New South Wales:} 12km S Coomba (PSW); 45km N Balranald (SOS); Ascut Vale (RSM); Black Hill Creek (RH/); Broken Hill (FFH); Broken Hill Airport (RSM); Matakana RS (BBL); Mount Gipps (RH/); Mundri Mundi, nr. Broken Hill (PJM & IVA); Pinnacles, 12mi. W Broken Hill (BBL); Poorange, W. Smith property (RHC & YCC & AKN); Silverton (PMJ).

\textit{Northern Territory:} 15km S Alice Springs (PJM); 23mi. N Narweetorea HS (RSM & JED); 33km E Ayers Rock (JEF); 7km W Curtin Springs (SOS); Andado (HOF); Kings Creek Stn (SDO); nr. Ayers Rock (BBL); Old Andado, c.15km EbyN Andado HS (JEF); Uluru NP 15 km ESE (HCS).

\textit{Queensland:} Munroo Lake (RRA); Cunnumballa (BBL); Foxes Ck. (GCA); Sandringham (PMJ).

\textit{South Australia:} 10km NW Emu Junction (JAH); 10km S Wudiny (JEF); 10mi. S Roxton (BBL); 11km ENE Arabana Hill, Munroo (JRE); 14 km SW Taplam (SANPVS); 14km SbyW Beltana (JEF); 14km
**Camponotus Wiederkehrii and Perijura Species Groups**

**Worker Diagnosis**
Tibiae lacking erect hairs. In minors, metanotal groove depressed below the level of the anterior region of the propodeum; dorsal surface of petiolar node relatively long and flat, its anterior face much shorter than the posterior face (Figs 8, 9). Mesosoma uniform in colour, varying from dark red-black to black, anterior region of first gastral tergite similar in colour to propodeum, gastric tergites often with the trailing edge golden yellow, the golden colour (when present) varying in width from a narrow band to involving most of the tergite.

**Description (Major Worker)**
Anterior clypeal margin weakly convex (Fig. 5). Dorsal surfaces of pronotum and mesonotum convex and separated by a shallow angle; propodeum uniformly convex and without a distinct angle; petiolar node with distinct anterior and posterior faces, its upper surface varying from a broad, blunt angle to uniformly convex and sometimes with the medial section nearly flat (Fig. 6). Erect hairs absent from scapes, petiole and tail, absent or a few scattered hairs on the outline of head and dorsum of mesosoma and gaster; underside of head with none, about to 30. Body varying from dark red to red-black, the head and dorsal surfaces of pronotum and mesonotum sometimes darker than the lateral mesonotum, propodeum, legs and petiole; gaster reddish black with yellow-gold banding along the posterior edge of each segment which varies from being absent to involving the entire visible portion of the segment.

**Description (Minor Worker)**
Anterior clypeal margin convex to broadly angular (Fig. 7). Dorsal surfaces of pronotum and mesonotum convex and separated by a shallow, broad angle, the posterior metanotum ending in the

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**Fig. 5.** Distribution of *C. curvates* material examined during this study.

**Fig. 10.** Distribution of *C. curvates* material examined during this study.

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**Fig. 5**
- WW N. Renmark (KRP); 1km N. Vokes Hill junction (JAF); 1km W. Eau Camp, Victoria Desert (PJM); 2.5km N. Limestone dam (SANPPOS); 26km SSE Illinitijtja (SANPPTJ); 30mi E. Farina, Mt. Lyndurst (ETR); 31km WW Renmark (KRP); 3km W. Eau Camp, Victoria Desert (PJM); 4.8km SE Coongie, Coongie Lakes Study site 10E (JRE); 40km W. Vokes Hill junction (JAF); 40km WWN Eau, Victoria Desert (PJM); 40mi. SW Iron Knob (JRE); 45km WWN Eau, Victoria Desert (PJM); 4km NE Marroo Hill, Cowarie (PRB); 5km WWN Farina (SANPPOS); 60km E. Vokes Hill, Victoria Desert (PJM); 6km W. Koongera, Birdsville Track (PJM & JAF); 70km E. Eau, Victoria Desert (PJM); 9km ESE Waalananchek Tank, Cowarie (TRO); Adelaide (GR); Adelaide (JCO); Atack Downs old shed, c.48km SW Birdsville (JEB); Ampicima Hills 10.5km E (SANPPTJ); Andamooka Ranges (MIT & GFO); Approxindam Attora Knolls 86.3km SW (SANPPOS); Barton Siding (AML); Beda Hill (JAF); Bimbowie 2km NE (SANPPOS); Brookfield Conservation Park (Site No. 1) (SOS); c.18km SSE Poorehah (RWT & RB); c.22km N. Beliana (JEF); Calpeper N.E. Boundary (AJM); Cambrai (PJM); Cheeseman Peak 13.2km NW (SANPPTJ); Clifton Hills Outstation (JAF & DHH); Coongie Lakes (JRE); Coongie Lake (DHH); Coongie Lakes (JRE); Cordillo Downs Stn (SANPPOS); Cordillo Downs Stn (SANPPOS); Corroboree Hill, Eyre Penin. (KCA); Danggali CP, Red Tank Dam (AJM); Darke Reske, Eyre Pen. (BBL); E. Purni Bore at junction of French Track and Rig Rd., Simpson Desert (JAF); Euan Camp, Victoria Desert (PJM); E. Emu Junction 10km NW (JAF); Eudunda Stn. (JTH); Farina 5km SW (SANPPOS); Gammon Ra. NP, Balcamaana area (AJM); Gawler Ranges (PJM); Glenelg (WBB); Gun Lagoon (EGM & JAF); Hamilton Creek (RBB); Hamilton Stn., (WKH); Hincks NP (EBB); Illinitijtja 23km WSW (SANPPTJ); Iron Knob 40 miles SW (EJR); Kondalilla (AFW); Killiparungu CP (SLE); Kimba (PJM & IVA); Kimba, edge of Pinkawilinnaie CP (FSC); Koongamore (PJM); Koongamore 9km E (SANPPOS); Koongamore, Nillinghoo (PJM); Koongera Waterhole 6.25km S (SANPGLS); Koongera, Birdsville Track (PJM & JAF); Kopi, Eyre Pen. (PJM); Kunyangi 25km NW (SANPPTJ); L. Meramandyge, Victoria Desert (PJM); L. Torrens, nr. Beda Hill (JAF); Lake Appadare 2km S (WHC); Lake Callabonna (AZE); Lake Gilles CP (BPI); Lake Palamurabria (JTH); Little Pine Hill c.32mi. SW Whyalla (EBB); Mabel Creek (PGR); Mparoo Waterhole (PGE); Marrella Hill 3.6km SE (SANPPOS); Maryrill Head 21.5km ESE (SANPPTJ); May Hill 9.3km NW (SANPPOS); Montecolline Bore (JSH); Morganvale, Danggali CP (AJM); Mount Lindsay 3.1km NW (SANPPTJ); Mt. Gunson, SE Wooloora (JTH); Mount, NE Eyre Pen. (JAF); Munyuroo CP, 7km SSW Moonshine HS, 37km fr. Whyalla (WKH); NW Yanine, Eyre Penin. (KCA); Olympic Dam (EGM & CWA); Paney, nr. Pink Lake, Gawler Ranges (WHC); Pinkawilinnaie CP, Eyre Pen. (JAF); Pinnacles Mine (RHM); Paphalajura 27.5km NE (SANPPTJ); Poochera (BHO); Purni Bore 77km E (SANPPOS); Purni Bore, SW Simpson Desert (PJM); Radium Hill (PAL); Sand end of L. Windabout (BBL); S. Koongera, Birdsville Track (PJM & JAF); S of Mann Rd, 8.5km NW Mt. Kintore (SANPPTJ); Serpentine L. Great Victoria Desert (PJM); Serpentine Lakes (JAF); Simpson Desert (DSC); Sinclair Gap (PHU); Stockyard Plain (JAM); Taplan 13.4km SW (SANPVS); Thirty Thousand Tank (GCM); Tomahawk Dam (JAF); Trinity Well (as Trinity) (EXP); Ungarra Rockhole (SANPPTJ); Vokes Hill 1km N (JAF); Wallalatta 16km W (SANPPTJ); Yelppararla Waterhole 7.6km NW (SANPGLS). **Victoria.** 9km ESE Hattah (ALY); Bannerton (CNI); Hattah (ALY); Lake Mournpall, Hattah-Kulkynae Nat. Park (SOS); Milawa South Bore (ALY); Halls Creek (KMA); Mangili Claypan (KDA). **Western Australia.** 11km W. Terihan W-H (PJM & HHE); 11mi. N. Mt. Aloyus (RSM & JED); 163km SEBye Broome (IFB); 16km W Mt. Aloyus (JEF); 16km W Mt. Aloyus (JEF & TWE); 19mi. N. Mt. Aloyus (RSM & JED); 20mi. W Sandstone on Mt. Magnet Rd (AM & MJ); 22mi. WSS Mt. Forrest (RSM & JED); 24km SSW Turce Creek HS (MPF); 28mi. NE Curneegi HS (RSM & JED); 66km SWbyW Dockey River, Northern Territory (JEF & TWE); Cannong Stock Route (EXP); Cavanughra. (KTR); Koonalda Cave (WHC); Meekatharra-Billabun Pool Cannong Stock Route (EXP); Noresson (BBL); Norsoran Area (AM & MJ); Sir Fredrick Ra. (KTR).
metanotal groove; metanotal groove distinct, separated from the anterior propodeum by a short face which varies from steep (Fig. 8) to gentle (Fig. 9); dorsal and posterior faces of propodeum flat to weakly concave and separated by a broad, gentile angle. Anterior face of petiolar node short and separated from the dorsal face by a sharp angle, dorsal face elongate and flat to weakly concave and separated from the posterior face by a broad, rounded angle, posterior face flat (Figs 8, 9). Erect hairs absent from scapes and legs, absent or with a few scattered hairs on the outline of head, mesosoma, petiole and gaster; underside of head with up to about 30 hairs. Body varying from red to red-black, head and sometimes propodeum, petiole and middle and hind legs usually slightly lighter than the pronotum; gaster dark reddish black and sometimes with yellow-gold banding along the posterior margin of each segment which varies from narrow to involving the entire visible segment, in which case the gaster is completely yellow-gold.

**Camponotus ceriseipes** Clark (Figs 11-16)

*Camponotus* (Myrmophyla) ceriseipes Clark, 1938: 378.

**Material examined**

Six workers from N. end of Reevershy Island, South Australia, December, 1936. J. Clark (3 in ANIC, 3 in MVMA).

**Other material examined**

- **Northern Territory**: 15km S Alice Springs (PJM); NW Alice Springs, Ataranga (PJM).
- **South Australia**: 10km WSW Lameroo (PJM); 6km NW Mt. Piesan (PJM); Banfi, Coorong (PJM); Belair (PJM); Bridgewater (PJM); Calca (BBL); Calca, 30km SE Streaky Bay (BBL); Cape Bauer (RWT & RJB & BBL); Clifton Hills Outstation (JAF & DHI); Coorong, Coolaroo (PJM); Coorong, 5km NWN Pinch (PJM); Eyre Pen., 6km W Wiluna (PJM); Innes Natl. Pt., York Peninsula (PJM); Kangaroo Is., 1km N Breakneck Cr. (PJM); Kangaroo Is., N Breakneck R. (PJM); Mt. Compass (BBL); Mt. Lofy (BBL); Mt. Rescue LP, Jimmy’s Well (JAF); Port Parham (BBL); Sandy Creek, Mt. Lofy Ranges (EYE); Poonchina (PSW); Streaky Bay (BBL); Victor Harbour (PJM).
- **Western Australia**: 20km S Condingup (SOS); 53mi. Eby S Ravensthorpe (RWT); Cape Arid NP, Yökum Bay (AIB); Coalmine Beach, Walpole-Nornalup Natl. Pk. (JLA & NLA); Esperance area (BBL); Green’s Pool, William Bay Natl Pk (SOS); Jana Rock, 9km NW Mt. Ragged (RWT); Ocean Beach, Denmark (BBL); Redgate Beach, Leeuwin-Naturaliste Natl Pk (SOS); Waterfall Beach, William Bay Natl Pk (SOS); William Bay Rd., Denmark (BBL); William Bay, Denmark (BBL).

**Worker diagnosis**

Scapes relatively short (in minors, SL < 1.5) (Fig. 15). Posterior section of mesonotum weakly but distinctly convex immediately anterior of the metanotal groove (more so in minors, less so in majors); metanotal groove a shallow, weakly defined concavity in minors (Figs 12, 14). Petiolar node angular or broadly rounded above, the anterior face at most only slightly shorter than the posterior face (Figs 12, 14). Tibiae and scapes lacking erect hairs, propodeum with more than 10 erect hairs (occasionally with fewer) which are scattered along the entire dorsal surface (never limited to near the propodeal angle as in *C. donnellii*). Anterior

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- **Western Australia**: 20km S Condingup (SOS); 53mi. Eby S Ravensthorpe (RWT); Cape Arid NP, Yökum Bay (AIB); Coalmine Beach, Walpole-Nornalup Natl. Pk. (JLA & NLA); Esperance area (BBL); Green’s Pool, William Bay Natl Pk (SOS); Jana Rock, 9km NW Mt. Ragged (RWT); Ocean Beach, Denmark (BBL); Redgate Beach, Leeuwin-Naturaliste Natl Pk (SOS); Waterfall Beach, William Bay Natl Pk (SOS); William Bay Rd., Denmark (BBL); William Bay, Denmark (BBL).

**Worker diagnosis**

Scapes relatively short (in minors, SL < 1.5) (Fig. 15). Posterior section of mesonotum weakly but distinctly convex immediately anterior of the metanotal groove (more so in minors, less so in majors); metanotal groove a shallow, weakly defined concavity in minors (Figs 12, 14). Petiolar node angular or broadly rounded above, the anterior face at most only slightly shorter than the posterior face (Figs 12, 14). Tibiae and scapes lacking erect hairs, propodeum with more than 10 erect hairs (occasionally with fewer) which are scattered along the entire dorsal surface (never limited to near the propodeal angle as in *C. donnellii*). Anterior
clypeal margin in majors broadly convex across its entire width. Head same colour as mesonotum (both either red or black).

This species is most often confused with the morphologically similar C. proseri. The surest way to separate these species is based on scape length. In larger minor workers of C. ceriseipes the scape is relatively short compared with similar sized C. proseri workers (Fig. 15). Note, however, that this difference is minimal or non-existent in smaller workers due to allometry in this character. Other characters useful in separating minor workers of these taxa are the generally higher and narrower petiolar node (Fig. 14) and shiny integument in C. ceriseipes compared to the lower and broader node (Fig. 36) and duller integument in C. proseri.

The shape of the node works well for the majority of minor workers while the shininess of the integument is more problematic due to the highly qualitative nature of, and greater variation in, this character.

Description (major worker)

Pronotum and mesonotum gently convex, metanotum distinct, propodeum dorsum weakly convex, sometimes a little higher near metanotum; angle well rounded and indistinct, anterior face of petiolar node straight, summit narrowly rounded, posterior face straight, feebly concave near summit (Fig. 12). Anterior margin of clypeus weakly convex, scarcely projecting, with a weak carina (Fig. 11). Posterior margin of head, underside of head, mesonota, node and gaster with scattered long setae, tibiae and scapes lacking erect hairs. Head red to black, scape red to black, funiculus dark brown; pronotum red to dark brown; mesonotum red to dark brown; petiolar red to black; gaster very dark brown to black; legs red to black.

Description (minor worker)

Anterior clypeal margin convex, carina distinct (Fig. 13). Pronotum and mesonotum an even, broad convexity; metanotum indistinct; anterior region of propodeum feebly concave, posterior region straight, angle distinct and widely rounded, ratio of dorsum to declivity near 2 (Fig. 14). Anterior face of petiolar node straight, inclined forward, summit rounded, posterior face straight (Fig. 14). Posterior margin of head, underside of head, mesonotum, petiolar and gaster with scattered long setae, tibiae and scapes lacking erect hairs. Head red to black, scape red to black, funiculus dark brown; pronotum, mesonotum, propodeum and petiolar red to black; gaster very dark brown to black; legs red to black.

Measurements

Workers (n=94). CI 0.82 (minor) – 1.23 (major); HL 1.42mm – 3.31mm; HW 1.25mm – 4.06mm; ML 2.36mm – 4.28mm; MTL 1.59mm – 2.58mm; PnW 1.07mm – 2.45mm; SI 0.68 (major) – 1.42 (minor); SL 1.75mm – 2.58mm.

Remarks

The specimens here treated as belonging to this species show considerable variation in body size. The head and mesosoma range from uniform red to uniform black with essentially all intermediate combinations displayed among the available material. There is a weak trend for the Western Australian specimens to be darker and a distinct trend for the Northern Territory specimens to be lighter. However, numerous specimens bridge the gaps between these colour forms, especially within Western Australia, and specimens nearly identical to those from the Northern Territory occur in South Australia along with more typical workers.

Camponotus ceriseipes ranges from eastern South Australia west along the coast through Western Australia, with two known collections from southern Northern Territory. It has been found in coastal sandplain heath, coastal scrub, limestone mallee, low scrub on a dry ridge and on vegetated coastal sand dunes. Nests have been found under rocks and in open sand and workers have been collected from pitfall traps and while beating vegetation. The species has been found with myrmecophytes (Orthoptera) at Mount Compass, South Australia, by B. B. Lowery.

Camponotus donnellani sp. nov. (FIGS 17-19)

Material examined

Holotype: Minor worker from Kings Creek Station, Northern Territory, 23 August, 1992, S. Donnellan, sandhill (ANIC).

Paratypes. Two minor workers, same data as holotype (ANIC, SAM,)

Other material examined

Northern Territory: 29km ESE Uluru, Uluru-Kata Tjuta (JWA); 15km ESE Uluru, Uluru-Kata Tjuta (JWA), South Australia: 3.1km WNW Mt. Lindsay (SANPPT); E shore Serpentine Lakes (JAF).

Worker diagnosis

Propodeum with at most 4 elongate erect hairs near the angle between the dorsal and posterior faces. Pronotum and mesonotum flatly convex, metanotum groove indistinct, anterior region of propodeum dorsum feebly convex, straight posterior. Petiolar node broadly rounded above, its anterior face at most only slightly shorter than the posterior face (Fig. 18). Tibiae and scapes lacking erect setae. Anterior clypeal margin feebly projecting, broadly convex across its whole width.

Camponotus donnellani is similar to C. arenatus in overall colour pattern but differs in the smaller size of the minor and the flatter mesosomal dorsum with a less distinct metanotal groove. It may also be confused with smaller, paler workers of C. ceriseipes, but differs in having fewer erect hairs on the propodeal dorsum.

Description (minor worker)

Pronotum and mesonotum gently convex, metanotal groove indistinct; anterior region of propodeum feebly concave then straight, lacking an angle between the dorsal and posterior faces, ratio dorsum to declivity about 3 (Fig. 18). Anterior face of petiolar node about as long as dorsal face and separated from it by a moderate convexity; dorsal face weakly convex and separated from the posterior face by a broad, rounded angle; posterior face flat (Fig. 18). Elongate erect hairs scattered on all surfaces of head (including underside), mesosoma, node and gaster, absent from scapes and tibiae. Anterior clypeal margin convex broadly angular (Fig. 17). Head, mesosoma and petiolar red with upper surfaces of head, pronotum and sometimes mesonotum infuscated with dark red-black, legs red-black basally, red distally; gaster dark red-black.

Measurements

Holotype. CI 0.89; HL 1.58mm; HW 1.40mm; ML 2.58mm; MTL 1.78mm; SI 1.32; SL 1.85mm.

Remarks

Camponotus donnellani has been encountered a limited number of times in north-western South Australia and south-western Northern Territory. It has been collected from a sand hill in association with Triodia spp. in the Great Victorian Desert of southern Northern Territory. Little else is known of its biology.

Etymology

Named after Dr Steve Donnellan of the South Australian Museum, the collector of this species.

Camponotus gouldiana Forel (FIGS 20-24)

Camponotus gouldiana Forel, 1922: 100.

Material examined

Syntypes. Two medium workers from Sea Lake, Victoria, both badly damaged (MHNG).

Other material examined

New South Wales: Balranald (WJD); c. 26km E Euston (RJK). Northern Territory: Illamurra Spr CP (JAF & DHI). South Australia: 10km NE Chalpaddie, Gawler Ranges (PMA); 10km NW Ceduna (RFO); 11km E Poochera (RWT & RJB &
Fig. 24. Distribution of G. costulata material examined during this study.

ELO; 11mi. E Kimba (PJM); 12km E Ceduna (RFO); 12km E Warrenboom, Eyre Pen. (PJM); 13km E Ooldea (JAF); 13mi. SE Steely Bay (TGR); 15km NW Renmark (SOS); 18km E Ceduna (RFO); 20km E Ceduna (JAF); 20km E Porcupine HS, Gawler Ranges (PJM); 20km E Uoolooi (PJM); 20km E Uoolooi (PJM); 20km E Ooldea (JAF); 15km NW Renmark (SOS); 32km N Renmark (SOS); 5mi. S Renmark (TGR); 41km Eby N Nullabor (RWT); 45km NWN Emu, Victoria Desert (PJM); 4km W Wirrum (JAF); 4mi. E Ooldea (GFG); 53km E Yikes Hill, Victoria Desert (PJM); 53km NW Renmark (SOS); 58km E Yikes Hill, Victoria Desert (PJM); 5km N Poonchera (RWT & RJB & ELO); 60km N Coloma (EXP); 60km NNE Ceduna (JAF & PJM); 6km W Nundroo (RFO); 7.4km SW Poonchera on Port Kenny Rd (RWT & RJB & ELO); 7.5km NW Venus Bay (SANPWS); 79km NNW Renmark (AJM); 7km NE Purnong (SANPWS); 7km SE Belah (SANPWS); 7km SW Munyaroop CP (WKH); 7km W Iluka Rock Waters (SANPWS); 9km N Atikindalhe (SANPWS); Aldinga Scrub (SMO); Allendale HS 9 km N (SANPWS); Baratia 6 km NW (SANPWS); Belah 7 km SE (SANPWS); Blyth (BBL); Brookfield Conservation Park, 0.5km S Camp area (SOS); Brookfield Conservation Park, Camp area (SOS); Pembroke (BEB); Calpatanna CP, Eyre Pen. (JAF); Calpatanna Waterhole (JAF); Calperum-Amalia (AJM); Calperum Murphys (AJM); Calperum NE corner (AJM); Cambray (PJM); Canopus Dam (AJM); Canopus HS, Danggali CP (TWE & KRP); Ceduna (KCA); Ceduna 10km NW (RFO); Ceduna 18km E (RFO); Chadee (LOQ); Chowilla (TGW & PJM); Clements Gap CP (DHI); Colona 60km N (EXP); Coolong (GLH); Cooldung (AJA & MA). Cowell (BRH); Danggali Tipperary Dam (AJM); Danggali, NE corner (AJM); Flash Jack Dam (SANPWS); Gawler Ra Lake Everard Station (GFG); Gawler Ra Scrubby Peak (JAF); Gawler Ranges (PJM); Hideaway Hut (SANPWS); Inglis Rock Waters 7km W (SANPWS); Katarapko Creek (AJM); Kimba (PJM); Kakatia; Gawler Ranges (PJM); Koonamare Peninsula (PJM); Koonamare (PJM); Koonamare HS (JAF); Kyabraming Soak (RCC); Lake Everard Station, Gawler Ranges (GFG); Lake Gilles (JAF); Lock (AJM); Loxton Payne's Farm (AJM); Loxton Snodgrass Farm (AJM); Mannal Creek, Port Augusta (PJM); Middle Dam (SANPWS); Middleback Station (AJO); Minnipa 20km NW (AJM); Mitcherie Rockhole (SANPWS); Mongalata (SANPWS); Woolowie Plain (PJM); Morganvale, Danggali CP (AJM); Mount Aruma (SANPWNRS); Mount Ive (AJA & PJF); Mount Coochee CP (PJM); Mundoria NP (PJM); Munyaroop CP & 7km SSW (W.K. Head); N.S.W. Coombab (PSW); Nundroo (AJA & SBA); Nundroo 6km W (RFO); Nundroo Roadhouse (RFO); Oak Bore (GCM); Ooldea (AML); Ooldea 13km E (JAF); Oraraphina 4mi E (GFG); Oraraphina, Flinders Ranges (PJM); Otterroo (GFG); Pandapapa (SANPWS); Parachilna (JAF); Poonchera (BHO); Poonchera (GFG); Poonchera (RWT & RJB & ELO); Poonchera (PJM); Poonchera area (RWT); Poonchera area (RWT & PSW); Poonchera Cemetery (AJM & CHW); Poonchera Hotel (SOS); Poonchera, "Freightline site" just S of village (RWT & RJB); Putchara Creek Flat (GLH); Putchara Creek Flat (GLH); Pumong 7km NE (SANPWS); Rockwater Rockhole (SANPWS); Salt Lake (PHU); Scrubby Peak, Gawler Ranges (JAF & WKH); Stockyard Plain (GLH); Steely Bay (BBL); Steely Bay (JMC); Steely Bay (PGR); Thirty Thousand Tant (GCM); Tinda Creek (SANPWS); Tipperary Dam, Danggali CP (AJM); Venus Bay (SEG); Walkerley (BBL); Wedina Well, Calpatanna CP, Eyre Pen. (JAF); Weebubieh (PAI); Whalyilla (PJM & RBH); Windsor (HBW); Wingoona Hill (SANPWS); Wirrabra 4km W (JAF); Wirrulla (KCA); Yalata (SANPWS); Yaninee (CWA); Yelpawarallum Creek (JAH & DJH); Yookamurra (WHC); Yumbarra CP (JAH); Yumbarra dog fence (JAF); Yumbarra Rockhole (SANPWS). Victoria: 3.3km N Millewa South Bore (ALY); Hattah 6.3km N (ALY); Lake Hattah (JDI); Mildura (JCM); Millewa South Bore 3.3km N (ALY); Sea Lake (JCA); Salt Lake (JMW); 25km N Junarna Rock, on Ballardina Rd (RWT); 10km NE Peak Charles, Peak Charles Natl Pk (SOS); 10km S Ballardina (SOS); 10mi. SE Karoonly (RWT); 12km SE Mt Ragged, Cape Arid Natl Pk (SOS); 160km ENE Esperance (PSW); 23km ESS of Cocklebiddy (RWT); 23mi. W Fraser Rge. R (RWT); 25mi. Nby Ballardina HS (RWT); 36mi. SE by E Zantius (RWT); 3km SW Mt Ragged, Cape Arid Natl Pk (SOS); 55km S Ballardina (SOS); 60mi. E Ballardina Station (TGR); 6km S Norseman (JEF); Ballardina 80k W (AJM & SBA); Border Village (KMA); Cape Arid National Park (AJM & SBA); Cape Arid NP (RPF); Esperance (BBL); Eucla (SOS); Gora [as Goora] Hill (TGR); Jarrahs (AJM & WMA); Jumana Rock, 9km NW Mt Ragged (RWT); Kambalda3.30S, 115.41E (JDM); Madura (AJM); Madura (JBA); Madura (JBA); Madura (JBA); Madura (JBA); Madura (JBA); Madura (JBA); Murbulla Motel (AJM & SBA); Wabubieh (PJM); Wabubieh (PJM); Wabubieh (PJM); Wabubieh (PJM).
2.87mm – 4.91mm; MTL 2.22mm – 3.04mm; PnW 1.18mm – 2.66mm; SI 0.65 (major) – 1.60 (minor); SL 2.46mm – 3.08mm.

**Remarks**

This is one of the most commonly encountered species in this group. It occurs from western New South Wales and Victoria west to south-central Western Australia and can be found in a range of habitats including mallee on a number of soil types. In sandy soils nest entrances are at ground level generally close to the trunks of mallee or other tall vegetation. In heavier soils nest entrances are constructed of soil formed into a column about 30 mm diameter and 100 mm tall with an entrance hole in the side near the rounded summit. The purpose of this turret nest is not known but is likely to be related to predator avoidance and/or to prevent water entering the nest during flooding. A night flight was observed at Waikerie, South Australia on 15 May 1998 at 3 pm when the temperature was 25°C. This ant is known to be the host for an unusual group of leafhoppers, members of the Euryelmidae (Hemiptera). These leafhoppers live in the ants' nests and forage nocturnally along with the ants (Day & Pullen 1999).

**Camponotus owensae** sp. nov.

(Figs 25–27)

**Material examined**


Paratypes. Three minor workers, same data as holotype (1 in SAMA, 2 in ANIC).

**Worker diagnosis**

Tibiae with abundant suberect hairs. In minors, metanotal groove depressed below the level of the anterior region of the propodeum; dorsal surface of petiolar node relatively long and flat, its anterior face much shorter than the posterior face. Elongate (overlapping) and dense pubescence present on head, mesosoma, gaster and tibiae. Body colour black. The configuration of the metanotal groove and the abundant pilosity will separate this species from others in this species group.

**Description (minor worker)**

Anterior clypeal margin projecting, median portion nearly straight and feebly crenulate with rounded angles laterally (Fig. 25). Pronotum, metanotum, metanotum and the anterior one-fifth of propodeum a strong, even domed convexity distorted only by the two feeble, well separated sutures of the metanotum, the posterior four-fifths of propodeum rise from a wide concavity to a posterior bump which includes the rounded angle and the mostly straight posterior propodeal face (Fig. 26). Anterior face of petiolar node straight, shorter than posterior face, summit narrowing upwards to a rounded angle (Fig. 26). Entire body black and covered with plentiful erect and flat lying white setae except antennae where setae are flat lying to suberect.

**Measurements**

Minor worker (n=2). CI 0.80 – 0.83; HL 2.04mm – 2.35mm; HW 1.63mm – 1.95mm; ML 3.33mm – 3.89mm; MTL 2.98mm – 3.08mm; PnW 1.42mm – 1.60mm; SI 1.50 – 1.71; SL 2.79mm – 2.92mm.

**Etymology**

Named after Helen Owens of the South Australian Department of Environment, Heritage and Aboriginal Affairs, who found this species during a faunal survey.

**Remarks**

This rare species has been collected only once from south-western South Australia (Fig. 27). Specimens were collected in pitfall traps in mallee. Nothing else is known of its biology.

**Camponotus postcoronatus** Clark

(FIGS 28–32)

**Camponotus (Tanaemyrmex) postcoronatus** Clark, 1930b: 121.

**Material examined**

Syntypes. 10 workers from Bungulla and Tammin, Western Australia (1 in AMSA, 5 in MCZC, 4 in MVMA).

**Other material examined**

South Australia: Blythe (BBL). Western Australia: 26mi, NWbW Norseman (RWT); 32km W Salmon Gums (GPB); 35km S Kambalda (JAF); 38.8km ex Murchison R-Hillabong (DHK & ACK & WLN & RDN); 53mi SSW Coolgardie (RWT); 71km S Payne's Find (GPB); 9mi SW Grass Patch (RWT); Binningerie Road, 6km ESE Widiemooltha (JAF); Bungulla (TGR); Frenchman Bay, S Albany (LPK); Kalbarri Natl Pk (BBL); Mullawa (WMW); Norseman Area (JMD & MJD); Parker Ra. [as Parkers] (TGR); Salmon Gums, 70mi N Esperance (BBL); Tammin (TGR); Tardun (CTM).

Figs 28–31. C. postcoronatus workers. Fig. 28. Head of major worker. Fig. 29. Mesosoma and petiolar of major worker. Fig. 30. Head of minor worker. Fig. 31. Mesosoma and petiolar of minor worker.
Measurements

Workers: n = 8; CI: 1.06 – 1.18; HL: 1.95 mm – 4.16 mm; HW: 2.06 mm – 4.89 mm; ML: 3.28 mm – 4.90 mm; MTL: 2.16 mm – 2.84 mm; PW: 1.71 mm – 3.13 mm; SI: 0.57 – 1.14; SL: 2.35 mm – 2.77 mm.

Remarks

This species is ground nesting with a simple entrance hole. It is most common in south-western Western Australia with a single collection from South Australia which is lighter in colour than those from Western Australia. Material is mostly from relatively dry areas such as mallee.

_Camponotus prossemi_ sp. nov.

(Figs 15, 33-37)

Material examined

_Holotype_: Minor worker from Streaky Bay, South Australia, 30 August 1976, B. B. Lowery, mallee, in sand (ANIC).

_Paratypes_: 25 workers, 10 queens and 1 male, same data as holotype (2 workers and 1 male in SAMA, remainder in ANIC).

Other material examined

_New South Wales_: 1 mi. S Hillston (BBL); 4 mi. N Condobolin (BBL); 62.8 km N Coonabarabran (LPK); 7 mi. S Hillston (BBL); Berriogian SF (BBL); Poocarrie (RHC & YCC & AKN); South Australia: 20 km E Ulundoo (PJM); 32 km N Renmark (KRP); 7 km SE Balah (SANSPSOP); Aldinga (BBL); Innes Natl. Pt., York Peninsula (PJM); Innes Natl. Pt., York Peninsula (PJM); Koonamore (PJM); Lothian Payne’s Farm (AMA); Lothian Snodgrass (AMA); Marion Bay; Yorke Pen. (RSL); Poocora (PSW); Poocora (RWT & RB); Pt Lincoln, 2 km N Cape Tounefort (PJM); Pt Lincoln, Eyre Pt., E Horse Rock (PJM); Port Lincoln, Horse Rock (PJM); Port Lincoln, Spalding Cove (PJM); Port Pirri, 50 mi. N Adelaide (BBL); Streaky Bay (BBL); Streaky Bay (BBL); Yumberra CP, 6 km NNE Inala Rock Waters (HOW); _Western Australia_: 28 km WSW Israelite Bay, Cape Arid Natl. Pt (SOC); 30 km WSW Israelite Bay (GPB & DJM); 53 mi SSW Coolgardie (RWT); 53 mi. SSW Coolgardie (RWT); 62 km NE Albany, Hassell Natl. Pt (SOC); 72 km SW Norseman (SOC); 80 km, West Talbot Rd, Beverley (AM & MJ); Albany (TGR); Balladonia and Madura (BBL); Eucla (SOC); Goras Gora (RWT); Rocks (TGR); Kings Park (BBL); Mt. Ragged, Cape Arid NP (AHD); Norseman (BBL); Salmon Gums (BBL); Stirling Ra. (GFR); Stirling Ra. NP (GPB).

Worker diagnosis

Anterior clypeal margin in major workers broadly convex across its entire width (Fig. 33). Scapes relatively long (in minor workers, SI > 1.4) (Fig. 15). Tibiae lacking erect hairs, propodeum with more than 10 erect hairs which are scattered along the entire dorsal surface. Posterior section of mesonotum weakly but distinctly convex immediately anterior of the metanotal groove (more so in minors, less so in majors); metanotal groove a shallow, weakly defined concavity in minors (Figs 34, 36). Petiolar node angular or broadly rounded above, the anterior face at most only slightly shorter than the posterior face (Figs 34, 36). Head same colour as mesonotum (both either red or black). This species is morphologically similar to _C. ceriseipes_ and is easily confused with it. The difference is outlined under _C. ceriseipes_ above.

Description (major worker)

Anterior clypeal margin weakly convex, scarcely projecting, with a weak carina (Fig. 33). Pronotum and mesonotum gently convex, metanotum distinct, dorsal propodeal face weakly convex, sometimes a little stronger near metanotum; angle well rounded (Fig. 34). Anterior face of petiolar node straight, summit rounded, posterior face straight, often feebly concave near summit in dorsal view (Fig. 34). Posterior margin and underside of head, mesosoma, petiole and gaster with scattered long setae, tibiae and scapes lacking erect setae. Head red to black, scape red to black, funiculus dark brown; pronotum red to dark brown; metanotum red to dark brown; petiolar node red to black; gaster very dark brown to black; legs red to black.
Description (minor worker)
Anterior clypeal margin convex, carina distinct (Fig. 35). Pronotum and mesonotum an even, wide convexity, metanotum indistinct, propodeal dorsum feebly concave anteriorly, straight posteriorly, angle widely rounded, ratio of dorsum to declivity near 2 (Fig. 36). Anterior face of petiolar node short, flat, inclined forward, summit rounded, about as high as long, posterior face short, flat (Fig. 36). Posterior margin and underside of head, mesosoma, petiolar and gaster with scattered long setae, tibiae and scopae lacking erect hairs. Head and mesosoma clothed in fine, flat-lying pubescence sufficiently dense in places to hide the integument. Head red to black, scape red to black, funiculus dark brown; pronotum, mesonotum, propodeum and petiolar each red to black; gaster very dark brown to black; legs red to black.

Measurements
Workers (n=94): CI 0.72 (minor) – 1.21 (major); HL 1.50mm – 3.21mm; HW 1.08mm – 3.88mm; ML 2.41mm – 4.13mm; MTL 2.14mm – 2.66mm; PnW 0.98mm – 2.42mm; SL 0.70 (major) – 1.76 (minor); SL 1.90mm – 2.71mm.

Etymology
Named after Dr Ian Prosser, Canberra, Australia.

Remarks
The specimens considered here as belonging to this species show considerable variation in overall head, mesosoma and petiolar shape as well as overall size. The length of the scape varies but this variation is highly correlated with head width (Fig. 15) as would be expected for a single taxon. However, these specimens do show considerable variation in colour and to a lesser extent pilosity. Allowing for a few apparently callow or faded individuals, all specimens have the head and gaster black. The mesosoma, petiolar and legs, however, vary from black to yellow-red. These colours show considerable variation in intensity with essentially all shades represented between the extremes present. In general most nest series are fairly consistent in colour pattern with the exception of the petiolar and legs, which vary among individuals. However, the variation between series shows a more interesting pattern. The pronotum is generally black but is partially to completely red in a few collections from Western Australia. The mesosoma and propodeum vary from black to red but this variation occurs throughout the range of the species and the lighter colour is much more common, especially for the propodeum where red is more common than black. It should be noted that the development of the red colour follows a distinct pattern. The propodeum must be red for the mesonotum to be red, and the mesonotum must be red for the pronotum to be red. This means that the most common colour pattern is black with a red propodeum followed by black pronotum with red mesonotum and propodeum and finally individuals with a completely red mesosoma. The colours of the petiole and legs vary independently of the mesosoma.

The variation in pilosity is substantial but generally less obvious than that found in body colour. Both the erect hairs and appressed clothed in fine, flat-lying pubescence are sufficiently dense in places to hide the integument. Head red to black, scape red to black, funiculus dark brown; pronotum, mesonotum, propodeum and petiolar each red to black; gaster very dark brown to black; legs red to black.

Measurements
Minor worker (n=3): CI 0.85 – 0.86; HL 1.37mm – 1.60mm; HW 1.16mm – 1.38mm; ML 2.19mm – 2.59mm; MTL 1.53mm – 1.96mm; PnW 0.98mm – 1.20mm; SL 1.44 – 1.55; SL 1.75mm – 2.14mm.

Etymology
Named after its red and black body colour.

Remarks
This species is known from three localities in southern South Australia (Fig. 40). Two collections consists of single minor workers, while one (from Cambrai) contains nine minor workers collected at six different times during January and February, 1972. Thus this species has been rarely collected and then generally in small numbers. The limited biological information suggests that this species occurs on sand.

Camponotus rufoniger sp. nov. (FIGS 38-40)

Material examined
Holotype. Minor worker from Cambrai, South Australia, 4-7 February 1972, P. J. M. Greenslade, dune Ihb (ANIC).

Other material examined
South Australia: Gawler Ranges, PJM; Yumburra, CP, 23.5 km NW Ingleton (HOW).

Worker diagnosis
Anterior clypeal margin broadly convex across its entire width (Fig. 38). Tibiae and scopae lacking erect hairs; propodeum with more than 10 erect hairs which are scattered along the entire dorsal surface. Petiolar node angular or broadly rounded above, the anterior face at most only slightly shorter than the posterior face (Fig. 39). Black head contrasting with red mesonotum.

Description (minor worker)
Anterior clypeal margin evenly convex, carina strong (Fig. 38). Pronotum and mesonotum forms an even convexity, metanotum indistinct, propodeal dorsum concave anteriorly and flat posteriorly, angle broadly rounded, ratio of dorsum to declivity about 1.5 (Fig. 39). Anterior face of petiolar node flat, short, summit widely rounded, posterior face convex (Fig. 39). Dorsal and undersides of head, mesosoma, petiolar and gaster with sparse long erect setae. Entire body clothed in fine, short, indistinct flat lying pubescence. Head, anterior of mesosoma, most of node and gaster dark brown to black, otherwise red-brown.

Measurements
Minor worker (n=3): CI 0.85 – 0.86; HL 1.37mm – 1.60mm; HW 1.16mm – 1.38mm; ML 2.19mm – 2.59mm; MTL 1.53mm – 1.96mm; PnW 0.98mm – 1.20mm; SL 1.44 – 1.55; SL 1.75mm – 2.14mm.

Etymology
Named after its red and black body colour.

Remarks
This species is known from three localities in southern South Australia (Fig. 40). Two collections consists of single minor workers, while one (from Cambrai) contains nine minor workers collected at six different times during January and February, 1972. Thus this species has been rarely collected and then generally in small numbers. The limited biological information suggests that this species occurs on sand.

Camponotus setosus sp. nov. (FIGS 41-43)

Material examined
Holotype. Minor worker from Manning River Gorge, 16°39'S 125°55'E, Western Australia, 1 June 1992, S. O. Shattuck (ANIC).
Paratypes: 21 minor workers, same data as holotype (5 in SAMA, 15 in ANIC).

Other material examined
Western Australia: 1.5 km W King Edward River crossing (SOS).
**Description (minor worker)**

Pronotum and mesonotum form together an even, raised convexity followed by the angular trough of the metanotum, the weakly convex dorsal surface of the propodeum, a widely rounded angle and the straight posterior face (Fig. 42). Entire body covered with dense flat lying pubescence, erect setae absent from antennae. Pubescence on posterior of gaster yellow, elsewhere white. Gaster black, most of head, mesosoma and node black, the remainder with red patches; antennae dark brown; coxa and femora red, tibiae and tarsi brown.

**Measurements**

Workers (n=4): CI 0.85 – 0.88; HL 1.88mm – 1.96mm; HW 1.64mm – 1.69mm; ML 3.08mm – 3.20mm; MTL 2.34mm – 2.54mm; PnW 1.50mm – 1.54mm; SI 1.45 – 1.57; SL 2.45mm – 2.62mm.

**Etymology**

Named after the abundant long setae present on most regions of its body.

**Remarks**

This apparently uncommon species is restricted to the Kimberley region of Western Australia (Fig. 43). All known collections consist of ground-foraging workers in open Eucalyptus woodlands.

*Camponotus terebrans* (Lowane)  
(FIGS 44-48)

*Formica testaceipes* Smith, 1858: 39 (preoccupied by Leach, 1825: 290).

*Camponotus testaceipes* – Mayr, 1862: 662.  
*Formica terebrans* Lowane, 1865: 278 (first available replacement name for *Formica testaceipes* Smith) – Mayr, 1876: 65.


**Material examined**

*Formica testaceipes*: Syntype workers from King George Sound, Western Australia (BMNH - see McArthur et al. (1998)).

*Formica terebrans*: Syntype workers and queens from Sydney, New South Wales (see McArthur et al. (1998)).

*Camponotus* (*Myrmoturba*) *latraculus victoriensis*: Syntype workers and males from Elsternwick and Belgrave, Victoria (see McArthur et al. (1998)).

*Camponotus* (*Tamaeomyraxes*) *myoporus*: Syntype workers from Reesbey Island, South Australia (3 in MVMA, 6 in ANIC - see McArthur et al. (1998)).

Other material examined

See McArthur et al. (1998).

**Worker diagnosis**

Erect hairs present on scapes and tibiae. Metanotum groove weakly developed and essentially absent (Figs 45, 47). Propodeum with 10 to 25 erect hairs. Pubescence on head and gaster sparse, with individual hairs generally non-overlapping or at most only slightly overlapping. In profile, dorsum of petiolar node angular in both minor and major workers (Fig. 45, 47). These characters will separate this taxon from close relatives, especially the morphologically similar *C. goudianus*.

**Description (major worker)**

Medial section of anterior clypeal margin straight, projecting anteriorly with rectangular lateral corners, crenulate; carina indistinct (Fig. 44). Pronotum and mesonotum weakly convex; mesoventral as well parallel, transverse grooves; dorsal surface of propodeum straight, angle well rounded, posterior face mostly straight, length of dorsal and declining faces about equal (Fig. 45). Anterior face of petiolar node convex, summit sharp, posterior face mostly straight (Fig. 45). Entire body with plentiful long erect setae tending to suberect on tibiae and scape, absent from funicular. Head red-brown to black, funiculi lighter, mesosoma and node yellow to brown, gaster darker than mesosoma, legs lighter.

**Description (minor worker)**

Anterior clypeal margin with median section...
convex and strongly projecting, carina distinct (Fig. 46). Pronotum and mesonotum mostly weakly convex; the smallest workers without a metanotal groove; dorsal propodeal surface straight, angle well rounded, posterior face straight, ratio dorsum to declivity exceeds 2 in smallest workers (Fig. 47). Anterior and posterior faces of petiolar node generally parallel, summit bluntly convex (Fig. 47). Entire body with plentiful long and short erect setae tending to suberect on tibiae and scape, absent from funiculi. Head brown, funiculi lighter, mesosoma and node yellow to brown, gaster darker than mesosoma, limbs lighter.

**Measurements**

Workers (n=20), CL 0.85 (minors) - 1.11 (majors); HL 1.36 mm - 3.28 mm; HW 1.15 mm - 3.64 mm; ML 2.07 mm - 3.64 mm; TTL 1.56 mm - 2.39 mm; PrW 0.91 mm - 2.02 mm; SI 0.66 (majors) - 1.54 (minors); SL 1.77 mm - 2.39 mm.

**Remarks**

*Camponotus terraebrum* is common in sandy soil or disturbed sites across much of southern Australia (Fig. 48). Nests are sometimes located adjacent to the trunks of trees or shrubs with abundant excavated soil deposited around the numerous entrances. In some cases excavations have been observed to apparently damage or kill nearby shrubs. In other cases nests and their entrances are in open areas and lack mounds. Colonies may be very large and sometimes have “highways” leading to trees and other colonies. This species is often found in association with *Ogyris* spp. butterflies (Brady 2000). For additional details see McArthur et al. (1998).

**Camponotus versicolor** Clark (FIGS 49-54)

*Camponotus (Myrmosatulus) versicolor* Clark, 1930b: 122.

**Material examined**

Syntypes. Workers from Emu Rocks, east of Ongerup, Western Australia (6 in ANIC, 3 in MCZC, 3 in WAMP, 5 in MVMA, 3 in BMNH).

**Other material examined**

Western Australia: 33 mi. SbyE Karonie (RWT); 9mi. E Newdegate (TGR); Bungulla (TGR); Emu Rock (HRE); Newdegate (HMC & TGR); Norseman (BBL).

**Worker diagnosis**

Tibiae and scape lacking erect hairs. In minor workers, metanotal groove angular to slightly depressed below the anterior region of the propodeum (Figs 52, 53); dorsal surface of petiolar node in minors relatively long and flat to weakly convex, its anterior face much shorter than the posterior face (Figs 52, 53). Mesosoma black and with at least the first two gastral tergites red and distinctly lighter in colour than the propodeum, gastral tergites never with golden-yellow bands. The configuration of the metanotal groove combined with the distinctively coloured gaster will separate this species from close relatives.

**Description (major worker)**

Dorsal surfaces of pronotum and mesonotum convex and separated by a shallow angle; propodeum uniformly convex without a distinct angle; petiolar node with parallel anterior and posterior faces, its upper surface slightly elongated flat to weakly convex (Fig. 50). Erect hairs sparse on outline of head including underside, scattered on mesosoma, petiole, coxa and gaster, absent from tibiae and scapes. Anterior clypeal margin weakly convex (Fig. 49). Body red-black, head and pedicel slightly lighter than mesosoma; gaster with the first two tergites red, the remainder red-black.

**Description (minor worker)**

Anterior clypeal margin convex (Fig. 51). Dorsal surfaces of pronotum and mesonotum convex and separated by a shallow, broad angle; metanotal groove either a broad angle (Fig. 53) or a shallow trough (Fig. 52); dorsal and posterior faces of propodeum flat to weakly convex and separated by at most a gentle angle. Anterior face of petiolar node short and separated from the dorsal face by a distinct angle, dorsal face elongate and flat to weakly convex and separated from the posterior face by a broad, rounded angle, posterior face flat (Figs 52, 53). Erect hairs abundant on outline and underside of head, mesosoma, petiole, coxa and gaster; erect hairs absent from scapes and tibiae. Body dark red-black or black with the head sometimes slightly lighter; gaster with at least the first two tergites red and the remainder dark red-black, or sometimes entirely red.

**Measurements**

Workers (n=7), CL 0.82 (minors) - 1.06 (majors); HL 2.23 mm - 3.20 mm; HW 1.83 mm - 3.42 mm; ML 3.96 mm - 4.86 mm; MTL 2.72 mm - 3.00 mm; SL 1.45 (majors) - 1.60 (minors); SL 2.93 mm - 4.95 mm.

**Remarks**

*Camponotus versicolor* is an uncommon species which is limited to a narrow band across southern Western Australia (Fig. 54). It is most similar to *C. aurocinctus* and can be separated from it by the darker body colour and red gastrual tergites. Minor workers of *C. aurocinctus* also have larger numbers of erect hairs on the head and mesosoma compared to this species. Essentially nothing is known concerning the biology of *C. versicolor*.

**Camponotus wiederkheri** Forel (FIGS 55-59)

*Camponotus wiederkheri* Forel, 1894: 232.


**Material examined**

*Camponotus wiederkheri*: Syntype workers from Charters Towers, Queensland (MHNG).

*Camponotus denticulatus*: Syntype workers from MacDonell (as McDonell) Ranges, Northern Territory (2 in MCZC, 1 in MVMA).

*Camponotus (Myrmotauro) latrunculus*: Syntype workers from Tumidomen, South Australia (1 in SAMC).

*Camponotus wiederkheri lucidor*: Syntype workers and males from Tennant Creek, Northern Territory (3 workers in MCZC, 2 workers in MHNG).

**Other material examined**

New South Wales: Waukerroo (RHM); 10 mi. N
Broken Hill (RHM). Northern Territory: 1.5km N Alice Springs (PJM & RJW); 12km SW Katherine (PJM); 15km S Tea Tree (MMA & JHA); 20mi. SE Anthonys Lagoon (TGR); 25km S Andado Sm Rodinga Ra (JAF & DHI); 33km S Darwin (LHI); 77km E Wellarrah Ranch (SOS); 3km E Serpentine Gorge (SOS); 50km NWN Hermannsburg (SOS); 7km W Timber Creek (MMA); Alice Springs (WLD); Alice Springs (WCC); Alice Springs (LHI); Alice Springs (PPL); Alice Springs (KRO); Batten Ck., 30km WSW Borroolooa (JEF); Bing Bong HS (JEF); Bitter Springs Creek (JAF & DHI); Bulhia Outstation (MMA); Camfield (IAR); Colyer Creek, 8km N Alice Springs (SOS); Corroboree Rock, 2km E Alice Springs (SOS); Darwin (SWM); Darwin (HWE); Doyles Ridge nr. Birdum (TGR); Flying Fox Creek (SMO); Glen Helen (SOS); Helen’s Ck., Banka Banka Rd. (TGR); Humrura Spring (JAF & DHI); Jasper Gorge (IAR); Katherine (RVS); Kings Canyon Nat. Park (PL); Kings Creek Caravan Park (SDO); Kulgera (JBS); Kunoa Paddock, 30km NW Alice Springs (WAL); Kunoa Park nr. Alice Springs (PJM & WLO); Macdonnell Downs (SAMA Exped.); McAmrthur R., 48km SW Whbys Borroolooa (JEF); Narawntoona (AWF); NW Brunette Dam (BBA); Phillipills River (TGR); Port Darwin (WDD); Rimbija Is., Wessel Islands (EDE); Rimbija Is., Wessel Islands (TAW); Rodderick Creek (IAR); Ruby Gap Gorge (JAF & DHI); Tennant Creek (JFF); Trephina Gorge Nature Park (SDO); Trephina Gorge, 55km ENE Alice Springs (SOS); Turtle Rock into Ormiston Gorge (SOS); Umbrwarra Gorge (JAR & IAR); Valley of Winds, The Olga (JEF & TAW); Victoria River (BRI); Yulara, campground (SOS). Queensland: 1.5km WNW Riversleigh HS, nr. Gregory R. (JAF); 160mi. NW Mt. Isa (TGR); 10mi. W Mt. Garet (BBL); 10mi. ESE Gilbert R. Crossing, E of Croydon (JEF); 18mi. ESE Emerald (JED); 1mi. S Carpentaria Downs HS, SE Einasleigh (JED); 1mi. SE Lorraine HS (JED); 25km W Woodstock (PJM); 28mi. N Thornioma HS, NE of Camooweal (JED); 2mi. SE Camel Ck. HS, W of Ingham (JED); 2mi. SE Mary Kathleen (JED); 4mi. NE Oorndi (JED); 50mi. N Julia Creek (REL); 52km S Woodstock (PJM); 5mi. E Lotus Vale HS, NE of Normanton (JED); 7km E Charters Towers (PJM); 9mi. NE Camooweal (JED); Barcaldine (GFG); Blackall (JBS); Carpentaria Downs (JED); Charters Towers; Clermont (BBL); Cooktown (BHO); Dalgonally, nr. Cloncurry (R. (JED); Doomadgee Mission Station (PAI & NBT); Emerald (FAC); Emerald District (SAH); Greenvale (JED); Greenvale Station area (SAH); Helenes (TGR); Homestead (FH); Jericho (FAC); Mareeba (BBL); Marmorion Mission (PAI & NBT); Mt. Isa (JRU); nr. Dimbulah (RWT & JEF); Quilpie (JSJ); St. George (BBL); Star R. Crossing (SAH); Surbiton (FAC); Townsville-Charters Towers Rd. (TGR); Undilla HS, NE of Camooweal (JED); Winton (FAC). South Australia: 1.5km SW Maryanna Hill (SANPPT;15) 155km N Cook (JAF); 20km ENE Picalpatjarra (SANPPT;26); 26mi S Kunyitjana (SANPPT;27); 53km E Vokes Hill, Victoria Desert (PJM); 60km S Pinba (MAA); 7mi. E Wilgen (TGR); 80km E Emu Junction, Victoria Desert (PJM); Andamsokoona (JAH); Artunta (DCO); Arora Adam (AUM & JDE); Belah (SANPSPS); Birthday Hill, N Tarcoola (PJM); Blood Ck. (CA); Box Creek (AJM & JDE); 22km N Beltana (JEF); Clifton Hills Outstation (JAF & DHI); Coober Pedy (BBL); Copper Hill (HFD); Curdumanka, L. Eyre (BBL); Davenport Range (AUM & MAA); Douglas Creek (MMA); Dulkannina (PCO); Emerabla Mission (NBT); Emerabla Mission Stn. (BBL); Everard Park (JEF); Fitara (PJM); Gawler Ranges (PJM); Hideaway Huts (SANPSPS); Lake Eyre (BBL); Lake Gairdner (AES & NS); Mabel Ck (TGR); Minmilla (SANPPTJ; Mitchell Nob (SANPPTJ); Mt. Cooperina (SANPPTJ); Mt. Finke (PJM & JAF); Musgrave Ranges (BBL); Ngurrajara (SANPPTJ; Ooldea (AML); River Diamantina (AMM); Robertsontown (SANPSPS); Ronald Well (SANPPTJ); S end of L. Windabout (BBL); Screech Owl Creek (WMC); The Twins HS (RSM); Vokes Hill (JAF); Vokes Hill (GFG); Vokes Hill, Victoria Desert (PJM); Womikata Bore, Musgrave Ra. (SANPPTJ; Woeacalla (RSM); Yardie (AJM & PJJ); Western Australia: 100km E Southern Cross (PJM); 100km N Mt. Wiluna (DDA & SRM); 163km SE Yalby (IBF); 45mi. S Onslow (GCA); 50km N Kalgoorlie (PJM); 53mi. SSW Coolgardie (RWT); 70km E Kalgoorlie (JEF); 7km W Kununurra, Bandicoot Ra. (DCF & JBA); Ashburton River (RHM & GCA); Balgo Mission (ARP); Ballardona (BBL); Black Stone Range (KTR); Canegrow, NNE Kalgoorlie (JED); Derby (WDD); Jigalong (JHI); Kalgoorlie (PAI); Kalgoorlie [as Kalgoorlie] (TGR); Kalumburu Mission (MDA); Kimberley area nr. Kalumburu Mission (<5 mi.) (WLE); Kununurra boat ramp (RHM & GCA); LaGrange Mission, 120km S Broome (KMC); Lyndon R., Carnarvon (RH); Lyndon River, Carvarvon (RH); Meekatharra, Mt. Newman (ml); Gascoyne K. (PJM); Mitchell Plateau (mining camp) (DCF & JBA); Moolo Bulla (NDJ); Onslow (RHM); Ord R. (SAH); Pilgangoora Mining Centre (NBT); Pindar (CTM); Port George IV (JR); Roebourne (WDD); Windjana Gorge NP (PSW). Worker diagnosis Anterior clypeal margin in major workers projecting, the central region straight with rectangular sides joining the lateral regions (Fig. 55). Posterior section of mesonotum flat (or nearly so) immediately anterior of the metanotal groove, metanotal groove essentially absent or weakly developed in minors (Fig. 56), a broad, shallow angle in majors (Figs 56, 58). Petiolar node angular or broadly rounded above, the anterior face at most only slightly shorter than the posterior face (Figs 56, 58). Tibiae and scapes lacking erect hairs. Description (major worker) Medial section of anterior clypeus strongly projecting, its margin straight and lateral corners broadly angular, carina weak (Fig. 55). Pronotum and mesonotum a slightly raised even convexity; metanotum with two distinct grooves, the anterior section of the propodale dorum feebly concave anteriorly and feebly convex posteriorly, propodale angle widely rounded, posterior face mostly straight, ratio of dorum to declivity about 1 (Fig. 56). Anterior and posterior faces of petiolar node straight; summit flat, narrow and sharp, sometimes bidentate, its posterior margin feebly concave (Fig. 56). Dorsum and underside of head, mesosoma, petiole, coxa and gaster with plentiful scattered erect setae, reduced numbers on propodeal angle and declivity, about from scapes, flat lying on tibiae. Head yellowed to dark brown, antennae red to red-brown, mesosoma and node yellow-red to brown; gaster darker, legs lighter. Description (minor worker) Medial section of anterior clypeus strongly projecting, its margin convex, crenulate; carina distinct (Fig. 57). Pronotum weakly convex, anterior section of metasomatal weakly convex, the remainder
joins with propodeal dorsum to form a long flat surface ending in a widely rounded propodeal angle and short posterior face, ratio of dorsum to declivity about 3 (Fig. 58). Anterior face of petiolar node mostly convex, summit sharp (in front view pointed), posterior face mostly flat (Fig. 58). Dorsum and undersides of head, mesosoma, petiole, coxa and gaster with scattered long setae; reduced numbers on propodeal angle and declivity present on tibiae and scape. Entire body clothed with fine pubescence. Mesosoma yellow-red to dark red-brown, sometimes with darker or lighter patches; head, node and gaster generally darker, legs lighter.

**Measurements**

*Workers (n=20):* CI 0.80 (minors) - 1.08 (majors); HL 1.51mm - 3.33mm; HW 1.21mm - 3.61mm; ML 2.51mm - 3.83mm; MTL 1.92mm - 2.62mm; PnW 0.97mm - 2.13mm; SL 0.68 (majors) - 1.60 (minors); SL 1.94mm - 2.45mm.

**Remarks**

This is one of the most commonly encountered and widespread species in this group (Fig. 59). In southern Australia nests are generally mounds approximately 150 to 200mm in diameter with steeply sloping sides and a flat summit with the entrance in a slight depression in the centre. These mounds are often decorated with small stones. Nests are often in heavy soil in open areas and are less common or are absent from areas of high rainfall. Often several mounds may be seen within a few metres of each other.

Morphologically, this species (as conceived here) shows minimal variation in body shape and pilosity (other than that expected for a polymorphic taxon) but does show considerable variation in colour. The colour ranges from bright yellow-red to black with essentially all grades of colour in between. In most cases the colour is uniform within an individual but various degrees of infuscation on the mesosoma are common. Also, most variation occurs between rather than within nests although the development of infuscation does vary within nest series. Finally, this colour variation shows little geographic pattern with essentially all colour forms being found in all regions, the only exception being northern regions of the Northern Territory where light forms predominate.

The types of *C. wiederkheiri* and *C. wiederkheiri lucidor* represent the more brightly coloured forms of this taxon. These two taxa were separated based on trivial and non-significant differences in size, sculpturing and the shape of the anterior clypeal margin (Forel 1910) and they clearly represent the same taxon. *Campotopus latranclus* represents an

intermediately coloured form and compares well with the types of *C. wiederkheiri*. Wheeler (1915) was apparently unaware of *C. wiederkheiri* as he made no mention of it in his description of *C. latranclus* and this is likely the cause of this synonymy. The final previously proposed name, *C. denticulatus*, represents the dark form of this taxon. However, it is morphologically very similar to the other forms placed here and no justification could be found for treating it as a separate taxon.

**Species of the *C. perjurus* species group**

*Camponotus perjurus* sp. nov.

**Material examined**

Holotype. Minor worker from 74 km E by N Cosmo Newberry, Western Australia, 13 November 1977, J. E. Feehan (ANIC).

Other material examined: South Australia: 80km NNE Ceduna (JAF); Emu Camp, Victoria Desert (PJM); Mt. Gunson, SE Woomera (PJM); Western Australia: 40km SE Ravensthorpe (RWT); Borden (EFR).

**Worker diagnosis**

Head of minor worker produced upwards so that its attachment to the pronotum is well below its upper margin (Fig. 61). Often with weak purple or green iridescent hue on head and body. The attachment of the head is unique to this species group, if not the genus, and will readily separate this species from others.

**Description (minor worker)**

Anterior clypeal margin wide, projecting, evenly convex and feebly crenulate, with a feeble medial carina (Fig. 60). Pronotum and mesonotum a raised convexity which smoothly joins the feebly concave dorsal surface of the propodeum, the propodeal angle rounded, its posterior face short and straight, the ratio of dorsum to declivity about 4 (Fig. 61). Metanotal spiracles high, near the dorsal mesosomal surface. Petiolar node leaning forward, parallel anteriorly and posteriorly, with a long, weakly convex summit (Fig. 61). Body red-brown except for gaster and parts of legs which are darker, sometimes with a weak purple or green iridescent hue. Entire body clothed in fine white indistinct pubescence with sparse long setae on the anterior and posterior head, mesosoma, petiolar node and gaster, absent on the underside of head.

**Measurements**

*Minor worker (n=5):* CI 0.79 - 0.95; HL 1.89mm -

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**Fig. 62. Distribution of *C. perjurus* material examined during this study.**

the *Iridomyrmex purpureus* species group (subfamily Dolichoderinae). This is based on the purple or green iridescent colour which is similar to *Iridomyrmex viridulaeeus* Viehmeyer (Shattuck 1993). Also, only single foragers have been found and most of these have been collected in association with *Iridomyrmex spodiipilus* Shattuck and Camponotus prosseri Shattuck and McArthur. They have been found from central South Australia west into south-central Western Australia (Fig. 62).

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**References**


FOREST, A. (1894) Quelques formis de Madagascar (récoltées par M. le Dr. Völckow); de Nouvelle Zélande (récoltées par M. W. W. Smith); de Nouvelle Calédonie (récoltées par M. Sommer); de Queensland (Australie) récoltées par M. Wiederkheir; et de Perth (Australie occidentale) récoltées par M. Cluze. Ann. Soc. Entomol. Belg. 38, 226-237.


