

From the ANNALS AND MAGAZINE OF NATURAL HISTORY,
Ser. 9, vol. x., p. 16, *July* 1922.

NEW ANTS FROM AUSTRALIA.

New Ants from Australia.

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[Concluded from vol. ix. p. 449.]

Solenopsis CLARKI, sp. n.

♂ (major). Length 1·8 mm.

Yellow; teeth of mandibles dark brown, and an indistinct band across the apical third of gaster brown. Body with moderately long yellow pilosity. Antennæ and legs abundantly provided with stiff erect hairs. Clypeus with long hairs.

Head as long as broad, the sides parallel up to the hinder third where they converge slightly, forming rounded occipital angles; occipital border widely concave. Eyes small, about 0·45 mm. in longest diameter, placed at the anterior one-quarter of sides of head. Mandibles with four teeth, the apical large, the two following less large and subequal, the third set far back and small. Clypeus of ordinary form, the carinæ ending in small teeth. Frontal area deeply impressed. Scapes reach just beyond two-thirds of the distance from their base to the occiput. The 2-jointed club longer than the rest of funiculus; the remaining joints of funiculus all broader than long and subequal, except the joint next to the club, which is longer and broader.

Thorax in profile slightly incised at mesoepinotal suture. Base of epinotum feebly convex, more than twice as long as

the declivity, which is concave and bordered. Pronotum about once and a half as long as broad, the shoulders rounded, the sides gradually narrowing in a gentle curve to just before the suture, where they narrow abruptly and form a deep constriction. First node from above a little broader than second, broader than long, almost straight in front and behind, the sides rounded; the second node rounded, slightly broader than long. In profile the first node is higher than the second, slightly higher in front than behind, not greatly narrower at apex; the second more or less globular.

Shining; mandibles smooth, grooves continuing the intervals between the teeth; head with scattered shallow circular punctures. Back of thorax and nodes with a few more superficial punctures, the rest smooth.

♂ (minor). Length 1·4 mm.

Entirely pale yellow, except the teeth of mandibles. Head longer than broad, the sides almost parallel, converging very slightly towards the occiput, which is concave. Eyes smaller and placed nearer the base of mandibles. Thorax in profile flatter, mesoepinotal suture deeper. First node proportionately higher and narrower. Otherwise like ♀ major.

Byford, W. A. (*Clark*, no. 171).

Types W. C. C. coll.

The first species of *Solenopsis* found in Australia (except the cosmopolitan *geminata*, var. *rufa*, Jerd.) was described by Forel in 1897 under the name of *belisarius*. The ♂ of this species, which is found in S.W. Australia, is entirely without eyes.

Aphanogaster POULTONI, sp. n. (Figs. 11 & 12.)

♂. Length 4·3 mm.

Dark castaneous, legs paler.

Head more or less rectangular, very slightly broader than long, widest at eyes; it does not narrow at occiput, where the shoulders are very square; in front at base of mandibles it is only slightly narrower than at occiput. There is no semblance of a neck, and the reflected border is minute. Eyes placed just behind middle of sides. The scapes extend less than one-quarter of their length beyond the occipital border. Joints of funiculus broader and shorter, and club more thickened, than in *longiceps*.

Elevation of thorax pronounced, extending to middle of the space between the anterior border and the incision. Spines mere teeth, and base of epinotum convex. Pedicel

as in *longiceps*, Sm., with the exception of the first node which in profile is distinctly less narrowed at apex.

Fig. 11.

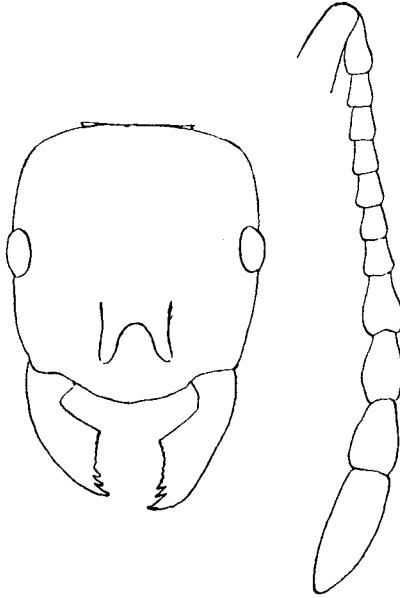
Head and antenna of *Aphanogaster poultoni*.

Fig. 12.

Profile of *Aphanogaster poultoni*.

Under the head is a scanty beard, less abundant than in *barbigula*, Wh., according to the description.

Mandibles finely striated as in type. Cheeks smooth and

shining, the space between frontal carinæ and eyes alone being striated, with the exception of a few very fine lines on the frontal carinæ. Generally the sculpture comes between that of *longiceps* and *pythia*. There is no sign of striæ between the epinotal teeth.

Beenup, W.A. (Clark, no. 164).

Type W. C. C. coll.

On re-examination of some ants taken by Professor Poulton at Perth in 1914, I found that there were among them three specimens of this form. There can be no doubt that these specimens agree with Mr. Clark's, though the head is possibly somewhat less square behind.

I have recently re-described Smith's type of *Aphænogaster longiceps* in the British Museum, and give the results below, followed by some notes on *pythia*, For., and *barbigula*, Wh.

A. longiceps, Smith. (Figs. 13 & 14.)

Type.

♂. Length 6.0 mm.

Dark castaneous. A short scanty pilosity on body. No beard under head.

Head longer than broad, widest just behind the eyes, narrowing halfway between eyes and occiput into a distinct neck and reflected occipital border; considerably narrower at base of mandibles than at eyes. Eyes placed just in front of middle of sides. The scape passes the occiput by more than one-quarter its length. Joints of funiculus long and narrow, all much longer than broad. Club only slightly thickened.

Elevation of thorax moderate, and does not extend as far as the centre of the dorsum between the anterior border of pronotum to the incision; from its highest point it falls in a feebly concave curve to the incision, which is deep. Spines almost horizontal, nearly as long as their interval. First node from above nearly twice as long as broad, only a little more than one-half as wide as second node; in profile it is considerably narrowed at apex.

Mandibles finely longitudinally striated. Longitudinal striæ on cheeks and between the antennal sockets and eyes. A few very fine ones at sides of frontal carinæ. Sides of mesonotum and epinotum rugose. Mesonotum longitudinally striate just before the meso-epinotal suture. Base of epinotum transversely striate, declivity between the spines smooth and shining with a few faint transverse lines.

The examples of *longiceps* from Healesville, Victoria, 1913

(*ruginota*, Forel), received from Mr. H. A. Arnold (*vide* Forel, Arkiv. för Zoologi, ix. 16, 1915, p. 75) are uniformly darker in colour than the type, but in all other respects agree perfectly.

Fig. 13.

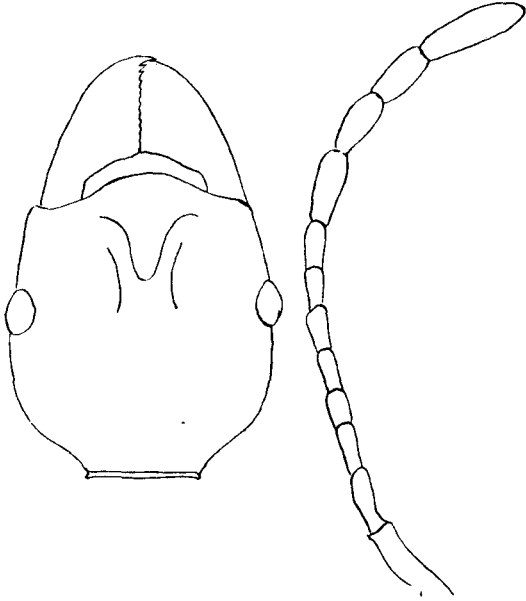
Head and antenna of *Aphanogaster longiceps*, Sm., type.

Fig. 14.

Profile of *Aphanogaster longiceps*, Sm., type.

A. pythia, For.—Wheeler (Tr. Roy. Soc. S. Austr. xl. 1916) says the head is hardly longer than broad, and broader behind than in front, with less rounded posterior borders than in *longiceps*; antennæ shorter, though scape passes the

occiput by nearly one-quarter its length, funicular joints shorter; epinotal spines shorter, much shorter than their distance apart at base, and directed more upward; petiolar node rising less abruptly from the peduncle. Colour usually paler and more yellowish than in *longiceps*.

The specimens in my collection from Mackay, Queensland, named by Forel, agree in the main with the above, but the head is as broad as long, very similar to that of *poultoni*, but slightly narrower in front. The funicular joints are not quite so long and thin as in the type of *longiceps*, but more so than in *poultoni*. The spines, besides being shorter than in *longiceps*, are directed more upward and outward. The sculpture, as Wheeler says, is less pronounced than in *longiceps*.

A. barbigula, Wheeler (*l. c.*), is distinguished from *longiceps* and *pythia* principally by the absence of spines, their place being taken by small teeth, and by the shape of the head; from race *poultoni* by the shape of the head (which is of the *pythia* type) and the more scanty beard.

Otherwise *barbigula* (according to the description and figures) is very like *poultoni*.

An account of the appearance of the nests of *poultoni* is given by Poulton in Ent. Mo. Mag. ? May, June 1922.

Clark says that it nests mostly under stones, the actual nest being underground with two or three small tunnels leading downwards.

Crematogaster PERTHENSIS, sp. n.

♂. Length 3·3–4·0 mm.

Varies in colour from dark castaneous brown, with the thorax less dark than head and gaster, and the apical half of the latter nearly black, to castaneous, with the gaster dark brown. The ♀ major is the darkest in colour, and has a black patch on the occiput.

Head broader than long, as broad in front as behind, sides feebly convex; occipital border very feebly concave. Mandibles with four teeth, clypeus depressed in front. Eyes placed just behind middle of sides, scape barely extends beyond occipital border. Antennal club 3-jointed, the apical joint slightly longer than the two others together; joints 2–5 of funiculus as broad as long.

Pronotum broad, the anterior angles rounded. Mesonotum longer than wide, pro-mesonotal suture distinct, mesoepinotal suture deep.

Base of epinotum shorter than declivity, broader than

long, declivity flat. Epinotal spines nearly horizontal, as long as half the width between them. First node slightly broader than long, equally broad in front and behind, the sides evenly convex; second node as wide as the first, divided into two discs.

Mandibles evenly striate throughout their whole length. Clypeus striate in front and at sides, smooth in the middle and posteriorly. Cheeks and sides of head longitudinally striate as far the posterior border of eyes; centre of head and occiput smooth and shining (in the ♀ major there is a faint striation up to near the occiput; in the ♀ minor the head is altogether more feebly striate).

Whole of dorsum of thorax coarsely longitudinally striate, including the space between the spines. Declivity smooth and shining. There is also a ground-reticulation between the striæ of the thorax. In the ♀ minor the striation is less regular and the reticulation more evident. First node shining, superficially reticulate; discs of second node smooth and shining. Gaster smooth and shining.

Antennæ and tibiæ with erect hairs. Whole body abundantly supplied with a long pilosity. Head in addition has short adherent pubescence.

♂. Length 4.5 mm.

Black; antennæ yellow-grey, mandibles testaceous; legs testaceous brown. Wing-nervures yellow-brown.

Body covered with a moderately long grey pilosity. Tibiæ with erect hairs.

Mandibles placed wide apart, their tips just meeting when closed, narrow, with three teeth, the innermost almost obsolete. Clypeus broad, moderately raised in centre, the anterior border feebly concave, almost straight. Frontal area impressed. Head broader than long, broadest just behind the eyes, which are prominent and placed slightly in front of middle of sides. The curve of the back of head from eye to eye describes almost a half-circle. Scape almost twice as long as broad and nearly twice as long as the first joint of funiculus, which is globular; the second longer than broad, the third as long as broad, the remainder increasing slightly in length and decreasing in breadth.

Thorax very large, high, and rounded. Base of epinotum about as long as declivity, which is rounded, a blunt projection at each side. From above both nodes are broader than long, the first twice as broad, the anterior border widely concave, sides parallel, the second wider, more than twice as broad as long, the sides rounded. In profile the anterior border of

the first is widely concave, the second higher than the first.

Mandibles striate with a few grooves. Head matt, the centre of clypeus, the frontal area, and a strip extending thence to the ocelli moderately shining. Rest of head longitudinally roughened. Thorax similar, but more shining. Base of epinotum faintly longitudinally striate, the declivity smooth; nodes almost entirely smooth. Gaster smooth and shining.

Genitalia: whole organ short and broad; stipes blunt, the tip abundantly pilose; volsella flat and thin, the lateral process opposing a concavity in the organ. Stipes, volsellæ, and sagittæ subequal in length.

Perth, W.A. (*Clark*, no. 36).

Types W. C. C. coll.

Crematogaster rufotestacea, Mayr.

♀ (hitherto undescribed). Length 7.5 mm.

Head dark brown, thorax less dark, legs yellow, gaster bright castaneous. Pilosity more abundant than in the ♂. Wings tinged with yellow.

Club of antennæ 2- or 3-jointed (2-jointed in ♂), apical joint very slightly longer than the other two taken together. Scape barely reaches the occipital border. Mandibles with five teeth (only four in ♂).

The clypeus, which in the ♂ (as pointed out by Forel, *Rev. Suisse Zool.* x. 2, 1902, p. 412) has its anterior border produced in a bidentate lobe, has a similar lobe, but merely concave. Epinotal spines mere teeth.

Mandibles striate; clypeus striate at sides only. Striation of head as in ♂, but coarser. Thorax smooth and shining, petiole striate at sides.

♂ (hitherto undescribed). Length 4.0 mm.

Brownish black; tip of gaster brown; mandibles, clypeus, and legs yellowish brown, tarsi palest; antennæ pale yellowish grey. Nervures of wing yellow.

Mandibles long and narrow, with three teeth. Clypeus high and rounded, the anterior border with a narrow rounded projection. There is a short depression between the clypeus and the anterior ocellus.

Head broader than long, eyes large, placed in front of the middle of the sides, of which they occupy more than one-half. Scape as long as the first two joints of the funiculus, the first joint broader than the scape, longer than broad, second

and third equal, narrow, fourth and fifth equal, broader, the remaining joints increasing in breadth and thickness up to the apical, which is nearly as long as the two preceding together.

Epinotum with two blunt projections. First node longer than broad, the sides parallel, the second broader, broader than long, with a small tooth at each side.

Smooth and shining; mandibles punctured, head finely and sparsely striate, with a few punctures; thorax smooth and shining, the apical border and sides of scutellum striate. Declivity and sides of epinotum sparsely striate. First node irregularly striate; gaster smooth and shining.

Body with a yellowish pilosity, fairly abundant.

Perth, W. Australia (*J. Clark*, no. 26).

Types W. C. C. coll.

Pheidole ampla, Forel, race PERTHENSIS, st. n.

♂. Length 5.0 mm.

Colour darker than type. Borders of mandibles, clypeus and cheeks, and a patch on the front, dark brown, rest of head castaneous red. Thorax and petiole darker than head, gaster dark brown.

Mandibles with a straight edge terminated by two large teeth; clypeus flat, with a deep incision in anterior border, but without a distinct central carina. Frontal area impressed, triangular.

Head 2.1 mm. long, 2.0 mm. broad, sides subparallel, broadest just behind centre; occipital groove very deep. Scapes do not reach to half the distance from their base to the occiput.

The mesonotum has a feeble transverse impression, less distinct than in var. *mackayensis*. Epinotal spines as long as half the distance that divides them. Second node more than twice as broad as long, with a prominent conule at each side.

Mandibles with a few coarse striæ at base, and sparsely punctured.

Clypeus with one or two longitudinal ridges. Cheeks and anterior half of head with regular longitudinal raised striæ in ridges, similar to, but more prominent than in var. *mackayensis*, the spaces between them smooth. Occipital lobes with striæ curving outwards from the central impression. Rest of head smooth.

Pronotum sparsely and irregularly striate. Epinotum between the spines superficially reticulate with a few lines.

First and second nodes superficially reticulate; the latter has also some longitudinal striæ at the sides. Gaster smooth and shining.

Whole body well supplied with a moderately long yellow-brown pilosity.

♂. Length 2·3 mm.

Head and gaster brown, rest of body (including mandibles) yellow-brown.

Head exactly as broad as long (broader than long in type). Scape passes the occiput by nearly its thickness. Eyes well in front of middle of sides (almost in middle in type). Mandibles with two large teeth, and a row of smaller ones behind. Sides of head slightly curved.

Mesonotum with a distinct transverse impression. Epi-notal spines longer than their interval. Second node only slightly broader than first.

Mandibles widely punctured. Sides of head and cheeks with a few longitudinal ridges. A ridge continues the frontal carina to the vertex. Thorax with a few lateral striæ and one central one. First node slightly rugose, second superficially reticulate. Space between the spines superficially reticulate. Gaster smooth and shining.

Pilosity less abundant than in ♀.

♀. Length 7·0 mm.

Colour as in ♂, but thorax and gaster darker, and the black patch embracing the ocelli more distinct.

Mandibles and clypeus as in ♂. Head slightly broader than long, broadest at occiput, the sides almost straight. The scape reaches nearly two-thirds of the distance from its base to the occiput, which is feebly concave.

Spines very short. Petiole as in ♂, but conules not so acute.

Whole head with longitudinal ridged striæ, diverging round the occiput. Thorax above with ridged striæ at sides, smooth in middle, where there are a few punctures. Epi-notum strongly longitudinally ridged between the spines. Base of first segment of gaster microscopically longitudinally striate.

Pilosity as in ♂.

Perth, W.A. (*Clark*, no. 24).

Types W. C. C. coll.

Dolichoderus (Hypoclinea) ypsilon, Forel, var. *NIGRA*, nov.

♂. The typical form is dark brown or black, with the mandibles and whole of legs red-yellow. The var. *nigra* is

entirely deep black and shining. The sculpture in the two forms is similar.

Clypeus deeply incised in centre (as in type). Scapes pass the occipital border by nearly half their length. The spines of the epinotum are longer than in the type, and thin off rather suddenly at their middle, where they bend more than in the type. The scale is shorter, broader, and more deeply notched.

Gaster with a similar thin golden pubescence to that of the type.

Kelmscott, W.A. (*Clark*, no. 25).

Type W. C. C. coll.

Iridomyrmex conifer, Forel.

♂ (hitherto undescribed). Length 5·0–5·5 mm.

Dark brown, nearly black; tarsi paler. Wings pale brown, with an iridescent tinge.

Mandibles short, pointed, edentate. Head broader than long, narrowed in front and behind, eyes large and globular, a little in front of the middle of sides of head, ocelli large. Clypeus raised in centre, and depressed just in front of the anterior border, which is feebly convex. Scapes, which are considerably longer than the second joint of funiculus, do not quite reach the anterior ocellus. First joint of funiculus one-third as long as second, which is longest, thereafter the joints diminish in length with the exception of the apical, which is a little longer than the preceding.

Thorax high and rounded, parapsidal furrows distinct, scutellum prominent. Epinotum regularly convex in both senses, the base longer than the declivity. Scale in profile short, broad at base, conical; from above transverse, more than twice as broad as long.

Genitalia extruded, stipites narrow and pointed, volsellæ very long, thin, and pointed, curved through a right angle, bearing a short blunt point on the inner side of base.

Sparsely provided with short erect hairs, almost absent on scapes and tibiæ; the whole body covered with a close yellow-grey pubescence.

More or less smooth and shining, with a microscopical reticulation.

Perth, W.A. (*Clark*, nos. 27, 34).

Types W. C. C. coll.

Iridomyrmex exsanguis, Forel.

♂ (hitherto undescribed). Length 2·0 mm.

Dark brown; mouth-parts, antennæ, and legs pale yellow-grey. Wings hyaline, iridescent.

Head longer than broad, eyes large, one-third of their length from base of mandibles, ocelli prominent, the pair placed wide apart on the angles of the occiput, which is concave between them. Mandibles edentate, very small and pointed. Scape a little longer than the first joint of funiculus, which is slightly longer than broad and two-thirds as long as the following joint. Clypeus raised in centre, the anterior border feebly incised. Thorax high and rounded. Epinotum flat, the base longer than the declivity.

Genitalia: stipites pointed, much longer than wide at their base; volsellæ very long, narrow, and curved downwards, with two small blunt teeth at base. The second tooth is not readily seen from above.

Body shining, superficially reticulate.

Wongang, W.A. (*Clark*, nos. 163, 167), ♂ ♀̄ ♀.

Type W. C. C. coll.

The ♀ corresponds exactly with the description of *Forel*, except that the scape does not extend so much as one-quarter of its length beyond the occipital border. The body is covered with a close grey pubescence. The wings are iridescent.

Bothriomyrmex FLAVUS, sp. n. (Fig. 15.)

♂. Length 2.0 mm.

Entirely yellow, the colour of a small *Lusius flavus* ♀, gaster slightly darker.

Mandibles with five teeth. Maxillary and labial palpi 2-jointed. Head very slightly longer than broad, as broad in front as behind, the sides feebly convex, the occiput widely emarginate. Anterior border of clypeus feebly convex. Eyes small, consisting of about eight facets, placed just in front of middle of sides of head. Scape fails to reach occipital border by about its breadth. Joints 2-4 of funiculus subequal, as long as broad, the remainder increasing in breadth in proportion to their length with the exception of the apical, which is longer than the two preceding together. The head has a large shallow depression at the vertex.

Thorax slightly impressed at the mesoepinotal suture, which is very slight. Declivity of epinotum three times as long as the base. Scale very small.

Entirely smooth and shining. Mandibles with a few stiff hairs. Clypeus with four very long hairs and a few shorter ones at sides. Antennæ, legs, apex of gaster, and bases of segments pilose; whole body covered with a scattered pubescence.

♀. Length 2·4 mm.

Fuscous, sometimes almost black; apex of mandibles and tarsi yellow-brown, rest of legs brown. Wings iridescent, nearly twice as long as the whole body.

Mandibles with five teeth, the two apical ones large and sharp, the remainder very small and pointed. Head longer than broad, the sides slightly convex, almost parallel, the occipital border widely and deeply emarginate, so that the border is bluntly margined. Anterior border of clypeus feebly concave. Scapes flat, failing to reach the occiput by their width. Second joint of funiculus longer than broad, slightly longer than the third, which is as long as broad; joints 4-6 about as long as broad, the remainder longer than broad, the apical equalling the two preceding together. Eyes large, less than their length from the base of mandibles.

Thorax flat, as broad as head. Base of epinotum very short, the declivity flat, slightly concave in centre. Scale

Fig. 15.



Mandible of *Bothriomyrmex flavus*, ♀.

thick, moderately high, rounded at top; seen from above only slightly broader than long.

Gaster as broad as thorax, and slightly shorter.

Mandibles and clypeus with a few small scattered punctures; rest of body smooth and shining; gaster microscopically reticulate. A few short hairs on clypeus and apex of gaster. Body covered with a thin scattered cinereous pubescence.

♂. Length 2·0 mm.

Fuscous. Mandibles, clypeus, and legs dirty grey-yellow. Extreme borders of funicular joints edged with brown.

Mandibles edentate, pointed. Clypeus high and rounded in centre, the anterior border straight. Head longer than broad, narrowing behind. Eyes large and globular, close to anterior border of head. Antennæ long, reaching to beyond the node of petiole; the scapes do not quite reach the

occiput. Joints of funiculus much longer than broad, all subequal with the exception of the apical.

Thorax broader than head. Node short and thick, bluntly rounded at apex. Entirely smooth and shining.

Pubescence similar to that of the ♀. Wings shorter than in ♀.

Mundaring Weir, W. Australia (Clark, nos. 21, 22, 57, 124, 147).

Types W. C. C. coll.

The ♀ differs from that of *pusillus*, Mayr, in the longer head with sides more parallel, and the thicker and higher scale; and from the var. *æqualis*, For., principally in size. The ♂ differs from *pusillus* in the longer scapes and edentate mandibles, and in the joints of the funiculus which in *pusillus* are as broad as long, and in its greater size. It is also larger than the ♂ of *æqualis*. The ♀ differs from *pusillus* in the lighter colour, the longer head and joints of funiculus, and in the impression on the back of thorax.

Bothriomyrmex scissor, sp. n. (Fig. 16.)

♀. Length 2·4 mm.

Fuscous; the extremities of mandibles, the funiculus, and tarsi lighter. Wings iridescent, much longer than the whole insect.

Pilosity as in *flavus*.

Fig. 16.



Mandible of *B. scissor*, ♀.

Mandibles somewhat similar in shape to those of *flavus*, but with only two teeth, a large apical and a smaller sub-apical one. Beyond the teeth the mandible is scooped out so as to form a sharp cutting-edge (*vide* fig. 16).

Head exactly as long as broad, slightly narrower in front, the sides slightly convex (more so than in *flavus*), the

occipital border widely and deeply emarginate. Anterior border of clypeus very feebly convex with the suspicion of an incision in the centre. The scape fails to reach the occipital border by its width. Joints 2-5 of funiculus subequal, slightly longer than broad; the sixth shorter, the remainder lengthening and broadening, the apical longer than the two preceding together. Eyes large, less than their length from base of mandibles.

Thorax flat, as broad as head. Epinotum as in *flavus*, scale as in *flavus*, but thinner and more pointed at apex.

Gaster as in *flavus*.

Murray River, W. Australia (*Clark*).

Two ♀ ♀ taken with *Iridomyrmex innocens*, For., no. 146.

Type W. C. C. coll.

Comes near the race *æqualis*, For., of *pusillus*, Mayr. Differs from the ♀ of *flavus* in the shape of head, node, and particularly mandibles. The latter are characteristic, and evidently adapted for decapitating the host queen. Probably parasitic on *I. innocens*.

Acantholepis (Stigmacros) OCCIDENTALIS, sp. n.

♂. Length 1.9 mm.

Dirty yellow, sometimes almost entirely brown; head darker, legs paler, a brownish band on apical borders of segments of gaster. Posterior and lateral borders of clypeus lined with dark brown.

Pilosity almost nil; two pairs of longish hairs on clypeus and a few on the apical segments of gaster. Whole body with small adpressed hairs.

Head a fraction broader than long, narrowing slightly in front of eyes, which are placed just behind the middle of sides. Occipital angles rounded, the border widely concave. Frontal area large, triangular, its anterior and lateral borders clearly defined. Mandibles triangular with four teeth and a fifth obsolete between the second and third. Clypeus bluntly carinate, the anterior border rounded and having a slight flattening in the middle. Frontal carinæ short, slightly divergent. Scapes pass the occiput by nearly one-quarter of their length, they are incrassate towards apex. First joint of funiculus twice as long as second, which is hardly longer than broad, the rest all longer than broad, the apical equalling the two preceding. There is a distinct thickening towards the apex.

Pronotum epaulate, twice as wide as long. Promesonotal suture distinct and impressed. Mesonotal longer than wide, wider in front. The mesonotum forms a transverse ridge,

bituberculate, separated from the mesonotum by a feeble suture. MesoePINOTAL suture deep. Base of epinotum from above transversely concave, forming two lateral angles, and wider than long, wider in front, the lateral borders raised. In profile the apex is flat, the declivity twice as long as the base, widely concave, the spines placed above the middle; they are short and sharp, hardly longer than wide at their base. Scale as broad as high, widely excised at summit; in profile very thin, feebly convex in front.

Mandibles smooth. Head almost entirely smooth; there are a few very indistinct shallow punctures on the clypeus and cheeks, and the back of head is slightly roughened. Entire thorax superficially roughened. Declivity of epinotum shining. Gaster smooth and shining.

Murray River, W. Australia (*Clark*, no. 141).

Type W. C. C. coll.

According to the description it appears to come near *amula*, Forel, but the scapes are longer and the clypeus carinate.

Camponotus (Myrmophyma) claripes, Mayr,
race MINIMA, st. n.

♂ (major). Length 7·0 mm.

Dark brown; underside of head, front of pronotum, and antennæ ferruginous; legs pale testaceous yellow, tarsi and joints of tibiæ brown; borders of segments of gaster testaceous. A few erect hairs on body, none on antennæ or legs.

Head as broad as long, broadest just behind the eyes, the sides curved and narrowing in front of eyes, which are placed behind the middle of sides. Occipital angles rounded, the border widely concave. Mandibles stout, with six teeth. Clypeus obtusely carinate, almost flat, the anterior border crenulate. Frontal carinæ sigmoid, wide apart. Ocelli marked by three superficial impressions. Scapes barely reach the occipital border. Thorax constricted at meso-epinotal suture. In profile the thorax forms a gentle curve to the junction of the base and declivity of epinotum, where it descends abruptly, the angle hardly greater than a right angle. Base and declivity equal, the latter concave. Scale broad and thin, rounded at top, in profile convex in front and flat behind.

Mandibles finely punctate. Whole head microscopically reticulate. Front of head with minute shallow punctures, disappearing at occiput.

Thorax similar, but punctures less in number.

♀ (minor). Length 4·4-5·0 mm.

Brown; clypeus, cheeks, antennæ, and anterior half of pronotum testaceous yellow, legs paler yellow, sometimes almost white; tarsi and joints of tibiæ as in ♂ major. Mandibles with six teeth. Clypeus as in ♂ major, but more clearly carinate.

Pilosity similar.

Head longer than broad, the sides almost parallel, the occipital border widely concave; the scapes pass the occipital border by over one-quarter of their length.

Thorax as in ♂ major, but the base of epinotum almost knife-edged, and the angle between base and declivity less abrupt. Scale narrower and thicker.

Sculpture similar to that of ♂ major, but smoother and minus the punctures on head.

♂. Length 5.0 mm.

Almost black, including legs and scapes; funiculus and tarsi brown. Wings clear, faintly iridescent; nervures yellow. Body with scattered erect hairs.

Mandibles flat, with a blunt apical tooth. Clypeus raised in centre, with an impression just before the anterior border, which is straight. Scapes pass the occipital border by nearly half their length.

Eyes placed just behind the middle of sides. Head broad behind, the occipital border convex; in front of the eyes it is very much narrower, the sides parallel from eyes to base of mandibles.

Thorax large, pronotum depressed in centre. Epinotum in profile evenly curved. Scale small and thick.

Genitalia: squamula short and broad, stipes long and narrow, volsella broad and flat, with a rounded point turned down, the lateral process broad and short with a blunt point directed upwards. This and the volsella are armed with teeth facing each other. Sagittæ long, intermediate in length between the stipes and volsella.

♀. Length 9.0 mm.

Similar to ♂ major, but darker, with ferruginous patches on cheeks and pronotum. Wings pale brown, nervures darker.

The scapes only just pass the occipital border. Base of epinotum only half as long as declivity, the angle between them rounded and wider than in ♂ major.

Otherwise like ♂ major, except for sexual differences.

Mundaring, W. A. (*Clark*, nos. 117, 121, 122, 131, 135).

Types in W. C. C. coll.

Camponotus (Myrmophyma) lownei, Forel.

♂ (hitherto undescribed). Length 4.5 mm.

Black; mandibles, funiculi, and tarsi yellow-brown; wings yellowish.

Body with a scanty pilosity, most abundant on gaster.

Head as long as broad, widest just behind eyes, which are prominent and just behind the middle of sides. Behind eyes rounded, in front of eyes narrow, the sides slightly converging. Mandibles flat, the points crossing when closed, masticatory border edentate, sharp, with a blunt apical point. Clypeus rounded, the anterior border impressed and slightly projecting, feebly convex. Antennæ long, the scapes passing the occipital border by nearly half their length. All joints of funiculus longer than broad, 2 and 3 subequal, the rest diminishing in length to the apical.

Thorax large, scutum almost overhanging the head; epinotum convex transversely, in profile the base feebly convex. Scale from above more than twice as wide as long, straight in front, convex behind; in profile twice as high as thick, the top blunt. Squamula broad and rounded, stipes long and tapering, generally similar to the genitalia of *C. claripes*, r. *minima*, but volsella less spatulate, the lateral process thicker, and the sagittæ longer, as long or longer than the stipples.

Shining; whole body, including antennæ and legs, superficially reticulate; on the head and thorax the sculpture forms a complete network, on the scale and gaster it takes a transverse direction.

♀ (hitherto undescribed). Length 8.0 mm.

Dark brown, almost black; antennæ brown, rims of gastric segments testaceous, legs yellow, tibiæ and tarsi darker. Wings yellow-brown, nervures brown. Body with stiff erect hairs, most abundant on gaster, and also small adherent hairs.

Head very slightly longer than broad, widest at occiput, whose border is nearly straight and angles square. Sides of head straight, converging slightly in front. Eyes flat, behind middle. Scapes pass occiput by not quite their thickness. Front swollen. Mandibles thick, with five to six teeth. Clypeus bluntly carinate, the anterior border sinuate, with a blunt projection at each extremity of the curve. Frontal carinæ widely divided and sigmoid. Base of epinotum short, the curve rounded, the first third of

declivity convex, the rest concave. Scale broad and oval, bluntly pointed.

Mandibles and whole of head with scattered superficial punctures. Thorax with fewer punctures, declivity with more, gaster with none. Whole body has a reticulate ground-sculpture similar to that of the ♀.

Beenup, W.A. (*Clark*, no. 166), ♀ ♂ ♀.

Types W. C. C. coll.

Camponotus (Myrmogonia) tumidus, sp. n. (Fig. 17.)

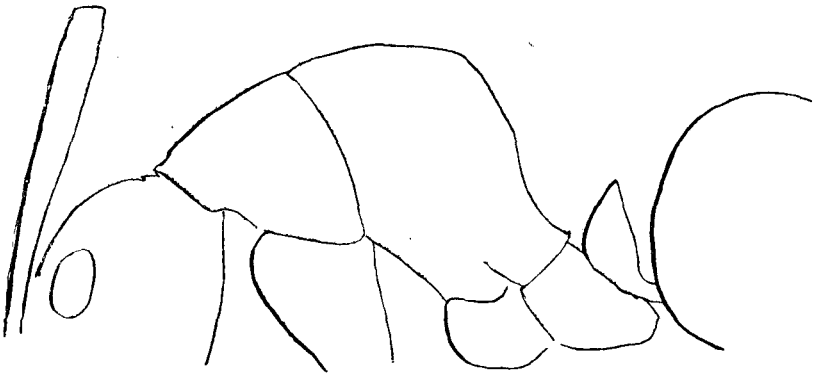
♂ major. Length 9.0 mm.

Dark brown, nearly black; funiculi, cheeks, tibiæ, and tarsi russet-brown, rest of legs yellow or light caataneous.

Pilosity sparse, none on scapes or upper surface of tibiæ; underside of tibiæ bears a row of spike-hairs.

Head thick, vertex swollen, as long as broad, widest at eyes, which are placed just below the middle of sides; ocelli distinct. Occipital border widely concave. Mandibles

Fig. 17.



♂ minor.

Profile of thorax of *Camponotus (Myrmogonia) tumidus*.

thick and short, with six teeth; clypeus bluntly carinate, its anterior third depressed; lobe short, the anterior border crenate. Scapes barely pass the occiput. Frontal carinæ short, curved, not diverging behind. Frontal groove reaches the anterior ocellus.

Pronotum broader than long, sub-bordered, evenly rounded in front. Mesonotum marked by two transverse impressions. In profile the base of epinotum is very short, the declivity descending abruptly, the first half straight, the

lower feebly concave. Scale moderately broad, the top rounded and acute.

Moderately shining; mandibles closely punctured. Clypeus with an elongate puncture at each side of lobe. Whole of head with scattered minute punctures. Thorax and gaster almost smooth. There is a reticulate ground-sculpture over the whole body, most noticeable on fore part of head, microscopical on gaster.

♂ minor. Length 7-7.5 mm.

Colour as ♂ major.

Head longer than broad, widest at base of mandibles, vertex very arched, sides subparallel, converging slightly behind eyes, which are well behind the middle of sides. Occipital border widely concave, the angles subacute. Mandibles and clypeus as in ♂ major, but the anterior border of latter distinctly convex. Antennæ remarkably long, the scapes passing the occiput by half their length; all joints of funiculus longer than broad. Angle of epinotum more pronounced and declivity more knife-edged, scale thicker and narrower at top, otherwise like ♂ major.

Byford, W.A. (*Clark*, no. 172).

Types W. C. C. coll.

Camponotus (Myrmoturba) nigriceps, Sm.,
race *dimidiata*, Rog., var. *perthiana*, For.

♂ (hitherto undescribed). Length 12.0 mm.

Black; apical half of funiculus and tarsi ferruginous, rest of funiculus and legs dark brown; apical borders of segments of gaster testaceous.

Pilosity short, red-brown. Legs with short semi-adherent hairs, scapes pubescent.

Mandibles moderately long, the masticatory border edentate, the edge sharp and notched in centre. Head longer than broad, rounded behind. Clypeus with a minute notch in centre. Eyes small, placed behind the middle of sides. Scapes pass the occiput by more than half their length. Thorax long, rather narrow; epinotum broad, convex in both directions. Scale short, broad at top and slightly concave. Gaster elongate-oval. Stipites very long and thin.

Dull; microscopically reticulate with a few punctures on clypeus, cheeks, and thorax.

♀ (hitherto undescribed). Length 16.0 mm.

Colour of ♂ major, but a larger area of base of gaster castaneous red, and thorax with a broad black band down

centre of mesonotum. Pilosity less abundant than in ♀. Mandibles with six teeth. Clypeus raised in centre, but not (strictly speaking) carinate, as is the case in the ♀; anterior border notched.

Head narrower, scale thinner than in ♀ major, otherwise similar.

Wongong, W.A. (*Clark*, no. 162), ♀ ♂ ♀.

Types W. C. C. coll.

Polyrhachis (Campomyrma) sidnica, Mayr,

var. PERTHENSIS, nov.

♀. Differs from the type in the length of the outer spines of the scale, which are slightly longer than the inner ones; in the gaster not being matt and microscopically punctulate, but more or less smooth and shining, the superficial reticulation only being distinguishable under a magnification of 60 diameters; and in the colour of the legs, which are ferruginous in the type, and almost entirely black in the variety.

Perth (*Clark*, nos. 8 and 20).

Type W. C. C. coll.