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ART. VIII.—*Australian Staphylinidae*.

By CHARLES OKE.

[Read 13th October, 1932; issued separately 1st August, 1933.]

The family Staphylinidae is generally neglected by Australian collectors, the larger and more showy species belonging to families like Buprestidae and Carabidae being more in favour.

At present we have over 700 species of Staphylinidae known in Australia, and there are many more waiting description, but, unfortunately, some of our genera and species have been but poorly characterized, and until these have been redescribed little progress can be made.

This article contains the description of six new genera and thirty-two new species and notes on some others.

The most interesting species dealt with are two having peculiar tarsi from Warburton, for which a new genus, *Warburtonia*, has been proposed. There is a small appendage on the apex of the fourth segment of each tarsus. After two tarsi had been in caustic potash and mounted in balsam, there appeared to be a small elongate balloon under the tarsi. Whether this was the appendage itself, swollen, possibly due to chemical action, or a natural process, or whether it was a protrusile vesicle from between the segments, could not be determined. I look forward to obtaining living specimens to determine this point next season.

Another interesting species is that which I have called *Geothethus attenuatus*. It is only like a fine line on its card, and is less than 150th part of an inch in width.

Family STAPHYLINIDAE.

Sub-Family OXYTELINAE.

HOLOTROCHUS AUSTRALICUS, n. sp.

(Text-figs. 1-5, 41.)

Dark reddish-castaneous, apical segments of antennae paler; base of abdominal segments and meso- and meta-sternum piceous; extreme margin of second to fifth abdominal segments and tarsi flavous. Antennae densely, extreme sides and undersurface of abdomen rather sparsely, clothed with short, yellowish pubescence; elsewhere glabrous. Nitid.

Head transverse, convex on disc, lightly margined on sides and in front; with large, sparse, round punctures. Labrum prominent, fairly wide, lightly emarginate. Eyes moderate, medio-lateral. Antennae of moderate length, robust; first segment thick, flattened on top, second and third about same length, rather suddenly widened from near middle, fourth to sixth subequal, moniliform, seventh to tenth transverse, increasing, eleventh briefly ovate. Prothorax transverse, convex on disc,

sides lightly explanate, with a distinct marginal groove; anterior angles produced but rounded, posterior quadrate; punctures as on head. Scutellum rather large, but normally most of it covered by prothorax; with a row of punctures on sides. Elytra lightly transverse, with sides margined as on pronotum; lightly produced at hind angles; punctures slightly more numerous than on head. Abdomen lightly widening to fifth segment, seventh much narrower; each segment coarsely shagreened on base, but not on apex, where there are a few moderate punctures. Most of under surface strongly shagreened, except on disc of metasternum where there are a few large punctures. Anterior tibiae dilated to apex, bisinuate on inner edge, with a conspicuous fringe of small setae-like spines and six or seven larger ones on outer edge and on apex; the other tibiae feebly dilated and spined. Length, 3.75-4 mm.

Hab. Victoria: Gembrook, Belgrave (C. Oke).

A very interesting addition to the Australian Staphylinid fauna of this widely distributed genus, of which it appears to be quite a typical species. Species have been described from North, Central, and South America, Madagascar, East Indies, Borneo, New Caledonia, and New Zealand, and now from Australia.

Types in coll. Oke.

OSORIUS VICTORIAE, n. sp.

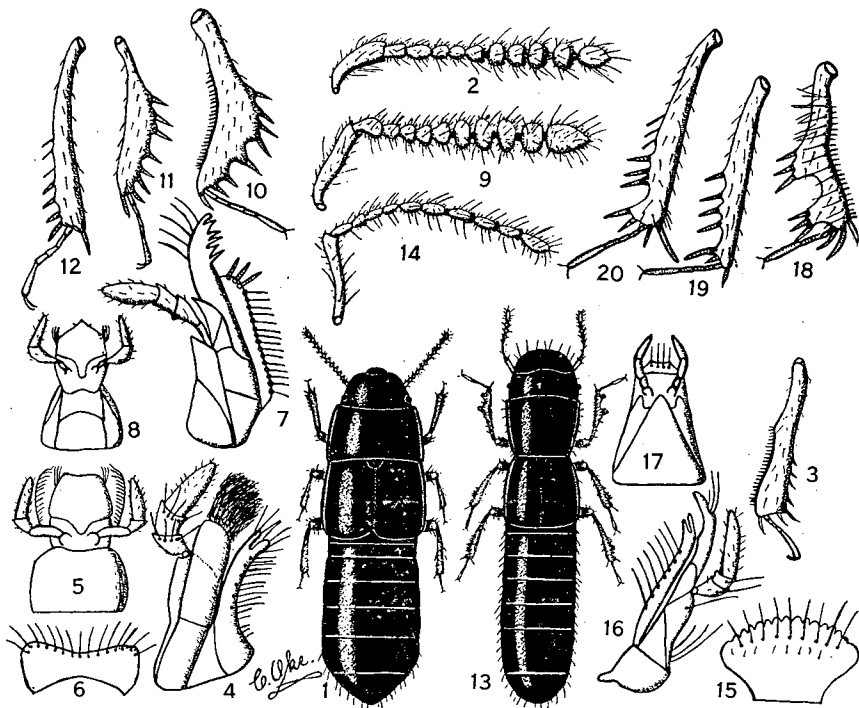
(Text-figs. 6-12, 42.)

Piceous; front of head, apex and base of pronotum, shoulders, suture and base of elytra, apex of first four abdominal segments, antennae, and legs bright reddish-castaneous. Clothed with fairly long, fine, yellowish pubescence, becoming more conspicuous on abdomen. Nitid.

Head strongly convex, obliquely narrowed in front of eyes; middle of frontal declivity laevigate, with rows of punctures on either side; disc with subseriate rows of moderate punctures; behind the eyes strigose, then roughly coriaceous and subopaque; antennal tubercle prominent. Mandibles with three or four obtuse teeth on inner side. Labrum prominent, strongly emarginate. Antennae with first segment long and curved, as long as next four combined, second a little longer than third, fourth and fifth equal, sixth very little larger, seventh to tenth still larger, equal, eleventh ovate. Prothorax as wide at base as the length, gently narrowed to near base then constricted to base, which is gently sinuate; sides lightly margined; on either side of a narrow medial space (which is smooth) is a row of fairly large punctures, the rest with sparse punctures. Elytra elongate, parallel-sided, shoulders slightly prominent; with a distinct sub-sutural impressed line; coriaceous with a few moderate punctures. Abdomen lightly inflated to sixth segment; each segment

coriaceous on base and with a few punctures across apex. Anterior tibiae widened, curved, with nine teeth on outer margin and with a fringe of fine spines on inner margin; intermediate not so wide, with seven acute teeth on margin; posterior lightly widened to near apex, with six strong spines. Length, 5.5-6 mm.

Hab. Victoria: Carrum, Ringwood, Lorne (C. Oke).



(TEXT-FIGS. 1-20.)

1-5.—*Holotrochus australicus*, n. sp.: 1. Imago. 2. Antenna. 3. Anterior tibia. 4. Maxilla. 5. Labium.

6-12.—*Osorius victoriae*, n. sp.: 6. Labrum. 7. Maxilla. 8. Labium. 9. Antenna. 10. Anterior tibia and tarsus. 11. Intermediate tibia and tarsus. 12. Posterior tibia and tarsus.

13-20.—*Cephronistus australicus* Bl.: 13. Imago. 14. Antenna. 15. Labrum. 16. Maxilla. 17. Labium. 18. Anterior tibia and tarsus. 19. Intermediate tibia and tarsus. 20. Posterior tibia and tarsus.

In many respects close to the description of *C. rubripennis* Fvl., but the prothorax is not "quarte parte longiore quam latiore," and its base is sinuate; the abdomen is not transversely strigose, and its second segment is not broadly impressed; also the colour is not quite the same, as most of the elytra in *O. victoriae* is piceous.

Type in coll. Oke.

Genus **Ephronistus** Blackburn.

(Text-figs. 13-20, 45.)

(Trans. Roy. Soc., S. Aust., 1902, p. 20.)

There are several specimens in front of me that have been identified by the late Mr. Lea as belonging to the genotype, *Ce. australicus* Bl., from comparison with specimens so identified by Blackburn. I believe they are correctly identified, but there are some differences from the description.

Blackburn in proposing the genus gave as its most distinguishing character, "tarsi 3-articulati." And further stated that "it is very easily recognizable as an Osoriid with less than five tarsal joints and the front tibiae resembling those of a Scaritid." Unfortunately, he did not mention which Scaritid! The species has five tarsal segments, though I doubt if they can all be seen except in a balsam mount. But the name should be retained as the structure of the mouthparts is distinctive. Blackburn twice stated that the eyes could not be seen when the head was viewed from above, but this is a mistake, as, when the top of the head is in the centre of the field of a hand lens, both eyes are distinctly visible. Important characters either missed or inaccurately noted are:—

Labrum unusually large, shaped like a pecten shell, anterior margin scolloped; with conspicuous criss-cross lines and furnished with long setae. Mandibles of peculiar shape, bifid at apex, with a membrane near base. Maxillae with the lacinia curved, bifid at apex and with numerous long setae on inner edge; the galea curved, longer than lacinia, with two setigerous impressions on outer edge; the palpi short, of four segments, the first small, second longer than third, fourth longer than the three preceding combined, acuminate. Labium as in *Osorius*. Eyes small, on declivous sides of head, arched, fairly prominent. Antennae geniculate, scape long, grooved on inner side, club of five segments. Femora grooved for partial reception of tibiae. All tibiae with two strong spines at apex; anterior spinose-dentate on external margin, inner margin sinuate, with a row of spines and in the middle a fringe of fine spines or setae; intermediate and posterior almost straight, spinose-dentate on outer margin.

Hab. Victoria: Dandenong and Warburton Ranges.

Warburtonia, n. gen.

Body oblong, lightly depressed, winged, of rather small size. Head and prothorax about same width, elytra wider. Head of moderate size, with longitudinal impressions. Antennae inserted under a subtuberculate ridge, just in front of the eyes. Eyes fairly large, prominent, with coarse facets. Antennae moderately

long, rather thin, lightly thickening to apex, no segment transverse; basal segment long and apical three forming a light club. Labrum transverse, narrow, strongly incurved in middle. Mandibles strongly dentate on inner edge, bifid at apex. Maxillae with the cardo almost triangular and more prominent than usual; the lacinia thin, short, spinulose, and dentated at apex; galea thicker and longer than lacinia, with a strong hooked tooth at apex, and three small teeth below; palpifer short, with a moderately long palpus, having a very small basal segment, the second of moderate length, curved, dilated from base to apex, third longer and stouter, fourth short, very thin, subulate. Labium with its submentum transverse, margins straight; mentum rounded on top, convex in front, with the ligula parallel-sided, slightly rounded on top, paraglossae long; the palpi rather stout, well separated at insertion, of three segments. Prothorax longer than wide, cordate; with a transverse impression near base. Elytra large, wider than prothorax, with impressions; its epipleurae very narrow. Abdomen strongly margined to sixth segment. Mesosternum rather short, produced between the intermediate coxae, which are lightly separated. Metasternum long, convex. Legs of moderate length, fairly thin; all coxae elongate, the anterior conical, prominent, almost touching, the intermediate and posterior not protruding, lightly and equally separated; femora thin; tibiae thin, straight and without spurs or spines, except one at apex. Tarsi 5, 5, 5, four basal segments very short and uneven; third lightly produced beneath at apex; fourth more strongly produced beneath and furnished with a thin, whitish filament, extending to claws; fifth about twice as long as four basal, with two strong, lightly appendiculate claws.

This genus is proposed for two species which, although different in appearance, agree in the essential characters of the mouth and in the peculiar tarsi. On dried specimens there appears to be a thin, membraneous extension of the fourth segment. After a leg had been in KOH and mounted in balsam, it was noticed that the filament was swollen and appeared like a small, elongated balloon. A second leg was tried with the same result. Possibly this is a natural function, or it may be due to chemical action.

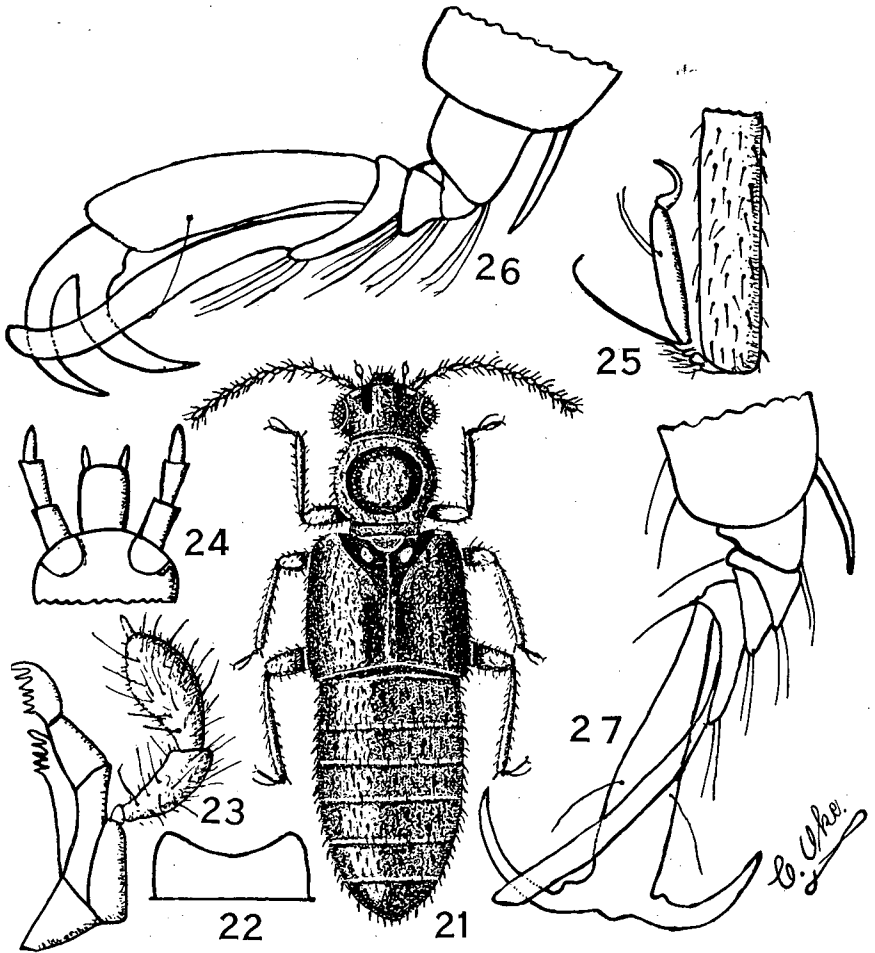
Genotype, *W. inflatipes*, n. sp.

WARBURTONIA INFLATIPES, n. sp.

(Text-figs. 21-27, 46.)

Dark pitchy brown, elytra and femora a little lighter. Rather densely clothed with short, ashen pubescence, becoming longer on under surface of head and with a few longer ones on sides of thorax and apex of abdomen. Subopaque. The whole body with fairly large, close punctures.

Male.—Head transverse, with a large impression on either side of middle, open in front but closed behind, the ridge between very convex; antennal tubercle quite prominent; under surface transversely strigose. Antennae reaching base of prothorax;



(TEXT-FIGS. 21-27.)

21-27.—*Warburtonia inflatipes*, n. sp.: 21. Imago. 22. Labrum. 23. Maxilla. 24. Labium. 25. Tibia and tarsus, from a dried specimen. 26. Tarsus and tip of tibia, from a balsam preparation, side view. 27. Same, from below.

first segment about length of next two combined, second same length as third but thicker, fourth to seventh subequal, moniliform, eighth quadrate, ninth and tenth equal, eleventh about one

and a half times the length of tenth, ovate-acuminate, the last three of same width. Prothorax subcordate, widest near apex; with a semicircular impression near base and ending well up on the sides, a moderate-sized impression on either side of disc just in front of sub-basal impression. Scutellum minute. Elytra sub-quadrate, angles lightly rounded; suture lightly elevated; on either side of scutellar region is a medium-sized obtuse tubercle, around which the elytra is depressed. Abdomen almost parallel-sided to near apex, then abruptly narrowed; on ventral surface, the seventh is notched almost to base.

Female.—Only differs from the male in having the seventh segment entire below. Length 2.75 mm.

Hab. Victoria: Warburton (C. Oke), in grass on marshy ground.

A dingy-coloured species of unattractive appearance, but of particular interest on account of the peculiar tarsi.

Types in coll. Oke.

WARBURTONIA RUFIPES, n. sp.

Black, base of first three antennal segments, apex of mandibles and the legs bright reddish-yellow, tibiae lightly infuscated in middle. Well clothed with moderately long, whitish pubescence. The whole insect finely shagreened. Head, prothorax and elytra with large, close punctures, smaller and sparser on abdomen. Fairly nitid.

Male.—Head, to insertion of antennae, strongly transverse, much narrowed on clypeus; antennal tubercles prominent; impressions much as in *W. inflatipes*. Eyes very prominent. Antennae thinner, but otherwise much as in *W. inflatipes*. Prothorax subcordate, widest near apex, strongly rounded on sides; with an elongate impression on either side of middle, the space between appearing as a raised ridge, but vanishing at apical fourth. Elytra a little longer than wide, humeral angles lightly rounded; moderately impressed on either side of suture at base and just traceable to apical fourth, another, very faint, impression on basal third, leaving an elevated ridge between, declivious on its inner edge, scarcely so on outer. Abdomen subparallel-sided; with a deep notch on ventral surface of apical segment. Legs as in *W. inflatipes*. Length, 2.30 mm.

Hab. Victoria: Warburton (C. Oke).

A smaller and narrower species than the foregoing one. It is darker, with brighter-coloured legs and more conspicuous clothing. In one specimen most of the elytra is reddish-brown with the base infuscated, in another, it is mostly dark. The elytra are not so wide in proportion to the prothorax, and the impressions on prothorax and elytra are very different.

Type in coll. Oke.

OXYTELUS DIXONI, n. sp.

Black; mandibles, antennal tubercles and prothorax bright red; palpi, base of first three segments of antennae, coxae, apex of femora and tarsi reddish-yellow. Glabrous. Fairly nitid.

Male.—Head large, wider than prothorax, hind angles rounded off; margin of clypeus strongly elevated, quadrilobed; antennal tubercles strongly elevated; the centre of vertex raised, with a shallow groove on either side and flattened between antennae; with sparse, large punctures and the base and sides with short, coarse striae. Eyes large, globose, with fine facets. Mandibles large, projecting forward, with a large tooth about apical third, in front of which they are obliquely grooved. Antennae not reaching base of prothorax; first segment longer than next two combined, third longer than second, but thinner, fourth a little longer than wide, fifth to tenth transverse, eleventh conical. Prothorax transverse, shorter than elytra, hind angles strongly rounded, front lightly produced, front margin strongly bisinuate, produced in centre; around the sides and down centre widely, but not sharply, grooved; with large, irregularly distributed, punctures. Elytra transverse, shoulders lightly raised and produced, hind angles rounded off, widely emarginate at apex; suture raised; with a wide, but not sharply defined, impressed groove in centre of each elytron; with large, more or less confluent, punctures. Abdomen elongate with the second and third segments transversely impressed; strongly margined; the margin and base of each segment with rather close punctures, but disappearing on apex. Legs robust, front tibiae thickened from base to apical fourth, where there are some strong spines, then abruptly cut away to apex.

Female.—Differs in having a much smaller head, with smaller mandibles and the prothorax a little smaller. Length, 6 mm.

Hab. Victoria: Emerald (C. Oke and J. E. Dixon).

The largest and most robust species of the genus yet described from Australia. The head and mandibles are larger than in *O. micropterus* Lea.

Types in coll. Oke. Paratypes in coll. Dixon.

BLEDIUS MILITARIS, n. sp.

(Text-fig. 68.)

Black, apex of mandibles and elytra (the suture and the declivous base infuscated) reddish, base of antennae and legs testaceous. Well clothed with short, ashen pubescence. Fairly nitid except front of head, which is opaque.

Head small and with the eyes much narrower than the prothorax; antennal ridges scarcely prominent; clypeal suture strongly procurved; deeply, but minutely, coriaceous and with

a few large punctures. Mandibles strongly curved, with a fairly strong, oblique tooth towards apex and a small one near middle. Eyes large, globose, with fairly large facets. Antennae with first segment long, curved, second to fourth elongate, decreasing, fifth subquadrate, sixth to tenth transverse, eleventh briefly ovate. Prothorax about as long as wide, strongly rounded on sides, base straight, apex recurved; median channel distinct; sculpture as on head, but punctures closer. Elytra a little longer than wide, much wider than prothorax, convex, sides parallel, apex deeply emarginate; with large, round, dense punctures. Abdomen slightly widening to fifth segment, then abruptly narrowed to apex; the base of segments one to five transversely impressed; with fine criss-cross lines and moderate punctures, fairly dense on basal segments, but almost disappearing towards apex. Length, 4 mm.

Hab. Ringwood, Belgrave (C. Oke).

In Blackburn's table (1) of the genus this species would fall beside *B. cowleyi* Bl., but the colour is different, as also are the punctures and the shape of the prothorax.

The mandibles are rather close to the species the late Mr. A. M. Lea identified as *B. mandibularis* Macl., but the colour is very different, and the new species is more robust, with a wider and more strongly rounded prothorax.

Types in coll. Oke.

BLEDIUS AUSTRALIS, n. sp.

(Text-figs. 66, 67.)

Piceous, antennae and elytra ferruginous, palpi and legs watery-flavous. Rather densely clothed with moderately long, ashen pubescence. Head opaque, elsewhere subnitid.

Head, with eyes, wider than prothorax, impressed between the antennal tubercles, which are well raised; clypeal suture procurved; with minute coriaceous sculpture. Mandibles strongly curved, with a strong tooth near middle, which is parallel to the mandible and indistinct from above. Eyes large, strongly arched, with large facets. Antennae fairly long, first segment long, curved, second to fourth elongate, fifth and sixth subquadrate, seventh to tenth transverse, eleventh briefly ovate. Prothorax transverse, scarcely as long as head, base much narrower than apex lightly rounded on sides; median channel very distinct; rather finely coriaceous and with fairly large punctures. Elytra much wider and longer than prothorax, slightly widened to apex, which is deeply emarginate; with close punctures, a little smaller than on prothorax. Abdomen as in preceding species. Length, 4-4.50 mm.

Hab. Victoria: Caulfield, Emerald, Warburton. (C. Oke.)

This species would also fall beside *B. cowleyi* Bl. in Blackburn's table(1), except that the base of the antennae is not pale. The peculiar mandibles will easily separate it from its nearer allies.

Types in coll. Oke.

Subfamily EUAESTHETHINAE.

EDAPHUS MJOBERGI Bernh.

(Arkiv for Zoologi, Band 10, No. 5, p. 3.)

There appears to be some mistake in either the description or the fig. of this species. Bernhauer in his description says: "De Korper ist unbehaart" and "die Augen kaum vorragend, flach, nicht gewolbt." But the figure shows quite a hairy species, and though the eyes are difficult to make out, they certainly appear fairly prominent and arched. It seems likely that the figure was taken from a specimen of *E. termitophilus*.

EDAPHELLUS MELCULUS, n. sp.

(Text-figs. 28, 53.)

Bright reddish-testaceous, appendages a little paler. Clothed with moderately long, pale pubescence. Nitid.

Male.—Head (excepting eyes) longer than wide; front of disc semi-circular, strongly raised; with a large impression on the base, bisinuate in front between the eyes, where there are two round, black foveae; laevigate. Eyes large, prominent, black. Labrum produced to a blunt point in centre. Mandibles long, acute, with an obtuse swelling near base. Maxillary palpi with the apical segment large almost securiform. Antennae scarcely reaching middle of prothorax, first and second segments long and stout, intermediate short and thin, tenth and eleventh suddenly much wider, eleventh as long as preceding three combined. Prothorax cordate, rounded on sides, rather strongly constricted near base where there is a deep transverse groove, within which are seven large round foveae, the groove closed on either side by a short, sharp, black carina; laevigate. Elytra slightly longer than wide, lightly rounded on sides; shoulder slightly prominent; laevigate. Abdomen lightly margined, evenly narrowing to apex; with a few small punctures; under surface of apical segment with a deep V-shaped notch. Legs moderate length, thin, simple.

Female.—Differs only in having the apical segment of abdomen straight across apex. Length, 1.20–1.40 mm.

Hab. Victoria: Belgrave, Gembrook, Warburton, Preston, Macedon. (C. Oke.)

This species seems to agree very well with the characters of the genus, and is rather close to the genotype according to the

figure given, but differs in the impressions of the head, the thorax not so wide in front, elytra not so wide at base in proportion to width of prothorax and in the puncturation.

EDAPHELLUS MELCULUS var. *CAMPONOTI*, n. var. or n. sp.?

On several occasions I have found specimens in the nests of the common "sugar ant," which may be a distinct species, but I prefer, for the present, to regard them as only a variety. They are a little smaller, thinner, and paler in colour, but otherwise they are much as the typical specimens. One day at Fern Tree Gully I opened a nest of the *Camponotus* that must have had at least 50 of the staphylinids in it.

Hab. Victoria: Fern Tree Gully, Evelyn, Lilydale. (C. Oke.)

Types in coll. Oke.

Geothethus, n. gen.

Body elongate, cylindrical, minute, apterous. Head with interocular foveae. Antennae inserted near base of mandible, of eleven segments, the first two large and the last five increasing, strongly clubbed. Eyes small, scarcely prominent, sublateral. Labrum transverse, finely denticulate. Mandibles long and thin, acute and with an acute tooth near middle. Maxillae with the lacinia curved, ciliate at apex; galea longer than lacinia, ciliate at apex; the palpi of four segments, the first small, the second thin at base, moderately dilated to apex, third large, obovate with a thin base, fourth small, subulate. Labium narrow, transverse. Labium with the submentum narrow, transverse; the mentum transverse, rounded on sides, with the internal lobe produced to an acute point; paraglossae free, spinose; palpi of three segments, first small, second large, obovate, third thin, subulate. Prothorax longer than wide, with the sides finely margined. Elytra very small, with a subsutural stria. Abdomen finely margined, lightly widening to sixth segment. Legs rather short; coxae as in figs., femora stout, tibiae dilated near apex, tarsi 4, 4, 4.

This genus is proposed for a very small, thin species, found living in decaying vegetable mould.

Genotype, *G. attenuatus*, n. sp.

GEOSTHETHUS ATTENUATUS, n. sp.

(Text-figs. 33-40, 56.)

Testaceous, mandibles, palpi and legs a little paler than body. Well clothed with short, pale pubescence, becoming rather long on last two segments of abdomen. Very distinctly, though finely shagreened, and with very fine punctures, much closer on head and prothorax than elsewhere. Subnitid.

Head subquadrate, lightly rounded on sides, hind angles lightly rounded; antennal tubercles fairly prominent, near each is a small round fovea. Eyes small, scarcely prominent. Antennae short, just passing base of head; first two segments large, second a little smaller than first, third to sixth small, equal, moniliform, seventh to tenth increasing, seventh quadrate, eighth to tenth transverse, eleventh conical, as long as two preceding combined. Mandibles thin, with an acute tooth on inner edge and a small one on upper surface. Prothorax slightly longer than wide, widest near apex, lightly narrowed to base, a faint transverse impression near base. Elytra very short, hind angles lightly rounded off. Abdomen almost parallel-sided to sixth segment, seventh narrower; with a fine margin. Legs short, the tibiae dilated and rounded near apex. Length, 1.37 mm. Width of prothorax, 0.16 mm.

Hab. Victoria: Belgrave, Warburton. (C. Oke.)

A very thin species of a almost uniform colour, though the reflection of light, due to the sculpture, makes it appear lighter or darker in parts. It is certainly the thinnest Staphylinid that I have seen.

Type in coll. Oke.

Austroesthetus, n. gen.

Characters as in *Geosthetus*, to which it is closely allied, differing only in having the abdomen not margined and the intermediate coxae a little further apart, with the mesosternum carinate between.

The head is larger and more rounded. The mouthparts appear to be identical, though I have not dissected out the labium, but the mentum and palpi are identical. It seems strange that two genera so obviously allied, should differ in this important character of the abdomen.

Genotype, *A. passerculus*, n. sp.

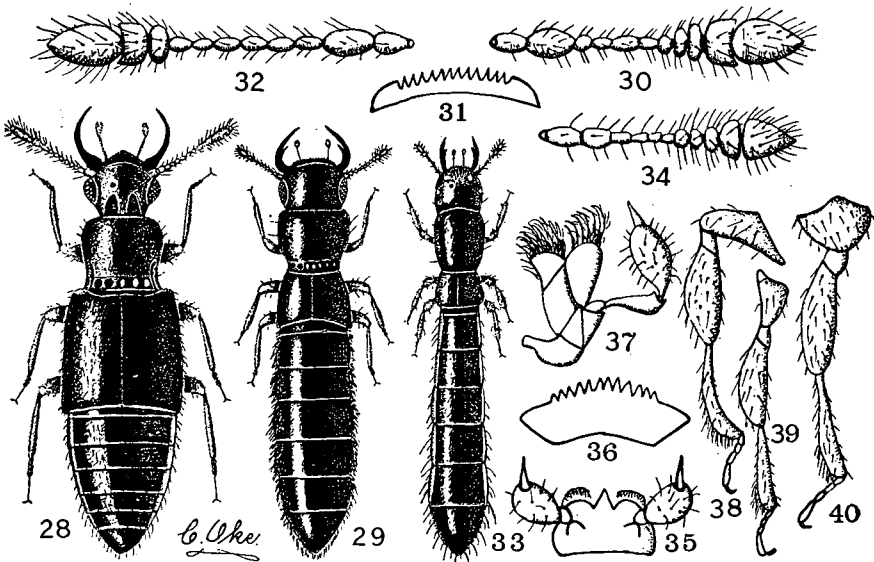
AUSTROESTHETHUS PASSERCULUS, n. sp.

(Text-figs. 29-31, 54.)

Reddish castaneous, abdomen a little lighter than rest; mandibles, palpi, antennae (club infuscated) and legs testaceous. Rather sparsely clothed with short, pale pubescence, becoming longer and more conspicuous on abdomen; in addition, the prothorax with sparse, and sides and apex of abdomen with numerous, long black setae. Subopaque.

Male.—Head almost round, convex; strongly shagreened and with fairly numerous, moderate punctures. Labrum with fine, acute denticulations. Mandibles curved, very acute at apex; with an acute tooth near middle and an obtuse angulation near base. Eyes large, coarsely faceted, a little prominent. Antennae just passing base of head; first two segments stout, third to

seventh thin, elongate, eighth lightly transverse, ninth strongly transverse, tenth much larger, transverse, eleventh ovate, nearly length of three preceding combined. Prothorax same width as head and elytra, widest about apical third, lightly narrowed to apex, a little more to base; with a transverse groove at base in which are eight foveae and a short, black carina on sides; faintly shagreened, without punctures. Elytra about same length as head, shoulders rounded off, arcuate at apex; sub-sutural striae fairly deep; lightly shagreened. Abdomen with a few large punctures and rather strongly shagreened; under



(TEXT-FIGS. 28-40.)

28. *Edaphellus melculus*, n. sp. 29. *Austroesthetus passerculus*, n. sp.
30. *A. passerculus*, n. sp. Antenna. 31. *A. passerculus*, n. sp. Labrum.
32. *A. gippsensis*, n. sp. Antenna.

33-40.—*Geosthetus attenuatus*, n. sp.: 33. Imago. 34. Antenna.
35. Labium. 36. Labrum. 37. Maxilla. 38. Anterior leg. 39. Intermediate leg. 40. Posterior leg.

surface with more numerous large punctures, the subapical segment with a deep U-shaped excision and the apical segment split to base.

Female.—Differs from the male in being a little wider and in the ventral segments of abdomen straight across their apices. Length, 2.3 mm.

Hab. Victoria: Fern Tree Gully, Belgrave, Warburton: Mt. Donna Buang at 4,000 feet; New South Wales: Mt. Kosciusko at 6,500 feet. (C. Oke.)

Types in coll. Oke.

AUSTROESTHETHUS GIPSENSIS, n. sp.

(Text-fig. 55.)

Very dark reddish-castaneous, in places almost piceous, parts of sternum lighter; mandibles and legs (knees infuscated) testaceous. Clothed with very sparse, short, pale pubescence, except on abdomen, where it is more conspicuous and where there are also numerous longer, black setae, becoming denser towards apex. Subnitid, sternum and parts of abdomen more nitid.

Male.—Head transverse, strongly convex; finely but deeply shagreened, and with a few small punctures; antennal tubercle hardly noticeable, frons suddenly declivious and the clypeal suture with a sharp, strongly elevated, carina; the labrum with fine, acute denticulations. Mandibles thin, acute, with an acute tooth near middle. Eyes large, occupying nearly whole side of head, slightly prominent, coarsely faceted. Antennae longer than in *A. passerculus*; second segment longer than first, third to seventh elongate, eighth quadrate, ninth transverse, wider than eighth, tenth transverse, much wider than ninth, eleventh ovate, same width as tenth, as long as three preceding combined. Prothorax cordate, widest near middle, rounded on sides; with several elongate, fovea-like impressions across base, forming a transverse impression; sculpture as on head. Scutellum small. Elytra as wide as the length at the sides, shorter on the suture, which is lightly elevated; shagreening coarser than on head. Abdomen almost parallel-sided to sixth segment; three basal segments very finely granulate and subopaque, the others nitid, all with large, sparse punctures; under surface of sixth segment lightly flattened and apex feebly emarginate, seventh with a V-shaped notch from apex to near base. Legs of moderate length, simple.

Female.—Differs in not having the impression or notches on under surface of abdomen. Length, 2–2.20 mm.

Hab. Victoria: Pakenham in moss, Traralgon in flood debris (C. Oke), and in moss gathered by Miss J. Galbraith.

This species differs from *A. passerculus* by its larger eyes, the carina on the clypeal suture, and by the longer and differently shaped antennae.

Types in coll. Oke.

AUSTROESTHETHUS PUNCTATUS, n. sp.

Piceous; antennae, palpi and legs obscure brown; mandibles bright yellowish-brown. Sparsely clothed with short, adpressed pubescence, the sides and apex of abdomen with some long dark setae.

Male.—Head transverse, convex, frons declivious; the labrum with a few denticulations in centre; strongly shagreened with

criss-cross lines. Eyes large, occupying whole side of head, strongly arched, with rather coarse facets. Mandibles, palpi, and antennae much as in *A. passerculus*. Prothorax cordate, rounded on sides, constricted near base, where there is a large foveate impression on either side, the transverse groove between rather faint; with conspicuous criss-cross shagreening lines and numerous large punctures. Elytra transverse, much longer on sides than suture; with sculpture as on pronotum. Abdomen lightly narrowing to fifth segment, sixth much narrower; the three basal segments with sculpture as on elytra, the fourth and fifth strongly punctate on base, but their apices and sixth segment laevigate; the sixth segment with a strong V-shaped notch on undersurface. Undersurface of head and sternum with distinct criss-cross lines.

Female only differs in having apex of sixth abdominal segment entire. Length, 2.30 mm.

Hab. Victoria: Grampians (C. Oke).

The eyes in this species are even larger and more coarsely faceted than in *A. gippsensis*, and the strongly punctate pronotum and elytra will separate it from both of the above species. The sculpture of the head is deep and almost round, and might equally be called fine reticulate punctures.

Types in coll. Oke.

Subfamily PAEDERINAE.

OEDICHIRUS PICTIPES, n. sp.

Head, abdomen, subapical half of femora and subbasal half of tibiae black; prothorax and elytra ruby-red; labrum and mandibles testaceous; base of femora, "knees" and apex of tibiae clear flavous; tarsi, antennae (part) and palpi of a dingy flavous; each segment of antennae partly infuscated. Moderately clothed with rather long, pale setae or pubescence. Subnitid.

Male.—Head small, almost round in outline; with a small, elevated space (scarcely a tubercle) over base of antennae, this continued towards front as a narrow ridge, but not quite meeting; with large, irregularly spaced, punctures. Labrum with a small notch in centre. Mandibles with a sharp tooth near middle. Eyes rather prominent. Antennae fairly long, thin, segments elongate, decreasing in size towards apex. Prothorax longer than wide, widest near apex, much narrowed to base; with irregular, subseriate rows of large punctures. Elytra much shorter than prothorax, produced at hind angles; with large, close punctures. Abdomen with punctures of about same size as on elytra, but closer together; underside of sixth segment with apex deeply emarginate. Legs long and thin; anterior tarsi strongly inflated.

Female.—Differs in having the margin of the sixth segment straight across ventral surface. Length, 7.50 mm.

Hab. New South Wales: Mt. Wilson (C. Oke).

A small species rather like *Oe. cribratus* Lea and *Oe. tricolor* Lea; distinguished from the former by its red elytra, the head and thorax more closely and deeply punctured, and the anal styles more strongly developed; from the latter, by its smaller size, black head, which is more closely punctured, and the prothorax more narrowed to base. From the description of *Oe. cribriventer* Lea, it differs in having the elytra red and the legs bicoloured and the puncturation is different. On the basal half of the prothorax there is a median longitudinal space free of punctures, it narrows and disappears anteriorly, on either side of which there is a semi-double row of punctures, then two rows of single punctures, with two narrow unpunctate ridges.

Types in coll. Oke.

SCOPAEUS TESTACEIPES Lea.

(*Trans. Roy. Soc. S.A.*, xlvii., p. 27, 1923.)

There were six specimens in front of me, from Warburton and Fern Tree Gully, five of which I have taken with ants.

Male.—The male, hitherto unknown, has the fifth ventral segment with a deep impression along its entire length; the sixth has a sharp V-shaped notch on its apex; the seventh is notched at apex and split to base. The anterior tibiae are notched towards base and have some furry pubescence there, but I cannot detect a comb.

Allotype Male. In coll. Oke.

SCOPAEUS GRACILIS, n. sp.

Black, or nearly so; antennae, palpi and legs, except hind femora, of a pale, dingy brown. Rather densely clothed with short, ashen pubescence, more noticeable on elytra than elsewhere; a few longer setae near apex of abdomen. Most of surface shagreened and with dense, minute punctures.

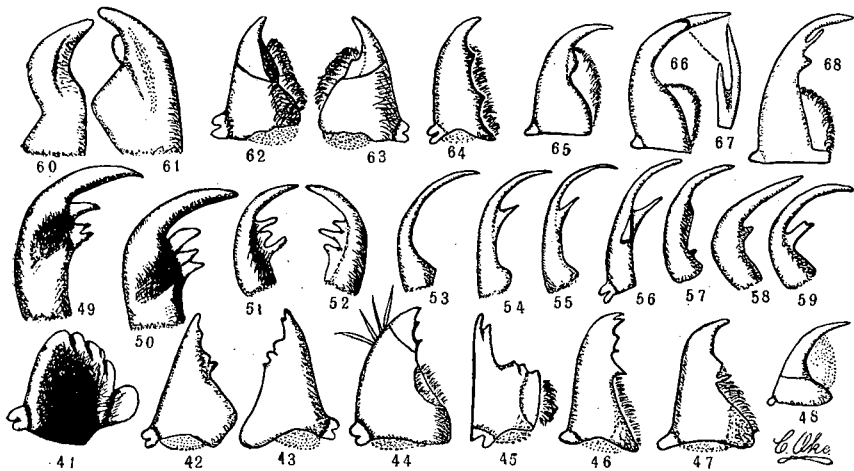
Male.—Head narrow, longer than wide, narrowed from base to apex, hind angles lightly rounded off. Antennae with first to seventh segments longer than wide, eighth to tenth quadrate, eleventh ovate-acuminate. Prothorax a little longer than wide, strongly narrowed from apical third to apex; medial line lightly elevated on basal fourth. Elytra a little longer than wide, humeral angles lightly rounded off; lightly depressed near scutellum. Under surface of abdomen with margin of sixth segment lightly emarginate, seventh with a V-shaped excision. Legs thin; front tibiae strongly notched near base and with a small comb.

Female.—Similar to the male, but margins of abdominal segments entire. Length, 2.25–2.50 mm.

Hab. Victoria: Pakenham (C. Oke) in moss.

A small, thin species evidently near *S. moerens* Lea, from Western Australia, but head and antennae different. It is rather like *S. digitalis* Fvl. in appearance, but smaller and head narrowed to eyes, not widened. About the size of *S. latebricola* Bl., which is paler, head not so narrowed in front and its hind angles more rounded, and is a wider species.

Types in coll. Oke.



(TEXT-FIGS. 41-68.)

Mandibles of Staphylinidae: 41. *Holotrochus australicus*, n. sp. 42. *Osoarius victoriae*, n. sp., left. 43. Right. 44. *Thoracophorus kingi* Lea. 45. *Œphronistus australicus* Bl. 46. *Warburtonia inflatipes*, n. sp. 47. *Toxoderus banksi* Fvl. 48. *Coptotermoecia alutacia*, n. sp. 49. *Macrodicax latebricola*, n. sp. 50. *Scimbalium nitidum*, n. sp. 51. *Medon reticulatus*, n. sp., left. 52. Ditto, right. 53. *Edaphellus melculus*, n. sp. 54. *Austroesthetus passerculus*, n. sp. 55. *A. gippsensis*, n. sp. 56. *Geosthetus attenuatus*, n. sp. 57. *Hyperomma labrale* Lea. 58. *H. pallipes* Oke. 59. *Procirrus ferrugineus* Lea. 60. *Microtachyporus imbricatus*, n. sp., left. 61. Ditto, right. 62. *Amblyoponiphilus satelles*, n. sp., left. 63. Ditto, right. 64. *Dabra myrmecophila* Oll. 65. *Dabrasoma subopacum*, n. sp. 66. *Bledius victoriae*, n. sp. 67. Ditto, tip from side. 68. *Bledius militaris*, n. sp.

MEDON RETICULATUS, n. sp.

(Text-figs. 51, 52, 77.)

Dingy brown, mandibles and legs paler. Clothed with ashen pubescence becoming rather dense on elytra and abdomen, on the sides and apex of the latter it is fairly long.

Female.—Head rather flat, about as wide at the base as long, narrowed in front, hind angles lightly rounded off; in front with round reticulate punctures, becoming more elongate and irregular in shape on centre and sides. Labrum produced forward in the central third of its margin. Mandibles strong, acutely pointed and with three strong teeth on each. Antennae rather stout, not reaching middle of prothorax; first segment longer than next two combined, third thinner and shorter than second, same width but longer than fourth, fourth to tenth decreasing in length but becoming wider, ninth and tenth transverse, eleventh ovate acuminate. Prothorax about as long as wide, widest near apical third; front angles lightly, hind angles strongly, rounded off; with punctures much as on head, round on apical part, elsewhere very irregular in shape. Elytra longer than wide, a little longer than prothorax, sides almost parallel; with close, coarse, round punctures. Abdomen subparallel-sided to sixth segment; with moderate sized, but not sharply defined punctures. Anterior femora edentate and their tibiae with a small notch at basal third from which two or three dark, spine-like setae protrude. Length, 3.50 mm.

Hab. Victoria: Sunshine, Bendigo. (C. Oke.)

With outlines much as in *M. debilicornis* Woll., but much larger, hind angles of head more rounded off, mandibles with three, instead of two, teeth; labrum and the sculpture very different. The sculpture might be described as being strongly coriaceous, as the round, reticulate punctures seem to merge into the irregular mesh.

Thinking this species might be a var. of *M. uniformis* Lea, I sent two specimens to the Adelaide Museum in 1927, but they were returned as not that species, and ticketed "Not in Adelaide colls."

Type in coll. Oke.

HYPEROMMA GLOBULIFERUM Lea.

(Text-figs. 69-72.)

As this species has not been figured previously I have given a figure, with its larva, which has not been described, also one of the mouthparts as they are typical of this interesting genus.

Blackish-brown with the soft parts between the segments a pale dingy flavous; head (disc excepted) dull reddish; antennae, palpi and legs reddish-flavous. Head clothed with fine, short, reddish pubescence, sparse on disc, but rather close on the sides; pronotum with sparse, stiff setae, a few clubbed; meso- and metanotum and abdomen (both surfaces) with rather long, stout, clubbed setae. Subopaque.

Head large, a little longer than wide, hind angles widely rounded off; surface finely granulate; armed in front with seven

strong teeth: a large trifold one in centre, followed by a large, acute tooth and then by two smaller, subequal ones on either side; the epicranial suture is distinct as a finely impressed line, with its frontal arms running out to just behind the base of the mandibles. On lower surface, on either side of buccal opening, there is a large, acute tooth; with two large, round impressions near centre of disc, and two impressed, oblique lines from base to near centre of disc. Eyes small, on edge of disc, scarcely visible from below. Antennae of three segments, with a fairly prominent basal tubercle; first and second segments subequal, third short. Maxillae prominent with four segmented palpi: the first very short, second short, third longest, fourth nearly as long as third, but thinner. Labium prominent with three segmented palpi. Thorax and abdomen with a deeply impressed longitudinal sulcus. Prothorax narrower than mesothorax, with two impressed, transverse lines. Meso- and metathorax each with two large impressions on posterior margins. Abdomen of nine segments, the surface uneven and with numerous impressions. Length of the larva described, 18 mm.

Several larvae have been found, generally under fairly deeply embedded logs, one of which I was fortunate to be able to keep alive until it turned into an imago. Unfortunately, no notes were kept about the pupa.

HYPEROMMA ATRUM Oke.

(Text-fig. 73.)

(*Proc. Linn. Soc. N.S.W.*, 1928, p. 3.)

The female of this species differs from the male in having the margin of the apical segment entire below and the subapical segment convex. Carrum, Victoria.

Allotype in coll. Oke.

HYPEROMMA PALLIPES Oke.

(Text-figs. 58, 75.)

(*l.c.*, p. 3.)

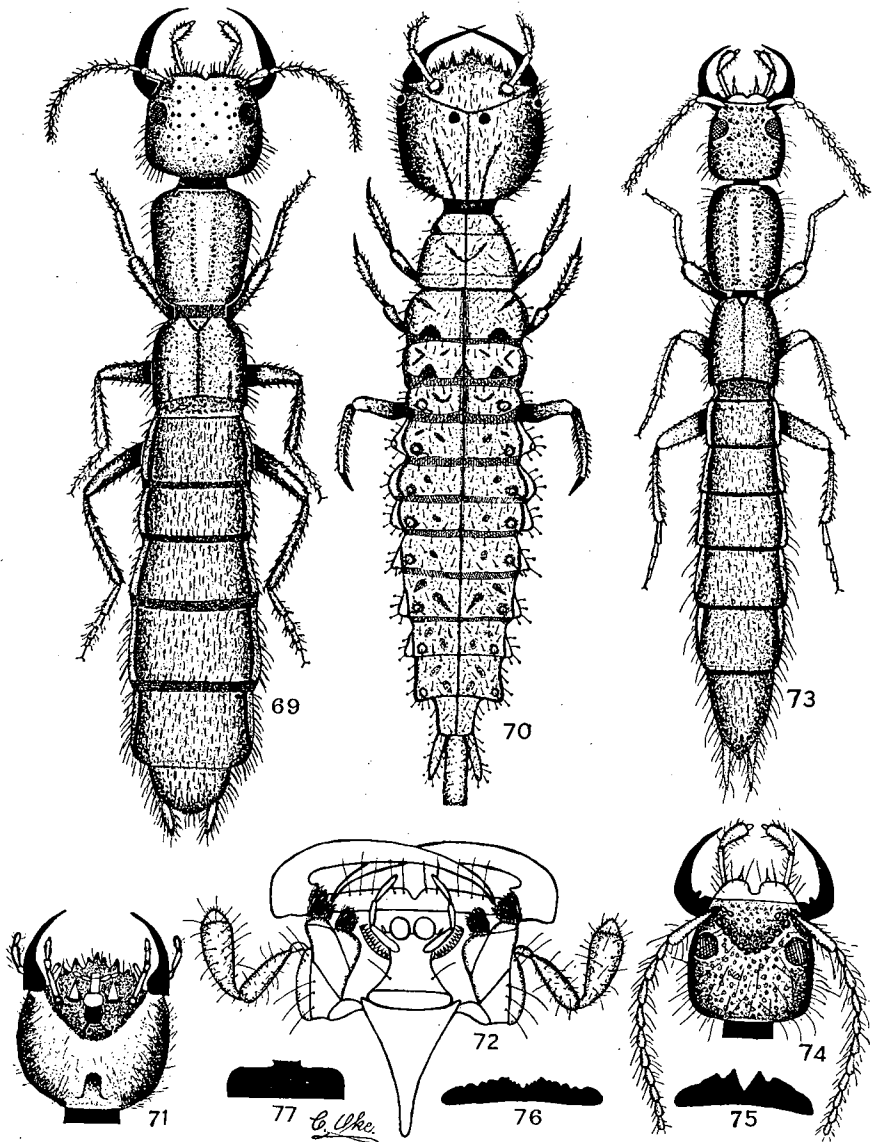
Figures of the mandible and labrum of this species are given for comparison with other species.

HYPEROMMA LABRALE Lea.

(Text-figs. 57, 76.)

(*Lea, Trans. Roy. Soc. S.A.*, 1923, p. 42.)

Figures of the mandible and labrum of the Warburton specimen of this species are given for comparison with other species.



(TEXT-FIGS. 69-77.)

69-72.—*Hyperomma globuliferum* Lea. 69. Imago. 70. Larva. 71. Ventral view of head of larva. 72. Complete mouthparts.

73. *Hyperomma atrum* Oke. 74. *Hyperomma polypunctum*, n. sp. 75. *Hyperomma pallipes* Oke, labrum. 76. *Hyperomma labrale* Lea, labrum. 77. *Medon reticulatus*, n. sp.

HYPEROMMA POLYPUNCTUM, n. sp.

(Text-fig. 74.)

Blackish, elytra diluted with red; labrum, mandibles, palpi and apices of abdominal segments reddish-castaneous; legs, three last segments of antennae and the base of the others of a dingy flavous. Nitid. Head, sides of prothorax and elytra, last two segments of abdomen and anal styles with numerous, long, black, setae; antennae and abdomen with short, dark pubescence.

Head subquadrate, hind angles rounded off; on base of each antenna are two large semi-confluent punctures and these with two similar-sized punctures in centre form a lightly procurved row of six punctures; from inner base of antennae there is a deeply procurved row of punctures: four large ones on each side and two smaller ones in centre, between these punctures and labrum the head is depressed; in middle of vertex rather sparsely punctured, elsewhere with crowded punctures of varying size; undersurface with a few large, scattered punctures. Eyes large, invisible from below. Antennae with first segment long, second short, third distinctly longer than fourth, fourth to tenth decreasing in length, eleventh briefly ovate. Labrum with a U-shaped excision in middle. Mandibles rather thin, with an acute tooth, preceded by a notch, near base. Mentum with two moderate-sized globular appendages. Prothorax elongate, all angles rounded off; with a semi-double row of about 22 punctures on either side of the middle; near the sides, from apex to near middle, a row of six large punctures, outside this an uneven row of nine smaller punctures and three large ones near the middle of the extreme, deflexed margin; the whole surface with small, close, asperate punctures. Scutellum very small. Elytra about same length as head, shoulders rounded off; suture depressed; with large, rough punctures, intermixed are smaller, asperate punctures. Abdomen rather coarsely shagreened. Legs long; anterior tarsi narrow, but wider than the others. Length, 8.50 mm.

Hab. New South Wales: Dorrigo (C. Oke).

The sculpture of the head, pronotum and elytra of this species is very distinct, and will easily separate it from previously described ones. On the elytra some of the larger punctures are confluent. On each elytron there is a row of large, deep punctures, nearer side than suture, which appear to have a lightly raised carina on either side of them, but it is not apparent from the sides, and so is probably only due to the impressing of the punctures.

Type in coll. Oke.

MACRODICAX LATEBRICOLA, n. sp.

(Text-fig. 49.)

Pale castaneous, antennae (basal segments excepted) palpi and legs paler; pronotum, elytra, mandibles, and three basal

segments of antennae bright reddish-castaneous, head darker. Well clothed with dark setae, becoming longer and more noticeable on the sides, and most numerous near apex, of abdomen; abdomen and appendages also with dark pubescence. Nitid, with a slightly bluish gloss.

Head a little longer than wide, parallel-sided to neck, gently incurved in front, with the frons obliquely sloping; with numerous small, but sharp, punctures, and the following large ones: largest near base of antennae and a smaller one near it, two on either side on edge of frontal slope, six in an oblique row on edge of lateral slope and several irregularly placed ones on the sides; undersurface with strong crisscross lines and with a few large punctures. Eyes fairly large, lateral. Mandibles strong and powerful, bidentate. Antennae rather thin, reaching basal third of prothorax, with segments as in *M. potens* Lea. Prothorax longer than wide, wider than head or elytra, parallel-sided; with sparse, small punctures as on head and thirteen large punctures on either side of middle forming a semi-double row. Elytra transverse, with slightly irregular rows of large, longitudinally semi-confluent punctures and fine crisscross lines. Abdomen parallel-sided to sixth segment, seventh abruptly narrowed, both surfaces coriaceous and with numerous, large, shallow punctures; under surface of fifth segment with a longitudinal impression near apex, the sixth with a large, deep, V-shaped excision. Anterior tibiae with a conspicuous fringe of fine spines at apex and lightly notched at basal third. Anterior tarsi with four basal segments dilated. Length, 9.5 mm.

Hab. New South Wales: Dorrigo (C. Oke). In a deep gully in leaf mould.

In many respects very close to the description of the only described species, *M. potens* Lea, but much smaller, with a smaller and narrower head and the abdomen parallel-sided. Both mandibles are the same on my unique type, and are similar to the right mandible of *M. potens* Lea.

Type in coll. Oke.

SCIMBALIUM NITIDUM, n. sp.

(Text-fig. 50.)

Reddish-testaceous. Moderately clothed with fairly short pubescence, with an occasional longer seta on the sides. Nitid.

Head flat, a little longer than wide, rounded on sides; with moderate, fairly close, punctures. Eyes small. Mandibles strong, with a large, subacute tooth about middle and nearer base a wider, bifid tooth. Antennae reaching base of prothorax; first segment longer than next two combined, third slightly longer than second or fourth, fourth to tenth decreasing in length, eleventh about length of eighth, sharply pointed. Prothorax a little wider than head, slightly wider at apex than base; punctures

finer than on head. Elytra longer than wide, the suture lightly raised, subsutural stria very distinct, with fine, close punctures. Abdomen with punctures as on elytra. Legs fairly long, anterior tibiae notched near base, where there are a few black setae. Length, 7.25 mm.

Hab. Victoria: Lake Hattah (C. Oke).

A small, flat species nearest to *S. rufum* Fvl. of the described species, but *S. nitidum* is much flatter, with a wider and otherwise different head.

Type in coll. Oke.

Subfamily STAPHYLININAE.

Genus *Quedius*.

Mr. A. M. Lea (2) drew attention to the fact that some males belonging to this genus have peculiar combs on the tarsi of the intermediate legs, but passed over many species without comment. Below is a list of those species which I have been able to examine, separated into two sections. A, those with combs and the number of teeth, and B, combless species. There are still a few species to be examined, but they are not available to me at present.

A.—*belgravensis* Oke, a V-shaped comb of 25 teeth.

bellus Lea, a comb of 39 teeth, longest in middle.

cordatus Lea, 17 teeth, longest in middle.

diemenensis Bl., 19 teeth, longest near apex.

hackeri Lea, 30 teeth, of even length.

hybridus Er., 24 teeth, of even length.

inaequalipennis Lea, 15 teeth.

inconspicuous Bl., 28 teeth, longest in middle.

nitidissimus Lea, "with a blackish comb" (after Lea)

pectinatus Lea, 20 teeth, of almost even length.

piceolus Fvl., 15 teeth, of even length.

ruficollis Grav., 15 teeth.

sidneensis Fvl., 19 and 20 very large teeth.

sulcicollis Fvl., 25 teeth, longest in middle.

tepperi, 18 teeth, of equal length.

B.—*andersoni* Bl., a row of bristles.

apiciflavus Lea, bristly, not combed.

duplopunctatus Lea, bristly.

erythroderes Lea, a few bristles.

fulgidus Fab., bristly.

iridiventris Fvl., bristly and furry.

lateroflavus Lea, bristly, not combed.

luridipennis Macl., with fur and bristles.

macrops Lea, combless (after Lea).

melas Lea, bristly.

nelsonensis Bl., a few bristles.

pictipennis Bl., furry.

pignerator Lea, bristly, not combed.

thoracicus Fvl., bristly, not combed.

QUEDIUS NELSONENSIS Bl.

(Trans. Roy. Soc. S. Aust., 1903, p. 93.)

Blackburn in describing this species said that he felt sure there were no wings under the short elytra. Lea in commenting on the species said that it was one "which may be readily distinguished by its bicoloured elytra and apterous body." But the species has ample wings. I sent some specimens, with the wings fully extended, over to the late Mr. A. M. Lea shortly after his paper appeared, and he agreed that they belonged to Blackburn's species, and that they were both mistaken. The species is common in Victoria, and I have taken it on the wing.

QUEDIUS HACKERI Lea.

(Trans. Roy. Soc. S. Aust., 1925, p. 245.)

I have taken some specimens of this species at Emerald and Warburton, my identification confirmed by Mr. Lea. It is now recorded from Victoria for the first time.

QUEDIUS ERYTHODERES Lea.

(Trans. Roy. Soc. S. Aust., 1925, p. 247.)

This species is not uncommon on the basalt plains near Melbourne; it must be very near, if not identical with, *Q. rubricollis* Fvl.

QUEDIUS INCONSPICUUS Bl.

(Trans. Roy. Soc. S. Aust., 1888, p. 5.)

The species which Lea identified as this one is fairly common on the beaches around Melbourne. It is now recorded from Victoria for the first time.

QUEDIUS MARGINALIS, n. sp.

Black, elytra and abdomen with a slight greenish gloss; mandibles, base of each of the four basal segments of antennae, apex of femora, parts of tibiae and the tarsi reddish; the extreme margins of elytra and segments of abdomen reddish-yellow; the apex of abdomen coppery. Moderately clothed with dark pubescence, in addition with a few long, black setae on sides and becoming more numerous towards apex of abdomen. Nitid. The whole surface with very fine, wavy, transverse lines.

Head a little longer than wide, rounded on sides; two punctures near inner edge of eyes, one just behind the antenna, the other behind the base of eye, a row of four moderate punctures near base and a few on sides. Eyes small, flat, not as long as inter-antennary space. Antennae with first segment about as long as next two combined, third longer than second, seventh to tenth transverse, eleventh longer than tenth, obliquely narrowed on one

side. Prothorax transverse, all angles rounded off, with six punctures across apex and two a little further back on disc than usual. Elytra transverse, same length down suture as prothorax, widened to apex, which is widely and deeply emarginate; with fairly large, close punctures. Abdomen with punctures much as on elytra; anal styles longer than usual. Length, 6 mm.

Hab. Victoria, Belgrave (C. Oke).

Described from two specimens, both of which I believe to be females, as I cannot find any distinct masculine features. The markings are suggestive of *Q. hybridus* Er., but the yellow margin of elytra is much narrower and more sharply defined, the size is larger and the shape of the head is very different.

Types in coll. Oke.

QUEDIUS VAGANS, n. sp.

Pale brown; base of elytra, coxae and femora yellowish-brown; head and metasternum black or almost so; antennae beyond third segment piceous; pronotum infuscated near apex. Elytra, abdomen and appendages well clothed with yellowish pubescence, a few long black setae down sides, becoming numerous on apex of abdomen. Head and pronotum nitid, elytra less nitid, abdomen almost opaque. With fine, wavy, transverse lines, except on elytra.

Male.—Head transverse, convex, rounded on sides, lightly flattened between antennae, where there are two punctures; two punctures near eyes, one on either side of disc near base and a few on sides. Eyes rather small, not length of interantennary space, flat. Apical segment of palpi much longer and thinner than subapical. Prothorax subquadrate, with angles rounded off, with two punctures in usual place and two on apex. Elytra longer and wider than prothorax, widely emarginate at apex; the suture well raised; with small, asperate, close punctures. Abdomen with the apex of most of the segments finely serrate, punctures finer than on elytra; apex of the apical segment on ventral surface with a slight, rounded, notch in middle. Anterior tarsi thin, intermediate with a row of bristles on outer side of basal segment, but not combed.

Female.—Differs in having a smaller head and apex of abdomen evenly rounded. Length, 4-4.25 mm.

Hab. Victoria: Belgrave; New South Wales: Dorrigo. (C. Oke.)

A small species rather close to *Q. nothus* Lea, but very differently coloured, with a raised suture and without the extra punctures on pronotum.

Types in coll. Oke.

THYREOCEPHALUS CAERULEUS, n. sp.

Black, with a faint purple reflection, elytra dark blue, three basal segments of antennae and most of the mouthparts reddish, fourth to eleventh antennal segments dull ferruginous, apex of tibiae and tarsi reddish-piceous. Sparsely clothed with moderately long, black setae, with a few longer ones intermixed. Nitid.

Head a little longer than broad, a little wider than prothorax, with a short ridge running to base of antennae, between that and base of mandibles with a semi-double fovea, a larger one a little further back, two behind eye, a small group on hind angles and rather numerous ones on base near neck, and with fairly close, minute punctures. Antennae longer than head, first segment as long as next three combined, third one and a half times as long as second, fourth to tenth subequal, transverse, eleventh ovate. Prothorax about as long as elytra and same width at apex, but narrower at base, sides gently incurved, the disc with finer punctures than on head and with large, irregular punctures on either side of apex and on sides, there is also a large puncture on disc a short distance obliquely from anterior angles. Scutellum depressed, with a few large punctures. Elytra longer than wide, widened at apex, which is moderately emarginate, suture depressed, with minute punctures as on head and a semi-double row of large ones near suture, a single row down centre of disc and a row on the deflexed margin. Abdomen almost parallel-sided to near apex, second to fourth segments transversely impressed near base, the base of each segment with close, coarse punctures, but becoming sparse on apex, the whole undersurface strongly punctate. Metasternum raised down centre, with a few small punctures. Length, 15-17 mm.

Hab. Victoria: Hattah, Melton, Sunshine. (C. Oke.)

Nearest to *T. chalcopterus* Er. from which it differs in not having bright red legs, a flatter head, punctures not quite the same, and in being a little wider.

Types in coll. Oke.

Subfamily TACHYPORINAE.

CONOSOMA PICTUM, n. sp.

Testaceous; base of head, two transverse spots on base of prothorax, two arcuate faciae, first about basal third, the second near apex, the latter not reaching suture, a vitta on centre of third and nearly all the fourth abdominal segments and fifth to ninth antennal segments black; four basal and two apical segments of antennae and a transverse mark near base of elytra white, or nearly so. Rather densely clothed with yellowish pubescence, in addition the elytra and abdomen with numerous long, stiff, black setae. Nitid.

Head transverse, with very minute punctures. Antennae scarcely attaining base of prothorax, third segment longer and thinner than second, fifth longer than wide, sixth subquadrate, seventh to tenth transverse, eleventh ovate-acuminate. Prothorax transverse, evenly narrowed from base to apex, hind angles scarcely produced; with sparse, fine punctures and very fine, wavy, transverse lines. Elytra about one and a half times as long as prothorax, lightly narrowed to apex, which is strongly emarginate; with rather close, fine punctures and fine criss-cross lines. Abdomen strongly tapering to apex; basal segments closely punctured, towards apex almost impunctate; with fine criss-cross lines. Length, 2 mm. (vix).

Hab. Victoria: Warburton. (C. Oke.)

Close to the description of *C. personatum* Fvl., but the markings are not the same, and that species has only two basal segments of antennae white.

Types in coll. Oke.

CONOSOMA HATTAHENSE, n. sp.

Bright reddish castaneous; apical fifth of elytra and part of third and fourth segments of abdomen black or almost so; last seven segments of antennae and metasternum infuscated. Well clothed with short, yellowish pubescence, becoming longer on apex of abdomen, where there are a few long, black setae.

Head small, transverse. Eyes large, prominent. Antennae rather short and thick; first four segments elongate, fifth to tenth compressed, lightly transverse, eleventh one and a half times length of tenth. Prothorax transverse, much narrowed to apex, angles rounded off; with sparse, minute punctures. Elytra a little longer than prothorax; parallel-sided, rather lightly emarginate at apex; sutural striae faint; with fine, close punctures. Abdomen evenly tapering; penultimate segment quadrifid above; with punctures as on elytra. Mesosternum strongly carinate. Metasternum with conspicuous imbricate sculpture and punctures as on elytra. Tarsi elongate, the hind pair longer than their tibiae. Length, 2.50 mm.

Hab. Victoria: Hattah (J. E. Dixon, C. Oke), some of the specimens were obtained from the nests of *Camponotus nigriceps*.

A pretty little species, the generic position of which I feel a little doubtful, though I have not found any marked character that would separate it from *Conosoma*. The abdomen appears to be very finely margined on some specimens, but not on others.

Types in coll. Oke. Paratypes in coll. Dixon.

Microtachyporus, n. gen.

Size minute. Body ovate, strongly convex, winged. Head small, narrower than prothorax. Eyes large, strongly convex, with moderately fine facets. Antennae inserted close to the

eyes, of ten segments; two basal segments elongate, three apical forming a strong club. Labrum transverse, rounded, Mandibles uneven; the right small, simple, the left dentate. Maxillae with the outer margin of the lacinia corneus, membranous on the inner, finely spined near apex, below which is a moderate tooth, then fine cilia; galea thin, produced at apex, with two fine spines; the palpi of four segments, first very small, second long, gradually thickened to apex, third nearly as long as second, and much wider; fourth short, thin subulate. Labium with the basal margin of its submentum incurved, sinuate on sides, narrowed to apex; mentum narrow; the ligula elongate, convex on apex, the paraglossae long, conical; the palpi thin, elongate, of three segments. Prothorax transverse, same with at base as elytra to which it is closely applied, Scutellum triangular, normally covered. Elytra transverse, shorter on suture than sides. Abdomen evenly tapering to apex, lightly margined; second, third, fourth, and sixth segments with numerous spines, fifth with setae only; all segments setose ventrally. Hind wings without venation, but clouded near base and anterior margin, covered with very fine setae and fringed with longer setae on posterior margin. Mesosternum short, produced into a broad process between the coxae. Metasternum large, convex. Anterior coxae strongly transverse, touching; intermediate large; obliquely placed, widely separated; posterior conical, lightly separated. Femora moderately stout, straight. Tibiae thin, straight, spinose. Tarsi 4, 4, 4; anterior with first three subequal, fourth longer; intermediate with first nearly as long as rest combined; posterior with first longer than the rest combined.

The strongly spinose abdomen, ten segmented antennae and the four segmented tarsi are all characters that will separate this new genus from previously described Australian genera. In facies it is rather like a small *Leucocraspedum*, with which it has in common the habit of turning the head underneath.

Genotype, *M. imbricatus*, n. sp.

MICROTACHYPORUS IMBRICATUS, n. sp.

(Text-figs. 60, 61, 78-83.)

Yellowish-brown; head, pronotum and elytra dark-brown; base of abdomen on dorsal surface almost black; two apical segments of abdomen reddish-yellow; eight basal segments of antennae and most of legs clear yellow. Rather densely clothed with short, ashen pubescence; the abdomen, except the fifth segment, strongly spinose. Subnitid.

Head transverse, smooth on upper surface; genae and gula plate with fine criss-cross lines. Antennae rather short, not reaching base of pronotum; first and second segments stout, subequal in length, third to sixth thin, decreasing in length, then increasing in width to tenth, tenth as long as two preceding combined. Prothorax transverse, strongly bisinuate on base; with

fairly close, moderate punctures. Elytra transverse, much shorter down suture than on sides; suture well raised, a little dehiscent near apex; with strong, square, imbricate sculpture, a moderate puncture at base of each square. Abdomen with distinct punctures on both surfaces. Metasternum with distinct imbricate sculpture. Length, 0.75 mm. to apex of elytra; 1.10 to apex of abdomen.

Hab. Victoria: Fern Tree Gully, Belgrave, Warburton. (C. Oke.)

This little species will be easily recognized by its colouration and the strong sculpture of the elytra. Fairly deep lines run diagonally across the elytra from the opposite directions, thereby forming squares, placed obliquely to the length of elytra and at the base of each square is a puncture.

Type in coll. Oke.

MICROTACHYPORUS LINEARIS, n. sp.

Piceous; abdomen from apical half of fifth segment reddish; labrum and palpi dark brown; antennae (apical half of seventh to tenth segments infuscated) and legs yellowish-brown. Clothed with short, ashen pubescence, this very sparse on head and pronotum, moderately sparse on elytra, where they are in lines, more numerous on abdomen, especially on fifth segment, the other segments with numerous spine-like setae. Nitid.

Head laevigate on dorsal surface. Antennae with second segment longer than first, second to sixth thin, seventh a little stouter, eighth obconic, ninth transverse, tenth a little shorter than two preceding combined. Prothorax transverse, strongly rounded on sides; laevigate. Elytra transverse, a little shorter down suture than on sides, the suture lightly raised; with fine, wavy, transverse lines and a few moderate punctures in lines, each puncture with a fine seta. Abdomen with sparse, small punctures. Length, 0.72 mm. to apex of elytra; 1.05 mm. to apex of abdomen.

Hab. Victoria: Ringwood, Fern Tree Gully. (C. Oke.)

This species will be easily separated from *M. imbreccatus* by the fine, wavy lines which traverse the elytra, it is also a smaller and darker species.

Type in coll. Oke.

LEUCOCRASPEDUM FERRUGINEUM, n. sp.

Ferruginous, parts of abdomen infuscated, four basal segments of antennae, mouthparts, legs and sixth and seventh segments of abdomen pale testaceous. Moderately clothed with short, pale pubescence, adpressed on head, pronotum and elytra, a little longer and semi-erect on abdomen. Subopaque.

Male.—Head strongly transverse, convex; finely shagreened. Antennae with the two basal segments stout, third to eighth thin, elongate, three last forming a fairly strong club, ninth and tenth transverse, eleventh ovate, as long as two preceding together. Prothorax transverse, strongly convex, rounded in front and on sides, truncate on base; sculpture as on head. Elytra transverse, a little longer on sides than on suture; moderately shagreened and with a few small punctures. Abdomen with moderate margins, sculpture a little finer than on elytra; apical segment with a slight notch at apex and split to base.

Female.—Differs in having apex of abdomen entire. Length, 1.25 mm.

Hab. Victoria: Hattah. (C. Oke.)

In the table given by Blackburn it would fall beside *L. validum* Bl., from which it is separated by its different antennae, colour, &c.

Types in coll. Oke.

Subfamily ALEOCHARINAE.

CALODERA MYRMECIAE, n. sp.

Reddish-testaceous, fifth to tenth and base of eleventh antennal segments and part of sixth abdominal segment infuscated. Well clothed with fairly long, yellowish pubescence. Fairly nitid.

Head small, rounded, about half width of prothorax; with sparse, microscopic punctures. Eyes rather prominent, with fine facets. Antennae stout; second and third segments of same length, fourth subquadrate, fifth to tenth transverse, eleventh ovate-acuminate (from side wedge-shaped) as long as three preceding combined. Prothorax transverse, much narrowed to apex, all angles widely rounded off; punctures much closer than on head. Elytra transverse, lightly widened to apex, which is strongly trisinuate; with close, almost reticulate, large, umbilicate punctures. Abdomen much narrower than elytra, parallel-sided; the first four segments with a strong, transverse sulcate-impression and each segment with large, round punctures across its apex, the fifth and sixth covered with these punctures. Posterior tarsi with first segment scarcely longer than second. Length, 3.40–4.25 mm.

Hab. Victoria: Warburton (C. Oke) in nest of Red Bull-ant, *Myrmecia rubra* Forel.

With all the characters given for *Calodera* except the elongate basal segment of hind tarsi, but I find that several species have been described which lack this character.

In some respects near to the description of *C. punctiventris* Lea, but that is a smaller species with thin antennae and a smaller apical segment and a narrow prothorax.

On one occasion I saw numerous specimens in a large nest of the ant under a deeply imbedded log.

Types in coll. Oke.

DABRA MYRMECOPHILA Oll.

(Text-figs. 64, 95.)

(Proc. Linn. Soc. N.S.W., 1886, p. 453, tab. VII., fig. 2, a, b.)

As already pointed out by Lea, the figure given of this species is misleading in regard to the eyes, and I should like to add that the figure of the maxilla is worse. It shows the palpus growing out of a hole in the galea, which it may appear to do from certain directions, but actually it does not. I have given a figure of a maxilla and the mandible, dissected from a Victorian specimen. The labium is correctly figured.

DABRA SULCICOLLIS Oke.

(Text-fig. 94.)

(Proc. Linn. Soc. N.S.W., 1928, p. 1.)

In the description of this species I stated that the apical segment of the antennae was as long as the preceding four combined, but by careful measurement of two specimens it is the length of five and on another, five and a half segments. The species is easily distinguished by its strongly impressed pronotum and its stout antennae.

DABRA CONVEXICOLLIS Lea.

(Proc. Linn. Soc. N.S.W., 1906, p. 216.)

This species occurs in Victoria in the nests of the ant, *Iridomyrmex nitidus*, and apparently not with *Chalcoponera*, as it was described. It is now first recorded from Victoria, where I have taken it at Ringwood and Bendigo.

DABRASOMA SUBOPACUM, n. sp.

(Text-fig. 93.)

Dull reddish-brown, infuscated in parts, legs paler; apex of abdomen, two basal and the apical segment of antennae testaceous. Well clothed with short, pale, decumbent pubescence, becoming longer at apex of abdomen. Subopaque.

Head small, lightly produced in front; distinctly shagreened and with a few small punctures. Antennae rather short; first segment a little longer than second, third a little longer than second, fourth quadrate, fifth to tenth transverse, eleventh about the length of two preceding combined. Prothorax strongly transverse, convex, anterior margin truncate, hind margin bisinuate with the angles moderately produced; sculpture as on head. Elytra transverse, hind angles rather strongly produced; sculpture a little coarser than on head. Abdomen narrow with sculpture as on head. Length, 2.25–2.50 mm.

Hab. Victoria: Melbourne, Eltham, Killara (C. Oke) in nests of the ant, *Iridomyrmex glaber* Mayr.

A small species which seems to be intermediate between *Dabra* and *Dabrasoma*. The head is not angulate as in *Dabra*, and the labium is very different. *Dabrasoma* has not been characterized sufficiently to say definitely whether this species should be referred to it, but it may be placed there for the present, though the head is not so rounded as in the genotype *D. pubescence* Lea. Other differences from that species are the colour, clothing, the dull surface and the shape of the prothorax.

Types in coll. Oke.

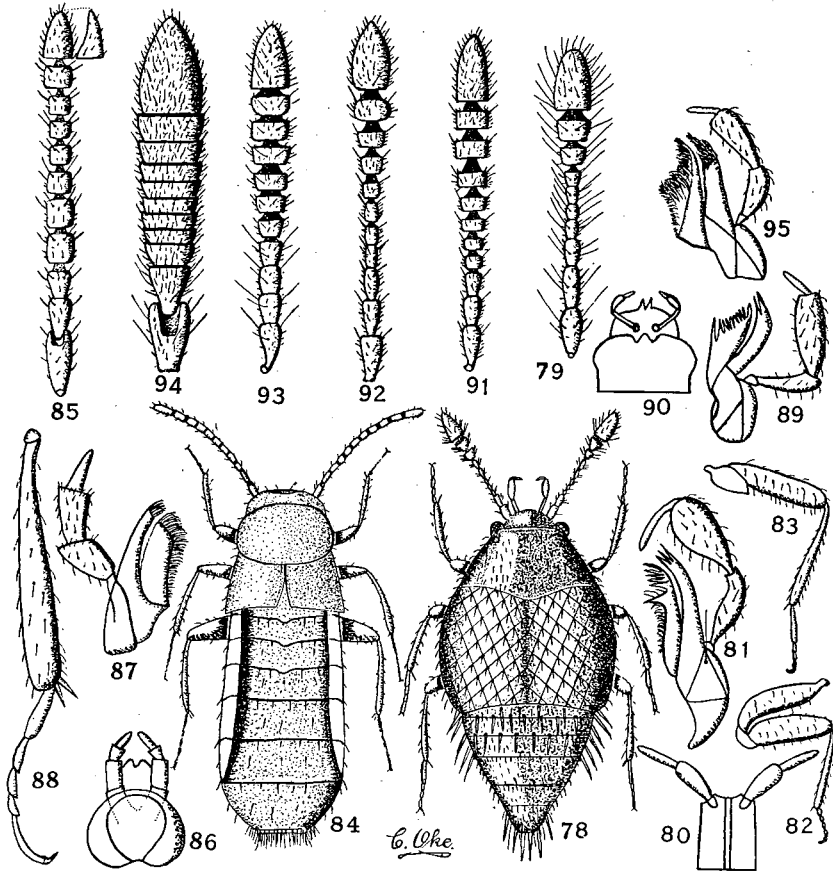
Amblyoponiphilus, n. gen.

Size minute. Body compact, convex, winged. In facies somewhat like *Dabra*. Head small, rounded on sides, sunk in prothorax. Eyes small, round, finely faceted; medio-lateral in position. Antennae of moderate length, three basal segments elongate, subapical segments transverse. Mandibles rather stout, lightly curved, fringed with short cilia towards base; right mandible with an obtuse tooth, left simple. Labium with the submentum transverse, notched on either side of middle of apex; mentum transverse, rounded on sides, with ligula short, bifid; palpi rather short, of three segments, lightly separated at insertion, the basal segment longest, second stouter, third very thin, shorter than second. Maxillae with the lacinia membranous on inner edge and spinose almost from apex to base; galea a little longer than inner, a moderate tooth at apex and spinulose for about half its length; the palpi fairly long, the first segment very short, second increasing in width from base to apex, third longest and stoutest, fourth nearly as long as second, thin, subulate. Prothorax transverse, rounded on sides, straight on apex, sinuate on base. Elytra transverse, produced at posterior angles. Hind wings short. Abdomen strongly margined, evenly tapering to apex. Tarsi 4, 5, 5; anterior with three basal segments short, subequal, fourth longer than two preceding combined; intermediate with four basal segments rather short, fifth the length of two preceding combined; posterior tarsi longest, with its basal segment longer than next two combined, next three equal, fifth about one and a half times as long as fourth. Intermediate coxae well separated by a cuneiform intercoxal plate.

This genus is proposed for two small species both found living in the nests of *Amblyopone australis*, where they appear to be on intimate terms with their hosts. Both species have the surface finely shagreened, or covered with fine, crisscross, subreticulate lines and with fine punctures.

The genus belongs to the group Myrmedoniae, as defined by Dr. Fenys in the "Genera Insectorum," and will follow *Dabra* in the Australian list.

Genotype, *A. satelles*, n. sp.



(TEXT-FIGS. 78-95.)

78-83.—*Microtachyporus imbricatus*, n. sp.: 78. Imago. 79. Antenna. 80. Labium. 81. Maxilla. 82. Anterior leg. 83. Posterior leg.

84-88.—*Coptotermoeicia alutacia*, n. sp.: 84. Imago. 85. Antenna. 86. Labium. 87. Maxilla. 88. Posterior leg.

89-91.—*Amblyoponiphilus satelles*, n. sp.: 89. Maxilla. 90. Labium. 91. Antenna.

92. *Amblyoponiphilus agilis*, n. sp., Antenna. 93. *Dabrosoma subopacum*, n. sp., Antenna. 94. *Dabra sulcicollis* Oke, Antenna. 95. *Dabra myrmecophila* Oll., Maxilla.

AMBLYOPONIPHILUS SATELLES, n. sp.

(Text-figs. 62, 63, 89-91.)

Pale, obscure, testaceous, legs and apex of abdomen pale flavous. Moderately clothed with short, pale pubescence and with some fairly long, dark setae on sides and apex of abdomen. Subnitid. The whole surface finely, but distinctly, shagreened; the head, pronotum and elytra with close, fine punctures, but much sparser on abdomen.

Head convex, rounded on sides, lightly narrowed in front. Antennae reaching base of prothorax; first segment longer than second, second and third equal, fourth and fifth subquadrate, sixth to tenth transverse, eleventh elongate, longer than two preceding combined. Prothorax strongly transverse and convex, anterior angles slightly, but obtusely, produced, posterior angles lightly rounded off. Elytra about same length as pronotum, rather strongly produced at hind angles. Abdomen evenly tapering from base to apex. Legs moderately long and thin. Length, 1.20 mm.

Hab. Victoria: Fern Tree Gully, Belgrave, Gembrook, Evelyn, Warburton, Macedon (C. Oke) in nests of *Amblyopone australis*.

This minute species is often seen in fair numbers in the nests, and will often run around the ants in the nest, when the latter is opened up by removing the covering stone, and may even seek shelter by pushing their way under the ants.

Types in coll. Oke.

AMBLYOPONIPHILUS. AGILIS, n. sp.

(Text-fig. 92.)

Pale brown, prothorax, tip of abdomen and appendages clear flavous. Clothing and sculpture as in *A. satelles*, except that the punctures are not quite so close.

Head transverse, with the clypeal suture distinct. Antennae with first and second segments equal, third a little longer, fourth a little longer than wide, same width as third, fifth to ninth increasing in width, ninth and tenth transverse and together shorter than eleventh which is conical. Other characters as in *A. satelles*. Length, 1.20 mm.

Hab. Victoria: Fern Tree Gully, Belgrave, Macedon, Ballarat (C. Oke) in nests of *Amblyopone australis*.

The real difference between the two species described lies in the antennae, these being thinner and differently proportioned in *A. agilis* from those of *A. satelles*. In describing some of the segments as transverse in both species, I refer to the "face" of the segments, not taking into account the narrowed apical "neck." In *A. satelles* the prothorax is sometimes paler than the elytra or head, but it is not so noticeably pale as in the present species. The differences in the antennae are not sexual as I have the sexes of both species, though I fail to see any outward sign of sex.

Types in coll. Oke.

HETAIROTERMES FORMICICOLA, n. sp.

Pale testaceous, prothorax, pale flavous, antennae and palpi watery flavous. Clothed with rather close, minute, pale pubescence. Nitid.

Head strongly transverse, convex, laevigate. Antennae scarcely reaching base of prothorax; first to tenth segment elongate, first stouter than next six, which are thin, eighth to tenth suddenly wider, subequal, eleventh much larger, about one and a half times as large as tenth. Prothorax strongly transverse, all angles rounded off, fairly strongly incurved to centre of anterior margin; with fine, almost microscopic, punctures. Elytra strongly transverse, a little dehiscent on apical half, posterior margin sinuate with the lateral angles produced. Abdomen with the first five segments strongly margined and with punctures as on elytra; sixth segment not margined and with moderately large, close punctures. Legs rather short and thin. Length, 2.50 mm.

Hab. Victoria: Gypsum (C. Oke), in nest of the ant, *Iridomyrmex nitida*.

I am indebted to the late Mr. A. M. Lea for confirming my opinion that this species belongs to his genus *Termophila*, which is now *Hetairotermes* (3). As a species it seems to have some of the characters of both the described ones, but differs from both in not having any "longer setae" anywhere. Under a hand lens it appears to be almost glabrous, but under the microscope it is seen to have a close, minute pubescence. The fine puncturation of most of the surface will also distinguish this species.

Type in coll. Oke.

Coptotermoecia, n. gen.

Body elongate, parallel-sided, apterous, pubescent, of moderate size. Head vertical, transverse from above, circular from front view. Eyes rather small, placed well forward. Antennae rather long, moderately stout; three basal segments elongate, first longest, most of the others more or less transverse, eleventh lightly pointed. Mandibles strongly curved, acutely pointed; with a membranous attachment in front. Labium with submentum transverse, straight apex, with the lateral angles rounded off; mentum subcordate, small; palpi of three segments, joined together at base, the apical very thin. Maxillae with the lacinia lightly curved, combed on apex and top of inner edge, lower down a little cilia; galea almost straight, ciliated at apex; the palpi of four segments; the first very small, second short and thick, third stout obconic, fourth short subulate. Prothorax transverse, truncate in front, rounded across base, anterior angle slightly, posterior strongly, rounded. Scutellum small, transverse, not normally visible. Elytra short, obliquely lengthened from suture to sides. Abdomen rather strongly margined. Intermediate coxae lightly separated. Legs of moderate length,

non-spinose. Tarsi 4, 5, 5; anterior short, with fourth segment nearly as long as three basal combined; intermediate longer, first and fifth segments of same length; posterior still longer, with the basal segment longer than fifth.

This genus is proposed for a species found living with *Coptotermes*. At Natya, some were found in the wood, others on the ground beneath embedded logs; at Violet Town, several specimens were taken in the hollow stem of a tree.

The genus is not very close to any previously described Australian; and there is not sufficient information given by Dr. Fenyes as to how he separates some of his groups to place this genus in them.

Genotype, *C. alutacia*, n. sp.

COPTOTERMOECIA ALUTACIA, n. sp.

(Text-figs. 48, 84-88.)

Pale brown and pale watery-yellow. Well clothed with fairly long, stiff pubescence or setae. Nitid. The whole body finely shagreened with fine subreticulate punctures.

Male.—Head strongly transverse from above, circular from in front; with a few large punctures. Antennae reaching middle of elytra, first segment longer than next two combined, second longer than third, both elongate and constricted at base, fourth to tenth same width, fourth and fifth longer than ninth or tenth, sixth to tenth subequal, eleventh as long as ninth and tenth combined, conical, hollowed out below. Prothorax transverse, rounded on sides and on base, straight across apex; with large close punctures. Elytra transverse, much longer on sides than on suture, dehiscent for about one-third of length; with a few small punctures. Abdomen strongly margined and with a row of stiff setae on apex of each segment; under surface of apical segment notched. Legs moderately long and rather thin.

Female.—Differs in having the abdomen a little wider towards apex and the under surface not notched. Length, 2.50-2.70 mm.

Hab. Victoria: Natya, Violet Town (C. Oke), in nests of *Coptotermes acinaciformis* Frogg.

The head, elytra and legs, except tarsi, are a pale brown, most of antennae, prothorax, and tarsi are a pale watery-yellow, and sometimes the base of abdomen and some other parts, but the colours are not sharply defined, and the two run into one another.

The specific name has been suggested, not by the shagreening, but by the tough, "leathery" nature of the beetle. It is a difficult one to dissect, as it has to be dragged apart with the needles.

Types in coll. Oke.

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