

## AUSTRALIAN COLEOPTERA: NOTES AND NEW SPECIES.

By H. J. CARTER, B.A., F.E.S.

This paper originated in the examination of material lately acquired for the Queensland Museum by Mr. Henry Hacker, the very efficient entomologist of that Institution. It also includes notes and descriptions of Mr. H. W. Brown's captures in the Northern Territory, descriptions of two new *Lucanidae* from that prolific district, the Barrington or Mount Royal Range, together with notes on synonymy gleaned from my correspondence with Mr. K. G. Blair of the British Museum.

## LUCANIDAE.

RHYSNONOTUS POLITUS, n. sp. (Text-figs. 1, 2).

Oval, bronze (with a reddish tinge), very nitid, glabrous above, a short fringe of yellow hairs on anterior coxae, also at apex of abdomen and prosternum, legs and tarsi reddish.

♂. *Head*  $2\frac{1}{2}$  x 6 mm.—excluding mandibles—rugose-punctate, forehead with medial saddle-shaped ridge, bituberculate in front, sides of head widely lobate, the lobe rounded in front, angulate behind; mandibles projecting about 3 mm., each armed with 5 or 6 tuberculiform teeth on inside and a single conical tubercle near external edge towards the base; upper surface of mandibles coarsely rugose, underside lightly punctate; mentum arched and projecting; eyes completely divided, antennae with scape longer than other joints combined, club 6-jointed.

*Prothorax* 6 x 9 mm., considerably wider than the elytra at base, anterior angles rounded and convex, sides lightly arched, a small sinuation preceding the sub-posterior tooth, this followed by oblique areuate excision to the true base; narrowly bordered throughout, lateral border entire or, sometimes, feebly erenulated by an irregular row of setiferous punctures. Surface mirror-like, sparsely and finely punctate, the punctures almost evanescent at middle, larger at sides, with a strong medial groove, two small foveae near middle of each lobe and a depressed area at sides.

*Scutellum* transversely oval, its border raised.

*Elytra* about as long as wide (9 mm.), sides a little explanate, scarcely wrinkled, with a row of large punctures forming inner boundary of margin; the edge of suture carinate, and two obsolescent ridges perceptible on basal area, one parallel to suture, the other oblique; surface mirror-like with some sparse, minute punctures to be seen with a lens. Flanks of prosternum sparsely and finely punctate and setiferous, abdomen more coarsely punctate, the two last

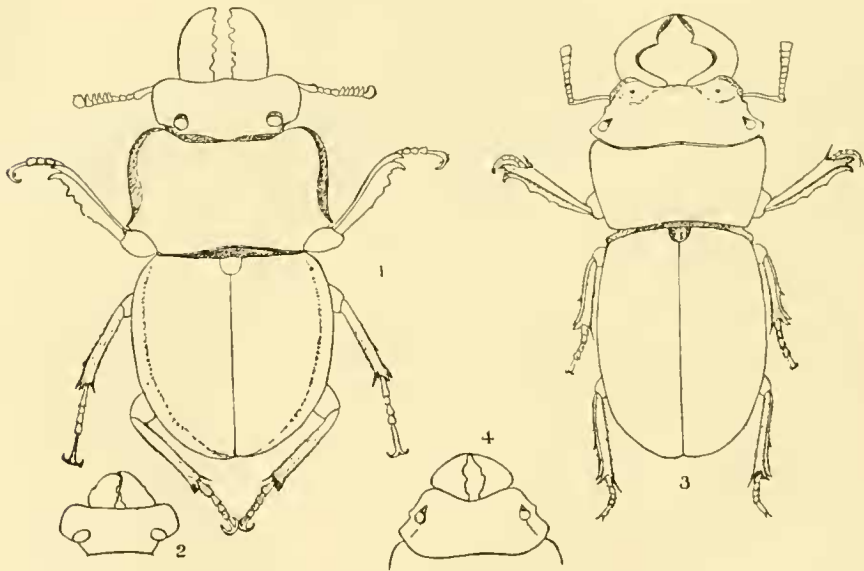
segments densely so and terminated by a fringe of golden hair; protibiae 4-dentate externally, bidentate internally, hind tibiae with 3 strong spines at apex, profemora with wide excision on inside edge near apex.

♀ with shorter mandibles (about 2 mm.); these rugose-punctate above, with two small tubercles on outside edge near base; the pronotum coarsely punctate, especially near sides (in marked contrast to the puncturation of ♂).

*Dimensions.* ♂. 19-23 x 8-10 mm. ♀. 17-23 x 8-11 mm. •

*Hab.*—New South Wales: Mount Royal or Barrington Tablelands. (Mr. John Hopson).

Eight examples examined, 5 ♂, 3 ♀, taken by Mr. Hopson. It is allied to *R. jugularis* Westw., but differs from that species in its extremely nitid and lightly punctate surface, the structure of head and mandibles, the narrower and



Text-fig. 1. *Rhyssonotus politus*, n.sp. ♂.  
 ,, 2. ,, ,, ,, Head of ♀.  
 ,, 3. *Lissapterus hopsoni*, n.sp. ♂.  
 ,, 4. ,, ,, ,, Head of ♀.

smoother elytral margins *inter alia*. *R. laticeps* Mael. is still closer in colour and facies, but has striate-punctate elytra with sharp wing-shaped lateral projections to the head. Types in Coll. Carter.

*LISSAPTERUS HOPSONI*, n. sp. (Text-figs. 3, 4.)

Black, moderately nitid, legs and tarsi clad with golden hairs.

♂. *Head* wide and convex, sides bilobed, the anterior lobe somewhat squarely explanate, the carinate border of the eye terminating anteriorly in a small tubercle, the posterior lobe forming a blunt tooth pointing outwards, a small tooth also on sides between anterior and posterior lobes; surface coarsely punctate at sides, becoming smooth at middle and apex; mandibles (projecting about 3 mm.)

outwardly curved at base, then obliquely inwards, the acute tips meeting; a wide tooth on inside of each near apex, the inferior basal area flattened into a lamina projecting downwards; antennae with three apical joints wider than rest—these successively widening to apex—the two penultimate feebly dentate on anterior side; the mandibles finely and sparsely punctate.

*Prothorax* twice as wide as long, sides lightly narrowing from apex to base, front angles semicircularly rounded, posterior widely obtuse, disc coarsely punctate, confluent at base and sides, nearly smooth at middle, medial channel indicated near front; a few irregular depressed areas on disc. *Scutellum* semicircular, nitid, with a few large punctures. *Elytra* of same width as prothorax at base, feebly widening towards middle, narrowly margined, surface closely and strongly punctate, except on three laevigate vittae; the first of these sutural, the other two meeting on apical declivity, slightly diverging towards and continuous to base, the third near the middle of elytron; beyond this one or two finer laevigate lines perceptible. Tibiae bidentate exteriorly and spinose internally at apex, fore-tibiae with about three teeth, the others with one on outside edge, claws very slender; underside coarsely punctate on sternal areas, abdomen smooth.

♀. Mandibles short—projecting about  $1\frac{1}{2}$  mm.—stout and coarsely punctate, without any defined internal tooth; prothorax with more clearly defined medial line.

*Dimensions* (including mandibles). ♂. 20 x 8 mm. ♀. 21 x 9 mm.

*Hab.*—New South Wales: Eccleston, Allyn River. (Mr. John Hopson).

Another of Mr. Hopson's discoveries in the hills adjoining the Barrington plateau, and I name the species in his honour. Smaller than its allies, it is clearly differentiated by the peculiar elytral sculpture, with its defined laevigate vittae. *L. tetrops* Lea has a somewhat similar—though far more obscure—arrangement, the smooth areas being bounded by single lines of minute punctures.

Type in Coll. Carter.

#### BUPRESTIDAE.

In the table of *Cyphogastra* given by the late Mons. Kerremans ("Monographie des Buprestides," T. iv., p. 163) *C. pistor* C. and G. is distinguished from *C. saundersi* MacL. as follows:—

"Elytres bordés extérieurement d'un large sillon prémarginal, allant de l'épaule au sommet . . . . . *pistor*.

Impression latérale de l'élytre n'atteignant pas le sommet . . . . . *saundersi*.

This distinction, however, is not only contradicted by the original description of *C. pistor* by Castelnau and Gory, fully corroborated by the coloured figure in the excellent monograph of those authors, but it is inconsistent with the detailed description of *C. pistor* given by Kerremans himself on p. 179 of the work quoted above, where the lateral impression is thus described "la cinquième" (impression) "enfin, plus courte, contre le bord extérieur, naissant en avant, à la hauteur de la précédente, mais terminée loin du sommet." The italics are mine.

I have lately again closely examined the types of *C. saundersi* in the Macleay Museum, and similar examples in the Masters Collection and the Australian Museum (probable cotypes), and must reiterate the opinion I expressed (Trans. Roy. Soc. S. Aust., 1916, p. 139) as to their identity with the correctly determined specimens of *C. pistor* in those collections—the superficial variations being due to abrasion or immersion in spirit.

*Cyphogastra vulnerata* Théry (Text-fig. 5). Mr. H. W. Brown has lately taken in the Northern Territory a long series of a *Cyphogastra* which does, however, agree with Kerremans' tabulated "*pistor*" (?) in having a lateral impression extending from base to apex, while also agreeing with that part of his detailed description of *pistor* (Monograph, p. 179) which states "au lieu de se prolonger en pointe sinuée et relevée, les côtés sont graduellement et régulièrement atténués en arc." This species clearly corresponds with the description of *C. vulnerata* Théry, a species hitherto unknown in Australian collections and erroneously placed by Kerremans as a synonym of *C. pistor* C. and G., from which it is clearly separated by (1) more convex and oval form, (2) angulately widened prothorax, sides nearly straight behind, (3) arrangement and form of elytral impressions. (Besides the difference in the lateral impression noted above, the premedial discal impression is longer, while the posterior discal impressions diverge from the suture, and are not parallel with it, as in *pistor*). The 7 Australian species of *Cyphogastra* readily arrange themselves into 3 groups.

A. containing *C. pistor* C. and G., *C. vulnerata* Théry, and *C. browni*, n. sp.

B. " " *C. macfarlani* Waterh., *C. venerea* Thoms. and *C. farinosa* F. (the last described as from Java, doubtfully Australian).

C. containing *C. woodlarkiana* Montr. (of which the upper surface is entirely black).

*C. venerea* is chiefly differentiated from *C. macfarlani* by the absence of the lateral impression on the elytra. *C. farinosa*, besides having certain ground colour difference from *C. macfarlani*, has an extra discal ray on the elytra.

*Chrysodema sub-fasciata* Cart. Mr. H. W. Brown has taken a long series of this species in the Northern Territory. The two types in the Melbourne Museum were the only examples hitherto known in Australian Collections.

The genera of the tribe *Chalcophorini* are not generally well known to Australian Collectors. I therefore append a tabulation of the six Australian genera so far recorded.

#### Tribe *Chalcophorini*.

1	Pronotum longitudinally carinate in middle . . . . .	<i>Chrysodema</i> C. and G.
2	8	Pronotum and prosternum longitudinally sulcate in middle.
3	5	Last abdominal segment carinate in middle.
4		Form ovate acuminate . . . . . <i>Chalcotaenia</i> Deyr.
5		Form navicular, 1st abdominal segment having a smooth salient plate at apex . . . . . <i>Cyphogastra</i> Deyr.
6	8	Last abdominal segment not carinate.
7		First abdominal segment sulcate in middle . . . . . <i>Chalcophorella</i> Kerr.
8		First abdominal segment <b>not</b> sulcate . . . . . <i>Paracupta</i> Deyr.
9		Pronotum partially, or not, sulcate, prosternum not sulcate, whole prothorax very rugose . . . . . <i>Pseudotaenia</i> Kerr.

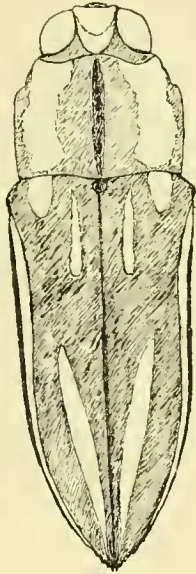
*Pseudotaenia* contains the giants of the group and *Chalcophorella* the smaller and narrower species.

The 35 Australian species are divided as follows:—*Chalcotaenia*, 11 species; *Cyphogastra*, 7; *Chalcophorella*, 3; *Pseudotaenia*, 8; *Paracupta*, 4; *Chrysodema*, 2. *Chalcotaenia* and *Pseudotaenia* are endemic in Australia or adjacent islands (one species of the former in Papua). *Chalcophorella* occurs also in America, Europe, Africa, and one species in Japan. The remaining three genera have a wide distribution throughout Malaysia and Oceania.

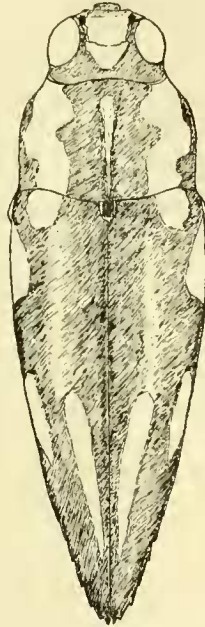
## CYPHOGASTRA BROWNI, n. sp. (Text-fig. 6.)

Navicular; upper surface dark green, with impressions filled with yellow flocculence, head bluish; underside metallic green, almost entirely obscured by yellow flocculence; raised medial lobe of abdomen purple, antennae bronze, legs and tarsi metallic green, knees blue.

*Head* subtriangularly excised on front—the apex of triangle somewhat arched—a large irregular impression filled with yellow flocculence between the eyes, this bordered by crenulate ridge; basal area sparsely rugose-punctate.



Text-fig. 5.  
*Cyphogastra vulnerata* Théry.



Text-fig. 6.  
*Cyphogastra browni*, n.sp.

*Prothorax* depressed, bisinuate at apex (strongly) and at base (slightly); all angles acute; widest at base, sides nearly straight and gently narrowing till near the front, then sinuately converging to the angles; disc with wide medial sulcus, a wide, irregular, trilobed, flocculent impression occupying the greater part of sides; the raised parts near centre sparsely punctate—at sides rugose-punctate.

*Scutellum* metallic green, rather square and depressed in middle.

*Elytra* slightly wider than prothorax at base, angulately widening at shoulders and tapering to the acuminate apex, terminating in two larger sutural spines—with about 6 strong serrations on each side; each elytron with four flocculent impressions, the first circular at basal margin (about midway between suture and shoulder), the second pear-shaped, larger than first, at sides before the middle—its narrower part produced forward along margin beneath the humeral callus, the third lanceolate, forming a short vitta near suture on posterior third and extending to apex; the fourth short and longitudinal at sides, postmedial (starting slightly in advance of the third); the remaining surface irregularly



punctate, the punctures coarse and rugose on basal area, finer and shallower towards apex; here and there showing a linear arrangement. Prosternum, meso- and metasternum widely sulcate, the convex plate of 1st abdominal segment rounded behind, acuminate in front, sparsely punctate. *Dimensions*: 29 x 9½ mm.

*Hab.*—Northern Territory. (H. W. Brown).

I gladly name this after the very enterprising collector who has added so many fine new species to the Australian list of Coleoptera.

*C. browni* can easily be distinguished from *C. pistior* by the absence of the discal pre-medial impression (the "second" of Kerremans' description) and the much abbreviated lateral impression (the "fifth" of Kerremans). Type in Coll. Carter.

STIGMODERA PRAETERMISSA, n. sp.

Oblong oval, head, antennae and prothorax coppery, elytra with margins and costae red, the intervals mostly black, underside and legs blue.

*Head* widely excavated, finely punctate.

*Prothorax* subtruncate at apex, strongly bisinuate at base, widest at base, sides areately narrowing to apex, surface uneven with four large depressions. A large irregular one on each side, an oval one at middle of base, connected by medial sulcus with a small triangular depression at apex, the areas between depressions tumid, the whole rather closely and coarsely punctate.

*Scutellum* very concave and punctate.

*Elytra* each with four well raised costae, the first two only continuous from base to apex, the 4th starting from margin at base, terminating well within the margin towards apex, the 3rd connecting with 4th near base and terminating between the 2nd and 4th; each apex with a minute notch, costae and intervals finely punctate, the latter also finely transversely reticulated; sternum coarsely, abdomen finely and densely punctate, scarcely pilose. *Dimensions*: 10-11 x 4 mm.

*Hab.*—Blue Mountains, New South Wales. (Dr. E. W. Ferguson and H. J. Carter).

Of the two examples examined, the ♂ taken by myself in 1903 has long been considered as *S. spinolae* C. and G. which it nearly resembles. The ♀ example, lately given me by Dr. Ferguson, has induced me to make a close examination which has revealed clear distinctions from *S. spinolae* in (1) smaller size, (2) underside blue (black in *spinolae*), (3) much finer surface punctures, (4) marked differences in shape and sculpture of prothorax (in *spinolae* the middle depression is cordate, the sides contain rounded projections, concave within, etc.). Types in Coll. Carter.

PARACEPHALA TRANS-SECTA, n. sp.

Sub-cylindric, bronze, sometimes in parts with bluish reflexions, sides of abdomen with pale golden hairs.

*Head* finely punctate, with wide longitudinal furrow.

*Prothorax* strongly transverse and convex, widest near front; apex a little produced at middle and at the angles—the latter widely rounded; sides obliquely narrowing to base, posterior angles obtuse, base strongly bisinuate; disc transversely divided near middle by a wide sulcus, expanding on each lobe into a wider depression, not continuous to sides; lateral margins thickly clothed with golden hair, a faint medial sulcus sometimes seen on posterior half of disc; surface finely punctate and transversely strigose.



ture of thorax, but the sides of the latter in *howitti* are entire not granulate; in *odewahni* they are broken by very strong prominent marginal granules. The elytra of the latter have 4 rows of elongate granules (or costae), the interspaces with irregularly disposed sharp granules and short hairs, in *howitti* the interspaces have each a median row of somewhat similar granules, the intermediate space irregularly, not closely punctured. I have only the type of each."

*Styrus batesi* Haag. (Jour. Mus. Godeffr., p. 117-118 footnote) nom. nov. for *S. elongatulus* Bates.

*Saragodinus batesi* Haag. *Id.*, p. 117.

These two names appear to have been confused and the latter omitted from Gebien's catalogue. In my "Revision of the Nyctozoilides" (Ann. Queensland Mus., 1911, p. 12) I placed Bates's *Styrus* as a probable synonym of *S. elongatulus* Mael., of which I have cotypes. Of a larger species from Dalveen (Q.), Mr. Blair writes "Your specimen I regard as *S. elongatulus* Bates, with which it agrees in size, colour, sculpture, etc., but from which it differs in the shape of the thorax. The latter in the type has the sides more widely and evenly rounded, as in *latior* . . . and the posterior angles directed backwards instead of outwards."

*Agasthenes goudiei* Cart. = *A. euclensis* Cart. On comparing a second example of the former with the type of the latter, I consider that the second name should be sunk, the differences formerly noted being rather individual than specific.

#### COTULADES TUBERCULATUS, n. sp.

Convex and widely oval; chocolate brown, elytra with pale patches of light fascicles, surface clothed with coarse recumbent hairs.

*Head*: Epistoma concave in front, forehead rather flat except for a strong depression on each side, sculpture obscured by bristly clothing; antennae very wide, joints strongly transverse and closely fitting; 1st and 3rd longer than the rest, 11th narrower than 10th, oval, the rest subequal.

*Prothorax* ovate, very convex and uneven; at apex a little wider than head, and produced in middle; base subtruncate, sides lightly rounded, margins a little crenulated—the true crenulations not easily distinguished from the apparent ones caused by the short bristles; disc with four strongly raised protuberances, two, rather close, overhanging anterior margin; two much larger—one at centre of each lobe; the middle part forming a deep, wide oval depression; also a foveate depression near each hind angle; all angles rounded off.

*Elytra* strongly convex, of same width as prothorax at base, the produced angulate humeri fitting the pronotal foveae; sides thence obliquely widened and forming a second angle at junction with straight portion; abruptly narrowed at apex; each elytron with three interrupted costae, terminating in large tubercles on apical area, a wide sutural area flatter than the rest; sculpture, as on rest of surface, obscured by thick bristly hairs, but a few large, widely set, punctures and some small shining tubercles can be made out; the lateral area, outside the 2nd sub-costa, containing an irregular row of pale fascicles, also a strong bundle of these on apical third, between 1st and 2nd sub-costa. *Dimensions*:  $4\frac{3}{4} \times 2\frac{1}{2}$  mm.

*Hab.*—Mittagong, N.S. Wales.

I have an example of *C. fascicularis* Pasg. from Tasmania, and five of *C. montanus* Blackb. from the Blue Mountains. *C. tuberculatus* is larger, especially wider, than either of these, with a much more uneven and bristly surface. In *C.*



*montanus* the coarse, close-set elytral punctures can always be clearly seen, the pronotum is much less uneven, though the elytra have some apical tubercles not mentioned by the author. *C. fascicularis*, *inter alia*, has a much narrower, straight-sided, flatter prothorax, depressed in middle, the elytral costae more regular. Type in Coll. Carter. (*N.B.*—Pascoc's description of the antennae of *C. fascicularis* "basal joint longest, the rest to the tenth subequal" is inaccurate. In my example, besides the basal joint being long, both the 2nd and 3rd joints are clearly longer than succeeding joints.

CESTRINUS DENTATUS, n. sp.

Elongate, parallel, subnitid black, tarsi red.

*Head* and pronotum coarsely but not confluent punctate, the intervals between punctures themselves very finely punctate; 3rd joint of antennae not as long as 4th-5th combined, joints beyond 6th wanting.

*Prothorax* areolate-emarginate at apex, truncate at base, anterior angles acute (less sharply than in *C. trivialis* Erich.); sides rather widely and evenly rounded, and clearly sinuate before the dentate, rectangular hind angles; margins sharply and closely crenulate.

*Scutellum* oval.

*Elytra* wider than prothorax at base, shoulders rather square, sides parallel; striate punctate, the punctures in striae large, round, uniform in size and separated by narrowly-raised cancellate ridges, intervals convex, finely and sparsely pustulose, a few very short pale hairs distinguishable at sides and apex; sternum coarsely, abdomen finely punctate. *Dimensions*: 11 x 4 mm.

*Hab.*—Camoowal, North Queensland.

A single specimen, given me by my friend Dr. E. W. Ferguson, is quite distinct from *C. trivialis* Erichs. (perhaps the most widely distributed Tenebrionid in Australia). After Mr. K. G. Blair's wholesome treatment of the species of this genus (these *Proc.*, xlv., 1919, pp. 529-532) it is a daring venture to describe another *Cestrinus*; nevertheless, the above is clearly differentiated from Erichson's species by (1) the differently shaped prothorax and especially in the small posterior tooth, (2) the difference in sculpture, the punctures of the upper surface being coarser, of the lower surface finer than in *trivialis*, while in both cases they are clearly more widely separated. The pustules on the elytra are much finer and more sparse. Type in Coll. Carter.

(*N.B.*—*C. championi* Blackb. is, I consider, quite distinct from *trivialis*, not only in size, but in the system of pronotal punctures, which are not confluent, as in *trivialis*, though less widely separated than in *dentatus*. It is much more strongly bristled than *dentatus* with a differently shaped prothorax and less crenulate margins).

GONOCEPHALUM SUB-COSTATUM, n. sp.

Ovate, brownish-black, opaque, rather thickly covered with short, bristly hair.

*Head*: labrum prominent, clypeus sub-truncate with 4 coarse setae thereon and at sides forming an angle with the raised canthus; surface coarsely, densely punctate; antennae with 3rd joint as long as the next three combined, 4th-10th moniliform, 11th large and ovate, twice as long as 10th.

*Prothorax* arcuate-emarginate at apex, truncate at base, anterior angles acutely produced, sides widely rounded, widest at middle, sinuate behind, pos-

terior angles definite and obtuse; disc covered with large confluent punctures, the short bristles more obvious on margins, lateral foliation not differentiated in sculpture from disc.

*Scutellum* triangular.

*Elytra* considerably wider than prothorax at base; punctate-striate, the striae shallow, the seriate punctures large and separated by transverse ridges; all intervals granulose and bristled, the alternate four intervals rather strongly convex, forming—especially on basal area—rounded costae; underside coarsely and closely punctate; tibiae not enlarged at apex. *Dimensions*: 7.8 x 4 (vix) mm.

*Hab.*—Stanthorpe, Queensland (Von Wiedt).

Three examples from the Queensland Museum show a species clearly distinct from all described species, except *G. costipenne* Cart., in its sub-costate intervals, but *costipenne* has a granulose pronotum, with other marked differences of sculpture and clothing. Types in the Queensland Museum.

#### HYOCIS INQUILINA, n. sp.

Short and rather wide; head, prothorax and appendages pale red, elytra and underside brown, or reddish, whole surface opaque.

*Head* and prothorax rough, not perceptibly punctured; joints of antennae very closely adjusted, the apical four tumid.

*Prothorax* convex, widest near front, sides gradually narrowed behind, scarcely or very feebly sinuate behind, with clearly foliate margins; extreme edge very minutely serrate, front angles rounded, hind angles obtuse.

*Elytra* wider than prothorax at base, convex, slightly widened behind middle, seriate-punctate; each with about 9 rows of large, rather shallow punctures, intervals flat (or nearly so). *Dimensions*: 1½ mm. (vix) long.

*Hab.*—Swan River, Western Australia, in nests of the ant *Tridomyrmex conifera* (J. Clark).

I am indebted to that indefatigable collector, Mr. Clark, for two specimens of this interesting species. The smallest of the genus, it is easily distinguished by its almost flat elytral intervals, and short, wide form. Both *H. nigra* Blackb. and *H. minor* Cart. look comparatively large. Type in Coll. Carter.

#### ELASCUS MAJOR, n. sp.

Elongate, parallel, brownish-black, surface in parts thinly clad with short recumbent bristles.

*Head* sub-depressed in front, tuberculate near base, antennal orbits widely arched above frontal surface; eyes round, sub-conically protuberant; antennae very wide and strongly bristled except towards apex. 1st and 3rd joints longer than rest (3rd twice as long as 4th) 4th-8th successively a little narrowed, 9th and 10th slightly wider than 8th, 11th truncate, shorter and narrower than 10th.

*Prothorax* uneven in surface, strongly produced in middle both in front and at base; anterior angles rectangular, posterior slightly wider but clearly defined; sides nearly straight, a little widening behind, with a rather wide horizontal margin—thence rising steeply to the two irregular ridges extending from base to apex and terminating in round tubercles on anterior margin, a wide central depression, surface shagreened with some fine tubercles on margins.

*Elytra* considerably wider than prothorax at base, shoulders squarely rounded, sides without horizontal border; each elytron with three flexuous costae, ter-

minating near apex in small elongate tubercles, the 2nd widely interrupted in middle. *Dimensions*:  $7\frac{1}{4} \times 2$  mm.

*Hab.*—Dorrigo, N.S. Wales. (Mr. A. E. Stephen).

I am indebted to my friend Mr. Stephen for this addition to an interesting group. It is more nearly allied to *E. crassicornis* Pasc. than to *E. lunatus* Pasc.—both of which I have from Tasmania, as well as two examples of the former from Mount Wilson (Blue Mountains)—but it is quite distinct from both in the form of antennae and prothorax, besides being larger. The specimen had been kept in a cyanide bottle so that it had little chance of retaining any pale coloured fascicles, if any existed. Type in Coll. Carter.

PLATYDEMA LIMBATUM, n. sp.

Oval, convex; whole surface, above and below, black suffused with red, nitid; elytra with a pale lateral band, antennae and legs red.

*Head* and prothorax thickly and rather coarsely punctate, head unarmed; antennae with apical seven joints enlarged.

*Prothorax* truncate at apex, base bisinuate, front corners widely rounded, hind angles rectangular, sides nearly straight, with narrow horizontal margin, deeply bifovate at base, disc without a sign of medial line or channel.

*Scutellum* triangular, punctate. Elytra ovate, moderately convex, of same width as prothorax at base, greatest width behind middle, striate-punctate, the seriate punctures round and regular, intervals flat and very finely punctate. Underside minutely punctate; legs slender. *Dimensions*:  $3 \times 1\frac{1}{2}$  (vix) mm.

*Hab.*—Murray River, South Australia. (Mr. A. H. Elston).

Three examples courteously sent by the discoverer can only be confused—so far as colour goes—with *P. limacella* Pasc. and its close ally *P. abdominale* Geb.; but the species is at once separated from both by much smaller size, less convex form, unarmed head of ♂, more slender antennae, differently shaped thorax and flat elytral intervals. It is the smallest of the Australian species and in form like *P. victoriae* Blackb. The red colour is most prominent on the head and pronotum, on the elytra showing only at the margins and shoulders. Types in Coll. Carter.

I have lately received from Mr. G. F. Hill of the Tropical Institute of Medicine, Townsville, several examples of what I take to be *P. deplanatum* Champ.; also an example of *P. aries* Pasc. without the usual red markings at the apex of elytra.

PLATYCILIBE TRICLAVATUM, n. sp.

Shortly ovate; head, prothorax and underside pale red, antennae and tarsi testaceous.

*Head* and pronotum distinctly, not closely punctate, antennae short, with the last three joints enlarged into a club.

*Prothorax* convex, slightly produced in middle at apex, truncate at base, sides nearly straight and narrowing to apex; all angles subrectangular; lateral border narrowly horizontal, disc without medial channel or foveae, with a row of larger lateral punctures besides the somewhat sparse and deep punctures on disc.

*Scutellum* arcuate-triangular, with about six large punctures.

*Elytra* of same width as prothorax at base, oval; seriate-punctate, with some large confused punctures near base in humeral region; the surface other-

wise nitid and impunctate; underside rather coarsely punctured. *Dimensions*: 2 x 1 (vix) mm.

*Hab.*—Tambourine Mountain, Queensland. (A. M. Lea).

In describing *P. bicolor* (Trans. Roy. Soc. S. Aust., 1914, p. 225), while noting the difference of colour in the examples, I failed to notice that these represented two distinct species of which the description applies only (except in colour) to the darker species, with black head and pronotum with the antennae 4-clavate. *P. triclavatum* was taken in company with *bicolor*, by sifting leaf refuse. Besides colour difference and antennal joints, the prothorax is narrower, the sides straighter, the size smaller and more convex than in *bicolor*. Type in Coll. Carter.

*N.B.*—Both species will probably be found to require generic distinction from *P. brevis* and *P. integricollis*, but at present I am unable to give well-defined characters to separate these groups.

PTEROHELAEUS PARVI-PUNCTATUS, n. sp.

Ovate, depressed, nitid black, antennae and tarsi red.

*Head* densely and clearly punctate, antennae with last four joints flattened and sub-circular.

*Prothorax* arcuate-emarginate at apex, anterior angles well produced and rather sharply rounded at apex, sides arcuately widened to base, posterior angles sharply falcate; foliate margins wide and concave, extreme margins reflexed, base bisinuate, disc very minutely punctate, smooth along middle, basal foveae rather deep.

*Scutellum* curvilinear-triangular.

*Elytra* of same width as prothorax at base, sides nearly straight on basal half, widely rounded behind, foliate margins wide, narrowed on apical third, thence narrowing to apex, seriate punctate, scarcely striate, with about 16 rows of small punctures (besides a short scutellary row), obsolescent at apex, intervals quite flat and almost impunctate; the 1st, 5th and 9th slightly wider than the rest; pro- meso- and meta-sternum finely transversely rugose, abdomen rather deeply longitudinally striolate. *Dimensions*: 17 x 9½ mm.

*Hab.*—Camooweal, North Queensland.

Two specimens had been long hypothetically labelled "*geminatus*" Blackb. in my collection. There is also a specimen in the British Museum. It is, however, a much flatter insect than *P. geminatus*, and is nearer *P. planus* Bless. but has a more nitid surface, smaller seriate punctures, and proportionally wider margins to elytra. Only under a Zeiss binocular can I make out punctures on the elytral intervals. The seriate punctures, though fine, are quite regular and there are no areas of irregular puncturation as in *P. dispersus* Mael. and others. From *P. darlingensis* mihi it differs in smaller size, wider margins, and finer sculpture throughout. Type in Coll. Carter.

SARAGUS PRONUS, n. sp.

Ovate, depressed, nitid black, tibiae piceous, antennae and tarsi red.

*Head* very minutely punctate, antennal orbits strongly raised and earlike, elypeus truncate in front, only separated from forehead by fine oblique side furrows, antennae with joint 3 twice as long as 4, the last three joints oval and flattened.

*Prothorax* arcuate-emarginate at apex, bisinuate at base, sides converging from base to apex, anterior angles well produced but rounded, posterior acute and falcate; foliate margins wide and concave, extreme border narrow and reflexed; disc smooth, a little depressed before the scutellum, a faint medial channel perceptible.

*Scutellum* semi-circular, smooth.

*Elytra* of same width as prothorax at base, wide, oval and rather flat; foliate margins as wide as those of prothorax in basal regions, narrowed, but wider than usual, at apex; a little concave in middle, flattened fore and aft; disc seriate-punctate, each elytron with 9 longitudinal series of punctures, besides a short scutellary row; of these the 9th—at junction with foliation—consists of large, deep pits; the 8th is a single row of small shallow punctures, the other series consist of irregular lines of clustered punctures—generally finer than those in 8th—in the 1st and 2nd row each forming geminate branches on basal half; all series more or less obsolescent at apex; the intervals lightly convex and smooth—flat towards apex—the first three (including the sutural) more evidently raised than the rest; prosternum with some fine pustules, abdomen finely striolate, underside otherwise impunctate and glabrous; basal joint of hind tarsi as long as the rest combined. *Dimensions*: 17 x 9½ mm.

*Hab.*—Flat Rock, New South Wales.

A single specimen, sex uncertain, was given me some time ago and was sent to the British Museum for comparison with a few species of which I was in doubt and returned by Mr. Blair with the note "have not." In my table (*Proc. Linn. Soc. N.S. Wales*, 1911, p. 197) the species would stand next to *satelles* Blackb., from which it is distinguished by its flatter form and nitid surface, together with the peculiar elytral sculpture noted above. Type in Coll. Carter.

Mr. H. W. Brown has lately taken in the Northern Territory a fine series of *Helaeus hopei* Breme and *H. crevatiipennis* Cart. The former I lately identified, for the first time, in a single specimen in the Melbourne Museum. The type probably came from Port Essington.

#### SARAGUS ELLIPSOIDES, n. sp.

Widely oval, convex, nitid black, tarsi red.

*Head* finely, closely punctate, clypeal margin reflexed, evenly rounded in front, widely produced at sides before the eyes.

*Prothorax* strongly transverse, emarginate at apex, anterior angles very widely rounded, sides rapidly widening to base, foliate margins concave, reflexed at border, posterior angles acute, base widely bisinuate, disc microscopically punctate, with a smooth, feebly impressed medial line and two shallow basal foveae.

*Scutellum* transversely oval.

*Elytra* as wide as prothorax at base, very convex and oval, foliate margins wide at base, gradually narrowing to apical third, thence strongly narrowed to apex, finely seriate-punctate, the series broken up into confused punctures on sides and near the scutellum (here appearing to overflow on to the intervals); all intervals with a few irregular punctures, each elytron with about five very slightly raised smooth intervals, these wider than the rest; metasternum pustulose at sides; abdomen finely striolate, apical segment minutely punctate; tibiae



armed with two short spines at apex, the front tibiae with a row of fine spines on outside edge. *Dimensions*: 12 x 8-9 mm.

*Hab.*—Cue (H. W. Brown) and Kalgoorlie (from Mr. C. French), Western Australia.

Two examples have long been undescribed in my collection, as possibly being *S. macleayi* Blkb., but a specimen of this from Port Lincoln sent by Blackburn himself to Dr. Sharp has been sent from the British Museum and is evidently that much-named *Saragus brunnipes* Bois. *S. ellipsoides* in size and form is intermediate between *brunnipes* and *spheroides* mihi, being wider and more convex than the former, and narrower than the latter, the sculpture finer than on either, especially on pronotum which is nearly smooth. Type in Coll. Carter.

NYCTOZOILUS PUNCTO-COSTATUS, n. sp.

Elongate-ovate convex, opaque black, antennae piceous, legs and tarsi clothed with golden hair.

*Head* coarsely, irregularly punctate; clothed with short golden bristles; clypeus arcuately hollowed in front, tabrum strongly produced, ciliate and punctate; antennae with 4 apical joints transverse and paler than the rest, 3rd joint longer than 4th-5th combined.

*Prothorax* arcuate-emarginate at apex, truncate at base, anterior angles acutely produced; sides widely rounded, sinuate behind; widest behind middle, posterior angles acute; disc very densely punctate, lightly depressed in middle with large shallow depression on each side; margins sub-foliate—separated from disc by light depression—extreme border rather thick on sides, less so at base and apex.

*Scutellum* transversely triangular, coarsely punctate.

*Elytra* wider than prothorax at base, each with four nitid and punctate straight costae, more or less evenly spaced, and uniformly raised, the suture also nitid and punctate, but less raised than costae; interspaces with opaque derm, densely pitted with shallow punctures; underside clothed with short golden hairs, the abdominal sculpture somewhat like that of the elytral intervals. *Dimensions*: 15 x 7 (vix) mm.

*Hab.*—Wyndham, North West Australia. (W. Crawshaw).

Mr. J. Clark has generously given me an example of the above—sex doubtful—that is quite unlike any described species. In my table (Ann. Q'land Mus., 1911, p. 10) it would come nearest to *N. hardcastlei* and *N. vermiculatus* mihi, but clearly separated from both by narrower form, and the 8-costate elytra, *inter multa alia*. Type in Coll. Carter.

NYCTOZOILUS DENTICOLLIS, n. sp.

Widely obovate, opaque black above, nitid beneath, apical joints of antennae reddish.

*Head* and pronotum with an impunctate felt-like surface, epistoma truncate in front, widely rounded at sides, little raised at antennal orbits, 3rd antennal joint almost as long as the succeeding three; 4th-7th longer than wide, 8th-10th subspherical, 11th ovoid.

*Prothorax* (5 x 7 mm.), apex widely emarginate, with acutely produced dentate angles pointing forwards and upwards; base sub-truncate, much wider than apex, posterior angles moderately dentate, pointing obliquely outwards; sides strongly widened near middle, sinuately narrowing each way, extreme border

rather narrow, margins entire, reflexed, with wide concavity within, disc with two deep foveae symmetrically placed slightly behind middle—no sign of medial line.

*Scutellum* widely transverse.

*Elytra* of same width as prothorax at base and more than thrice as long, obovately widened and very convex behind; disc with three well marked, undulate costae, the first two connected at base, and near apex, the 3rd originating behind shoulder, the suture forming thicker geminate costae (without undulations), these bifurcating behind scutellum and joining 1st costa near base; interspaces reticulate-foveate, with one or two transverse cancellations and many smaller, less raised reticulations; a row of large lateral punctures and a small row of similar punctures within the post-scutellary costae. Abdomen minutely punctate and striolate; sternum and epipleurae smooth; fore- and mid-tibiae slightly bowed, hind-tibiae straight, all without tomentum; hind tarsi with basal joint as long as the rest combined. *Dimensions*: 19 x 10 mm.

*Hab.*—Stanthorpe, Queensland (Von Wiedt).

A single ♀ example in the Queensland Museum shows a species easily distinguished by its smooth, unpunctured pronotum, large size and obovate form. In my table it would follow *N. vermiculatus* Cart. Type in the Queensland Museum.

#### NYCTOZOILUS MARGINATUS, n. sp.

Ovate, subopaque black, apical joint of antennae and extreme apex of palpi reddish.

*Head* densely and finely punctate, epistoma truncate in front, oblique on sides, canthus well raised in front of eyes; antennal joints more slender, and elongate than in *N. denticollis*; 3rd joint about as long as next two combined, 4th-7th elongate, 8th widely ovate, 9th-10th subspherical, 11th ovate-acuminate.

*Prothorax* ( $4\frac{1}{4}$  x  $8\frac{1}{2}$  mm.) widest at middle, anterior angles produced and rounded, base slightly wider than apex and bisinuate, posterior angles forming an acute tooth produced backwards; sides moderately rounded, without sinuation; extreme margins entire, very thick and round, raised and finely punctate, widely concave within, this gutter transversely rugose; disc densely punctate and finely rugose with a smooth medial line terminating behind in a foveate depression, a wide shallow depression on each side of medial line.

*Scutellum* very transverse.

*Elytra* wider than prothorax at base and four times as long, ovate and convex, sides evenly rounded; each elytron with 4 well raised shining, undulate costae, besides the sutural geminate costae, bifurcating behind scutellum and joining 1st costa at base; 1st and 2nd (also 2nd and 3rd) costae connect by lateral ridge at base, the 4th (less raised), near extreme border, originating behind shoulder and terminating on apical declivity; interspaces irregularly reticulate; and having the usual lateral row of punctures. Abdomen longitudinally striolate and very minutely punctate. Sternum smooth; front tibiae arcuate, middle straight, hind tibiae wanting—the two former tomentose within. *Dimensions*: 20 x 10 mm.

*Hab.*—Wyreema, Queensland. (O. W. Tiegs).

A single ♂ example, in the Queensland Museum, labelled as above, is also very distinct from described species by its combination of large size, evenly rounded pronotum with thick margins, and the 8-costate, reticulate elytra. In my

table it should be placed next *N. daemeli* Haag, from which its size alone will distinguish it. Type in Queensland Museum.

BRISES GRANULATUS, n. sp.

Oblong ovate, depressed, dark castaneous, moderately nitid; antennae, tarsi and underside of femora paler.

*Head* sparsely punctate, antennae not extending to base of prothorax, joint 3 longer than 4-5 combined, the five apical joints submoniliform.

*Prothorax* narrower than in *B. acuticornis* Pase., apex arcuate, base subtruncate, anterior angles rounded, posterior rather widely acute, sides gently arcuate, a little sinuate behind. Disc finely punctate—more distinctly so than in *B. acuticornis*—medial channel faintly indicated; a subhorizontal depression near base, the punctures coarser along this area.

*Scutellum* semi-elliptic, transverse and punctate.

*Elytra* wider than prothorax at base, the suture and eight subcostae on each lightly raised—the alternate subcostae more strongly so—a row of granules along each subcosta as also on suture, the costae obsolete and indicated by rows of granules only towards apex; between each pair of subcostae two rows of punctures of a size clearly larger than those in *B. acuticornis*; gular region transversely rugose, rest of underside lightly punctate. *Dimensions*: 17 x 7 mm.

*Hab.*—Broken Hill, New South Wales. (Mr. R. J. Burton).

Four examples examined, of which three were sent by Mr. Burton; the fourth had been long in my collection, given to me by the late Mr. G. Masters amongst some *B. laticornis* and labelled S. Australia. The species is clearly distinct from all described species, of which representatives of each are before me. In general shape and nitid surface it is most like *B. acuticornis* Pase., in elytral sculpture nearer *B. parvicollis* Blkb., but with the granules much more accentuated—somewhat as in *Pterohelaus bullatus* Pase. Type in Coll. Carter.

HYPALAX NANUS, n. sp.

Obovate, opaque black, elytra a little nitid, apical joints of antennae and tarsi red.

*Head* finely, not densely punctate, clypeal suture shallow, forehead flat.

*Prothorax*: apex and base feebly bisinuate, anterior angles advanced but rounded, sides strongly widened at middle, thence narrowing each way—obliquely in front, sinuately behind—posterior angles subrectangular, not produced; lateral and basal border thin and lightly raised; disc minutely and evenly punctate, a medial depression shown near base, two round foveae—one near centre of each lobe—and two small transverse basal foveae.

*Scutellum* widely transversely triangular.

*Elytra* obovate, wider than prothorax at base, seriate punctate, with 8 rows of foveate punctures—besides a row at junction of epipleurae; lateral rows substriate, interspaces uneven and finely punctate; anterior tibiae of ♂ a little bowed, sternum smooth, abdomen of ♂ distinctly and sparsely punctate, of ♀ only the apical segment very closely and minutely punctate. *Dimensions*: 8-9½ x 4-5 (vix) mm.

*Hab.*—Northern Territory. (H. W. Brown).

Four examples, two of each sex, have been examined. It is like a miniature *H. insularis* Hope, with the following differences: *Prothorax* widest in middle

(widest behind middle in *insularis*) all its angles less wide; *Elytra*, seriate punctures finer, the intervals finely punctate (smooth in *insularis*).

The elytral surface is uneven through each fovea forming a pit around which the area is slightly tumid, the combined effect being very different from the convex interval of a striate species. Types in Coll. Carter.

*N.B.*—In the abdominal sculpture of *H. insularis* Hope there is a similar sexual difference to that noted above, but to a greater degree—the ♂ having rather coarse sparse punctures. My remarks on this point in my revision of the genus (Proc. Linn. Soc. N.S. Wales, 1914, p. 63) apply therefore only to the ♀.

CARDIOTHORAX COERULESCENS, n. sp. (Text-fig. 7.)

Shortly ovate, nearly black with blue reflexions, nitid.

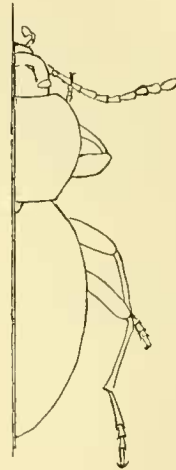
*Head*: clypeus rounded, usual frontal impression well marked, with a few punctures near its base.

*Prothorax* cordate, widest about middle, arcuate at apex, sub-truncate at base, foliate margins narrow, sides narrowly sinuate behind; anterior angles subrectangular, posterior deflexed and obtuse, without distinct tooth, disc smooth, medial channel defined, a small fovea on each side (sometimes wanting).

*Elytra* wider than prothorax at base, ovate; each with nine fine sulci—ninth on sides—intervals equal, very lightly convex. Legs fine, without sexual characters, tibiae straight, underside smooth. *Dimensions*: 11-12½ x 4-4½ mm.

*Hab.*—Enngai (north of Kempsey), New South Wales. (Mr. T. G. Sloane).

Four examples, taken by Mr. Sloane (July, 1920), show a small metallic species near *iridipes*, *metallicus* and *coeruleo-niger*. The first and third of these, however, have clearly dentate hind angles to prothorax and the third also has only 6 clearly impressed sulci on each elytron; *metallicus* Cart. has a clearly arcuate or sub-angulate base to prothorax, the posterior angles wider and not bent downwards as in the above species. Type in Coll. Carter.



Text-fig. 7.  
*Cardiothorax*  
*coerulescens*, n. sp.

ADELIUM MUREX, n. sp.

Brilliant violet-bronze, nitid, pilose; antennae, underside, legs and tarsi metallic black, the last clothed beneath with red tomentum, whole body more or less clothed with long upright, dark hair.

*Head* coarsely punctate, the punctures neither close nor regular; foveae at corners of clypeal suture strongly setiferous, 3rd antennal joint as long as 4th-5th combined.

*Prothorax* sub-truncate at base and apex, widest near middle, thence rather abruptly narrowed each way, sinuate near base, all angles obtuse, disc very coarsely punctate-rugose, the punctures more thickly placed than in *A. scutellare* Pase. or *A. pilosum* Pase., the rugosity consisting of smooth sub-vermiculate ridges, chiefly conspicuous towards base, foliate margins not differentiated from disc save by less coarse sculpture and transverse ridges.



*Scutellum* smooth, broadly triangular.

*Elytra* oblong-ovate, seriate, foveate-punctate; with rows of large punctures, somewhat uneven in size, becoming still larger—with a tendency to confluence—towards sides; intervals raised and crenulate, the lateral intervals—from the 6th outwards—subcostate, the intervals bearing scattered setae, more numerous at sides; post-intercoxal process truncate, prosternum, epipleurae and femora punctate, the punctures less coarse than on upper surface, abdomen finely punctate. *Dimensions*: 15 x 6 mm.

*Hab.*—Wyreema, Queensland. (O. W. Tiegs).

A single ♂ specimen in the Queensland Museum shows a species that is a close ally of Pascoe's *A. scutellare* in size, form and hairy clothing. The chief difference lies in (1) the much more closely punctured and rugose pronotum, (2) the quite different and unique elytral sculpture; besides the colour in which it is the most brilliant of the genus. Type in the Queensland Museum.

SEIROTRANA NODICAUDA, n. sp.

Elongate, parallel, bronze, nitid, glabrous.

*Head* irregularly punctate, forehead with some smooth spaces and a few large round punctures, base and clypeal depression with close, smaller punctures, extreme base finely pustulose; antennae sub-moniliform, joint 3 little longer than 4, apical joint ovate-acuminate.

*Prothorax*: apex arcuate-emarginate, anterior angles acute, base feebly bisinuate and about as wide as apex; posterior angles also acute, but wider than the anterior; sides very slightly arcuately enlarged on anterior half and feebly sinuate near base; extreme margin fine and feebly undulate; disc irregularly punctate, with larger foveate punctures scattered amongst a closer system of minute puncturation, the foveate punctures smaller towards sides; a medial channel indicated on front half.

*Scutellum* transverse, minutely punctate.

*Elytra* of same width as prothorax at base, sides parallel to apical third, disc with surface uneven, some irregular tumours taking the place of the usual longitudinal nodules, giving rise to the occasional interruption of the series of large round punctures—these rows, as usual, in pairs; the intervals quite impunctate and nitid; the apical declivity showing large oval nodules (about 6 on each apex). Epipleurae and episterna coarsely, abdomen very finely, punctate. *Dimensions*: 9 x 4 mm.

*Hab.*—Stanthorpe, South Queensland. (Von Wiedt).

A single example in the Queensland Museum is quite distinct from any others of the genus by its combination of small size and curiously sculptured elytra. The surface is not as in *S. parallela* Germ. (and many others), but the feeble elevations are diagonal or sub-vermiculate, except towards apex, where the oval nodules are even larger than the corresponding ones in *S. parallela*. Type in Queensland Museum.

LICINOMA SUB-CANALICULATA, n. sp.

Elongate oblong, nitid, bronzy black, antennae and tarsi piceous.

*Head* coarsely punctate, clypeus arcuately hollowed out in front, its sides oblique, rhomboidal frontal impression well marked and limited in front by deep sulcus; antennae moniliform—the apical joint moderately larger (much smaller than in *L. nitida* Fasc.).



*Prothorax* longer than wide, truncate at apex and base, widest in front of middle, sides lightly rounded, scarcely sinuate behind, anterior angles blunt, posterior widely obtuse; disc rather sparsely and coarsely punctate with a few foveae; medial line shallow, more or less clearly impressed but not continuous to front margin and terminating near base in a shallow transverse impression.

*Elytra* wider than prothorax at base, subparallel for the greater part, shoulders distinct though rounded; striate punctate, the striae deeply impressed, seriate punctures round and uniform, intervals with a single line of almost microscopic punctures, the 3rd and 5th each with two large setae; epipleurae coarsely, abdomen finely punctate. Posterior tarsi with 1st joint shorter than claw joint. *Dimensions*: 9-10 x 3 mm.

*Hab.*—Victoria: Mount Macedon (C. Deane and J. E. Dixon) and Gisborne (J. E. Dixon), Gippsland (J. E. Dixon), Jamieson (H. J. Carter).

Seven examples under examination. Since publishing my revision of the genus (These Proc., xlv., 1920, p. 237) I could not resist a lingering doubt that the above species might be *L. nitida* Pasc. on account of its habitat, so sent a specimen to Mr. Blair for careful comparison with Pascoe's type. Mr. Blair, however, corroborates his former opinion and writes "Your *Licinoma* from Mt. Macedon . . . is certainly different from Pascoe's Mt. Macedon species. Cf. shape of thorax, particularly posterior angles." I can only conclude, therefore, that either Pascoe's locality is wrong, or—what is much more likely—that the ranges of the two species overlap. I have *L. nitida* (= *victoriae* Blkb.) from Dandenong Ranges, Mt. Buffalo, Wandin, Olinda Creek, and Gippsland in Victoria and from Mt. Kosciuszko and Eden in N.S. Wales.

*L. sub-canaliculata* is clearly separated from *L. nitida* by (1) darker colour of surface and antennae, (2) longer and more coarsely punctate pronotum, the latter also longer and channelled, (3) elytra more deeply striate, its intervals more finely punctate. Pascoe's words "antennae ferruginous, the last joint large and as long as the two preceding together" are entirely inapplicable to my species.

From *L. meridiana* Cart.—to which it is more closely allied—it differs in the truncate apex and more rounded sides of prothorax, with its disc more sparsely punctate; elytral striae less deep, seriate punctures more widely separate (in *L. meridiana* they are very close, while the interstices appear quite smooth). Types in Coll. Carter.

#### BRYCOPIA CAPILLATA, n. sp.

Ovate, dark bronze, nitid, apical joints of antennae red, whole upper surface clothed with long upright hairs.

*Head* coarsely and closely punctate, antennae moniliform, apical joint considerably larger than the rest.

*Prothorax* subcordate, truncate at base and apex and about equally wide at each, widest before the middle, anterior angles obtuse, sides crenulated, rather widely rounded on anterior half thence, at first obliquely, later sinuately narrowed before the small subrectangular posterior angle—this forming a small tooth more or less outwardly directed; disc convex, coarsely, not very closely, punctate (more densely so towards the sides) and slightly rugose, without foveae or medial line; sides without clear foliation, extreme margins finely crenulate.

*Scutellum* large, sentiform, with a few large punctures.

*Elytra* slightly wider than prothorax at base, shoulders rather squarely rounded; striate-punctate, the seriate punctures close, round and regular—of the

same size as those on pronotum,—alternate intervals (3rd, 5th, 7th) and suture slightly raised, each interval with a single row of punctures, not much smaller than those in the series, each bearing a hair. Legs also with long hairs; episterna coarsely, abdomen (at sides) more finely punctate; hind tarsi with basal joint shorter than the rest combined. *Dimensions*: 6 x 2.3 mm.

*Hab.*—Stanthorpe, South Queensland. (Von Wiedt).

I have examined seven examples, sent from the Queensland Museum, of this very distinct little species. It is nearest to *B. pilosella* Fasc. and *B. comata* Cart., but is readily separated from the former by its darker colour (especially its dark appendages) and unusual elytral sculpture. *B. comata* Cart. is quite black, with elytral intervals convex and wrinkled. The small but distinct tooth at hind corners of prothorax will also serve to differentiate *B. capillata* from both. Types in Queensland Museum.

CHALCOPTERUS SCUTELLARIS, n. sp.

Elongate oblong, sub-cylindric, whole upper surface (except head) dark peacock blue—elytra sometimes green or purplish-green or coppery at sides, scutellum coppery, antennae, legs and underside black, tarsal clothing red.

*Head* punctate, eyes separated by the length of 1st antennal joint; antennae with joint 3 not as long as 4-5 combined, 4-10 subequal in length but successively widening.

*Prothorax* truncate at apex, feebly sinuate at base, widest behind, thence gently narrowing to apex; surface finely, closely punctate, with smooth medial space on basal half.

*Scutellum* brightly metallic, smooth.

*Elytra* little wider than prothorax at base, about twice as long as wide; seriate-punctate, intervals flat; seriate punctures round, small and close in 1st row, larger and more widely separated towards sides; intervals very finely and closely punctate; underside finely striolate. *Dimensions*: 11 x 4 $\frac{3}{4}$  mm.

*Hab.*—Kimberley, N.W. Australia (Mr. Crawshaw), Cairns, Queensland, and Northern Territory.

Near *C. gracilis* Blackb. in form and sculpture, but distinguished by its black abdomen and the bright metallic scutellum which is shown in the nine examples under examination. Types in Coll. Carter.

CHALCOPTERUS TORPEDO, n. sp.

Narrowly elliptic, uniformly dark blue above, black beneath, antennae brownish, legs red—the knees and tarsal claws obtuseate; tarsal clothing pale red.

*Head* closely and finely punctate, eyes widely separated (intervening space the length of 3rd antennal joint); antennae, joint 3 as long as 4-5 combined, 4-11 short, subequal in length but moderately and successively widened.

*Prothorax* unusually convex, a little arched at sides, these converging towards apex, hind angles rectangular from above; disc uniformly, closely punctate, with a distinct smooth, medial line, slightly raised in parts; two triangular basal foveae.

*Scutellum* triangular, smooth, metallic.

*Elytra* scarcely wider than prothorax at base, sub-cylindric for basal two-thirds, thence finely narrowed to apex; striate-punctate, the striae shallow; seriate punctures round and large (as in *C. iridicolor* Bless. but more closely set), both

punctures and striae continuous to, but becoming finer at the apex; under a lens the slightly convex intervals seen to be closely, very finely, punctate. *Dimensions*: 10 x 4 mm.

*Hab.*—North Queensland. (Mr. H. Dodd).

A single example is in size and form not unlike the former (*C. scutellaris*), but clearly distinct in its striate elytra, larger seriate punctures and red legs. It is quite unlike any of the other red-legged species. Type in Coll. Carter.

#### AMARYGMUS METALLICEPS, n. sp.

Elongate elliptic, convex, whole upper surface (including head) brilliantly metallic, the prevailing tints being head green, pronotum purplish, elytra green with iridescent purple gleams, golden at suture; underside and legs black, tarsal clothing dark.

*Head* clearly, uniformly punctate, eyes widely separated by a space of the diameter of one eye; antennae with joint 3 scarcely longer than 4; joints 4-7 subequal in length, slightly widening outwards, other joints wanting.

*Prothorax* short, transverse, sides straight, narrowing from base to apex, posterior angles acute (from above); disc finely and closely punctate.

*Scutellum* punctate.

*Elytra* a little wider than prothorax at base; seriate-punctate, seriate punctures close, round and regular (somewhat as in *C. purpureus* Germ. but smaller); intervals flat, finely and closely punctate. *Dimensions*: 7.9 x 3½-4 mm.

*Hab.*—W. Australia: Cue (H. W. Brown); South Australia: Tareoola and Cleve.

Three examples, one from each of the above localities, are, I think, conspecific, though the Cue example (the type) has rather finer seriate punctures, and the Cleve example has its lateral elytral intervals sub-convex. Type in Coll. Carter.

*N.B.*—*Amarygmus tarsalis* Pasg. has been lately identified (by comparison with type) from Wauchope and Munanbang, N.S. Wales.

#### CISTELIDAE.

*Chromomoea mastersi* MacL. This is a good species, quite distinct from *C. deplanchei* Fauv., though given as a variety of that species in my Revision (Proc. Roy. Soc. Viet., 1915, p. 60).

The following differences may be noted:—

	<i>C. deplanchei.</i>	<i>C. mastersi.</i>
<i>Antennae.</i>	Black, joints 4-9 pear-shaped, successively increasing, 10 similar but smaller; 11 finely pointed.	Basal joints (at least) yellow or red; joints 4-10 linear, 7-10 gradually thinner but of equal length, 11 about ¾ length of 10.
<i>Prothorax.</i>	As wide as long.	Longer than wide.
<i>Elytra.</i>	Intervals flatter.	Intervals more convex and punctulose.
<i>Legs.</i>	Black.	Red.

*C. mastersi* is not uncommon near Sydney. I have beaten it from *Casuarina* foliage, and besides the types from Gayndah, there are in the Australian Museum examples from Bombala, N.S.W., and N. Queensland.

#### CHROMOMOEA TIBIALIS, n. sp.

Elongate, glabrous; head, elytra, underside and appendages pale red; prothorax reddish, with medial area slightly infuscate.

*Head* densely and finely punctate, eyes large and prominent; antennae with joints 3-8 elongate linear, successively shorter and wider, 9-10 triangularly widened, 11 as long as 10, acuminate.

*Prothorax* longer than wide, truncate at base and apex, sides nearly straight, a little narrowed in front, hind angles rectangular; whole disc fine and confluent punctate.

*Elytra* navicular, wider than prothorax at base, striate-punctate; the seriate punctures comparatively large, close and regular, the intervals sub-convex—with a line of sparse punctures on each—with an occasional extra puncture: sternal area closely, the episterna very densely, punctate; abdomen sparsely so. Post-tibiae enlarged exteriorly into a wide triangular lobe, inner surface hollowed. *Dimensions*: 7 x 2 mm.

*Hab.*—Cairns, Queensland.

A single male example, from a forgotten source, was amongst my series of *C. mastersi* MacL. from which it is clearly distinguished by (1) colour, (2) longer and finer antennal joints, (3) more densely punctured pronotum, (4) glabrous surface and (5) tibial sex character. Type in Coll. Carter.

#### HOMOTRYISIS AEREA, n. sp.

Elongate, obovate, whole body nitid, coppery bronze, glabrous, antennae and tarsi red.

*Head* finely, not densely, punctate; eyes very large, bordered within by a sulcus, separated by a space less than (in ♂), or equal to (in ♀) the width of one eye; antennae linear, each joint lightly thickened at apex, joints 3-11 successively shorter, 11 lanceolate.

*Prothorax* subquadrate in ♂, more widened in ♀, apex truncate (or feebly advanced in middle), front angles rounded, base truncate, posterior angles rectangular, sides in ♂ nearly parallel, in ♀ clearly rounded; disc with light sparse, shallow punctures, larger at base, obsolescent towards apex, a lunate transverse depression near base, a smaller transverse depression near apex (sometimes indicated only by two foveae) and (in general) two small central foveae.

*Scutellum* semicircular, smooth.

*Elytra* considerably wider than prothorax at base, shoulders rather square, sides gradually widening to near apex; striate-punctate, each elytron with 9 striae, besides a short scutellary stria; the punctures round, deep and fairly uniform, the series irregularly interrupted by a raised connection between the intervals, the latter impunctate and nearly flat, except at sides. Meso- and metasternum with a few coarse punctures; abdomen striolate; fore-tibiae of ♂ dentate in the middle, within; the middle and hind-tibiae lightly curved; in ♀ all tibiae unarmed and straight. *Dimensions*: 15-16 x 5-6 mm.

*Hab.*—Port Macquarie (Dr. E. W. Ferguson) and Eungai (T. G. Sloane), New South Wales.

Five specimens examined (3 ♂, 2 ♀). It is readily distinguished from the rest of group i. in my tabulation (Proc. Roy. Soc. Vict., 1915, p. 79) by its brilliant bronze, glabrous surface and the tibial tooth in the male. Types in Coll. Carter.

#### HOMOTRYISIS AENESCENS, n. sp.

Elongate obovate, brownish bronze, subnitid, tarsi (also tibiae in male only) reddish.

*Head* closely punctate (more finely and densely on clypeus than on forehead), eyes very close in ♂, much more widely separated in ♀, antennae lineate, joints 3-11 successively shorter than preceding.

*Prothorax* subarcuate at apex (feebly advanced in middle), feebly bisinuate at base, sides slightly rounded on front, half-arcuate narrowed in front—nearly straight on basal half; posterior angles (seen from above) rectangular, disc closely and strongly (not contiguously) punctate, with short, pale, sparse, renubent hairs; medial depression well marked in ♂, feebly indicated in ♀; a wide transverse depression near base and 2 shallow discal foveae.

*Scutellum* arcuate-triangular, closely punctate.

*Elytra* obovate, wider than prothorax at base, and  $3\frac{1}{2}$  times as long; humeri tumid; punctate-striate, each with 8 striae—besides a short scutellary stria and a lateral row of punctures; the seriate punctures large and rectangular on basal half, separated by transverse cancellations, but gradually obsolescent towards apex; intervals coarsely punctate, the interstitial punctures each bearing a short hair similar to those on pronotum; sternum coarsely, abdomen finely punctate; protibiae of ♂ widened (subdentate) on inside. *Dimensions*: ♂. 15 x  $5\frac{1}{2}$ ; ♀. 16 x 6 mm.

*Hab.*—Stanthorpe, Queensland (Von Wiedt).

A pair of this fine species sent by Mr. Haeker, shows a species distinct in colour, sculpture and sexual characters from all its congeners—except *debilicornis* Haag.—and from *debilicornis* by larger size, different antennae and sexual characters. Compared with *H. cistloides* Newm. the eyes of ♂ are much closer, the pronotum is more closely and finely punctate, the seriate punctures of elytra are much larger, the interstices more convex and more coarsely punctate. Types in the Queensland Museum.

#### CERAMBYCIDAE.

*Piesarthrius (Anotisis) frenchi* Blackb. Mr. John Hopson has recently found this fine longicorn breeding in *Diospyros Cargillia* \* in the dense brush of the mountain gullies near Eccleston, Allyn River, New South Wales. Originally described from Queensland, its occurrence as far south as the Hunter River basin is noteworthy. As the male only was known to Blackburn, I append a description of the female, generously given me together with its mate by Mr. Hopson.

♀. Antennae extending to four-fifths of the body, all joints sub-linear, 1-10 expanded at apex, 5-10 subdentate at interior apex, 3-10 subequal, 2nd longer than 3rd, constricted and knobbed at base, 11th cylindrical, as long as but narrower than 10th, other characters as in ♂. *Dimensions*: 34 x 10 mm.

The male specimen exactly corresponds in size with that of the described type, *i.e.* 32 x 8 mm. (16 x 4 lines).

\*For the determination of this tree I am indebted to my friend, Mr. J. H. Maiden, F.R.S., of the Sydney Botanic Gardens. Mr. Hopson informs me that the local name is "Black Plum," and that bullock drivers use it for whip handles. It seldom grows beyond 3-4 inches in diameter.)