

AUSTRALIAN AND NEW GUINEA COLEOPTERA.

NOTES AND NEW SPECIES. NO. III.

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

(Five Text-figures.)

[Read 29th August, 1934.]

Fam. BUPRESTIDAE.

DIADOXUS ERYTHRURUS White, var. SEPTENTRIONALIS, new var. (or sp.).

Mr. F. E. Wilson has sent, for diagnosis, two examples (♀) of a *Diadoxus* from North Queensland that varies from the typical form as follows: Orange-red markings at the latero-basal area of pronotum in place of the usual testaceous maculae, the post medial pair of subfasciate maculae tinged on the outside with orange-red. The green markings at the base of elytra are continuous to the sides, and the dark area on the apical half is much greater, the testaceous subfasciae being considerably wider apart. The ventral segments are a darker brown than in 10 examples of *D. erythrurus* now before me. I can find no structural or sculpture distinction. There are faint signs of the red elytral markings on some examples of *erythrurus*. Type returned to Mr. Wilson.

Note.—Under the description of *D. jungi* Blackb. the author states that "in *erythrurus* the apical ventral segment is trispinose in both sexes". This is not so. In all undoubted ♂ examples before me the apical segment is truncate, the external corners are more or less dentate, not spinose.

MELOBASIS RADIOLA, n. sp.

Elongate-oval. Head golden and glabrous, prothorax golden copper with wide green vitta on each side of middle. Scutellum and the suture for short distance behind it golden. Elytra peacock-green, darker on sides and apex, with curved, pale golden vitta radiating from the shoulder, narrowing and obsolescent on apical third, following line of subsutural carina. Underside and femora metallic gold, glabrous, antennae, tibiae and tarsi blue.

Head densely minutely punctate, eyes a little prominent. *Prothorax* at apex slightly narrower than head, apex and base lightly bisinuate; widest at base, sides nearly straight, very lightly, arcuately narrowed to apex, medial line indicated near base, disc very finely and densely punctate, punctures slightly larger and less dense at sides, with very fine transverse striae on postmedial area. *Scutellum* transversely ovate, very minutely punctate and longitudinally bisected by fine sulcus. *Elytra* subparallel to apical third, thence narrowed and separately rounded at apex, margins of apical third clearly denticulate; finely striate-punctate, intervals densely set with smaller punctures than those in striae, a defined subsutural depression limited by a, lightly defined costa. Underside closely punctate, the punctures on metasternum coarser than those on prosternum,

those on abdomen fine and subelongate, except on apical segments, here round and larger. Apex of abdomen with subcircular excision, limited by strong spines. *Dim.*, 10×4 mm.

Hab.—South Queensland: Fletcher (E. Sutton).

A single example, probably ♀, can only be confused with *M. iridicolor mihi*. Mr. Wilson has compared it with the type of *iridicolor* in the National Museum and finds abundant distinctions as follows:

<i>iridicolor</i>	<i>radiola</i>
<i>Form</i> narrower	more robust
<i>Head</i> pubescent	glabrous
<i>Pronotum</i> with smooth medial line	medial line indistinct except near base
<i>Scutellum</i> minute and longitudinal	much larger and transverse
<i>Elytra</i> clearly seriate-punctate	seriate punctures scarcely distinct from interstitial

Colour differences as stated in descriptions. Holotype in Coll. Wilson.

STIGMODERA (CASTIARINA) BROOMENSIS, n. sp. Text-fig. 1.

Oblong-ovate; head, prothorax, scutellum, underside and legs peacock blue, prothorax with wide orange border, the elytra orange-yellow, with the following markings dark blue: a triangular patch surrounding the scutellum, and produced along the suture, terminating at basal third in an enlarged oval, a nearly straight postmedial fascia widened at suture, not extending to sides, an apical patch narrowly connected along suture with the fascia.

Head deeply excavate and channelled; punctate. *Prothorax* widest considerably behind middle, thence abruptly narrowed to base and gradually to the apex, a well marked basal fovea connected with a clearly cut medial line on basal third, surface rather irregularly punctured. *Elytra* perceptibly enlarged at shoulders, feebly so behind middle, apices lunate and bispinose, subapical margins strongly denticulate; striate-punctate, striae punctures well marked, intervals convex throughout, strongly so towards apex, and themselves closely punctate. Under-side very lightly pubescent and punctate. *Dim.*, $10-11 \times 4$ mm.

Hab.—Western Australia: Broome (H. W. Brown).

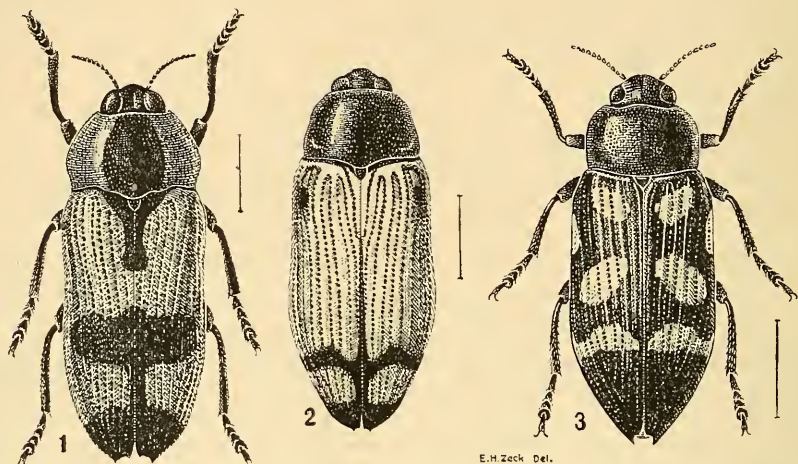
A species first diagnosed as a variety of *S. gibbicollis* Saund., but further comparison with a series of the latter shows the following, apparently constant, differences: (1) More cylindric form, (2) wider lateral band to prothorax (the light and dark colours forming three vittae of subequal width), (3) narrow scutellary mark instead of a wide basal band, (4) short and narrow postmedial fascia (leaving at least two clear intervals at sides), (5) different elytral sculpture, apical teeth more developed. (In *gibbicollis* intervals flat, except at apex.) Holotype in Coll. Carter.

STIGMODERA (CASTIARINA) EBORICA, n. sp. Text-fig. 2.

Oblong-ovate; head, prothorax, underside, appendages and elytral markings green, the first three tending to golden, the last two to olive. Elytra testaceous, with wide basal border, shoulder mark (extending from base to behind shoulder) narrow, zig-zag, preapical fascia extending to, and widened at, sides and suture, narrow, straight apical mark, scutellar region and suture itself narrowly, dark green.

Head excavate and channelled, finely, densely punctate. *Prothorax*: apex and base bisinuate, anterior angles acute, posterior rectangular, widest at middle,

sides lightly arcuate, disc closely and finely punctate, medial line defined throughout, with a terminal fovea behind and a foveate depression near each hind angle. *Elytra* subparallel, very lightly enlarged at shoulder, little compressed behind them, apices with a moderately wide lunation, the sutural angle scarcely defined;



Text-fig. 1.—*Stigmodera* (*Castiarina*) *broomensis*, n. sp. Text-fig. 2.—*Stigmodera* (*Castiarina*) *eborica*, n. sp. Text-fig. 3.—*Stigmodera* (*Castiarina*) *insculpta*, n. sp.

margins entire, striate-punctate, the seriate punctures distinct, intervals laevigate, alternate intervals clearly raised and convex. Underside glabrous, finely and closely punctate. *Dim.*, 11–11.5 × 4–4.2 mm.

Hab.—N. S. Wales: Ebor (F. E. Wilson).

Mr. Wilson captured two examples in December, 1933. It is clearly distinct from, though, in colour, near *S. domina* Cart., from which it differs markedly in its smaller size, narrower and more parallel form, and the subcostate and laevigate alternate intervals of elytra. Holotype in Coll. Wilson.

Note.—Mr. C. F. Deuquet writes that he has taken several of this species at Ebor and considers it a variety of *S. rotundata* Saund. But the following differences are apparent, besides the distinctions of colour and pattern: *Pronotum*: Discal punctures larger and more widely separated. The base less strongly bisinuate. *Scutellum* larger.

STIGMODERA (*CASTIARINA*) *LAEVINOTATA*, n. sp.

Elongate-oblong; head, prothorax, antennae and scutellum bronzy-black, elytra red with the suture (wholly or in part) and extreme apex black, underside blue-black, legs blue.

Head deeply excavate and channelled, lightly punctate. *Prothorax*: apex lightly arcuate, anterior angles produced and deflected, base bisinuate, posterior angles subacute, widest at base, sides converging to front with very slight curvature; surface strongly and rather closely rugose-punctate with a wide medial line and a transverse line a little in front of middle forming a raised laevigate cross. *Elytra* forming an obtuse angle at junction with prothorax, subparallel for the greater part, apices with shallow bidentation, a little divergent

near apex, margins everywhere entire, striate-punctate, alternate intervals costate, seriate punctures large, costae sublaevigate. *Prosternum* finely and sparsely, *metasternum* more coarsely, punctate. *Dim.*, 15×4.7 mm.

Hab.—N. S. Wales: Bogan River (J. Armstrong).

Three examples (2 ♂, 1 ♀) have lately been sent by this keen young entomologist, the two males taken on Wilga (*Geijera parviflora*) flowers, the female on Eucalyptus flower. It is an ally of *S. impressicollis* MacL. and *S. latipes* Cart. in the elongate form, red and costate elytra, but has not the uneven deeply impressed pronotum of these species, the disc being nearly flat except for the punctures and the embossed laevigate cross, which easily distinguish the species in Sect. A of my tabulation of 1931 (*Austr. Zool.*). There are some colour differences also in the three species mentioned, the suture being more or less black (wholly so in one example), as also the extreme tip of apices. The figure of *latipes* (These Proc., 1924, p. 22, f. 3) would almost serve for this, save for the pronotal impressions, the wide tibiae and the absence of dark suture. Holotype in Coll. Carter.

STIGMODERA PRATENSIS, n. sp.

Oblong-oval, rather flat; head, prothorax, underside, legs and ground colour of elytra metallic green, the mouth and disc of pronotum golden-green, underside dark green, somewhat obscured—especially on prosternum—by dense silvery pubescence; elytra dark clear green with yellow markings as follows: a round spot near middle of each elytron, a short, narrow, undulate, transverse line on apical fourth, extending neither to suture nor sides, and a minute spot on side at the posthumeral swelling, extending over epipleura (on the right-hand elytron this spot only on the epipleura).

Head with shallow excavation and channel, closely and finely punctate. *Prothorax* widest slightly behind middle, apex lightly bisinuate, little advanced in middle, base also feebly bisinuate, all angles obtuse, sides nearly straight behind, arcuately narrowed to apex; disc rather flat, subexplanate towards sides, medial line indicated by shallow, irregular depression, only clearly defined near base; latero-basal foveae unusually large; surface closely, not densely punctate, the punctures larger at sides and base. *Scutellum* triangular, longitudinally depressed and channelled. *Elytra* as wide as prothorax at base, widened at shoulder, sides nearly straight, entire throughout, apices with wide, shallow bidenticulation; striate-punctate, intervals impunctate and rather sharply carinate except in the region of the medial yellow spot, the two lateral carinae subcrenulate; underside densely pubescent. *Dim.*, 19×7 mm.

Hab.—Tasmania: National Park (D. McBurney).

A unique example, probably female, in the Australian Museum, taken in February, 1933, is the only one I have seen, and is a notable addition to the Tasmanian Buprestidae. It seems clearly distinguished from its nearest ally, *S. virginea* Erichs., by the following tabulation (under *S. insculpta*), besides different elytral markings.

Holotype, K.66904, in the Australian Museum.

STIGMODERA (CASTIARINA) INSCULPTA, n. sp. Text-fig. 3.

Elongate-ovate; head, prothorax, underside and legs bright metallic green, elytra green, with the following markings yellow; two oval, postbasal spots, two latero-subhumeral spots, two oval medial spots and an arcuate postmedial fascia,

interrupted at suture and slightly extended at margins; glabrous above and below (traces of pubescence only at sides of prosternum).

Head canaliculate and lightly excavate between eyes, finely, closely punctate. *Prothorax* sub-convex, apex rather strongly bisinuate, and produced in middle, anterior angles depressed and wide, base nearly straight, excisions scarcely evident, hind angles subrectangular, widest a little in front of middle, sides arcuately (but little) narrowed to apex, almost straight to the base; a little explanate laterally, with rather large, deep depressions near hind angles; disc finely, evenly punctate, medial sulcus well defined near apex and on basal half, with smooth line terminating in a small basal fovea. *Scutellum* small, triangular, laevigate. *Elytra* obliquely widening to shoulder, lightly compressed behind it, apices with wide oval lunation bounded by strong external and short internal spines, margins entire; striae-punctate, striae punctures regular and well defined, intervals sharply carinate, the first four close and uniform, 5th and 6th more strongly raised and wider apart, between these an almost obsolete interval arising behind middle, the wider interstices irregularly punctate, elsewhere the intervals laevigate. *Pro-* and *metasternum* rather strongly and evenly punctate, abdomen very finely so. *Dim.*, $12 \times 4\frac{1}{2}$ mm.

Hab.—Tasmania: Great Lake district (Critchley Parker).

Another unique having for its nearest ally *S. virginea* Erich., but clearly separated by (1) the six sharper raised intervals (in *virginea* only four, and these less prominent), (2) the wider and more strongly punctate prothorax, (3) the wider and bispinose apical lunation. Holotype in British Museum.

N.B.—In These PROCEEDINGS, 1919, pp. 137–139, I enumerated the fourteen species of this genus known from Tasmania and tabulated the five species with metallic green coloration, likely to be confused. The present paper adds three to the total, of which two belong to this group. The three having carinate intervals may be separated as follows:

1. *Elytra* with alternate intervals raised *virginea* Erich.
Elytra with all intervals carinate 2
2. Size large, 19×7 mm., underside pubescent *pratensis*, n. sp.
Size small, $12 \times 4\frac{1}{2}$ mm., underside glabrous *insculpta*, n. sp.

STIGMODERA (CASTIARINA) RUDIS, n. sp.

Oblong-obovate; head, pronotum, abdomen, legs and scutellum dark blue—the pronotum almost black—prosternum with subtriangular basal area violaceous, its remaining part red; elytra brick-red, having basal margin, suture near scutellum, and each with two narrow elongate spots black, these placed en echelon behind the shoulder, the first, rather undefined, on inside of 3rd costa, the 2nd behind this, between 3rd and 4th costae.

Head rather flat, canaliculate but not excavate in middle, closely and rather coarsely punctate, with sparse, upright, silvery hair. *Prothorax*: apex arcuate, anterior angles acute and produced, base feebly bisinuate, the usual excisions minute, hind angles rectangular, widest near middle, sides thence nearly straight (feebly sinuate) to base, arcuately narrowed to apex; disc lightly convex, depressed and explanate laterally, an ill-defined but distinct medial sulcus traceable throughout; surface densely and coarsely punctate, subrugose at sides and base, the punctures forming sharply crenulate margins; sparse, long, upright hairs over greater part of surface. *Scutellum* transverse, longitudinally depressed in middle, laevigate. *Elytra* slightly widened at shoulders, widest behind middle,

a little divagate at apex, with oblique lunation each terminating in a single tooth, apical margins entire, each with four strong, smooth costae, besides a narrower, short scutellary costa, continuous with lightly raised suture; intercostal spaces with three rows of large, somewhat irregular punctures (sometimes coalescing), surface glabrous. *Prosternum* and *metasternum* with moderately large, close punctures, abdomen sublaevigate, glabrous and nitid. *Dim.*, $18 \times 7\frac{1}{2}$ mm.

Hab.—Tasmania: Great Lake (Critchley Parker).

A single female example, sent from the British Museum, has the following attached note by its captor: "This beetle provides a lot of food for the trout. It flies about at dusk and alights on the water. Taken Great Lake, Jan., 1934." It is strikingly distinct by colour, clothing and sculpture from any recorded species, though nearest in form to *S. decipiens* Westw. The latter, however, has only three elytral costae, besides the scutellar, while the intercostal area is without the large punctures of *rudis*. The long hair on head and pronotum, with glabrous underside, and the bicoloured prosternum are peculiar features. The faint indications of black along suture suggest that other examples may have this to a more marked extent. It adds another interesting species to the Coleoptera of Tasmania. Holotype in British Museum.

STIGMODERA (CASTIARINA) ERYTHROPTERA Boisd. subsp. NIGROTERMINATA (? n. sp.).

Differs from the widely distributed *erythroptera* by (1) the apex narrowly covered with black marking, instead of the usual short preapical fascia; (2) narrower form, especially of the prothorax, this very lightly rounded; (3) elytral costae less raised; and (4) underside much less strongly punctate.

I have been in doubt as to considering this a distinct species. It is, at least, a good example of a constant geographical variety, i.e., subspecies. Fourteen examples are before me, of which eleven are from the Bogan River, taken by Mr. J. Armstrong, on *Geijera parviflora*, the other three taken by myself in the Coonabarabran district, N.S.W., on *Leptospermum*. Type in Coll. Carter.

STIGMODERA (THEMOGNATHA) PICTIPES Blkb.—Mr. Clark has recently sent me, for examination, examples of this, including one labelled type, besides a variety with blue elytra. This type shows the following discrepancies from the author's description: (1) dimensions in description are "Long. 14 l., lat. $5\frac{1}{2}$ l." (31×12 mm. as measured by Blair); dimensions of National Mus. type, 35×15 mm.; (2) type as described is "Mas", whereas the Melbourne type is ♀.

In Mr. Lea's useful paper on the Blackburn types, that of *S. pictipes* is said to be in the British Museum. This is possibly the male said to have been presented to him (Blackburn), the female being returned to Mr. French. The variety with blue elytra is another case of the variation noted in my Revision of the genus (*Trans. Roy. Soc. S. Aust.*, 1916, p. 81, also *Proc. Linn. Soc. N.S.W.*, 1932, p. 104). I propose the name *pictipes* var. *pavo* for this.

S. SPENCEI L. and G.—A ♂ in the National Museum, from Rockhampton, Q., has the pronotum a golden bronze, the elytra without the usual premedial dark fascia, but is, I am confident, conspecific with a wider ♀ from Condamine, Q., and those with the typical darker pronotum from northern N.S.W. (Trial Bay and Wardell). The sexual coloration noted above is found in many other species, e.g., *duboulayi*, *conspicillata*, *imperialis*, *vitticollis* and others.

TORRESITA CUPRIFERA Kirby var. LIMBATA, n. var.

An example from Forest Reefs, N.S.W., in the National Museum shows striking differences of colour and size from the other named varieties, though without distinction of form or sculpture. The head, prothorax and a wide lateral band around the elytra are a fiery copper, the medial area of elytra, underside and legs are blue. *Dim.*, 17×7 mm. Unique, in the National Museum, Melbourne.

Cisseis prasina Cart.—Mr. Armstrong has sent this, taken in fair quantity, associated with *C. marmorata* L. and G., on the Myall acacia in the Bogan River district. All the examples of *prasina* are male, while all the *marmorata* are female. I find this to be the case in a long series of the latter, so have little doubt that *prasina* Cart. is the ♂ and *marmorata* L. and G. the ♀ of the same species. This provides an extension of a common sexual coloration in the genus.

CISSEIS AUROCYANEA, n. sp.

Oval; head, prothorax and underside coppery-bronze, elytra golden, with post-scutellary lozenge, the suture widely, postmedial fascia and apex cyaneous, the last fiery coppery at sides; appendages dark bronze.

Head convex (seen from above), a small depression near clypeus, finely punctate. *Prothorax*: apex lightly, base strongly bisinuate, sides lightly, arcuately narrowed to apex, widest about middle, posterior angles subrectangular, lateral carinae rather widely separated and subparallel for the greater part, meeting at base; disc finely strigulose, with slight depression on each side near base. *Scutellum* transversely ovate. *Elytra* (5×3 mm.) lightly convex, sides sinuate, widest a little behind middle, lightly compressed behind shoulders, apical margins very minutely serrulate, surface finely scalose-punctate. *Underside* finely strigulose, front margin of prosternum bisinuate, hind tibiae fringed with a single row of fine bristles (not in fascicles). *Dim.*, 7×3 mm.

Hab.—South Queensland; Fletcher (E. Sutton).

A single example sent by this keen collector is unlike any recorded *Cisseis* in pattern, which is somewhat as in *Neospades lateralis* Blkb., but without the white maculae and with larger postscutellar lozenge; the form and sculpture are widely different from that species. The figure of *C. pulchella* (These Proc., 1923, p. 169) comes near it in shape. Holotype in Coll. Carter.

CISSEIS BROWNI, n. sp.

Oblong-ovate, violet bronze above and below; head and parts of underside coppery; pubescent with defined white maculae and scattered fascicles above, rather close silvery pubescence beneath.

Head lightly canaliculate, closely punctate. *Prothorax*: apex and base strongly bisinuate, sides nearly straight, narrow lateral vitta of pubescence at sides, two large foveate depressions near middle, more or less filled with pubescence; disc punctate on apical half, transversely strigose on basal half. *Elytra* with maculae and fascicles as below. Tibiae narrow and straight, hind tibiae without marginal spinules.

Hab.—Western Australia; Dedari (H. W. Brown).

Three examples sent by the above indefatigable naturalist are clearly differentiated from its nearest ally *C. duodecimmaculata* F. by the following detailed comparison.

duodecimmaculata F.

Form ovate obliquely attenuate towards apex.

Colour blue, often coppery on head and raised parts of underside.

Head subglabrous, clearly channelled.

Prothorax: form wider, sides rounded, pubescence limited to lateral vitta, this wide and widening to base, discal foveae vague.

Elytra: pubescence limited to 14 spots, more or less round and clearly defined, 12 discal, 2 posthumeral (the 2 subapical spots more oval than the rest).

Hind tibiae curved and thickened, with 4 or 5 bunches of spinules on exterior margin.

Underside subglabrous, very short pubescence scarcely perceptible, except for defined spots at sides of ventral segments, a spot on edge of prosternum and a large spot on metasternal margin extending to hind coxae.

Dim., 7-11 × 3-5 mm.

Examples from Q'land, N.S.W., Victoria and Western Australia.

Holotype in Coll. Carter.

N.B.—Hope's name *quatuordecimmaculata* is more appropriate than that of the earlier name by Fabricius.

CISSEIS HERONI, n. sp.

Blue-black, with coppery gleams on head, shoulders, suture and apex, lightly concave between eyes, pubescent on epistoma, minutely striolate on forehead.

Prothorax: base bisinuate, sides from above almost straightly converging from near base to apex, with hind angle widely rounded off; lateral carinae evenly arcuate for the greater part, widely diverging from junction at base, bent upward near apex; disc with saddle-like convexity, causing a medial production at apex, minutely transversely strigose. *Elytra* widened at shoulders, convex behind scutellum, apices finely denticulate, with fine pale pubescence more or less arranged in close transverse lines, a wide arcuate, subfasciate, preapical patch more noticeable than the rest. *Dim.*, 5-8 × 2.5-3.5 mm.

Hab.—N. S. Wales: Dorrigo (W. Heron).

Seven examples were sent some time ago by Mr. Heron, who has collected this district so thoroughly. It is nearest *C. pygmaeus* Blkb. in colour and size. The following comparison will distinguish them:

pygmaeus Blkb.

Dim., 4-5 mm. long.

Head rather strongly concave.

Prothorax: sides (seen from above) well rounded, lateral carinae constricted near middle.

browni, n. sp.

elongate, subparallel, gradually narrowed behind.

violet copper, head and pronotum coppery, elytra tending to cyaneous at sides and apex, underside fiery coppery. closely pubescent, lightly channelled.

narrower and longer, sides nearly straight; pubescence besides forming narrow lateral vitta also in two wide lines extending obliquely from near basal excisions towards middle, terminating in two foveate depressions, half-way between sides and centre.

pubescence on 12 defined spots; of these 8 more or less round, the 2 posthumeral spots replaced by small lateral fascicles throughout the length, with similar fascicles scattered over greater part of elytra (2 subapical spots vaguely linear).

straight and narrow, without spinules.

silvery pubescent over whole, large spots on sides of ventral segments, and one on side of metasternum not extending to hind coxae.

9-10 × 3 mm.

Dedari, W.A.

heroni, n. sp.

5-8 mm. long.

lightly so.

converging obliquely to apex, bent upward near apex.



pygmaeus Blkb.*heroni*, n. sp.

Elytra: pubescence irregular, with 2 more or less in transverse lines, with one parallel, preapical fasciae. wide fasciate patch.
 Holotype and Allotype in Coll. Carter.

CISSEIS MYALLAE, n. sp.

Narrowly ovate, attenuate behind; bronze, with minute adpressed pubescence on base, wide medial and preapical areas of elytra, with coppery gleams on head and some tendency to cyaneous colour on elytra.

Head closely punctate, sulcate in middle. *Prothorax* gradually narrowing from base to apex, base strongly sinuate, lateral carinae sinuate, intercarinal area widest near base, then rather abruptly narrowed; disc subglabrous, sparse short hair scarcely evident, covered with the usual undulate striolae. *Elytra* of same width as prothorax at base, very lightly compressed behind shoulders, attenuate at apex, apical margins minutely denticulate. Underside nitid coppery, evenly clothed with fine short hairs. *Dim.*, 4.6 × 1.5 mm.

Hab.—N. S. Wales: Bogan River (J. Armstrong).

The fine veil of pubescence is characteristic. The preapical fascia is widened at suture into an oval patch produced backwards. Five examples sent by my friend are in size and form somewhat near *C. subbifascialis* Cart., but differ in colour and in the absence of the long white pubescence of that species, as well as in the form of the lateral carinae, its smaller size and less parallel outline. Mr. Armstrong writes that *C. bifascialis* occurs on the River Wilga (*Acacia stenophylla*), while the above species frequents the Myall (*Acacia pendula*). Holotype in Coll. Carter.

CISSEIS NITIDIVENTRIS, n. sp.

Elongate-ovate; nitid coppery bronze above and below, with silvery pubescence at sides of prothorax, sparse on elytra, beneath only at lateral margins of pro- and metasternum and of ventral segments. Without sexual coloration.

Head glabrous and finely punctate, sulcate but scarcely concave in middle. *Prothorax*: apex lightly, base strongly, bisinuate, sides subparallel on basal half, thence lightly, arcuately narrowed to apex, the lateral carinae subparallel, closer together than in *C. acuducta* Kirby, disc very nitid and glabrous, with fine transverse striolae. *Elytra* enlarged at shoulders, compressed behind them, lightly attenuate to apex, apical margins finely denticulate, disc coppery, with atrovioletaceous shading and scattered pubescence on basal two-thirds, on apical third forming a straight, rather wide fascia continuous to sides, a second short fascia close to apex not extending to sides. Underside very nitid coppery, pubescence limited to margins; prosternum with large, not close, punctures, metasternum almost impunctate, abdomen closely and finely punctate. *Dim.*, 7.8 × 3 mm.

Hab.—N. S. Wales: Gosford (N. MacGregor).

Ten examples were in the collection of Mr. W. Duboulay, of which he has kindly given me four. It is clearly separated from *C. acuducta* Kirby and *C. cupripennis* Guér., with which it is most nearly allied; from *acuducta* by the glabrous and nitid underside (everywhere clad with short pubescence in *acuducta*) besides its flatter elytra and more parallel form; *cupripennis* has the head and prothorax of ♂ green, with more cylindric form and more strongly punctured surface. Holotype in Coll. Carter.

ETHON ROEI L. & G. var. OBSCURUM, n. var.

I have been puzzled by three examples of an *Ethon* taken by Miss M. Duboulay at Albany, W.A. These differ from normal forms of *roei*, but I do not feel justified in describing them as specifically distinct without seeing a longer series. The following comparison shows the main differences:

<i>E. roei</i> .	var. <i>obscurum</i> .
Head and prothorax bright coppery, little obscured by hair.	Darker bronze, obscured by long hairy pubescence.
Elytra violet-bronze, pubescence sparse with tendency to concentration in a preapical fascia.	Brown-bronze, pubescence more marked.
Sculpture fine, with linear punctures and carinulae.	Showing a tendency to striation.

The lateral carinae of prothorax and the clothing of the underside are similar to those of typical *roei*. *Dim.*, 11 × 4.5 mm. Type in Coll. Carter.

Family DRYOPIDAE.

Simsonia purpurea Cart. = *S. deanei* Cart. and Zeck.—The acquisition of further material from Tambourine Mountain, Q'land, shows the latter species to be too close to the former for specific distinction and the name must be sunk as a synonym.

Onthophagus carteri Blkb.—An interesting fact of distribution is in my possession in an example of this Sydney species being given me from Nauru (Ocean) Island.

Family TENEBRIONIDAE.

ORCOPAGIA ANGUSTATA, n. sp.

Narrowly subcylindric; opaque reddish-brown.

Head convex with raised margins, a vertical horn on clypeus, this rounded at its apex, a round tubercle at inside of each eye, antennae with two apical segments forming a club. Prothorax having the discal region strongly raised, divided throughout by deep medial channel and produced over the head with a forked apex, as in certain Poropterus weevils, the margins of this discal region irregularly raised by successive rounded tubercles, forming an elongate ellipse with anterior and posterior extensions, the extreme margins on a much lower plane forming a somewhat S-shaped curve, wide on the anterior half, with about four irregular crenulations, the concave posterior half with a single tubercle at margin; hind angles subrectangular. Elytra wider than prothorax at base, the surface irregularly covered with elongate tubercles, culminating in larger rounded knobs at apical declivity, lineate punctures visible in places, margins unseen from above, the visible outline showing small tubercles, the apex rather sharply serrated. Under-surface concealed by squamose derm. Front tibiae strongly widened, hooked at apex beneath, mid-tibiae slightly widened, all tibiae crenulated on outside by small tubercles. *Dim.*, 8–12 × 2.8–4 mm.

Hab.—New Britain: Rabaul (F. H. Taylor).

♀. Without clypeal horn.

Several examples taken by my friend, of which seven are before me, the larger examples being females. A specimen sent to Herr Gebien was diagnosed as clearly distinct from *O. sepidioides* Geb. by (1) narrower form, (2) sides of head not bidentate before the eyes, (3) front tibiae hooked.

N.B.—The sexual distinction (clypeal horn in ♂) will probably be found

also in *sepidioides* with the examination of more material. Holotype and Allotype in Coll. Carter.

PTEROHELAUS CELLULOSUS, n. sp.

Oblong-ovate; nitid black, antennae and tarsi piceous.

Head sparsely punctate, antennae unusually slender, except for the enlarged four apical segments, of these 8 is subtriangular, 9–11 round. *Prothorax*: apex deeply arcuate, front angles produced and rather sharply rounded, base lightly bisinuate, posterior angles acute and sub-falcate, foliate margins thin and subtransparent, rather strongly concave and recurved, disc with close, moderately strong punctures (more strongly punctate than in *P. vicarius* Pasc.), medial line finely impressed, two basal foveae. *Elytra* parallel for the greater part, horizontal margins rather narrow but of uniform width throughout, striate-punctate, the punctures large and close, the striae also close, intervals narrow and slightly raised in places, a row of large punctures at junction with margins. Underside finely and densely strigose. *Dim.*, 14 × 6 mm.

Hab.—W. A.: Kalgoorlie (From Mr. W. Duboulay).

A single example given to me by Mr. Duboulay is nearest in sculpture to *P. persculptus* Cart., *punctipennis* Macl. and *vicarius* Pasc. The first of these is larger (17 × 8 mm.) with a differently shaped prothorax, the "extreme border moderately thick and reflexed", the same being exceptionally thin and wafery in *cellulosus*. *P. punctipennis* Macl. is a small species from North Queensland, of more convex form with narrower foliation. *P. vicarius* is also more convex and ovate, the elytral sculpture is more irregular and less uniform. Holotype in Coll. Carter.

N.B.—An example of *P. persculptus* is in the collection of Mr. F. E. Wilson, taken at You-yang, Victoria. The type had no locality label.

ONOSTERRHUS COSTATUS, n. sp.

Convex, ovate; nitid black, antennae opaque black.

Head: labrum prominent, clypeus straight in front, rounded at sides, forming an angle with the wide, flat antennal orbits, antennal segment 3 as long as 4–5 combined, 4–8 successively shorter and wider, 8–10 transversely ovate, 11 ovate, forehead uneven with three depressions bordered by longitudinal ridges, the exterior of these, near eye, costate, the middle two wide. *Prothorax* (7 × 12 mm.) widest at middle, apex arcuate-emarginate, anterior angles widely rounded and directed downwards, base bisinuate, posterior angles subacute and overlapping elytra, sides widely rounded, nowhere sinuate, extreme border very thick, little raised above but seen sideways widely rounded, margins widely foliate and concave; disc scarcely perceptibly punctate with clearly impressed medial sulcus terminated near base by short transverse sulcus. *Elytra* (18 × 14.2 mm.) lightly obovate, wider than prothorax at base, shoulders rounded, a narrow horizontal border with a line of punctures within it; each with four defined, smooth costae, besides the suture itself, more narrowly but sharply raised throughout and limiting the postscutellary triangular depression, the fourth costa near margins less raised than the others, intervals impunctate, vaguely uneven, with the suggestion of longitudinal convexity midway between costae. Underside glabrous with a few ventral strigae. Hind tibiae with a line of tomentum on inside, mid tibiae rather strongly curved, mid and hind tibiae enlarged at apex,

with very short spines. Submentum with a triangular tooth directed forwards, prosternal process sulcate. *Dim.*, 26×14 mm.

Hab.—Queensland (in the British Museum of Natural History).

A single example, sent for inspection by Mr. Blair, is the largest species of the genus. It is easily distinguished by the combination of nitid, almost impunctate surface and its 4-costate elytra. Holotype in the British Museum.

ONOSTERRHUS ROBERTUS, n. sp.

Convex, widely ovate; subopaque black above, more nitid beneath, antennae piceous.

Head: labrum prominent, clypeus straight in front, sinuate at sides, antennal orbits not much raised, surface very minutely punctulate, antennal segment 3 rather shorter than 4-5 combined, 4-7 subtriangular, 8-10 rounded, 11 oval. *Prothorax* (6×10 mm.) widest behind middle, apex arcuate-emarginate, with narrow border widening towards angles, these acute, base bisinuate, posterior angles produced, roundly blunted at tip, sides well rounded, subsinuate behind (in one example of three, feebly so behind front angles), extreme border round and thick, gradually narrowing to the front and widened at the hind angles, concave and sulcate within this border; disc microscopically punctulate, in one example a fine medial line shown on front half. *Scutellum* transversely triangular. *Elytra* (16×13 mm.) wider than prothorax at base, shoulders obliquely rounded, widest near middle, a narrow laminate border and a row of large punctures in the sulcus within this, each with three distinct and equidistant costae, the suture also raised for the greater part and bordering the triangular depression behind scutellum to form a feeble fourth costa; on each side of costae an irregular line of small punctures, especially evident near suture, the intervals also irregularly punctate and rugose. *Underside* glabrous, submentum with bluntly rounded but vertical tooth, ventral segments with a few longitudinal strigae, tibiae without tomentum save at extreme apex. *Dim.*, $21-23 \times 13-14$ mm.

Hab.—N. S. Wales: Coonabarabran and Mullaley district (J. Armstrong, Bob Anderson, and H. J. Carter).

Two complete examples and fragments of two others, one having the thorax, elytra and part of legs. I found an elytron near Coonabarabran in 1923; Mr. Armstrong found an uninjured example and fragments of another near Mullaley in November, 1933; a month later the 8-year-old son of Mr. Anderson, of Garrawilla Station (after whom I name it), found another example (the holotype). The species is nearest *O. sloanei* Blackb., from which it differs in its wider prothorax with much more strongly thickened border and more acute anterior angles, also the more clearly defined elytral costae. Holotype in Coll. Carter, paratype in Coll. Armstrong. One example was sent to the British Museum for comparison with the type of *sculpturatus* Blackb. Mr. Blair has kindly returned this with the note "Your *Onosterrhus* is certainly not *sculpturatus* Blackb., which is smaller and smoother, subnitid, with the costae scarcely indicated, etc."

HYPAULAX UNDULATICOSTIS, n. sp.

Elongate-obovate; glabrous, dull black above, nitid black beneath, antennae (towards apex) and tarsi reddish.

Head: clypeus truncate in front, at sides making an angle with the antennal orbit, surface impunctate. *Prothorax* lightly arcuate at apex, anterior angles widely rounded off, base bisinuate, posterior angles dentate, obliquely pointing

outwards, widest near front, narrowed at base, sides with a few crenulations behind middle, abruptly, sinuately narrowed towards base, disc impunctate, with a finely impressed medial line and two small foveae on each side of this near middle, basal border wide, lateral border narrowing on front half. *Elytra* little wider than prothorax at base, widest behind middle, each with nine wide sulci containing close foveate punctures and limited by seven sharp zig-zag costae, the suture forming an extra, but straight costa, the 4-5 and the 6-7 rows of foveae being geminate, i.e., not separated by sharp costae. Prosternum bisulcate and carinate, ventral segments striolate at base, pro- and mid-tibiae bent inwards at apex. *Dim.*, 25-20 × 10-8.2 mm.

Hab.—South-western Queensland: Morven (F. Sullivan).

Two examples (♂, ♀) in Mr. W. Duboulay's collection, which he has generously given me for description, are strikingly distinct from its nearest ally, *H. spenceri* Cart., by the very different form of the prothorax (widest behind in *spenceri*), besides many evident details of sculpture as specified. Holotype in Coll. Carter.

APASIS DISTORTIPES, n. sp.

Oblong-ovate; head, prothorax and underside black, elytra and legs brownish-bronze, tibiae and tarsi clothed on inside with red tomentum, antennae and tarsi brown, the former largely opaque.

Head as in *Adelium*, but the eyes less transverse (rounded towards inside), antennae submoniliform, segment 3 only slightly longer than 4, 4-5 cupuliform, 6-10 increasingly widened and transversely oval, 11 as wide as and little longer than 10. *Prothorax* transverse and rather flat, apex arcuate-emarginate, front angles rounded, base subtruncate, hind angles well defined (about 110°), sides evenly rounded, widest at middle, with distinct sinuation near base, extreme border narrowly raised, shallow horizontal foliation separated by short, curved sulcus from disc, the latter uniformly and finely punctate, two shallow depressions near middle, without any sign of medial line. *Scutellum* widely triangular, finely punctate. *Elytra* slightly wider than prothorax at base and more than twice as long, subparallel for the greater part, shoulders rounded, apex rather widely so; striate (without sign of seriate punctures), intervals lightly convex, 3rd and 5th wider than the rest, minutely and indistinctly punctate. *Prosternum* transversely striolate, notched on the convex area, rest of underside sublaevigate, post-intercoxal process rounded. *Hind tibiae* widely angulate before the middle, widened and strongly incurved to apex, mid tibiae also sinuately widened but less strongly than the post. *Hind tarsi* short, with basal segment not quite as long as the rest combined. *Dim.*, 15 × 5½ mm.

Hab.—Victoria: Yarram, S. Gippsland (F. E. Wilson).

A single male example was found by Mr. Wilson in the small reserved area (Bulga Park) of what was formerly a densely forested region. It has some affinity with *Cardiothorax* in the lateral foliation of the prothorax and the tibial characters, but I think it more properly may be associated with *Apasis* through the more rounded eyes, the widely truncate base of prothorax, the form of antennae and tarsi. Holotype in Coll. Wilson.

Female latet.

DAEDROSIS RUFIPES, n. sp.

Oblong-ovate; subnitid, head and prothorax brownish-bronze, elytra and underside subcastaneous, antennae and legs red.

Head densely punctate, clypeus rounded in front, eyes large and prominent, antennae extending to basal third of prothorax, segment 1 slightly wider than 2, 2 shortly ovate, 3, 4, 5 subequal in length, 5 widening at apex, 6 subconic, 7-10 asymmetrical and increasingly transverse, the exterior half of segments more sharply produced, 11 globose, its diameter as wide as and twice as long as 10. *Prothorax*: apex and base bisinuate, median apical area convex and somewhat produced over head, anterior angles rounded off; widest in front of middle, sides with raised border, well rounded, sinuate behind, posterior angle obtuse (not widely so), disc densely and coarsely punctate, the punctures at apex and middle as on head, much coarser towards sides and hind angles. *Scutellum* triangular, nitid and impunctate. *Elytra* wider than prothorax at base, epipleural fold forming a wide tooth at shoulders; striate-punctate, striae well marked, a little irregular in definition, punctures elongate and ill-defined, 3rd interval containing minute pustules, intervals wide, lightly convex and transversely rugulose, the sutural interval wide and flat with transverse wrinkles. Sternal regions punctate, abdomen strongly strigulose. *Dim.*, 7×2.5 mm.

Hab.—Victoria: Lower Terwin (G. F. Hill).

A single specimen sent by Mr. Clark is very distinct from *D. crenatostrata* Bates by its smaller, flatter form and more strongly and densely punctate prothorax, red appendages and different antennae. Holotype in the National Museum.

LICINOMA PUTEOLATA, n. sp.

Elongate-ovate; nitid bronze-black, antennae and legs red.

Head coarsely, unevenly punctate, with a smooth, nitid, raised area behind each antennal orbit, antennae unusually stout, its segments lineate-ovate and setose, 3 only slightly longer than 4, 5-10 successively more widely ovate, 9-10 subspherical, 11 largest of all, piriform. *Prothorax*: apex subtruncate, lightly advanced at angles, these wide and rounded, base truncate; moderately convex, lateral margins deflexed, widest at middle, thence gently, evenly narrowed each way, hind angles obtuse; disc irregularly pitted with round, deep, setiferous punctures, besides having a closer, more regular system of smaller punctures, a row of setiferous punctures on each narrow, lateral margin. *Elytra*: shoulders obliquely rounded, striate-punctate, the striae punctures strongly crenulating the sides of the convex intervals, the lateral striae bearing larger, irregular, setiferous punctures, more sparsely found on other intervals. Hind tarsi having basal segment as long as apical, slightly longer than 2nd and 3rd combined. *Dim.*, ♂, 11×3.6 mm.; ♀, 13×4 mm.

Hab.—Queensland: Stanthorpe district, two taken by F. E. Wilson and E. Sutton, one previously sent by Mr. E. Sutton.

A strikingly distinct species. The sculpture of the pronotum is suggestive of certain *Seirottrana* species in having the dual system of punctures, while the setae springing from large punctures on the upper surface are unusual in the genus. Holotype in Coll. Carter, allotype in Coll. Wilson.

In 1930 I examined Macleay's types of *Amarygmus* from the Fly River when working out the large number of Tenebrionidae collected by Mr. McNamara and others for the South Australian Museum, but omitted to publish the following synonymy.

Amarygmus inornatus MacL. = *A. morio* F.—This adds another to the long list of names given to this much described species. The type was very dirty.

When cleaned the colour came out a clear bronze, though described as "black". See also my note (*Trans. Roy. Soc. S. Aust.*, 1913, p. 34) that Mr. Blair had a similar experience with the type of *A. morio* F. from the Banks Collection.

A. convexiusculus MacL.—Macleay used this name twice: (1) for a Gayndah species in 1871; (2) for a New Guinea species in 1887. In the Junk Catalogue, Gebien supplied a new name "niger" for (2). This name is unfortunate, since, again, when cleaned the type has a clear, rather dark bronze colour. The description gives "black", but Macleay notes "a slight purplish gloss on thorax". This is a common species in New Guinea that I have from Mt. Lamington, N.E. Papua and Bulolo.

Gonocephalum subcostatum Cart.—This is a *Cestrinus* and is synonymous with *C. carbo* Cart. The type is in the Queensland Museum and escaped my notice when describing *carbo*. It must therefore now be known as *Cestrinus subcostatus* Cart.

Menephilus colydioides Er. var. *armstrongi* Cart.—A comparison of the type of *armstrongi* with that of *parvulus* MacL. (= *colydioides* Er.) shows too close affinities of structure for specific distinction, and can only rank as a variety.

Family CISTELIDAE.

NOCAR FUNEREUS, n. sp.

Widely ovate, convex; black, rather nitid, above and beneath, subglabrous, with inconspicuous pubescence on pronotum and sides of elytra.

Head finely punctate, eyes separated by a space of the diameter of one, antennae rather slender. *Prothorax* strongly narrowed to front, apex at middle slightly compressed and hood-like, base widely bisinuate, its angles acute. Disc with fine, shallow punctures and two small basal foveae. *Elytra* striate-punctate, the striae very fine, the strial punctures small and regular, intervals quite flat and very finely punctate; the two lateral striae more strongly impressed, giving a quasi-rounded aspect to the lateral intervals. Underside glabrous, almost impunctate. *Dim.*, 6 × 4 mm.

Hab.—South Queensland: Fletcher (E. Sutton).

Three examples have been sent by Mr. J. Armstrong, taken by Mr. Sutton. It is an exceptionally wide species, distinguished from other concolorous species by its black colour, this extending to antennae, legs and tarsi. (I described *N. rugosus* as black, but a longer series since acquired shows a brownish tint to prevail, with its appendages reddish). The sculpture of *N. funereus* is finer than that of any other. Holotype in Coll. Carter.

Family CERAMBYCIDAE.

ARIDAEUS PRINCEPS, n. sp.

♂. Black, sparsely pubescent; head, palpi, scutellum and two linear marks on each elytron red.

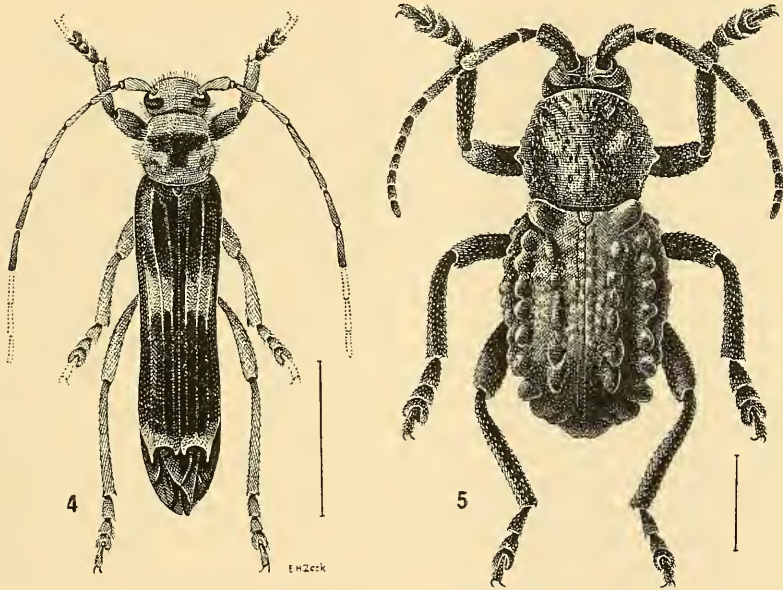
Head as in *A. heros* Pasc., antennae much stouter and longer than in that species and tapering to a very fine apex. 3-5 spinose, subequal in length, 6-11 unarmed, 6-10 equal in length, 11 longer than 10. *Prothorax* ovate, widest at middle, strongly constricted near base; disc velvety, with short medial costa behind the two basal protuberances, sparsely clad with upright white hairs. *Scutellum* triangular, pubescent. *Elytra* widest at shoulders, there rather squarely rounded, sides nearly straight for the greater part, apices widely truncate, the exterior angle subdentate. Black, except for a short curved mark behind the

shoulders and a curved fascia extending backwards from the suture near middle, but not reaching sides; surface cellulose-punctate on basal two-thirds, the punctures more distant on yellow fascia, behind this the surface becoming asperate and finely pustulose. Legs very long, femora stout, hind tibiae with long spine at apex. *Dim.*, 21×6 mm.

Hab.—N. Queensland: Cooktown (C. Olive).

A single ♂ in my collection is larger than any example of *Aridaeus* that I have seen, with longer antennae (nearly twice as long as body), and distinguished by its finely tapering apex with its unusually long apical segment. Every part of the insect is a dull velvety-black, except for the red parts specified above. Holotype in Coll. Carter.

N.B.—*A. heros* Pasc.—In the note under the description the author states that the antennae are "without apical spines in the ♂". In two males before me the apical spines are well developed on segments 3–5 as in *A. thoracicus* Don. The species has a wide distribution in Queensland.



Text-fig. 4.—*Tragocerus cylindricus*, n. sp. Text-fig. 5.—*Microtragus tuberculatus*, n. sp.

TRAGOCERUS CYLINDRICUS, n. sp. Text-fig. 4.

Elongate, cylindric; head, seven basal segments of antennae, and legs red, prothorax red with large T-shaped black macula (not extending to sides or base), elytra chiefly black, reddish at sides, with medial and apical fasciae testaceous, the former not quite extending to suture, the latter narrow, with longitudinal extension between third costa and margin, underside red with base of coxae and front margins of ventral segments black.

Head pubescent, lightly channelled between eyes, antennae more slender and lineate than in other species, segments successively diminishing in length from third outwards, 6-7 slightly darkened at apex, 8 almost wholly black, 9-11 wanting. *Prothorax* widest near base, surface rather uneven, depressed at apex, constricted and hollowed at base, slightly raised at middle, with oblique, rounded, postero-lateral hump on each side. *Scutellum* large, rounded behind, closely punctate, surrounding area excavated. *Elytra* little wider than prothorax and $4\frac{1}{2}$ times as long, bispinose and considerably abbreviated at apex, with three well marked costae, besides similarly raised suture and lateral margins, intercostal area finely rugose and punctate. Abdomen glabrous, the rest of underside with fine upright hair. *Dim.*, 22×4 mm.

Hab.—S. Queensland: Milmeran, Darling Downs (J. Macqueen).

A single example (? ♀) given by its captor is strikingly distinct in its genus by uneven pronotum, elongate form and abbreviated elytra. The uncovered part is about 3 mm. long. The apical spines are longer than in *T. formosus* Pasc. and rendered more distinct by the absence of pubescence on the elytra. Holotype in Coll. Carter.

MICROTRAGUS TUBERCULATUS, n. sp. Text-fig. 5.

Concolorous dark brown, squamose, with short, recumbent pale setae on head and elsewhere.

Head without apparent punctures, antennae, also eyes, approximate, a transverse row of small tubercles near junction with thorax, antennae extending to apical third of elytra, segment 1 very stout, 2 nodulose, 3 and 4 elongate, 3 longer than 4, 5-11 subequal, much shorter than preceding. *Prothorax* oval, rather wider than long (4 mm.), convex, apex subtruncate, base lightly bisinuate, widest slightly behind middle, surface uneven, rugose and tuberculate, with coarse, more or less longitudinal ridges near middle, ridges and tubercles somewhat confused laterally, two lateral triangular tubercles at widest part and two large rounded, flattish tubercles near middle of disc. *Scutellum* oval, subvertically raised. *Elytra* considerably wider than prothorax at base, convex, abruptly declivous at apex, the usual humeral spines replaced by large tubercles having a blunt triangular outline, as seen sideways; with three longitudinal rows of tubercles on each, the first rather closely placed curving inwards from humeral tubercle and terminating in a large tubercle on apical declivity, and second starting just below humeral tubercle and terminating behind and below the end of the first row in a crest of three subjoined tubercles, the third row at sides just visible from above, of smaller tubercles than those of the second row; interspaces of rows with large punctures, a single row of these on each side of suture. Underside smooth. *Dim.*, 13×5 mm.

Hab.—South Queensland: Wyberba district (E. Sutton); and N. S. Wales: Armidale (C. F. Deuquet).

Three examples examined appear to be of the same sex, since the palpi have their terminal segments sublinear. The Armidale specimen was erroneously placed amongst my series of *M. luctuosus* Shuck., but with three examples before me I have no hesitation in considering it as a distinct species from the following comparison:

tuberculatus.

Size smaller, 13 mm. long.

Excrescences non spinose.

Elytra with 3 rows of tubercles.

The antennae have segments 5-11 much shorter than in *luctuosus*.

luctuosus.

larger, 16-18 mm. long.

chiefly spinose.

with 2 rows of spinose tubercles.

It is not near any other of the genus. Holotype in Coll. Carter.
