

NOTES ON AUSTRALIAN COLEOPTERA, WITH DESCRIPTIONS OF NEW SPECIES.

By the Rev. T. BLACKBURN, B.A.

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The Hon. W. Macleay, of Sydney, has recently published through the Linnean Society of New South Wales two papers of very great interest, each of them being a monographic revision of a genus of *Lamellicornes* peculiar (so far as is known) to Australia, viz., *Diphucephala* and *Liparetrus*. In 1866 Mr. Macleay, through the Entomological Society of New South Wales, dealt similarly with the genus *Phyllotocus* and its allies, and in 1871, through the same Society, he supplied descriptions of several new species from Queensland of the last-named genus. I venture to draw the special attention of the Royal Society to the exceedingly valuable work that Mr. Macleay has commenced in the series of memoirs alluded to above, entitled "Miscellanea Entomologica," and which is all the more valuable because in all probability he is the only entomologist qualified for the task, so that without his doing it it would long remain undone. By far the richest Australian collections both of specimens and books are at his disposal, and by publishing the results of his studies of these he will open the way for less-favoured students to supplement his work by the publication of such of their observations as his memoirs enable them to ascertain to be still unrecorded.

In the present paper I offer to the Royal Society descriptions of several new species belonging to *genera* that Mr. Macleay has dealt with, and add a few notes on certain species that he has treated of. I take the opportunity also to furnish descriptions of a few new *Coleoptera* belonging to other groups that have recently come under my notice.

SCARITIDÆ.

EURYGNATHUS, *gen. nov.*

Corpus maxime elongatum; palpi maxillares et labiales apice fortiter securiformes; caput rotundatum; mandibulæ crassæ capite breviores, fortiter arcuatæ, intus unindentatæ; sulci frontales sat fortiter impressi, elongati, postice divergentes; tibiæ anticæ externe bidentatæ; intermedia unispinosæ.

The remarkable insect on which this genus is founded must be somewhat allied to *Teratidium macros*, Bates, one of the rarest and most interesting of Australian *Carabidæ*. It differs from it, however, in certain respects that render the two incapable of being associated in the same genus. The general form of this insect—the rounded head, the extremely incrassated apex of all the palpi, the bisinuate labrum prominent in the middle, the prominent eyes encased behind in broad orbits, and the projecting tooth at the shoulders of the elytra—are strongly suggestive of *Teratidium*, but the bidentate anterior tibiæ, the head scarcely so wide as the thorax, the well-marked frontal foveæ, and the strong external apical spine of the intermediate tibiæ, are inconsistent with its finding a place in Mr. Bates' genus.

E. fortis, sp. nov. Niger; nitidus; capite (mandibulis inclusis) fortiter transverso; antennis prothorace vix longioribus; prothorace leviter transverso canaliculato, antice subtruncato (angulis anticis minus notatis), lateribus in parte anteriore plus quam dimidiâ leviter emarginatis, inde fortiter angustatis, basi leviter rotundatâ, angulis posticis vix perspicuis, basi apice multo angustiori; elytris prothorace vix angustioribus, subcylindricis, fortiter punctato-striatis, striis punctatis apicem marginesque versus obsoletis, humeris externe dentatis; pedibus validis; tibiis anticis apice abrupte palmatis, externe fortiter bidentatis; tibiis intermediis et posticis apice intus fortiter bispinosis. Long., 40 m.; lat., 11 mm.

I may add that the elytra are slightly narrowed at the base, and rather deeply emarginate across their front, that there is a row of somewhat elongate impressions in a deep furrow just before the reflexed margin of the elytra, the portion of the elytra on which it is placed being vertical, and that the frontal foveæ are very strong behind, commencing in a fovea nearly as far back as the hinder edge of the eye, thence converge strongly to about the level of the front of the eye, whence they diverge again, but become exceedingly faint, and that they are united at their hinder end by a shallow furrow.

A single specimen of this magnificent insect was taken by Mr. Tepper at Ardrossan, and is in the South Australian Museum.

STAPHYLINIDÆ.

BLEDIUS.

B. caroli, sp. nov. Niger; minus nitidus; breviter albido-pubescent; ore, antennis, palpis, pedibusque testaceis; elytris pallide testaceis, basi et maculâ communi nigris;

ano rufescente; capite, prothorace elytris et abdominis segmentis (basi exceptâ) creberrime subtiliter punctatis; prothorace subtilissime canaliculato, antice truncato, postice sat angustato, elytris sat brevioribus, lateribus fortiter rotundatis. Long., 3-3½ mm.

The black mark common to the elytra proceeds from the scutellum down the suture, becoming wider to about the middle of the elytra, where it expands abruptly on each side till it reaches nearly half way across each elytron, and does not extend into the apical quarter of the elytra. It has somewhat the shape of the club in a pack of cards.

I have named this species after my son, who obtained a short series by washing sand on the banks of the Port River, near Adelaide.

B. minax, sp. nov. Niger; nitidulus; parce pilosus prothoracis cornu, elytris, pedibus, anoque piceis vel rufescentibus; antennis elongatis minus clavatis; capite creberrime subtiliter punctato, inter spinam utrinque elongatam acutam longe ciliatam fortiter incurvam, et verticem, transversim late depresso; prothorace convexo, subquadrato, parce nigro-piloso, parce profunde punctato, angulis anticis subrotundatis, lateribus medio intus emarginatis postice fortiter coarctatis, angulis posticis minus perspicuis, sulco sat profundo antice spinâ gracili acutâ a basi ad apicem incurvâ producto; elytris convexis, prothorace vix latioribus, haud longioribus, dense crasse punctatis; abdomine alutaceo, segmentis apicem versus obscure crasse punctatis. Long., 5 mm.

Allied to *B. hamifer*, Fauv., from which it differs *inter alia* in its more parallel form, longer and more slender antennæ, frontal horns strongly bent inwards, and very coarsely punctured thorax.

A single specimen occurred to me on the bank of a creek about 35 miles north-west of Port Lincoln.

B. injucundus, sp. nov. Piceo-niger; minus nitidus; antennis, tibiis, tarsisque rufescentibus; antennis sat brevibus, apicem versus incrassatis, articulis subapicalibus sat fortiter transversis; capite alutaceo vix evidenter punctato; prothorace leviter canaliculato subtilius sat crebre, elytris fortius sat crebre, abdomine sparsim subtiliter, punctatis. Long., 3¼ mm.

This is an inconspicuous species, but it does not appear to bear much resemblance to any yet described as Australian.

I have a single specimen from Port Lincoln, but I do not know the circumstances of its capture.

LAMELLICORNES.

PHYLLOTOCUS.

P. occidentalis, sp. nov. *P. assimili* affinis; latius, pallide testaceus, nitidus, elytrorum apice (vix) abdomineque fuscis; prothoracis angulis posticis rotundatis; elytris leviter punctato-striatis; tibiis anticis (? maris solum) externe bidentatis. Long., $8\frac{1}{2}$ -9 mm.

Rather closely allied to *P. Macleayi*, Fisch., and *P. assimilis*, Maccl., but a broader and shorter insect than either, with the hind angles of the thorax rounded off, the sculpture of the elytra fainter, and their apex almost devoid of fuscous shading. My specimens all appear to be males. The anterior tibiæ are bidentate externally, and the claws of the anterior tarsi are only very moderately thickened, with very little, if any, difference *inter se*.

Several specimens of this insect were sent to me from Western Australia by E. Meyrick, Esq., B.A.

P. Meyricki, sp. nov. Minus convexus, niger, obscure iridescent, sparsim albo-hirtus; antennis (clavâ exceptâ), pedibusque (tarsis piceis exceptis) squalide testaceis; elytris (suturâ marginibusque exceptis) pallide testaceis; capite prothoraceque sparsim subtilius punctatis, elytris leviter punctato-striatis; tibiis anticis (? maris solum) externe bidentatis; tarsorum anticorum unguiculis (? maris solum) modice dilatatis, subæqualibus. Long., $6\frac{1}{2}$ -7 mm.

Var.—Rufus; capite, palpis, et maculis in prothorace nonnullis, nigris; elytris albidis piceo-marginatis.

The iridescence of this species is not very conspicuous (in the pale variety it is scarcely discernible); the suture of the elytra is blackened only very narrowly; the marginal blackening or infuscation of the same is scarcely traceable along the base, at the base of the external margin is scarcely as wide as an interstice between the elytral striæ, widens towards the apex till it is about three times as wide as at the base, and then becomes merged in an apical cloud of the same colour, which occupies nearly a quarter the length of the elytra. The whitish hairs with which the insect is furnished are chiefly on the underside, and fringing the margins. I am not quite sure of the sex of my two specimens; but from the bidentation of the anterior tibiæ and the decided (though equal and not very strong) dilation of the anterior claws I expect they are males. The basal joint of the posterior tarsi is shorter than the second.

Perhaps somewhat allied to *P. iridescent*, Maccl. (a species that I am not sure I know). Judging by Mr. Macleay's brief description (dealing only with size, colour, and pubescence),

Meyricki is smaller than *iridescens*, much less conspicuously iridescent, and has the thorax quite differently coloured. *Palliatu*s, Macl. (which its author conjectures may be female *iridescens*) has the elytra sulcate.

This also was sent to me from Western Australia by E. Meyrick, Esq.

MÆCHIDIUS.

M. major, sp. nov. Brunneo-piceus, subnitidus, depressiusculus; clypea triangulariter exciso, lateribus obliquis, bisinuatis; capite prothoraceque crasse punctatis dense hispidis; hoc postice minus angustato, lateribus crenulatis, angulis posticis subdentiformibus, basi leviter bisinuata; elytris tuberculis minutis instructis, his seriatim minus regulariter positis; tibiis anticis modicis, dente superiori (prope medium posito) subobsoleto; unguiculis simplicibus; pygidio æque ac prothorace, hispido. Long., 14 mm.

The clypeus resembles that of *M. sordidus*, Boisd. The setæ on the head, thorax, and pygidium are of a golden brown colour, and nearly as long as the basal joint of the antennæ. They stand erect, but their apical third part is bent over backwards. The setæ on the elytra are of similar form and colour, but being shorter and much less dense are not so conspicuous. The sculpture of the elytra is very difficult to describe. Owing to the projection (above the punctures) of the tubercles within the punctures, and their frequent coalescence with each other, the surface of the elytra (when not viewed from directly above it) seems to be confusedly covered with rows of short transverse ridges mingled with minute conical granulations. There are about 20 of these rows, and nearly 40 granulations in each of them.

This species is probably allied to *variolosus*, Macl., and *longitarsis*, Waterh., both unknown to me. Compared with the former it is larger, with the clypeus more deeply emarginate, the elytra differently sculptured, the legs differently coloured, &c. From the latter it differs by the conspicuous long setæ of the head, thorax, and pygidium; by the shorter basal joint of the hind tarsi, &c., &c.

Taken at King George's Sound by E. Meyrick, Esq.

M. crenaticollis, sp. nov. Brevis, convexus, piceus, minus nitidus, sat confertim granulatus, granulis setiferis; clypeo sat leviter exciso, lateribus obliquis fortiter bisinuatis; prothorace postice leviter angustato, lateribus rotundatis fortiter crenulatis (fere serratis) postice sinuatis, angulis posticis fere rectis, basi leviter bisinuata; elytris tuberculis oblongis instructis, his seriatim positis, interstitiis 5° 9° que ceteris latioribus; tibiis anticis tridentatis, unguiculis simplicibus. Long., 9 mm.

The emargination of the clypeus is very well marked, but evidently shallower than in *M. sordidus*, Boisd., the bisinuation of its sides somewhat stronger than in that insect. The lateral margins of the thorax are each cut into about 20 teeth, each of which is scarcely shorter than one of the thoracic setæ. As the setiferous tubercles are raised above the surface of the insect, it has no punctures rightly so called. The elongate tubercles form about 18 rows on the elytra, each row containing less than 30 tubercles. The setæ are of a pale brown colour, but are not particularly conspicuous. The middle tooth of the front tibia is fairly well defined, and is about intermediate in position between the base of the tibia and the apex of the terminal tooth. The widening of the fifth and ninth (and in a less degree of several other) intervals between the rows of granulations on the elytra is very noticeable.

Taken by Mr. B. S. Rothe, of Sedan, S.A.

N.B.—The South Australian Museum, Adelaide, contains a specimen ticketed "S.A.," which I cannot regard as distinct from that sent me by Mr. Rothe, although it is larger (11 mm.), somewhat darker in colour, and has the granulations on the surface of the thorax not quite so strong. I have also seen two specimens taken by Mr. J. Anderson on Boston Island.

M. rugosipes, sp. nov. Brevis, convexus, rufo-piceus, minus nitidus; clypeo triangulariter, minus fortiter exciso lateribus obliquis vix sinuatis; prothorace creberrime punctato, antice angustato, lateribus rotundatis vix crenulatis, angulis posticis subdentiformibus, basi fortiter lobatâ; elytris seriatim punctulatis tuberculatisque; tibiis anticis obtuse minus fortiter tridentatis; tibiis intermediis et posticis in medio margine externo bi-vel trituberculatis; unguiculis simplicibus. Long., 10 mm.

The shape of the thorax is remarkable in this species. From the front, which is the narrowest part, it widens with gently-curved margins nearly to the base, and then is rapidly narrowed, with a strong curve, to the posterior angles, which are dentiform; but behind the posterior angles the thorax is quite strongly emarginate in such manner that the middle of the basal portion forms a conspicuous lobe. The sculpture of the elytra resembles that of *M. major*, mihi. The external outline of the anterior tibiæ might almost be called "strongly bisinuate" rather than "tridentate." On the intermediate and hind tibiæ two or three of the asperities on the middle of the external edge exceed the rest in prominence much more noticeably than is usual in the genus.

I obtained a single specimen of this insect some years ago from Victoria, but the exact locality of its capture is unknown to me.

LIPARETRUS.

L. phænicopterus, Germ.—In his recent paper on *Liparetrus*, the Hon. W. Macleay adds some particulars to those originally furnished by Germar regarding this species. I have no doubt Mr. Macleay's identification of Germar's species is accurate, inasmuch as (so far as I know) there is only one South Australian species of the same group of *Liparetrus* in which the pilosity on the disc of the thorax is (as Germar describes it in *phænicopterus*) in contrast by its dark colour with that at the sides; and that species is plentiful and widely distributed. There still remain, however, several characters of the above-mentioned species that I have not seen recorded, viz.:—That in many examples the elytra are more or less infusate or blackish at the base, and that the basal joint of the anterior tarsi is very peculiar in form. In the male it is almost square, attached to the tibia by one of the corners, so that the tarsus looks as if it had been broken off and gummed on again; in the female it is much narrowed at the base, and the basal portion is bent, at an angle of about 45 deg. to the axis of the tarsus, the apex of this bent portion being the point of attachment to the tibia. In the male the claws of this tarsus are short and strongly bent, the inner claw much more strongly than the outer; in the female the claws are very similar to those of the male, but are a little more slender, and are equally bent.

There is another species very closely allied to *L. phænicopterus*, but having the front tarsi and claws of the male quite different, and the hair on the upper surface paler, which is widely distributed in South Australia. It must be still more closely allied to the Queensland *L. fulvohirtus*, Maccl. It seems so improbable that an insect having a wide range in Queensland and also in South Australia should have failed to be noticed in New South Wales that I think the South Australian insect is probably not identical with the Queensland one, but as it agrees very fairly with the *description* (I observe no discrepancy except that the thorax is hardly so coarsely punctated as from the description I should expect it to be in *fulvohirtus*, and that the clypeus is somewhat more strongly emarginate) I abstain from giving it a new name.

L. fimbriatus, sp. nov. Niger; antennis (clavâ exceptâ), palpis, tarsis, tibiis anticis et elytris (basi lateribusque exceptis) rufescentibus; capite crebre subtiliter punctato; prothorace capillis longis brunneis erectis fimbriato, sat fortiter nec crebre punctato; elytris glabris subnitidis sparsim punctatis, striis 3 geminatis punctatis instructis; pygidio crasse (nec profunde) crebrius punctato, sparsim albo-hirto; subtus sat dense albido-hirtus; tibiis anticis tridentatis; unguiculis basi tuberculo setifero instructis;

maris clypeo antice reflexo leviter emarginato, lateribus pone apicem valde emarginatis, angulis anticis acutis; tarsis unguiculisque anticis fortiter incrassatis, his apice abrupte arcuatis; feminæ clypeo antice reflexo vix emarginato, lateribus vix sinuatis, angulis anticis subrotundatis; antennis noviesarticulatis. Long., 7-8½ mm.

The fringe of erect, moderately close and very long hairs completely surrounding the prothorax (the rest of the upper surface being glabrous) gives this insect a peculiar appearance. The hairs along the front of the thorax are evidently darker in colour than those along the base.

Compared with *L. phænicopterus*, Germ., the clypeus of the male scarcely differs, while that of the female is less sinuated at the sides; the head is more closely, the thorax very similarly punctated; the elytra differ chiefly in being darker along the base and sides, and having the geminate striæ more distinct; the pygidium is less closely punctured, and the whole insect is incomparably less hairy.

The basal joint of the hind tarsi equals about two-thirds of the second joint.

This species is common on flowers near Tumby Bay in the Port Lincoln district in early summer.

L. caviceps, sp. nov. Niger, iridescent; antennis (clavâ exceptâ) palpisque rufis, tarsis, plus minusve piceis; prothorace capillis (antice sparsis erectis longis, postice crebris retrorsum directis brevibus, ad latera crebris longis erectis) fimbriato; clypeo nitido confuse sat crasse punctato, marginibus reflexis, antice subtruncato, angulis rotundatis sutura postice haud arcuata; capite opaco sat fortiter nec crebre punctato, antice longitudinaliter impresso (nonnullis exemplis obscure et obtuse bituberculato); elytris fortius sparsim punctatis, striis geminatis instructis, his subtilius punctatis; pygidio propygidioque glabris, crebre crasse (feminæ? quam maris? crassius) nec profunde punctatis; tibiis anticis bidentatis; tarsorum posticorum articulo primo secundo fere dlupo longiore; subtus cinereo-pilosus; antennis noviesarticulatis. Long., 7-8½ mm.

This species seems to be well distinguished by the strong broad furrow running down the forehead from near the base to the apex, at which point there is in some specimens a minute tubercle on either side. In the specimens which I take to be females the iridescence is conspicuous and brilliant over the whole upper surface, and the puncturation of the pygidium and propygidium is quite rugose; in a single specimen, which I judge from a slight incrassation of the anterior claws to be the

male, the iridescence is very slight, and the hind parts of the body are punctured more smoothly.

This species occurs in the Port Lincoln district, but I have met with it only rarely.

L. senex, sp. nov. Niger, iridescent; antennis (clavâ exceptâ), palpis, tarsisque rufis; pedibus anticis et intermediis plus minusve rufescentibus; prothorace capillis longis albidis erectis ad latera fimbriato; clypeo nitido crasse leviter punctato, antice tridentato (maris sat fortiter, feminae vix evidenter), suturâ postice arcuatâ; capite minus nitido multo crebrius punctato; prothorace sparsim subtiliter punctato, postice canaliculato; elytris fortius nec crebre punctatis, striis geminatis modice distinctis, pygidio propygidioque sat confertim punctatis; tibiis anticis fortiter tridentatis; tarsorum posticorum articulo primo secundo subæquali; maris tarsis anticis sat fortiter incrassatis; subtus griseo et brunneo pilosus; antennis novies articulatis; tarsis robustis. Long., 8-10 mm.

There are specimens of this insect in the South Australian Museum; one of them is ticketed as having been taken by Mr. Tepper at Murray Bridge; the others are unticketed.

L. gracilipes, sp. nov. Niger, iridescent; antennis palpis pedibusque piceis vel rufopiceis; prothorace ad latera capillis longis subtilibus, elytris capillis brevibus crassis, nigrofimbriatis; clypeo subnitido crasse leviter punctato, antice rotundato-truncato vix evidenter bisinuato, suturâ postice parum arcuatâ; capite confertim crebrius punctato; prothorace sparsim subtiliter punctato, postice canaliculato; elytris fortius nec crebre punctatis, striis geminatis sat distinctis; pygidio propygidioque sat confertim punctatis, hoc medio longitudinaliter biimpresso; tibiis anticis maris extus bisinuat, parte apicali angustata producta, feminae fortiter tridentatis; tarsis omnibus gracilibus, posticorum articulo primo secundo subæquali; subtus griseo et brunneo pilosus; antennis novies articulatis.

This insect seems to occur near Adelaide, specimens in the South Australian Museum being ticketed as having been taken by Mr. Tepper at Mitcham and Belair. I have taken it in the western districts of Victoria.

The preceding three species belong to a section of *Liparetrus* probably numerous, and so far as yet known confined to South and West Australia. Its members agree in having their bodies (except the antennæ, palpi, and legs, which are sometimes more or less reddish) of a uniform deep black, which in some lights is brilliantly iridescent; the upper surface of the head, thorax, and elytra glabrous (save that those parts are surrounded with

fringes of hair); the under surface rather thickly pilose, and the elytra very short. The first description appertaining to them was published by Germar in 1848, in the "Beiträgs zur Insektenfauna von Adelaide," under the name *iridipennis*. This brief description (founded on a single female specimen) would apply to almost any member of the group, but the Hon. W. Macleay, of Sydney, in a paper recently published by the Linn. Soc. of New South Wales, furnishes details omitted by Germar. Since 1848 three more species of the group have been described, so that the three described in this paper bring up the number to seven. The following table will enable the student to distinguish them *inter se* :—

- A. Basal joint of posterior tarsi twice the length of the second joint.
 - a. Clypeus of male tridentate in front. Size, about 9 mm. ... *iridipennis*, Germ.
 - aa. Clypeus not tridentate. Size, about 6 mm. ... *convexior*, Macl.
- AA. Basal joint of posterior tarsi about half again as long as second joint.
 - a. Forehead longitudinally sulcate. Elytra quite concolorous, with prothorax ... *caviceps*, Blackb.
 - aa. Forehead not sulcate.* Elytra of a pitchy sub-iridescent colour ... *rotundipennis*, Macl.
- AAA. First and second joints of posterior tarsi not much different in length.
 - a. Pygidium and propygidium densely clothed with white scales ... *tristis*, Blanch.
 - aa. Pygidium and propygidium glabrous, or nearly so.
 - b. Propygidium with two short longitudinal furrows,† the space between which is elevated, as though pinched up. Hairs fringing the thorax black; tarsi very slender ... *gracilipes*, Blackb.
 - bb. Propygidium normal; thorax fringed with whitish hairs; tarsi very robust ... *senex*, Blackb.

It should perhaps be noted that some specimens of *L. picipennis*, Germ., are coloured somewhat similarly to the insects mentioned in the preceding table, but they may be readily distinguished by their elytra extending nearly or quite to the apex of the propygidium.

L. diversus, sp. nov. Ovatus; niger; parum, nitidus, antennis (clava excepta) palpis pedibusque rufis; elytris lividis,

* This colour leads me to doubt whether *L. rotundipennis* (which I have not seen) should really be included in this group.

† These furrows are sometimes faintly defined, sometimes very deep, but appear to be always discernible.

lateribus apiceque infuscatis; supra ubique capillis longis crassis (in capite, et in prothoracis elytrorumque disco, brunneis vel piceis; in marginibus albis) sparsim vestitus; subtus et in pygidio propygidioque dense albo-tomentosus; clypeo antice rotundato-truncato; capite prothoraceque opacis; hoc transverso sparsissime, illo minus sparsim, fortiter punctatis; elytris subnitidis crasse vix seriatim punctatis; tibiis anticis in medio obsolete dentatis, apice in dentem longum producto; tarsorum posticorum articulo 1° 2° paullo longiore. Long., 6½ mm.

A very distinct little species, not very closely allied, I think, to any yet described. Probably it is most at home near *L. discipennis*.

It was taken in Western Australia by Mr. Meyrick.

L. nigro-umbratus, sp. nov. Late ovatus; sat nitidus; niger; antennis, palpis, tarsisque, rufo-piceis; elytrorum disco cupreo-lurido; capite prothoraceque dense nigro-pilosis; subtus cinereo-pilosus; clypeo antice rotundato-truncato, marginibus sat fortiter reflexis; capite prothoraceque crebre sat fortiter, elytris sparsim subtilius, pygidio propygidioque longe fulvo-pilosis sat sparsim nec fortiter, punctatis; striis geminatis, leviter notatis; tibiis anticis alterius sexus leviter, alterius fortiter, tridentatis; tarsis posticis gracilibus elongatis, articulo 1° et 2° subæqualibus; antennis 9-articulatis. Long., 10-11 mm.

Occurs in various localities near Adelaide.

Allied to *L. erythropterus*, Blanch., but differing *inter alia* in its greater pilosity and in the absence from the thorax of a channel and from the propygidium of a keel. The upper tooth on the anterior tibiæ is much smaller than the others, so that in the sex (probably male) in which the teeth are feebly developed this one is only barely indicated.

Mr. Tepper has shown me a very remarkable *Liparetrus* from Kangaroo Island, which I think is an extreme variety of this insect. It differs in being much smaller (long., 8 mm.) and having the lurid colouring (which in the type occupies only the disc of the elytra, and shades obscurely off into the surrounding black) extended over the whole of the elytra except a narrow basal margin.

L. Rothei, sp. nov. Ovatus; sat nitidus; piceo-niger, antennis (clava infuscata excepta), palpis, pedibusque rufescentibus, elytris rufo-piceis; supra sat glaber; prothorace ad latera et antice capillis longis nigris, elytris postice ciliis fuscis pervalidis, fimbriatis; subtus cinereo-pilosus; pygidio propygidioque sparsissime pilosis; clypeo (? alterutrius sexus solum) reflexo, antice truncato, angulis rotundatis;

hoc et capite prothoraceque crasse nec profunde, elytris crasse nec profunde subseriatim, pygidio propygidioque sparsim profundius, punctatis; striis geminatis vix evidenter impressis; elytris brevibus; tibiis anticis (? alterutrius sexus solum) apice longe leviter arcuatim productis, margine externo leviter bidentato; tarsorum posticorum articulo 1° 2° duplo longiore antennis novies articulatis (?). Long., 4 mm.

This is one of the smallest species of the genus known to me. The antennæ of the single specimen placed in my hands for description are not capable of satisfactory examination, but they are evidently peculiar, having the portion between the second joint and the club exceptionally short and thick, and apparently consisting of four joints, though these joints are so small and crowded together that I cannot be absolutely certain on this point without breaking an antenna off. The anterior tibiæ (with two obscure teeth on the external margin, and then one very long and only slightly curved at the apex) are also peculiar, as is the fringe of long thick bristles at the apex of the elytra. These latter project across the narrow riband-like membranous border that edges the hinder portion of the elytra so conspicuously in some *Liparetri*, and which in this species is yellow and very broad. The general appearance of the insect is, however, quite that of an ordinary *Liparetrus*, and it is much of the build of *bituberculatus*, Mael.

Taken by Mr. Rothe, near Sedan, South Australia.

L. analis, sp. nov. Ovatus; supra glaber; nitidus; ater, antennis palpis pedibus, pygidio, propygidio, et subtus tota superficie (metasterno ad latera infuscato excepto) læte rufis; prothorace antice et ad latera capillis fulvis fimbriato; clypeo crasse nec fortiter punctato, antice reflexo rotundato; capite crebre sat fortiter, prothorace fortiter minus crebre, elytris sat fortiter subseriatim, punctatis; his striis geminatis evidenter impressis; propygidio antice vix evidenter, hoc postice et pygidio toto fortiter, punctatis; tibiis anticis tridentatis; antennis novies-articulatis; subtus obscure pilosus; tarsi postici specimini descripto desunt. Long., $7\frac{1}{2}$ mm.

Although the loss of the hind tarsi involve the omission from the preceding description of an important character, yet the species is so widely distinct from its congeners, that I have no hesitation in describing it. It must bear a good deal of resemblance to *L. erythropygus*, Blanch. (indeed, if my identification of that species is correct, its superficial resemblance is very close), which, however, seems to have antennæ consisting of only eight joints. The position of *L. analis* in Mr. Macleay's

arrangement of the genus would probably be near *L. rubefactus* of that author.

There is a single specimen in the South Australian Museum.

- L. insularis*, sp. nov. Ovatus; supra (pygidio propygidioque sparsim breviter griseo-hirtis exceptis) glaber; nitidus; piceus aut rufopiceus, tibiis tarsisque nonnullis exemplis dilutioribus; prothorace capillis longis pallidis fimbriato; subtus longe sat sparsim pallide pilosus; clypeo crebre fortius, prothorace minus crebre fortius, elytris transversim rugose subseriatim sat fortiter, punctatis; his (maris fere, feminae omnino) propygidium tegentibus, striis geminatis vix evidenter impressis; pygidio maris obscure, feminae sparsius sat fortiter punctato; tibiis anticis tridentatis; antennis novies articulatis; tarsorum posticorum articulo primo secundo subæquali. Long., $5-5\frac{1}{2}$ mm.

Allied to *L. picipennis*, Germ. The clypeus is truncate in front in the male, rounded in the female.

Collected on Kangaroo Island on flowering shrubs by Mr. Tepper, of the South Australian Museum, whose indefatigable labours are very rapidly developing the national collection, and who probably possesses the best knowledge of any living person of the habits and localities of South Australian insects.

- L. simplex*, sp. nov. Sub-hemisphæricus; supra (pygidio propygidioque sparsim breviter griseo-hirtis exceptis) glaber; prothoracis lateribus capillis pallidis fimbriatis; subtus fulvo-pilosus; nitidus; niger, subiridescens, antennis palpisque testaceis, pedibus elytrisque plus minusve rufescentibus; clypeo antice rotundato-truncato (? alterutrius sexus solum) crasse nec profunde, capite duplo (crebrius subtiliter et sparsim fortius), prothorace sparsim minus fortiter, elytris subseriatim sat fortiter, propygidio crebre sat fortiter, pygidio sparsim profunde, punctatis; striis geminatis evidenter impressis; propygidio permagno; tibiis anticis apice longe productis, margine externo minute bidentato; antennis novies-articulatis; tarsorum posticorum articulis primo et secundo sat longis, subæqualibus. Long., $7\frac{1}{2}$ mm.

The sub-hemisphæric form of this species gives it a very distinct appearance, and its anterior tibiæ are peculiar, being longitudinally produced at the apex after the manner of *Diphucephala*, while the external margin is interrupted above the middle by a very small tooth, and below the middle by a somewhat larger one. The puncturation of the pygidium is moderately close at the extreme base, becoming very sparing and very strong towards the apex. The insect may be best placed perhaps not far from *L. rotundipennis*, Macl.

There is a single specimen in the South Australian Museum. I do not know where it was taken.

L. modestus, sp. nov. Ovatus; supra glaber; sat nitidus; rufo-piceus, antennis, palpis, pedibus, elytris, abdomineque rufis; prothoracis lateribus capillis pallidis fimbriatis; subtus cinereo-pilosus; clypeo (? alterutrius sexus solum) antice rotundato, suturâ arcuatâ fortiter impressâ, illo et capite crasse rugatis, vix evidenter punctatis; prothorace obscure canaliculato sparsim subtiliter, elytris crebrius fortiter, pygidio propygidioque obscure crasse, punctatis; striis geminatis elytris parum evidenter impressis; propygidio sat magno; tibiis anticis apice longitudinaliter fortiter productis, margine externo vix dentato; antennis novies articulatis; tarsorum posticorum articulo primo secundo sat longiore. Long., $4\frac{1}{2}$ mm.

The position of this little species in the genus should be, I think, near the preceding (*L. simplex*). It is no doubt in many respects allied to the West Australian *L. rubefactus*, Macl., but differs in the absence of a *carina* from the pygidium, the arcuate clypeal suture, sculpture of the head, &c., &c.

There is a single specimen in the South Australian Museum.

L. dispar, sp. nov. Late ovatus; sat nitidus; niger; antennis (? clavo excepto), palpisque testaceis; elytris (marginibus late obscure infuscatis exceptis) tibiis anticis et tarsis omnibus rufescentibus; capite prothoraceque nigro pilosis; subtus cinereo-pilosus; clypeo (? alterutrius sexus solum) antice rotundato, marginibus sat fortiter reflexis; capite crebre sat fortiter; prothorace duplo (subtilius et fortiter), elytris pygidio propygidioque fortiter sat crebre, punctatis; striis geminatis evidenter impressis; pygidio basi carinato, utrinque sat fortiter sulcato; elytris propygidii partem majorem tegentibus; tibiis anticis (? alterutrius sexus solum) externe sat fortiter tridentatis; tarsorum posticorum articulo $1^{\circ} 2^{\circ}$ vix breviori; antennis 9 articulatis. Long., 10 mm.

This species is evidently allied to *picipennis*, Germ., from which the black pilosity of its head and thorax, the complete absence of a thoracic channel, larger size, different colour, and different thoracic puncturation easily distinguish it.

There is a single specimen in the South Australian Museum, but the locality of its capture is not known.

L. agrestis, sp. nov. Ovatus, minus nitidus; niger, antennis (clavâ exceptâ), palpis, pedibus anticis, elytris (marginibus anguste infuscatis exceptis), pygidio et propygidio rufis; pedibus posticis piceis; supra glaber, prothorace antice et ad latera capillis longis pallidis sparsis fimbriato, postice

pallide ciliato, pygidio propygidioque sparsim pallide pilosis; subtus sat dense cinereo pilosis; clypeo (? alterutrius sexus solum) antice rotundato-truncato, marginibus minus reflexis; capite pone medium transversim carinato; hoc crebre subtilius, prothorace fortius minus crebre; elytris et fortius et sparsius vix seriatim, propygidio crebre minus fortiter, pygidio minus crebre sat fortiter, punctatis; striis geminatis evidenter impressis; elytris propygidii partem dimidiam tegentibus; tibiis anticis (? alterutrius sexus solum) externe obtuse tridentatis, unguiculis anticis sat incrassatis; antennis octies articulatis; tarsis posticis elongatis, articulo 1° 2° paullo longiore. Long., 8 mm.

A single specimen of this species (which does not seem to resemble any hitherto described as having antennæ of only eight joints) was sent to me from Western Australia by E. Meyrick, Esq. The distinct, though not strong, incrassation of its front claws points to the probability of its being a male. The teeth on the anterior tibiæ are equidistant, or nearly so; the two nearer to the apex are only moderately large, and the upper one is very small.

L. lætus, sp. nov. Elongato-ovatus, sat nitidus; rufus, capite pectoreque nigris, prothorace elytrisq. antice infuscatis; supra glaber; prothoracis, lateribus capillis longis pallidis fimbriatis, margine postico pallide ciliato; subtus pallide pilosus; clypeo (? alterutrius sexus solum) antice rotundato-truncato, suturâ minus fortiter arcuatâ; illo, æque ac capite, rugoso punctato; prothorace haud canaliculato fortiter minus crebre, elytris sparsim crasse, pygidio propygidioque minus fortiter sat crebre, punctatis; striis geminatis obscure notatis; elytris propygidium fere tegentibus; tibiis anticis apice longitudinaliter arcuatim productis, margine externo medio obtuse dentato; antennis octies articulatis; tarsis posticis sat brevibus, articulis, 1° et 2° subæqualibus. Long., 7 mm.

This species is probably not unlike *L. monticola*, Fab., though evidently distinct. The very brief original description calls that species "*minuta*," which my insect is not, as compared with other species of *Liparetrus* described by Fabricius, and also calls the elytra "*abdomine multo brevioribus*" ("*abdomine brevioribus*" being the expression applied to the elytra of others of the genus), which is evidently inapplicable to an insect with exceptionally long elytra. The Hon. W. Macleay, in his recent paper on *Liparetrus*, gives a detailed description of an insect which he considers to be *L. monticola*, Fab. (very probably on good grounds), but which does not appear to me

to fit in very well with the original description. Taking it for granted, however, that Mr. Macleay is right, *L. lætus* must differ from *monticola* in respect of the much coarser puncturation of its upper surface and (unless Mr. Macleay's description applies only to one sex) in respect of the shape of its anterior tibiæ.

This insect was sent to me from Western Australia by E. Meyrick, Esq.

L. Macleayi, sp. nov. Ovatus, minus nitidus; niger, palpis tibiis anticis tarsis et elytrorum disci parte posteriori plus minusve rufescentibus, antennis piceis; supra nigro, subtus cinereo-hirsutus; clypeo reflexo (?alterutrius sexus solum) antice subemarginato truncato, crasse nec profunde punctato; capite subopaco creberrime, prothorace sat crebre, elytris minus crebre minus seriatim, rugoso-punctato; striis geminatis vix evidenter impressis; pygidio propygidioque fortiter rugoso-punctatis (æque ac *L. salebrosi*), carinatis; tibiis anticis (?alterutrius sexus solum) tridentatis, dente summo parvo; tarsis posticis gracilibus, articulo 2°, 1° sat longiore; antennis octies articulatis. Long., $7\frac{1}{2}$ mm.

Of each elytron of this insect the hinder two-thirds contains a large dull red blotch, which, however, does not touch the margin or suture, being everywhere surrounded (somewhat narrowly, except in front) by the black ground colour. The species is rather closely allied to *L. ferrugineus*, Blanch., differing, however, *inter alia* by the darker pilosity on the upper surface, and the extremely strong and rough sculpture of the pygidium and propygidium.

I took a single specimen at Ararat, Victoria, by sweeping flowers in September.

L. aureus, sp. nov. Ovatus crasse puncturatus, puncturis singulis squamas singulas minutas ferentibus; piceus; capite, prothorace pygidio, propygidio et pedibus capillis longis aureis vestitis; elytris capillis brevioribus minus dense instructis, vix striatis; clypeo, antice et ad latera, reflexo, truncato; tibiis anticis bidentatis; tarsis posticis sat robustis, articulo secundo primo paullo minus duplo longiore; subtus aureo-hirtus; antennis 8 articulatis. Long., $7\frac{1}{2}$ mm.

Probably allied to *L. mæchidioides*, MacL., but double the size, and densely clothed (except on the elytra) with very long decumbent golden hairs. On the elytra the pilosity is shorter and less dense. The elytra are not striated, but the punctures run in rows, and the interstice between the fourth and fifth rows is conspicuously wide. The basal joint of the hind tarsi

being evidently more than half as long as the second distinguishes this species from many of its allies—the non-sinuosity of the sides of its clypeus from others—and the *Mæchidius*-like nature of its puncturation distinguishes it from all its described congeners of the *basalis* group that approach it in size.

There is a single specimen in the South Australian Museum, Adelaide.

L. bicolor, sp. nov. Oblongo-ovalis; crasse nec profunde punctatus; nigro-piceus; antennis (clava excepta), palpis, pedibus anterioribus et intermediis, tarsis posterioribus, elytris, pygidio et propygidio plus minusve rufis; capite, prothorace, scutello, pygidio propygidioque longe aureo-pilosis; prothoraci in disco capillis nigrescentibus; elytris subseriatim puncturatis, puncturis singulis (his in pygidio propygidioque etiam) squamas singulas minutas ferentibus; interstitiis alternis obscure elevatis; clypeo reflexo antice truncato, lateribus leviter emarginatis; tibiis anticis apice bidentatis, basi vix dentatis; tarsis posticis gracilibus, articulo secundo primo circiter triplo, longiore; subtus sat sparsim aureo-hirtus; antennis 8-articulatis. Long., $7\frac{1}{2}$ mm.

This is an obscure little species distinguished by its *Mæchidius*-like puncturation, the peculiar sculpture of its elytra, and the very slender hind tarsi, with unusually long second joint. It probably resembles *striatipennis*, MacL., but is smaller, and differs in the colour of the thoracic pilosity, of the elytra, &c., and, as Mr. Macleay does not mention the puncturation of *striatipennis* as being of the *Mæchidius* type, probably in that respect also.

A single specimen in the South Australian Museum, Adelaide, is ticketed as having been taken at Summerton.

L. granulatus, sp. nov. Oblongo-ovalis; nigro-piceus; antennis (clava excepta), palpis pedibusque plus minusve rufescentibus; capite prothoraceque fortius nec crebre granulatis, granulis singulis squamas singulas pallidas adpressas ferentibus; elytris brevibus postice attenuatis seriatim granulatis, granulis (ut prothoracis) setigeris; pygidio propygidioque (æque ac prothorax) granulatis setulosisque; hoc permagno; illius disco toto excavato nitido, excavatione intra canaliculata, antice tuberculo obtuso instructa; clypeo antice truncato, lateribus sat emarginatis; tibiis anticis bidentatis; tarsorum posteriorum articulo secundo primo duplo longiore; subtus granulatus, setis longioribus pallidis instructus; antennis 8-articulatis. Long., $6\frac{1}{2}$ mm.

Small as it is, I consider this the most remarkable *Liparetrus* I have seen. Its sculpture throughout is exaggeratedly *Mæchidius*-like. Its elytra are scarcely longer than the dis-

tance from their apex to the apex of the pygidium, and are so narrowed behind that (viewed from above) the hind body is visible on both sides outside the hinder two-thirds of the elytra. The pygidium is most extraordinary. Not far from its base a kind of ridge runs transversely across it, which is gathered up in the middle into an obtuse tubercle. This ridge forms the anterior boundary of a large depression or excavation, which is much more shining than the rest of the segment, and is longitudinally divided by a deep furrow. The portion of the pygidium bearing this sculpture is obliquely bent under towards the ventral surface of the hind body.

A single specimen has been submitted to me by Mr. Rothe, taken, I presume, in the interior of South Australia. I am uncertain as to its sex.

MACLEAYIA, *gen. nov.*

Mentum planum, antice haud emarginatum; palpi labiales brevissimi, maxillares modici, art^o 1^o brevi, 2^o et 3^o subæqualibus, 4^o 3^o paullo longiore; labrum vix conspicuum; clypeus magnus antice subemarginatus, lateribus reflexis, sutura vix conspicua; antennæ 9-articulatæ, sat longæ, clava articulis reliquis omnibus conjunctis vix brevior, altero sexu 5, altero 3, articulata; prothorax transversus, basi rotundato-truncatus; scutellum magnum fortiter transversum; elytra prothorace plus duplo longiora, propygidii ad medium attingentia; hoc et pygidium perpendicularia; pedes robusti, tibiis anticis altero sexu 3-dentatis, altero simplicibus apice attenuatis; unguiculis simplicibus.

Of this remarkable genus I possess three specimens taken in Western Australia by E. Meyrick, Esq. Two of them are sexually similar, and are probably attributable to the same species; they have the anterior tibiæ quite simple, and the antennal club three-jointed. The other has the anterior tibiæ tridentate, and the antennal club of five joints, and seems specifically distinct from the other two. I am unable to say which is the male.

M. singularis, sp. nov. Elongato-ovata; sat nitida; nigra, antennis (clava excepta), palpis, tibiis tarsis et elytris plus minusve rufis; supra glabra, prothorace et elytris capillis longis fulvis ad latera fimbriatis; subtus sparsim fulvo pilosa; clypeo (? alterutrius sexus solum) reflexo, antice rotundato-truncato; hoc et capite fortius sat crebre, prothorace conspicue canaliculato fortius minus crebre, scutello transverso magno sparsim minus fortiter; pygidio propygidioque subopacis albo squamosis sparsim fortiter, punctatis; elytris propygidii partem dimidiam tegentibus punctato-striatis, interstitiis latis convexis; tibiis anticis



Blackburn, Thomas. 1888. "Notes on Australian Coleoptera, with descriptions of new species." *Transactions and proceedings and report of the Royal Society of South Australia* 10, 12–30.

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