

REVISION OF THE AUSTRALIAN ELATERIDAE.  
COLEOPTERA.—Part I.

By ALBERT H. ELSTON, F.E.S.

[Read September 11, 1924.]

Family ELATERIDAE.

The insects comprising this family have the head sunk into the prothorax, almost up to the eyes, and it is always wider than long; the antennae are very variable in length, as long as the body or not even reaching the base of the pronotum, either filiform, serrated, combed, or even laminated and having either eleven or twelve joints; the upper lip is always visible, transverse or semicircular, and sometimes emarginate in the middle of the anterior margin; the maxillae are always small and bilobed, and at the apex with dense and somewhat long hairs; the maxillary palpi are always four-jointed; the basal joint is small, the following two variable in length, and the last one having different shapes, being either filiform, securiform, triangular or even cylindrical; the labial palpi are mostly short and three-jointed, the last joint, as with the maxillary palpi, is of various shapes. The prosternum is elongate and, with one exception (*Campylides*), provided in front with a protuberance, generally rounded, projecting underneath the head, and frequently concealing the entire lower part; at the posterior end, the prosternum is abruptly contracted between the anterior legs and is prolonged into a projection, either straight or curved, which is received into a cavity in the mesosternum, and forming an important part of the curious mechanism which gives these insects the power of jumping or skipping, when they are placed on their backs. The scutellum is always visible, and the elytra are usually elongated. The legs are comparatively short and the tarsi five-jointed; the latter are either simple, more or less compressed, under surface clothed with hairs, sometimes very strongly dilated or flatly depressed, or the individual joints are bilobed, cordate or lobed.

The Elateridae in their larval stage are known as wireworms; they are distributed all over Australia and attack a variety of crops. They are particularly destructive to maize, wheat and oats, as well as to potatoes, sugar beets and sugar cane. When attacking the cereal and forage crops they work entirely beneath the surface of the ground, and their attention is chiefly confined to the seeds, roots and underground stems.

My work, up to the present, has been considerably lightened by the help of my colleagues in Australia generously loaning to me their collections, and I herewith desire to express my appreciation of the courtesy of the following gentlemen in this connection:—Mr. A. M. Lea of the South Australian Museum; Mr. J. Clark of Perth; Mr. H. J. Carter and Dr. E. W. Ferguson of Sydney; Mr. F. E. Wilson of Melbourne; Mr. J. C. Goudie of Maldon, Victoria; and Mr. R. F. Kemp of Adelaide.

Subfamily AGRYPNIDES.

The members of this subfamily have the mandibles dentate on the inside or cleft at the apex; the antennae seldom extend beyond the base of the pronotum and are received into the prosternal furrows formed by the separation of the lateral borders of the prosternum from the sides of the prothorax; the face is flat, or more or less depressed. The prosternum is sometimes provided

with deep furrows for the reception of the tarsi, of which the latter are either simple, clothed underneath with brush-like hairs, or sometimes one or two joints are lobed or dilated.

#### Key to the Genera of Agrypnides.

- |  |   |                    |
|--|---|--------------------|
| 1. The tarsi are simple .. .. .  | 2 |                    |
| 1a. Joints 1 to 4 of the tarsi are strongly dilated, flatly depressed, and at apex emarginate .. .. .  |   | <i>Trieres</i>     |
| 1b. Apex of first joint of tarsi strongly, the remainder less strongly, dilated .. .. .  |   | <i>Pseudolacon</i> |
| 2. The antennal furrows reach up to the anterior legs .. .. .  | 3 |                    |
| 2a. The antennal furrows do not reach up to the anterior legs .. .. .  | 5 |                    |
| 3. The 3rd joint of antennae is shorter than the 4th, or if quite as long, in this case at least narrower than the latter. The pronotum is more or less arched, the carina of the posterior angles extends upwards and parallel to the lateral margins .. .. . |   | <i>Agrypnus</i>    |
| 5. The antennae long and more or less pectinate .. .. .  |   | <i>Homoeolacon</i> |
| 5a. The antennae short and not pectinate .. .. .   | 6 |                    |
| 6. Elytra at the base strongly contracted, on the shoulders obliquely truncate, the epipleurae not twice as long as wide .. .. .   |   | <i>Myrmodes</i>    |
| 6a. Elytra at the shoulders rounded or angular, the epipleurae more than twice as long as wide .. .. .   |   | <i>Lacon</i>       |

#### Genus LACON.

This genus has a world-wide distribution and is largely represented in Australia. It may be distinguished by the following characteristics: The mandibles are bifid or dentate on the inside; the apical joint of the palpi is securiform. The antennae are short, the first joint is large and somewhat bent, the second and third small, the third sometimes somewhat shorter than the second, the following are triangular, the last at the apex truncate or emarginate. The pronotum may be more or less flat or yet strongly arched, usually wider than long or as long as wide, and sometimes it may be even longer than wide; the appearance, at first glance, of the relative length and breadth of the pronotum is very deceptive, usually it will appear to be longer than wide, but on actual measurements it may prove to be only as long as wide or even slightly wider than long. The elytra are wide and comparatively short, at the sides parallel, or dilated in, or before, the middle; usually punctate-striate or with seriate punctures. The antennal furrows on the prosternum only reach to the middle; the sides of the pro- and metasternum have sometimes sharply defined or slightly distinct tarsal furrows; at the base of the propleurae there is frequently a deep transverse furrow for the reception of the anterior femur. The legs are moderately long, the femora and the tibiae usually of equal length. The insects comprising this genus may be divided into four sections. The first, having the pro- and metasternum furnished with deep, sharply defined tarsal furrows, as with *L. caliginosus*, Guer.; the second section, to which *L. socius*, Cand., belongs, has the prosternum only with deep, sharply defined tarsal furrows, and the metasternum with ill-defined furrows, or even entirely absent; the third has the pro- and metasternum, or the prosternum only, with distinct, but not deep and sharply defined tarsal furrows, of which *L. assus*, Cand., is an example; and the fourth section is without tarsal furrows on the prosternum, or, if present, so ill-defined as to be almost indiscernible, this last section is represented by *L. variabilis*, Cand.

#### SYNONYMY.

- L. gayndahensis*, Macl.=*L. assus*, Cand.  
*L. squalescens*, Blackb.=*L. marmoratus*, Cand.  
*L. bimaculatus*, Schwarz=*L. duplex*, Blackb.  
*L. adelaidae*, Blackb.=*L. carinulatus*, Cand.

#### LACON CALIGINOSUS, Guérin.

*Hab.*—New South Wales; Victoria; South Australia; Tasmania.

## LACON LATICOLLIS, Cand.

The posterior angles of the pronotum inside are lightly, but distinctly, carinate; a characteristic not mentioned by the author.

*Hab.*—Victoria; South Australia (Kangaroo Island); Western Australia.

## LACON URSULUS, Cand.

This species is variable in size, specimens before me range from 9 mm. to 13.5 mm. in length.

*Hab.*—New South Wales; Victoria; South Australia.

## LACON SOCIUS, Cand.

A specimen from the Endeavour River, Queensland, agrees very well with the author's description of this species, and has the posterior angles of the pronotum rectangular. A specimen in the South Australian Museum, however, determined by Candeze as *socius*, has not the posterior angles of the pronotum rectangular. The latter specimen has the sides of the pronotum, in front of the posterior angles, lightly sinuated, and from the bottom of this sinuation are continued rectilinearly in an oblique direction downwards, which gives the angles the appearance of being widely and obliquely truncated. The interstices on the elytra have two rows of punctures, much smaller than those in the striae, very distinct near the base and in the middle, but almost obsolete on the posterior third.

## LACON FARINENSIS, Blackb.

*Hab.*—South Australia (Parachilna); New South Wales (Broken Hill).

## LACON MANSUETUS, Blackb.

This species is very variable in colour, ranging from a dark brownish-black to a tawny tint. The pronotum has two more or less distinct subbasal round foveae, situated one on each side of the faintly defined longitudinal median furrow, midway between the latter and the lateral margins. In general appearance it closely resembles *L. granulatus*, Macl., but can be easily distinguished from that species by the base of the pronotum being much less deeply emarginate, the posterior part of the elytra more widely rounded, the punctures on the pronotum larger and not granulated in appearance.

## LACON ASSUS, Cand.

*L. gayndahensis*, Macl.

Macleay's species is undoubtedly conspecific with *assus*, and must now be regarded as a synonym of the latter. The author in his description of *gayndahensis* said that the prothorax is "longer than the width," but this is so only in appearance; by careful measurement the width proves to be barely greater than the length. Some specimens have the tuberculate prominence within the posterior angles of the pronotum more conspicuous than on others, whilst on some it is barely discernible. Length, 13 mm. to 16.5 mm.

*Hab.*—Queensland; New South Wales.

## LACON COSTIPENNIS, Germ.

This species is very variable both in colour and size, the former ranges from a dark brown to a tawny colour, on some specimens the pronotum is dark brown and the elytra a reddish-brown, also in many instances the posterior angles of the pronotum are reddish; when abraded this insect has a distinct nitid appearance. The size varies from 6.5 mm. to 10.25 mm. in length.

*Hab.*—Victoria; South Australia; Kangaroo Island; Western Australia.

## LACON LACRYMOSUS, Cand.

Some specimens are much paler than the typical form, being of a reddish-brown, although probably this may be due to immaturity. On fresh specimens the clothing is slightly of a mottled appearance, due to whitish scales being interspersed among the dark ones, especially is this noticeable on the pronotum and the elongate tubercles on the posterior part of the elytra. The posterior angles of the pronotum, on many specimens, are of a distinct reddish colour. This insect, as with *L. costipennis*, Germ., to which it is closely allied, has a nitid appearance when abraded. The length varies from 5.5 mm. to 7.5 mm.

*Hab.*—South Australia.

## LACON LINDENSIS, Blackb.

This species is very close to *L. lacrymosus*, Cand., and of which, probably, it is only a variety.

## LACON GUTTATUS, Cand.

Closely allied to *L. pictipennis*, Cand., and of which, probably, it is only a variety. The size varies from 6 mm. to 8 mm. in length.

*Hab.*—Victoria; South Australia.

## LACON MURRAYENSIS, Blackb.

The only distinction, apparently, between this species and *L. guttatus*, Cand., and *L. pictipennis*, Cand., is that of its colour. For the present I am regarding these as three separate species, although I believe eventually they will prove to be but one variable species.

## LACON PORRIGINOSUS, Cand.

The author in his description of this species does not mention anything about the puncturation of the interstices on the elytra. The specimens determined by me as *porriginosus* have the interstices strongly and closely punctured, the punctures being only slightly smaller than those in the striae. The colour is variable, some specimens being of a much lighter brown than others. The length varies from 8.5 mm. to 11 mm.

*Hab.*—North-west Australia; North Queensland.

## LACON MARMORATUS, Cand.

*L. squalescens*, Blackb.

I have examined a cotype of *L. squalescens*, Blackb., which is in the South Australian Museum, and it is undoubtedly the above species, of which Mr. Lea has specimens in his collections determined by Candeze. It is a somewhat variable species, the colour of some being a much lighter brown than others; the longitudinal furrow on the pronotum is very finely impressed, whilst on several specimens it is almost obsolete. The length varies from 7.5 mm. to 10.5 mm.

*Hab.*—Queensland; New South Wales.

## LACON VICTORIAE, Cand.

*Hab.*—Queensland; New South Wales; Victoria; South Australia; Tasmania.

## LACON DUPLEX, Blackb.

*L. bimaculatus*, Schwarz.

The species described by Schwarz as *bimaculatus* is, apparently, the same as that described by Blackburn as *duplex*; the former must now be regarded as a synonym of the latter.

*Hab.*—New South Wales; Victoria; South Australia.



## LACON CASTELNAUI, Cand.

The tarsal furrows on the prosternum are clearly indicated, but are neither deep nor sharply defined; those on the metasternum are almost obsolete.

## LACON SCULPTUS, Cand.

*Hab.*—Queensland; New South Wales; Victoria.

## LACON DIVARICATUS, Cand.

*Hab.*—Queensland; New South Wales; Victoria; South Australia.

## LACON GRANULATUS, MacL.

On one specimen the dark scales on the pronotum are interspersed with whitish ones, and forming four more or less distinct maculae. The pronotum, by measurement, is about as long as wide and not "much longer than the width" as stated by the author, although, in appearance the length seems to be greater than the width. On the pronotum there are two small, shallow foveae, situated one on each side, and near to the almost obsolete longitudinal furrow, and just in front of the base. The antennae, anterior margins and posterior angles of the pronotum are more or less reddish. The prosternum has somewhat distinct tarsal furrows and those on the metasternum almost obsolete.

## LACON DUBOULAYI, Cand.

The insect which I have determined as the above species differs from the typical form in size, its measurements being 19 mm. long and 7.5 mm. wide, and, in addition, a moderately wide, shallow, tarsal depression is distinctly visible on the prosternum; in all other respects it agrees very well with the author's description.

## LACON PRINCEPS, Cand.

Two specimens from Coen River, Queensland, are smaller than the typical form, one is only 20 mm. in length and the other 22 mm.

## LACON GIBBUS, Cand.

A specimen from the Northern Territory only measures 17.5 mm. in length.

## LACON CRASSUS, Cand.

There is a single specimen before me from Queensland which agrees very well with the author's description, except that there is a more or less distinct, short, shallow tarsal depression on the prosternum.

## LACON VARIABILIS, Cand.

This species, as its name implies, is indeed very variable, and is commonly distributed over the whole of Australia and Tasmania. On some specimens, particularly with the male, the tarsal depression is more or less visible, whilst on others it is entirely absent; the sculpture of the elytra also shows a certain amount of variability, the alternate interstices being more conspicuously elevated on some specimens than on others; the length varies from 7.5 mm. to 14.5 mm. A careful comparison of the type of *L. yilgarnensis*, Blackb., with a series of the above species would probably reveal it to be only a variety of *variabilis*, of which the latter, having a wide distribution, is variable *inter se*. The present location of the type of *yilgarnensis* is unknown to the author, who considers it desirable for the present that these two species should be considered as separate until such time that Blackburn's type can be examined. Apparently the only distinction

between these two insects is that *yilgarnensis* has the margins of the pronotum less flattened and the tarsal furrows on the prosternum more conspicuous.

LACON INCULTUS, MacL.

*Hab.*—North-west Australia; Northern Territory.

LACON PLEURETICUS, Cand.

This species has a moderately wide, shallow depression on the prosternum for the reception of the tarsi. On the inside of the posterior angles, close to the lateral margins, is a very fine, but nevertheless distinct, carina. The interstices of the elytra have each two rows of punctures, much finer than those in the striae, and the alternate striae are each more densely squamose than the others.

LACON VARIOLUS, Cand.

The tarsal furrows on the metasternum are almost as distinct as those on the prosternum. The interstices of the elytra near the suture are moderately wide and flat and, *inter se*, equal; towards the lateral margins they are more narrow and costate, the interstices near suture have each two rows of punctures, smaller than those in striae.

LACON GEMINATUS, Cand.

Specimens from King River, Northern Territory, agree very well with the author's description, except that they are much smaller and variable in size, the smallest being 10 mm., and the largest 13 mm., in length.

LACON CARINULATUS, Cand.

*L. adelaidae*, Blackb.

On a large number of specimens examined by me there are to be seen two more or less distinct round foveae on the pronotum, one on each side of the longitudinal furrow, just in front of the base, and about midway between the former and the lateral margins; a characteristic not mentioned by either of the above authors. The elytral sculpture of this insect varies considerably, on some forms the alternate interstices are more elevated than on others, agreeing well with what Candeze wrote, "les intervalles impairs élevés en forme de petites côtes nettement saillantes." In the series before me there are to be found also specimens agreeing with what Blackburn wrote about *adelaidae*, "the alternate interstices of its elytra by no means strongly carinate." The intermediate stages between these two forms are also before me, so that I feel convinced the insect described by Blackburn as *adelaidae* is the same species as that described by Candeze as *carinulatus*. The length varies from 5.75 mm. to 7.5 mm.

*Hab.*—South Australia; Victoria.

LACON PLAGIATUS, Cand.

There are a number of specimens before me which undoubtedly appear to be this species. The colour of the body, on both the dorsal and ventral surfaces, is dark brown, with the exception of the posterior angles of the pronotum, which are sometimes strongly diluted with red; the antennae and legs are testaceous, the latter somewhat darker than the former. The posterior angles of the pronotum are acute and with a more or less distinct, fine carina on each near the outer margin; the punctures in the striae are almost round, those of the interstices also round but smaller. Length, 7 mm. to 9.5 mm.; width, 2.5 mm. to 3.75 mm.

*Hab.*—North-west Australia (Derby); Northern Territory (Daly River); Queensland (Cairns, Coen River, Cunnamulla, Normanton, Stewart River); South Australia (Oodnadatta).

***Lacon perplexus*, n. sp.**

Wide, moderately convex; subnitid; reddish-brown, pronotum and head slightly darker, antennae and epipleurae of elytra reddish; moderately thickly clothed with yellow squamose hairs. Head flat, with a small shallow depression near the top; punctures concealed by the clothing. Pronotum transversely gibbous behind the middle, wider than long, sides roundly contracted on the anterior third, thence straight to the base, which is subtruncate, posterior angles rectangular and very finely carinate; with closely placed, moderately large, sieve-like punctures, becoming smaller and more crowded near the margins. Scutellum almost round with a few large punctures. Elytra of the same width as pronotum at the base and barely twice its length, sides almost parallel to beyond the middle then roundly narrowed to apex, slightly flattened in the middle near suture; punctate-striate, the punctures in striae large and more or less oblong in shape, the interstices flat and very finely punctured. Prosternum with deep, sharply defined furrows for the reception of tarsi, metasternum with very shallow and wide depressions. Length, 10-14.5 mm.; width, 4.25-5.5 mm.

*Hab.*—North-west Australia: Forrest River (W. Crawshaw), Hammersley Range (W. D. Dodd), Wyndham (W. Crawshaw); Northern Territory: Port Darwin. Type in author's collection.

The longitudinal furrow on the posterior part of the pronotum is not quite deep enough to divide the transverse gibbosity; the punctures in the elytral striae are much larger near the lateral margins than elsewhere, and those on the interstices more distinct near the base. The specimen from Port Darwin differs from the typical form in being of a uniform dark brown. Very close to *L. socius*, Cand., but wider in proportion to length, more nitid, and with the punctures in the elytral striae larger. Distinguished from *L. incultus*, MacL., by being proportionately broader and with the interstices on the elytra wider.

***Lacon impressicollis*, n. sp.**

Moderately flat and wide; of a uniform dark brown with the antennae, palpi, posterior angles of prothorax, scutellum, epipleurae of elytra and legs reddish; densely clothed with very small, light-brown scales. Under surface brown, diluted with red and less densely clothed than upper surface. Head moderately flat and lightly impressed in the middle near the top; with dense, not large, rugose punctures. Pronotum wider than long, the sides roundly contracted on the anterior third, thence straight to the base, which is subtruncate; posterior angles rectangular, and almost imperceptibly carinate, depressed inside the anterior and posterior angles; longitudinally impressed in the middle, and with two distinct, round subbasal depressions, one on each side of the longitudinal furrow; densely covered with moderately small, round punctures. Scutellum almost round, slightly convex, and minutely punctured. Elytra as wide as pronotum at the base and less than twice the length of the latter, sides straight and almost parallel to just beyond the middle, thence strongly, roundly narrowed to apex; somewhat flattened on top near the suture; punctate-striate, the punctures in striae moderately large and deep, the alternate interstices wider and more elevated, minutely punctured. Prosternum with moderately deep, but not sharply defined, tarsal furrows. Length, 6.75-8.5 mm.; width, 3-3.75 mm.

*Hab.*—Tasmania: George Town, Ben Lomond (4,000 feet). Type in South Australian Museum.



In form somewhat resembling *L. laticollis*, Cand., but with the pronotum less convex, the elytra sculptured differently, and the tarsal furrows on the prosternum not sharply defined. Allied to *L. sculptus*, Cand., but easily distinguished by the shape of its pronotum, the punctures of which are much smaller, the upper surface more densely covered with scales and with the sculpture of the elytra different.

***Lacon validus*, n. sp.**

Thick, convex; subopaque; dark brown with the antennae (basal joint excepted), tibiae and tarsi reddish; moderately densely clothed with griseous-yellow, squamose hairs, on parts of elytra more thickly arranged and forming patches. Under surface same colour as upper, densely and uniformly clothed with very small pale scales. Head with surface very uneven and thickly covered with rather large punctures. Pronotum wider than long, transversely gibbose behind the middle, and with an indistinct longitudinal furrow posteriorly, sides roundly contracted on the anterior third and sinuate in front of the posterior angles, finely crenulate; posterior angles moderately large, slightly divergent, and widely and obliquely truncated, indistinctly carinate; impressed inside the anterior and posterior angles, the latter more deeply than the former; closely covered with rather large punctures, becoming smaller near the margins. Scutellum pentagonal, slightly concave and acuminate behind. Elytra as wide as pronotum and slightly more than twice its length, sides barely perceptibly dilated near the middle, then roundly contracted to apex; punctate-striate, the punctures in striae moderately large and almost round, the interstices wide and flat, each with two rows of punctures which are smaller and more shallow than those in striae. Prosternum and metasternum with wide, shallow tarsal depressions, those on the former much more distinct than those on the latter. Length, 13-15 mm.; width, 5-5.5 mm.

*Hab.*—Queensland: Bowen (A. Simson). Type in South Australian Museum.

The clothing is more patchy on the posterior part of the elytra than elsewhere and arranged so as to form two or three more or less distinct fasciae; the head has three or four large depressions which give its surface a very uneven appearance, also slightly granulated on the vertex; the interstices of the elytra are distinctly granulated near the base. Distinguished from *L. crassus*, Cand., by the patchy appearance of the clothing on the elytra, the uneven surface of the head, and the prosternum with distinct tarsal impressions.

***Lacon productus*, n. sp.**

Elongate, moderately convex; subopaque; reddish-brown with the antennae, posterior angles of prothorax, scutellum and legs more reddish; moderately densely clothed with short, yellowish-grey, squamose hairs. Under surface somewhat paler than upper and similarly clothed. Head triangularly impressed in the middle, and with closely arranged, rather small punctures. Pronotum about as long as wide, sides roundly contracted on the anterior fourth, thence straight to the base which is subtruncate; transversely gibbose behind the middle and with the gibbosity feebly divided by a shallow longitudinal furrow which extends almost the whole length of the pronotum; posterior angles almost rectangular and very feebly carinate; with moderately dense, small, round punctures, smaller and more crowded near the sides. Scutellum vaguely pentagonal, more or less rounded posteriorly, slightly concave and feebly punctured. Elytra as wide as pronotum and about two and a half times as long, sides parallel to beyond the middle then roundly contracted to apex; punctate-striate, the inside striae with small round punctures, those of the outer ones



much larger and more or less quadratic, the interstices rather wide and flat, minutely punctured. Prosternum with shallow, but nevertheless distinct, tarsal depressions. Length, 9 mm.; width, 3 mm.

*Hab.*—Northern Territory: Darwin (W. K. Hunt). Type in South Australian Museum.

The clothing on the elytra is arranged in double rows on each of the interstices; the sides of the pronotum in front of the posterior angles are not at all sinuate. In general appearance somewhat resembling *L. caliginosus*, Guer., but smaller, more convex, and with the sculpture of the elytra and tarsal furrows different.

***Lacon orthoderus*, n. sp.**

Elongate, narrow, convex; brown, in parts feebly diluted with red, the greater portion of head, antennae, and parts of the legs reddish; moderately densely clothed with pale griseous, acuminate scales. Under surface somewhat more reddish than above and similarly clothed. Head widely and somewhat deeply impressed in the middle, closely and rugosely punctured. Pronotum longer than wide, evenly convex, with a feeble, longitudinal, median furrow on the posterior half; sides on the anterior fourth roundly and feebly contracted, thence straight and parallel to the base, which is widely sinuate, lateral margins slightly crenulate; anterior and posterior angles lightly impressed on the inside, the latter subacute and produced backwards. Scutellum almost round, closely and finely punctured. Elytra as wide as pronotum and about twice the length, sides parallel to near the middle, then roundly contracted to apex; punctate-striate, the punctures in striae very dense and small, the interstices not wide, flat, and minutely punctured and granulate. Prosternum without tarsal depressions. Length, 7.5 mm.; width, 2 mm.

*Hab.*—Northern Territory (Blackburn's collection). Type in South Australian Museum.

The pronotum is evenly convex and not transversely gibbose, as is the case with most of the convex species of this genus; easily distinguished by the sculpture of the elytra. Near *L. productus*, Elston, but more slender, without tarsal depressions on the prosternum and the punctures smaller and more crowded.

***Lacon scopulosus*, n. sp.**

Thick; subopaque; dark brown, with the antennae and legs a reddish-brown; moderately densely clothed with whitish-grey scales, on parts of the elytra somewhat more densely arranged and of a more whitish colour, which gives it a mottled appearance. Under surface same colour as above and moderately densely clothed with pale scales. Head almost semi-circular and flat with a shallow depression in the centre; closely punctured and distinctly granulated. Pronotum wider than long, transversely gibbose behind the middle, sides crenulate and abruptly contracted on the anterior third, thence straight to the base, which is almost straight; posterior angles subrectangular with the apex obliquely truncated; with small, closely arranged, subrugose punctures. Scutellum almost round and more or less concave. Elytra barely perceptibly wider than pronotum and about twice the length of the latter, evenly convex, sides very slightly dilated near the middle, then roundly contracted to apex; rather deeply punctate-striate, the interstices not wide, more or less flat, and on the basal half distinctly granulated. Prosternum with short, very indistinct, tarsal furrows. Length, 5.5 mm.; width, 2 mm.

*Hab.*—Queensland: Coen River (W. D. Dodd); Endeavour River. Type in South Australian Museum.

A small, thick, and very distinct species, with the clothing denser at the base and more patchy on the posterior part of elytra. The elytra, in parts, are

sometimes diluted with red and with the posterior angles of the pronotum more or less reddish; the sides of the pronotum in front are almost rectilinearly contracted and the longitudinal furrow in the middle, which is usually present on species of this genus, is absent. A smaller species than *L. pinguis*, Cand., the clothing different and with the posterior angles of the pronotum truncated.

***Lacon adustus*, n. sp.**

Moderately thick; convex; subopaque; brown, in parts diluted with red, with antennae and legs reddish; rather densely clothed with tawny, squamose hairs, more densely arranged in parts and forming patches. Under surface convex; subnitid; reddish-brown and somewhat densely and evenly covered with testaceous squamose hairs. Head widely and rather deeply depressed in the middle; closely, deeply, and somewhat rugosely punctured. Pronotum wider than long, transversely gibbose behind the middle, more or less narrowly flattened inside the lateral margins which are crenulate; without a longitudinal furrow in the middle, sides somewhat abruptly contracted on the anterior third and from thence to the base almost straight, slightly sinuate in front of the posterior angles, which are widely and obliquely truncated on the outside, acuminate at the apex and carinate, the carina continued up to about the anterior third and forming a double edge; with moderately large, deep, and closely placed punctures, becoming smaller and somewhat more crowded near the margins. Scutellum pentagonal, acuminate behind and convex. Elytra slightly wider than base of pronotum and a little more than twice the length of the latter, evenly convex, sides somewhat dilated near the middle, then gradually and roundly contracted to apex; punctate-striate, the punctures in striae more or less rectangular, the interstices flat and even, minutely punctured and tuberculate near the base. Prosternum with shallow, more or less distinctly visible, tarsal furrows. Length, 8-12 mm.; width, 3-5 mm.

*Hab.*—Queensland: Cairns (A. M. Lea), Coen River, Stewart River (W. D. Dodd, Townsville (N. B. Tindale), Malanda (Dr. E. Mjöberg). Type in South Australian Museum.

On some specimens the epipleurae of the elytra are reddish; there is no longitudinal furrow on the middle of the pronotum, or at the most only barely perceptible on the basal part; the carina begins from the top of the truncation of the posterior angles of the pronotum and extends upwards to about the anterior third, forming a more or less distinct double margin. Five specimens (Cairns [2] and Malanda [3]) differ from the typical form by having the clothing much brighter; the squamose patches on the elytra are more or less golden and those on the prothorax silvery. In general appearance it closely resembles *L. marmoratus*, Cand., but distinguished from that species by not having the pronotum longitudinally furrowed in the middle, the interstices on the elytra more finely punctured and distinctly granulate near the base.

***Lacon submarmoratus*, n. sp.**

Elongate; moderately convex; subopaque; ferruginous with blackish patches; antennae, posterior angles of pronotum, epipleurae and legs a clearer red; moderately densely clothed with testaceous squamose hairs, more densely arranged on parts of elytra and pronotum and forming patches. Under surface of a more uniform ferruginous and with clothing similar to upper surface but more densely arranged. Head almost circular, with a large flat depression in the centre; somewhat coarsely punctured, the punctures more or less concealed by the clothing. Pronotum slightly longer than wide, base narrower than width at the anterior third, from the latter place abruptly, strongly, and rectilinearly contracted to anterior margin, lateral margins behind almost straight, very

slightly sinuate in front of the posterior angles, which are widely and obliquely truncated; lateral margins inside rather widely flattened, the longitudinal furrow just barely visible on the posterior half; closely covered with moderately large round punctures. Elytra as wide as pronotum and about two and a half times as long, sides almost parallel from base to middle and from thence gradually, roundly contracted to apex; punctate-striate, the punctures in striae rather small and rectangular, but becoming larger towards lateral margins, the interstices almost flat and with minute punctures, which are concealed by the clothing, distinctly granulate on the basal third. Prosternum with shallow, not very distinctly defined tarsal depressions. Length, 9-11 mm.; width, 2.75-3.75 mm.

*Hab.*—Queensland: Cairns (A. M. Lea). Type in South Australian Museum.

The antennae are comparatively long, almost reaching to the base of the pronotum; the elytra are much attenuated posteriorly. The scales on the latter are arranged in longitudinal rows and in parts more densely placed so as to form patches, particularly on the posterior half; the clothing on the pronotum is also irregular and so arranged as to appear in parts like guttae. This species is very close to *L. marmoratus*, Cand., but more elongate, antennae longer, pronotum rectilinearly contracted in front, with the lateral margins not crenulate and more widely flattened inside, and with the tarsal furrows on the prosternum not so strongly and clearly impressed.

#### ***Lacon applanatus*, n. sp.**

Elongate; rather flat; subnitid; upper surface dark brown with the antennae, palpi, legs, and posterior angles of pronotum reddish; moderately densely clothed with minute testaceous scales, which are seriate on elytra. Under surface same colour as upper but with the gula more or less reddish and the abdomen in parts diluted with red; somewhat densely clothed with small testaceous scales, more conspicuous than those on the upper surface. Head with three large depressions; densely covered with very small rugose punctures. Pronotum about as long as wide, lightly convex, abruptly and almost rectilinearly contracted from about the anterior fourth to base, from thence straight to posterior angles, in front of the latter slightly sinuate, sides not crenulate, the longitudinal furrow rather vague, the posterior angles almost imperceptibly produced backwards, the outer margin curved and slightly rounded off at the apex, with a very fine, but nevertheless distinct, carina; closely covered with small, round punctures. Scutellum small, truncate in front and rounded behind, minutely and rugosely punctured. Elytra as wide as pronotum and a little more than twice as long, almost flat on the middle with a narrow margin at the sides gently sloping, lateral margins vaguely dilated near the middle, from the posterior third gradually and roundly contracted to apex; punctate-striate, the punctures in rows moderately large and round, the interstices with densely placed punctures, a little smaller than those in striae, the alternate ones slightly elevated. The tarsal furrows on prosternum are almost indiscernible. Length, 8-11 mm.; width, 2.5-3.5 mm.

*Hab.*—Western Australia. Type in author's collection.

The pronotum of this species is much more nitid than the elytra, and on some specimens the latter has a narrow margin at the suture and the sides of a more or less reddish tint; the fifth interstice of the elytra is distinctly more elevated than the others. It differs from *L. monachus*, Cand., by not having the posterior angles of the pronotum acuminate, more nitid and more depressed.

#### ***Lacon conspiciendus*, n. sp.**

Moderately thick; subopaque; dark brown, with the antennae, palpi, and parts of the legs ferruginous; somewhat thickly clothed with short, acuminate,



testaceous scales. Face with a large, shallow, triangular depression in the middle, the apex of which touches the anterior margin of the pronotum; closely and somewhat rugosely punctured. Pronotum longer than wide, convex, sides curved and much constricted in front of the posterior angles, which are strongly produced backwards, obtusely pointed at the apex and distinctly carinate; median longitudinal line feebly marked, with two rather large, deep, round foveae in front of the middle, and two less distinct ones in front of the base, situated two on each side of the median line and midway between the latter and the lateral margins; closely covered with rather large and almost round punctures. Scutellum flat, more or less rounded posteriorly and lightly punctured in the middle. Elytra at the base much narrower than pronotum and less than twice the length of the latter, the sides at the anterior fifth abruptly dilated from the base, from thence to just beyond the middle almost parallel, then suddenly contracted to apex; the top, between the fifth suture on each elytron, slightly depressed; punctate-striate, the punctures in striae large and round, but becoming much smaller posteriorly; the interstices sparsely covered with minute punctures, which are concealed by the clothing, the fifth and seventh distinctly elevated, the remainder more or less flat. Prosternum without any distinct tarsal impressions. Length, 12-13.5 mm.; width, 4-4.5 mm.

*Hab.*—Northern Territory: King River. Type in South Australian Museum.

A very distinct and unlike any previously described species; it is easily distinguished by the unusual shape of the pronotum and elytra, the former by its strongly produced posterior angles and the two conspicuous foveae near the middle, and the latter by having the anterior fifth and the posterior third abruptly contracted.

***Lacon commutabilis*, n sp.**

Moderately thick; subopaque; dark brown, with antennae and mouth parts a pale, and the legs a darker ferruginous; moderately densely clothed with pale, squamose hairs. Under surface more densely clothed, of the same colour as upper, and with shorter and more depressed scales. Face almost semicircular and slightly depressed on the anterior part; somewhat deeply and closely punctured. Pronotum about as wide as long, evenly convex, sides roundly contracted on the anterior third and from the middle gradually contracted to near base; posterior angles rather strongly divergent and produced backwards, obtusely pointed, finely carinate, the carina extended along the sides up to the base of the anterior angles and forming a more or less distinct double edge to the margins; the longitudinal median furrow almost obsolete, only on the posterior half barely visible; on the middle with rather closely placed, large, round punctures, but becoming smaller and denser towards margins. Scutellum truncate in front and rounded behind, slightly concave in the middle with a few moderately large punctures. Elytra at base barely as wide as pronotum between apices of posterior angles slightly depressed near suture, humeral angles rounded, sides almost straight and parallel to beyond middle then gradually and roundly contracted to apex; punctate-striate, the punctures in striae elongately rectangular, those in the striae near suture much smaller than those near lateral margins; interstices moderately wide and flat, minutely punctured and very finely transversely rugose. Prosternum without distinct tarsal furrows. Length, 14.5-18 mm.; width, 5-6.25 mm.

*Hab.*—Northern Territory: Port Darwin (W. K. Hunt, coll. of Dr. E. W. Ferguson); North-west Australia: Derby (W. D. Dodd), Noonkanbah (Dr. E. Mjöberg). Type in author's collection.

This species is variable in size and with some the colour is a more reddish-brown than the typical form; the posterior angles of the pronotum are more or less reddish and at the apex are not sharply truncated but somewhat rounded.\*





Elston, A H. 1924. "Revision of the Australian Elateridae. Coleoptera.-Part I." *Transactions and proceedings of the Royal Society of South Australia (Incorporated)* 48, 196–208.

**View This Item Online:** <https://www.biodiversitylibrary.org/item/129841>

**Permalink:** <https://www.biodiversitylibrary.org/partpdf/244305>

**Holding Institution**

South Australian Museum

**Sponsored by**

Atlas of Living Australia

**Copyright & Reuse**

Copyright Status: In copyright. Digitized with the permission of the rights holder.

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.