

Descriptions of some new North American COLEOPTERA.

BY GEO. H. HORN, M. D.

OMUS, Esch.

O. Lecontei, n. sp.—Black, shining. Head sparsely intricately rugulose, frontal impressions shallow, deeply rugulose, clypeal region smooth. Thorax trapezoidal, slightly broader in front than long, sides arcuate and gradually convergent to base, anterior angles obtusely rounded, disc subdepressed at sides rounded, lateral margin acute, very narrow and slightly reflexed; surface feebly shining, intricately wrinkled, anterior transverse impression very faint, median line nearly obsolete. Elytra elongate oval, sides arcuate in front and gradually attenuate to apex, surface shining, and with large punctures, each distinct and with scarcely evident foveate punctures, in a double series on each elytron near the middle. Body beneath black, shining; thorax vermiculately rugulose, sides of abdominal segments finely longitudinally strigose. Terminal segment ♂ deeply notched. Length .66 inch; 17 mm.

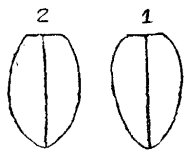
This species is closely allied both to *californicus* and *Audouinii*, but differs very distinctly from either. The form of thorax is almost exactly that of the former species, the sculpture is intermediate between the two, being less deep than in *californicus* while the thorax of *Audouinii* is comparatively smooth. The elytra in the above species is broadest behind the middle, (fig. 2) in the present species (fig. 1) the greatest width is in front of middle and behind this point they gradually become narrower and at the same time are much less arcuate.

This latter character gives this species a totally different facies from any other previously described. The punctuation of the elytra resembles that of *californicus*, but is less deep. In *Audouinii* the punctures are of a less decided character and the intervals between them irregularly elevated so that the punctures appear to become confluent. The elytral sculpture is remarkably uniform in all the specimens of *Omus* that have passed through my hands, scarcely any variation occurring in many individuals of all the species examined.

The specimens in my cabinet were collected by Mr. W. M. Gabb, near Monterey, California.

CYCHRUS, Fab.

C. rugiceps, n. sp.—Black, feebly shining. Head elongate, on side carinate, between the insertion of the antennæ deeply transversely impressed, vertex moderately convex, irregularly rugoso-tuberculate. Thorax cordate, at base moderately constricted, hind angles rectangular, sides feebly margined. Elytra regularly oval, moderately convex, surface striate, striæ punctured, intervals convex, interrupted especially at sides. Epipleuræ nearly smooth.



Anterior tarsi of male with three joints spongy pubescent beneath. Length .54 ♂—.66 ♀ inch; 14—17 mm.

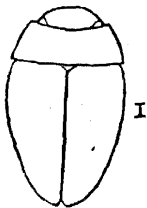
This very distinct species belongs with *C. cristatus* and *C. angulatus* being almost exactly intermediate in the sculpture of the head. A deep groove on each side of the head limits within the supra-orbital ridge and its extension forward over the insertion of the antennæ, where it forms a tubercle and then diminishing in size, extends to the margin of the front. Between the base of the antennæ a deep transverse groove unites the lateral grooves and forms thus a triangular smooth elevation, the base of which is the margin of the front. The front is not carinate as in *cristatus* and *angulatus*, but moderately convex and roughened in the manner of an irregular cicatrix. In *C. cristatus* the occiput immediately behind the eyes is constricted, in the one now before me, and *angulatus*, the head is not constricted. The thorax is nearly that of *C. punctatus*, but with the disc less convex along the median line and the transverse basal impression less deep. The elytra are of regularly oval form as in the two species above cited, and the surface sculptured nearly as in *C. interruptus*. The antennæ have the basal joint moderately stout, and are about equal to half the length of the entire body.

Both sexes are before me through the kindness of Mr. G. R. Crotch, and are from the collections of Lord Walsingham, made during a recent visit to Oregon.

LIMNOCHARIS, n. g. (Hydrophilidæ.)

Allied to *Limnebius*, differing as follows:—Abdomen composed of eight segments, first five equal in length, sub-connate, sixth slightly shorter, seventh and eighth narrower than the sixth, and the eighth rounded at tip and not ciliate. Hind legs not ciliate, outer edge finely spinulose. Antennæ eight-jointed, similar to *Limnebius*, last three joints forming an oval mass. Elytra sub-acute at apex, and at tip of suture slightly dehiscent. Surface sparsely pubescent.

L. piceus, n. sp.—Oval, more attenuate behind, subdepressed, piceous, shining, very sparsely pubescent. Head sparsely punctulate. Antennæ and palpi testaceous. Thorax transverse, twice as wide at apex as long, at base two and a half times; apex slightly emarginate, base broadly rounded, sides slightly arcuate and gradually narrowing to apex; surface sparsely and finely punctulate. Scutellum small, triangular, broader than long. Elytra oval, gradually narrowed to apex, apex sub-acuminate and slightly dehiscent; surface less shining than thorax, finely alutaceous. Body beneath black, sub-opaque, densely punctulate, sparsely pubescent. Legs testaceous. Length .06 inch; 1.5 mm.

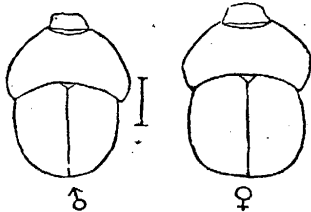


The entire upper surface is of uniform color and under a high power is seen to be finely alutaceous. The species recalls the form in miniature of some Australian species of *Hydroporomorpha*. The generic characters are those of *Limnebius* with the exceptions indicated. The presence of an eighth abdominal segment is a very unusual character and created some doubts in my mind at first as to the correctness of the determination, but under the compound microscope the last two segments are very plainly seen.

One specimen in my cabinet from a pool of water on the mountains south of Fort Crook, California.

LEPTINUS, Müller.

L. validus, n. sp.—Broadly oval, depressed, testaceous, feebly shining, sparsely clothed with short yellowish pubescence. Head broader than long, densely punctured, frontal margin thicker, shining, and slightly reflexed. Antennæ testaceous, longer than head and thorax. Thorax nearly twice as wide at base as long, apex emarginate and nearly as wide as the length, sides strongly arcuate at basal angles, lightly narrowed, base broadly emarginate, surface densely punctured. Scutellum broader than long. Elytra at base slightly narrower than thorax, sides feebly ♂, or broadly arcuate ♀, as long as head and thorax; surface depressed, densely punctured with a tendency to become transversely strigose. Body beneath testaceous, more shining than above, less densely punctured and pubescent. Length .20 inch; 5 mm.



Two specimens are before me which, from their dissimilarity of elytral form, I take to be sexes of the same species. The male has the elytra feebly arcuate on the sides and widest at base, the female has the sides much more broadly rounded and broader at middle. In the male the thorax has, near the apex, a very shallow broad fovea composed of three depressions scarcely separated. The male anterior tarsus is more dilated than the female. The accompanying diagrams illustrate the two forms, that of the ♂ being a fair representation, that of ♀ having the sides of thorax rather too strongly arcuate. In this species the hind angles of the head are less prominent than in our other species, *americanus*, Lec., or the *testaceus*, Müll., of Europe. The prosternum distinctly separates the anterior coxæ, is prolonged slightly behind them, obtuse at tip and furnished with a brush of rather stiff hairs. The mesosternum is carinate as in the other species, and separates the middle coxæ rather more widely than in *L. americanus*. The latter species has the prosternum very short and the coxæ are contiguous.

This species was obtained by Mr. Ulke from the Hudson's Bay Region.

PITYOPHAGUS, Shuck.

P. rufipennis, n. sp.—Sub-cylindrical, black, shining, elytra rufous. Head convex, black, moderately shining, coarsely but sparsely punctured, sides behind the eyes very slightly divergent, then feebly narrowed at base. Eyes small, round, inconspicuous. Antennæ rufous. Thorax black, shining, punctured similarly to the head, subquadrate, slightly longer than wide, sides very feebly arcuate, apex truncate, angles slightly prominent, base broadly rounded. Elytra as long as head and thorax, parallel, apex truncate, base slightly broader than thorax; humeri rectangular, moderately prominent; surface rather densely, but not regularly punctured, sutural stria obliterated at basal third; color rufous. Pygidium black, densely punctured and concave. Body beneath black, shining, sparsely punctured. Legs rufous. Length .26 inch; 6.5 mm.

Similar in form to *P. cephalotes*, Lec., but larger and differing by the more fine punctuation of the elytra as well as in color.

Two specimens before me, one in my cabinet from Oregon and another in the cabinet of Dr. LeConte, collected by the Messrs. Matthews in Vancouver.

DERETAPHRUS, Newm.

D. oregonensis, n. sp.—Black, sub-opaque, elongate, elytra subcylindrical. Head black, moderately shining, punctulate. Antennæ piceous, tip of club paler. Thorax elongate obcordate, one-fourth longer than wide, sides in front rounded, then parallel, finally sinuate to the hind angle; base scarcely half as wide as length of thorax; surface convex, sparsely punctured with unequal punctures, median line very deeply impressed at basal three-fourths, impression divided by transverse ridge at anterior third. Elytra one-half longer than head and thorax, subcylindrical, parallel, at base slightly narrowed, humeri moderately prominent anteriorly, base emarginate; surface with nine rows of large deeply impressed punctures, the ninth row obsolete at tip, the intervals between rows 3—4, 5—6, 7—8, 8—9, elevated costiform, the first two and last two costæ confluent with each other at apex. Body beneath black, more shining than the upper surface, sparsely punctulate. Legs rufous. Length .46 inch; 11.5 mm.

This is one of the largest species of the genus, until now not known in our fauna. A specimen was received several years since from California, but from a source whence Australian species had been sent, and little credit was therefore given to the authenticity of the locality, especially as all the known species were Australian. Lately, however, another has been attained free from any suspicion of error, and I have therefore ventured to name it. *Deretaphrus* has place with the Bothriderini of the family COLYDIIDÆ.

The specimens before me in my own and Dr. LeConte's cabinet are

from Oregon and (?) California. Many specimens have been obtained by Lord Walsingham in a recent visit to Oregon.

PHÆNOCERUS, Bonv.

P. americanus, n. sp.—Oblong, black, feebly shining, very sparsely clothed with short black pubescence. Head densely and coarsely punctured. Thorax wider than long, sides moderately arcuate and gradually narrowed from base to apex, hind angles acute, base bisinuate, median lobe short and slightly emarginate, surface densely and coarsely punctured. Elytra oblong parallel, gradually attenuate at apical third, base slightly narrower than the thorax, surface finely striate, intervals very feebly convex, densely punctulate. Body beneath black, more shining than the upper surface, pro- and metasternum coarsely but sparsely punctured, triangle of propleuræ mere densely, abdomen finely punctulate. Length .30 inch; 7.5 mm.

One specimen from Vancouver, collected by Messrs. J. and H. Matthews.

Through the kindness of M. de Bonvouloir I have been enabled to study the unique of *Ph. subclavatus*, Bonv., in his cabinet. Our species differs by its more elongate form and black color. In both the thorax is slightly narrower between the apices of the hind angles. The principal points of difference, however, may be found in the antennæ. Those of *americanus* are as follows; first joint moderately stout, scarcely carinate in front, longer than the two following united, second in part hidden by the first and with joints 3, 4, 5 nearly equal in length, joints 6—10 one-half the length of the fifth, broader than long and each broader than the preceding, eleventh joint narrower, but longer than the preceding, and oval in form. The antennæ of the typical species are as follows: first joint thick, slightly carinate in front, as long as the two following united, second small, in part hidden by the first, third elongate, slightly longer than the two following united, fourth to eighth becoming gradually thicker and submoniliform, ninth and tenth broader and compressed, the terminal narrower and, more elongate and nearly conical, the last three joints forming a loose mass. Generically the two species entirely agree except in the form of the antennæ, and as both have been described from unique specimens and apparently of different sexes, it seems better to await the discovery of additional material before adding a new generic name, founded on characters that may be insufficient.

CARDIOPHORUS, Esch.

C. mimeticus, n. sp.—Black, moderately shining, sparsely clothed with yellowish pubescence. Head minutely punctuate, frontal margin slightly reflexed. Antennæ black, nearly as long as head and thorax. Thorax longer than wide, sides very feebly arcuate, hind angles not divergent, disc moder-

ately convex, densely and very minutely punctulate. Scutellum black. Elytra broader at base than thorax, sides moderately arcuate and gradually narrower to apex, surface striate, striæ punctured, intervals moderately convex, finely punctured; color black with large rufous humeral space, involving the epipleuræ and extending obliquely on its inner edge from below the scutellum, nearly half the length of the elytra. Body beneath black, moderately shining, densely punctulate and sparsely pubescent. Femora piceous, tibiæ and tarsi piceo-rufous. Tarsal claws simple. Length .34 inch; 8.5 mm.

Closely allied, in color, to *C. togatus*, but differs from all our species in the scarcely arcuate sides of the thorax. The thorax is very slightly narrowed in front.

One specimen from California, in the cabinet of Dr. LeConte, obtained during his recent visit in Europe from M. Thevenet.

AGRIOTES, Esch.

A. Thevenetii, n. sp.—Black, subopaque, very sparsely clothed with short pale yellowish pubescence. Head black, coarsely punctured. Antennæ nearly as long as head and thorax, pale rufous, joints 2, 3, 4 subequal. Thorax longer than wide, moderately convex, densely, coarsely and equally punctured, sides at middle nearly parallel, at anterior angles strongly rounded, hind angles acute, slightly divergent and moderately carinate. Elytra nearly twice the length of thorax and at base not wider, sides feebly arcuate and gradually narrowing to apex; surface finely striate, striæ coarsely punctured, intervals flat, sparsely punctured, punctures submuricate; color of elytra black, humeral space rufous extending obliquely on its inner margin from the sides of the scutellum to the middle of the sides. Body beneath black, densely punctured, the punctures coarser on the prothorax. Coxal plates strongly dilated within. Legs rufous. Length .34 inch; 8.5 mm.

Abundantly distinct from any *Agriotes* in our fauna, resembling *A. limosus* in form, sculpture and size. In color it strongly resembles *Cardiophorus mimeticus*, and the degree of resemblance is such that by a casual examination the species might be confounded.

Specimens from California obtained by Dr. LeConte from M. Thevenet, of Paris, to whom it is dedicated.

LIMONIUS, Esch.

L. Crotchii, n. sp.—Black, moderately shining, thorax with slight tinge of bronze, elytra with large humeral red space, surface sparsely clothed with very short yellowish pubescence. Head slightly bronzed, coarsely punctured, margin of front rounded and slightly reflexed. Antennæ as long as head and thorax, black, joints 2 and 3 together slightly longer than the fourth. Thorax longer than wide, sides moderately arcuate and converging in front, near the hind angles slightly sinuate; hind angles slightly divergent, finely carinate; surface slightly bronzed, densely and coarsely punctured. Elytra subdepressed, black with large rufous humeral space; sides nearly straight gradually convergent, and at terminal third rounded to apex; surface striate, striæ coarsely punctured, intervals moderately convex and punctulate. Body be-

neath black, shining and moderately punctured. Prosternal sutures in front canaliculate. Legs black. Length .42—.48 inch; 11—12 mm.

This species must be referred to the group with *L. mirus*, Lec., and *L. Ulkei*, Horn, it differs from the former by the sides of the thorax being more rounded and the hind angles slightly divergent, and from the latter by the anterior angles not suddenly narrowed in front. The rufous humeral spot is large, involving a narrow space across the entire base of the elytra; the inner margin of the rufous space is along the third stria and extends along it one-third the length of the elytra, then obliquely backwards to the lateral margin, involving the epipleuræ, along which it extends to the tip.

Two specimens are before me from the collections made by Lord Walsingham, in Oregon, and kindly loaned by Mr. G. R. Crotch, to whom I take very great pleasure in dedicating it.

HYPORHAGUS, Thoms.

H. gilensis, n. sp.—Elongate oval, black, moderately shining. Head densely and evenly punctured. Antennæ dark brown, outer three joints somewhat paler. Thorax trapezoidal, as long as wide at apex, base one and a half times broader, apex truncate narrowly margined with rufous, anterior angles obtuse, sides straight, hind angles slightly reflexed; surface less coarsely punctured than the head, punctures finer and more distant along the middle, denser, and more elongate at the sides. Elytra with rows of fine punctures, the inner two nearly obsolete, especially at base, outer rows slightly elevated, intervals finely punctulate; surface more shining along the middle. Body beneath dark brown, shining, punctured less densely in front, more densely at the sides and tip of abdomen. Legs piceo-rufous, sparsely punctulate. Submentum ♂ with slight fossa and brush of hairs. Length .30 inch; 7.5 mm.

The elytra are slightly broader at base than the thorax, with the sides moderately rounded and gradually narrowing. The form of the thorax is very nearly that of the figure of *costulatus*, Thoms. (Ann. Ent. Soc. France, 1860, pl. iii.). The male has but two joints of the anterior tarsi dilated and pubescent beneath. This is the largest species in our fauna.

One specimen collected south of the Gila River in Arizona.

H. opuntiae, n. sp.—Elongate oval, sub-opaque, black, anterior margin and sides of thorax paler. Elytra with rows of moderately coarse punctures, the outer four slightly elevated, intervals sparsely and obsoletely punctured. First two joints of anterior tarsus of male dilated and pubescent beneath. Length .22 inch; 5.5 mm.

This species resembles closely the preceding, but the thorax is less broad behind. The rows of punctures are coarser, and the inner rows entire and very distinct. The punctulations of the intervals are much finer and more obsolete. The form of the two species in almost ex-

actly the same, the present one is more opaque and transversely more convex. Several immature specimens are ferruginous.

Collected at Camp Grant, Arizona, under fallen *Opuntia*.

The species of *Hyporhagus* are separated by apparently feeble, though very constant characters. The two species above cited, while differing greatly to the eye, are very difficult to describe as distinct. From an examination of our species (*Lecontei*, Thoms., being unknown in nature) the following remarks have been prepared to still further assist in their identification.

Body very shining.

Anterior tarsi ♂ three joints dilated and pubescent..... **punctulatus.**
 * * * * * (Lecontei.)

Body feebly shining, sub-opaque.

Three joints of anterior tarsi ♂ dilated and pubescent.

Sides of thorax slightly arcuate. Surface sub-opaque. Striæ composed of moderately coarse punctures, the inner rows coarser and more distinct than the outer. Epipleuræ black, smooth, unistriate; inflexed portion of elytra rufous, finely rugulose within and opposite the hind coxæ not wider than twice the epipleuræ..... **opaculus.**

Two joints of anterior tarsi ♂ dilated and pubescent.

Elytral rows composed of moderately coarse punctures, intervals with nearly obsolete punctulations. Surface sub-opaque. Epipleuræ opposite hind coxæ as wide as inflexed portion of elytra..... **opuntiae.**

Elytral rows composed of fine punctures, the inner two and scutellar row nearly obsolete or not distinguishable from the punctulations; intervals distinctly but finely punctulate, evenly over the entire surface, which is feebly shining. Epipleuræ opposite the hind coxæ slightly narrower than the inflexed portion of elytra..... **gilensis.**

H. Lecontei, Thoms., is unknown to me. It resembles *punctulatus* in form and in having the sides of thorax arcuate. It differs in having the thorax more feebly punctured and the elytral rows of punctures more distinctly impressed. It is said to be from California, but, judging from the form of the three species that have occurred in the western fauna, the locality seems doubtful.

SPHALMA, n. g. (Pythidæ).

Mentum quadrate, slightly broader than long, ligula scarcely visible, rounded in front. Last joint of maxillary palpi oval, truncate at tip. Mandibles concealed beneath the labrum, arcuate and bifid at tip. Labrum transverse, feebly emarginate. Head broad, cylindrical behind the eyes, epistoma broadly rounded, feebly truncate at middle. Antennæ as long as head and thorax and slightly thicker toward the tip; joint 1 moderate, 2—5 obconical, joint 2 shorter, and 3 longer than the others, 6—10 oval, broader than the preceding joints; joint

11 elongate oval, subacute at tip. Eyes lateral, round, entire and moderately prominent. Thorax quadrate, broader than long, lateral margin acute. Elytra elongate parallel and at apical fourth gradually narrowed to tip. Epipleuræ scarcely longer than half the elytra. Legs moderate. Anterior coxæ oval, moderately prominent and contiguous, but without distinct trochantin. Middle coxæ with distinct trochantin. Tibiæ slender, spurs minute. Body elongate, glabrous.

Allied to *Pytho*, *Crymodes*, etc., but differs from all by its subquadrate, acutely margined thorax. Their affinities may be expressed in the following table:

Anterior coxæ contiguous; intercoxal process of prosternum short.	
Middle coxæ contiguous; meso- and metasternum not meeting.....	Pytho.
Middle coxæ separated; meso- and metasternum joined.	
Mandibles concealed; thorax acutely margined.....	Sphalma.
Mandibles prominent; margin of thorax rounded.....	Priognathus.
Anterior coxæ distinctly separated; intercoxal process long.	
Head slightly constricted behind the eyes forming a neck.....	Boros.
Head not constricted, stout.....	Crymodes.

The genus *Sphalma* was known to me at the time of the preparation of my revision of the Tenebrionidæ. The only specimen then known (see Trans. Am. Phil. Soc. xiv., 254) was in the cabinet of Mr. Ulke, and was inaccessible to me at that time. The only peculiarity of the insect retained in memory was the contiguity of the anterior coxæ. Through the kindness of Mr. H. Edwards, of San Francisco, I have been presented with a specimen, from which the preceding diagnosis has been prepared. The open anterior coxal cavities forbids its reference to the Tenebrionidæ.

S. quadricollis, n. sp.—Moderately elongate, sub-depressed, piceous, shining. Head coarsely but sparsely punctured. Antennæ piceo-rufous. Thorax subquadrate, slightly broader than long, apex and base truncate, sides very feebly arcuate, margin acute; surface moderately convex, sparsely and evenly punctured. Elytra broader at base than thorax, sub-parallel attenuate and obtusely rounded at apex, moderately convex, sparsely but irregularly punctured, the punctures becoming obsolete towards apex. Body beneath piceous, shining, sparsely punctured. Legs piceous or rufo-piceous. Length .36 inch; 9 mm.

Specimens in my cabinet and that of Mr. Ulke, from California. The insect is about three times as long as the width of the elytra at base.

ANDRECTOR, n. g. (Chrysomelidæ).

Form elongate oval, as in *Diabrotica 12-punctata*. Surface glabrous. Head short, eyes round, prominent. Front vertical with very deep transverse fossa below the eyes, above which is a short very prominent transverse plate emarginate on its free edge. Labrum transverse, emarginate. Antennæ moderately long, equal to two-



thirds the body, first joint long, slender, second short, scarcely one-fourth as long as the first, third joint as long as the first, broadly dilated at distal end and deeply emarginate in front, fourth joint half as long as the third, broadly dilated at distal end and deeply notched, joints 5—11 slender, of usual form and gradually increasing in length, the last joint acute at tip, these joints together one-third longer than joints 1—4. Anterior coxæ contiguous. Tarsal claws with broad basal dilatation.

This genus is proposed for a Chrysomelide of the tribe Galerucini, allied to *Cerotoma*, from which it differs in the deformity of the third and fourth antennal joints, the vertical and deeply excavated front. The frontal excavation is deep, extending from one side of the head to the other and slightly divided at middle by a slight ridge, the ridge forming the lower margin of the fossa is moderately prominent at its extremities and with a small tubercle at middle; above the fossa and forming its upper boundary at middle, is a short plate projecting at right angles to the front and emarginate on its free edge. The form of the antennæ is represented in the accompanying diagram and as the specimen is a male and the articulation between the third and fourth joints freely movable, it is probable that this structure has similar uses, to that for which the deformed joints of the male antennæ of *Collops* are applied, that is for holding the antennæ of the female in copulation. In every other respect the insect is a *Cerotoma*.

A. sexpunctatus, n. sp.—Pale yellow, glabrous, shining; elytra with a humeral, median and subapical small black spot on each side. Head pale yellow, occiput slightly darker, antennæ pale yellow. Thorax similar in form to *Cerotoma caminea*, smooth, sparsely punctured. Elytra oblong, broader behind the middle, shining, with three small black spots externally, surface sparsely and irregularly punctured. Scutellum piceous. Body beneath pale yellow, hind coxæ and sides of pectus piceous. Legs pale yellow, hind femora tipped with piceous. Length .22 inch; 5.5 mm.

One male from Texas. Less robust than *Cerotoma caminea* and similar in form to the spotted species of *Diabrotica*.