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Nov. 26th.

Mr. LEA, President, in the Chair.

Ninety-one members present.

In accordance with the invitation extended at the preceding meeting, Dr. Hayes gave a narrative of the explorations of his late Arctic expedition. He made copious collections in various departments of Natural History, which, with great liberality, he placed at the disposal of the Academy, for the selection of such specimens as are desirable additions to the Museum.

On report of the respective Committees, the following papers were ordered to be published in the Journal:

Monograph of the Polyzoa of the Secondary and Tertiary formations of North America, by Wm. M. Gabb, and George H. Horn, M. D.

New Unionidæ of the United States, by Isaac Lea.

Descriptions of new Birds from Western Africa in the Museum of the Academy of Natural Sciences of Philadelphia, by John Cassin.

And the following in the Proceedings:

Notes on the Coleopterous Fauna of Lower California.

BY JOHN L. LE CONTE.

The Coleoptera of Lower California, thus far unknown to science, are now, by the industry of my indefatigable friend, Mr. John Xantus, capable of being duly compared with those of contiguous regions. His collections embrace (as I am informed by him) more than 500 species, of which the portions thus far sent to me contain 114. It is not my intention on the present occasion to describe the new species which have thus become known to me, but rather to await the arrival of the remainder of the collections, and then to prepare a synopsis of the fauna. In this paper I will merely call attention to the relations between the fauna of the region in question and those of California, Arizona, Mexico and Texas, describing only a few of the most conspicuous and characteristic species.

Among the 114 species which I have received, the following are found in Upper California (maritime): *Cicindela sigmaidea* Lec.; *C. hemorrhagica* Lec.; *Hydrophilus californicus* Lec.; *Temnochila chlorodia* Lec.; *Sphenophorus procerus* Lec.; *Dermestes Mannerheimii* Lec.; *D. vulpinus* Linn.

These are found in Arizona: *Saprinus fimbriatus* Lec.; *Cerenopus concolor* Lec.; *Hydrophilus limbalis* Lec.; *H. ellipticus* Lec.; *Diplotaxis angulata* Lec.; *Clerus latecinctus* Lec.; *Asclera cana* Lec.; *Dineutus sublineatus* Aubé, (♀ integer Lec.); *Sinoxylon asperum* Lec.; *Arhopalus eurystethus* Lec.

And these in Texas and New Mexico: *Megacephala carolina* Dej.; *Casnonia pennsylvanica*; *Lebia grandis* Hentz.; *Plochionus timidus* Hald.; *Derobrachus geminatus* Lec.; *Elaphidion validum* Lec.; *Tragidion annulatum* Lec.; *Dendrobias 4-maculatus*; *Coccinella abdominalis* Say; *Acmaeodera flavomarginata*; *Dermestes vulpinus* Linn.; *Euparia strigata*?; *Ligyris rufinatus* Lec.; *Ludius* (*Crigmus*) *texanus* Lac.; *Bostrichus punctipennis* Lec.; *Notoxus monodon*?; *Sitophilus oryzae*; *Hydrophilus triangularis* Say; *Polycaon exesus* Lec.; *Calosoma scutator* Fabr.

Of the remaining species nearly all appear to be new; the genera are those already known in our territory, with the exception of one species of *Megasoma*, several species (perhaps five) of *Brenthus*, allied to the common Mexican species, and three *Cerambycidæ* of unknown genera.

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A very few are closely allied to, and perhaps identical with described Mexican species, but the number is very small.

Some of the more conspicuous and peculiar species are described below: enough has been stated to show that the affinities of the fauna are with that of the region extending from the Colorado Desert across to the Rio Grande valley, thereby confirming the results obtained* by Prof. Baird and Mr. Cope† from the study of the vertebrata collected by Mr. Xantus.

The limited number of species of those two classes precludes the possibility of the occurrence of many new forms in the region here treated of; but in the number of peculiar species of the much more extensive class of insects seen in Mr. Xantus' collections, we recognize that Lower California constitutes one or more provinces of the Interior district, as defined by me in the introduction to my synopsis of the Coleoptera of Kansas and New Mexico.‡

The preponderance of Tenebrionidæ, both in genera and species seen in the fauna of Upper California and Arizona has here been partially destroyed. The genera which survive are, however, such as are already known from the last mentioned region. None of those peculiar to maritime California have as yet occurred.

MEGASOMA Kirby.

M. Thersites, piceo-niger; ♂ sordide pubescens, capite cornu elongato apice bifurco, thorace dense punctulato, angulis anticis acutis divaricatis, cornu brevi apice emarginato, elytris punctulatis et obsolete punctatis; ♀ punctata, thorace glabro elytris parce pubescentibus, basi glabris. Long. 1.18—1.40.

Cape San Lucas. Very much smaller than the other species, of which it approaches most nearly to *M. Hector*, but the anterior angles of the thorax are divergent.

EURYOMIA Burm. (emend. Lac.)

Eu. fascifera, nigra, clypeo apice truncato et late reflexo, thorace latitudine haud brevior, lateribus obliquis parum rotundatis, nigro nitido, parce punctato, margine basali lateribusque flavis, his puncto nigro ante medium notatis, elytris opacis, a humeris paulo angustatis, margine humerali fasciis duabus latis apiceque flavis, pectore abdominisque lateribus pallide pilosis. Long. .66.

Cape San Lucas.

CHALCOLEPIDIUS Esch.

C. rubripennis, niger, squamulis minutis aureo-smaragdinis dense tectus, thorace latitudine fere sesqui longiore, lateribus rotundatis, angulis posticis brevibus divergentibus, elytris rubris, striis nigris punctatis, interstitiis paulo convexis. Long. 1.11—1.75.

Cape San Lucas. A specimen also sent as found at Cajon Pass, California. Belongs to the group of the genus, having the scutellum triangular, slightly emarginate in front, and the third joint of the antennæ equal to the fourth. The antennæ are serrate in both sides.

LYCUS Fabr.

L. cruentus, læte coccineus, thorace latitudine brevior, apice carinato, dein fovea rhomboidea impresso, elytris postice sensim dilatatis thorace duplo latioribus, margine costisque quatuor parum elevatis, interstitiis rugose punctatis, a dodrante ad apicem nigris, tibiis tarsis antennis capiteque nigris, hoc angusto thorace haud brevior. Long. .37—.53.

Cape San Lucas. The elytra of the females are less dilated behind so as to be only one half wider than the thorax.

* Proceedings Acad. Nat. Sci. 1859, 299.

† Ibid, 1861, 305.

‡ Smithsonian Contributions, vol. xi. p. iv. (These results are also alluded to on page 49 of these Proceedings for 1860.)

PELECYPHORUS Sol.

P. ægrotus, ater opacus, thorace latitudine haud brevior, lateribus late rotundatis serratis, postice subangustato, et lateribus sinuato, angulis posticis acutis, basi late emarginato, lateribus et plaga dorsali postica transversim rugose punctatis; elytris thorace duplo latioribus, ovalibus postice valde declivibus et prolongatis, humeris rotundatis, margine costaque discoidali postice magis elevata et abbreviata rugis transversis undulatis elevatis connexis, epipleuris sublævibus. Long. .90.

One specimen. Cape San Lucas. In general appearance resembles in an extraordinary manner *P. morbillosus* Lec. (Pr. Ac. 1858, 74), but, besides minor differences, the humeri are not toothed but rounded.

P. bifurcus, ater, subnitidus, thorace punctato valde convexo, lateribus rotundatis, basi sinuato, angulis omnibus acutis, margine anguste reflexo, dorso profunde canaliculato; elytris postice sensim latioribus, basi subemarginatis, angulo humerali distincto obtuse, parce punctatis, margine elevato pone trientem duplici. Long. .73.

One specimen. Cape San Lucas. The elevated lateral margin of the elytra bifurcates at the anterior third, the portions then diverge, neither reaching the tip; the inner is a little more elevated, but also a little shorter than the outer portion.

P. sexcostatus, sordide niger, parce pubescens, thorace latitudine paulo brevior planiusculo, lateribus late rotundatis anguste reflexis, angulis acutis, haud dense punctato; elytris elongato-ovalibus, parce punctatis, margine laterali serrulato costisque dorsalibus duabus, (interna integra, altera utrinque abbreviata) acute elevatis. Long. .50.

One specimen. Cape San Lucas. In form somewhat resembles *P. parallelus* Lec., but the sides of the thorax and elytra are more rounded.

CENTRIOPTERA Mann.

C. spiculifera, nigra, subnitida, thorace latitudine brevior, postice angustato lateribus valde rotundatis, postice breviter paulo sinuatis, angulis posticis rectis; elytris elongato-ovalibus, thorace parum latioribus, seriatim punctatis, interstitiis internis planis parce uniseriatim punctatis, ad apicem et externis tuberculis valde acutis ornatis, femoribus posticis intus tuberculis exasperatis. Long. 1.08.

Larger and stouter than *C. muricata* Lec., with the tubercles more acute and more elevated, so as to become towards the apex actual short spines; the sides of the thorax are also not strongly punctured.

CRYPTOGLOSSA Sol.

C. seriata, nigra subnitida, thorace latitudine brevior, parum convexo, postice modice angustato, lateribus rotundatis postice subsinuatis, angulis posticis rectis, elytris subovatis, postice subacutis, seriatim punctatis, interstitiis parce uniseriatim punctatis, externis postice tuberculis parum elevatis exasperatis. Long. .75—86.

Cape San Lucas. Has very much the form of *Centrioptera*, but the hind thighs are not at all serrate.

CERENOPUS Lec.

C. cribratus, niger, subnitidus, thorace ovato, convexo, latitudine longiore, basi late subemarginato, elytris seriatim cribratis, ad apicem utrinque tuberculo magno obtuso, alteroque parvo suturali armatis. Long. .55—71.

Mas tibiis anticis introrsum sinuatis, et serratis, femoribus posticis dente magno acuto armatis.

Femina tibiis anticis crassioribus haud serratis femoribus posticis simplicibus.

Cape San Lucas. Of the same general form as *C. concolor* Lec.

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DIABROTICA (Chevr.) Er.

D. ? insolita, supra sordide flava, thorace latitudine duplo brevior, apice subsinuato angulis anticis prominulis, basi emarginato angulis obtusis subrotundatis, lateribus anguste marginatis, elytris thorace latioribus oblongis, confertim punctatis, gutta posthumerali, alteraque discoidali pone medium, nigris ornatis, scutello nigro; subtus niger, abdominis segmentis flavo-piceo marginatis, femoribus flavis palpis antennisque nigris, his thorace elytrisque haud brevioribus.

Mas alatus abdomine elytris haud longior. Long. .23.

Femina aptera, abdomine inflato, elytris plus duplo longior. Long. .46.

Cape San Lucas. The difference in size between the sexes is produced entirely by the abdomen of the female being immensely distended. The first joint of the antennæ is sometimes piceous, and the head has sometimes a short black occipital line. The thorax is moderately convex, with a slight impression at the middle, and another at the base; there is also a faint transverse impression before the middle. The second and third joints of the antennæ are together equal to the fourth.

It is extraordinary to find the genera of the Pacific coast of most diverse families in which the abdomen of one or both sexes is imperfectly covered by the elytra, and the wings wanting, thus unexpectedly increased by a Chysomelide. There does not appear to me any sufficient reason for separating the present species from *Diabrotica*, though I have not as yet studied the group to which it belongs sufficiently to entitle my opinion to much weight.

New species of COLEOPTERA inhabiting the Pacific district of the United States.

BY JOHN L. LE CONTE, M. D.

The species described in the present paper have been derived partly from contributions of friends, partly from Government expeditions. Those from the Northwestern Boundary Commission were made by Mr. George Gibbs, and the late Dr. Kennerley; those from Lieut. Mullan's Wagon Road Expedition were collected by Mr. John Pearsall, and have been submitted to me by the Smithsonian Institution. It is much to be regretted that the most valuable portion of the last mentioned collection, procured within the mountainous region at the head of the Missouri river, has in great part been rendered by the collector unavailable for scientific research; the restrictions placed upon investigations by the Entomological Society of Philadelphia, now in possession of the larger part of the collection, being such as to render any satisfactory comparisons extremely difficult.

I must return my cordial acknowledgements to Mr. Andrew Murray, now of London, for the liberality with which he has given specimens, many indeed unique, in aid of my investigations; and also to Mr. Alex. Agassiz, for excellent collections made at San Mateo, Mendocino City, and on the Gulf of Georgia; and to Mr. C. M. Bache, U. S. Coast Survey, for a good series of species from the islands of Santa Barbara and Santa Cruz; and likewise to Mr. G. Davidson, U. S. Coast Survey, for his continued efforts in supplying specimens from California.

1. *Cicindela longilabris* Say. A beautiful green variety of this species was found at Kootenay Camp; a similar variety has been found in Newfoundland.

2. *Cicindela montana*, atra, labro magno, antice obtuse dentato, lateribus sinuato, thorace transverso, trapezoideo, modice convexo, confertim rugoso, impressionibus profundis, elytris nitidis, confertim punctatis, fascia trans-

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versa media sinuata, obtuse deflexa, sæpe deficiente alba ; subtus nigra parce albo-pilosa. Long. .6.

Mas labro mandibularumque basi albis ; femina labro mandibulisque nigris.

Valleys of the Rocky Mountains. Belongs to the same group (III. of my Monograph, Trans. Am. Phil. Soc. xi. 33) as *C. longilabris*, from which it differs at first sight by the shining and more deeply punctured elytra, as well as by the black labrum of the female.

3. *Trachypachys Gibbsii*, ovalis, nigro-æneus, nitidus, thorace latitudine fere duplo brevior, antrosum sensim angustato, lateribus rotundatis, postice profunde transversim impresso, utrinque subbifoveato, et parce punctato, elytris versus suturam seriatim punctatis. Long. .25.

East of Fort Colville. Larger and broader than *T. inermis* Motsch., and very different by the form of the thorax and its posterior impression. The thorax is not at all narrowed behind, but gradually narrowed almost from the base to the apex ; the impression is somewhat punctured, with two moderately distinct foveæ each side.

4. *Pterostichus oregonus*, longiusculus, niger, nitidus, (elytris feminae opaciusculis) thorace latitudine haud brevior, postice angustato, lateribus late rotundatis postice subsinuatis, tenuiter marginatis, angulis posticis subrectis, basi utrinque parce punctato, et stria basali longiuscula impresso, linea dorsali profunda, elytris striis tenuibus haud punctatis, interstitiis planis, 3io foveis 5 impresso. Long. .55—58.

East of Fort Colville. This species belongs to the same division as *P. orinomum*, *adstrictus*, &c., (*Bothriopterus* Chaudoir), but differs much in shape from those species, resembling, in fact, very closely in outline our common *P. adoxus*, and having the margin of the thorax not wider than in that species.

5. *Anisodactylus viridescens*, elongato-oblongus, æneo-viridis, nitidus, capite utrinque fortius haud dense punctato, thorace latitudine paulo brevior, postice parum angustato, lateribus late rotundatis postice subobliquis haud sinuatis anguste marginatis, angulis posticis obtusis subrotundatis, basi utrinque impresso, apice basi lateribusque punctato, elytris striatis subpubescentibus, interstitiis alternis punctatis alternis, sublævibus, 3io postice 1-punctato ; subtus niger. Long. .34—38.

California ; Mr. A. Murray. Cape Mendocino ; Mr. A. Agassiz. This species is related to *A. alternans* Lec., but the sides of the thorax are not sinuate, and the hind angles are not prominent. The 3d and 5th intervals are smooth, but in most specimens, on close inspection, a series of small points is visible at their inner margin. The first and seventh intervals are free from punctures ; the others are distinctly, but not densely punctured. The punctures emit very short pale hairs.

6. *Anisodactylus pitychrous*, elongato-oblongus, nigro-piceus, nitidus, thorace latitudine vix brevior, postice paulo angustato, lateribus tenuiter marginatis antice rotundatis, postice obliquis, angulis posticis subrectis, basi utrinque anguste impressa et punctulata, elytris striatis, interstitiis subplanis. Long. .40.

One male ; California ; Mr. A. Murray. This species has the form of *A. baltimorensis*, but the basal impressions of the thorax, instead of being large rounded foveæ, are narrow, and the punctures are confined to the depth of the impressions. The color of the head and thorax is almost black ; the rest of the body has a decided piceous tinge.

7. *Harpalus fraternus* Lec. This species has an extensive range, being found in Oregon, Kansas, Nebraska and New Mexico ; a somewhat immature specimen from the last named locality was described by me as *H. oblitus*.

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8. *Bembidium paludosum*. A specimen from Oregon, given me by Mr. Ulke, only differs from those found at Lake Superior, by the thorax being a little less transverse, and a little more narrowed in front. In a European specimen before me, the thorax is slightly and equally narrowed before and behind, and is but little broader than its length; the single specimen from Lake Superior, described by me as *B. lacustre*, exactly agrees with it in these respects. It is impossible to say with the limited series of specimens before me whether these three forms should be considered as races or species.

9. *Bembidium quadrulum*, æneo-nigrum, nitidum, thorace minus convexo latitudine brevior, subquadrato, postice vix angustato, lateribus late rotundatis, angulis posticis subrectis, basi utrinque biimpresso, carinulaque ad angulum munito; elytris thorace latioribus parum convexis, striis fortiter punctatis, ad apicem oblitteratis, 3ia bipunctata, 7ma ad apicem exarata. Long. .20.

East of Fort Colville; Mr. Gibbs. This species has the same size, shape, color and sculpture as *B. salibratus* Lec., except that the striæ of the elytra are obliterated at the tip, and the thorax is less rounded on the sides, scarcely perceptibly narrowed behind, with the hind angles more nearly rectangular. The inner basal impression is deep, and the outer one small; the posterior transverse impression and the dorsal line are deeply impressed. The eighth and ninth striæ of the elytra are approximate, but do not unite until very near the shoulder.

10. *B. dyschirinum*, elongatum, convexum, nigro-æneum, pernitidum, thorace transverso cordato, postice angustato, lateribus rotundatis ad angulos posticos rectos breviter sinuatis, basi utrinque profunde foveato, et carinula externa munito, elytris ovalibus, thorace paulo latioribus seriatim punctatis, postice lævibus, interstitio 3io bipunctato, tibiis tarsisque nigro-testaceis. Long. .19.

East of Fort Colville; one specimen. Allied to *B. nitens* Lec. (*Peryphus picipes* †Mann.), but is smaller and more convex, with the sides of the thorax less sinuate towards the hind angles, and the base free from punctures.

11. *Agabus morulus*, latiusculus, subovatus, niger, nitidus, haud reticulatus, dense subtiliter punctulatus, antennis palpis tarsisque piceo-rufis, elytrorum seriebus punctorum fere obsoletis. Long. .22.

California; Mr. Murray; one specimen. Resembles in form *A. obtusatus*, but is less obtuse anteriorly, and not at all reticulated; the anterior tarsi of the male are but very slightly dilated, and the claws are not deformed. There is no appearance of elytral spots. The body is equally attenuated before and behind.

12. *Agabus lineellus*, regulariter ovalis, piceo-ferrugineus nitidus, subtilissime, reticulatus, elytris testaceis, sutura et vittis utrinque 4 angustis nigris antice abbreviatis, nebulisque externis piceis ornatis, seriebus punctorum solitis distinctis, sternis piceis. Long. .30.

California; Mr. Murray; one male. The only other vittate species found in the United States is *A. tæniolatus* Harris, from which this is abundantly distinct by the narrower vittæ occupying only the inner two-thirds of elytra; the meshes of the reticulation are not so small; the head and thorax is clouded with darker color as in that species.

13. *Agabus confertus*, ovalis, modice convexus, æneo-niger nitidus, dense punctulatus, haud reticulatus, thorace minus fortiter marginato, latitudine fere triplo brevior, elytris lineola laterali guttaque postica pallidis ornatis, seriebus punctorum solitis distinctis, antennis ore pedibusque anticis piceo-rufis. Long. .32.

Cabo de los Reyes; Mr. G. Davidson; one male. Of the same form and size as *A. semivittatus* Lec., but with the thorax shorter, more strongly nar-

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rowed in front, and less strongly margined at the sides, and the upper surface of the body much more strongly punctulate; the sides of the thorax also form a very obtuse angle with the sides of the elytra. The sexual characters are also different; in the present, the claws of the anterior tarsi of the male are long and slightly deformed; in *A. semivittatus* they are not elongated, but the inner one is toothed at the base. The trochanters and thighs of the middle and hind legs are tinged with reddish brown.

14. *Agabus discors*, elongato-ovalis, minus convexus, æneo-niger, dense minus subtiliter reticulatus, thorace lateribus modice rotundatis margine crassiore rufescente, ad basin elytris vix conspicue angustiore, his longitudinaliter reticulato-strigosis, ore maculis que solitis verticalibus piceo-rufis, pedibus rufo-tinctis. Long. .40.

Mas nitidus, elytris thoracisque lateribus profundius strigosis, tarsis anterioribus modice dilatatis, unguiculis anticis valde elongatis subsinuatis.

Femina opaca quasi velutina, elytris minus profunde strigosis.

Washington Territory; Mr. Gibbs. A very distinct species.

15. *Helophorus alternatus*, elongatus, capite rugoso, viridi-æneo, cupreo variegato, thorace latitudine fere sesqui brevior, postice subangustato, lateribus late rotundatis margine depresso latiusculo testaceo, angulis posticis subobtusis, præcipue versus latera granulato viridi-æneo, lineis 5 solitis latis profundis aureis, intermediis sinuatis, elytris elongato-ovalibus thorace parum latioribus, testaceis, fusco-nebulosis, vel piceis testaceo-maculatis, striis profunde crenatis, interstitiis seriatim punctulatis, 2do et 4to latioribus et minus convexis subtus niger, antennis palpis pedibusque pallidis. Long. .14—.15.

California; Mr. Murray. This species is more elongated than *H. lineatus*, and is readily known by the elytra being somewhat wider than the thorax, more regularly oval than usual, with 2d and 4th intervals wider and less convex than the others.

16. *Hydrocharis glaucus*, ovalis, convexus, supra nitore argenteo-cœruleo glaucus, thorace lateribus magis rotundatis, basi recta angulis posticis obtusis et rotundatis, punctis paucis versus latera notato, elytris striis e punctis parvis compositis, interstitiis alternis irregulariter grosse punctatis, alternis punctis paucis minutis impressis; subtus niger, pedibus cœruleo-glaucis. Long. .60.

California; Mr. A. Murray. A very beautiful species with the sides of the thorax more rounded than in *C. substriatus* Lec., which it resembles somewhat in the sculpture of the elytra, though the striæ of punctures are more distinct, and the punctures of the intervals much larger.

17. *Philhydrus imbellis*, ellipticus, convexus, nitidus, dense punctulatus, capite nigro-piceo, thorace piceo, lateribus pallidis, elytris piceo-ochraceis vix conspicue striatim punctatis, stria suturali antice oblitterata, subtus niger, tibiis tarsisque testaceis. Long. .24.

One specimen; California; Mr. Murray. This species belongs to the group (a, Lec. Proc. Acad. Nat. Sc. Phil. 7, 369,) having the mesosternum and prosternum not carinated. It differs from the other species known to me by the faint traces of striæ upon the elytra; the three confused rows of punctures seen in the others are here scarcely observed as separate from the rows of punctures constituting the striæ.

18. *Philhydrus normatus*, ovalis, modice convexus, nigro-piceus, nitidus, vix punctulatus, elytris striis integris 10, scutellarique e punctis digestis compositis, antennarum basi palpisque testaceis. Long. .22.

One specimen; Bodega; Mr. Davidson. The prosternum is not carinated, the mesosternum has a small protuberance near its hind margin. The outer

striae of the elytra are deeper than the inner ones, and the intervals in some places are marked with faint traces of obsolete intermediate striae.

19. *Cyllidium nigrellum*, hemisphaericum, nigrum nitidum, elytris parce subtilissime punctulatis, stria suturali profunda antice oblitterata, pedibus piceis: Long. .06.

San Diego, California. The sides of the thorax and elytra are diaphanous, and therefore appear brown by transmitted light.

20. *Cyllidium pallidum*, hemisphaericum, nitidum, capite thoraceque piceis, hoc limbo omni pallido, elytris pallidis, parce subtilissime punctulatis, stria suturali profunda antice oblitterata; subtus piceum, antennis palpis pedibusque pallidis. .05.

At the junction of the Colorado and Gila rivers, California, under stones and pieces of wood, in wet places.*

21. *Thinopinus variegatus*; *Trichocanthus variegatus* Motsch. A specimen found by Mr. Davidson at Bodega differs in many respects from those of *T. pictus* Lec., found by me at San Diego. The head is destitute of the Y-shaped frontal spot, which in *T. pictus* is connected with the occipital transverse spot; the latter is much more defined, and different in shape. The two ring-shaped black spots of the thorax are interrupted opposite the hind angles of the thorax, but the basal portion is complete; in *T. pictus* it is the latter that is absent. The elytra are sparsely but strongly punctured, the lateral margin and a semiannular spot extending from the base to the external hind angle is black; in *T. pictus* the elytra are very feebly punctured, and the elytral spot is annular, interrupted towards the humerus. The spots of the dorsal surface of the abdomen are much larger, than in *T. pictus*.

22. *Hadrotus extensus*. Several specimens found by Mr. Gibbs in Washington Territory differ from the Russian American *H. crassus*, by the body being much more slender, and the thorax comparatively longer. In sculpture I find no difference, but the form of the thorax and body requires them to be regarded as indicating a separate species, to which the present name is applicable.

23. *Staphylinus submetallicus*, aeneo-niger, pubescens, capite thoraceque nigro-aeneis, confertissime punctatis, illo linea tenui laevi antice oblitterata, hoc latitudine longiore, lateribus parallelis, vitta dorsali nitida laevi; scutello atro-tomentoso, elytris nigro-aeneis, densissime subtilius punctatis; abdomine dorso pube subtili aureo-variegato bifariam nigro-maculato. Long. .62.

Tejon; Mr. Xantus, one specimen; another one from Mr. Murray. The outer joints of the antennae are somewhat transverse.

24. *Staphylinus saphyrinus*, niger pubescens, capite thoraceque laete cyaneis, dense punctatis, illo linea tenui laevi antice oblitterata, hoc latitudine longiore, postice paulo angustato, vitta dorsali nitida laevi, elytris cyaneis densissime subtilius punctatis, abdominis segmentis duobus ultimis, palpis, coxis pedibusque laete rufo-testaceis, antennis piceis basi rufescentibus. Long. .40—52.

San Jose and Fort Tejon, California. The outer joints of the antennae are slightly transverse.

25. *Staphylinus luteipes*, niger, pubescens, capite thoraceque olivaceo-

* I add the description of a third species from the Atlantic district.

C. nigriceps, hemisphaericum, supra pallide testaceum nitidum, capite nigro, thoracis disco obscuriore, elytris parce subtiliter punctulatis, stria suturali antice oblitterata; subtus nigro-piceum, antennis palpis pedibusque pallidis. Long. .06.

Lake Superior, one specimen.

æneis, dense fortiter punctatis, illo linea tenui lævi antice obliterated, hoc latitudine longiore postice paulo angustato, vitta dorsali nitida lævi, elytris confertissime subtiliter punctatis, olivaceo-æneis, abdomine vix maculato, pedibus rufis vel rufo-piceis. Long. .56.

San Jose, California, under bark of oak trees. The ventral segments are sometimes annulate with dark red. The outer joints of the antennæ are slightly transverse. These three species and the next belong to Erichson's 8th family.

26. *Staphylinus pleuralis*, piceo-niger, fusco-pubescens, capite thoraceque dense sat fortiter punctatis, illo linea tenui lævi antice obliterated, hoc latitudine longiore, postice paulo angustato, vitta angusta dorsali lævi nitida, scutello atro-tomentoso, elytris confertissime subtiliter punctatis, piceis, lateribus late obscure rufis, abdomine supra tomento aureo irrorato, pedibus rufis, coxis piceis. Long. .56—.63.

Oregon. The punctures of the head and thorax are finer than in *S. luteipes*. The golden pubescence of the dorsal segments seems to be generally diffused, so far as I can judge by the specimens before me, and there are faint indications of two rows of velvety black spots.

27. *Liparocephalus brevipennis* *Mäklin*, Bull. Mosc., 1853, 191.

A specimen collected by Mr. A. Agassiz at Cape Mendocino agrees with the description of this species, except that the color is dark brown, and the antennæ are not obviously shorter than the head and thorax. A comparison with a specimen from Russian America will be necessary before it will be proper to express an opinion regarding the specific nature of these differences.

28. *Hister (Platysoma) punctiger*, elongatus, parallelus, parum convexus, niger nitidus, capite parce punctulato fronte vix concava, striola integra, thorace disco punctulato, lateribus parce punctatis, stria marginali ad apicem ambiente, elytris obsolete parce punctulatis, apice punctis paucis, notatis, 6-striatis striis internis duabus ante medium antice abbreviatis (interno longiore) punctoque basali notatis; mesosterni stria marginali integra; pedibus piceo-rufis, tibiis anticis 4-, intermediis 3-, posticis 2-dentatis. Long. .16.

California. Mr. A. Murray. Larger and wider than *H. parallelus*, and much less convex, resembling in form *H. æquus* *Lec.*, but much larger and a little more convex.*

AMARTUS. (n. g. Nitidulidæ, trib. Brachypterini.)

Palpi labiales articulo ultimo elongato, ovali; unguiculi simplices, pygidium ♂ segmentulo anali auctum.

The external appearance of the species of this genus described below is that of *Carpophilus*, and very nearly that of *C. niger*, but the absence of antennal grooves will at once distinguish it. The outer lobe of the maxillæ is long and slender, not hooked at the extremity, with a large terminal vesicle. The labial palpi have the first joint short, the second one half shorter than the

*Resembling in appearance this species, but still larger and more convex, with the striæ of the elytra more distinctly punctured, and the sutural striæ shorter than the inner dorsal one is a species from Ohio given me by Mr. Ulke, which I would name

Hister (Platysoma) basalis, elongatus, cylindricus, niger nitidus, capite parce punctato, fronte concava, striola integra, thorace disco parce punctulato, versus apicem et lateribus paulo fortius, stria marginali ad apicem ambiente, elytris ad basim profunde transversim impressis, fere marginatis, 6-striatis, striis punctatis, duabus internis antice abbreviatis (interno brevioribus); mesosterni stria marginali apice deficiente, pedibus, nigris tibiis anticis 4-, intermediis posticisque 3-dentatis. Long. .20.

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third, which is elongate oval; the maxillary palpi have the last joint conical, a little longer than the preceding. The mentum is broad, emarginate in front. The labrum is emarginate, the mandibles flat, not toothed. The club of the antennæ is 3-jointed and elongate, the joints but slightly transverse. The second and third ventral segments are shorter than the first and fourth; the fifth is the longest; in the males a small but distinct dorsal segment is added. The tibiæ are broad and pubescent, with small terminal spurs; the tarsi are dilated, the claws slender, a little broader at the base, but not toothed.

29. *A. rufipes*, ovalis parum convexus nigro-piceus, helvo-pubescent, confertim punctatus, thorace latitudine fere duplo brevior, antice truncato, lateribus et basi rotundato, elytris thorace sesqui longioribus, lateribus et apice late indeterminate rufo-testaceis, antennis pedibusque rufo-testaceis. Long. .20.

Mendocino, California. A. Agassiz. The surface is equally punctured both above and beneath. The antennæ are as long as the head and thorax united.

30. *Trogosita sinuata*, nigro-picea nitida, depressa, capite thoraceque sat parce punctatis, hoc latitudine paulo brevior, postice parum angustato, lateribus late rotundatis, postice sinuatis, margine fortius reflexo, angulis posticis rectis, basi sinuatim truncata, elytris oblongis, basi late emarginatis, humeris rectis, striis punctatis haud impressis, interstitiis planis, parce rugulosis, biserialiter subtiliter punctulatis, antennis pedibusque piceo-rufis, illis clava triarticulata. Long. .28.

East of Fort Colville, one specimen; Mr. Gibbs. This species resembles in appearance *T. corticalis* Mels., and several others from the Atlantic States, but is easily known by the thorax being less transverse and less narrowed behind, with the hind angles more prominent, and the base not rounded, but nearly truncate and sinuate, and slightly emarginate at the middle.

31. *Trogoderma ornatum* Lec. Proc. Acad. Nat. Sc. Phil. 7, 110.

A specimen of this species from California, differing from those found in New York, by the spots of white hair being larger, was sent me by Mr. A. Murray.

32. *Cryptorhopalum nigricorne*, ovale convexum, nigrum pubescens, subtiliter dense punctatum, thorace lateribus oblique late rotundatis, tarsis piceis, antennis nigris basi piceis. Long. .09.

California, one specimen; Mr. Murray. Differs from *C. triste* and *piceorne* Lec. (Proc. Acad. 7, 111), by the surface being more finely punctured both above and beneath, by the sides of the thorax being less rounded, and by the club of the antennæ being black.

33. *Orphilus subnitidus*, ovalis convexus, antice obtuse attenuatus, niger subnitidus, thorace punctulato, ad basin vage arcuatim impresso, angulis posticis paulo prolongatis, lateribus subexplanatis, valde declivibus, elytris sat subtiliter punctatis, dorso ante medium vage impressis. Long. .13—.16.

Le Conte, Classification of Coleoptera of North America, 109.

California and Oregon. Broader, larger and more finely punctured than *O. ater* Er.

34. *Syncalypta albnotata*, ovalis, utrinque attenuata, convexa, nigra, fusco-squamulosa, setis clavatis longiusculis nigro-piceis hispida, elytris guttis pluribus parvis argenteo-squamosis ornatis, capite thorace que dense punctatis, elytris striis tenuibus, suturali postice externisque profundis. Long. .11.

Washington Territory, one specimen; Mr. Ulke. Larger than *S. echinata* Lec., with the thorax more coarsely and densely punctured; easily known by the silvery white spots of the elytra.

35. *Dorcus mazama* (♂) nigro-piceus, capite punctato, thorace vix angustiore, mandibulis apice acutis, dente parvo medio armatis, thorace latitudine plus duplo brevior, postice angustiore, lateribus medio obtuse angulatis, angulis posticis rectis, disco modice, versus latera sat dense punctato, elytris modice punctatis subtiliter rugosis, tibiis anticis 4-dentatis, et dente superiore obsoleto munitis, tibiis posterioribus dentibus 3 lateralibus apicalique acutis armatis. Long. (mand. excl.) 1.20

New Mexico, Mr. Ulke, one male. This species is alluded to by me on page 120 of my Classification of the Coleoptera of North America, as belonging to *Lucanus*, but the form of the labrum, which is rectangular and about four times as broad as its length, requires it to be placed in *Dorcus*. The outline of the thorax differs very greatly from that of our other species, in which the sides are simply and broadly rounded: in the present species the form is as in *Lucanus dama*, but a little more dilated on the sides. The third tooth of the middle and hind tibiæ is double, that is, there are two sharp teeth placed transversely, so as to present the appearance of a single tooth.

36. *Platycerus coerulescens* (♂), niger, capite thoraceque parce grosse punctatis, hoc transverso, lateribus antice rectis paulo convergentibus, pone medium inflexis, angulis posticis obtusis haud rotundatis, elytris nigro-cyaneis, punctis striatim digestis, interstitiis irregulariter subseriatim punctatis; mandibulis sursum incurvis, dente infero pone apicem, alteroque superno armatis. Long. (mand. inclus.) .48.

Tejon and Vallecitas, California. Closely related to *P. quercus*, but the punctures of the head and thorax are much more distant, the lateral margin of the thorax is narrower, the elytra are not at all rugous, and there are no denticles between the apex of the mandibles and the tooth on the inferior margin: the 6th joint of the antennæ is transverse as in *P. quercus*, and the club consists of four joints.

37. *Platycerus Agassii*, (♀) elongato-ovalis, supra obscure æneus, capite thoraceque sat dense punctatis, hoc linea dorsali lævi, latitudine duplo brevior, lateribus fortiter marginatis valde rotundatis, angulis posticis rectis prominulis, elytris obsolete striatis, striis punctatis, interstitiis rugosis confuse punctatis; tibiis posticis denticulo externo ad medium armatis. Long. .38.

One specimen, San Mateo, California, Mr. A. Agassiz. Closely related to *P. depressus* Lec. (with which *P. oregonensis* Westwood is probably identical), but differs by the thorax being wider, with a distinct dorsal smooth line, by the interstitial punctures of the elytra being smaller, but especially by the hind tibiæ having a small sharp tooth about the middle on the outer edge. The seventh joint of the antennæ is not transverse, and the mandibles are small and acute, without teeth.

DASYDERA Lec.* (n. g. Scarabæidæ Glaphyrini.)

Antennæ 10-articulatæ, clava maris scapo haud brevior triarticulata, articulis haud approximatis; palpi maxillares articulo ultimo ovali, majusculo, extus profunde excavato; mandibulæ parvæ obtusæ; labrum late emarginatum. Unguiculi basi latiores, haud dente armati.

The species of this genus resembles precisely in form *Lichnanthe vulpina*, but is still more hairy: the characters are entirely as in *Lichnanthe*, except that the club of the antennæ is larger, the labrum is less deeply emarginate, the maxillary palpi are thicker, and the last joint is oval instead of elongate, and the claws are not toothed at the base.

38. *D. ursina*, nigra, pilis longissimis pallidis sericeis dense tecta, capite thoraceque confertissime subtilius punctatis, elytris pallide testaceis, subgla-

* Class. Col. N. America, p. 133.

bris, sat parce punctatis, abdomine brevioribus, apice dehiscentibus obtuse rotundatis, tibiis tarsis antennisque rufo-testaceis, his basi nigris. Long. .52.

California, one male, Mr. A. Murray. The abundance of hair conceals the form of the thorax, which appears to be more gradually narrowed in front than in *Lichnanthe vulpina*.

39. *Diploptaxis insignis*, oblongo-ovata, convexa, rufo-ferruginea, nitida, capite confertim fere grosse punctato, clypeo marginato, antice subtruncato, sutura frontali profunda, fronte transversim vix elevata; thorace fortiter punctato, brevi, ante medium valde angustato, lateribus obliquis ad medium obtuse angulatis, angulis posticis obtusis, anticis acutis, ad apicem marginato, elytris fortiter parcius punctatis, vix tricostatis, tibiis anticis tridentatis dente ultimo oblique truncato, unguiculis medio breviter dentatis. Long. .52.

Salt Lake Desert. Resembles at first sight an immature specimen of *D. brevicollis* Lec., but belongs to a very different group of species, being related to *D. Haydenii* Lec., (*Journ. Acad.* 2d ser. 3, 272). It differs from the last named by the larger size, by the head and thorax being much more thickly and coarsely punctured, and by the elytra being more sparsely punctured; the usual smooth lines of the latter are scarcely elevated, and are marked with a row of small punctures.

40. *Phobetus testaceus*, longius ovatus, convexus, flavo-testaceus nitidus, capite sat dense punctato, clypeo rotundato fortiter marginato, thorace parce subtiliter punctato, apice valde marginato, lateribus pilis longis fimbriato, elytris parce haud profunde punctatis, lineis solitis lævibus, margine laterali et basali longe flavo-pilosis, stria suturali profunda; pygidio parce subtiliter punctulato, et piloso; pectore pedibusque longissime pilosis, antennis 10-articulatis. Long. .58.

One male, Santa Cruz Island, California; Mr. C. M. Bache. Differs from *P. comatus* Lec. by the 10-jointed antennæ, by the thorax being pilose only along the side margins, more finely punctured, without any large punctures at the anterior part, and by the pygidium being very finely, scarcely distinctly punctured.

A female with 9-jointed antennæ, from Oregon, differs from the type of *P. comatus* by the head being less coarsely and not confluently punctured, and by the punctures and smooth ribs of the elytra being quite well marked. I am not willing, in the absence of other specimens, to consider it as a distinct species.

41. *Cyclocephala hirta*, oblongo-ovalis, testacea convexa nitida, pilis flavis parce vestita, clypeo confluentem punctato antrosum sensim angustato, lateribus anguste, apice obtuso fortius marginato; thorace latitudine duplo brevior antice angustato, lateribus valde rotundatis, parce punctato, elytris punctatis, vittis solitis lævibus. Long. .50.

One male, California, Mr. A. Murray. A very distinct species. The club of the antennæ is as long as the inferior portion, and the last joint of the anterior tarsi is large and tumid, with unequal claws. The frontal suture is well marked; the clypeus is confluently punctured; the head behind the suture is slightly convex, coarsely but not densely punctured.

42. *Chrysobothris vulcanica*, depressa subtus nigro-cuprea, supra æneo-nigra, fortiter punctata, thorace brevi cicatricoso vage 3-canaliculado, costis parcius punctatis, lateribus utrinque incurvis, elytris lineis solitis elevatis interruptis, nitidis punctis paucis notatis transversim connexis, spatiis depressis sat dense punctatis, cinereo-tinctis, postice serrulatis, apice singulatum rotundatis. Long. .60—.63.

East of Fort Colville. Mr. Gibbs. Allied to *C. dentipes* and *californica*, with the elytra sculptured as in the latter, but with the elevated parts of the thorax rugous and punctured, though not so thickly as the depressed portions.

43. *Elater mœrens*, ater, parum nitidus, subtiliter cinereo-pubescent, thorace latitudine haud brevior, convexo, confertim fortiter punctato, postice vix canaliculato, elytris antice parallelis, profunde punctato-striatis, interstitiis convexiusculis rugose punctatis, antennis articulo 3io 2ndo sesqui longiore, tarsisque fuscis. Long. .46.

East of Fort Colville, and at Sinyak water depot. Mr. Gibbs. Precisely resembles *E. luctuosus* Lec., except that the pubescence is finer and cinereous, instead of brownish gray, and that the third joint of the antennæ is a little longer, and the thorax a little more rounded on the sides.

44. *Elater dimidiatus*, niger nitidus, pube brevi griseo-fulva haud dense vestitus, thorace latitudine vix brevior, lateribus magis rotundatis, fortiter haud dense punctato, postice canaliculato, elytris antice parallelis, profunde punctato-striatis, interstitiis paulo convexis, rugose punctatis; a basi usque ad medium rufo-testaceis, tarsis fuscis, antennis articulo 3io 2ndo sesqui longiore. Long. .36.

One specimen, Oregon. Related to *E. apicatus*, but the thorax is more rounded on the sides, and less closely punctured. The orange color of the elytra reaches only to the middle, and extends farther along the sides than the suture.

45. *Cardiophorus longior*, elongatus, niger nitidus, subtiliter cinereo-pubescent, thorace latitudine conspicue longior, convexo, lateribus late rotundatis, antice posticeque æqualiter parum angustato, confertim subtiliter punctulato, elytris thorace vix latioribus fortiter punctato-striatis, interstitiis paulo convexis subtilissime punctulatis, antennarum articulo 2ndo, genibus, tibiis apice tarsisque fusco-testaceis. Long. .31.

Bitter Root Valley, at the head of the Missouri. Mr. John Pearsall. The specimens furnished me, like all those collected by Mr. Pearsall, who was attached to Lieut. Mullan's expedition, which have passed through my hands, are in excessively bad condition, and I am therefore not able to fix the characters of this species with precision. It is related to *C. tumidicollis* and *gagates* Lec., but differs by the much longer thorax, which is equally narrowed before and behind. From the Californian *C. tenebrosus* Lec. it differs by the same character, as also by the color being pure black. The hind angles are but slightly prolonged, the basal lines are moderately long, and the thorax is channeled at the base.

As several specimens of other insects, in the collection of Mr. Pearsall, had lost their color from some material in which they were preserved, it is possible that the antennæ may be found to be entirely black in those which are well kept.

46. *Melanotus variolatus*, nigro-piceus, elongatus, griseo-pubescent, fronte subplana punctis grossis umbilicatis confertis impressa, thorace latitudine parum longior, lateribus parallelis antice rotundatis, confertim grosse punctato, punctis umbilicatis, postice subcanaliculato, angulis posticis carinatis haud divergentibus, elytris fortiter punctato-substriatis, interstitiis parum convexis parce punctatis, pedibus rufis; antennarum articulo 3io 2ndo sesqui majore subtriangulari. Long. .45—55.

San Pedro, California, Mr. C. M. Bache. Related to *M. oregonensis* and *longulus*, but differs from the first by its rufous feet, and more densely punctured thorax, and from both by the sides of the thorax being more rounded, with the hind angles not diverging.

The thorax of the female is broader, more convex and more rounded on the sides than that of the male.

47. *Pityobius Murrayi*, niger subnitidus, subtiliter vix conspicue pubescens, thorace fortiter punctato, latitudine longior lateribus late rotundatis, angulis posticis productis divergentibus, carinatis, profunde canaliculato, 1861.]

medio valde excavato, et utrinque ante medium fovea magna impresso, elytris striis punctatis, interstitiis paulo convexis, dense rugose punctatis, antennis articulo 3io 2ndo duplo majore. Long. ♂.78, ♀1.42.

Mas antennarum articulis 4—11 ramo subbasali interno, duobusque externis, uno basali, altero pone medium ornatis.

Femina antennis serratis.

California. The male from Mr. Murray, the female from Mr. Rathvon.

48. *Limonius discoides* rufo-testaceus, opacus, pallide pubescens, capite fortiter punctato, occipite nigro, fronte plana antice recte truncata, thorace fortiter dense punctato, latitudine longiore antrorsum angustato, lateribus late rotundatis angulis posticis brevibus carinatis, convexo, macula ovali dorsali nigra, elytris striis punctatis, interstitiis haud convexis, profunde punctatis, antennis piceis, articulo 3io 2ndo plus sesqui longiore, postpectore piceo; prosterno suturis antice excavatis. Long. .40.

Rocky Mountains, at the head of Missouri River; for this beautiful species, I am indebted to Mr. H. Feldmann.

49. *Dolopius ferrugineipennis*, elongatus, niger, cinereo-pubescens, capite thoraceque dense punctatis, hoc latitudine longiore, a medio antrorsum angustato, lateribus late rotundatis, angulis posticis elongatis divergentibus fortiter carinatis, elytris rufo-testaceis, striis punctatis, interstitiis subconvexis dense punctatis, antennis (?) pedibusque flavo-testaceis. Long. .42.

Oregon. A specimen with only the basal joint of the antennæ remaining. Easily distinguished from our other species by the form of the thorax.

50. *Asaphes tumescens*, nigro-piceus, fusco-pubescens, capite thoraceque fortius sat dense punctatis, hoc (feminæ) convexo, latitudine paulo longiore postice canaliculato, lateribus rotundatis magis ad apicem, versus basim paulo angustato, angulis posticis acutis parallelis fortiter carinatis, elytris striis punctatis, interstitiis paulo convexis punctulatis, antennarum articulo 3io 2ndo duplo longiore et 4to paulo angustiore. Long. .49—53.

Santa Cruz Island, California. Mr. Bache. Closely allied to the dark varieties of *A. decoloratus*, but the head and thorax are much more strongly punctured. The second joint of the antennæ is shorter, being only half as long as the third, and the striæ of the elytra are more strongly punctured.

51. *Asaphes oregonus*, niger, pube longiore fulva suberecta vestitus, capite fortiter thorace sat dense subtilius punctato, hoc angulis posticis carinatis paulo divergentibus, elytris flavo-testaceis, striis subtilius punctatis, interstitiis planis rugosis et punctulatis; antennarum articulo 3io 2ndo sesqui longiore, pedibus fusco-piceis, tibiis partim, tarsisque fuscis. Long. .32—40.

Mas thorace latitudine longiore, antrorsum sensim angustato, lateribus late rotundatis.

Femina thorace latitudine fere brevior, convexiore apice magis angustato, lateribus magis rotundatis.

Oregon.

Sericosomus flavipennis. A specimen from Mr. Murray agrees with the description of *Dolerosomus flavipennis* *Motsch.* (Bull. Mosc. 1860,) except that the apical margin of the thorax is not testaceous. The color is variable in our common *S. silaceus*, so that I am not inclined to consider my specimen as a distinct species from that described by Mr. Motschulsky. It is closely allied to *S. silaceus*, but differs by the antennæ being nearly black, and by the thorax being less deeply punctured, with the hind angles less diverging, (but is perhaps merely a variety of *S. debilis* *Lec.*, Proc. Acad. Nat. Sc., 1859, 72;) the latter is of a pale testaceous color, with only the head obscure. These variations in color are all seen in *S. silaceus*.

52. *Corymbites colossus*, niger, capite thoraceque subnitidis, fortiter

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punctatis, fronte late concava, thorace (♀) convexo vix obsolete canaliculato, latitudine haud brevior, apice angustiore, lateribus modice, magis ad apicem rotundatis, angulis posticis paulo divergentibus fortiter carinatis, linea lævi dorsali obsolete postice notato, elytris fere opacis, dense punctatis et rugolosis, punctis vix majoribus striatim digestis, antennis thorace brevioribus, valde serratis, articulo 3io 2do sesqui longiore, haud dilatato. Long. 1.07.

California. Mr. S. S. Rathvon. The joints of the antennæ 4-10 are very strongly triangular, gradually smaller; the eleventh joint is also triangular, with the oblong appendage still more distinct than usual.

53. *Corymbites conjungens* Lec. A specimen of this species was sent by Mr. Murray, in which the entire prothorax is of a brownish red color. Were it not for the slightly pubescent surface, I should consider this species as *Diacanthus diversicolor* Esch., a species which has not been identified in recent times, but which may be more nearly allied to *C. rotundicollis*.

54. *Corymbites anthrax*, elongatus, niger, nitidus, pube brevissima cinerea parce obsitus, capite fortiter dense punctato, fronte fere plana, thorace lateribus confluentem medio parcius fortiter punctato, oblongo, latitudine vix sesqui longiore, lateribus subrectis, angulis posticis acutis divergentibus carinatis, elytris striis punctatis, interstitiis subplanis disperse punctatis, antennis modice serratis articulo 3io 4to paulo longiore. Long. .75.

Bodega, California; one female. Mr. G. Davidson. Almost as slender in form as *C. pyrros*.

55. *Aplastus optatus*, fuscus, pube cinerea vestitus, thorace latitudine haud longiore, antrorsum sensim angustato, lateribus rectis, angulis posticis elongatis carinatis valde divaricatis, punctato, canaliculato, elytris substriatis, interstitiis subplanis rugose punctatis. Long. .52—.70.

Mas oculis prominulis valde convexis, antennis articulis 3-10 apice externo paulo productis.

Femina oculis minus convexis, antennis articulis triangularibus.

California, Mr. A. Murray. Bodega, Mr. Davidson. Differs from *A. separatus* Lec. (Proc. Acad. 1859, 73), by the less elongated thorax and more distinctly carinated posterior angles.

56. *Sandalus californicus*, niger parce pubescens, thorace latitudine summa duplo brevior, a basi antrorsum fortiter angustato, lateribus rectis, subcanaliculato, apice et basi vage impresso, parce punctato, dense punctulato, elytris flavo-testaceis nitidis fortiter punctatis. Long. .60.

California, Mr. Murray; one male. Resembles in sculpture the male of *S. niger*, but is more robust in form, the pubescence is much less dense, the thorax is very transverse, and the antennæ are black.

57. *Macropogon piceus*, nigro-piceus, nitidus, fusco-pubescens, capite fortiter punctato, thorace latitudine brevior, trapezoideo, antrorsum angustato, basi bisinuato, lateribus rectis, angulis posticis acutis, sat dense punctato, foveis duabus posticis obliquis densius punctatis notato, elytris subtiliter striato-punctatis, interstitiis rugosis et punctulatis, antennis elongatis, articulis 2-4 conjunctis 5to longitudine æqualibus. Long. .31.

East of Fort Colville, Mr. Gibbs. This genus was placed by Motschulsky (Bull. Mosc. 1860) among the Elateridæ; it in reality belongs to the Dascylidæ, vide Classif. of Coleoptera of N. America, page 178.

58. *Calopteron megalopteron*, nigrum, thorace minuto carinato, lateribus flavis late reflexis, latitudine vix brevior, angulis posticis acutis valde divergentibus, elytris flavis corpore duplo longioribus, a basi sensim valde dilatatis, lateribus extrorsum concavis, apice valde rotundatis, reticulatis, costis solitis elevatis, fascia ad trientem anticam, trienteque postica cyaneo-1861.]

nigris, trochanteribus femorumque basi flavis. Long. (elytr. inclus.) .47—·62 ; lat. elytr. max. .36—·50.

Oregon. Differs from our other species by the much larger size of the elytra, which are so much dilated behind that their greatest width is but little less than their length, and the lateral outline is decidedly concave. The sides of the thorax before the angles are nearly parallel ; the apex, as usual, is semi-circular.

59. *Podabrus torquatus*, niger (cinereo-pubescentis?), nitidus, capite flavo, antice lævi pone antennis fortiter punctato, cervice nigro-piceo, thorace flavo latitudine plus sesqui brevior, lateribus rotundatis late reflexis, angulis anticis rotundatis, posticis dentiformibus prominulis, antice late transversim concavo et parce punctulato, basi marginato, pone medium linea dorsali profunda impresso, elytris subtilius rugose punctulatis, abdominis lateribus anoque pallidis, pedum antennarumque basi testacea ; his articulo 3io 2ndo duplo longiore, at 4to brevior, palpis nigris basi flavis. Long. .38.

Bitter Root Valley, Rocky Mountains. Lieut Mullan's Expedition ; collected by Mr. Pearsall. The pubescence has been all removed. The claws are pale yellow, and cleft, with the under portion scarcely shorter than the upper.

60. *Podabrus mellifluus*, niger opacus cinereo-pubescentis, capite ante antennis flavo, parce punctato, postice fortiter punctato, thorace latitudine duplo brevior, lateribus late rotundatis, angulis anticis rotundatis, posticis obtusis haud prominulis, confertim subtiliter punctato, lateribus late rufotestaceis ; elytris dense subtiliter rugose-punctatis. Long. .40.

California, Mr. Murray. Quite distinct by the above characters from any other species found within the United States. The third joint of the antennæ is longer than the second, but shorter than the fourth ; the first three joints are testaceous beneath : the claws are cleft, the under part scarcely shorter than the upper.

61. *Podabrus scaber*, elongatus, niger opacus cinereo-pubescentis, capite ante antennis fere lævi utrinque testaceo, postice dense punctato, collo valde elongato, thorace latitudine haud brevior, lateribus postice rectis antice rotundatis, angulis posticis rectis vix prominulis, confertim punctato, antice transversim late concavo, postice linea dorsali impressa, lateribus late rufotestaceis, elytris dense granulato-rugosis. Long. .42.

Oregon. The first joint of the antennæ is yellow beneath, the third joint is one-half longer than the second, and not shorter than the fourth ; the claws are acutely toothed about the middle.

62. *Podabrus corneus*, valde elongatus, supra testaceus nitidus, capite antice lævi, postice piceo sat fortiter punctato, thorace latitudine haud brevior, lateribus late rotundatis, angulis posticis acutis, vix punctulato, antice, ad latera, et disco late concavo, inde obtuse bicostato, elytris confertim rugose punctulatis ; subtus niger, trochanteribus, femorum apice, tibiisque anticis testaceis ; tarsis antennisque fuscis, his basi testaceis. Long. .38.

California, Mr. S. S. Rathvon. Bears a striking resemblance in appearance to *Telephorus larvalis* Lec. The third joint of the antennæ is intermediate in size between the second and fourth ; the claws are cleft, with the inferior portion but little shorter than the superior.

63. *Podabrus macer*, valde elongatus, niger opacus cinereo-pubescentis, capite confertim punctulato, thorace latitudine longior, lateribus fere rectis parallelis pallide testaceis, angulis anticis rotundatis, posticis obtusis, punctato, antice posticeque late transversim concavo, disco pone medium costis duabus magnis obtusis elevatis, elytris dense rugose punctulatis, antennarum articulo 3io 2ndo duplo longior, at sequente paulo brevior. Long. .31.

San Mateo, California, Mr. A. Agassiz. The antennæ are not much shorter

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than the body, the legs are long, and the claws are furnished with a large square tooth at base, extending beyond their middle.

64. *Malthodes transversus*, nigro-piceus, cinereo-pubescentis, thorace flavo, latitudine fere duplo brevior, undique marginato, lateribus fuscis rectis parallelis, disco oblique biimpresso, elytris rugose punctatis, antennis pedibusque fuscis, illis articulo 1mo testaceo, sequentibus æqualibus. Long. .11.

Santa Cruz Island, Mr. Bache.

65. *Thanasimus rubriventris*, niger, pubescens, capite thoraceque subtiliter punctatis, elytris dense punctulatis, striis externis ultra medium extensis, internis valde abbreviatis, sutura antice, fascia angulata antica alteraque latiore prope apicem dense cinereo-pubescentibus, abdomine sanguineo. Long. .30.

East of Fort Colville, Mr. Gibbs. Resembles in form and sculpture *C. nubilus* Klug, but differs by the legs being entirely black, and by the outer rows of punctures of the elytra being longer: the elytra are also more parallel and less convex.

66. *Thanasimus nigriventris*, niger, pubescens, capite thoraceque subtiliter punctatis, elytris punctulatis, striis omnino oblitteratis, sutura antice, fascia transversa ad quadrantem, altera angusta angulata ad medium, maculaque magna apicali dense cinereo-pubescentibus. Long. .27—·35.

East of Fort Colville, and in Bitter Root Valley. Of the same shape as the preceding, but differs by the body being entirely black. The usual rows of punctures on the elytra are completely wanting; about one-fourth from the base a broad band of cinereous pubescence extends from the suture nearly to the margin; the suture from the base to the band is also clothed with cinereous hair; behind this band, but about the middle, instead of before the middle, as in the other species, is the usual narrow, acutely angulated band; a large apical spot of gray hair occupies the hindmost fifth of the surface, and extends along the suture higher than on the margin; its anterior outline is angulated, and is transversely truncate at the middle.

In badly preserved specimens the apical spot sometimes appears to be a subapical band, from the rubbing off of the hairs near the tip.

67. *Cupes serrata*, fusco-testacea, piceo-marmorata, squamulis cinereis nigrisque variegata, fronte concava, thorace transverso, lateribus parallelis, angulis anticis acutis divaricatis, apice ad medium late breviter producto, confertim punctato, canaliculato, antice posticeque transversim impresso, elytris cylindricis, foveis seriatis quadratis cancellatis, lateribus versus apicem spinulis acutis armatis serie duplici positis; oculis parvis, antennis corpore duplo brevioribus, cinereo nigroque annulatis. Long. .43—·82.

East of Fort Colville, at Sinyak water depot, and at Camp Kootenay. The variation in size of this remarkable species is very great. Besides the spiculæ on the lateral margin, and on the extreme inflexed margin of the elytra, a few are visible on the seventh interstitial line near the tip. The blackish markings are scattered along the interstitial line and a broad band behind the middle is also seen.

It will probably be found on dissection that the characters separating our three species of *Cupes* will warrant them in being considered as belonging to distinct genera. The external characters are very marked; thus in *C. serrata* the head is not tuberculate behind, and is deeply concave between the antennæ, which are distant, only one-half as long as the body, and somewhat serrate; the eyes are small. The mentum appears larger and more prominent than in the other two species.

In *C. capitata* the head has a very deeply impressed line between the eyes, and is divided behind into four tubercles; the antennæ are about two-thirds the length of the body, stout, but not serrate; the eyes are small.

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In *C. concolor* Westwood, (*cinerea* Say, *trilineata* Mels.) the head is not tuberculate behind, the antennæ are less distant, longer than the body, and filiform, and the eyes are very large.

68. *Philoxylon alutaceum*, elongatum fusco-testaceum, pube helva sericea brevi dense vestitum, elytris alutaceis, vix distincte punctulatis. Long. .20.

California; Mr. A. Murray. Differs from *P. convexifrons* Lec. (*Anobium conv.* Mels.) by the more elongate form, and by the elytra not being distinctly punctulate; in *P. punctulatum* Lec. (*Anobium punct.* Lec.), they are more strongly and less densely punctulate than in *P. convexifrons*.

The genus *Philoxylon* was established by me (Class. Col. N. Am. 205), on the two species just named, which differ in many respects from *Anobium*. It will be recognized by the prothorax not being excavated beneath for the reception of the head; the prosternum before the coxæ is very short, but distinct; the anterior coxæ are contiguous, as are also the middle ones; the tarsi are moderately long, the fifth joint is not flattened, and is as long as the two preceding united; the claws are slender. The antennæ are long, the joints 3—7 are nearly equal, and the 8—11 are together somewhat longer than all the others united.

69. *Eleodes obtusa*, elongata, nigra, capite thoraceque confertim punctatis, hoc ovato, latitudine paulo brevior, lateribus rotundatis, postice obliquis, angulis posticis obtusis, spatio parvo lævi utrinque ad medium notato, elytris postice oblique attenuatis valde declivibus, basi truncatis humeris obtusis, granulis punctisque intermixtis vix seriatim positis; femoribus anticis subtus obtuse angulatis. Long. .60.

California; Mr. Murray; one male. Quite distinct by its characters from all others known to me. The prosternum is slightly prominent behind. The elytra are punctured towards the suture, but behind and at the sides the punctures are replaced by oval elevations of moderate size, which are arranged in rows, though not very distinctly. The epipleural margin is not visible from above, and the humeral angles are not produced.

70. *Eleodes inculta*, nigra, subopaca, capite thoraceque sat dense punctatis, hoc latitudine paulo brevior, lateribus valde rotundatis postice subito breviter sinuatis, angulis posticis obtusis prominulis, basi late rotundato, elytris ovalibus thorace sesqui latioribus, apice attenuatis valde declivibus, humeris late rotundatis, dorso deplanatis punctis granulisque parvis inordinatis insculptis, granulis versus latera breviter piliferis; femoribus anticis muticis, antennis apice parum incrassatis. Long. .57.

Island of Santa Barbara, Mr. C. M. Bache. More nearly related to *E. producta* than to any other known to me; the thorax is, however, less broad, and less rounded on the sides, the humeri are broadly rounded and the epipleural margin is not at all visible from above; the elytra are also more granulated and less punctured, and the antennæ are more slender.

71. *Eleodes hirsuta*, nigra pilis elongatis nigris erectis villosa, capite thoraceque opacis, confertim (hoc fortius) punctatis, thorace latitudine vix brevior, lateribus rotundatis angulis posticis obtusis, elytris ovalibus, subnitidis, confertim inordinatim punctatis, versus latera et apicem submuricatis, femoribus anticis muticis, antennis extrorsum paulo incrassatis. Long. .37—
.42.

Mas elytris thorace paulo latioribus, latitudine fere duplo longioribus. Femina elytris thorace plus sesqui latioribus.

Great Salt Lake Desert. The prosternum is slightly prominent behind. From the long hairs with which this species is covered it presents very much the appearance of *Amphidora nigropilosa* Lec.; the anterior tarsi are, however, not at all dilated, and otherwise it presents the characters of *Eleodes*.

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72. *Helops Bachei*, elongatus, nigro-piceus, ænescens, capite thoraceque dense fortiter aciculatim punctatis, hoc parum convexo, latitudine paulo brevior, rotundato, ante basin vage arcuatim impresso, elytris striato-punctatis, interstitiis planis disperse subtiliter punctatis postice tuberculis minutis punctigeris uniseriatim ornatis, metasterno brevi. Long. .34—.50.

Island of Santa Barbara, Mr. C. M. Bache. Very distinct from all the other species known to me; the small tubercles of the elytral intervals in large specimens may be seen almost to the base, in small ones, however, they are sometimes almost entirely wanting, and may be traced only very near the tip. Each little elevation is marked with a point somewhat larger than the scattered punctures of the intervals. The antennæ are slender, very slightly thickened externally. The under surface of the prothorax is densely aciculate; the metasternum is strongly, the abdomen more finely punctured. The male has three joints of the anterior tarsi moderately, and of the middle tarsi very slightly dilated.

73. *Helops pernitenis*, nigro-æneus nitidissimus, subtus nigro-piceus, capite confertim punctato, thorace latitudine plus sesqui brevior, antice posticeque truncato, lateribus rotundatis, margine fortius depresso et reflexo postice haud latiore, disperse punctato, elytris oblongo-ovalibus convexis, fortiter marginatis, striis profundis subpunctatis, interstitiis planis vix punctulatis, metasterno brevi. Long. .40.

Oregon. Related to *H. lætus Lec.*, but differs by the thorax being less densely punctured, and by the posterior angles being much more obtuse; the sides curve equally before and behind the middle, and the depressed margin is not wider at the base. The sides of the prothorax are finely and densely striate beneath; the metasternum is strongly punctured; the abdomen is more finely punctured, and is rugous at the sides. Three joints of the anterior tarsi are moderately, of the middle tarsi very slightly dilated in the male.

74. *Helops convexulus*, nigro-piceus, ænescens, capite confertim, thorace sat dense punctato, hoc convexo latitudine paulo brevior, antice posticeque truncato, lateribus rotundatis, angulis obtusis rotundatis, elytris ovalibus, convexis, striis subtilibus punctatis, interstitiis planis, pedibus rufo-piceis. Long. .24.

Bitter Root Valley, Rocky Mountains. Lieut. Mullan's Expedition. The sides of the prosternum beneath are densely striate; the rest of the under surface is punctured, and the sides of the abdomen are besides finely rugous.

75. *Cibdelis Bachei*, niger opacus, thorace latitudine vix brevior, antice magis angustato, lateribus rotundatis postice subsinuatis, angulis posticis rectis, parum convexo, tuberculis parvis scabro, elytris lateribus rotundatis, thorace sesqui latioribus, striis subtilibus punctatis, interstitiis tuberculis parvis dispersis. Long. .65.

Island of Santa Barbara, California; Mr. C. M. Bache, to whom I take great pleasure in dedicating this fine species, as a slight acknowledgment for the labor bestowed in making collections on the islands near the coast of California.

Larger and broader than *C. Blaschki*, and totally distinct in its sculpture. The epistoma is broadly emarginate and nearly conceals the labrum, while in *C. Blaschki* it is truncate, and the labrum is more prominent; the mentum is broader in front, and feebly emarginate, and the hind feet are more widely separated. I am not disposed to regard these differences as generic.

76. *Uloma longula*, piceo-rufa, elongata, nitida, capite confertim subtiliter punctato, fronte late et profunde transversim impressa, thorace latitudine brevior, antice paulo angustato, lateribus anguste marginatis, sat dense medio subtilius punctato, elytris striis haud profunde punctatis, interstitiis planis obsolete punctulatis. Long. .37.

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California, Mr. Murray. Of the same form as *U. ferruginea* Say, but much larger, with the striæ of the elytra much less strongly punctured, and the intervals only very obsolete punctulate.

75. *Meloe opaca*, elongata, nigra, opaca, capite medio parce lateribus et postice sat dense punctato, linea longitudinali obsolete impressa, fronte utrinque transversim impressa, thorace latitudine brevior ovato, basi emarginato, sat dense punctato, obsolete canaliculato, dorso vage bifoveato, elytris dense sat fortiter intricato-rugosis, abdomine subtiliter rugoso. Long. .75.

One specimen, Mendocino City, Mr. A. Agassiz.

78. *Meloe barbara*, æneo-nigra, subnitida, capite disperse punctato, thorace oblongo, ad apicem rotundatim angustato, basi emarginato, dorso planiusculo, disperse punctato, obsolete canaliculato, antice vage bifoveato, ad basin impresso, elytris valde convexis, parce rude haud profunde rugosis, abdomine alutaceo-rugoso, antennis (♀) medio parum incrassatis. Long. .60.

Island of Santa Barbara, Mr. C. M. Bache.

79. *Lytta dolosa*, minus elongata, metallescens opaca (nigro-cyanea, olivacea, vel pistacea cupreo-tincta), capite parce punctato, postice canaliculato, gutta frontali flava, basi truncato angulis posticis rotundatis, thorace ovali, latitudine subbreviore, punctis parcis adspersis, subtiliter canaliculato, dorso obsolete bifoveato, elytris thorace fere duplo latioribus dense rugosis et punctulatis, antennis elongatis nigris, extrorsum moniliatis paulo incrassatis, tibiis posticis calcari interno tenui acuto, externo dilatato, obtuso. Long. .42—·58.

California, Mr. Murray; Mendocino City, Mr. A. Agassiz. Very variable in color, sometimes of a greenish bronze, sometimes almost black, with a bluish brassy tinge. The smaller specimens resemble in appearance *L. smaragdula* Lec., but are at once distinguished by the outer spur of the hind tibiæ being much broader and more obtuse.

80. *Tragosoma Harrisii* Lec. A specimen of this species was found by Mr. Gibbs, east of Fort Colville. It probably extends its range across the continent in more northern latitudes.

81. *Pogonocherus oregonus*, niger, setis nigris elongatis erectis adspersus, thorace vix calloso, spina laterali brevi obtusa, elytris parallelis punctis magnis parcis, antice confusis postice seriebus paucis ordinatis, fascia lata antica trienteque postico cinereo-pubescentibus, penicellis parvis brevibus tri-seriatis ornatis; antennis cinereo-annulatis. Long. .28.

East of Fort Colville, Mr. Gibbs. The long hairs with which this species is clothed, and the three rows of bunches of black pubescence seen on the elytra, cause it to resemble in appearance *P. penicellatus* Lec., but the thorax has no very distinct elevations, and the lateral lines are less prominent. The elytra are not gradually narrowed behind, have no costæ, and the bunches of black hair are very short. The anterior band occupies one-third of the surface, except a basal broad triangular space; the punctures not being covered with hair appear black.*

* It may here be proper to state that *Amphionycha subarmata* Lec. (Col. Kansas, 22) from Niagara, on examination of perfect specimens, is found to have the ungues simple, and in fact to belong to the genus *Eupogonius* Lec. The resemblance in appearance to *Amphionycha* is most remarkable, though I have since observed that the genera allied to *Saperda* have the eyes finely granulated, while in *Liopus*, *Eupogonius*, *Pogonocherus* and all allied forms the lenses are much larger, thus causing the eyes to appear more coarsely granulate. A similar difference in structure obtains among the genuine *Cerambycidae*, and by regarding it, many groups may be circumscribed with great precision. I hope shortly to make known some modifications in the natural arrangement of these tribes suggested by this discovery.

82. *Leptura cribripennis* Lec. Two specimens collected by Dr. W. A. Hammond in the Black Hills, have precisely the form and sculpture of this species, but the elytra are black, with the base red; another from Oregon has the elytra entirely black. Finding no differences but those of color, I not only believe these to be merely varieties, but also suppose that *L. canadensis* Fabr. and *L. erythroptera* Kirby (nec Germ.) are corresponding varieties of another species; the entirely black variety of our Eastern species is as yet unknown.

83. *Leptura cubitalis*, elongata, nigra, parce subtiliter cinereo-pubescent, capite thoraceque confertim punctatis, hoc convexo, subcanaliculato, lateribus valde rotundato, antice angustato, fortiter constricto, basi modice constricto, linea dorsali lævi nitida, elytris parallelis apice subtruncatis, sat dense postice subtilius punctatis, antennis tenuibus piceis, basi rufis, pedibus anticis rufis, femoribus apice, tibiis apice externo, tarsisque nigris. Long. .35.

San Mateo, California, A. Agassiz. Belongs to the same division as *L. sphaericollis* Say, *L. vibex* Newman (*nitidicollis* Horn, Pr. Ac. 1860, 570) and *L. aurata* Horn.*

84. *Leptura fasciventris*, nigra, fulvo-pubescent, capite thoraceque confertissime punctatis, opacis, hoc convexo subcanaliculato campanulato, apice valde, postice modice constricto, lateribus sinuatis, elytris flavis (♀) subparallelis, thorace fere duplo latioribus apice subtruncatis, dorso antice subdepressis, modice postice subtilius punctatis, flavis fasciis duabus trienteque postico nigris, maculaque rotundata utrinque ante apicem flava ornatis; abdomine flavo, plus minusve nigro-fasciato, pedibus rufo-flavis, femoribus crassiusculis; antennis nigro-fuscis, plus minusve testaceo-annulatis, vel testaceis, nigro-annulatis, basi nigris. Long. .40—47.

California, Mr. A. Murray; found also in Oregon. Belongs to the same group as *L. crassipes* Lec., *xanthogaster* Lec., *tibialis* Lec. and *rufula*. The first band is oblique towards the suture, and is about $\frac{1}{4}$ from the base; the second is transverse, situated about the middle; it is broad externally, but scarcely reaches the suture; the outer margin is black from the 2d band, and the suture from the first band. The abdomen is yellow, the base of each segment, especially at the sides, is black, but in one specimen this is observed only on the first and second segments.

85. *Leptura dolorosa*, robusta, nigra opaca, subtiliter cinereo-pubescent, capite confertim punctato canaliculato, thorace antrorsum sensim angustato, lateribus late rotundatis, basi incurvis, apice valde constricto, basi profunde transversim impresso et depresso, disco parum convexo, profunde canaliculato, parce basi dense punctato, elytris planiusculis, apice oblique intus truncatis, subparallelis, sat dense postice subtilius punctatis. Long. .58.

East of Fort Colville, Mr. Gibbs. Related more nearly to *L. biforis* than to any other known to me, though, from its black color, very different in appearance. The disc of the thorax is broadly flattened each side behind the middle.

86. *Leptura (Stenura) carbonata*, elongata, nigra subnitida, subtiliter nigro-pubescent, capite canaliculato, sat dense fortiter punctato, thorace parum convexo, antrorsum sensim angustato, apice constricto, basi fortiter impresso et depresso, linea dorsali angusta lævi, dorso parce, lateribus sat

* To the same division belongs the following species from Lake Superior:

L. pedalis, elongata, nigra, parce fusco-pubescent, capite thoraceque dense punctatis, hoc convexo, subcanaliculato, lateribus rotundatis, antice angustato apice valde constricto, basi modice constricto, linea dorsali tenui lævi, elytris parallelis, apice subtruncatis, sat dense postice minus fortiter punctatis, antennis nigro-piceis, articulis 3—11 basi testaceis, pedibus rufo-testaceis. Long. .40.

In one specimen the middle thighs are darker.

dense fortiter punctato, utrinque vage deplanato, angulis posticis laminatis, elytris parallelis apice subtruncatis, modice, postice subtiliter punctatis. Long. .73.

Washington Territory. Allied to *L. nigrella* Say, but the head and thorax are not confluentely punctured, the elytra are parallel, and are only slightly truncate at tip, and not emarginate as in *L. nigrella*.

87. *Toxotus flavolineatus* Lec. A variety of this species in which the elytra are entirely black, is found in Oregon.

88. *Argaleus lituratus*; *Pachyta liturata* Kirby. Specimens collected in various parts of Washington Territory prove that *A. nitens* Lec. is merely a variety of this species; the elytra vary from being entirely pale to entirely black.

89. *Acmæops vincta*, elongata, nigra, subtiliter fusco-pubescentis, capite thoraceque dense punctatis, hoc latitudine haud brevior, convexo, canaliculato, antice et postice profunde constricto, lateribus obtuse angulatis, elytris fortiter postice subtilius punctato, a basi perparum angustatis, apice subtruncatis, vittis duabus flavis utrinque ornatis sæpe obsoletis, femoribus anterioribus rufis apice nigris, posticis nigris basi rufis. Long. .47—53.

Bitter Root Valley, Lieut. Mullan's Expedition; also found in Oregon. Narrower than *A. dorsalis* Lec., (Col. Kansas, 21,) with the impressions of the thorax much stronger, and the sides more distinctly angulated.

90. *Acmæops gibbula*, nigra, fusco-pubescentis, capite sat dense, thorace parcius punctato, hoc campanulato, apice fortiter constricto, postice transversim impresso, dorso late depresso utrinque subgibboso, linea dorsali lævi, angulis posticis rotundatis prominulis, elytris fortiter postice subtiliter punctatis, (♂) a basi angustatis, apice truncatis, nigro-fuscis, vel obscure rufis, sutura vittaque submarginali obscuris. Long. .35.

Washington Territory, Mr. Gibbs. Allied to *A. proteus*, but the elevations of the thorax are much less prominent, and the flattening of the disc is less decided. Specimens will undoubtedly occur having the elytra pale without any dark vittæ. When the elytra are not entirely dark colored, the base of the thighs is testaceous.

91. *Stenopterus fuscipennis*, niger, subtiliter pubescens, thorace latitudine longiore, antice angustato, lateribus late rotundatis, apice et basi impresso, fortiter punctato, linea dorsali brevi elevata callisque duabus elongatis lævibus, elytris abdomine parum brevioribus longe subulatis, dorso planis, fusco-testaceis, haud dense punctatis, punctis hic inde seriatis, tibiis anterioribus basi testaceis, pedibus posticis flavis, femorum clava tibiæ apice tarsisque nigris. Long. .40.

San Mateo, California, Mr. A. Agassiz. The hind tibiæ are slightly bent, and are roughened with small elevations.

92. *Arhopalus lutosus*, niger, pube brevi virescenti-ochrea undique dense tectus, thorace rotundato, latitudine haud brevior, elytris apice oblique truncatis angulo externo subacuto, antennis pedibusque rufis. Long. .46.

Kansas, near the Rocky Mountains.

93. *Crossidius ater*, ater opacus, griseo-pubescentis, thorace latitudine brevior, convexo rotundato, rude et dense punctato, pilis longis pallidis villosis, elytris confertim antice fortius punctatis. Long. .62.

Utah, Mr. E. T. Cresson. Resembles in form *C. testaceus* and *C. humeralis* Lec., but quite different by its color.

94. *Crossidius pulchellus*, longior, niger, pallide pubescens, thorace latitudine paulo brevior, rotundato, rude punctato, lateribus postice paulo concavis, pilis longis villosis, elytris fortiter ad apicem subtilius punctatis, pallidis, margine basali ad humeros latiore, plagaque communi maxima pos-

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tica oblonga nigris, abdomine rufo, segmentis duobus primis fuscis apice rufis. Long. .37.

Bitter Root Valley, Mr. Ulke. The large spot of the elytra extends two-thirds the length; its anterior outline is angulated at the suture, and slightly concave each side; the lateral outline is straight, and reaches the apex, which is abruptly rounded; the suture is retracted and presents a small tooth.

95. *Clytus mormonus*, niger, parce cinereo-pubescentibus, capite scabro, carinis duabus frontalibus notato, thorace ovali latitudine longiore, convexo, scabro, elytris subtilius punctatis et rugosis, apice singulatim rotundatis, guttis pluribus parvis cinereo-pubescentibus in fascia ad medium alteraque ad dodrantem digestis; femoribus posticis abdomine paulo brevioribus. Long. .60.

Utah, Mr. E. T. Cresson. The specimen before me has lost nearly all the pubescence, but the species can be readily recognized by the characters above given. The thorax is regularly oval, equally narrowed at base and apex, densely rugosely punctured, without any elevations.

96. *Callidium (Phymatodes) Agassii*, robustum, atrum opacum, thorace rude punctato, transverso, lateribus valde rotundatis, elytris basi truncatis, thorace latioribus, ante medium rude, pone medium parce sat fortiter punctatis. Long. .67.

San Mateo, California, A. Agassiz. The elytra behind the middle are still more destitute of lustre than the rest of the surface. The anterior coxæ are separated by the very narrow prosternum. The antennæ are stout, scarcely more than half the length of the body.

97. *Donacia californica*, supra virescente-ænea nitida, thorace quadrato, latitudine paulo brevioribus, lateribus rectis postice paulo convergentibus, angulis omnibus prominulis, tuberculo antico male definito, postice transverse fortiter, antice modice transversim impresso, dorso parum convexo, obsolete punctulato et rugoso, canaliculato, ante medium transversim impresso, elytris thorace duplo latioribus, planiusculis, apice subtruncatis, punctis inauratis confertis striatis, interstitiis subtiliter rugosis, subtus plumbea. Long. .45.

California, Mr. Murray. Resembles in form and characters *D. proxima Kirby*, but differs by the color and by the thoracic tubercles being less prominent. The upper surface is also not so smooth and shining.

98. *Coscinoptera vittigera*, oblonga, subcylindrica, æneo nigra, cinereo-pubescentibus, thorace latitudine vix brevioribus, antrorsum sensim angustato, subtilius punctato, vitta dorsali lævi, elytris confertim punctatis, vitta lata rufa a basi ad apicem extensa ornatis, humeris obscuris. Long. .23.

Bitter Root Valley, Mr. Pearsall.

99. *Pachybrachys analis*, oblongus, convexus niger, subopacus, cinereo-pubescentibus, capite thoraceque confertim subtiliter punctatis, hoc vitta dorsali lævi, margine laterali testaceo, elytris punctatis subrugosis, hic inde substriatis, lateribus ante medium, apiceque testaceis; pygidio flavo-bimaculato, abdomine apice testaceo, pedibus nigro-flavoque variegatis. Long. .20.

California, Mr. A. Murray.

100. *Pachybrachys viduatus Suffr.*; (*Crypto. bivittatus* Say). A singular variety of this species from California was sent me by Mr. Murray. The middle and posterior spots are united with the vitta, so that the elytra are pale, with the suture and narrow lateral and apical margin, a small humeral spot, and a very broad stripe extending nearly to the tip black.

101. *Chrysomela (Phædon) oviformis*, ovalis convexa, supra ænea; cupreo-micans, thorace lateribus distincte, medio fere obsolete punctato, elytris punctis mediocribus striatim digestis, interstitiis parce obsolete punctulatis. Long. .15.

East of Fort Colville, Mr. Gibbs. Less rounded and more convex than our
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common *C. viridis*, with the punctures in the rows of the elytra rather larger, and the interstices less finely rugous. The under surface is metallic black, the legs black, with the outer half of the tibiæ and tarsi obscure testaceous in one specimen; in another they are entirely black.

102. *Chrysomela* (*Phædon*) *prasinella*, supra obscure viridi-ænea, ovalis modice convexa, thorace æqualiter modice punctato, elytris punctulatis, punctis vix majoribus striatim digestis. Long. .18.

Oregon, Mr. Murray. Less convex than the preceding, and less rounded than *C. viridis*; differs from both by the middle of the thorax being scarcely less punctured than the sides, and the intervals between the rows of punctures of the elytra being covered with scattered punctures scarcely smaller than those of the rows.

103. *Haltica* *reticollis*, elongata, supra æneo-fusca, pube flava subhispida, thorace latitudine paulo longiore, lateribus serrulatis late rotundatis, angulis posticis rectis, anticis prominulis, modice convexo, grosse punctato, sulco basali transverso profundo, elytris oblongis, thorace haud latioribus striis antice fortiter postice subtiliter punctatis, interstitiis punctulatis; subtus nigra, antennis pedibusque rufis. Long. .12.

California, Mr. Murray. The western representative of our *H. forticornis* Ill. (? *copalina* Fabr.), though very different from that species.

104. *Haltica* (*Crepidodera*) *semnulum*, breviter ovata, convexa, nigro-ænea, cinereo-pubescent, capite convexo fere lævi, thorace transverso, convexo, antrorsum angustato, basi medio producto, fortiter parce punctato, sulco basali transverso profundo, elytris ante medium dorso impressis, striis e punctis majusculis compositis, interstitiis fere lævibus; subtus nigra, antennis pedibusque flavo-testaceis, femoribus nigro-piceis. Long. .09.

California, Mr. Murray.

105. *Haltica* (*Crepidodera*) *maneuila*, ovata, convexa, nigro-ænea, glabra, capite parce grosse punctato, thorace transverso, convexo, antrorsum angustato, angulis anticis rotundatis paulo prominulis, parce punctato, sulco transverso postice fere oblitterata, striola brevi profunda utrinque notato, elytris striato-punctatis, punctis antice majoribus, apice obscure testaceis, subtus nigra, antennarum basi, tibiis anticis apice, tarsisque piceis. Long. .10.

East of Fort Colville, Mr. Gibbs. Remarkable for the usual transverse furrow of the thorax being almost entirely wanting.

106. *Galleruca* *carbo*, atra opaca, breviter cinereo-pubescent, thorace transverso, antrorsum angustato, lateribus rotundatis, angulis anticis paulo prominulis, punctato, subcanaliculato, dorso vage biimpresso, elytris parce punctatis, sulco marginali lato haud profundo. Long. .20—22.

East of Fort Colville, Mr. Gibbs. Resembles *G. Sagittariae*, but is entirely black, and the thorax is more rounded on the sides.

107. *Triplax* *antica*, elongata ovalis, nigra nitida, capite thoraceque haud dense punctatis, hoc transverso antrorsum paulo angustato, lateribus parum rotundatis, elytris subtilius striato-punctatis, interstitiis vix obsolete punctulatis, basi anguste indeterminate rufis, antennis palpis pedibusque rufis, illis clava nigra. Long. .16.

Sinyak water depot, Mr. Gibbs. Totally distinct from any other of our elongate species, which constitute the genuine group of the genus.

108. *Hippodamia* *spuria*, ovalis, longiuscula, thorace nigro, limbo omni angusto lineisque duabus discoidalibus albis, elytris pallide fulvis, macula communi scutellari elongata, altera humerali, tribusque utrinque pone medium 2, 1, positis nigris, sæpe deficientibus, his nonnunquam varie confluentibus, angulo suturali rotundata, subtus nigra epimeris mediis et posticis pallidis. Long. .20.

Oregon, Mr. A. Agassiz. This species has the size and form of our common *H. parenthesis*, but the thorax of *H. convergens*. The elytra are more elongate oval in form than in either, and more obtusely rounded at tip; the apical angle is also not at all acute, but on the contrary quite rounded.

The spots of the elytra vary greatly; the scutellar elongate spot is sometimes prolonged on the sutural margin for two-thirds the length; the first and second, or the second and third of the posterior spots are connected sometimes as in varieties of *H. parenthesis*, and specimens will undoubtedly be found in which all three are united to form an arcuated spot. It is also probable that *H. sinuata* Muls. (Cocc. 1011) is an extreme form of this species, having all the spots united into a sinuous vitta; sometimes the spots are entirely wanting. The pectoral and abdominal curved lines are obsolete, and it consequently belongs in the same group with *H. convergens*.

Description of a new Mexican Bat.

BY HARRISON ALLEN, M. D.

In 1842, Prof. Gray described, in the *Ann. and Mag. of Nat. Hist.*, a new genus of bats, which he called *Centurio*, and gave the diagnosis of a new species,—*C. senex*. Both of these were afterwards introduced, with a plate and extended description, in the *Zoology of the Voyage of the Sulphur*, p. 27. This was the first notice given of a well marked group of Cheiroptera inhabiting the tropical regions of America.* Since that time, Lichenstein and Peters† have published an account of a new species—*C. flavogularis*—coming from Cuba; and M. de Saussure‡ has added a third, under the name of *C. mexicanus*.

A short time since, the author obtained from the collection of the Smithsonian Institution two bats, sent by Dr. Sartorius from Mirador, Mexico. One of these was determined, from the descriptions furnished by M. de Saussure, to be the *C. mexicanus* of that author. The other was an animal resembling the members of the genus in question in many particulars, but differing so markedly in others as to render a special description necessary.

The head in its general expression and arrangement of the facial pleats resembles that of the other species. The greater and lesser transverse frontal ridges are present, the latter being less distinct than in the original plate of Gray, and much less so than in the figure of Lichenstein and Peters. The mesial callosity between the nostrils, the nostrils themselves, the warts, setæ and oval crenations, are all similar in extent and relative proportions one to the other, as in other *Centuriones*. The ear, however, presents some points of difference. The "hatchet-shaped" internal lobe is of the same shape, but possesses longer and thicker hair. The auricle proper is similar, while the tragus is much thicker on the inner than on the outer side, which thickness exceeds that of *C. mexicanus*; and the external lobe is more acute, and has upon its summit a minute, well-defined knob.

But the great point of variance consists in the development of the corrugations beneath the chin. These in the known species are but leathery bands, three in number, running from one side of the neck to the other,—the lower one being the largest and covered with hair. In our animal, in addition to the three above noticed, there are two smaller ones, placed anterior to the rest. On a comparison being instituted between these rugæ, they were found to differ greatly in the degree of their development. Thus, while the first pli-

* Prof. Gray was in doubt as to the nativity of his species, from the fact that bats collected both from Amboina and South America were contained in the same bottle. There can be but little doubt, however, that his animal came from the latter country.

† *Abhandl. der Akad. der Wissenschaften zu Berlin*, 1854, p. 81, pl. 1.

‡ *Rev. et Mag. Zool.*, 1860, p. 378.