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**The Annals and magazine of natural history; zoology, botany, and geology
being a continuation of the Annals combined with Loudon and
Charlesworth's Magazine of Natural History.**

London, Taylor and Francis, Ltd.

<http://www.biodiversitylibrary.org/bibliography/15774>

4th ser. v. 4 (1869): <http://www.biodiversitylibrary.org/item/61864>

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THE ANNALS

AND

MAGAZINE OF NATURAL HISTORY,

INCLUDING

ZOOLOGY, BOTANY, AND GEOLOGY.

(BEING A CONTINUATION OF THE 'ANNALS' COMBINED WITH LOUDON AND CHARLESWORTH'S 'MAGAZINE OF NATURAL HISTORY.')
UNIVERSITY OF CHICAGO

CONDUCTED BY

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WILLIAM S. DALLAS, F.L.S.,

AND

WILLIAM FRANCIS, Ph.D., F.L.S.

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VOL. IV.—FOURTH SERIES.  
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LONDON:

PRINTED AND PUBLISHED BY TAYLOR AND FRANCIS.

SOLD BY LONGMANS, GREEN, READER, AND DYER; SIMPKIN, MARSHALL, AND CO.;

KENT AND CO.; BAILLIÈRE, REGENT STREET, AND PARIS:

MACLACHLAN AND STEWART, EDINBURGH:

HODGES AND SMITH, DUBLIN: AND ASHER, BERLIN.

1869.

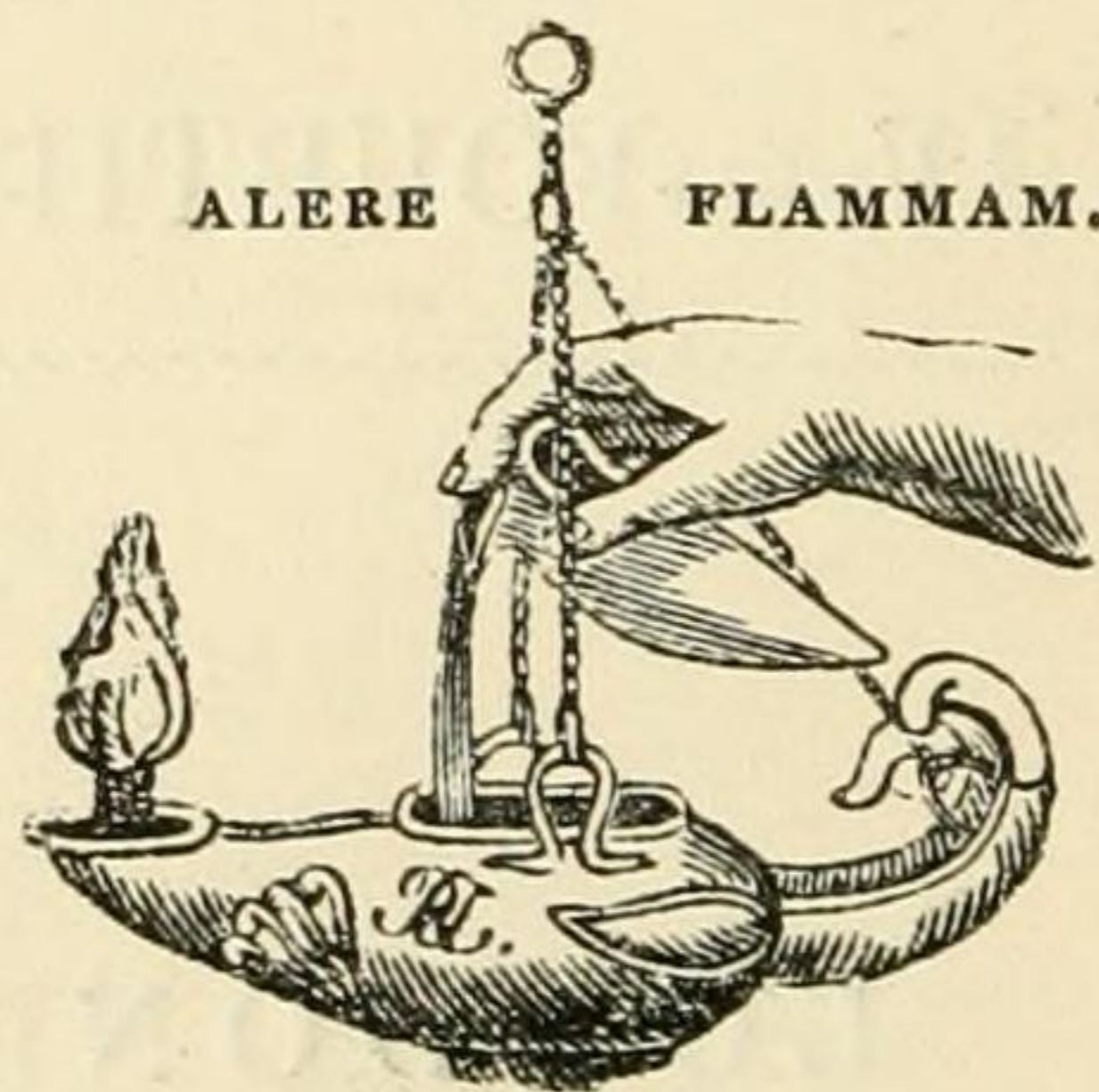
“Omnes res creatæ sunt divinæ sapientiæ et potentiæ testes, divitiæ felicitatis humanæ:—ex harum usu *bonitas* Creatoris; ex pulchritudine *sapientia* Domini; ex œconomiâ in conservatione, proportione, renovatione, *potentia* majestatis elucet. Earum itaque indagatio ab hominibus sibi relictis semper æstimata; à verè eruditis et sapientibus semper exulta; malè doctis et barbaris semper inimica fuit.”—LINNÆUS.

“Quel que soit le principe de la vie animale, il ne faut qu’ouvrir les yeux pour voir qu’elle est le chef-d’œuvre de la Toute-puissance, et le but auquel se rapportent toutes ses opérations.”—BRUCKNER, *Théorie du Système Animal*, Leyden, 1767.

. The sylvan powers
 Obey our summons; from their deepest dells
 The Dryads come, and throw their garlands wild
 And odorous branches at our feet; the Nymphs
 That press with nimble step the mountain-thyme
 And purple heath-flower come not empty-handed,
 But scatter round ten thousand forms minute
 Of velvet moss or lichen, torn from rock
 Or rifted oak or cavern deep: the Naiads too
 Quit their loved native stream, from whose smooth face
 They crop the lily, and each sedge and rush
 That drinks the rippling tide: the frozen poles,
 Where peril waits the bold adventurer’s tread,
 The burning sands of Borneo and Cayenne,
 All, all to us unlock their secret stores
 And pay their cheerful tribute.

J. TAYLOR, *Norwich*, 1818.

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THE ANNALS

AND

MAGAZINE OF NATURAL HISTORY.

[FOURTH SERIES.]

No. 24. DECEMBER 1869.

XLIV.—*List of Coleoptera collected in Vancouver's Island by Henry and Joseph Matthews, with Descriptions of some new Species.* By Dr. J. L. LECONTE, Philadelphia.

By the kindness of my friend the Rev. A. Matthews, I have been permitted to examine a very interesting series of Coleoptera collected by his brothers Henry and Joseph Matthews in Vancouver's Island and British Columbia. Though pertaining to the same zoological district as Oregon and Washington Territories, several species not yet obtained from other localities occur in Messrs. Matthews's collection; and, what is of equal interest, several species known from the eastern and central parts of the continent have been found to extend their range to the Pacific slope.

Among the former, *Zacotus Matthewsii* (a magnificent copper-coloured Broscide, resembling in form *Promecoderus*, but allied by generic characters to *Miscodera*) stands preeminent as one of the most remarkable additions recently made to the North-American insect-fauna. Of those which have been found to extend their western range beyond the limits within which they were previously known may be mentioned:—*Nebria mæsta*, *Psydrus piceus*, *Platynus cupripennis*, *P. bembidioides*, *Anisodactylus nigrita*, *Dytiscus Harrisii*, *Leistotrophus cingulatus*, *Elater apicatus*, *Corymbites inflatus*, *Clerus nubilus*, *Tricrania Stansburii*, *Tragosoma Harrisii*, *Acmaeops strigilata*, *Callidium janthinum*, *Monohammus scutellatus*, *Saperda calcarata*, *Platyrhinus? fasciatus*.

The occurrence in a far northern locality of such forms as *Omus Audouinii* and *Dejeanii*, *Promecognathus lævissimus*, *Amara californica*, *Chlænius harpalinus*, *Dichirus piceus*, *Necrophorus nigrita*, *Necrophilus hydrophiloides*, *Odontæus obesus*, *Polycaon Stoutii*, *Cælus ciliatus*, *Cælocnemis dilati-*

collis, *Ergates spiculatus*, and *Mesosa Guexi*, all of which are found on the Pacific slope in more southern regions of Oregon and California, is an instructive fact, and not without significance as indicating a greater uniformity of the climate of the maritime parts of the continent than has been heretofore suspected.

In conclusion, I would desire to express my most sincere thanks not only for the privilege of investigating the series of Messrs. Matthews, but also for the great liberality with which I have been permitted to select from it such specimens as were desirable additions to my cabinet.

- | | |
|--|--|
| Omus Audouinii, <i>Reiche</i> . | Anisodactylus (<i>Dichirus</i>) piceus |
| — Dejeanii, <i>Reiche</i> . | (<i>Men.</i>). |
| Cicindela purpurea, <i>Oliv.</i> | — nigrita, <i>Dej.</i> |
| — vulgaris, <i>Say</i> (green race). | — semipunctatus, <i>Lec.</i> |
| Elaphrus californicus, <i>Mann.</i> | — confusus, <i>Lec.</i> |
| Blethisa oregonensis, <i>Lec.</i> | Harpalus cautus, <i>Dej.</i> |
| — acutangula, <i>Chaud.</i> | Patrobus fulcratus, <i>Lec.</i> , n. sp. |
| Loricera 10-punctata, <i>Esch.</i> | Bembidium simplex (?), <i>Lec.</i> |
| Trachypachys inermis, <i>Motsch.</i> | —, n. sp. |
| Nebria Mannerheimii, <i>Esch.</i> | Anisomera recta, <i>Lec.</i> , n. sp. |
| — moesta, <i>Lec.</i> | Colymbetes densus, <i>Lec.</i> |
| Leistus ferruginosus, <i>Mann.</i> | Dytiscus parvulus, <i>Mann.</i> |
| Calosoma tepidum, <i>Lec.</i> | — Harrisii, <i>Kirby.</i> |
| Carabus tædatus, <i>Fab.</i> | Necrophorus maritimus, <i>Mann.</i> , var. |
| Cychrus tuberculatus, <i>Harris.</i> | confossor, <i>Lec.</i> |
| — velutinus, <i>Men.</i> | — nigrita, <i>Mann.</i> |
| — angusticollis, <i>Fischer.</i> | — pollinator, <i>Lec.</i> (nec <i>Mann.</i>). |
| — angulatus, <i>Harris.</i> | Silpha lapponica, <i>Herbst.</i> |
| — marginatus, <i>Dej.</i> | Necrophilus hydrophiloides, <i>Mann.</i> |
| Promecognathus lævissimus, <i>Chaud.</i> | Creophilus villosus (<i>Grav.</i>). |
| Platynus ovipennis (<i>Mann.</i>). | Leistotrophus cingulatus (<i>Grav.</i>). |
| — metallescens, <i>Lec.</i> | Philonthus californicus, <i>Mann.</i> |
| — carbo, <i>Lec.</i> | —, sp. |
| — cupripennis (<i>Say</i>), var. | Lathrobium, sp. |
| — lutulentus, <i>Lec.</i> | Temnochila viridicyanea, <i>Mann.</i> |
| — strigicollis, <i>Lec.</i> | Peltis Pippingsköldii, <i>Mann.</i> |
| — bembidioides (<i>Kirby</i>). | Pediacus planus, <i>Lec.</i> |
| — fraterculus, <i>Lec.</i> , n. sp. | Cucujus puniceus, <i>Mann.</i> |
| Pterostichus herculaneus, <i>Mann.</i> | Orphilus subnitidus, <i>Lec.</i> |
| — algidus, <i>Lec.</i> | Platycerus cærulescens, <i>Lec.</i> |
| — amethystinus, <i>Mann.</i> | Ceruchus striatus, <i>Lec.</i> |
| — longicollis, <i>Lec.</i> | Sinodendron rugosum, <i>Mann.</i> |
| — 6-punctatus (<i>Mann.</i>). | Odontæus obesus, <i>Lec.</i> |
| Holciophorus ater (<i>Dej.</i>). | Dichelonycha fulgida, <i>Lec.</i> |
| Amara scitula, <i>Zimm.</i> | Serica anthracina, <i>Lec.</i> |
| — impuncticollis, <i>Say.</i> | Diplotaxis brevicollis, <i>Lec.</i> |
| — californica, <i>Dej.</i> | Polyphylla 10-lineata, <i>Lec.</i> |
| Badister anthracinus, <i>Lec.</i> | Chalcophora angulicollis, <i>Lec.</i> |
| Chlænius harpalinus, <i>Esch.</i> | Dicerca crassicollis, <i>Lec.</i> |
| Zacotus Matthewsii, <i>Lec.</i> , n. sp. | Ancylochira rusticorum, <i>Lec.</i> |
| Psydrus piceus, <i>Lec.</i> | — Langii, <i>Lec.</i> |

- Ancylochira lauta, *Lec.*
 — adjecta, *Lec.*
 Melanophila Drummondi (*Kirby*).
 Chrysobothris trinervia (*Kirby*).
 Fornax basalis, *Lec.*
 Epiphanis cornutus, *Esch.*
 Anelastes Latreillei, *Lec.*
 Adelocera rorulenta, *Lec.*
 — cavicollis, *Lec.*
 Cardiophorus longulus, *Lec.*
 Cryptohypnus funebris, *Cand.*
 Elater apicatus, *Say.*
 — cordifer, *Lec.*
 — phœnicopterus, *Lec.*
 — anthracinus, *Lec.*, n. sp.
 Megapenthes stigmosus, *Lec.*
 Dolopius macer, *Lec.*
 Limonius subauratus, *Lec.*
 — nitidicollis, *Lec.*, n. sp.
 Athous ferruginosus, *Esch.*
 — scissus, *Lec.*
 — vittiger, *Lec.*
 Sericosomus incongruus, *Lec.*
 Corymbites æripennis, *Lec.*
 — carbo, *Lec.*
 — Suckleyi, *Lec.*
 — cruciatus, *Linn.* (race festivus, *Lec.*).
 — triundulatus (*Randall*).
 — nubilus, *Lec.*
 — bombycinus (*Germ.*).
 — inflatus (*Say*) = glaucus, *Germ.*
 — fraternus, *Lec.*, n. sp.
 — gracilior, *Lec.*
 Asaphes morio, *Lec.*
 — oregonus, *Lec.*
 Eros hamatus, *Mann.*
 Photinus facula, *Lec.*
 Podabrus comes, *Lec.*
 Trichodes ornatus, *Say.*
 Clerus sphegeus, *Fab.*
 — eximius, *Mann.*
 — nubilus, *Lec.*
 Polycaon Stoutii, *Lec.*
 Cioide, sp.
 Phellopsis porcata, *Lec.*
 Cœlus ciliatus, *Esch.*
 Coniontis ovalis, *Lec.*
 Eleodes producta, *Mann.*
 Cœlocnemis dilaticollis, *Mann.*
 Iphthimus serratus (*Mann.*).
 Helops lætus, *Lec.*
 Dendroides ephemeroïdes (*Mann.*).
 Phryganophilus collaris, *Lec.*
 Meloë montanus, *Lec.*
 Tricrania Stansburii (*Hald.*).
 Ditylus gracilis, *Lec.*
 Asclera nigra, *Lec.*, n. sp.
 Priognathus monilicornis (*Rand.*).
 Dyslobus decoratus, *Lec.*, n. sp.
 — granicollis, *Lec.*, n. sp.
 Phyllobius?, sp.
 Alophus didymus, *Lec.*
 Hylobius? tæniatus, *Lec.*
 Plinthus carinatus, *Mann.*
 Pissodes costatus, *Mann.*
 Rhyncolus, sp.
 Platyrhinus? fasciatus (*Oliv.*).
 Ergates (*Trichocnemis*) spiculatus, *Lec.*
 Tragosoma Harrisii, *Lec.*
 Asemum atrum, *Hald.*
 — ? asperum, *Lec.*
 Criocephalus productus, *Lec.*
 Tetroplium velutinum, *Lec.*, n. sp.
 Ulochætes leoninus, *Lec.*
 Necydalis lævicollis, *Lec.*, n. sp.
 Rhagium lineatum, *Oliv.*
 — investigator, *Mann.*
 Toxotus flavolineatus, *Lec.*
 — spurcus, *Lec.*
 — vestitus, *Hald.*
 Acmæops strigilata (*Fabr.*).
 Leptura cribripennis, *Lec.*
 — sanguinea, *Lec.*
 — dehiscens, *Lec.*
 — valida, *Lec.*
 — chrysocoma, *Kirby.*
 — læta, *Lec.*
 — fasciventris, *Lec.*
 — quadrillum, *Lec.*
 — dolorosa, *Lec.*
 — obliterateda (*Hald.*).
 — Matthewsii, *Lec.*, n. sp.
 — fuscicollis, *Lec.*
 — scripta, *Lec.*, n. sp.
 Clytus undulatus, *Say.*
 — Sayi, *Lap.*
 Rosalia funebris, *Motsch.*
 Callidium janthinum, *Lec.* (race).
 — dimidiatum, *Kirby.*
 — vulneratum, *Lec.*
 — (*Semanotus*) ligneum, *Fabr.*
 Atimia dorsalis, *Lec.*, n. sp.
 Plectrura spinicauda, *Mann.*
 Mesosa Guexii, *Lec.*
 Monohammus scutellatus (race), *Say.*
 Saperda calcarata, *Say.*
 Adimonia externa (*Say*).

New or remarkable Species.

CYCHRUS.

Cychnus angulatus, Harris, Bost. Journ. Nat. Hist.

The recovery of this remarkable species, the type of which has disappeared, enables me to add some characters to those briefly indicated by Dr. Harris. The thorax is much more polished and convex than in any other species found on the Pacific slope of America, and is very narrowly margined and deeply channelled; the sides are distinctly angulated in front of the middle, oblique towards the tip, strongly sinuate towards the base, the angles of which are rectangular and prominent; the transverse impressions are deep, the basal ones well marked, not punctured. The elytra are elongate-oval, narrower than in *ventricosus*, but sculptured in nearly the same manner, with sixteen deeply impressed, closely punctured striæ, of which the two outermost are confused.

The head is obtusely elevated in the middle, and narrowly carinate at each side above the insertion of the antennæ, the carinæ extending along the superior margin of the eyes, and bending around their hind margin; the first joint of the antennæ is stouter than in *C. ventricosus*, but neither as thick nor as long as in *C. cristatus*. The feet of the specimen (a female) are proportioned as in *C. ventricosus*.

Cychnus tuberculatus, Harris, Bost. Journ. Nat. Hist.

The specimen submitted to me by Mr. Matthews is much larger (23 millims. long) and stouter than those in my collection, and is therefore evidently a female: this species is therefore to be placed among those in which the anterior tarsi are not dilated in the male nor furnished beneath with brushes of hair. It differs from all the other species, not only by the peculiar sculpture (scabrous upon the head and thorax, tuberculated upon the elytra), but by the antennæ being shorter, scarcely more than half the length of the body, with the first and third joints equal in length, and the second but little shorter; the labrum is scarcely longer than wide, and less deeply bilobed than usual. The palpi of the male are more broadly securiform than those of the female.

PLATYNUS.

Platynus ovipennis (Mann.).

This species, rare in California, has not been heretofore found in the more northern regions. It is easily distinguished

by the regularly oval, deeply striate elytra, without distinct humeral angles, though the base is slightly emarginate, and the basal fold meets the margin in a well-defined angle; the dorsal punctures are three—the first on the third, the other two on the second stria; the wings are not developed. The prothorax is quadrate-ovate, narrowed behind, scarcely wider than long, with the sides strongly but not widely margined, and subsinuate behind; the hind angles rectangular, not rounded in five specimens, feebly rounded in a sixth; the base is truncate, finely margined, somewhat oblique at the sides near the angles; the transverse impressions are well marked, and the basal impressions are deep and not punctured. The under surface of the joints of the front tarsi of the ♂ are clothed with long golden-yellow hair; the front tarsi are without grooves; the middle and hind tarsi have a distinct exterior, but no interior groove.

Platynus fraterculus, n. sp.

Æneo-niger, nitidus, alatus; prothorace rotundato-quadrato, postice paulo angustiore, latitudine vix brevior, lateribus et basi late rotundatis, margine laterali anguste reflexo, angulis posticis obtusis, subrotundatis, licet sat distinctis, basi utrinque late impressa et subtiliter rugosa; elytris elongato-ovalibus, thorace paulo latioribus, striis subtilibus haud punctatis, punctis 3 dorsalibus, 1^{uno} in 2^{da}, alteris in stria 3^{ia} sitis.

Long. 7 millim.

One female. This species appears more nearly allied to *P. Harrisii*, Lec., than to any other in my collection, but differs by its much smaller size and by the absence of the impression near the posterior end of the fifth stria. It resembles in the form of the prothorax *P. frater*, Lec.*, but is smaller, and has the second dorsal puncture on the second stria, while in that species it is on the third.

ZACOTUS, nov. gen. (Broscini).

Zacotus Matthewsii.

Supra purpureo-cupreus, nitidus, subtus niger; capite obscure cupreo, fronte profunde impresso, lateribus et inter oculos valde rugoso; prothorace convexo, ovato, latitudine paulo longiore, postice angustato et pedunculato, lateribus versus basin sinuatis, linea dorsali profunda, impressionibus transversis parum distinctis; disco

* I am informed by Baron Chaudoir that *P. frater*, Lec., is the same as *Agonum brevicolle*, Dej. iii. 159. The latter, however, is described as having four dorsal punctures, while in many specimens of *P. frater* which I have examined I perceive but three. I am therefore inclined to believe that Dejean's species is only an individual variation of *P. fossiger*.

toto transversim rugoso, basi punctato; elytris elongato-ovalibus, convexis, thorace haud latioribus, striis subtilibus subpunctatis, interstitiis vage impressis, parce subtiliter rugosis, basi virescentibus, stria scutellari distincta puncto magno notata.

Long. 18 millim., lat. 5.5 millim.

I have seen but one badly preserved female of this most interesting addition to the North-American fauna. It evidently belongs to a different genus from any mentioned by Mr. Putzeys in his Synopsis of Broscini (Stettin. Ent. Zeitung, 1868, p. 306); but the palpi are wanting, and only a few joints of the antennæ and tarsi remain. I am therefore unable to characterize the genus any further than to say that it resembles somewhat in form *Promecoderus*, and that its place in the tabular arrangement of Mr. Putzeys would be in (aa, gg), probably next to *Miscodera* and *Broscosoma*. The mentum-tooth is moderately large, slightly rounded, and is scarcely perceptibly impressed at tip; the temporal suture is not visible. The first dorsal stria commences on the peduncle of the elytra, as in *Miscodera*; the scutellar stria is connected at the base with the second stria, and is marked at its hinder end with a large puncture. The first four joints of the antennæ are glabrous.

It gives me much pleasure to dedicate this very beautiful species to the enterprising explorers to whose energy and perseverance during the many privations to which travellers in North-western America are exposed we owe the valuable collection which forms the subject of the present memoir.

PATROBUS.

Patrobus fulcratus.

Niger, nitidus, depressus; capite profunde biimpresso; prothorace quadrato-cordato, latitudine paulo brevior, postice modice angustato, lateribus rotundatis, anguste reflexis, versus basin late sinuatis, angulis posticis rectis, basi medio late emarginato, utrinque vix obliquo, foveis basalibus latis profundis, dense punctulatis, carina angulari vix distincta, linea dorsali profunda; elytris elongatis, parallelis, striis haud profundis vix punctulatis, 3^{ia} punctis 3 dorsalibus notata; trochanteribus posticis elongatis, maris acutis.

Long. 11.5 millim.

One pair. In the male the hind trochanters are about half as long as the thighs, and nearly acute at tip; in the female scarcely shorter, and rounded at the tip.

This species belongs to a group thus far found only in Western North America, distinguished by the great length of the hind trochanters. In the depressed form of the body and

parallel elongate elytra, they resemble in appearance *P. angicollis*, Randall, and *P. aterrimus*, Esch., but differ by the eyes being less prominent, the head less narrowed behind, and the hind angles of the prothorax less prominent; the third and fourth joints of the front tarsi of the ♂ are scarcely narrower than the first and second, but, as in other species, are not furnished beneath with papillæ; in both sexes the front tarsi are broader and furnished beneath with more abundant long golden hairs than in the typical *Patrobis*, and the fourth joint is very distinctly emarginate.

Three species of this group are known to me, agreeing closely in form and sculpture, but differing chiefly in size, form of prothorax, and length of trochanters. They may be distinguished as follows:—

Patrobis trochantericus.—Prothorax scarcely wider than long, very slightly narrowed at base, sides feebly rounded in front of the middle, and slightly sinuate behind; hind angles rectangular, slightly dentiform, base broadly emarginate at the middle, oblique and subsinuate at each side near the angles; basal impressions broad, punctulate, not very deep; carina of angle feeble, limited by a distinct but short impression: hind trochanters of male nearly as long as the femur, much attenuated beyond the middle, and extremely narrow and sharp at the tip; of the female nearly half as long as the femur, rounded at tip. Length 13–14 millims. Fort Crook, Northern California (Dr. G. H. Horn).

Patrobis californicus, Motsch. Bull. Mosc. 1859, ii. 123.—Of the same size and general form as the preceding; but the basal impressions of the thorax are shallower, more distinctly punctured, and the carina and impression near the angle are wanting; the base is much more oblique at each side, and the angle is more dentiform. The male is unknown to me. The hind trochanters of the female are as in the preceding, narrowed towards the tip, which is rounded, and are about half the length of the femur. California (Col. Motschulsky).

Patrobis fulcratus, Lec., above described, differing by the deeper basal impressions of the prothorax, by the base being scarcely oblique on each side, by the angles, which are less prominent though more rectangular, and by the less elongated and less attenuated hind trochanters of the male.

ANISOMERA.

Anisomera recta.

Elongato-ovalis, æneo-nigra, subtiliter dense reticulata; prothorace longitudine plus triplo latiore, postice subangustato, lateribus an-

tice late rotundatis, versus basin paulo obliquis vix subsinuatis, angulis posticis rectis, basi truncato; elytris thorace vix latioribus, utrinque seriebus tribus punctorum solitis, externa minus distincta.

Long. 10 millim.

One male. The first three joints of the front tarsi are clothed beneath with an elongate oval brush of dense hairs.

This species differs remarkably from *A. cordata* by the prothorax being scarcely perceptibly narrowed behind; it, in fact, resembles in miniature a *Colymbetes* of the group *Meladema*; but the ungues of the hind feet are equal and moveable, and much longer and more divergent than in *Agabus*—precisely, in fact, as in *Anisomera cordata*.

PLATYCERUS.

Platycerus cœrulescens, Lec. Proc. Acad. Nat. Sci. Philad. 1861, p. 345.

A remarkably well-developed ♂ (14 millims. long excluding the mandibles) is contained in Mr. Matthews's collection: it is much larger than the type, which was found at Fort Tejon, California, but agrees with it in form and sculpture; it is easily distinguished from *P. quercus* by the beautiful purple-blue colour of the elytra, by the tooth on the upper edge of the mandibles near the tip being prominent, and by the apex not being dilated and subserrate, as in that species, but only slightly emarginate.

CERUCHUS.

Ceruchus striatus, Lec. Proc. Ac. Nat. Sc. 1859, p. 55.

The only male of this species I have seen is one of the valuable acquisitions of Mr. Matthews: it is larger (16.5 millims. long) than *C. piceus*, as might have been anticipated from the larger size of the female; the elytral striæ are very strongly marked, as in the female, and the intervals convex and coarsely punctured; the frontal excavation is much smaller and more anterior than in *C. piceus* ♂; the mandibles are stouter, more curved, and the tooth at the middle of the upper edge is very much broader, its base extending nearly to the base of the mandible. In both sexes the middle thighs are furnished beneath with a large patch of long yellow hair; and in the male the middle tibiæ are also clothed with long yellow hair on the inner face from the middle to the tip—characters not observed in *C. piceus*, which has in those places only a few scattered hairs.

A fine male specimen, collected in El Dorado, co. Cala.,

agrees with the one above described in having the under surface of the middle femora and the inner surface of the middle tibiæ clothed with long hair, but differs in the frontal excavation being triangular, much larger and broader, the prothorax much more strongly punctured, and especially by the elytral striæ being very fine, the outer ones obsolete, and the intervals perfectly flat and coarsely punctured. The tooth of the mandibles rises nearly perpendicularly about one-third from the tip; the angle is nearly rectangular, and the upper edge nearly horizontal, extending nearly to the base, giving the appearance of a curved inner outline and great breadth to the hind part of the mandible.

These characters seem to indicate a distinct species, to which I would give the name of *C. punctatus*.

ODONTÆUS.

Odontæus obesus, Lec.

One well-developed male (10 millims. long). On account of the resemblance of sculpture, I refer it to this species, of which the female only was previously known to me by a single Californian specimen. The clypeus is more obtusely rounded in front than in the two species of Eastern America, *flicornis* and *cornigerus*, and somewhat less coarsely punctured; the horn is long and slender, as in them; the prothorax is similar in form, except that it is perhaps a little shorter and more narrowed in front; the medial excavation is broader than in *cornigerus* and almost as in *flicornis*; the anterior declivity is sparsely punctured, much less so than in the one last named; the lateral elevations are longitudinal and laminiform, as in that species, but the excavations at their base are smaller, more deeply indented and subtriangular, and the crest of the elevation, instead of being broadly rounded in the arc of a circle, is very distinctly and nearly rectangularly angulated and perpendicularly declivous in front. I may mention, in order that the three species may be readily distinguished by the notes here given, that this lateral elevation in *O. flicornis* is merely a subacute tubercle or cusp, and that the dorsal groove is deeper, narrower, and more strongly punctured.

The females of these species are scarcely to be distinguished, except by minute differences in form and sculpture, which are not very obvious without comparison.

CARDIOPHORUS.

Cardiophorus longulus, Lec.

Well-preserved specimens of this species are clothed with a

fine cinereous pubescence, as in *C. gagates*, from which it differs chiefly by its less convex prothorax and elytra, and less rounded sides of prothorax.

ELATER.

Elater anthracinus.

Niger, nitidus; pube brevi suberecta nigra parce vestitus, prothorace latitudine longiore, antice angustiore, angulis posticis elongatis, fortiter carinatis; disco convexo, fortiter sat dense punctato, punctis haud umbilicatis; elytris striis punctatis, interstitiis vix convexis, punctatis, et transversim subrugosis; tarsis piceis; antennarum articulis 2^{do} et 3^{ti}o conjunctis sequente paulo longioribus, hoc 2^{do} vix latiore.

Long. 10 millim.

One pair. In the male the prothorax is narrowed from the base to the apex, with the sides broadly and obliquely rounded; in the female the sides are nearly parallel behind the middle, then rounded to the tip, and the elytra are more obtuse behind than in the male. This species is allied to *E. carbonicolor*, but is much larger, the prothorax is more strongly punctured, and the third joint of the antennæ is narrower. It also approaches very nearly to an Alaskan specimen of *E. nigrinus*, which, however, has the hind angles of the thorax *acutely*, not *feebly* carinate, as described by Candèze, *Elat.* ii. 475; it differs by its larger size and greater length of the third joint of the antennæ, which is distinctly longer than the second, and by the somewhat more elongate form, longer hind angles of the thorax, and black antennæ and feet.

LIMONIUS.

Limonius nitidicollis.

Nigro-æneus, nitidus, parce breviter nigro pubescens; fronte apice late rotundato, margine anguste reflexo, inter antennas biimpresso; capite thoraceque parce distincte punctatis, hoc latitudine paulo longiore, antice vix angustiore, convexo, angulis posticis acutis, reflexis, carina brevi margini approximata, minus conspicua, basi medio brevissime canaliculato; elytris striis subtilibus impunctatis, interstitiis planis, biserialim punctatis; antennarum articulis 2^{do} et 3^{ti}o æqualibus, conjunctis 4^{to} paulo longioribus.

Long. 6 millim.

One pair. Similar in size and form to *L. quercinus*, but very different by the characters given above, and rather allied to *L. aurifer*, Lec., though quite distinct from that species.

CORYMBITES.

Corymbites triundulatus, Lec. Trans. Am. Phil. Soc. x. 457 ;
Candèze, Elat. iv. 145.

Elater triundulatus, Randall, Bost. Journ. Nat. Hist. ii. 12.

A female specimen, much larger (11 millims. long) than those from Lake Superior and Maine, but which does not differ from them in form and sculpture. The middle angulated dark band is equidistant between the other two, instead of being nearer to the hinder one as in our eastern specimens; I do not think that this is a sufficient character to establish it as a distinct species, although the prothorax seems to be a little broader.

Corymbites fraternus.

Obscure æneus, nitidus, pube cinerea longiuscula vestitus; prothorace latitudine longiore, fortiter sat dense punctato, angulis posticis elongatis, obliquis at vix divaricatis, breviter carinatis; elytris striis angustis vix punctatis, interstitiis planis, punctatis; antennis pedibusque piceis vel piceo-ferrugineis, illis articulo 3^{to} secundo paulo longiore at vix latiore, conjunctis 4^{to} haud longioribus. Long. 15-17 millim.

One pair. In the male the prothorax is gradually narrowed and feebly rounded on the sides from the base to the apex; in the female the body is more robust, the sides of the prothorax are nearly parallel behind, and more strongly rounded before the middle.

This species is very closely allied to the Alaskan *C. angusticollis*, but differs chiefly by the hind angles of the prothorax, which are not so narrow and are scarcely divaricated.

ASCLERA.

Asclera nigra.

Cyaneo-nigra, opaca, brevissime pubescens; prothorace obovato, postice angustato, latitudine vix longiore, dense punctulato, apice subsinuato, basi late rotundato, apice subconstricto, lateribus medio rotundatis, postice late sinuatis, disco subtiliter punctulato, foveis tribus latis impresso, ante medium subcarinato; elytris confertissime punctatis, lineis utrinque tribus angustis elevatis. Long. 9 millim.

One specimen. Resembles somewhat the European *A. cærulea*, but differs by the much deeper excavations of the prothorax: it agrees in form and sculpture with the Californian *A. excavata*, Lec.; but the thorax in that species is rufous, more elongate, and much less punctured than in the present one.

DYSLOBUS, Lec.

I have associated under this name several species found in Western North America which belong to the tribe Eremnini of the Oxyophthalm Adelognath Curculionidæ, according to the arrangement of Prof. Lacordaire. They differ from the other genera known to me by the following assemblage of characters:—

Rostrum slightly dilated at tip, rather thick, flattened above, feebly carinate, with the apical lobes divergent; postocular lobes of thorax more or less ciliate, and very feebly developed, though still quite apparent. The general appearance is that of *Otiorhynchus*, from which this genus differs by the form of the eyes, narrowed and angulated beneath, by the less elongated scape of the antennæ, and the postocular thoracic lobes.

To this genus belong:—

Otiorhynchus segnis, Lec.

Dyslobus granicollis.

Niger, squamulis griseis et fuscis dense vestitus et breviter brunneo pubescens; thorace latitudine paulo longiore, antice vix angustiore, lateribus rotundatis, apice et basi subtruncatis vix rotundatis, angulis omnibus obtusis, dorso transversim convexo, dense subtilius rugose punctato et granulato; elytris convexis, ovalibus, thorace duplo latioribus, apice valde declivibus, striis haud impressis e punctis magnis compositis, interstitiis 3^a, 5^a, et 7^a paulo elevatis et maculis obscuris variegatis.

Long. 10 millim.

Vancouver's Island and Puget Sound (Mr. G. Davidson).

The beak is a little longer than the head, not narrower than the front, nearly parallel on the sides, very feebly dilated at tip; upper surface flattened, carinate from the base to between the antennæ, where the carina ends in an elongate fovea. The antennal grooves are short and oblique; and under them on each side is a strongly impressed oblique line, nearly uniting in the gular transverse impression. The front is broadly transversely impressed at the base of the rostrum. The scales of the occiput are tinged with metallic colours. The prothorax is scarcely one-half wider than the head, a little longer than its width, broadly rounded on the sides, very feebly rounded and nearly truncate at base and tip; the surface is densely rugosely punctured, and between the scales presents small shining granules. The elytra are nearly twice as wide as the thorax, and about twice as long as their width, oval, convex, very declivous behind; the striæ are composed of large shallow punctures, not closely placed; and the third, fifth, and seventh intervals are slightly elevated and darker in colour.

The scape of the antennæ is slender and extends to the back part of the eyes; the funiculus is slender, and longer than the scape; the first and second joints are equal and elongate, the third is two-thirds as long as the second, the fourth, fifth, and sixth equal, each a little shorter than the third, the seventh a little longer; club elongate-oval, acute at tip. The first ventral suture is distinct and straight, the second and third are deeply exarate; the last ventral segment is convex towards the tip, and the extreme tip is carinated and acute.

In *D. segnis* the third joint of the funiculus of the antennæ is scarcely shorter than the second, the carina of the rostrum is very feeble, almost obsolete, and the lateral oblique lines below the antennal grooves are entirely wanting.

Dyslobus decoratus.

Niger, squamis obscure argenteis et cupreo-fuscis variegatus, parce breviter pubescens, rostro subcarinato; thorace latitudine haud longiore, antice subangustato, lateribus rotundatis, apice basique fere truncatis, angulis omnibus obtusis, disco transversim convexo, profunde rugose punctato et granulato; elytris thorace latioribus, elongato-ovalibus, apice rotundatim valde declivibus, striis e punctis magnis magis approximatis compositis.

Long. 7 millim.

Vancouver's Island.

Smaller and somewhat more robust than *D. granicollis*, but apparently congeneric with it; the carina of the rostrum is more feeble, and does not end in an anterior elongate fovea; the lateral oblique lines below the antennal grooves are distinct; the funiculus of the antennæ is rather stouter, and the third joint is not longer than the following, which are nearly as broad as they are long; the elytral striæ are feebly impressed and composed of more approximate large punctures.

Two other species of this genus are before me—one from Oregon, one from California, which await description when a general synopsis of the Curculionidæ of the United States is prepared.

Tyloderes? gemmatus, Lec.

is related to *Dyslobus*, but differs by the beak being more slender, much more dilated at tip, and by the antennal grooves being longer and deeper. The first and second joints of the funiculus are elongate, the third to the seventh are nearly equal in length, except that the fifth is a little shorter. The postocular lobes of the prothorax are equally broad, but more prominent and less fimbriate. The first ventral suture is deep, and feebly convex forwards at the middle; the other three are straight

and deeply exarate; the last ventral segment is not convex, nor subcarinate at tip. The thorax and elytra are studded with scattered, large, polished granules or small tubercles, and the striæ are not apparent. These differences are apparently generic; but I am unwilling at present to do more than propose the name *Phymatinus*, and to indicate it as probably belonging to the group Phytoscaphi, Lac. Gen. vi. 229.

In all the species here mentioned, the apical cavities (corbeilles) of the hind tibiæ are broad, oblique, acutely margined and open at their upper limit; and the antennal grooves, though oblique, are not directed below the inferior angle of the eyes. They also all belong to a great division of Curculionidæ (embracing the greater part of Lacordaire's Adélognathes, with some of the short-beaked Phanérogathes, such as *Eudiagogus*, among our North-American forms), which exhibits a remarkable character, not known in any other group of Coleoptera: the mandibles of the freshly developed imago have acute pyramidal appendages, which are deciduous, and leave a well-defined scar on the most anterior part of the convex outer surface of the organ. This peculiar structure has been mentioned by Lacordaire (Gen. vi. p. 5, note), but without attributing to it the importance which such an extraordinary character, common to a large number of genera, and without parallel in any other part of the series, seems to deserve. I have placed, in an unfinished continuation of my 'Classification of the Coleoptera of North America,' all such forms together as a subfamily, under the name Brachyderidæ. *Sitones* and allied forms do not belong to this type, as the mandibles are not provided with the deciduous appendage, nor does the mentum cover the base of the maxillæ.

TETROPIUM, Kirby.

Tetropium velutinum.

Nigro-piceum, opacum, subtiliter sericeo pubescens; prothorace latitudine haud brevior, lateribus fortiter rotundatis, disco confertissime punctulato, sulco dorsali lato profundo, linea lævi polita versus basin notato; elytris basi nonnunquam piceo-ferrugineis. Long. 12.5–20 millim.

Four female specimens from Vancouver's Island, Oregon, and California differ from *T. cinnamopterum*, Kirby, found in Eastern America, by the prothorax being not wider than long, and more finely and densely punctulate. This difference appears to me to be specific, though I have not studied the group with a sufficient number of specimens to give my opinion much value.

NECYDALIS.

Necydalis lævicollis.

Capite thoraceque nigris, hoc latitudine paulo longiore, convexo, nitido, fere impunctato, dorso vix canaliculato, antice posticeque transversim impresso, lateribus medio late rotundatis utrinque vix subsinuatis; elytris obscure ferrugineis, rugose punctulatis, apice piceis et transversim profunde impressis; abdomine supra piceo, infra ferrugineo, pectore nigro; pedibus obscure ferrugineis; antennis nigro-piceis.

Long. 16 millim.

One specimen. Differs from *N. mellitus* of Eastern America by the more robust and nearly smooth prothorax, which is scarcely sinuated on the sides, and by the elytra being much more deeply impressed near the tip.

LEPTURA.

Leptura fuscicollis, Lec. Pac. R.R. Expl. & Surveys,
Ins. p. 65.

Elongata, æneo-nigra; capite thoraceque confertissime subtiliter punctatis, hoc transversim profunde bis constricto, lateribus medio angulatis, dorso canaliculato et linea lævi notato; elytris basi thorace latioribus, ab humeris sensim angustatis, apice rotundatis, vix subtruncatis, confertim fortiter punctatis, pube brevissima parce vestitis, nigris, margine laterali, basali et apicali vittaque angusta dorsali testacea ornatis; pedibus fuscis, femoribus rufis, anticis supra, posterioribus apice fuscis.

Long. 12 millim.

Variat testacea, subænea, capite thoraceque fusco-æneis, elytris vitta lata submarginali paulo obscuriore. (Lec. Pac. R.R. Expl. and Surveys, Ins. p. 65.)

A fully matured specimen from Vancouver's Island evidently belongs to the same species as the pale-coloured specimen from California previously described by me. It is allied to the Alaskan *L. Frankenhauseri* and *macilenta*, and, apart from differences in the colour, which I regard as of no importance, only differs from them by the larger size, and the convex part of the disk of the prothorax not being foveate on each side of the dorsal channel.

The two larger specimens are both females, and differ from the male types of the Alaskan species by the more slender and less elongated antennæ, and by the more distinctly emarginated eyes. I am inclined, in view of the great differences in colour observed in certain species of *Acmaeops*, to regard these three forms as merely varieties of one species. They belong to a

group of the genus which, from the slender outline and the peculiar conformation of the prothorax, bears a strong resemblance in miniature to *Toxotus*.

I may further observe that the elytra of the specimen above described may be equally well said to be pale, with a broad black sutural stripe, and a broad black dorsal vitta extending from the humeri nearly to the tip.

Leptura scripta.

Elongata, fusca, parce pubescens; capite thoraceque confertim subtilius punctatis, hoc apice angustiore, tubulatim profunde constricto; basi transversim impresso, lateribus medio rotundatis, subangulatis, antice posticeque concavis, angulis posticis haud prolongatis; elytris fortius punctatis, thorace latioribus, parallelis, apice rotundatis subtruncatis, pallide testaceis, lituris nigris ornatis (viz. striga angusta discoidali a basi fere ad medium extensa, macula laterali duplici ad medium, alterisque duabus approximatis ad dorantem, exteriori submarginali); antennis pedibusque testaceis, femoribus posticis extrorsum late infuscatis.

Long. 10 millim.

One female. Belongs to the same group as *L. sphaericollis*, and related in form and sculpture to *L. aurata*, but quite distinct by the peculiar coloration. The black markings of the elytra above mentioned are a narrow line extending from the base to about the middle, slightly oblique and gradually narrowed behind, a lateral or submarginal spot at the middle, composed of two confluent spots, and an imperfect band behind the middle, half way between the spot just described and the tip; this band is composed of an elongate submarginal spot and a smaller discoidal one; there is, besides, a very faint fuscous cloud on the side margin near the base: the scutellum and the suture for a short distance are also black.

Leptura Matthewsii.

Nigra, pubescens; elytris a basi paulo angustatis, confertim subtilius punctatis, flavo-testaceis, apice late et macula magna pone medium ad marginem extensa nigro-piceis, apice singulatim rotundatis rufescentibus; prothorace latitudine brevior, apice valde angustato et fortiter tubulatim constricto, lateribus obtuse angulatis, pone medium fere parallelis, angulis posticis brevibus acutis, basi late bisinuato, disco confertissime fortiter punctato, ante basin profunde transversim impresso.

Long. 20 millim., lat. 7 millim.

One female. Somewhat related to *L. cordifera*, but much larger, therefore resembling *L. obliterated* and *vitiosa*, which,

however, belong to a different group, having the elytra bidentate at tip. This species differs conspicuously from *L. cordifera* and its allies by the tubular constriction of the apex of the thorax being very well marked and longer than usual, and by the base being less prolonged at the middle and more broadly bisinuate; the posterior impression extends entirely across the base, and is very strongly marked and nearly straight.

In the name of this fine and conspicuous species I desire to commemorate the labours of Messrs. Henry and Joseph Matthews, who, inspired by the same love of science to which we owe many valuable memoirs in entomological literature by their brother, the Rev. A. Matthews, have with great zeal explored the wildernesses of British Columbia and Vancouver's Island, and, in fact, have obtained the best material yet procured for a study of the distribution of species in those regions, which remain, in a scientific sense, the most unexplored portions of North America.

ATIMIA, Hald.

Atimia dorsalis.

Nigro-picea, pube brevi depressa fulvo-sordida dense vestita; thorace latitudine vix brevior, quadrato, ad apicem subito angustato, lateribus haud rotundatis, modice punctato, vitta dorsali lata subnuda; elytris antice parce punctulatis, vitta denudata subsuturali pone medium extrorsum bidentata, et sensim angustata notatis.

Long. 10 millim.

Vancouver's Island. A specimen was also collected in Southern California by Dr. G. H. Horn.

This species is very closely related to *A. confusa* (*Clytus confusus*, Say, *A. tristis*, Hald.), but differs by the prothorax being less transverse, almost quadrate, and scarcely rounded at the sides, except near the apex, where it is suddenly narrowed: the arrangement of the denuded spots is somewhat similar; but the sides of the thoracic vitta are straight and the elytral spots are confluent, forming a vitta extending nearly to the tip, with two external dilatations—one at the middle, the other at the extremity; the tip of the elytra is more squarely truncate, and the general form a little less robust than in *A. confusa*.