



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

Fauna boreali-americana, or, The zoology of the northern parts of British America : containing descriptions of the objects of natural history collected on the late northern land expeditions, under command of Captain Sir John Franklin, R.N. / by John Richardson, surgeon and naturalist to the expeditions ; assisted by William Swainson and the Reverend William Kirby.

London :J. Murray [etc.],1829-1837.

<http://www.biodiversitylibrary.org/bibliography/39293>

v. 3-4: <http://www.biodiversitylibrary.org/item/87187>

Page(s): Page 178, Page 179, Page 180, Page 181, Page 182, Page 183, Page 184, Page 185, Page 186, Page 187, Page 188, Page 189

Contributed by: University of Pittsburgh Library System (archive.org)

Sponsored by: University of Pittsburgh Library System

Generated 9 June 2013 4:18 AM

<http://www.biodiversitylibrary.org/pdf4/017801800087187>

This page intentionally left blank.

Family RHAGIADÆ. *Rhagiadans*.

XCI. Genus HARGIUM. Leach.

(237) 1. HARGIUM LINEATUM. *Stripe-necked Hargium*.Stenochorus lineatus. Oliv. *Ent.* iv, 69, 13, 6, t. iii, f. 22.Rhagium lineatum. Schön. *Syn.* iii, 414, 5.Length of the body $5\frac{1}{4}$ lines.

Taken more than once in Lat. 54° . and also by Mr. Drake in the province of Massachusetts.

DESCRIPTION.

Body black, rather glossy, hoary from longish cinereous hairs. Head constricted behind into a neck, punctured with large scattered punctures; antennæ shorter than the prothorax, robust, last joint ovate, pedicel testaceous: prothorax constricted anteriorly and posteriorly, armed on each side by a stout rather sharp spine, punctured like the head, and hairy, but there are three longitudinal stripes without hairs, and the intermediate one without punctures, the lateral ones pass over the spines: elytra mottled with whitish or cinereous hairs, with three longitudinal ridges, the two external ones confluent near the apex, and a little higher up including between them a short abbreviated ridge; the interstices are punctured like the head and prothorax; at the base and lateral margin the elytra are reddish, and on the ridge next the suture there are two yellowish spots: coxæ, trochanters, and base of the thighs reddish: abdomen carinated underneath.

Family LEPTURIDÆ. *Lepturidans*.

XCII. Genus PACHYTA. Meg.

(238) 1. PACHYTA LITURATA. *Blotched Pachyta*.*P. (liturata) atra, villosa-incana; elytris nudis, luridis, lituris tribus nigris, anticis duabus subparallelis.*

Blotched Pachyta, very black, hairy with hoary hairs; elytra naked, lurid, with three black blotches, the two anterior ones nearly parallel.

Length of the body 7—9 lines.

Several specimens taken in Lat. 54° . and 65° .

DESCRIPTION.

This is the American representative of *P. quadrimaculata*, from which it differs principally in being not so hairy, with hoary instead of yellow-tinted hairs: the punctures of the prothorax and elytra are more minute; the antennæ are rather shorter, and the elytra, instead of two subquadrangular black spots, have three less black linear ones, the two anterior ones being partly parallel, and in some specimens confluent.

XCIII. Genus LEPTURA. Linn.

This genus may be thus subdivided with respect to the species about to be described.

- * Eyes emarginate, or kidney-shaped.
- † Elytra triangular.
 - a ——— truncated } at the apex.
 - b ——— premorse, or with a sinus taken out }
 - 1 ——— prothorax anteriorly constricted without posterior angles.
 - 2 ——— not constricted, posterior angles acute.
 - c ——— rounded..... at the apex.
- †† Elytra linear.
 - a ——— truncated } at the apex.
 - b ——— rounded }
- ** Eyes entire.

* † a.

(239) 1. * LEPTURA CHRYSOCOMA. *Goldy-locks Leptura.*

L. (chrysocoma) holosericea, lanugine aurea; elytris testaceis, apice extus obscurioribus; antennis pedibusque nigris.

Goldy-locks Leptura, velvety with golden pile: elytra testaceous, at the apex externally dusky; antennæ and legs black.

PLATE V, FIG. 1.

Length of the body $5\frac{1}{2}$ — $6\frac{1}{4}$ lines.

Several specimens taken; the largest, in the Journey from New York; the smaller, near Cumberland-house. Taken likewise by Dr. Mac Culloch and Capt. Hall, in Nova Scotia.

DESCRIPTION.

This beautiful insect, is related to *L. virens*, but perfectly distinct. The body appears to be black, but that colour is, in most parts, nearly concealed by a thick and mostly long coat of brilliant golden hairs with a very slight tint of green, where the coat is thin the body appears minutely punctured. Head subelongated, the neck exerted, subtriangular; nose with only a few scattered whitish hairs; antennæ black, third, fourth, and fifth joints rather slenderer and longer than the succeeding ones: prothorax between globose and bell-shaped, constricted anteriorly, channelled, grossly punctured: substance of the elytra pale testaceous, towards the apex externally they are dusky; the golden down on them is shorter and decumbent; apex diverging and obliquely truncated: underside of the abdomen particularly brilliant from decumbent hairs: legs less hairy than the rest of the body.

(240) 2. * LEPTURA SUBPUBESCENS. *Subpubescent Leptura.*

L. (subpubescens) nigra, flavo-subpubescens: prothorace punctis confluentibus scabro; elytris pallide testaceis, apice divergentibus, fastigiatis, nigris.

Subpubescent Leptura, black, red with thin yellow down: prothorax rough with confluent punctures; elytra pale testaceous, diverging, fastigiated and black at the apex.

Length of the body not noticed.

Taken in Canada by Dr. Bigsby.

DESCRIPTION.

Body black, thinly coated with yellow hairs. Head and neck grossly punctured; antennæ longer than the prothorax, black, downy, intermediate joints rather slenderer than the others, fourth shorter than the fifth: prothorax shaped as in *C. chrysocoma*, widely but obsoletely channelled; rough and reticulated, as it were, with numerous confluent punctures, sides more hairy than the disk: elytra thickly punctured, pale testaceous, black at the apex, where the suture curves outwards so that they diverge from each other, extremity nearly transversely truncated: abdomen underneath minutely, breast rather grossly, punctured: podex subemarginate.

* † b l.

(241) 3. * LEPTURA ERYTHROPTERA. *Red-winged Leptura.*

L. (erythroptera) atra, subpubescens, punctata; prothorace punctis rugoso, antennis pallido annulatis; elytris grosse punctatis, rubris, apice summo nigro, præmorso.

Red-winged Leptura, very black, subpubescent, punctured; prothorax wrinkled with punctures; antennæ annulated with pale: elytra grossly punctured, deep red, extremity black, premorse.

Length of the body 8 lines.

Taken in Nova Scotia by Capt. Hall.

DESCRIPTION.

Body very black, slightly downy, underneath minutely punctured. Head shorter than in the last section, as well as the neck obsoletely channelled; thickly but not minutely punctured; antennæ rather longer than the prothorax; third and fourth joints a little slenderer than the others, and pale red at the base; the sixth is pale with a black spot on each side at the apex; and the whole of the eighth is of the same colour; the last joint is acuminate: the prothorax is constricted anteriorly, and the constricted part is perfectly smooth, the rest is thickly and confluent punctured and wrinkled; at the base the prothorax is depressed and obsoletely trilobed: scutellum black, representing an isosceles triangle: elytra of a dull red, grossly and deeply punctured; extremity scooped out with the external angle longer than the internal and acuminate: mesosternum emarginate posteriorly.

(242) 4. LEPTURA CANADENSIS. (Olivier.) *Canada Leptura*.

Leptura canadensis. Fab. *Syst. Eleuth.* ii, 357, 15. Oliv. *Ent.* iv, 73, 8, 6, t. iii, f. 27. Illig. *Mag.* iv, 122, 15.

Length of the body $6\frac{3}{4}$ —8 lines.

Taken in Nova Scotia by Dr. Mac Culloch.

DESCRIPTION.

Body very black, slightly downy, minutely punctured. Head as in the last species, but the neck is not channelled; antennæ with base of the fifth joint, the whole of the sixth and eighth, except the black apex of the former, pale or pale rufous: prothorax as in *L. erythroptera*, only deeply and confluent punctured but not wrinkled: elytra black, sanguineous at the base. In other respects this species resembles that insect; the external angle of the apex of the elytra is however shorter.

* † b 2.

(243) 5. * LEPTURA TENUIOR. *Slenderer Leptura*.

L. (tenuior) nigra, pube flava; elytris flavo quadrifasciatis; pedibus abdomineque testaceis.

Slenderer *Leptura*, black, with yellow down; elytra with four yellow bands; legs, and abdomen testaceous.

Length of the body $5\frac{3}{4}$ lines.

Taken in Canada by Dr. Bigsby.

DESCRIPTION.

Body black, rather slender, slightly punctured, thinly coated with decumbent yellow hairs. Antennæ shorter than the body, fifth joint scarcely longer than the fourth: prothorax between bell-shaped and a truncated cone, a little constricted in the middle, fringed with yellow hairs anteriorly and posteriorly: scutellum triangular: elytra testaceous, yellow at the base, and with three yellow bands, the first interrupted; oblique sinus at the apex not so deep as in the two preceding species: legs testaceous; abdomen of a deeper colour; and segments scarcely emarginate.

This species differs in habit from the two preceding ones, it is narrower in proportion, and comes nearer to *L. quadrifasciata*, but the posterior angles of the prothorax, though acute, are not so prominent, it belongs however to the same subdivision, with the last mentioned insect.

* † c.

(244) 6. * LEPTURA BREVIS. *Short Leptura.*

L. (brevis) nigra, brevis, pubescens; antennis articulis ultimis sex basi pallidis; elytris grosse punctatis vitta laterali lutea.
Short Leptura, black, short, pubescent; six last joints of the antennæ pale at the base; elytra grossly punctured with a luteous lateral band.

Length of the body 5 lines.

Taken in Canada by Dr. Bigsby.

DESCRIPTION.

Body shorter than usual in proportion to its width; black, underneath minutely punctured and thinly covered with rather silvery decumbent hairs. Head thickly and confluent punctured, rather downy with erect hoary hairs; antennæ shorter than the body; fourth, fifth, and sixth joints long and slenderer than the rest; six last short and pale at the base: prothorax between bell-shaped and globose, deeply and confluent punctured; downy with some erect hoary hairs; anteriorly constricted, posteriorly depressed: scutellum linear covered with pale decumbent hairs: elytra very grossly and deeply punctured, shorter than the abdomen and rounded at the apex, with a lateral band bent a little inwards towards the base, which it does not reach, of the colour of the yolk of an egg; anus entire: down on the legs yellow.

(245) 7. LEPTURA SEXMACULATA. (Linné.) *Six-spotted Leptura.*

Leptura sexmaculata. Linn. *Fn. Suec.* 686; *Syst. Nat.* ii, 638, 11. Fab. *Syst. Ent.* 197, 11; *Ent. Syst.* I, ii, 346, 37. *Syst. Eleuth.* ii, 362, 47. Oliv. *Ent.* iv, 73, 26, 35, t. 4, f. 43. Payk. *Fn. Suec.* iii, 123, 25. Gyll. *Ins. Suec.* iv, 14, 13. Panz. *Fn. Germ.* lxxix, 21? Müll. *Zool. Dan.* Pr. 94, 1058.

——— *testaceo-fasciata.* De Geer *Ins.* v, 133, 9.

Pachyta sexmaculata. Steph. *Illustr. Mandib.* iv, 265, 5†?

Length of the body 5½ lines.

Two specimens taken in Lat. 65°.

DESCRIPTION.

Body rather short, black, downy, minutely punctured. Head very thickly and minutely punctured, obsoletely channelled; antennæ slender, shorter than the body, fifth joint considerably longer than the fourth: prothorax shaped as in the preceding species but less depressed posteriorly; very thickly as well as minutely punctured: scutellum triangular: elytra pale-yellow, with an arched black spot at the base, then follows an interrupted band consisting of three acute black spots placed in a triangle, beyond the middle is a dentated black band which reaches neither the suture nor the lateral margin; the apex also, the suture, and the lateral margin towards the apex, are all black.

VARIETY B. Head not channelled: spot at the base of the elytra coalescing with the intermediate and lateral ones of the anterior band, and reaching the lateral margin; interior spot reaching the suture so as to form the half of a spot common to both elytra; the intermediate band is broader and reaches both the suture and lateral margin.

* †† a.

(246) 8. * LEPTURA SEMIVITTATA. *Half-striped Leptura.*

L. (semivittata) linearis, nigra, supra nitida, subtus argenteo-sericea: elytris vitta dimidiata, flexuosa, lutea, apice truncatis.
Half-striped Leptura, linear, black, above glossy, underneath silvery from silky hairs; elytra with a luteous flexuose stripe reaching half their length; truncated at the tip.

Length of the body 6 lines.

Taken in Canada by Dr. Bigsby.

DESCRIPTION.

Body long and narrow, black, underneath slightly and minutely punctured, with the sides of the breast and abdomen brilliant with a silvery lustre from decumbent silky hairs, above glossy and almost naked. Head thickly punctured, but behind each eye there is a levigated space; antennæ longer than the prothorax, intermediate joints not slenderer than the others, the fourth as long as the fifth; neck short and levigated: prothorax bell-shaped, not constricted anteriorly, depressed posteriorly; thinly punctured, especially in the disk: scutellum triangular: elytra punctured but not thickly, punctures almost arranged in rows, towards the apex they are very slight; a reddish-yellow subflexuose stripe runs from the middle of the base of the elytra a little more than half way towards the apex, which is diverging and truncated: the ventral segments of the abdomen terminate in a reddish membrane.

(247) 9. * LEPTURA GULOSA. *Red-throated Leptura.*

L. (gulosa) linearis, nigra, supra nitida, subtus sericeo-argentea; gula rufescenti; elytris vitta postice abbreviata lutea; apice truncatis.

Red-throated Leptura, linear, black above glossy, underneath silvery from silky hairs; throat reddish; elytra with a luteous stripe abbreviated posteriorly; truncated at the apex.

Length of the body 5 lines.

Taken in Nova Scotia by Dr. Mac Culloch.

DESCRIPTION.

Very nearly related to the preceding species, from which it differs chiefly in being much smaller, in having the underside of the body more thickly covered with hairs glittering like silver; in having the throat pale-red; the fifth joint of the antennæ longer than the fourth; the punctures of the elytra more numerous and scattered; the yellow stripe running nearer to the apex of the elytra, dilated at the base and not flexuose: the fore-breast also in the disk, the after-breast on each side, and the base of the thighs are obscurely red: the tibiæ are piceous.

* †† b.

(248) 10. * LEPTURA SUBARGENTATA. *Subargent Leptura.*

L. (subargentata) linearis, nigra, punctulatissima; corpore subtus, prothoracisque angulis posticis ex pube subargenteis: elytris apice rotundatis.

Subargent Leptura, linear, black, very minutely and thickly punctured, with the body underneath, and the posterior angles of the prothorax rather silvery from down; elytra rounded at the apex.

Length of the body 4 lines.

Taken in Lat. 65°.

DESCRIPTION.

Body narrow, entirely black, very minutely and thickly punctured, underneath glittering, but less conspicuously with silver pile: antennæ shorter than the body, nearly filiform, fourth and fifth joints of equal length: prothorax perfectly bell-shaped, anteriorly not constricted, posterior angles acute, diverging and covered with silver pile: elytra rounded at the apex.

(249) 11. * LEPTURA SIMILIS. *Similar Leptura.*

L. (similis) linearis, nigra, punctulatissima, corpore subtus ex pube subargenteo; elytris apice rotundatis; antennis scapo femoribusque rufis.

Similar Leptura, linear, black, very minutely and thickly punctured, body underneath, rather silvery from down; elytra rounded at the apex; scape of the antennæ and thighs rufous.

Length of the body $3\frac{1}{2}$ lines.

A single specimen taken in Lat. 65°.

DESCRIPTION.

This may possibly be the other sex of the preceding species which it resembles in every respect, except that the antennæ are rather longer, the scape or first joint, all but the base on the upper side, is rufous, as are likewise the thighs and four anterior tibiæ; the posterior thighs are however black at the apex.

(250) 12. * LEPTURA LONGICORNIS. *Long-horned Leptura.*

L. (longicornis) nigra, elongata; elytris grosse punctatis, vitta pedibusque basi, testaceis; antennis mediocribus.

Long-horned Leptura, black, elongated, stripe of the grossly punctured elytra, and base of the legs, testaceous; antennæ as long as the body.

Length of the body 5 lines.

A single specimen taken in Lat. 65°.

DESCRIPTION.

At first sight this species a good deal resembles *L. semivittata* and *gulosa* of the former section, but its eyes are entire, and its antennæ much slenderer and of a different type, more nearly resembling those of *L. argentata* and *similis*. Body black, minutely punctured, downy, especially underneath, with silvery hairs. Head minutely, thickly, and confluent punctured; labrum and base of the mandibles rufous; last joint of the palpi securiform; antennæ very slender nearly as long as the body; scape incrassated, rufous, black at the base: prothorax a little constricted anteriorly, very thickly punctured with a longitudinal dorsal impunctured line or channel: scutellum longitudinally concave, rounded at the apex; elytra nearly linear, grossly punctured, glossy, nearly black, with a pale stripe extending from the middle of the base to near the apex, and gradually approaching the suture; apex subtruncated: legs rufous at the base.

* *

(251) 13. * LEPTURA PROTEUS. *Proteus Leptura.*

L. (Proteus) nigra, subpubescens, nitidiuscula; oculis integris subauratis; antennis elytris pedibusque colore variantibus; prothorace canaliculato postice bigibbere.

Proteus Leptura, black, subpubescent, rather glossy; eyes entire, inclining to a golden lustre; antennæ, elytra, and legs varying in colour; prothorax channelled, posteriorly with a gibbosity on each side.

Length of the body $3\frac{1}{4}$ — $5\frac{1}{2}$ lines.

Taken abundantly in Lat. 54° . and 65° .

DESCRIPTION.

Body narrow, black, punctured, somewhat glossy, rather hairy, especially underneath, with decumbent hairs, those on the elytra have somewhat of a golden lustre, the rest are silvery. Nose more grossly punctured than the rest of the head; vertex convex; eyes subovate, pale with a slight golden lustre; antennæ filiform, longer than the prothorax, obscurely rufous, with the four first joints black, fifth joint longer than the fourth: prothorax campanulate, anteriorly constricted, posterior angles a little diverging; thinly punctured; channelled, the channel running between two dorsal gibbosities: scutellum triangular: elytra rather widest at the base, and punctured there more grossly next the suture; diverging and truncated at the apex: tibiæ piceous or rufo-piceous; four posterior thighs rufous at the base.

VARIETY B. In this variety only the base of the six last joints of the antennæ is rufous; all the thighs are rufous at the base, and the tibiæ of a clearer red, but they are dusky at the apex; tarsi rufous at the base. Length of the body $3\frac{3}{4}$ lines.

C. Elytra with a stripe at the base, tips and lateral margin rufous: antennæ entirely black: legs as in variety B. Length of the body $4\frac{3}{4}$ lines.

D. Elytra with a longitudinal rufous stripe dilated at the base and apex; bead of the lateral margin also rufous: antennæ and legs nearly as in B, but the whole of the tarsi is obscurely rufous. Length of the body 3—4 lines.

E. Elytra rufous with the suture and a stripe near the margin abbreviated at both ends, dusky: antennæ as in A; legs as in B. Length of the body 4—5 lines.

F. Elytra rufous, with a dusky suture; antennæ as in A; legs as in D.

G. Like F, but elytra luteous; antennæ all black. Length of the body 4 lines.

H. Like F and G, but legs and antennæ black. Length of the body $3\frac{3}{4}$ lines.

This species is the American representative of *L. femorata* of Paykull and Gyllenhal, which is not clearly synonymous with that of Fabricius and Olivier, it differs, without mentioning colour, in having much shorter antennæ, and in being glossy. Mr. Marsham's *L. femorata* has reniform eyes, and therefore belongs to another section, it may be that of Olivier.

L. Proteus seems to vary ad infinitum in the colour of the elytra, antennæ, and legs, but as all the varieties agree in every respect except colour and size, and the elytra advance so gradually from pale rufous to black, or vice versa, there can be little doubt of the identity of the different varieties.

(252) 14. * LEPTURA LONGICEPS. *Long-headed Leptura.*

L. (longiceps) nigra, punctulata, ex pube alba subincana; capite elongato; prothorace canaliculato; elytris luridis litura antica, sutura, apiceque, nigris.

Long-headed Leptura, black, minutely punctured, somewhat hoary from white down; head elongated; prothorax channelled; elytra lurid with an anterior blotch, the suture, and apex black.

Length of the body 4 lines.

Several specimens taken in Lat. 54°. and 65°.

DESCRIPTION.

Like the preceding species but shorter in proportion with a longer head. Body black, punctured, hoary with rather silvery down: head as long or longer than the prothorax; eyes pale, subtriangular; antennæ with the second, third, and fourth joints slenderer than the rest: prothorax shaped as in *L. Proteus*, constricted before, depressed behind, but without diverging angles, channelled but with no gibbosity on each side the channel: elytra nearly linear, very thickly punctured, dirty-yellow, with a dusky lateral blotch extending from the base beyond the middle of the elytrum, suture and subtruncated apex black; down yellowish.

Having now described all the Capricorn beetles and other *Longicornia* of Latreille taken in the Expedition, and being arrived at a spot whence there is a direct path to his *Eupoda*, I shall again retrace my steps, and call back the reader's attention to the last family of Mr. W. S. Mac Leay's *Rectocera*, the *Passalidæ*, from which, as was before observed,² we may get an approach, by the *Scolytidæ*, &c. to the great tribe of Rhynchophorous beetles, or those the anterior part of whose head terminates in a rostrum or snout.

A most remarkable insect, taken by Edward Bennett, Esq. in Choco, in Colombia, and a specimen of which may also be seen in the collection of the British Museum, may be here noticed, as supplying the first stage in the route now indicated. Its general figure is that of a *Passalus*, only more convex and cylindrical; it has the same description of mandibles but rather straighter; a similar upper-lip; the vertex is crowned with an incurved horn as in *Passalus cornutus*, &c.; the

² See above, p. 163.

furrows of the elytra are similar and crenated; and between the claws, as in the *thalerophagous* Lamellicorn Beetles, and some of the *saprophagous* is a plantula or little spurious joint, but instead of a single pseudonychium or bristle, it is furnished with *two* on each side.³ All these circumstances prove something more than an analogical relation between this genus and *Passalus*, and that they may be placed near to each other in the scale of affinities, with no very wide interval between them. *Phrenapates* differs from the last-mentioned genus, chiefly in its tongue, the lobe of its maxilla, in its antennæ without a lamellated or pectinated knob; in having all the tibiæ armed with teeth, and in its heteromerous tarsi.

Having thus, as it should seem, discovered a link that may be connected with the *Passalidæ*, by the intervention probably of some intermediate genus,⁴ we are next to look for some group, leading towards the Rhynchophorous beetles, that will approach it on the other side. Fabricius placed *Sinodendrum* amongst the *Bostridi-*

³ *Introd. to Ent.* iii, 385, 691. In the genuine *Dynastidæ* the *Plantula* is very conspicuous, but instead of *Pseudomychia* it terminates in a pencil of stiffish hairs.

I shall here give the characters of the genus alluded to in the text.

* GENUS PHRENAPATES. Kirb.

Labrum transverse, submembranous, subemarginate, hairy, especially at the apex.

Labium nearly square, above longitudinally lacunose; at the apex emarginate in the middle with a sinus on each side.

Tongue horny, linear; dilated at the base, rounded at the apex, above convex.

Mandibles protended, robust, three-sided, widest at the base and excavated, toothed at the apex, and internally.

Maxillæ one-lobed; lobe narrow, acute, fringed with hair on the inner side.

Maxillary palpi four-jointed, filiform, the three first joints subclavated, the third shorter than the rest, last joint cylindrical.

Labial palpi three-jointed, filiform, two first joints subclavated, the third straight internally, curving externally, the first joint longer than the rest.

Mentum three-lobed, intermediate lobe much shorter than the lateral ones, truncated.

Antennæ robust, eleven-jointed, joints somewhat spherical, the three last larger than the rest, so as to form an oblong knob.

Body subcylindrical, naked. Head transverse, scarcely narrower than the prothorax: eyes small, prominent, subhemispherical: trunk isthmiated: prothorax very slightly channelled, anteriorly and posteriorly subsinuated on each side; prosternum dilated at the base; at the apex recurved between the arms; mesosternum an obtuse mucro; metasternum a rounded lobe: legs, posterior pairs distant; thighs subcompressed linear; tibiæ armed with spiny teeth, with a pair of moveable spurs and a pair of fixed teeth at the apex; four anterior tarsi five-jointed, with the four first joints very short, the last elongated and clavate; posterior four-jointed with the first joint rather long, the two next short, the claw-joint as in the other legs; claws single incurved; between the claws is a spurious joint furnished at the end with two pairs of bristles: scutellum triangular; elytra slightly furrowed, furrows crenate.

There is a Sierra Leone insect taken by Afzelius, and described by Gyllenhal,* under the name of *Passandra sexstriata*, which comes near *Phrenapates*, but the labium, tongue, and antennæ differ.

P. BENNETTI, *nigra, glabra, nitida: capite tricorni, cornu intermedio incurvo, apice subemarginato, lateralibus obliquis truncatis.* Length of the body, mandibles included, 1 inch 2 lines. Two or three specimens taken by Edward Bennett, Esq. in Choco in Colombia.

The mandibles in this species are incurved at the apex, and armed with three sharpish teeth, the intermediate one being the longest; on the innerside are two short obtuse ones, of which the posterior one is the smallest.

⁴ *Sinodendrum cylindricum* appears an intermediate insect agreeing in many characters with *Phrenapates*. Its antennæ exhibit the knob of those of the *Lucanidæ*.

* Schön. *Syn.* iii, append. 146, 200, t. vi, f. 3.

chidæ, to which Mr. W. S. Mac Leay acknowledges it exhibits an affinity worthy of further investigation,⁵ it exhibits likewise characters that connect it with the Lamellicorns, and *Phrenapates* is similarly circumstanced. There are several such characters that appear occasionally in all these tribes, thus lamellated antennæ are found in *Phloiotribus* and *Sinodendrum*, as well as in the Lamellicorns; the spurious joint between the claws of the tarsi is found in *Bostrichus*, as well as in *Phrenapates* and the tribe just named; all the tibiæ are armed with spiny teeth in *Sinodendrum*, *Phrenapates*, and some *Bostrichi*; the head also is armed with a horn not only in the two first, but in some species, of the last of these genera.

Giving due weight to all these circumstances, I think it may be fairly deduced from them, that the *Passalidæ* by *Phrenapates* and *Sinodendrum* lead off to the *Bostrichidæ*, which are generally acknowledged to lead in their turn to the Rhynchophorous beetles. Having cleared, as I hope, this point, I shall now proceed to the description of the insects of the two latter tribes, taken in the Expedition.

iv. XYLOTRYPA. Kirb.

Family ANOBIDÆ.

Latreille has placed his *Ptinioides*, including the present family, at a great distance from the other Lignivorous beetles, to which I agree with Mr. Stephens in thinking they properly belong; but I regard them as forming two families at least, *Ptinidæ* and *Anobidæ*. I hesitate, however, as to their place, for they seem to occasion a disruption of affinities, if placed between the *Bostrichidæ* and *Scolytidæ*; I am therefore disposed to consider them as out of the direct line, and forming a branch from the former of these families. As there are only two species in the collection belonging to this family, I shall describe them in this place.

⁵ *Hor. Ent.* 33.

The following text is generated from uncorrected OCR.

[Begin Page: Page 178]

178 NORTHERN ZOOLOGY.

Family RHAGIAD[^]. Rhagiadans.

XCI. Genus HARGIUM. Leacb.

(237) 1. Hargium lineatum. Stripe-necked Hargium.

Stenochorus lineatus. Oliv. Ent. iv, 69, 13, 6, t. iii, / 22.

Rhagium lineatum. Schori. Syn. iii, 414, 5-

Length of the body 5[^] lines.

Taken more than once in Lat. 54°. and also by Mr. Drake in the province of
Massachusets.

DESCRIPTION.

Body black, rather glossy, hoary from longish cinereous hairs. Head constricted behind into a neck, punctured with large scattered punctures ; antennse shorter than the prothorax, robust, last joint ovate, pedicel testaceous : prothorax constricted anteriorly and posteriorly, armed on each side by a stout rather sharp spine, punctured like the head, and hairy, but there are three longitudinal stripes without hairs, and the intermediate one without punctures, the lateral ones pass over the spines : elytra mottled with whitish or cinereous hairs, with three longitudinal ridges, the two external ones confluent near the apex, and a little higher up including between them a short abbreviated

ridge ; the interstices are punctured like the head and prothorax ; at the base and lateral margin the elytra are reddish, and on the ridge next the suture there are two yellowish spots : coxeb, trochanters, and base of the thighs reddish : abdomen carinated underneath.

Family LEPTURID^A. Lepturidans.

XCII. Genus PACHYTA. Meg.

(238) 1. *Pachyta liturata*. Blotched *Pachyta*.

p. (*liturala*) alra, viUoso-incana ; elytris nudis, luridis, lituns trihus nigris, anticis duabus snbpaTallelis,

Blotched *Pachyta*, very black, hairy with hoary hairs ; elytra naked, lurid, with three black blotches, the two anterior ones

nearly parallel.

Length of the body 7 — 9 lines.

Several specimens taken in Lat. 54°. and 65°.

[Begin Page: Page 179]

LEPTURID^E. 179

DESCRIPTION.

This is the American representative of *P. quadrifnaailata*, from which it differs principally in being not so hairy, with hoary instead of yellow-tinted hairs: the punctures of the protliorax and

elytra are more minute; the antennae are rather shorter, and the elytra, instead of two subquadran-
gular black spots, have three less black linear ones, the two anterior ones being partly parallel, and
in some specimens confluent.

XCIII. Genus LEPTURA. Linn.

This genus may be thus subdivided with respect to the species about to be described.

- Eyes emarginate, or kidney-shaped.

f Elytra triangular.

» truncated..... l at the apex.

b premorse, or with a sinus taken out)

1 prothorax anteriorly constricted without posterior angles.

2 not constricted, posterior angles acute.

c — rounded at the apex.

ft Elytra linear.

truncated } „, „ „

(at the apex.

rounded 3

a

b rounded

•• Eyes entire.

• t a.

(239) 1. * *Leptura chrysocoma*. Goldy-locks *Leptura*.

L. f chrysocoma) holosericea, lanugine aureo; elytris testaceis, apice exclus obscurioribits ; antennis pedibusque nigris.

Goldy-locks *Leptura*, velvety with golden pile : elytra testaceQUs, at the apex externally dusky ; antennae and legs black.

PLATE V, FIG. I.

Length of the body 5i — 6:^ lines.

Several specimens taken ; the largest, in the Journey from New York ; the smaller, near Cumberland-house. Taken likewise by Dr. Mac Culloch and Capt. Hall, in Nova Scotia.

2 A 2

[Begin Page: Page 180]

DESCRIPTION.

This beautiful insect, is related to *L. virens*, but perfectly distinct. The body appears to be black, but that colour is, in most parts, nearly concealed by a thick and mostly long coat of brilliant golden hairs with a very slight tint of green, where the coat is thin the body appears minutely punctured. Head subelongated, the neck exerted, subtriangular ; nose with only a few scattered whitish hairs ; antenna black, third, fourth, and fifth joints rather slenderer and longer than the succeeding ones : prothorax between globose and bell-shaped, constricted anteriorly, channelled, grossly punctured : substance of the elytra pale testaceous, towards the apex externally they are dusky ; the golden down on them is shorter and decumbent ; apex diverging and obliquely truncated : under-side of the abdomen particularly brilliant from decumbent hairs : legs less hairy than the rest of the body.

(240) 2. * *Leptura subpubescens*. Subpubescent *Leptura*.

L. (subpubescens) *J. nigra*, flavo-subpubescens : prothorace punctis confluentibus scabro ; elytris pale testaceis, apice divergen-

tibus, fastigiatis, nigris.

Subpubescent *Leptura*, black, red with thin yellow down : prothorax rough with confluent punctures ; elytra pale testa-

ceous, diverging, fastigated and black at the apex.

Length of the body not noticed.

Taken in Canada by Dr. Bigsby.

DESCRIPTION.

Body black, thinly coated with yellow hairs. Head and neck grossly punctured ; antennae longer than the prothorax, black, downy, intermediate joints rather slenderer than the others, fourth shorter than the fifth : prothorax shaped as in *C. chrysocoma*, widely but obsoletely channelled ; rough and reticulated, as it were, with numerous confluent punctures, sides more hairy than the disk : elytra thickly punctured, pale testaceous, black at the apex, where the suture curves outwards so that they diverge from each other, extremity nearly transversely truncated : abdomen underneath minutely, breast rather grossly, punctured : podex subemarginate.

» t b 1-

(241) 3. * *Leptura erythroptera*, Red-ivinged *Leptura*.

L. (erythroptera) atra, subpubescens, punctata; prothorace punctis rugoso, antennis pallida annulatis ; elytris grosse punctatis,

rubris, apice summo nigro, pmmorso.

Red-winged *Leptura*, very black, subpubescent, punctured ; prothorax wrinkled with punctures ; antennae annulated with

pale : elytra grossly punctured, deep red, extremity black, premorse.

Length of the body 8 lines.

Taken in Nova Scotia by Capt. Hall.

DESCRIPTION.

Body very black, slightly downy, underneath minutely punctured. Head shorter than in the last section, as well as the neck distinctly channelled ; thickly but not minutely punctured ; antennæ rather longer than the prothorax; third and fourth joints a little slenderer than the others, and pale red at the base; the sixth is pale with a black spot on each side at the apex; and the whole of the eighth is of the same colour ; the last joint is acuminate : the prothorax is constricted anteriorly, and the constricted part is perfectly smooth, the rest is thickly and confluent punctured and wrinkled ; at the base the prothorax is depressed and distinctly trilobed : scutellum black, representing an isosceles triangle : elytra of a dull red, grossly and deeply punctured ; extremity scooped out with the external angle longer than the internal and acuminate: mesosternum emarginate posteriorly.

(242) 4. *Leptura canadensis*. (Olivier.) Canada Leptura.

Leptura canadensis. Fab. Syst. Eleuth. ii, 357, 15. Oliv. Ent. iv, 73, 8, 6, t. iii, / . 27. Illig. Mag. iv, 122, 15.

Length of the body C| — 8 lines.

Taken in Nova Scotia by Dr. Mac CuUoch.

DESCRIPTION.

Body very black, slightly downy, minutely punctured. Head as in the last species, but the neck is not channelled ; antenna with base of the fifth joint, the whole of the sixth and eighth, except the black apex of the former, pale or pale rufous : prothorax as in *L. erythroptera*, only deeply and confluent punctured but not wrinkled : elytra black, sanguineous at the base. In other respects

this species resembles that insect ; the external angle of the apex of the elytra is however shorter.

• t b 2.

(24.S) 5. * *Leptura tenuior*. Slenderer *Leptura*.

L. f. tenuior J nigra, pube flava ; ehjtrisflavo quadrifasciatis ; pedibus abumineque testaceis.

Slenderer *Leptura*, black, with yellow down ; elytra with four yellow bands; legs, and abdomen testaceous.

Length of the body 5J lines.

Taken in Canada by Dr. Bigsby.

[Begin Page: Page 182]

182 NORTHERN ZOOLOGY.

DESCRIPTION.

Body black, rather slender, slightly punctured, thinly coated with decumbent yellow hairs. Antennae shorter than the body, fifth joint scarcely longer than the fourth : prothorax between bell-shaped and a truncated cone, a little constricted in the middle, fringed with yellow hairs anteriorly and posteriorly : scutellum triangular : elytra testaceous, yellow at the base, and with three yellow bands, the first interrupted ; oblique sinus at the apex not so deep as in the two preceding species : legs testaceous; abdomen of a deeper colour; and segments scarcely emarginate.

This species differs in habit from the two preceding ones, it is narrower in proportion, and comes nearer to *L. quadrifasciata*, but the posterior angles of the prothorax, though acute, are not so prominent, it belongs however to the same subdivision, with the last mentioned insect.

* t c.

(244) 6. * *Leptura brevis*. Short *Leptura*.

L. f brevis J nigra, brevis, pubescens ; antennis articulis ultimis sex basi pallidis ; elytris grosse punctatis vitta laterali lutea.

Short *Leptura*, black, short, pubescent ; six last joints of the antennae pale at the base ; elytra grossly punctured with a

luteous lateral band.

Length of the body 5 lines.

Taken in Canada by Dr. Bigsby.

DESCRIPTION.

Body shorter than usual in proportion to its width ; black, underneath minutely punctured and thinly covered with rather silvery decumbent hairs. Head thickly and confluent punctured, rather downy with erect hoary hairs; antenna; shorter than the body; fourth, fifth, and sixth joints long and slenderer than the rest; six last short and pale at the base: prothorax between bell-shaped and globose, deeply and confluent punctured ; downy with some erect hoary hairs ; anteriorly constricted, posteriorly depressed: scutellum linear covered with pale decumbent hairs: elytra very grossly and deeply punctured, shorter than the abdomen and rounded at the apex, with a lateral band bent a little inwards towards the base, which it does not reach, of the colour of the yolk of an egg ; anus entire : down on the legs yellow.

(245) 7. *Leptura sexmaculata*. (Linne.) Six-spotted *Leptura*.

Leptura sexmaculata. Linn. Fn. Suec. 686 ; Syst. Nat. ii, 638, 11. Fab. Syst. Ent. 197, 11 ; Ent. Syst. I, ii, 346, 37.

Syst. Eleuth. ii, 362, 47. Oliv. Ent. iv, 73, 26, 33, t. 4, / . 43. Payk. Fn. Suec. iii, 123, 23. Gyll. Ins. Suec. iv, 14,

13. Panz. Fn. Germ. Ixix, 21 ? Miill. Zool. Dan. Pr. 94, 1038.

testaceo-fasciata. De Geer Ins. v, 133, 9.

Pachyta sexmaculata. Steph. Illustr. Mandib. iv, 265, 5f ?

Length of the body 3i lines.

Two specimens taken in Lat. 65°.

[Begin Page: Page 183]

LEPTURID.E. 183

DESCRIPTION.

Body rather short, black, downy, minutely punctured. Head very thickly and minutely punctured, obsolete channelled ; antennae slender, shorter than the body, fifth joint considerably longer than the fourth : prothorax shaped as in the preceding species but less depressed posteriorly ; very thickly as well as minutely punctured : scutellum triangular : elytra pale-yellow, with an arched black

spot at the base, then follows an interrupted band consisting of three acute black spots placed in a triangle, beyond the middle is a dented black band which reaches neither the suture nor the lateral margin ; the apex also, the suture, and the lateral margin towards the apex, are all black.

Variety B. Head not channelled : spot at the base of the elytra coalescing with the intermediate and lateral ones of the anterior band, and reaching the lateral margin ; interior spot reaching the suture so as to form the half of a spot common to both elytra; the intermediate band is broader and reaches both the suture and lateral margin.

* tt a.

(246) 8. * *Leptura semivittata*. Half -striped *Leptura*.

L. (*semivittata*) *linearis*, nigra, supra nitida, subius argenteo-sericea : elytris vitta dimidiata, flexuosa, apice truncata.

Half-striped *Leptura*, linear, black, above glossy, underneath silvery from silky hairs ; elytra with a luteous flexuose stripe

reaching half their length ; truncated at the tip.

Length of the body 6 lines.

Taken in Canada by Dr. Biesby.

It O •

DESCRIPTION.

Body long and narrow, black, underneath slightly and minutely punctured, with the sides of the breast and abdomen brilliant with a silvery lustre from decumbent silky hairs, above glossy and almost naked. Head thickly punctured, but behind each eye there is a levigated space ; antenna; longer than the prothorax, intermediate joints not slenderer than the others, the fourth as long as the fifth;

neck short and levigated : prothorax bell-shaped, not constricted anteriorly, depressed posteriorly ;
thinly punctured, especially in the disk : scutellum triangular : elytra punctured but not thickly,
punctures almost arranged in rows, towards the apex they are very slight ; a reddish-yellow subflex-
uose stripe runs from the middle of the base of the elytra a little more than half way towards the
apex, which is diverging and truncated : the ventral segments of the abdomen terminate in a reddish
membrane.

[Begin Page: Page 184]

184 NORTHERN ZOOLOGY.

(247) 9. * *Leptura gulosa*. Red-throated *Leptura*.

L. (*gulosa* J *linearis*, *nigra*, *supra nilida*, *subtus sericeo-argentea* , - *gula rufescenii*; *elytris vitta postice abbreviata*
hitea ; *apice*

truncatis.

Red-throated *Leptura*, linear, black above glossy, underneath silvery from silky hairs ; throat reddish ; elytra with a
luteous

stripe abbreviated posteriorly ; truncated at the apex.

Length of the body 3 lines.

Taken in Nova Scotia by Dr. Mac Culloch.

DESCRIPTION.

Very nearly related to the preceding species, from which it differs chiefly in being much smaller, in having the underside of the body more thickly covered with hairs glittering like silver ; in having the throat pale-red ; the fifth joint of the antenna longer than the fourth ; the punctures of the elytra more numerous and scattered; the yellow stripe running nearer to the apex of the elytra, dilated at the base and not flexuose : the fore-breast also in the disk, the after-breast on each side, and the base of the thighs are obscurely red : the tibiae are piceous.

* tt b.

(248) 10. * *Leptura subargentata*. Subargent *Leptura*.

L. (subargentata) linearis, nigra, punctulatissima ; corpore subtus, prothoracisque angulis posticis ex parte subargenteis : elytris

apice rotundatis.

Subargent *Leptura*, linear, black, very minutely and thickly punctured, with the body underneath, and the posterior angles

of the prothorax rather silvery from down ; elytra rounded at the apex.

Length of the body 4 lines.

Taken in Lat. 65°.

DESCRIPTION.

Body narrow, entirely black, very minutely and thickly punctured, underneath glittering, but less conspicuously with silver pile : antennae shorter than the body, nearly filiform, fourth and fifth joints of equal length : prothorax perfectly bell-shaped, anteriorly not constricted, posterior angles acute,

diverging and covered with silver pile : elytra rounded at the apex.

[Begin Page: Page 185]

LEPTURID/E. 185

(249) 11. * *Leptura similis*. Similar *Leptura*.

L. f. similis) *linearis*, *tiyra*, *punctulatissima*, *corpore subtus ex- ptihe snbargnteo* : *eh/Iris npace rolundatis* ; *aviennis scapo feniori-*

busijuc rujis.

Similar *Leptura*, linear, black, very minutely and thickly punctured, body underneath, rather silvery from down; elytra

rounded at the apex ; scapae of the antennae and thighs rufous.

Length of the body 3[^] lines.

A single specimen taken in Lut. 65[^].

DESCRIPTION.

This may possibly be the other sex of the preceding species which it resembles in every respect, except that the antennae are rather longer, the scape or first joint, all but the base on the upper side, is rufous, as are likewise the thighs and four anterior tibiae ; the posterior thighs are however black at the apex.

(250) 12. * *Leptura longicornis*. Long-horned *Leptura*.

L. (longicornis) nigra, elongata ; elytris grosse punctatis, vitta pedibusque basi, testaceis ; antennis mediocribus .

Long-horned *Leptura*, black, elongated, stripe of the grossly punctured elytra, and base of the legs, testaceous ; antenna as

long as the body.

Length of the body 3 lines.

A single specimen taken in Lat. 65°.

DESCRIPTION.

At first sight this species a good deal resembles *L. semivittata* and *gulosa* of the former section, but its eyes are entire, and its antenna much slenderer and of a different type, more nearly resembling those of *L. argentata* and *similis*. Body black, minutely punctured, downy, especially underneath, with silvery hairs. Head minutely, thickly, and confluent punctured ; labrum and base of the mandibles rufous ; last joint of the palpi securiform ; antenna; very slender nearly as long as the body ; scape incrassated, rufous, black at the base : prothorax a little constricted anteriorly, very thickly punctured with a longitudinal dorsal impunctured line or channel: scutellum longitudinally concave, rounded at the apex ; elytra nearly linear, grossly punctured, glossy, nearly black, with a pale stripe extending from the middle of the base to near the apex, and gradually approaching the suture ; apex subtruncated : legs rufous at the base.

2 B

[Begin Page: Page 186]

(251) 13. * *Leptura Proteus*. *Proteus Leptura*.

X. [^]*Proteus* ^J*nigra*, subpubescens, nitidiuscula; oculis integris subauratis ; antennis elytris pedibusque colore variantibus : pro-

thorace canaliculato postice bigibbere.

Proteus Leptura, black, subpubescent, rather glossy ; eyes entire, inclining to a golden lustre ; antennae, elytra, and legs

varying in colour; prothorax channelled, posteriorly with a gibbosity on each side.

Length of the body 3[^] — 5i lines.

Taken abundantly in Lat. 54°. and 65°.

DESCRIPTION.

Body narrow, black, punctured, somewhat glossy, rather hairy, especially underneath, with decumbent hairs, those on the elytra have somewhat of a golden lustre, the rest are silvery. Nose more grossly punctured than the rest of the head; vertex convex; eyes subovate, pale with a slight golden lustre; antennae filiform, longer than the prothorax, obscurely rufous, with the four first joints black, fifth joint longer than the fourth : prothorax campanulate, anteriorly constricted, posterior angles a little diverging ; thinly punctured ; channelled, the channel running between two dorsal gibbosities : scutellum triangular : elytra rather widest at the base, and punctured there more grossly next the suture ; diverging and truncated at the apex : tibiae piceous or rufo-piceous ; four posterior thighs rufous at the base.

Variety B. In this variety only the base of the six last joints of the antenna is rufous ; all the

thighs are rufous at the base, and the tibiae of a clearer red, but they are dusky at the apex ; tarsi rufous at the base. Length of the body 3 J lines.

C. Elytra with a stripe at the base, tips and lateral margin rufous : antennae entirely

black : legs as in variety B. Length of the body 4 J lines.

D. Elytra with a longitudinal rufous stripe dilated at the base and apex ; base of the

lateral margin also rufous : antennae; and legs nearly as in B, but the whole of the tarsi is obscurely rufous. Length of the body 3 — 4 lines.

E. Elytra rufous with the suture and a stripe near the margin abbreviated at both ends,

dusky : antennae as in A ; legs as in B. Length of the body 4 — 5 lines.

F. Elytra rufous, with a dusky suture ; antennae as in A ; legs as in D.

G. Like F, but elytra luteous ; antennae all black. Length of the body 4 lines.

H. Like F and G, but legs and antennae black. Length of the body 3 J lines.

This species is the American representative of *L. femorata* of Paykull and Gyllenhal, which is not clearly synonymous with that of Fabricius and Olivier, it differs, without mentioning colour, in having much shorter antennae, and in being glossy. Mr. Marsham's *L. femorata* has reniform eyes, and therefore belongs to another section, it may be that of Olivier.

L. Proteus seems to vary ad infinitum in the colour of the elytra, antennae, and legs, but as all the varieties agree in every respect except colour and size, and the elytra advance so gradually from

pale rufous to black, or vice versa, there can be little doubt of the identity of the different varieties.

o

[Begin Page: Page 187]

LEPTURID.i: ANOBID/E. 187

(252) 14. * *Leptura longiceps*. Long-headed *Leptura*.

L. (*longiceps*) nigra, punctulata, ex pube alba subincana ; capite elongato , prothorace canaliculato , elytris luridis l' dura antica,

suturis, apicibus, Jipris.

Long-headed *Leptura*, black, minutely punctured, somewhat hoary from white down; head elongated; prothorax elytra-

nerved ; elytra lurid with an anterior blotch, the suture, and apex black.

Length of the body 4 lines.

Several specimens taken in Lat. 54° and 05°.

DESCRIPTION.

Like the preceding species but shorter in proportion with a longer head. Body black, punctured, hoary with rather silvery down : head as long or longer than the prothorax ; eyes pale, subtriangular ; antennae with the second, third, and fourth joints slenderer than the rest : prothorax shaped as in

L. Proteus, constricted before, depressed behind, but without diverging angles, channelled but with no gibbosity on each side the channel : elytra nearly linear, very thickly punctured, dirty-yellow, with a dusky lateral blotch extending from the base beyond the middle of the elytrum, suture and subtruncated apex black ; down yellowish.

Having now described all the Capricorn beetles and other Lor/giconiia of Latreille taken in the Expedition, and being arrived at a spot whence there is a direct path to his Eiipoda, I shall again retrace my steps, and call back the reader's attention to the last family of Mr. W. S. Mac Leay's Recfocera, the Passalidw, from which, as was before observed,[^] we may get an approach, by the Scolytldce, &c. to the great tribe of Rhynchoporous beetles, or those the anterior part of whose head terminates in a rostrum or snout.

A most remarkable insect, taken by Edward Bennett, Esq. in Choco, in Colombia, and a specimen of which may also be seen in the collection of the British Museum, may be here noticed, as supplying the first stage in the route now indicated. Its general figure is that of a Passalus, only more convex and cylindrical; it has the same description of mandibles but rather straightcr ; a similar upper-lip; the vertex is crowned with an incurved horn as in Passalus conudus, &c. ; the

See above, p. 163.

•2 B2

[Begin Page: Page 188]

188 NORTHERN ZOOLOGY.

furrows of the elytra are similar and crenated ; and between the claws, as in the
thaler ophagous Lamellicorn Beetles, and some of the saprophagous is a plantula or
little spurious joint, but instead of a single pseudonychium or bristle, it is furnished
with two on each side.^ All these circumstances prove something more than an
analogical relation between this genus and Passalus, and that they may be placed
near to each other in the scale of affinities, with no very wide interval between
them. Phrenapates differs from the last-mentioned genus, chiefly in its tongue,
the lobe of its maxilla, in its antennae without a lamellated or pectinated knob ; in
having all the tibiae armed with teeth, and in its heteromerous tarsi.

Having thus, as it should seem, discovered a link that may be connected with
the Passalus, by the intervention probably of some intermediate genus,^ we are next
to look for some group, leading towards the Rhynchophorous beetles, that will
approach it on the other side. Fabricius placed Sinodendrum amongst the Bostridi-

' Introd. to Ent. iii, 385, 691. In the genuine Dynastidae the Plantula is very conspicuous, but instead of
Pseudonychia

it terminates in a pencil of stiffish hairs.

I shall here give the characters of the genus alluded to in the text.

* Genus Phrenapates. Kirb.

Lahrum transverse, submembranous, subemarginate, hairy, especially at the apex.

Labium nearly square, above longitudinally lacunose ; at the apex emarginate in the middle with a sinus on each
side.

Tongue horny, linear; dilated at the base, rounded at the apex, above convex.

Mandibles protended, robust, three-sided, widest at the base and excavated, toothed at the apex, and internally.

Maxilla: one-lobed ; lobe narrow, acute, fringed with hair on the inner side.

Maxillary palpi four-jointed, filiform, the three first joints subclavated, the third shorter than the rest, last joint cylindrical.

Labial palpi three-jointed, filiform, two first joints subclavated, the third straight internally, curving externally, the first joint

longer than the rest.

Mentum three-lobed, intermediate lobe much shorter than the lateral ones, truncated.

Antennae robust, eleven-jointed, joints somewhat spherical, the three last larger than the rest, so as to form an oblong knob.

Body subcylindrical, naked. Head transverse, scarcely narrower than the prothorax : eyes small, prominent, subhemis-

spherical: trunk isthmiated: prothorax very slightly channelled, anteriorly and posteriorly subsinuated on each side; pros-

ternum dilated at the base ; at the apex recurved between the arms ; mesosternum an obtuse muero ; metasternuni a rounded

lobe: legs, posterior pairs distant ; thighs subcompressed linear; tibiae armed with spiny teeth, with a pair of moveable

spurs and a pair of fixed teeth at the apex ; four anterior tarsi five-jointed, with the four first joints very short, the last

elongated and clavate ; posterior four-jointed with the first joint rather long, the two next short, the claw-joint as in the

other legs ; claws single incurved ; between the claws is a spurious joint furnished at the end with two pairs of bristles :

scutelluni triangular ; elytra slightly furrowed, furrows crenate.

There is a Sierra Leone insect taken by Afzelius, and described by Gyllenhal,* under the name of *Passandra sexstriata*,

which comes near *Phrenapates*, but the labium, tongue, and antennae differ.

P. Bennettii, nigra, glabra, nitida : capita tricorni, cornu intermedia incurvo, apice subemarginato, lateralibus obliquis trun-

catis. Length of the body, mandibles included, 1 inch 2 lines. Two or three specimens taken by Edward Bennett,

Esq.

in Choco in Colombia.

The mandibles in this species are incurved at the apex, and armed with three sharpish teeth, the intermediate one being

the longest ; on the innerside are two short obtuse ones, of which the posterior one is the smallest.

* *Sinodendrum cylindricum* appears an intermediate insect agreeing in many characters with *Phrenapates*. Its antennae

exhibit the knob of those of the *Lxtcanidce*.

* *Schiin*. Syn, iii, append. 146, 200, i. vi, / . 3.

[Begin Page: Page 189]

ANOUID[^]. 189

chidw, to which Mr. W. S. Mac Lcay acknowledges it exhibits an alhnity worthy of further investigation,[^] it exhibits likewise characters that connect it with the Lamellicorns, and *Phreuapates* is similarly circumstanced. There are several such characters that appear occasionally in all these tribes, thus lamellated antennae are found in *Phlo'iofribus* and *Shtodcndrum*, as well as in the Lamellicorns ; the spurious joint between the claws of the tarsi is found in *BostricliKs*, as well as in *Phrcnapate.s* and the tribe just named ; all the tibiae are armed with spiny teeth in *S'niodendrum*, *Phreuapates*, and some *Bostrkhi*; the head also is armed with a horn not only in the two first, but in some species, of the last of these genera.

Giving due weight to all these circumstances, I think it m;iy l)e fairly deduced

from them, that the Passalidæ by Phremptæ and Sinudendrum lead off to the Bostrich'idæ, which are generally acknowledged to lead in their turn to the Rhynchophorous beetles. Having cleared, as I hope, this point, I shall now proceed to the description of the insects of the two latter tribes, taken in the Expedition.

iv. Xylotrypa. Kirb.

Family ANOBIDÆ.

Latreille has placed his Ptinioreæ, including the present family, at a great distance from the other Lignivorous beetles, to which I agree with Mr. Stephens in thinking they properly belong; but I regard them as forming two families at least, Pfinidæ and Auobidæ. I hesitate, however, as to their place, for they seem to occasion a disruption of affinities, if placed between the Bostrich'idæ and Scolyt'idæ; I am therefore disposed to consider them as out of the direct line, and forming a branch from the former of these families. As there are only two species in the collection belonging to this family, I shall describe them in this place.

' Hot. Enl. 33.