

tractis, folio brevioribus; drupa oblonga, 1-sperma.—In sylvis prov. Rio de Janeiro.

I have not seen this plant, which evidently is very closely allied to, if not identical with, one of the three last-named species. The size of the leaves is not given by DeCandolle, nor the characters of the flower; but its fruit and seed are completely those of *V. mucronata*. The calyx is said to be 5-partite, with puberulous ovate sepals; the drupe oblong and 1-seeded, the seed being plicated round the prominent longitudinal indurated placenta, which is enlarged by other two abortive cells, and projects far into the cavity of the fertile cell, the seed being suspended from its summit. The specimen, being fructiferous, appears to have had no flowers, as Prof. DeCandolle says of it, "flore ignoto."

#### XIV.—Contributions to an Insect Fauna of the Amazon Valley.

COLEOPTERA: LONGICORNES. By H. W. BATES, Esq.

[Continued from vol. viii. p. 478.]

##### Genus ÆTHOMERUS.

Thomson, Class. des Céramb. p. 338.

Syn. *Macronemus*, Dej. Cat.; White, Cat.

Char. emend. Body subcylindrical. Muzzle moderately broad, quadrate; front plane; antenniferous tubercles short, prominent, widely separated at their bases. Antennæ naked, excessively elongated, in some species being five or six times the length of the body, capilliform; the joints slightly increasing in length to the apex, the eleventh joint generally the longest; the basal joint short, very slender at the base, abruptly enlarged into an ovate club. Palpi normal. Prothorax unituberculated on the sides. Elytra rounded at the tip. Femora clavate; tarsal joints short. Prosternum greatly constricted between the large anterior coxæ.

The sexes are not distinguishable, as in Longicornes generally, by the relative length of the terminal antennal joint in most of the species; there is a sexual character, however, in the apical ventral segment, the ♀ having in that part a deeply impressed fovea. The genus was established on certain curious species which agreed in having greatly elongated and hair-like antennæ, and strongly bowed fore tibiæ. I have extended the definition so as to embrace the *Alphus Lacordairei* of Dejean's catalogue—an insect which differs from all other *Alphi*, including *A. tuberosus* of Germar, to which it has otherwise some resemblance, in the curiously abrupt dilatation of the first antennal



joint—a feature characteristic of the genus *Æthomerus*. *Æ. Lacordairei* differs from the other species in having straight fore tibiæ, and in having rather less elongated antennæ, whose articulations are much shorter in the ♀ than in the ♂.

The species are nocturnal in their habits. They are of rare occurrence, and are found in the daytime crouched on leaves,—*Æ. Lacordairei*, however, being seen only closely adhering to decayed boughs. In those species which have strongly bowed fore tibiæ, the anterior femora are greatly enlarged and furnished on the inner side with a sharp ridge, which fits a corresponding groove along the tibiæ. In the crouching position, the fore legs are closely folded, the almost invisible antennæ laid backwards, and the whole insect assumes a rigid aspect, well calculated to deceive its enemies. *Æ. Lacordairei*, on the other hand, possesses passive means of defence of quite a different character: its colours and markings give it a deceptive resemblance to a dead pupa covered with a fungous growth, such as is often seen adhering to trees in damp climates. The deception is perfect, the insect having on each side of its body a large spot coloured and reticulated like a wing seen through the integument of a pupa. Thus we see here another instance of the widely different means Nature employs, within the same genus, to maintain the existence of her specific forms. Every species exists by virtue of some endowment which enables it to triumph over the infinite diversity of adverse circumstances that surround it at all stages of its life. This concerns us here, inasmuch as the general principle has an important bearing upon the systematic arrangement of species, a knowledge of the fact that structures are adapted to the ends just mentioned being necessary to avoid errors in estimating their affinities. Longicornes are greatly subject to these adaptations, those parts of structure being modified, from species to species, on which we depend for the establishment of genera, thus rendering, in this family, real generic definitions almost impossible.

1. *Æthomerus antennator*, Fabricius.

*Lamia antennator*, Fab. Syst. Eleuth. ii. p. 288. 36.

*Æ. elongatus*, tenuiter tomentosus, niger vel brunneus, variegatus: elytris inæqualibus, lineis tenuibus argenteo-albis inscriptis, basi elevatis, apud medium subnudis nitidulis. Mas segmento ultimo ventrali simplici: foemina eodem fovea magna impresso. Long.  $3\frac{1}{2}$ – $4\frac{1}{2}$  lin. ♂ ♀.

Head dark brown. Antennæ pitchy brown, the apices of the joints paler. Thorax with two dorsal tubercles in a transverse line with the lateral ones, all four of equal size; the surface punctured; dark brown or blackish, varied with lighter brown.



Elytra with short but strongly elevated and crested centro-basal ridges, the space between the two being also elevated and clothed with a silky fulvous-brown pile; the sides in the middle have each a very large depression: the surface of the elytra is punctate-granulate in rows, one of which runs straight along the disk on each side, continuous with the centro-basal ridge; others are diverted out of their course by the lateral excavations, within which the surface is extremely irregular; the disk near the suture is irregularly punctured; towards the apex are some elevated lines; the disk is naked and shining: the colour is generally nearly black, in some specimens silky brown of various shades; there are also numerous very slender silvery-white lines, two of which, more conspicuous, oblique on the disk, form an inverted V. Body beneath and legs dark brown, covered with a slight pile, and varied with paler shades. Anterior femora dilated; tibiæ curved and grooved on the inner side. Antennæ capilliform. In the male the apical ventral segment is simple; in the female it has a large deep transverse fovea near the apex.

This species I met with at Pará, at Obydos in Brazilian Guiana, and at Santarem; it is found also at Cayenne. I have received it from M. Depuiset, of Paris, as *M. ruficornis*, var. I think there can be no doubt it is the *Lamia antennator* of Fabricius; his description (somewhat better than the Fabrician descriptions usually are) seems to suit our insect sufficiently well. I have thought it better to give a more detailed description, for the sake of fixing the Fabrician name with more precision. The white lines are faint or wanting in some examples.

## 2. *Æthomerus rufescens*, n. sp.

*Æ. elongatus*, tomentosus, brunneo-ferrugineus: elytris inæqualibus, basi elevatis, omnino brunneo-tomentosis: antennis pedibusque ferrugineis. Mas segmento ultimo ventrali apice fortiter bisinuato; foemina latet. Long. 4 lin. ♂.

Head rufous brown. Thorax tuberculated as in *Æ. antennator*, clothed with rusty-brown pile, faintly punctured. Elytra with short but strongly elevated and crested centro-basal ridges, the space between them being slightly elevated; the sides in the middle have each a very large depression; the surface of the elytra along the discal portion is impunctate, being clothed with pile, and there is no line of granulations in continuation of the centro-basal ridge: the strongly flexuous line along the disk is present, the lateral ones are broken and confused within the excavation, as in *Æ. antennator*; the whole surface is rusty tomentose and opaque; there are indications of white lines in the same position as in the preceding species. Body beneath, legs, and antennæ ferruginous red. The apical ventral segment in the



male is strongly bisinuated at the tip. Anterior femora dilated; tibiæ curved and grooved within. Antennæ capilliform.

Taken at Santarem. The distinctness of this species from the foregoing depends more upon the structure of the ventral apical segment than on the general colour and clothing, which seem to be variable in these species.

### 3. *Æthomerus Lacordairei*, n. sp.

*Æ. subcylindricus*, cano-tomentosus, fronte, vertice et thoracis vitta dorsali violaceo-brunneis: elytris utrinque apud humeros macula magna lineata albam mentiente instructis, in medio prope basin fuscis, apices versus canis tuberosis. Long.  $6\frac{1}{2}$  lin. ♂ ♀.

Head rather broader, and front more plane, than in the preceding species; epistome and cheeks hoary white, rest of the head dark brown; antennæ yellowish, partially clothed with fine hoary-white pile. Thorax somewhat rugose transversely; lateral tubercles acute, dorsal ones only slightly raised, hoary white, a broad stripe of a violet-brown colour down the centre. Elytra with the centro-basal ridges short, obtuse, punctate-granulate, chiefly in rows, but more confused in the middle towards the base; on each side near the shoulders is a large yellowish spot traversed by the rows of granulations, which are of a darker colour and varied by discoloured punctures in the interstices, the whole producing an imitation of a wing; the basal space between the two spots is blackish; the apical half of the elytra is hoary-white, tomentose, varied with dusky, and having white tubercles in rows continuous with the granulate punctures of the basal part. Body beneath and legs yellowish testaceous, clothed unevenly with hoary-white tomentum. Fore femora and tibiæ simple. The antennæ in the male are about three times, in the female about twice, the length of the body.

Taken at various places on the Lower and Upper Amazons, closely clinging to dead boughs. As I have before stated, this species is the *Alphus Lacordairei* of Dejean's Catalogue, according to French collections.

### Genus MYOXINUS (Dej. Cat.?), nov. gen.

Head narrow across the vertex, the antenniferous tubercles being very prominent and directed upwards. Antennæ simple, the basal joint pyriform-clavate, though somewhat slender, shorter than the third. Palpi with their terminal joints slender and pointed, as in Lamiaires generally. Thorax with the sides furnished with a short simple spine, without conical tubercle; the disk having three small acute tubercles. Elytra with short, strongly raised and abrupt, crested centro-basal ridges; their tips rounded. Mesosternum narrowed behind, but broader than



long, its front oblique and bituberculated. Prosternum simply rounded.

The narrowness of the head across the vertex, and the consequent approximation of the antenniferous tubercles, which at the same time are very prominent, amply distinguish this genus from *Acanthoderes*, as well as from the following, *Alphus*. It has, in common with *Alphus*, the comparative slenderness of the basal joint of the antennæ; but this is more pyriform and shorter in comparison with the third in *Myoxinus* than in *Alphus*. The form of the thorax and the crested ridges of the elytra contribute to give the species a peculiar facies. The name was first given, in Dejean's Catalogue, to an undescribed species; the genus has never been characterized; the species to which the generic name was applied I have seen in collections, and it appears different from the one I took; both belong, however, decidedly to the same genus. M. Thomson (Classif. des Cérambycides, p. 337) unites the genus to *Alphus*. It is more nearly allied to *Alphus* than to any other genus; but I think the characters given above will show that it should be separated from it.

*Myoxinus pictus*, Erichson.

*Acanthoderes pictus*, Erichs. Conspect. Ins. Peruan. p. 144.

I took this species at Ega and St. Paulo. It is sluggish in its motions, and is found on dead branches of trees, to the bark of which the insect is assimilated in colours. I have nothing to add to the excellent description given by Erichson in the place quoted.

Genus ALPHUS, Thomson.

Thomson, Classif. des Cérambyc. p. 10.

M. Thomson notices the shape of the basal joint of the antennæ, but, I think, not with sufficient detail to show the difference in that respect between this genus and its allies. In *Alphus* this joint is very gradually thickened, and is nearly equal in size to the third; therefore it is not pyriform in shape, as is the rule in the *Acanthoderitæ*. The genus differs from *Myoxinus* in the greater breadth of the head across the crown; the head, however, is much narrower than it is in *Acanthoderes* and the allied genera; the muzzle also is much more obtuse. The genus, in fact, forms a connecting link between the *Acanthoderitæ* and the *Acanthocinitæ*, the chief character of the latter group being the great length of the basal joint of the antennæ, which exceeds that of the third. The other characters of *Alphus* which require mention are the sockets of the fore haunches, which in most of the species are angulated exteriorly; the fore tarsi, which are not dilated in the male; and the mesosternum, which is much nar-



rowed behind, as in *Myoxinus*. As the genus is very imperfectly known at present, I add a list of all the described species, including those introduced in the present memoir.

1. *A. leuconotus*, Thoms. Classif. p. 10, = *sellatus*, Dej. Cat. sec. Chevrolat. South Brazil.

2. *A. pubicornis*, Serville. South Brazil.

*Oreodera pubicornis*, Serv. Ann. Soc. Ent. Fr. iv. p. 21.

*Ægomorphus pubicornis*, White, Cat. Long. Col. Brit. Mus.

3. *A. centrolineatus*, n. sp. Amazons and Venezuela.

4. *A. senilis*, n. sp. Amazons.

5. *A. scutellaris*, n. sp. Amazons.

6. *A. canescens* (Dej. Cat. ?), n. sp.\* South Brazil.

7. *A. tuberosus*, Germar.

*Lamia tuberosa*, Germ. Ins. Sp. nov. p. 477.

8. *A. subsellatus*, White.

*Alphus subsellatus*, White, Cat. Long. Col. Brit. Mus. p. 375.

The *Ædilis griseofasciata* of Serville, included by White in this genus, does not belong to it. Its proper position, as shown by the length of the basal joint of the antennæ and other characters, is amongst the *Acanthocinitæ*.

### 1. *Alphus centrolineatus*, n. sp.

*A. oblongus*, modice convexus, fusco-ferrugineus, tomentosus, pilis cervinis passim vestitus: thorace fusco bilineato: elytris punctatis, punctis setiferis, apice oblique truncatis, apud medium linea abbreviata, suturali, communi, fusca ornatis. Long. 5 lin. ♂ ♀.

Head moderately broad, tomentose. Antennæ in both sexes half as long again as the body, dull ferruginous, spotted with hoary tomentum, pubescent, more densely so beneath than above; the terminal joints more slender and less hairy than the preceding. Thorax with large lateral tubercles, and two impunctate obtuse dorsal ones, the interstices coarsely punctured: on each side of the upper surface is a longitudinal dark brown line. Elytra punctured throughout; the punctures closer and granulated towards the base, each furnished with a short blackish

\* *Alphus canescens*, n. sp.—Oblongus, antice leviter attenuatus, tomento cinereo-olivascens vestitus. Caput parvum, fronte inter antennis concava. Antennæ corpore duplo longiores, infra dense ciliatæ, canescentes, articulorum apicibus nigris. Thorax grosse punctatus, supra breviter tricarinatus. Elytra grosse irregulariter punctata, olivascens, apud medium canescentia, apicibus breviter truncatis, carinis centro-basalibus parum elevatis postice prolongatis. Subtus niger, pilis cinereis vestitus. Pedes cinereo-pubescentes. Long. 7 lin. Rio Janeiro.



bristle: the centro-basal ridges are scarcely indicated: the surface is dull ferruginous, tomentose, with a few streaks of hoary colour; in the middle of the suture is a short, abruptly limited, dark-brown line. Body beneath black, thinly clothed with hoary pile. Legs ferruginous, clothed with similar pile and also with long pale hairs.

The elytra in the male taper towards the apex, which is obliquely truncated, the outer angle being slightly produced; in the female, the elytra are of equal breadth, and are obtusely rounded towards the tips, which are simply truncated obliquely.

This species, which is nearly allied to *A. pubicornis*, Serv., of Rio Janeiro, I found at Obydos, in Brazilian Guiana, on decayed branches. I have a specimen, ♀, also from Venezuela.

### 2. *Alphus senilis*, n. sp.

*A. oblongus*, tomento cano-olivascens vestitus: thorace punctato, tuberibus lateralibus productis, dorsalibus tribus acutis: elytris granulato-punctatis, fasciculis pilorum ornatis, apice singulatim rotundatis, regione scutellari fusca. Long. 8 lin.

Head punctate, tomentose, slightly depressed between the antennæ. Antennæ half as long again as the body, ashy; the tips of the joints blackish. Thorax with very acute prolonged lateral tubercles, and three acute and prominent dorsal ones arranged in a triangle; the surface closely punctured. Elytra oblong, moderately convex, rounded at the tips; the centro-basal ridges prominent, crested with tubercles, the scutellar space between them very thickly impressed with large, regular, oblong punctures; this space is of a dusky or brown colour; the rest of the surface is olive-ashy, coarsely granulate-punctate; each elytron has three indistinct incomplete longitudinal ribs, and along each of these is an interrupted row of small fascicles of hair. Body beneath and legs clothed with hoary tomentum.

On dead branches, Obydos and Pará.

### 3. *Alphus scutellaris*, n. sp.

*A. oblongus*, tomentosus, cinereus, thorace brunneo, spatio triangulari apud scutellum violaceo-brunneo: thorace punctato, tuberibus lateralibus productis acutis, dorsalibus tribus obtusis: elytris granulato-punctatis, fasciculis parvis pilorum ornatis, apice singulatim rotundatis. Long.  $4\frac{1}{2}$  lin.

Head punctured, tomentose. Antennæ half as long again as the body, ashy; tips of the joints blackish. Thorax with very acute-pointed lateral tubercles, two obtuse dorsal ones, and a third behind, smaller, also obtuse; the surface coarsely punctured, pubescent and brown in colour. Elytra with moderately raised crested centro-basal ridges, the scutellar space between them



densely and regularly punctured, violet-brown in colour; the rest of the surface is ashy-white, sparingly punctured; each elytron has two or three incomplete raised lines, along each of which is a row of very small linear pencils of dark-coloured hair. Body beneath and legs black, clothed with ashy pile.

This species I found at Caripí, near Pará. It is closely allied to the preceding, and is probably a variety of it; but its much smaller size, different coloration and punctation, give it so distinct a character that, in the absence of connecting links, I am obliged to treat it as a separate species.

The present genus terminates the succession of generic forms which lead from the *Acanthoderes* type to that of *Acanthocinus* and *Leiopus*. I shall now return to a series of forms which appear to have branched off from *Acanthoderes*, especially from those species resembling *Pteridotelus* in general structure.

[To be continued.]

XV.—On new Species of Snakes in the Collection of the British Museum. By Dr. ALBERT GÜNTHER.

[Concluded from p. 59.]

NATRIX.

Physiognomy entirely that of *Tropidonotus*. Body stout, cylindrical; belly rounded; tail rather long. Temple shields of moderate size. Scales smooth, in 19 rows, without apical groove; anal entire, subcaudals two-rowed. Teeth of equal length, not grooved, of moderate length.

*Natrix lavissima*. Pl. IX. fig. 4.

We have employed for this new genus an old name well adapted for the snakes of the family of Natricidæ, but entirely abandoned by later herpetologists, and superseded by that of *Tropidonotus*. The present species has so completely the physiognomy of *Tropidonotus*, that we may be justified in giving a very short description. The anterior frontals are small, triangular, somewhat pointed anteriorly; two nasals, nostril between; a large loreal; one anterior and two posterior oculars; six rhombic temporals, the anterior in contact with the lower ocular only; eight upper labials, the eye over the fourth, the fifth slightly entering the orbit. Scales quite smooth, rhombic, in 19 rows. Ventrals 175; anal 1; subcaudals 76. Upper and lateral parts uniform blackish ash; ground-colour of the abdomen yellowish; a blackish band commences at the throat, and, gradually becoming broader and more irregular, covers nearly entirely the





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