

Bütschli has no reason for doubting that the former supposition is the only correct one. Among a great number of these animals I have not seen a single one in which there were not always the two kinds of spicules, and always arranged in the same manner—that is to say, the longer ones implanted only by one end at the surface of the head, and the smaller ones entirely immersed in the organic substance of the head and peduncle; further I have never observed any other spicules, small grains of sand, or other foreign substances. I believe, therefore, that we may, without hesitation, accept my opinion that these spicules are the product of the organism itself, as, indeed, we not unfrequently find siliceous spicules formed by the protoplasm of the Heliozoa.

As regards the classification of the animal, there is only a single point that makes me hesitate before placing it among the Heliozoa; and that is the absence of pseudopodia. I have never been able to observe pseudopodia issuing from any part of the body, just as I have also never seen them in *Haliphysema ramulosa*; and M. Paul Mayer has also told me that he never saw them in *Wagnerella*. With the exception of this difference there is a very great resemblance between *Wagnerella* and the Heliozoa, such as *Clathrulina*, for example—a resemblance much closer than with any Rhizopod or, in general, any other Protozoa. It must consequently form a distinct family in the group of the Heliozoa—a family which will be characterized by the presence of separate spicules forming the skeleton, and by the presence of a peduncle which attaches the animal to foreign objects. This family should undoubtedly be called WAGNERELLIDA, from the generic name of the single species known.

XXIX.—*Notes on Longicorn Coleoptera.—Revision of the Ærénicides and Amphionychides of Tropical America.*
By H. W. BATES, F.R.S., F.L.S.

[Continued from p. 204.]

Isomerida fimbriata.

- I. albicollis* major et robustior, elytris postice paullo dilatato-explanatis. Niger, griseo subtiliter pubescens, thorace lateribus obtuse tumidis vittaque angusta indistincta grisea; elytris apice rotundatis et planatis, carina laterali paullo ante apicem desinente, dorso subcrebre punctulatis, lateribus vitta alba (spatium inter carinam et marginem occupante) longe ante apicem terminata; antennis (♂) corpore longioribus nigris, articulis secundo ad sextum infra sparsim ciliatis, cæteris pubescentibus; corpore subtus nigro,

femoribus basi testaceis; trochanteribus posticis productis, acutis.

Long. 6-7 lin. ♂.

Rio Janeiro, Minas Geraes.

Resembles *Spathoptera gutticollis*, Thoms., but is smaller, and distinguished at once by the generic character of unarmed thorax. In *Spathoptera* the sides (behind the middle) are furnished with a long and robust spine (obtuse at the point); in the present species they are simply though rather strongly rounded.

Isomerida plumosa.

Angustior, elongata, nigra; antennis articulis secundo ad sextum supra, infra et intus densissime nigro-penicillatis; thorace breviter cylindrico, lateribus medio vix rotundatis, basi et apice paululum sulcatis; linea laterali vix conspicua pallida; elytris apicem versus perpaulum dilatatis, apice singulatim rotundatis; dorso sublineatim punctulatis, carina laterali elevata, apicem fere attingente, epipleuris vitta indistincta cinerea; femoribus basi rufo-testaceis; trochanteribus posticis spiniformibus.

Long. $7\frac{1}{2}$ lin. ♂ ♀.

Rio Janeiro, ♀ Tucuman.

The brush-like ornamentation of the antennæ, at first sight, resembles that of *Isomerida crinicornis* (Germar); but in that species the pencils are on the *under* side of the joints only from the first to the seventh, though on each joint they form two diverging brushes. *I. crinicornis* has the elytral suture pale testaceous, and the posterior trochanters simple.

Isomerida picticollis.

Elongata, nigra, subtiliter griseo-pubescent, fronte maculis duabus, occipite vittis duabus thoraceque macula magna utrinque anticolaterali cano-tomentosis, elytris linea utrinque juxta carinam marginalem testacea; fronte convexa; thorace parvo, basi constricto; elytris elongatis, fere parallelis, apice singulatim rotundatis vix truncatis, supra crebre punctulatis; antennis ♂ corpore haud longioribus, articulis primo ad septimum infra subpenicillatis, tertio cæteris conspicue longiore.

Long. 6 lin. ♂.

Paraná, South Brazil.

Although the relatively greater length of the third antennal joint would bring this species within the definition of *Amphionycha*, the thick and somewhat tufted and long cilia of the underside of the joints, from the first to the seventh, is a decided character of the genus *Isomerida*. The whitish tomentose spots of the thorax are situated on the antero-lateral part on each side, reaching a little way down the flank, but not attaining the mesial dorsal line, where there is a very straight stripe of the black ground-colour.

Isomerida vittipennis.

I. lineatæ (Bates) simillima, at differt antennarum articulo tertio quam quartus vix longiore. Cylindrica, nigro-fusca, subtiliter griseo-pubescent, thorace vitta laterali, elytris linea elevata dorsali limboque laterali carneo-fulvis: capite inter antennis fortiter concavo; thorace antice angustato, medio vix latiore, disco subtuberculato, nitido, sparsim punctato; elytris lineatim punctulatis, apice breviter truncatis; antennis articulis basi flavo-testaceis, articulis omnibus (secundo excepto) subæqualibus, primo ad sextum infra penicillatis; femoribus ventrisque apice flavo-testaceis. Long. 6-7 lin.

Rio Janeiro, Novo Friburgo.

In colour very similar to *I. lineata* ♀, but longer and more cylindrical, and the third antennal joint very little longer than the fourth, with thick tufts of hair beneath all the joints from the first to the sixth.

Isomerida longicornis.

Cylindrica, fulvescens pube tenui flavo-cinerea vestita, pedibus rufis, tibiis extus tarsisque nigris: antennis (♂) corpore multo longioribus, robustis, filiformibus, nigris, articulo tertio cæteris distincte longiore, secundo ad septimum infra paullo densius ciliatis; capite haud retractili, fronte convexa; thorace cylindrico, densius flavo-tomentoso; elytris fundo rufescentibus, apice truncatis, angulo externodentato, dorso lineatim punctulatis interstitiis nonnullis subelevatis, carina laterali paullo ultra medium obsoleta, carinulaque exteriori paullo longiore.

Long. $6\frac{1}{4}$ lin. ♂.

Bahia, Brazil.

Of all the species hitherto described, this approaches *Amphionycha* nearest in the relative proportions and ciliation of the antennal joints. The third joint, however, is not relatively so long as it is in *Amphionycha*; and the hairs beneath the joints are longer than in that genus, and decidedly denser on joints 2-7. In facies and style of coloration and in the truncature of the elytra the species is quite conformable to the prevailing character of *Isomerida*.

Hemilophus infuscatus.

Fere cylindricus, fusco-niger, capite et thorace (hoc disco postice fusco excepto) fulvescenti-rufis, elytrorum sutura (anguste et indistincte) vittaque abbreviata laterali cinereis; antennis nigris, articulis nonnullis basi testaceis, femoribus fulvo-testaceis: antennis articulis secundo ad quartum subtus dense, cæteribus sparsim ciliatis; thorace sparsim grosse punctato, disco posteriore

valde convexo; elytris apice recte truncatis, angulo exterioro dentiformi, dorso sublineatim punctulatis, carina laterali acutissima.

Long. $4\frac{1}{2}$ lin. ♂ ♀.

Rio de Janeiro, Brazil.

This species, long known in collections under the inedited name which I have adopted, is closely allied to *H. dimidiaticornis* (Serv.), the type of the genus. It differs *inter alia* in the colour of the thorax, which in Serville's species is black with a large spot on each side pale reddish.

Hemilophus leucogramma.

H. dimidiaticorni valde affinis, at differt thorace nigro linea utrinque alba tomentosa. Niger, capite rufo; thorace supra nigro nitido, punctato, vitta laterali utrinque alba: elytris apice obtusissime truncatis, muticis, vitta lata marginali apicem longe haud attingente, albo-tomentosa; femoribus quatuor anticis flavo-testaceis, geniculis infuscatis; antennis articulis secundo ad quartum infra densissime nigro-penicillatis.

Long. 5 lin.

Province of Paraná, Brazil.

Hemilophus unicolor.

Fulgineo-niger, vitta laterali elytrorum rufescenti-cinerea, femoribus fulvo-testaceis fusco-signatis; elytris apice obtusissime truncatis, muticis; antennis articulis secundo ad quartum infra densissime nigro-penicillatis, omnibus basi testaceis.

Long. 5 lin.

Brazil.

Hemilophus Smithii.

H. fasciato et spectabili quoad colores similis; fere cylindricus, niger, elytris fascia postmediana fulvescenti-alba maculaque humerali fulva; capite fulvo, fusco-nebuloso vittulaque verticis nigra; thorace vitta laterali e tomento compacto flava, vel cretacea fulvo-marginata; corpore subtus medio plus minusve fulvo, abdominis segmentis tertio et quarto in ♀ albis (medio fuscis); pedibus nigris, femoribus basi fulvis; antennis articulis tertio et quarto valde elongatis fere æqualibus, quarto paullo grossiore et in ♀ infra densius ciliato; thorace medio utrinque paullulum angulato; elytris apice late rotundatis paullo truncatis, dorso confuse punctulatis, carina laterali fortissima.

Long. 6– $6\frac{1}{2}$ lin. ♂ ♀.

Lower Amazons (*Mr. Herbert Smith*).

Hemilophus cayennensis.

Subcylindricus, robustus, fusco-niger, antennarum articulis quinto ad septimum totis, quarto apice, secundo ad quartum octavoque basi flavis; capite linea verticis genisque cinereis; thorace vitta lata utrinque laterali cinereo-tomentosa: elytris apice late rotundatis et prope suturam breviter truncatis, carina laterali valde elevata flexuosa, dorso basin versus punctulatis, fascia postmediana (ad suturam late interrupta) alba fulvo-marginata, maculaque humerali fulva; femoribus pallide fulvis; abdomine (♀) segmentis secundo et tertio albo-tomentosis; antennis articulis tertio et quarto modice elongatis, infra dense ciliatis.

Long. $6\frac{1}{2}$ lin. ♀.

Cayenne.

Hemilophus duplicatus.

Subangustus, erecte pilosus, fusco-niger, fronte, thoracis lateribus, elytrisque vitta lata mediana, macula supra callum humeralem lineaque marginali versus humeros ochraceo-fulvis: capite angusto, retracto; antennis articulo tertio modice, quarto vix elongato, subtus dense hirsutis; thorace cylindrico; elytris parallelis, apice rotundatis, carinis lateralibus utrinque duabus, interiore abbreviata; femoribus basi fulvo-rufis.

Long. 5 lin. ♂?

New Granada.

Differs from all other species of the genus in its retractile head and double elytral carina, besides the much shorter fourth joint of the antennæ. In other respects it presents the characters of *Hemilophus*, and in colours resembles *H. fasciatus* and *H. spectabilis*.

Tyrinthia macilenta.

Angusta, elongata, postice sensim dilatata, supra fulva, thorace medio elytrisque utrinque vitta nigro-fuscis; capite antice fulvo, postice nigro fulvo-trivittato: vertice profunde impresso, fronte modice prominula; antennis gracilibus, nigris, articulo tertio infra (quartoque basi) longe ciliato; thorace angusto; elytris dense substriatim punctulatis, absque costulis; pedibus nigris, coxis femorumque dimidio basali flavo-testaceis.

Long. $3\frac{3}{4}$ –5 lin.

Novo Friburgo, Rio Janeiro.

Tyrinthia longiscapus.

Gracilis, erecte breviter nigro-pilosa, supra fulva; capitis vertice et vittis tribus, thorace vitta dorsali alteraque laterali, elytris vitta abbreviata communi basali-suturali alteraque utrinque apicali (versus medium, interdum usque ad basin) attenuata nigris: antennis nigris, longe pilosis, scapo valde elongato, articulo tertio

haud incrassato; elytris versus apicem paullo dilatatis, apice singulatim rotundatis, supra sublineatim punctatis; corpore subtus pedibusque nigris, femoribus plus minusve testaceis.
Long. $3\frac{1}{2}$ –4 lin.

Rio Janeiro (*Rev. Hamlet Clark*).

The forehead is only moderately convex in the single example examined; but the vertex is deeply depressed, and the elytra are destitute of lateral keels. The antennal scape is relatively only a little longer than in *T. capillata*, but it is nearly equal in length to the third joint; the long hairs are not so dense beneath the joint as in other species.

Tyrinthia reversa.

Elongata, postice dilatata, nigro-pilosa, supra fulva, fascia frontali, thoracis lateribus, sutura vittaque utrinque elytrorum nigris: fronte conice porrecta; antennis dense et longe pilosis, scapo valido, modice elongato; elytris dense punctatis, subtiliter elevato-lineatis, apice singulatim rotundatis; corpore subtus pedibusque nigris, coxis et femoribus testaceis.
Long. $4\frac{1}{4}$ lin.

Rio Janeiro (*Rev. Hamlet Clark*).

Very similar to *T. longiscapus*; but the dorsal part of the occiput and thorax are fulvous instead of black, and the entire flanks of the latter are black. The forehead is produced and conical, with a slight notch in the apex of the protuberance.

Tyrinthia xanthotænia.

Sublinearis, postice deplanata, erecte pilosa, cinereo-nigra, capite (vertice excepto), thorace vitta angusta laterali, elytris vitta lata laterali, pedibus antennarumque articulis quarto quintoque et scapo (infra) melleo-flavis: capite inter antennis depresso, fronte convexa linea mediana profunde divisa; thorace parvo, medio paullulum angulato, antice angustato; elytris ante apicem paullo rotundatis, apice sinuatim truncatis, angulo exteriori dentato, dorso usque ad apicem declivi, lineatim crebre punctulato, carina laterali obtusa subrecta, epipleuris modice (postice perparum) elevatis; antennis articulo tertio undique longe, modice dense piloso.
Long. $3\frac{3}{4}$ lin. ♂?

Rio Janeiro, Brazil.

Tyrinthia obtusa.

Oblongo-linearis, elytris apice late rotundatis haud dilatatis, lateribus carina incrassata longe ante apicem terminata: rufo-fulva, erecte pubescens, capite postice supra nigro, fronte (♂ fortius) conica, vertice valde concavo; antennis nigris, articulo tertio longissimo, paullo incrassato, dense hirsuto, quarto ad undecimum

elongatis (præcipue ♂) gracillimis; thorace valde transverso, dorso convexo, nigro nitido, linea laterali rufo-fulva; elytris subplanatis crebre punctatis, rufo-fulvis, apice nigris; corpore subtus pedibusque nigris; pectore medio, coxis femoribusque testaceis.

Long. 5 lin. ♂ ♀.

New Granada.

The species has a peculiar facies, owing to its parallel form, the length and slenderness of the joints 4-11 of the antennæ, and the coloration. The surface is slightly shining. The lateral carinæ of the elytra extend from the base to beyond the middle, and are thickened and raised posteriorly so as to give the elytral surface a plane appearance in the central portions.

Malacoscyclus albens.

Angustulus, nigro-fuscus, passim erecte pilosus, antennis articulo quarto quintoque basi, pedibus (tarsis tibiisque apice exceptis) et vitta laterali elytrorum albo-testaceis; capite (occipite excepto) thoracisque lateribus rufo-testaceis: capite postice subtumido; thorace brevi, antice et postice constrictulo, sparsim grosse punctato; elytris apice breviter truncatis (angulo exteriori producto), subcrebre punctulatis; antennis articulo tertio valde elongato et piloso sed haud incrassato, quarto dimidio brevior.

Long. $4\frac{1}{4}$ lin.

South Brazil.

Agrees with *Malacoscyclus* in the great length and pilosity of the third antennal joint, although the absence of thickening in the same joint gives the insect a different facies. The elytra have no elevated lines, and the lateral keel is much thickened; the white lateral vitta is broad from the shoulder to far beyond the middle, whence it narrows and terminates in a point before the apex.

Malacoscyclus iodinus.

Elongatus, niger, elytris violaceis sericeo-nitentibus, fascia postmedi-ana flava; capite thoraceque nigro-velutinis, fronte vix convexa; thorace linea utrinque laterali indistincte fulva; elytris apice late rotundatis, dorso convexis, utrinque costulis duabus tertiarumque laterali præter carinam, lateribus post medium paullulum explanatis; pedibus antennisque nigris, coxis fulvis.

Long. $6\frac{1}{2}$ lin.

Ecuador (*Buckley*).

Malacoscyclus auricomus.

Elongatus, angustus, niger, verticis et thoracis vitta utrinque laterali elytrisque fulvis aureo-sericeis, his vitta suturali usque ad

medium ibique in maculam magnam dilatata alteraque marginali a basi usque ad medium nigris; antennis nigris, articulo quarto basi fulvo; capite antice, pectore medio coxisque flavis; elytris apice late rotundatis, angulis exterioribus breviter spinosis, dorso crebre sublineatim punctulatis.

Long. 5 lin. ♀.

Chanchamoyo, Peru (*Dr. Thamm*).

Apparently closely allied to *M. Klugii*, Thomson, from Colombia.

Malacoscyclus cinctulus.

Hemilopho spectabili (Blanch.) similis, at minor. Gracilis, linearis, niger; vertice et thorace utrinque vitta laterali elytrisque macula triangulari humerali fasciaque lata postmediana ochraceis aureo-sericeis; fronte et genis flavis; antennis nigris, articulo quarto basi flavo; elytris apice subtruncatis, angulo exteriore spinoso, dorso lineatim punctulatis; pedibus basi testaceis.

Long. $4\frac{1}{4}$ lin. ♀.

Bolivia, Yungas, La Paz (*Buckley*).

Malacoscyclus gratiosus.

Elongatus, niger, elytris (vittula subhumerali excepta) croceo-fulvis, capite antice fulvo, vertice thoraceque nigris, vitta utrinque laterali fulva; scutello nigro; elytris apice late subtruncatis, angulo exteriore breviter spinoso, dorso planatis crebre punctulatis, carina laterali acutissima; antennis nigris, articulis quarto, quinto et sexto basi fulvis.

Long. $6\frac{1}{2}$ lin. ♀.

Ecuador (*Buckley*).

Malacoscyclus gonostigma.

M. cirrato (Germ.) proxime affinis, differt elytrorum macula nigra postica antice ad suturam acute angulata. Niger, vertice vittis duabus postice divergentibus et per thoracis latera continuatis fulvo-rufis; elytris (quarto apicali nigro excepto) fulvo-ochraceis, sutura et lateribus usque ad basin nigris; genis (♂) femorumque basi antennarumque articulis quarto et quinto flavo-testaceis.

♂. Caput inter antennis late concavum, fronte medio linea impressa; vittis flavis verticis et thoracis angustis.

♀. Caput crassum, inter antennis modice concavum; fronte genisque totis fulvis.

Long. 4 lin. ♂ ♀.

Rio Janeiro, Brazil (*Rev. Hamlet Clark*).

The head in the female is much broader behind, and the crown and occiput much more convex than in the same sex of the

common Brazilian *Malacoscyclus cirratus*. The species further differs in the crown having a single central black stripe, and not two separate vittæ. The colour of the fore part of the head varies, being sometimes wholly fulvous and sometimes more or less clouded with dusky or black.

Themistonoe exilis.

Elongata, gracilis, postice paullulum rotundato-ampliata, longe sparsim setosa, subtus nigra, supra fulvo-ochracea, vertice et thorace vittis tribus elytrisque margine apicali nigris: antennis articulo tertio valde elongato, incrassato, infra ciliato, lateribus utrinque dense hirsuto, articulis quarto ad undecimum modice tantum abbreviatis; elytris utrinque costulis dorsalibus duabus carinaque acuta laterali.

Long. 5 lin.

Yungas, La Paz, Bolivia (*Buckley*).

Intermediate in generic structure between *Themistonoe* and *Malacoscyclus*, but nearer the former on account of its elongate shape and the distinct, though moderate, rounded expansion of the elytra towards their apices. The third antennal joint, viewed sideways, appears slender and fringed beneath only with fine and long hairs; but viewed from above it is thicker than the fourth and densely pilose on each side, as in the larger species of *Themistonoe*.

Lycidola expansa.

L. Beltii quoad formam similis, elytris mox pone humeros valde explanato-dilatatis. Nigra, thorace lateribus, elytris fascia basali alteraque mediana fulvis, his area apicali violacea; pedibus basi testaceo-flavis; elytris utrinque 4-costulatis, interstitiis punctulato-coriaceis.

Long. $6\frac{1}{2}$ lin. ♂.

New Granada.

Agrees with *L. Beltii* in the wide dilatation of the elytra, which is carried to a greater extent in these species than in *L. simulatrix* and *L. togata*. It differs, however, in colours, the elytra being violet-black (more violet in the apical part) and traversed by two tawny-ochreous belts of equal width, one basal and the other median. The sides of the thorax are also tawny ochreous, having a broad dorsal vitta (much narrowed behind) of the black ground-colour; the head is black, with a spot between the antennæ and one on the occiput on each side tawny.

List of the Ærénicides and Amphionychides of Tropical America.*

Subfamily Saperdinæ.

Group ÆRÉNICIDES.

Genus 1. MECAS, Lec. (*Dylobolus*, Thoms.).

1. *senescens*, Bates, Biol. Centr.-Amer., Col. v. p. 203. Mexico.
2. *rubripes*, Bates, ibid. p. 203. Mexico.
3. *ambigenus*, Bates, ibid. p. 203. Mexico.
4. *laminata*, Bates, ibid. p. 204. Mexico, Guatemala.
5. *obereoides*, Bates, ibid. p. 204, t. 15. f. 16. Mexico, Guatemala.
6. *laticeps*, Bates, ibid. p. 204. Mexico, Guatemala.
7. *mexicana*, Bates, ibid. p. 204. Mexico, Guatemala.
8. *rotundicollis*, Thomson. Mexico, Guatemala.
9. *ruficollis*, Horn, Trans. Amer. Ent. Soc. vii. p. 44. Mexico (Texas).

Four other species have been described from North America.

Genus 2. PANNYCHIS, Thoms.

1. *sericeus*, Thoms. Mexico.
2. *ducalis*, Bates, Biol. Centr.-Amer., Col. v. p. 205. Mexico.
3. *callicerus*, Bates, ibid. p. 206. Mexico.

Genus 3. APHILESTHES, Bates, antè, p. 145.

1. *rustica*, Bates, antè, p. 145. Venezuela.

Genus 4. ANTODYCE, Thoms.

1. *picta*, Klug. Brazil.
2. *cretata*, Bates, Biol. Centr.-Amer. t. 15. f. 8. Mexico, Guatemala, Nicaragua.
3. *nympha*, Bates, Biol. Centr.-Amer., Col. v. p. 207. Mexico, Guatemala.
4. *juncea*, Bates, antè, p. 145. Brazil.

Genus 5. ÆRENICA, Thoms.

1. *hirticornis*, Klug. Brazil.

* In this list I give references only to those genera and species which have been published since the appearance of the tenth volume of Harold and Gemminger's Catalogue, which contains full citations to all species described up to the year 1873.

2. *albicans*, Guérin. Brazil.
3. *canescens*, Klug. Brazil.
4. *hirsuta*, Bates, Biol. Centr.-Amer., Col. v. p. 206. Guatemala.
5. *multipunctata*, Serville. Brazil.
6. *spissicornis*, Bates, antè, p. 145. Brazil.
7. *leucippe*, Bates, antè, p. 146. Brazil.
8. *porosa*, Bates, antè, p. 146. Venezuela.

Genus 6. PHAULA, Thoms.

1. *antiqua*, Thoms. Brazil.
2. *Thomsonii*, Lacord. Brazil.
3. *lichenigera*, Perty. Brazil.

Genus 7. ISCHNOPHYGAS, Thoms.

1. *telephoroides*, Thoms. Mexico.

Genus 8. APAGOMERA, Bates, antè, p. 146.

1. *triangularis*, Germar. Brazil.
2. *suturella*, Bates, antè, p. 147. Brazil.
3. *azurescens*, Bates, antè, p. 147. Brazil.

Genus 9. HYDRASHEMA, Thoms.

1. *fabulosa*, Thoms. Brazil.
2. *virgata*, Pascoe, Ann. & Mag. Nat. Hist. 1878, ii. p. 377. Brazil.

Genus 10. EULACHNESIA, Bates.

1. *sapphira*, Bates. Amazons.
2. *smaragdina*, Bates, Biol. Centr.-Amer., Col. v. t. 15. f. 11. Nicaragua.
3. *cobaltina*, Bates, antè, p. 148. New Granada.
4. *calliste*, Bates, antè, p. 148. Peru.
5. *aequatoria*, Bates, antè, p. 149. Ecuador.
6. *viridipennis*, Bates, antè, p. 149. Ecuador.

Genus 11. DADOYCHUS, Chevr. (*Daduchus*?)

1. *flavocinctus*, Chevr. Brazil.

Genus 12. AMILLARUS, Thoms.

1. *apicalis*, Thoms. (*erythrodera*, Chevr., *mutabilis*, Bates), Biol. Cent.-Amer., Col. v. t. 15. f. 14. Nicaragua, New Granada, Amazons.

Genus 13. PRETILIA, Bates.

1. *telephoroides*, Bates. Amazons.

Group AMPHIONYCHIDES.

Genus 14. SPHALLONYCHA, Bates, antè, p. 149.

1. *roseicollis*, Bates. Amazons.

Genus 15. ALAMPYRIS, Bates., Biol. Centr.-Amer., Col. v.
p. 219.

1. *fuliginea*, Bates, Biol. Centr.-Amer., Col. v. p. 219.
Mexico.
2. *curta*, Bates, ibid. p. 219. Mexico.
3. *nigra*, Bates, ibid. p. 220. Mexico.
4. *melanophiloides*, Thoms. Mexico.
5. *photinoides*, Bates, Biol. Centr.-Amer., Col. v. p. 220.
Guatemala.
6. *mimetica*, Bates, ibid. p. 220. Mexico.
7. *marginella*, Bates, ibid. p. 221. Mexico.
8. *quadricollis*, Bates, ibid. p. 221. Mexico.
9. *planipennis*, Bates. Brazil.

Genus 16. TETANOLA, Bates, antè, p. 151.

1. *polita*, Bates, antè, p. 151. Ecuador.

Genus 17. ESSOSTRUTHA, Thoms.

1. *læta*, Newm. Mexico.
2. *fimbriolata*, Bates, Biol. Centr.-Amer., Col. v. p. 210
(*albina*, Pasc. ?) Mexico.
3. *miniata* (Lac.), Bates, ibid. p. 211. Mexico.
4. *cinnabarina*, Bates, ibid. p. 211. Guatemala.
5. *binotata*, Bates, ibid. p. 212, t. 15. fig. 18. Mexico.

Genus 18. ERANA, Bates.

1. *cincticornis*, Bates. Amazons.
2. *pusilla*, Bates. Guatemala, Nicaragua.
3. *pectoralis*, Bates, Biol. Centr.-Amer., Col. v. p. 208.
Mexico, Guatemala.
4. *leuconoe*, Bates, ibid. p. 209. Nicaragua.
5. *florula*, Bates, ibid. p. 209. Guatemala.
6. *dispar*, Bates, ibid. p. 209. Mexico, Guatemala.
7. *suavissima*, Bates, ibid. p. 209. Guatemala.
8. *univittata*, Bates, ibid. p. 210. Mexico.
9. *fulveola*, Bates, ibid. p. 210. Guatemala.

Genus 19. CALOCOSMUS, Chevrolat.

1. *venustus*, Chevr. Cuba.
2. *dimidiatus*, Chevr. Cuba.
3. *nuptus*, Chevr. Cuba.
4. *speciosus*, Chevr. Cuba.
5. *Janus*, Bates, antè, p. 151. Cuba.
6. *semimarginatus*, Bates, antè, p. 151. Cuba.

Genus 20. BUTOCRYSA, Thoms.

1. *insignis*, Lucas. Brazil.

Genus 21. CEPHALODINA, Bates, Biol. Centr.-Amer.,
Col. v. p. 213.

1. *capito*, Bates. Panamá.
2. *crassiceps*, Bates, Biol. Centr.-Amer., Col. v. p. 213, t. 15.
f. 5. Nicaragua.
3. *megacephala*, Bates. Amazons.

Genus 22. HILAROLEA, Thoms.

1. *incensa*, Perty (*Saperda*). Brazil.
2. *nigripennis*, Bates (*Amphionycha*). Amazons.
3. *seminigra*, Bates. Amazons.
4. *miniacea*, Bates. Amazons.
5. *tuberculicollis*, Guér. (*Hemilophus*). Ecuador.

Genus 23. CHRYSAPERDA, Bates, antè, p. 152.

1. *metallica*, Bates, antè, p. 152. Ecuador, Peru.
2. ? *circumcincta*, Pascoe (*Amphionycha*). Amazons.

Genus 24. OCHROMIMA, Bates, antè, p. 151.

1. *megalopoides*, Bates (*Amphionycha*). Amazons.

Genus 25. CIRRHICERA, Thoms.

1. *leuconota*, Casteln. Mexico.
2. *Sallei*, Thoms. Mexico, Guatemala, Nicaragua.
3. *Championi*, Bates, Biol. Centr.-Amer., Col. v. p. 214, t. 15.
f. 12. Guatemala.
4. *longifrons*, Bates, ibid. p. 214. Guatemala.
5. *niveosignata*, Thoms. Mexico.
6. *nigrina*, Thoms. Mexico.
7. *cristipennis*, Bates, Biol. Centr.-Amer., Col. v. p. 214.
Mexico.
8. *cinereola*, Bates, ibid. p. 215. Guatemala.

Genus 26. PHÆBE, Serville.

1. *octomaculata*, Serv. (*phæbe*, Serv. olim, *cretifera*, Pasc.).
Brazil.
2. *cornuta*, Oliv. Surinam.
3. *bicornis*, Oliv. Amazons.
4. *concinna*, White. Amazons.
5. *cava*, Germar. Brazil.
6. *mexicana*, Bates, Biol. Centr.-Amer., Col. v. p. 215.
Mexico.
7. *albaria*, Bates, ibid. p. 215, t. 15. f. 3. Nicaragua.
8. *lutaria*, Bates, ibid. p. 215. Guatemala.

Genus 27. AMPHIONYCHA, Leseleuc.

1. *luctuosa*, Leseleuc. Brazil.
2. *Diana*, Thoms. Cayenne, Amazons.
3. *princeps*, Bates, Biol. Centr.-Amer., Col. v. t. 4. f. 2.
Nicaragua.
4. *charis*, Bates, antè, p. 197. Ecuador.
5. *leucodryas*, Bates, antè, p. 198. Venezuela.
6. *tribalteata*, Bates, antè, p. 198. Peru.
7. *læta*, Bates, antè, p. 198. Venezuela, Peru.
8. *spilota*, Bates, antè, p. 199. Brazil.
9. *scalaris*, Pascoe. New Granada.
10. *sexguttata*, Lucas. Brazil.
11. *sexlineata*, Bates, antè, p. 199. Brazil.
12. *strigata*, Redtenb. Brazil.
13. *vittata*, Pascoe. Brazil.
14. *diva*, Chabrillac. Brazil.
15. *theaphia*, Bates, antè, p. 199. Ecuador.
16. *hemispila*, Germar. Brazil.
17. *verticalis*, Germar (*nigriceps*, Castl.). Brazil.
18. *spectabilis*, Drury. Mexico, Central America, New
Granada.
19. *callizona*, Bates, Biol. Centr.-Amer., Col. v. p. 217.
Honduras, Guatemala.
20. *Druryi*, Thoms. Costa Rica.
21. *bifasciata*, Bates, Biol. Centr.-Amer., Col. v. t. 15.
f. 4. Nicaragua.
22. *pluricostata*, Bates, Biol. Centr.-Amer., Col. v. p. 217.
Guatemala.
23. *dimidiata*, Bates, antè, p. 200. New Granada.
24. *bisellata*, Bates, antè, p. 200. Ecuador.
25. *obesa*, Bates, Biol. Centr.-Amer., Col. v. p. 217. Mexico.
26. *globicollis*, Bates, ibid. p. 218. Mexico.
27. *colligata*, Redt. Brazil.

28. *flavipes*, Lucas (an var. præced.?). Brazil.
29. *pallipes*, Oliv. Surinam.
30. *postilenata*, Bates, antè, p. 201. Brazil.
31. *fumigata*, Germar. Brazil.
32. *suturata*, Bates, antè, p. 201. Brazil.
33. *pubicornis*, Bates, antè, p. 201. Amazons.
34. *rectilinea*, Bates, antè, p. 202. Brazil.
35. *longipennis*, Bates, antè, p. 202. Ecuador.
36. *fraudatrix*, Bates, Biol. Centr.-Amer., Col. v. p. 218.
Nicaragua.
37. *fulvicornis*, Bates, antè, p. 203. Brazil.
38. *fenestrata*, Bates, antè, p. 202. Brazil.
39. *fuscipennis*, Bates, antè, p. 203. Peru.
40. *discicollis*, Bates, antè, p. 203. Ecuador.
41. *rubra*, Bates, antè, p. 204. Brazil.
42. *dilaticeps*, Bates, antè, p. 200. New Granada.
43. *cephalotes*, Bates. Amazons.
44. *urocosmia*, Bates, antè, p. 204. New Granada.

Sp. incertæ sedis.

45. *petronæ*, Burmeister. Tucuman.
46. *Mniszechii*, Chabrillac. Brazil.
47. *ocularis*, Hope, Trans. Ent. Soc. iv. p. 181, t. 13. fig. 2
(*Saperda*). South America.
48. *brachialis*, Guérin. Ecuador.

Genus 28. ALICIA, Thoms.

1. *flavescens*, Thoms. Brazil.
2. *testacea*, Bates (*Amphionycha*). Amazons.

Genus 29. ISOMERIDA, Bates.

1. *albicollis*, Casteln. Guiana, Amazons.
2. *amicta*, Pascoe. New Granada.
3. *lineata*, Bates. Nicaragua, New Granada.
4. *subdilatata*, Bates, Biol. Centr.-Amer., Col. v. t. 15. f. 9.
Nicaragua.
5. *picticornis*, Bates, ibid. t. 15. f. 10. Nicaragua.
6. *ruficornis*, Bates. Amazons.
7. *longicornis*, Bates, antè, p. 292. Brazil.
8. *vittipennis*, Bates, antè, p. 292. Brazil.
9. *picticollis*, Bates, antè, p. 291. Brazil.
10. *crinicornis*, Germar. Brazil.
11. *lanificus*, Germar. Brazil.
12. *plumosa*, Bates, antè, p. 291. Brazil.
13. *fimbriata*, Bates, antè, p. 290. Brazil.

Genus 30. SPATHOPTERA, Serv. (*Photuronta*, Thoms.).

1. *albilatera*, Serv. (*P. gutticollis*, Thoms.). Brazil.

Genus 31. HEMILOPHUS, Serv.

1. *dimidiaticornis*, Serv. Brazil.
2. *infuscatus*, Bates, antè, p. 292. Brazil.
3. *leucogramma*, Bates, antè, p. 293. Brazil.
4. *unicolor*, Bates, antè, p. 293. Brazil.
5. *varians*, Bates, Biol. Centr.-Amer., Col. v. p. 222.
Mexico, Guatemala.
6. *longulus*, Bates, ibid. p. 222. Mexico.
7. *prolixus*, Bates, ibid. t. 15. f. 20. Nicaragua.
8. *fasciatus*, Bates. Amazons.
9. *spectabilis*, Blanch. Bolivia.
10. *cayennensis*, Bates, antè, p. 294. Cayenne.
11. *Smithii*, Bates, antè, p. 293. Amazons.
12. *duplicatus*, Bates, antè, p. 294. New Granada.
13. ? *ciliaris*, Klug. Brazil.

Genus 32. TYRINTHIA, Bates (*Cyphometopus*, Thoms.).

1. *scissifrons*, Bates. Amazons.
2. *infacetus*, Thoms. Brazil.
3. *Lacordairei*, Thoms. Colombia.
4. *frontalis*, Guérin (*Hemilophus*). Ecuador.
5. *macilenta*, Bates, antè, p. 294. Brazil.
6. *reversa*, Bates, antè, p. 295. Brazil.
7. *longiscapus*, Bates, antè, p. 294. Brazil.
8. *lycinella*, Bates, Biol. Centr.-Amer., Col. v. p. 223.
Costa Rica.
9. *xantha*, Bates, ibid. p. 223. Nicaragua.
10. *xanthotænia*, Bates, antè, p. 295. Brazil.
11. *capillata*, Bates. Amazons.
12. *obtusa*, Bates, antè, p. 295. New Granada.
13. ? *minima*, Pascoe. New Granada.

Genus 33. MALACOSCYLUS, Thoms.

1. *cirratus*, Germar (*dasycerus*, Klug). Brazil.
2. *gonostigma*, Bates, antè, p. 297. Brazil.
3. *Klugii*, Thoms. Colombia.
4. *albens*, Bates, antè, p. 296. Brazil.
5. *fulveolus*, Bates. Brazil.
6. *auricomus*, Bates, antè, p. 296. Peru.
7. *cinctulus*, Bates, antè, p. 297. Bolivia.
8. *gratiosus*, Bates, antè, p. 297. Ecuador.

9. *iodinus*, Bates, antè, p. 296. Ecuador.
10. *thoracicus*, Oliv. Guiana.

Genus 34. THEMISTONOE, Thoms.

1. *cacica*, Thoms. Brazil.
2. *reticulata*, Waterh. Ann. & Mag. Nat. Hist. ser. 5, vol. v. (April 1880), p. 300. Ecuador.
3. *humeralis*, Waterh. ibid. p. 301. Ecuador.
4. *delectabilis*, Waterh. ibid. p. 302. New Granada.
5. *exilis*, Bates, antè, p. 298. Peru.

Genus 35. LYCANEPTIA, Thoms.

1. *amicta*, Klug (♀ *ampliata*, Klug). Brazil.
2. *antiqua*, Waterh. Ann. & Mag. Nat. Hist. ser. 5, vol. v. (April 1880), p. 300. Brazil.

Genus 36. LYCIDOLA, Thoms.

1. *palliatà*, Klug. Brazil.
2. *togata*, Klug. Brazil.
3. *simulatrix*, Bates. Amazons.
4. *Beltii*, Bates, Biol. Centr.-Amer., Col. v. t. 15. f. 1. Nicaragua.
5. *flavofasciata*, Waterh. Ann. & Mag. Nat. Hist. ser. 5, vol. v. (April 1880), p. 298. Ecuador.
6. *felix*, Waterh. ibid. p. 298. Ecuador.
7. *retifera*, Waterh. ibid. p. 298. Ecuador.
8. *expansa*, Bates, antè, p. 298. New Granada.
9. *mimica*, Bates. Amazons.
10. *capillacea*, Bates. Amazons.

Genus 37. ITES, Waterh.

1. *plagiatus*, Waterh. Ann. & Mag. Nat. Hist. ser. 5, vol. v. (April 1880), p. 298. Ecuador.

Genus 38. CLYTHRASCHEMA, Thoms.

1. *Chabrillacii*. Brazil.

XXX.—An Account of the *Sphinges* and *Bombyces* collected by Lord Walsingham in North America during the Years 1871–72. By ARTHUR G. BUTLER, F.L.S., F.Z.S., &c.

THE *Sphinges* and *Bombyces* collected by Lord Walsingham consist of thirty-six species referable to twenty-six genera.