

XIX. *On the Lepidoptera of the Amazons, collected by Dr. James W. H. Trail during the years 1873 to 1875.* By ARTHUR GARDINER BUTLER, F.L.S., F.Z.S., &c.

[Read July 6th, 1881.]

PART IV.—GEOMETRITES.

THE *Geometrites* collected by Dr. Trail consist of eighty-two species, of which thirty are new to Science. I include the *Uraniidæ*, notwithstanding Professor Westwood's admirable paper, and in spite of the instructive suggestions as to the affinities of that family therein published; and this I do, not from mere unthinking obstinacy, but because I feel satisfied that the *Uraniidæ* form a passage from the *Bombycites* to the *Geometrites* proper; unfortunately, owing to the confused state of the classification of the moths, and the very few efforts which have been made since the publication of Guenée's work to render it more natural, it is impossible to gauge accurately the value of characters offered by the perfect insects as against those exhibited in the adult larva.

To my mind the imago forms of *Urania* and *Mania** show greater affinities to the *Geometrites* than to the *Bombycites*; and, until we know the youngest form of the larva in these genera, we cannot positively assert that the apparent affinity to the *Bombycites* exhibited by the adult stage is reliable.

A natural classification of the moths would, I believe, place the *Noctuities* near to the *Sphinges*, and therefore in front of the *Bombycites*, the family *Notodontidæ* being divided into two distinct groups, the one typified by *Stauropus*, *Notodonta*, &c., showing greater affinities to the *Noctuities*; the other, as represented by *Phalera*, to the *Bombycites*: *Cerura* and allies may have to form a third family to be placed next to the *Drepanulidæ*;

* The alteration of this name to *Manidia* is unnecessary, since Hübner and Ochsenheimer's use of *Mormo* for the *Noctuid* genus has been largely followed.

the *Bombycites* could then be concluded naturally with *Asthenia* and the *Uraniidæ*, forming a passage to the typical *Geometrites*.*

Of the position of the *Pseudo-Deltoids*, *Deltoids*, *Pyrales*, and the confused mass of families arbitrarily associated under the term Micro-Lepidoptera, I need at present say nothing, excepting that their distribution amongst what have been called the higher groups must eventually take place.

URANIIDÆ.

URANIA, *Fabricius*.

1. *Urania leilus*.

Papilio leilus, Linnæus, Syst. Nat. ii. p. 750, n. 31 (1766).

Teffé, 18th December, 1874.

MANIA, *Hübner*.

2. *Mania empedocles*.

Papilio empedocles, Cramer, Pap. Exot. iii. pl. 199, figs. A, B (1782).

Juruapuca, Rio Jurua, 28th October, 1874.

URAPTERIDÆ.

RIPULA, *Guenée*.

3. *Ripula area*.

Phalæna-Geometra area, Cramer, Pap. Exot. i. pl. 56, fig. D (1779).

Rio Jurua, 7th November, 1874.

M. Guenée placed this species in *Urapteryx*.

Before proceeding to the next family it will be useful to correct some of the errors in published catalogues and lists.

Chærodes transcendens of Walker, and *Cimicodes castanearia* of Moore should be placed in *Mucronodes*.

* It might, however, be necessary to reverse this order on account of the affinity of the *Geometrites* to the *Noctuities*; thus the *Bombycites* would come after the *Geometrites*,

Gynopteryx gygearia is allied to *Cimicodes torquataria*, of which *Gynopteryx liolesaria* is evidently a variety; *G. ? celeraria* (= *prælataria*, H.-Sch.), is unquestionably nearly allied to Guenée's *Cimicodes pallicostata*.

Clysia succedens is a *Lycimna*; *C. mixtipennaria* would be better placed in *Eutrapela*, although somewhat aberrant even for that genus, and *C. decisaria* is an *Endropia* near to *E. pectinaria*.

Chærodes transponens of Walker is a slight variety of *Oxydia vesulia* of Cramer, but the specimen miscalled *O. vesulia* by Dr. Herrich-Schäffer (and nevertheless labelled with a MS. name of his own), is clearly *O. agliata* of Guenée, whilst the examples placed under the latter species by Walker are again varieties of *O. vesulia* of Cramer.

Guenée's first group of *Oxydia*, consisting of *O. vulpecularia* only, may retain the generic name *Acrosemia* proposed for it by Dr. Herrich-Schäffer; the marvellously simple antennæ of both sexes will at once separate it from the next species, *O. capnodiata*, which is wrongly associated with *O. bendiata* under Group II.

Oxydia capnodiata is clearly a very slight variety of Walker's *Herbita aglausaria*, and may therefore stand as *Herbita capnodiata*.

Oxydia bendiata is allied to *Chærodes translineata*, and to *Acrosemia decurtaria* of Herrich-Schäffer, which is (if more than a variety) a local form of Walker's *Ira atomaria*; these species, which nearly approach *Acrosemia vulpecularia* in structure, may be placed under Walker's genus *Ira*.

If I have rightly identified them, Guenée's *O. hispata* and *O. distichata* may be only well-marked varieties of *O. vesulia*; Walker included all three under the name of *O. agliata*: *Chærodes translinquens* of Walker is an *Oxydia*, and probably *O. nimbata* of Guenée, the description of which it agrees fairly well with.

Under the specimens sent by Dr. Herrich-Schäffer as *O. trapezata*, and agreeing with Walker's *Mucronodes mundipennata*, I recognise examples of the form named *O. trychiata* by Guenée.

CIMICODES, Guenée.

4. *Cimicodes gygearia*.

Gynopteryx gygearia, Walker, Cat. Lep. Het. xx. p. 96, n. 8 (1860).

Teffé, 19th October, 1874.

I think it very doubtful whether the genus *Cimicodes* really belongs to the family *Urapteridæ*.

The genus *Andania* of Walker certainly does not belong to this family, being identical with *Syngria* of Guenée. I found *S. druidaria* and *S. falcinaria* mixed with the specimens of *Andania scitosignata*, other examples of the latter species being recorded as *S. druidaria* in the collection. *Andania scriptipennaria*, on the other hand, is closely allied to *Lagyra* (female form of *Hyposidra*) and is the *Azelina? claustraria* of Felder.

ENNOMIDÆ.

PYRINIA, Hübner.

5. *Pyrinia optivata*.

Crocopteryx optivata, Guenée, Phal. i. p. 72, n. 94 (1857).

Near end of Ilha de Botya, Rio Solimoes, 15th October, 1874.

Closely allied to *P. cæaria*, from which it differs chiefly in the absence of the silvery stripe across its wings.

The following genus should certainly be placed near to *Pyrinia*, *Drepanodes*, and *Gargaphia*, and not where Walker put it, near to the end of the family:—

HALESA, Walker.

6. *Halesa asychisaria*.

Halesa asychisaria, Walker, Cat. Lep. Het. xx. p. 211, n. 1 (1860).

Rio Jurua, 4° 40' S., 66° 40' W., 29th October; Pupunha, 5th November, 1874; Boaventura, Rio Jutahi, 21st January; above Rio Curuem, 29th January, 1875.

This species was subsequently described by Snellen as *Falcinodes gonodontaria*.

7. *Halesa glauca*, n. s.

Wings above shining violet-grey, rather more rosy towards the external borders ; primaries crossed at basal third by an olivaceous stripe beginning in a triangular costal patch of the same colour ; a broad olivaceous band beyond the middle, slightly narrowing towards the inner margin, and bounded externally by an elbowed leaden-grey line beginning in a short oblique creamy whitish costal dash ; costal border creamy whitish ; external border sometimes well defined and purple towards the external angle, its inner edge zigzag ; fringe ferruginous ; secondaries crossed before the middle by a rather broad olivaceous band, which is limited externally by a central leaden-grey line ; the latter terminates upon the abdominal border in a creamy whitish dash ; external border purplish, ill-defined ; fringe ferruginous ; thorax pale violet-grey ; abdomen pale greyish brown ; antennæ, palpi, and upper surface of legs buff ; under surface silvery grey, striated with pale lilacine-grey ; primaries with pale buff costal margin ; an oblique white discal line ; external area towards the angle purplish ; fringe testaceous ; secondaries whiter than the primaries, with well-defined purplish external border ; costal border tinted with buff ; fringe golden ferruginous ; body and legs below whitish ; expanse of wings, 1 inch 3 lines.

Uruçaca, Rio Jurua, 7th November, 1874 ; Boaventura, Rio Jutahi, 24th January ; Boa Vista, 1st February ; Santarem, 4th February, 1875.

It is just possible that this may be the *Phalæna violacea* of Sepp, but I think not ; his figure is evidently a very poor one, whatever it is meant for.

CRATOPTERA, *Guenée*.8. *Cratoptera brunnea*, n. s.

Sandy testaceous, the wings with the outer half washed with reddish, which becomes more intense towards the external borders, the whole surface irrorated with black ; a dark olive-brown oblique line from the apex of the primaries to just above the middle of the abdominal border of secondaries ; primaries crossed at basal third by an elbowed slender dark brown line ; two very oblique dark brown costal dashes, the first from the middle of

the costal margin, and the second near to the apex, where it bounds an elongated semi-pyriform costal spot, mottled with brown and edged below with whitish; apex and a disco-cellular dot black; one or two vague dusky spots on the disc; fringe tipped with dark brown; secondaries with a discal indistinct bisinuated series of dusky spots; fringe tipped with red-brown; under surface bright ochreous, speckled and mottled with grey, excepting on the body and towards the base of secondaries; wings crossed by a dark grey oblique stripe corresponding to the olivaceous line of the upper surface; discal diffused spots not extending below the third median branch of the secondaries; primaries white, speckled with grey at apex; body paler than the wings; palpi reddish brown; expanse of wings, 1 inch 5 lines.

Rio Jurua, near the mouth; 14th November, 1874.

9. *Cratoptera primularis*, n. s.

Nearly allied to *C. vilaria* of Herrich-Schäffer, and to *Drepanodes* (!) *pholata* of Guenée; in shape it more nearly agrees with the former, but in markings (excepting the absence of the subbasal line on the primaries) it is like the latter species; bright chrome-yellow; the wings crossed from apex of primaries to the middle of the abdominal margin of secondaries by an externally diffused bright red oblique line; this line is elbowed close to the apex of the primaries, and bounded externally by five small pure white spots upon the nervures; fringe at apex black; wings below of a clearer yellow colour than above, and crossed by a rather broad oblique black band with reddish diffused edges; external area sparsely speckled with black; primaries with four black dots in a zigzag series within the discoidal cell; body below whitish; expanse of wings, 1 inch 1 line.

Rio Jutahi, 5th February, 1875. Taken at light.

There can be no question that this is congeneric with *C. vilaria*, and it is hardly possible that the *Drepanodes pholata* of Guenée, which has almost the same pattern on both surfaces (a pattern, moreover, which on the under surface is singularly striking) can belong to a different genus. I am therefore unwillingly compelled to believe that here, as in several other instances, this

great lepidopterist has failed to recognise the real differences between genera which he himself described.

Two other species, *Gynopteryx* ? *calexaria* and *G.* ? *icaunaria*, must also be referred to *Cratoptera*; the *Apicia prostypata* of Snellen is a *Gynopteryx*, his *A. plebejata* being characteristic of *Apicia*.

GYNOPTERYX, Guenée.

10. *Gynopteryx vulgaris*, n. s.

Allied to *G. arbuaria* (*Apicia arbuaria*, Wlk.), greyish, reddish or yellowish brown, densely mottled with fine grey striations; two bright rust-red or reddish brown lines of the usual form; the inner one restricted to the primaries rather more irregular and nearer to the outer line than in the other species; the outer line acutely angulated and bounding a partly white and partly black-edged arched costal spot near apex; the area between the two lines paler than the rest of the wing; a black disco-cellular spot; a zigzag discal series of more or less distinct whitish-edged grey spots; secondaries with the discal series of spots extremely indistinct; under surface whitish or pale rusty-brown, mottled with grey striations; with conspicuous black disco-cellular spots; a testaceous stripe just beyond the cell; a zigzag submarginal series of whitish-bordered grey spots scarcely indicated on the secondaries, excepting by a darker shade of the ground colour; apex of primaries whitish; expanse of wings, male 1 inch 1 line, female 1 inch 2 lines.

Male, S. Guajara, mouth of Rio Purus, 6th September; male and female, Gepatiny, 26th and 29th; male, Mabidiry, 30th; Urucuri, 2nd October; female, Curimata, Rio Jurua, 30th; Pupunha, 1st to 7th November; Gaviao, 10th; Rio Javary, 2nd December, 1874.

Dr. Trail obtained five males and ten females of this species; it varies much in tint, but the modifications not only occur in different localities, or at different times, but also in specimens taken together, so that they cannot even be separated as local races.

TETRAGONODES, *Guenée*.11. *Tetragonodes anopsaria*?

Tetragonodes anopsaria, Guenée, Phal. i. p. 80, n. 113 (1857).

Female, Rio Jurua, 24th October, 1874.

Is not Cramer's *Phalæna croceata* congeneric with this species?

MAGIDA, *Walker*.12. *Magida aurantiaca*, n. s.

Bright orange-fulvous, mottled with ferruginous; primaries with the central area rather paler; a slightly irregular ferruginous stripe from the middle of the costal margin of primaries to just below the middle of the abdominal margin of secondaries; primaries with the costal margin striated, and spotted at the origin of the transverse stripes with black; two closely approximated irregular red-brown discal stripes, the external border also brownish and mottled with black; fringe black; secondaries with a submarginal ferruginous stripe, very slender, excepting towards the costal margin; fringe black at apex, otherwise yellow; antennæ and a band across the back of the head grey; under surface clear golden yellow, the markings bright sienna-red instead of ferruginous; otherwise as above; expanse of wings, $8\frac{1}{2}$ lines.

Fonteboa, Rio Solimoes, 17th November, 1874.

The genus *Magida* is nearly allied to *Melinodes*.

HYPERYTHRA, *Guenée*.13. *Hyperythra decrepitaria*.

Syrrhodia decrepitaria, Hübner, Zutr. Exot. Schmett., figs. 371, 372 (1823).

Aspilates decrepitaria, Guenée, Phal. ii. p. 184, n. 1218 (1857).

Hyperythra mimasaria, Walker, Cat. Lep. Het. xx. p. 132, n. 15 (1860).

Serpa, 22nd April, 1874.

It seems scarcely possible that Guenée can have looked at Hübner's figures of this species; the moth is so utterly unlike an *Aspilates* that even Mr. Walker quotes it with a note of interrogation.

NEMATOCAMPA, *Guenée*.14. *Nematocampa arenosa*, n. s.

Wings above sandy yellow, speckled with red-brown; the disco-cellulars dark brown; primaries crossed just before basal third by an angulated black-brown stripe, and at external third by a sinuous stripe, beyond which is an angulated line of the same colour; external angle slaty grey, crossed transversely by a blackish-edged ochraceous band; faint indications of a slender blackish submarginal line, beyond which the nervures are black; secondaries crossed beyond the middle by an arched dark brown line; external area testaceous; apex and base of fringe slaty grey; primaries below pale stramineous, with the same dark brown lines as above; area between the discal and angulated subapical lines slaty grey, traversed by a sinuous testaceous stripe flecked with grey; secondaries rather paler than the primaries, dark brown markings scarcely perceptible; apex broadly slaty grey; external border and base of fringe greyish; body below pale creamy yellowish; expanse of wings, 9 lines.

Rio Jurua, 6th November, 1874.

Nearest to *N. resistaria*.

15. *Nematocampa reticulata*, n. s.

Stramineous; wings above striated with dark brown; the nervures, a line before the basal third, an irregularly angulated line beyond the middle, and a regularly angulated discal line limiting the external area, dark chocolate-brown; external area very broad, occupying nearly half the secondaries and about a third of the primaries, chocolate-brown washed with shining plumbageous-grey; a large apical stramineous patch striated with brown on the primaries; under surface paler, most of the brown markings on the basal two-thirds obsolete; only the external third of all the wings dark and of a smoky greyish colour; body cream-colour; expanse of wings, 1 inch 1 line.

Pupunha, Rio Jurua, 1st November, 1874. Taken at light.

Seems to be allied to *N. varicata* of Walker.

ENDROPIA, Guenée.

16. *Endropia singularis*, n. s.

General aspect above of "*Hygrochroa*" *davalliata*, Felder (a species of *Mucronodes*), but allied to "*Hyperythra*" *angulifascia*; whity brown; primaries above crossed by two brown-edged angular greyish bands, the inner one interrupted, near the base of the inner margin, by a very oblique brown-edged whitish dash; a sub-apical triangular white-bordered costal olive-brown spot only separated by its outer border from a notched sub-cuneiform patch of the same colour on the outer margin; a patch of creamy white below the last mentioned patch of brown; secondaries crossed from costa to interno-median area by a tapering brown streak; basi-abdominal and apical areas washed with reddish brown; a white-bordered blackish-edged creamy yellowish spot on the abdominal border near the anal angle; body testaceous; tegulae white, crossed by a dull ferruginous stripe; primaries below greyish brown, with the internal half, excepting towards the external angle, cream-coloured; an arched, almost semicircular, white submarginal line, forked externally towards the apex; apical area dark brown internally, testaceous externally; fringe whitish; secondaries creamy whitish, with the basi-costal area and abdominal border sandy yellowish; two sinuous chocolate-brown lines from the middle of the costa to the abdominal border, filled in with brown above the radial vein, and immediately followed by a pure white stripe which bounds the external border; the latter brownish testaceous; fringe white, spotted with brown towards the anal angle; body below whity brown; expanse of wings, 1 inch 4 lines.

Obydos, 8th March, 1874.

A most singularly marked species, but I think without doubt belonging to this genus.

AZELINA, Guenée.

17. *Azelina pumaria*.

Pergama pumaria, Felder and Rogenhofer, Reise der Nov., Lep. v. pl. cxxiii. fig. 15 (1876).

Gepatiny, Rio Purus, 29th September, 1874. At light.

This species belongs to the section *Synemia* of Guenée, in which the projecting apical portion of the outer margin is straight instead of being more or less sinuated.

18. *Azelina garuparia*.

♀. *Azelina garuparia*, Felder and Rogenhofer, Reise der Nov., Lep. v. pl. cxxiii. fig. 21 (1876).

♂. Boa vista, Rio Jutahi, 1st February, 1875. At light.

19. *Azelina trailii*.

Azelina trailii, Butler, Ann. & Mag. Nat. Hist., ser. v. vol. viii. p. 31 (1881).

Pariti, Rio Purus, 5th October, 1874. At light.

20. *Azelina lustraria*.

Azelina lustraria, Guenée, Phal. i. p. 156, n. 242 (1857).

Pupunhazinho, Rio Jurua, 8th November, 1874. At light.

21. *Azelina clysiaria*.

Azelina clysiaria, Felder and Rogenhofer, Reise der Nov., Lep. v. pl. cxxiii. fig. 12 (1876).

Rio Javary, 4th February; Guajaratuba, Rio Purus, 11th September; Rio Solimoes, 20th November, 1874; Rio Jutahi, 27th January and 5th February, 1875.

22. *Azelina juruana*.

Azelina juruana, Butler, Ann. & Mag. Nat. Hist., ser. v. vol. viii. p. 43 (1881).

Curimata, 30th October; Rio Jurua, 7th November, 1874.

BROTIS, Hübner.

23. *Brotis vulneraria*.

Brotis vulneraria, Hübner, Zutr. Exot. Schmett., figs. 319, 320 (1823).

Rio Madeira, west bank, about 5° 30' S., 16th May; Rio Javary, 1st, 3rd, and 7th December, 1874; Boaventura, Rio Jutahi, 24th January, 1875.

This species is very variable, both in the tint of the wings, which may be of either a rich brown or silver-grey colour, and in the presence or absence of the triangular orange costal spot on the primaries.

The following corrections may be made to the *Ennomidæ*, in addition to those already noted:—*Caberodes* ? *carcearia* may be referred to *Gynopteryx*; *Apicia* ? *liberaria* may be referred to *Tacparia*; one of the specimens of *T. zalissaria* is referable to *Apicia deductaria*; *Gynopteryx* ? *calbisaria*, although it has almost the same pattern as *G. seriaria*, agrees better in structure with *Apicia*; *Melinodes* ? *amphisaria* is a *Pyrinia*; *Epione liboraria* is identical with *Tephрина confiniaria*; *E.* ? *brongusaria* is close to (if distinct from) *Tephрина incessaria*; *E.* ? *roseigera* is probably an *Ephyra*, but with the aspect of *Anisodes*; it certainly is not allied to *Epione*: “*Epione*” *serinaria*, *agyllaria*, and *cambogiaria* are allied to *Sicya solfataria*; it is probable that the so-called “South African” species is from the New World.* *Hyperythra arcasaria*, of which we have a specimen from Canada, is probably *Antepione depontanata* of Packard’s ‘Monograph’; *H. angulifascia* is nearer to *Endropia*, but several of the Indian species will have to be turned out of *Hyperythra*, such as *H.* ? *riobearia* and *calcearia*; *H. ennomosaria* is a *Caustoloma*; *Hyperetis alienaria* is an *Anisodes*; *Ellopiia inflectaria* and *E. convexaria* are slightly abnormal species of *Sicya*; although they come from Africa, they are so unlike *S. cambogiaria*, and the latter is so like the N. American species that they rather strengthen than weaken my belief that that species is American; the genus *Ennomos* is in utter confusion, the species being referable to half a dozen genera; *E.* ? *potentaria* is a *Colussa* (*Lasiocampidæ*).

BOARMIIDÆ.

BOARMIA, Treitschke.

24. *Boarmia bipennaria*.

Boarmia bipennaria, Guenée, Phal. i. p. 257, n. 395; pl. 13, fig. 5 (1857).

Pupunha, Rio Jurua, 1st November, 1874. At light.

* According to Messrs. Grote and Robinson, *E. agyllaria* is = *E. calipusaria*. The latter is *Sicya solfataria*, but (in my opinion) is distinct from *E. agyllaria*.

The figure is not a very good one, but the description happily corrects it where in error.

ALMODES, Guenée.

25. *Almodes stigmaria*.

Boarmia stigmaria, Walker, Cat. Lep. Het. xxi. p. 363, n. 64 (1860).

Rio Trombetas, 3rd March; Rio Jurua, 13th November, 1874.

I have no doubt that *Almodes* is very closely allied to *Boarmia*, and cannot understand why Guenée placed it between genera so utterly dissimilar as *Mecoceras* and *Eumelea*.

TEPHROSIA, Boisduval.

26. *Tephrosia ? cretacea*, n. s.

Dull white, minutely irrorated with grey; wings crossed by two subparallel slightly arched and widely undulated pale testaceous stripes; external border rather broadly pale brownish grey, its inner border interrupted by a regular series of white-bordered slightly darker spots; a marginal series of black dots; a blackish dot at the end of each discoidal cell; primaries with a very indistinct third testaceous stripe at basal fifth, all three stripes on these wings commencing upon the costal margin in small black spots; under surface sordid white; wings with slender brown disco-cellular striæ; a rather broad greyish brown external border; fringe and the apex of the primaries snow-white; expanse of wings, 1 inch 6 lines.

Prainha, 14th November, 1873.

This very distinct species is unfortunately represented by only one headless specimen, so that for the present it is impossible to decide with absolute certainty whether it is a *Tephrosia* or a *Boarmia*; the pattern is more like that of the former genus; it seems allied to *T. incongruaria* of Rio Janeiro.

The two genera *Boarmia* and *Tephrosia* are at present in a state of great confusion, fully bearing out M. Guenée's remarks (first as to *Boarmia*), "Voici un genre très-ancien, universellement adopté, et cependant jusqu'ici assez mal limité"; and (secondly as to *Tephrosia*), "Les

caractères de l'insecte parfait ne sont pas, en effet, très tranchés."

The fact is that the antennæ of the males ought to have been regarded as the most important character for distinguishing these groups, those of *Boarmia* being broadly pectinated, and those of *Tephrosia* narrowly pectinated, or, in exceptional cases, almost simple; these are broad distinctive characters, but it may be necessary, in strictly attending to them, to break up *Tephrosia* into two genera.

GEOMETRIDÆ.

NEMORIA, *Hübner*.

27. *Nemoria iris*, n. s.

Near to "*Geometra*" *remotaria* of Walker; wings apple-green, crossed by an oblique tricoloured stripe from the costal margin near the apex of primaries to the external third of abdominal margin of secondaries; this stripe is golden green internally, yellow in the centre, and pure white externally; a black dot at the end of each cell; fringe yellowish green at base, and tipped with white, the central line being apple-green; primaries with a second stripe at basal third transverse, golden green externally, and yellow (narrowly edged with white) internally; costal border snow-white, the extreme margin barred with red-brown; body white, collar yellowish, tegulæ green; primaries below pale apple-green, crossed obliquely by an ochreous line; a black dot at the end of the cell; fringe and edge of costal border as above; secondaries green, washed with silvery white; body white; expanse of wings, 1 inch.

Uricurituba, Rio Tapajos, 17th March, 1874.

JODIS, *Hübner*.

28. *Jodis opaca*, n. s.

Deep apple-green; wings crossed beyond the middle by a nearly straight stripe, which does not reach the costal margin of the primaries, its inner half testaceous, its outer half greenish white; fringe white, traversed by a green line; primaries with a slender yellow costal margin speckled with blackish; a black dot at the end of the cell; an indistinct nearly straight stripe across

the basal third; head, collar, and abdomen (excepting at its base) yellow; a stripe across the vertex, the basal joint of the antennæ and their upper edge white; primaries below rather paler green than above; a broad discal slate-coloured belt, beginning at the upper radial vein and expanding to the outer margin below the second median branch; an apical dot of the same colour; base of fringe and costal border yellowish; a black dot at the end of the cell; secondaries shining greenish cream-colour, crossed by two arched diffused green bands enclosing subquadrate slate-coloured spots; body below pale creamy pink; expanse of wings, 1 inch 3 lines.

Santarem, Rio Jutahi, 4th February, 1875. At light.

This beautiful species appears to come nearest to "*Nemoria*" *bryata* of Felder.

TACHYPHYLE, n. g.

Allied to *Jodis* and *Phyle*; wings elongate-triangular, the primaries being almost rectangled triangular, the secondaries much prolonged at anal angle; head and thorax large and robust; antennæ rather short, pectinated for about two-thirds of their length; palpi projecting slightly in front of the head; legs compressed, with rather short tibial spines; abdomen rather short, scarcely longer than the thorax (not including the head). Type, *T. acuta*.

29. *Tachyphyle acuta*, n. s.

Deep apple-green; wings crossed beyond the middle by an oblique creamy white stripe, from apex of primaries to below the middle of the abdominal margin of secondaries; fringe white, with a dull greenish basal line; primaries with a black dot at the end of the cell; a faint indication of a transverse whitish line at about the basal third; secondaries with yellowish abdominal fringe; vertex of head snow-white; face and antennæ flesh-coloured; collar yellow; thorax green; abdomen yellow (possibly faded, or changed from green or white); anus white; primaries below paler green than above, becoming whitish towards the outer margin; a black dot at the end of the cell; secondaries sericeous greenish white; legs flesh-coloured, the tibiæ spotted at both

extremities with black; body below white; expanse of wings, 1 inch 1 line.

Rio Solimoes, near Santa Cruz, 7th December, 1874.

This singularly triangular species seems to be allied to the *Phalæna pigraria* of Sepp (Surin. Vlind. pl. 16).

DYSPTERIS, *Hübner*.

30. *Dyspteris inæquaria*.

Dyspteris inæquaria, Guenée, Phal. i. p. 363, n. 571 (1857).

D. diminutaria, var., Walker, Cat. Lep. Het. xxii. p. 558, n. 3 (1861).

Prainha, Rio Jurua, 1st and 7th November, 1874.

EUCROSTIS, *Hübner*.

31. *Eucrostis expulsata*.

Eucrostis expulsata, Walker, Cat. Lep. Het. xxii. p. 566, n. 3 (1861).

Gaviao, Rio Jurua, 10th November, 1874.

COMIBÆNA, *Hübner*.

32. *Comibæna ocellata*.

Phalæna-Geometra ocellata, Stoll, Suppl. Cramer, p. 156, pl. 34, fig. 9.

Rio Javary, 5th December, 1874.

Congeneric with *C. bajularia* and *Racheospila marginiplaga*.

RACHEOSPILA, *Guenée*.

33. *Racheospila miccularia*.

Racheospila miccularia, Guenée, Phal. i. p. 374, n. 599 (1857).

Rio Jurua, 4° 40' S., 66° 40' W., 20th October, 1874.

One much broken example of this rare species was taken at light; it is quite new to the National collection.

APLODES, *Guenée*.

34. *Aplodes malina*, n. s.

Nearly allied to *A. mimosaria* and *glaucaria*; apple-green; wings above crossed by three undulated rosy white

lines, the first at basal two-fifths sinuous, the second and third subparallel, angulated, the third submarginal, broken up into spots and >-shaped lines; fringe with a whitish basal line; antennæ and crest silvery white; wings below greenish white; body silvery white; expanse of wings, 7 lines.

Rio Jutahi, 27th January, 1875. At light.

A second specimen, apparently conspecific, though faded white, was obtained at Pupunha, Rio Jurua, on the 1st November, 1874.

The following corrections should be made to this family:—*Geometra subvectaria*, Walker, is *Numia buxaria*, Guenée; *G. factaria* is *N. terebintharia*, Guenée, and *G. difissa* and *subcelata* are also species of *Numia*; *G. reciprocata*, *viridiluteata*, *dimissa*, *luteoviridata*, and *subignita* are species of *Tanaorhinus* (of which *G. confuciaria* is the type); *Nemoria translucidaria*, Herrich-Schäffer, would be better placed in *Amaurinia*, but *Thalassodes diserta*, Walk., which is the *Amaurinia rubrolimbaria* of Guenée, should be referred to *Thalera*; *Chlorochroma congenita*, Walker, is the female of his *C. vertumnaria* and = *Omphax plantaria*, Guenée; *C. externa*, Walk., is also a species of *Omphax*.

MECOCERIDÆ.

MECOCERAS, Guenée.

35. *Mecoceras nitocris*.

Phalæna-Geometra nitocris, Cramer, Pap. Exot. iii. p. 148; pl. 275, fig. A (1782).

Forest behind Arimanahy, 9th January; Lake Arapicu, Rio Trombetas, 3rd March; Boa vista, Rio Purus, 12th September, 1874; Manaos, 3rd January, 1875.

PALYADÆ.

OPHTHALMOPHORA, Guenée.

36. *Ophthalmophora formosanta*.

Phalæna-Geometra formosanta, Cramer, Pap. Exot. iii. p. 92, pl. 247, fig. G (1782).

Rio Negro, 4th July, 1874. Taken at light.

The examples from Santarem, placed by Walker under this species, are referable to *O. corinnaria* of Guenée.

CHRYSOCESTIS, Hübner.

37. *Chrysocestis pæcilmidia*, n. s.

Allied to *C. fimbriaria* of Cramer, from which it differs in having the external border of only half the width, and consequently with only one submarginal series of *embossed cupreous* spots; in *C. fimbriaria* these spots are more silvery, and there is a second inner series of almost confluent, but not embossed, silvery spots, which, when looked at from the front, form a greyish brown band limiting the external border; the present species is of the same semitransparent pearly white colour, with metallic golden costal border, orange external border enclosing the submarginal cupreous spots, and white fringe having a slightly plumbageous shot; antennæ golden testaceous; below, the margins of the wings are pale brassy yellow, the submarginal spots of the upper surface being replaced by a series of dark grey spots; expanse of wings, 10 lines.

Amazons. (No exact locality or date given).

Walker confounded two examples of this moth (which were received from Honduras) with Cramer's species; he also described, as the *C. institata* of Stoll, five examples of *Berberodes conchylata* of Guenée, at the same time placing an example of *C. institata* among the specimens referred to *C. fimbriaria*, in which I think he was probably not far out, since it is doubtful whether the two forms are more than variations of one species.

Lastly, Walker's *C. bisignata* is only the female of Guenée's "*Berberodes*" *gibbiferata* which that author ought to have separated as a distinct genus.

EPHYRIDÆ.

NUMIA, Guenée.

38. *Numia ? flava*, n. s.

Gamboge-yellow; wings with the external two-fifths testaceous; a marginal series of grey spots; a zigzag discal series of grey spots; primaries with two testaceous dots at the end of the cell; a dot in the cell and two on the costal margin orange; palpi, back of head, and

collar washed with orange; abdomen buff-coloured; wings below darker than above, more uniform in colouring, grey spots ill-defined; body below creamy yellow, washed in front with orange; anterior tarsi blackish above; expanse of wings, 1 inch 1 line.

Rio Jurua, near the mouth, 16th November, 1874.

Notwithstanding its yellow, instead of green, coloration, this seems to belong to the genus *Numia*.

EPHYRA, *Duponchel*.

39. *Ephyra rudimentaria*.

Ephyra rudimentaria, Guenée, Phal. i. p. 407, n. 657 (1857).

Teffé, 18th October, 1874. Taken at light.

M. Guenée says that the cellular marking is not ocellated, but in Walker's type, and in the example taken by Dr. Trail, it is very distinctly pupillated with white.

40. *Ephyra rubripennis*, n. s.

Bright rust-red, washed with a tint of lake-red towards the outer margin, and with lilacine on the costal border of primaries; the whole surface irrorated with minute dark grey striations; antennæ grey; thorax washed with lake-red; under surface creamy pale buff; wings with a rather broad dull rose-coloured external border; a blackish dot at the end of each cell; expanse of wings, $11\frac{1}{2}$ lines.

South bank of Rio Negro, 16th June, 1874. At light.
Allied to *E. proditata*.

ANISODES, *Guenée*.

41. *Anisodes lateritiaria* ?

Zonosoma lateritiaria, Herrich-Schäffer, Auss. Schmett. pl. 59, fig. 332 (1850—58).

Ilha das Araras, 3rd June, 1874. At light.

The identification of this species must remain doubtful until a similar example to that figured by Herrich-Schäffer can be examined; the Venezuelan form there represented appears to have dentated secondaries, and the lines across the wings seem to be simply angulated,

whereas in the Amazon form they are dentated; I am however inclined to believe that the figure is incorrect in the second character, from an examination of the Venezuelan *A. metaspilata*, in which the lines, though extremely indistinct, are unquestionably dentated; in this form also the margin is not perfectly entire, though less dentated than in Herrich-Schäffer's figure; however, if the Amazon form be distinct from the Venezuelan one, it may prove to be a variety of the following:—

42. *Anisodes globaria*?

Anisodes globaria, Guenée, Phal. i. p. 417, n. 682 (1857).

Rio Jamunda, 11th April, 1874.

Here again it is impossible to be certain of my identification. M. Guenée mentions "une série subterminale de points gris et de petits points terminaux à peine visibles," whereas Dr. Trail's example has the usual zigzag or dentated submarginal line instead of a series of dots; the coloration of the head also seems decidedly darker; still these differences in a variable genus may very likely be individual, so that I think it would be venturesome to describe the Amazon form as distinct; it is allied to "*Epione*?" *roseigera* of Walker.

43. *Anisodes nodigera*, n. s.

Bright ochraceous; wings crossed by four dentate-sinuate greyish brown stripes, and mottled with red-brown; a marginal series of black dots; primaries with a greyish brown rounded spot, enclosing two blackish elongated dots upon its inner half, near the outer margin upon the radial interspaces; a second but very indistinct smaller greyish spot towards the external angle; costal border dusky; secondaries with a metallic knot-like silver spot at the end of the cell; abdomen paler than the thorax; wings below pale creamy yellowish; primaries with the markings as above, but of a dull rose-colour; secondaries with markings on the costal and external areas also rose-coloured; no trace of the silver spot of the upper surface; expanse of wings, 1 inch 2 lines.

Pariti, Rio Purus, 5th October; Rio Jurua, 4° 40' S.,

66° 40' W., 29th October, 1874; Barreira branca, Rio Jutahi, 3rd February, 1875.

This species and the two following bear considerable resemblance to the nearly allied genus *Synegia*.

44. *Anisodes nudaria*.

Anisodes nudaria, Guenée, Phal. i. p. 417, n. 680 (1857).

Mouth of Rio Sapo, 14th December, 1874.

45. *Anisodes coxaria*.

Anisodes coxaria, Guenée, Phal. i. p. 416, n. 677 (1857).

Rio Negro, south bank, 16th June; Pupunhazinho, Rio Jurua, 8th November; Sao Antonio, Rio Javary, 8th December, 1874.

46. *Anisodes nebuligera*, n. s.

Seems allied to *A. urcearia*; bright stramineous, irrorated with sienna-brown; wings crossed by three slightly arched and nearly equidistant dentate-sinuate grey lines; a large and almost marginal grey spot on the radial interspaces of all the wings, and a marginal series of black dots; primaries with brownish grey costal border; the large submarginal grey spot bounded internally by two dark brown dots; a small diffused greyish spot near the margin towards external angle; two black dots at the end of the cell, and one near the base of the submedian vein; secondaries with nearly the whole central third up to the outer dentate-sinuate line occupied by a grey nebula: two or three diffused greyish submarginal spots; a blackish diamond-shaped annulus at the end of the cell; body creamy stramineous; under surface creamy whitish, the inner lines of the upper surface obsolete; all the other markings violaceous; expanse of wings, 1 inch 3 lines.

South bank of Rio Napo, 16th June, 1874.

47. *Anisodes peculiaris*, n. s.

Pale stramineous; wings with the external third slightly sordid (pale testaceous); an irregularly zigzag,

slightly arched, pale rust-red line across the basal third, a black dot at the end of each discoidal cell, and a marginal series of minute black points; primaries with an irregularly bisinuated rust-red line just beyond the middle, partly bounded externally by a rather broad semi-circular grey fascia, which runs from the inner margin to near the middle of the outer margin; from this fascia to the costa there is an indistinct greyish stripe bounded internally by a zigzag rust-red line; three blackish discal spots on the submedian and first and second median branches; secondaries crossed by a sinuous discal series of indistinct whitish dots bounded internally by rust-red Λ -shaped markings; front of head and antennæ grey-brown; under surface pale creamy stramineous; the primaries and the costal and external borders of the secondaries sparsely speckled with black; a black dot at the end of each cell, and a series, at the extremities of the veins, upon the fringe; a slender black marginal line and a well-defined rather broad irregular blackish submarginal band; expanse of wings, 1 inch 4 lines.

Rio Negro, 17th June, 1874.

The following alterations must be made in the *Ephyridæ*:—*Acidalia trigonata*, Walker, seems to be an *Ephyra* of the *E. albiocellaria* group, but *Ephyra*? *strigularia* certainly does not belong to this genus, but to *Bargosa* of Walker; and *E. leonaria* is an *Anisodes*. *Anisodes imitaria*, Walker (= *A*? *obrimaria*), *A. pustularia*, *A. eumeleata*, and *A. hadassa* should all be referred to *Synegia*, although I am doubtful whether M. Guenée would not have done better by regarding the latter as a section of *Anisodes* than by placing it in the next family: *Anisodes*? *platycerata* is a *Drapetodes*.

ACIDALIIDÆ.

HYRIA, Stephens.

48. *Hyria pyraustaria*?

Hyria pyraustaria, Guenée, Phal. i. p. 429, n. 704 (1857).

Arapecu, Rio Trombetas, 4th March, 1874.

CAMBOGIA, *Guenée*.

49. *Cambogia contractata*.

Cambogia contractata, Walker, Cat. Lep. Het. xxii. p. 671, n. 10 (1861).

C. russearia var., Walker (nec Hübner), *l. c.*, p. 669 (1861).

Amazons, 30th January, 1874.

50. *Cambogia procurata*.

Cambogia ? procurata, Walker, Cat. Lep. Het. xxii. p. 672, n. 12 (1861).

Pedroso, Rio Purus, 25th September, 1874.

The *Acidalia phorcara* of Guenée seems allied to this species, and certainly looks quite out of place in *Acidalia*; *A. expressaria* of Walker is undoubtedly a *Cambogia*.

ACIDALIA, *Treitschke*.

This name, having been originally applied to a section of the Rhopalocerous genus *Argynnis*, will have to give way to one or other of Hübner's names; but since I have not at present time to devote to the determination of the types of that author's genera, I provisionally retain *Acidalia* in accordance with general usage.

51. *Acidalia eupitheciata*.

Acidalia eupitheciata, Guenée, Phal. i. p. 461, n. 767 (1857).

Rio Jutahi, near Rio Curuem, 29th January, 1875.

52. *Acidalia asopiata*.

Acidalia asopiata, Guenée, Phal. i. p. 472, n. 798 (1857).

Rio Jurua, 5th and 7th November, 1874.

53. *Acidalia stella*, n. s.

Bone-white; wings crossed by four parallel undulated equidistant grey lines, the outermost one indistinct, the first and third dotted with blackish; a marginal series

of linear black dots ; a small white elongated transverse spot at the end of each cell ; antennæ silvery ; under surface paler than above and sericeous ; expanse of wings, 8 lines.

Rio Jurua, 7th November, 1874.

This species appears to be most nearly allied to *A. apparitaria*, although, judging by description alone, one might suppose it to come nearer to *A. figurinata*, Walker (nec Guenée) = *A. taturata*, Walker, *ex parte*.

54. *Acidalia amazonata*.

Acidalia amazonata, Guenée, Phal. i. p. 503, n. 871 (1857).

Sao Antonio, Rio Javary, 6th December, 1874 ; Rio Jutahi, 29th and 31st January, 1875.

55. *Acidalia pulverea*, n. s.

Pearly white, sprinkled with brown atoms ; wings with narrow irregular smoky-brown outer border, and a slender black marginal line ; fringe purplish slate-colour at the base, but tipped with shining golden cupreous ; a very irregular zigzag dusky externo-discal line, dotted with black upon the nervures ; a black dot at the end of each discoidal cell, succeeded on the primaries and preceded on the secondaries by an indistinctly dentate-sinuate widely zigzag dusky line ; primaries with the costal border dark slaty grey ; palpi, frons, collar, and pectinations of antennæ golden testaceous ; vertex and stem of antennæ snow-white ; abdomen with a subterminal abbreviated transverse black bar ; under surface sordid white ; markings indistinct ; fringe shot with lilacine pink ; expanse of wings, 9 lines.

Uruçaca and Gaviao, Rio Jurua, 9th and 10th Nov., 1874.

This species appears to be most nearly allied to *A. expositata* of Guenée, to judge from his description, but I have seen nothing like it in any collection.

56. *Acidalia terminata* ?

Acidalia terminata, Guenée, Phal. i. p. 483, n. 824 (1857).

Prainha, 14th November, 1873.

57. *Acidalia vinocinctata*.

Acidalia vinocinctata, Guenée, Phal. i. p. 483, n. 826 ;
pl. 15, fig. 6 (1857).

Forest behind Arimanahy, 1st January, 1875.

58. *Acidalia juruana*, n. s.

Creamy white ; the centre of the wings sparsely irrorated with black scales ; primaries crossed just beyond the middle by two interrupted olivaceous lines, approximated in the centre, but divergent at their extremities, the outer line dotted with black, and immediately followed on the median interspaces by an abbreviated litura and a minute spot of the same colour ; a barely visible and very slender zigzag submarginal olivaceous line ; secondaries crossed at basal third by a biundated olivaceous line which does not reach the costa ; a black spot beyond it at the end of the cell ; two closely approximated parallel olivaceous sinuated discal lines, the inner one dotted with black ; a slightly irregular, very slender and indistinct, submarginal line ; margin dotted with black towards the apex ; front of head bronze-brown ; antennæ slightly brownish ; under surface white, the wings towards the base, and the body sordid ; expanse of wings, 7 lines.

Rio Jurua, 7th November, 1874.

This little species appears to be allied to *A. purata* of Guenée.

59. *Acidalia calidata*.

Acidalia ? calidata, Walker, Cat. Lep. Het. xxvii.
p. 1599 (1862).

Braga, Rio Javary, 7th February ; Rio Madeira, 26th May ; Gaviao, Rio Jurua, 10th November, 1874 ; Boaventura, Rio Jutahi, 24th January, 1875.

60. *Acidalia stictopteris*, n. s.

Primaries above lilacine-grey, washed with ferruginous, irrorated with minute black scales, and crossed beyond the cell by three irregular angulated indistinct grey lines ; a small grey spot at the end of the cell ; a dot in the cell, and a submarginal series black ; fringe laky brown ; secondaries rather small, sericeous whitly brown,

becoming quite white towards the base; a marginal series of black dots; fringe clearer and more golden than the body of the wing; thorax whitish; abdomen greyish brown; wings below shining grey, with marginal or submarginal black dots as above; a black dot at the end of each cell, and a curved grey line beyond it; costa of primaries reddish ochraceous; body cream-coloured; expanse of wings, 7 lines.

Barreira branca, Rio Jutahi, 3rd February, 1875. At light.

Allied to *Arrhostia elegantaria*, H.-Sch.

SOMATINA, Guenée.

61. *Somatina eburneata*?

Acidalia eburneata, Guenée, Phal. i. p. 474, n. 801 (1857).

Pupunha and Uruçaca, Rio Jurua, 1st and 9th Nov., 1874.

If I have rightly identified this little species it must be placed in *Somatina*, since it agrees in every structural character, excepting in its slightly less acuminate primaries, with *S. anthophilata*.

62. *Somatina fervens*, n. s.

Pattern of the preceding species, but more strongly marked; pale pinky brownish, the external area densely irrorated with ferruginous, especially between the discal and submarginal lines, where the red-brown scaling forms a defined but interrupted band; discal line dark brown, irregularly angulated; submarginal line widely sinuated, undulated, blackish, with a pale external border; a slender black marginal line formed of confluent fusiform spots; primaries with ferruginous costal margin; an ill-formed oblique ferruginous stripe at basal fourth; a crinkled dark red-brown central line, its outer sinuations filled in with the same colour; secondaries crossed just before basal third by an oblique bracket-shaped red-brown line; a dot of the same colour at the end of the cell; head black, with the vertex and base of antennæ cream-coloured, remainder of antennæ greyish brown; thorax and abdomen pale rosy brown; under surface sericeous whity brown, with the fringe of all the wings and the

costa of the primaries yellowish; the latter wings with a blackish spot at the end of the cell, and a curved abbreviated blackish discal line running downwards from the subcostal vein; secondaries with the external area faintly tinted with yellowish; a brown dot at the end of the cell; legs above slightly tinted with yellow; expanse of wings, 11 lines.

Rio Tapajos, 10th March; Rio Jurua, 7th and 10th November, 1874; Rio Jutahi, 29th January, 1875.

Three specimens and a fragment of a fourth were obtained at light; in coloration it differs entirely from *S. eburneata*, although very similar in pattern.

Macaria ? *turturaria* of Walker is referable to *Somatina*.

After examining and comparing the genera *Acidalia* (including several perfectly distinct genera), *Timandra*, *Ochodontia*, &c., with the *Macariidæ*, I have come to the conclusion that some of the species confounded together under the generic name *Macaria* could be advantageously referred to the present family under the generic names proposed for them by Hübner, but ignored by Guenée.

The type of *Macaria* is necessarily *M. liturata* since that is the sole species given by Curtis, but *Geometra alternata*, Denis, and *Phalæna notata*, Linn., are certainly not congeneric with the insect, but agree in almost every respect with *Ochodontia sareptaria*. The following species are referable to *Parasemia* of Hübner, to which genus these two well-known European forms belong:—*Macaria æmulataria*, *inoptaria*, *discerptata*, *enotata*, *agnitaria* (type of the genus), *clararia*, *approximaria*, *tectaria*, *emersaria*, *shanghaisaria*, and *insistaria*; it is probable that many other species unknown to me will fall into the same genus, and if *Ochodontia* be still retained as a group of *Acidaliidæ*, so close to *Timandra* that M. Guenée and others would not separate it, I do not see how we can place *Parasemia* in a distinct family; if we do, we must add to it *Timandra aventiaria* of India, which, although it has the general aspect of a *Timandra*, is structurally a *Parasemia*.

CALOTHYSANIS,* *Hübner*.

This genus may readily be distinguished from both *Acidalia* and *Timandra* by the well-defined angulation of the primaries.

63. *Calothysanis pulcherrima*, n. s.

Wings above sap-green, crossed at about the basal fourth by a slightly curved white stripe broadly bordered with slaty grey; a second white curved stripe edged with grey internally, and bounded externally by a broad grey discal band, which emits long dentate streaks along the nervures to the outer margin: primaries with the first two of these streaks (upon the last subcostal and third median branches) blackish; costa silvery white; secondaries with the first two discal dentate streaks abbreviated but blackish, the third well defined, blackish, and running to the angle of the wing at the extremity of the third median branch; all the wings with a slender black marginal line from the apex to the angle, and with white fringes; body white; under surface pearly white, with a grey indication of the discal band; expanse of wings, 11 lines.

Prainha.

Only one example of this very distinct and beautiful little species was obtained.

PARASEMIA, *Hübner*.64. *Parasemia percisaria*.

Macaria percisaria, Walker, Cat. Lep. Het. xxiii. p. 913, n. 80 (1861).

Santarem, Rio Jutahi, 4th February, 1875.

New to the collection of the British Museum; it is probably the same as *P. gambarina* of Cramer (pl. 371, B), of which moreover the *irrufata* of Guenée may be a variety; from Felder's figure (pl. cxxvii. 18) it differs only in that the slaty grey coloration of the primaries terminates obliquely at the external angle (as it does in Cramer's figure), and that there is no dusky band between the ordinary lines on the secondaries.

* As *amataria* (Hübner's first species) has been referred to *Timandra*, I shall regard *imitaria* as the type of his genus.

65. *Parasemia gigantata* ?

Macaria gigantata, Guenée, Phal. ii. p. 73, n. 1017 (1857).

Serpa, 13th February, 1875.

Very near to *Semiothisa gentitata* of Felder.

66. *Parasemia distans*, n. s.

Phalæna notata (part), Cramer (nec Clerck), Pap. Exot. iv. pl. 371, fig. G (1782).

Prainha, 14th January, 1873.

As neither of Cramer's figures represent Clerck's species they will both require to be renamed; it is possible, however, that the insect represented by fig. H may already have been described by Guenée, Walker, Snellen, or Felder, and therefore, for the present, I pass over it. Clerck's figure ('Icones,' pl. 6, fig. 11), represents a white species crossed by three pale yellow stripes, which commence in blackish spots along the costa of primaries; the group of dark spots bounding the third stripe on the primaries is not massed upon the lower radial interspace, and the ground colour beyond this stripe is equally white with the rest of the upper surface, whereas in *P. distans* the wings are pale stramineous, with the external area sordid or testaceous.

67. *Parasemia subitaria*.

Macaria subitaria, Walker, Cat. Lep. Het. xxiii. p. 910, n. 74 (1861).

Prainha, 14th November, 1873.

AZATA, Walker.

68. *Azata gambaria*.

Semiothisa gambaria, Hübner, Zutr. Exot. Schmett., figs. 159, 160 (1818).

Rio Jurua, 7th November, 1874.

MACROGONIA, *Herrich-Schäffer*.69. *Macrogonia igniaria*.

Macrogonia igniaria, Herrich-Schäffer, Auss. Schmett.
pl. 57, fig. 315 (1850—69).

Prainha, 17th December, 1873.

Nobody who had examined this striking species could for a moment think that it was an *Acidalia*, as suggested by Walker.

ZANCLOPTERYX, *Herrich-Schäffer*.70. *Zanclopteryx aculeataria*.

Zanclopteryx aculeataria, Herrich-Schäffer, Auss.
Schmett. pl. 59, fig. 330 (1850—69).

Gasmara uniferata, Walker, Cat. Lep. Het. xxvi.
p. 1634 (1862).

Barreiras de Ouary, Rio Purus, 2nd October, 1874.

BERBERODES, *Guenée*.71. *Berberodes conchylata*.

Berberodes conchylata, Guenée, Phal. ii. p. 17, n. 917,
pl. 12, fig. 9 (1857).

Chrysocestis institata, Walker (nec Stoll), Cat. Lep.
Het. xxii. p. 621 (1861).

Prainha, Rio Jurua, 5th November, 1874 ; Rio Jutahi,
5th February, 1875.

BALLANTIOPHORA, n. g.

Allied to *Berberodes*, but with the outer margin of the secondaries less angular; the disco-cellulars of the primaries more transverse, so as to join the median vein just before the emission of the second and third branches; the male with a thickened fringed purse-like swelling at about the middle of the inner border of the primaries, and the anal angle of the secondaries not curved upwards like a shell, as in *Berberodes*, but flat. Type, *Berberodes gibbiferata*, Guenée.

72. *Ballantiophora gibbiferata*.

Berberodes gibbiferata, Guenée, Phal. ii. p. 17, n. 918 (1857).

Chrysocestis bisignata, Walker, Cat. Lep. Het. xxii. p. 621, n. 3 (1861).

Prainha, 14th November, 1873.

73. *Ballantiophora lanaris*, n. s.

Chalky white; wings crossed by three subparallel series of pale yellow spots, the first series not extending into the secondaries, and only consisting of two widely separated spots; external border grey, with a marginal series of conspicuous black spots; fringe pale pinky brown; primaries with the costal border stramineous, streaked with shining leaden black; secondaries with the anal half of the abdominal margin broadly fringed with woolly hair; head clay-coloured; under surface sordid white; wings with brown external border; expanse of wings, 10 lines.

Rio Taruma, Rio Negro, 31st July, 1874.

MICRONIIDÆ.

I am satisfied that the following genera ought not to be referred to this family, but as they have been placed here it will be better not to disturb them until their true affinities can be satisfactorily made out.

NEDUSIA, *Hübner*.

74. *Nedusia metachromata*.

Erosia metachromata, Walker, Cat. Lep. Het. xxiii. p. 835, n. 2 (1861).

Amazons. No exact locality or date given.

SCHIDAX, *Hübner*.

75. *Schidax squammaria*.

Schidax squammaria, Hübner, Zutr. Exot. Schmett., figs. 161, 162 (1818).

Serpa, 13th February, 1875.

MENDA, Walker.

To this genus the so-called "*Molybdophora*" *concinularia* of Herrich-Schäffer must be referred, as also the "*Nadagara*" *nigripalparia* of Walker. What Guenée associated *M. concinnaria* and the *concinularia* of Herrich-Schäffer together for, I cannot at all comprehend; certainly not for any similarity either of form or coloration; and as for the *hyphinoë* of Cramer, I can second his remark, "Je ne suppose pas qu' *Hyphinoë*, Cram., 357 G, H, puisse se placer ici," inasmuch as that species, of which Dr. Trail took no less than eighteen specimens, is a *Deltoid* referable to Walker's genus *Gaala*, and nearly allied to his *Rethma*.

It is a singular fact that M. Guenée's remark did not deter Mr. Walker from placing the *Phalæna hyphinoë* of Cramer under *Molybdophora*, nor from regarding *Rethma* as a genus of *Geometrites*.

76. *Menda cinerea*, n. s.

Form of *M. nigripalparia*; silvery ash-grey, crossed in the centre by two darker grey stripes, the inner one nearly straight, the outer one undulated; a discal series of subconfluent white lunules; primaries with blackish costal margin; body immaculate; head dusky; under surface uniform silvery grey, without markings; expanse of wings, 1 inch 5 lines.

Rio Jurua, 2nd November, 1874.

MACARIIDÆ.

MACARIA, Curtis.

77. *Macaria infimata*.

Macaria infimata, Guenée, Phal. ii. p. 81, n. 1041 (1857).

Below Tabatinga, 28th November, 1874.

78. *Macaria peltigerata*.

Macaria peltigerata, Guenée, Phal. ii. p. 79, n. 1033 (1857).

Rio Jurua, in the forest, 7th and 8th November, 1874. Apparently not a rare species.

79. *Macaria cometifera*, n. s.

Allied to *M. pernicata*, Guenée (which we have recently obtained from Rio Janeiro), distinctly smaller, and different in pattern; wings white, mottled with greyish brown, the nervures and fringes pale stramineous; wings crossed by three greyish brown lines, the first two approximated, undulated, incurved at costal margin of primaries, the first obsolete upon the secondaries; third line slightly undulated and transverse on the primaries, dentate-sinuate and arched on the secondaries, bounding a greyish discal band, which is limited externally by a less distinct undulated submarginal line, a slender black marginal line, two grey lines on the fringe; primaries with two black discal dots, one above the other, followed by two fusiform silvery white spots; body greyish; under surface washed with yellow, excepting upon the external border; discal band rather reddish; expanse of wings, 11 lines.

Uraria Channel, 8th May, 1874.

EUTROPA, Hübner.

80. *Eutropa? columbaris*, n. s.

Flesh-coloured; wings crossed by three greyish brown lines, the innermost one slightly sinuous, wanting on the secondaries, the second, which is placed just beyond the middle, very irregularly sinuated; the third flecked here and there with black, parallel to the second, and limiting the external border, which is of a slightly paler greyish brown colour; vertex of head greyish; under surface much more pink in tint, the innermost line absent, the second line more strongly defined, and the third line merged in a very irregular grey submarginal band; expanse of wings, 1 inch 5 lines.

Serpa, 21st April, 1874.

This species seems to be allied to *E. distribuaria* of Hübner, although the banding of the wings is far more simple; as to whether the genus is rightly referred to the *Macariidæ*, I must leave to future investigation to decide.

Before leaving the *Macariidæ*, I may mention that the following species placed in *Macaria* are referable

to the genus *Semiothisa* (regarding as type of that genus the *S. fasciata* of Fabricius):—*Macaria eleonora*, Cramer = *S. fasciata*, *M. nora*, Walker, *M. neonora*, Walker, *M. xanthonora*, Walker, *M. myandaria*, Walker, and perhaps *M. elvirata* of Guenée, and *Azelina metagonaria* (which are probably conspecific).

M. bisignata, Walker (which has no character in common with Packard's *Semiothisa bisignata*), is apparently a *Molybdophora*, although the want of Hübner's *M. concinnaria* unfortunately prevents my comparing the neuration, and, consequently, I can only be guided by similarity of form. The *Semiothisa divergentata* of Snellen appears to me to be much more like some of the forms associated under *Acidalia*, although in some respects it is more like some of the species associated under *Tephрина*, such as *T. divisaria*, *deerraria*, &c.; to the latter group I shall provisionally refer it and a nearly-allied species, which I here describe:—

FIDONIIDÆ.

TEPHRINA, Guenée.

81. *Tephрина lucinda*, n. s.

Nearly allied to *T. divergentata**; smaller; upper surface very pale stramineous, almost cream-colour; wings speckled with dark brown, and crossed in the central area by two subparallel slender dark brown lines, beyond which the ground colour is more densely speckled and yellower; a very slender black marginal line; primaries with a third very irregular brown line near the base, and a black spot on the second median interspace; under surface brighter in colour, yellower; an arched bisinuate brown line beyond the outer or discal line on all the wings; also two black spots beyond this line; otherwise as above; the outer margin angulated slightly at the third median branch; expanse of wings, 11—13 lines.

Serpa, 13th February, 1875.

* See Felder, Reise der Nov., Lep. v. pl. cxxviii. figs. 22, 22a.

LARENTIIDÆ.

SCORDYLIA, *Guenée*.

82. *Scordylia* ? *basaliaria*.

Scordylia basaliaria, Walker, Cat. Lep. Het. xxiv.
p. 1280, n. 15 (1862).

Teffé, in the forest, 19th October, 1874.

Two or three other minute *Geometrites* were obtained, but in so worn and broken a condition as to be unrecognisable ; they seem to be very small species of *Cambogia*, *Hyria*, and *Acidalia*.



Butler, Arthur G. 1881. "XIX. On the Lepidoptera of the Amazons, collected by Dr. James W. H. Trail during the years 1873 to 1875." *Transactions of the Entomological Society of London* 29, 315–349.

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