

II. GEOMETRIDAE.

By Louis B. Prout, London.

The Geometridae of these collections have been difficult to work out satisfactorily, not only on account of the very fragmentary state of our present knowledge of the Geometrid fauna of the vast area covered by the Gran Chaco and southward over the Pampas of Argentina but also, to some extent on account of the fewness of the specimens in nearly all the species. For these very reasons, however, they have proved extremely interesting and of considerable scientific importance, although much larger material must be awaited before we can know much about the variability and the geographical range of a number of the obscure species. Such notes as I have been able to give on the range will be found under the heading of the separate species.

Subfam. Oenochrominae.

1. *Ergavia exstantinea* Prout (M.S.)

Ergavia exstantilinea Prout in Seitz, Vol.VIII. (in the press, Paraguay).

Bolivia: Villa Montes, May 1926 (Lindner). 1 ♀ (Chaco Exp.).

Subfam. Sterrhinae.

2. *Flavinia chibcha* (Schaus) (1892).

Bolivia: Villa Montes, May 1926 (Lindner), 1 ♂, 1 ♀; Fortin Esteros, March 1926, 1 ♀. N.Argentina: San José, October 1925 (Lindner), 1 ♀ (Chaco Exp.).

The Fortin Esteros ♀ is an aberration with the black borders of the hindwing very broad — the antithesis of *ab. tenuis* Warr. (1905). The Villa Montes two are very small.

F. chibcha was described from Peru, but extends across Bolivia to N.Argentina, Paraguay and Brazil.

3. **Flavinia basina** (Bsd.) (1869).

Bolivia: Ipitás, 17 October 1926 (Lindner), 1 ♂ (Chaco Exp.).

The type is said to have come from Guatemala, a manifest error. The actual range of the species is approximately the same as that of the preceding.

4. **Semaeopus rubripuncta** (Dogn.) (1902).

Argentina: Capilla del Monte, Cordoba (Prof. Hosseus).

Paler than the few specimens previously known to me, which have the reddish irroration as in Dognin's type. This phase of colour — variation is frequent — in the *Sterrhinae* and one cannot say from a single specimen whether the distinction is here geographical. Best known from Tucuman, the type locality, but the Tring Museum has it also (1 ♂) from Agua Suja, Minas Geraes.

5. **Semaeopus ambagifera** (Warr.) (1897).

Bolivia: Fortin Linares, April 1926, 1 ♂ (Chaco Exped.).

Described from Venezuela, but reappears in Bolivia, Paraguay and Brazil. Probably a good deal overlooked.

6. **Pleuroprucha insulsaria asthenaria** (Walk.) (1861).

Bolivia: San José de Chiquitos, October 1926 (Lindner), 1 ♀ (Chaco Exped.).

Extremely widely distributed from Mexico and the West Indies to Argentina, at least as far south as Buenos Aires (vide Trans. Ent. Soc. London 1910, pp. 215—16). It does not belong only to „eastern“ America, as I have implied, but has long been known to me also from Peru and Bolivia. It is still problematical whether it should be separated from the *insulsaria* Guen. of the United States.

7. **Scopula mappata** (Guen.) (1858).

N.Argentina: San José, October 1925 (Lindner), 1 ♀ (Chaco Exped.).

The example, though torn, is otherwise in very fresh condition and shows a delicate purplish vinaceous colour on the

fringes — perhaps 2'''c according to the colour-scheme of Ridgway (Nomenclature of Colors, pl. XXXIX). Probably bred specimens would always show this, but there may be geographical variation or even two extremely close allies not yet differentiated.

Hitherto only known from Brazil.

8. *Scopula eburneata* (Guen.) (1858).

Paraguay: Trinidad, near Asuncion, August 1925, 1 ♀ (Chaco Exped.).

Widely distributed and often common: Mexico, Venezuela, the Guianas, Brazil (loc. typ.), Paraguay and Argentina. I believe also that *chionaeata* H.-Sch. (1870, Cuba) and *subsignaria* Walk. (1861, Jamaica) are synonyms or at most races.

9. *Scopula subnictata* (Snell.) (1874), (ab.?)

Bolivia: El Cairo, August 1926 (Lindner), 1 ♀ (Chaco Exp.).

The assumed range is from Colombia (the type locality) to Bolivia, but it is either very variable, at least on the upperside or still includes one or more undetected species. The present specimen is rather pale and weakly marked, lacking the pairs of accentuated spots on the postmedian line.

10. *Scopula eclipses* (Prout) (1910) (?).

Misiones: Tacaaglé, November 1925 (Lindner), 1 ♀ (Chaco Exp.).

On account of the sex and the fact that the specimen is worn, this determination is only provisional. In any case the group has not yet been adequately studied. *S. eclipses* was described from Buenos Aires and two rather small, weakly marked specimens from near Florenzia, Gran Chaco, October 1902, were referred to it.

11. *Sterrhia spernata* (Walk.) (1861).

N. Argentina: San José, October 1925 (Lindner), 1 ♂ (Chaco Exped.).

The geographical range, so far as at present known to me, is somewhat discontinuous, at least in the northern part of South America. I have only records for Costa Rica, Venezuela (whence it was described), Bolivia, Paraguay, Brazil and Argentina, but in the last-named country it is far from rare and reaches southward to Buenos Aires.

12. **Sterrha** sp.

Misiones: Tacaaglé, Nov. 1925 (Lindner), 1 ♀ (Chaco Exp.).

Probably the ♀ of a new species, but although the specimen is in good condition I cannot venture to describe it without the ♂. The ♀♀ of the more specialised Neotropical *Sterrha* ♂♂ (with hairy middle legs or hair-tufts on the hindwing, etc.) are in large part extremely similar and have not yet been worked out. A very similar form (probably conspecific) is in the Tring Museum from E. Bolivia (unnamed) and I think belongs with a ♂ of the section *Lobura* Warr. (Proc. U. S. Nat. Mus. XXX. 451). Considerably smaller than the ♀ of *praetextaria* Guen. (1858), otherwise not dissimilar; in that species the ♂ has the middle leg tufted, which is not the case in the typical forms of *Lobura*.

Subfam. **L a r e n t i i n a e.**

13. **Eois tegularia** (Guen.) (1858).

N.Argentina: San José, Oct. 1925 (Lindner), 1 ♂ (Chaco Exp.).

Very widely distributed. Recorded from Panama by Dyar and known to me from Venezuela, British and Dutch Guiana, Ecuador to Bolivia, Paraguay and Brazil (loc. typ.). I have no previous record from Argentina.

14. **Xanthorhoë argentina** (Prout) (1910).

Misiones: Tacaaglé, Nov. 1925 (Lindner), 1 ♂ (Chaco-Exp.).

This very distinct species was described from Buenos Aires and Montevideo.

15. **Orthonama vittulata** (Schaus) (1901).

Capilla del Monte, Cordoba (Prof. Hosseus), 1 ♂.

I sink as synonym *densilineata* Warr. 1907 and give as range S. E. Peru (*densilineata*), Bolivia (*vittulata*) and Argentina.

16. **Perizoma impromissata** (Walk.) (1862).

Central Argentina: Germania, Juli 1925 (Lindner, 3 ♂♂, 1 ♀ (Chaco Exped.).

One of the ♂♂ is of the form with a white band traversing the centre of the median area of the forewing. On the variation and synonymy see Trans. Ent. Soc. London 1910, pp. 267-69.

Characteristic of Argentinae from Goya to Patagonia, but also known from Uruguay (Walker's type locality) and Paraguay.

17. *Spargania* sp. (?)

Capilla del Monte, Cordoba, 24 March 1929 (Prof. Hosseus), 1 ♂.

Probably new, but unfortunately too worn for description. Perhaps near *S. viridissima* (Dogn. 1907) but more fuscous, without green admixture. It has somewhat the build and palpus of *Perizoma iduna* Prout (1910) but not the colour and markings, while the narrow median band is shaped — so far as can be made out — much as in *P. pastoralis* (Butl. 1882), which has much shorter palpus. The so-called *Perizoma* of South America perhaps intergrade with *Spargania* and seem far from the Palaearctic genus.

18. *Euphyia stellata* (Guen.) (1858).

Bolivia: Villa Montes, May 1926 (Lindner), 1 ♂; Fortin Linares, April 1926, 1 ♀ (Chaco Exped.). Argentina: Capilla del Monte, Cordoba (Prof. Hosseus), 2 ♂♂.

One of the most widely distributed of all the American Geometridae, southern United States to Argentina, the West Indies and the Atlantic Islands, becoming *purpurariorum* Rbl. (1917) on Madeira and represented by the scarcely different *natalata* Walk. (1862) in Africa, *rubritincta* Hamps. (1899) on Socotra and *constellata* Warr. (1897) on Mauritius. Variable on the upperside less so beneath.

19. *Euphyia zona* (Dogn.) (1901).

N. Argentina: San José, October 1925 (Lindner), 1 ♀ (Chaco Exped.), Capilla del Monte, Cordoba (Prof. Hosseus), 1 ♀.

Both the examples are rather large (38-39 mm) and darkish.

Described from S. Brazil and well known from Buenos Aires; also known from Tucuman. I am still doubtful whether it may have to sink to *corrivulata* Warr. (1900), founded on a smaller, paler ♀ from Parana, Entre Rios; which has never yet been matched.

20. *Euphyia fringillata* (Guen.) (1858).

Misiones: Tacaaglé, November 1925 (Lindner), 1 ♂ (Chaco Exped.).

Apparently very generally distributed: Central America, Colombia, Venezuela, Peru, Bolivia, Paraguay, Argentina, Brazil, the last-named being the type locality.

21. **Euphyia ochribasis** (Warr.) (1905).

Capilla del Monte, Cordoba (Prof. Hosseus), 2 ♂♂, 1 ♀.

Only definitely known to me from Argentina, chiefly from Tucuman (the original locality) and from La Rioja and Cordoba, where Dr. Giacomelli has collected it rather freely. I have, however, been very similar *Euphyia* from Paraguay and Brazil, possibly races.

22. **Euphyia nigrolineata** (Warr.) (1904).

Argentina: Aguarai, June 1926 (Lindner), 1 ♂ (Chaco Exp.).

Described from Paraguay and only further known in its typical form from N.Argentina. It has, however, a race in Colombia-Peru (*fumida* Warr., 1905) and another unnamed in Bolivia, agreeing in size and forewing colouring with *n. nigrolineata*, in antemedian line, hindwing colouring and underside with *n. fumida*. Wider experience does not support my earlier suggestion (Trans. Ent. Soc. London 1910, p. 246) that *parinotata* Zell. (1872) might also be conspecific: it is evidently *tenera* Warr. (1900), from Bolivia, Argentina and Paraguay, which is the southern representative of *parinotata*.

23. **Euphyia kirschi chaconis** subsp. n.

Forewing darker than in *k. kirschi* Mssn. (1890), described from Ecuador, but extending with little variation to Costa Rica and to Peru; interneural subterminal lunules (or spots) edged distally with dark dots and succeeding weaker dashes, especially between veins R^1 and M^2 . Hindwing with the dark distal border restricted to an apical mark, much like that of *combustaria* H.-Sch. (1855) but rather smaller.

Argentina: Aguarai, June 1926 (Lindner), 1 ♂ (type) in Mus. Munich (Chaco Exped.).

I have seen, and separated out, examples of this race from Tucuman and Tapirigo, Argentina, in other collections, but have not hitherto found an opportunity to make it known.

24. **Hoplolygris cicatriculata** (Berg) (1875).

Capilla del Monte, Cordoba (Prof. Hosseus), 1 ♂.

Described from Rio Negro, S.Argentina, this interesting little species has proved to have a wide distribution in the Republic but has never been found outside its confines. In Trans. Ent. Soc. London 1910, pp. 254-5, I shewed reasons

for separating it generically from *Pelurga* of the Palaearctic Region, to which Warren had assigned it. But that remains its nearest known ally, as has received unexpectedly striking confirmation from the examination of the ♂ genitalia; these I submitted several years ago, to my friend the Rev. C. R. N. Burrows, without giving him the faintest clue as to the systematic position, and he promptly pronounced them to be „actually *Pelurga comitata* on a small scale. I don't mean to say that this is the same, but perhaps a similar genus in the New World“ (in litt. 25 January 1922). One can only suppose either that the connecting forms have become extinct over a wide area, or that they have so far diverged superficially that their real affinities have been disguised and will only manifest themselves to a more intensive study.

25. *Eudule cupraria* (Walk.) (1854).

N. Argentina: San José, October 1925 (Lindner), 1 ♂. Pilcomayo River: Lapango, September 1925 (Lindner), 1 ♀. Bolivia: Villa Montes, May 1926, 1 ♀ (Chaco Exped.).

Distribution: almost everywhere from Mexico to Argentina, with a race (if not, indeed, synonym) *unicolor* Robinson (1869) in Texas, Arizona and New Mexico and a dwarfed form (I think unnamed) on Cuba.

26. *Scordylia quadruplicaria latior* Th.-Mieg (1894).

Argentina: Aguarai, June 1926 (Lindner), 2 ♂♂ (Chaco-Exp.).

This form, for which Thierry-Mieg gives „Peru and Brazil“, thus disguising the racial tendencies, is intermediate between typical *quadruplicaria* Hb.-Gey. (1832) from S.E. Brazil (also Argentina, excepting the north) and *q. latississima* Th.-Mieg (1894) (= *amplificata* Warr., 1904) from E. Peru; and in the prevailing form in Bolivia and no doubt in the adjacent part of Argentina.

27. *Rhopalodes castniata* Guen. (1858).

Capilla del Monte, Cordoba (Prof. Hosseus) 1 ♀.

A rather rare species, described and figured from a single ♀ from „Brazil“ (probably in the vicinity of Rio). The ♂ was first made known by Le Moult in 1911 (from Misiones) and of recent years both sexes have been occasionally received from S. Brazil and N. Argentina.

In the males which I have examined, the areale of the forewing is undivided; in the ♀ — as also in the rest of the

species which are referred to *Rhopalodes* — it is double, as Guenée gives it. Variability in this character crops up sporadically in this *Lobophora* group (cfr. Pearsall, Can. Ent. XXXVI, 210).

28. **Baynia odontota** Prout (1910).

Capilla del Monte, Cordoba (Prof. Hosseus), 1 ♂.

Described and figured in my introductory paper „On the Geometridae of the Argentine Republic“ (Trans. Ent. Soc. Lond. 1910, pp. 204—345) from a ♂ from Aristides Villanueva, Mendoza. A few further specimens have since come to my knowledge, but only from a restricted area — Alta Gracia (per W.J.H. Rosenberg), La Rioja (per Dr. E. Giacomelli) etc. I have also found that *dismutata* Warr. (1904, as *Rhopalista*), from Tucuman, is referable to the genus which I erected for *odontata* and which would therefore seem endemic to N. Argentina.

Subfam. GEOMETRINAE.

29. **Pero trailii** (Butl.) (1881).

Bolivia: El Cairo, August 1926 (Lindner), 1 ♂.

Warren (Nov. Zool. XI. 165) erroneously sinks to this species *mathanaria* Oberth. (1883) and in this he has been followed by Oberthür in his collection. It is *marcaria* Oberth. (1883) which sinks to *trailii*, with the ♂ antenna strongly dentate, whereas in *mathanaria* the fascicles of cilia are sessile. In the Amazon subregion the two allies occur together, but hitherto I only knew *mathanaria* to extend into Peru and Bolivia. The El Cairo specimen perhaps represents a race.

Hosseusia gen. nov.

Face somewhat rounded, with appressed scales. Palpus longish, 2nd joint heavily and rather loosely scaled above and beneath, 3rd joint moderate, smooth. Tongue developed. Antenna rather short, in both sexes simple. Thorax and abdomen not crested, in ♂ slender, in ♀ very robust. Pectus hairy. Femora glabrous. Hindtibia in ♂ not dilated, in both sexes with all spurs. — Forewing elongate, costa slightly sinuous, apex shortly produced, minutely falcate, termen smooth, relatively short, bowed, oblique, strongly so behind; cell somewhat over $\frac{1}{2}$, rather narrow at end, DC hardly curved; fovea wanting; SC¹ well free, SC² connected by short bar (in the southern

form anastomosing) with SC^{3-4} just beyond SC^5 , R^2 central, M^1 rather widely separate. — Hindwing with costal margin long, slightly curved near end, apex round-prominent, termen slightly sinuous, straightish from SC^2 to R^3 , then more curved, tornus moderate; cell less than $\frac{1}{2}$, DC incurved, rather strongly oblique posteriorly, C approximated to SC to near end of cell, then moderately rapidly diverging, SC^2 approximated at origin to R^1 , R^2 wanting, M^1 rather widely separate from R^3 .

Type of the genus: *Hosseusia eoa* sp. n.

Probably a somewhat ancestral genus. The venation is nearly that of *Pero* (= *Azelina*), which Meyrick treats as Subantarctic and allows to contain some species which have more nearly the build and scaling of *Hosseusia*, than the true typical *Pero*. The retention of an elongate cell in the forewing, together with a shortening of that of the hindwing, is an unusual combination. It is just possible that, on a revision of the subfamily, some Chilian or even Australian genus may be found which could contain it, but I have failed, after prolonged investigation to find any legitimate association for it.

30. *Hosseusia eoa* sp. n.

♂, 38 mm. Face cartridge-buff, darker-mixed ad sides and lower edge. Palpus about 2, cartridge-buff, above orange. Collar and patagium light fuscous. Thorax and abdomen cartridge-buff. Femora and tibiae black-speckled.

Forewing cartridge-buff, in a broad ill-defined, median area suffused with vinaceous-buff, in some lights almost vinaceous-fawn; sparge dark irroration except on a narrow costal margin and a narrow (scarcely 1 mm), very slightly incurved, not sharply defined streak, which arises on costa about 1 mm from apex and reaches hindmargin at just over 2 mm from termen, its posterior half rendered indistinct by a spreading of the vinaceous suffusion; area outside this streak somewhat suffused with grey; fringe pale, becoming orange at apex. — Hindwing cartridge-buff to lilac-buff, with some dark irroration; a broad, ill-defined area in the centre ochraceous-orange, not or scarcely reaching costa, posteriorly scarcely extending behind cell and M^1 , distally becoming slight at 3 mm from termen, gradually fading out.

Underside rather more strongly irrorated; hindwing almost

unicolorous cartridge-buff, forewing with an extensive ochraceous-orange central area.

Argentina: Capilla del Monte, Cordoba (Prof. Hosseus), 1 ♂ (type) in Mus. Munich.

The ♀ is considerably larger (46 mm), the forewing above and both wings beneath more cream-buff, the hindwing above with the orange much more extended but not quite so bright, leaving only the inner-marginal area of the ground-colour, the forewing beneath also with the orange area more extended than in the ♂, the hindwing beneath with a rather large but not intense cell-spot.

Chaco de Santiago del Estero, in coll. Joicey.

A ♂ aberration or race, with the irroration heavier, rather strong cell-spots present on both wings above and beneath, the vinaceous suffusion and orange patches much reduced (the latter rather faint), is in the Tring Museum from La Soledad, Entre Rios, close to the frontier of Uruguay, 24 November 1909 (Miss E. A. Britton).

31. *Microgonia nimbata* (Guen.) (1858).

Capilla del Monte, Cordoba (Prof. Hosseus), 1 ♂.

Range: Mexico to S. Brazil.

Guenée's type, which is a broken ♀, was assumed to be a ♂ and has caused much mystification as to the identity of the species, Oberthür even being inclined to think it was a ♂ form of *agliata* Guen. I feel confident, after examination, that it is nothing but a ♀ to the widely distributed *noctuitaria* Walk. (1860), founded on the ♂. Both types were from the Rio Janeiro district.

32. *Microgonia mundata* (Guen.) (1858).

Capilla del Monte, Cordoba (Prof. Hosseus), 5 ♂♂, 1 ♀.

A common species in Brazil, Paraguay and Argentina.

33. *Microgonia nedusia* (Druce) (1892).

Bolivia: Buena Vista, August 1926 (Lindner), 1 ♂ (Chaco Exped.).

Druce described *M. nedusia* (as „*Herbita*“) from Chiriqui. It is known from British Honduras, Costa Rica, Colombia, Venezuela, the Guianas, Peru, Paraguay and Uruguay.

34. *Apicia holmiaria* (Guen). (1858). (?)

? *Tetracis inaequaria* Walk., List Lep. Ins. XXVI. 1615 (1862), Brazil.

? *Apicia holmiaria* (err. orthogr.) Oberth., Et. Lé p. Comp. VI. 249, 349, t. CXLIX, f. 1418 (1912), Brazil.

Bolivia: Santa Cruz de la Sierra, 31 July 1926 (Lindner), 1 ♂ (Chaco Exped.).

This group, like many other of the difficult assemblages of variable and closely similar species among the Neotropical *Geometrinae*, has never yet been worked out morphologically and most determinations remain more or less tentative. Oberthür (loc. cit.) opines that *quartaria* Guen. and *holmiaria* Guen. (each founded on a single ♀ from Brazil) form a single specific unit, a precarious suggestion which could not be absolutely dismissed from the range of possibilities, but which (as is pointed out by Dognin (Ann. Soc. Ent. Belg. VII. 68) is stultified by his interposing between them (fig. 1417) a Peruvian ♂ of widely different shape and markings which to him „seems to establish a highly suggestive transition between *quartaria* and *holmaria*“ (!). This interloper, named by Dognin (1913) *apicia oberthuri* (= „*quartaria* Guen. ♂“ Oberth., nec Guen.) is recorded also from Colombia, but we need not concern ourselves with it here except to reject the apparent bibliographical evidence of a wide distribution for *holmiaria*.

I have not yet seen any other specimen quite agreeing with this of the Chaco Expedition, and it is not unlikely that it may belong to an undescribed species, but the present seems the best provisional determination for it. It is more glossy than Guenés type ♀, but this will be due, at least in part, to its beautiful condition; from the equally glossy *cayennaria* it differs radically in the strongly bent termen of both wings (on neither wing so sharply pointed at R^3 as in *oberthuri* Dogn.). The basal area of the forewing is darkened equally with the distal, giving nearly the same effect as Oberthür's fig. 1420 („*Apicia* transitional between *arnetaria* Guen. and *spinctaria* Guen., S.-Catharina, Brazil“), though the median area is broader and not quite so clear buff, the postmedian line not quite so long-produced and showing an (extremely slight) inward curve which is not indicated in either of the figures cited; the underside likewise shows some approach to Oberthür's fig. 1420, notably

in the narrow pale bordering of the hindwing. *A. laevipennis* Dogn. (1908, Tucuman), which is unknown to me, would seem to be precluded by its more oblique postmedian, less bicoloured hindwing and less yellowish underside and its shape and midtermen is not stated.

I have a ♀ from La Rioja which I am inclined to call *holmiaria* ab., in most respects somewhat closer to the type than the present ♂ is, but rather more heavily irrotated.

35. **Erosina hyberniata** Guen. (1858).

Argentina: Aguarai, June 1926 (Lindner), 1 ♂. Bolivia: Santa Cruz de la Sierra, 31 July 1926 (Lindner), 1 ♂ (Chaco Exp.).

Widely distributed, with very little variation, Mexico to N. Argentina, Paraguay and S.E. Brazil.

36. **Pantherodes colubraria** Guen. (1858).

Bolivia: Villa Montes, May 1926 (Lindner), 1 ♀ (Chaco Exp.).

Founded, like the foregoing, on examples from Novo Friburgo, Brazil. *Pantherodes colubraria* is nearly as widely distributed. It is, however much more variable and it is possible that some geographical forms will be found racially tenable — e. g. *E. viperaria* Th.-Mieg (1916) = *colubraria* var. A, Guen. (Colombia and Ecuador). It has already been recorded from N. Argentina (Tucuman), but under the erroneous name of *pardalaria* ab. *obliterata* Warr. (1909) (recte *colubraria* ab. *obliterata*).

37. **Gnophos oreas** Prout (1910).

Capilla del Monte, Cordoba (Prof. Hosseus), 1 ♂.

I founded this species on a good ♀ from Cacheuta, 1245 m, on the Argentine Great Western Railway, and during the succeeding years have seen only one other example, a ♀ kindly sent me by Dr. E. Giacomelli from La Rioja. So far as can be judged from these three specimens, it is not at all variable.

Prof. Hosseus' discovery of the ♂ is valuable as supplying further structural characters and confirming the suggested close relationship of the species with *chanchani* Dogn. (1904). The rather long antenna is bipectinate to $\frac{3}{4}$ with rather long but fairly stout branches, which do not end in well-formed bristles. The hindtibia is somewhat dilated, with a groove enclosing a hair-pencil. The fovea is wanting. It has apparently much more to do with *Parapheromia* Mc. Dunnogh (1917) than with *Gnophos*, but I am disposed still to defer any radical rearrangement until it is more fully studied.

38. *Iridopsis silia* sp. n.

♂, 32 mm. Similar to *obliquata* Dogn. (1904), of which a very good description is given in Ann. Soc. Ent. Belg. XLVIII, 364. Abdomen relatively more slender (in *obliquata* moderately robust). Hindleg shorter, with the tarsus almost $\frac{3}{4}$ the length of tibia (in *obliquata* ♂ not quite $\frac{2}{3}$). Coloration darker, more fuscous than red-brown. — Forewing with cell-spot connected with costal margin by a blackish median shade which from behind cell-spot to hindmargin is strong and double, somewhat connected by dark shading; terminal dots connected by a very fine dark line. — Hindwing with only one of the proximal lines developed this rather strong and nearer to the base than the more proximal of the two lines of *obliquata*; postmedian line *obsolescent* at costa; distal area scarcely at all variegated, subterminal very fine and weak. — Underside also rather greyer than in *obliquata*, otherwise very similar.

Argentina: Capilla del Monte, Cordoba (Prof. Hosseus).

I have a rather larger example of this species in my collection from La Rioja (Dr. E. Giacomelli) and hitherto assumed it — without close attention — to be a dark aberr. of *obliquata* (which also occur in that locality), notwithstanding that about Tucuman, where it is common, the ♂ has always about the tone indicated by Dognin.

39. *Stenalcidia differens* Warr. (1897). (?)

Bolivia: Cabezas, 25 July 1926, 1 ♀ (Chaco Exped.).

Probably a very white aberration of this species, with the cell-dots and the shading outside the postmedian weak; but the determination is far from certain. From Paraguay, the type locality, I know ♂♂ only, but a pair from Buenavista, E. Bolivia, seem to show that the ♀ is, at least, not darker than the ♂, I have seen, however, a few other miscellaneous whitish *Stenalcidia* from Paraguay and N. Argentina which need elucidation. Some, at least, of them are passing in collections as dwarfed forms of *mollearia* Walk. (1860, Brazil), of which *tenerata* Walk. (1862), though much smaller than the ♀ type, is said to be the ♂. Again, *signataria* Walk. (List Lep. Ins. XXVI. 1657, Brazil), which Schaus says is a distinct species, is shown by a figure in the British Museum to be another similar insect; when I saw the type in the Oxford Museum many years ago I took it to be a light ♂ of *Odysia molaria* Guen., but I may easily

have been mistaken. In any case the Capezas ♀ is not on *Odysia*, for its antenna is not pectinate. For further light I must wait for more material, and more time to work it out.

40. *Stenalcidia contempta* sp. n.

♂, 23—24 mm. Head and thorax whitish, rather strongly dark-mixed, the face blackish, the vertex rather pale. Abdomen apparently black-mixed dorsally (in both the examples discoloured by grease). Structure in most respects typical but the hindtibia not dilated.

Forewing with the termen slightly less curved than in the genotype (*quisquiliaria* Guen.; Oberth. Et. Lep. Comp. VII, fig. 1663), at least as oblique; fovea strong, but not extremely; ground-colour whitish, tinged (but less strongly than in *quisquiliaria*) with brown, the dark irroration and markings strong, so that the general effect is of a considerably darker, less brown and more sharply marked species than *quisquiliaria*; antemedian line from about $\frac{2}{7}$ costa, oblique outward and fairly strong to a very acute angle at cell-fold, then extremely oblique inward, bounding the fovea and ending close to base; an ill-defined dark shade suggested proximally to it; median line about central, or very slightly proximal of middle, fine, fairly strong, less oblique anteriorly than the antemedian, right-angled subcostally; postmedian about as proximal as in *quisquiliaria*, similarly formed or a little less dissolved into dots, approaching or touching the median about the fold; a strong and pretty complete dark (not brown) shade outside the postmedian, reaching costa, thickened about R^3 but not (as in *quisquiliaria*) throwing out a projection proximad across the postmedian; a conspicuous whitish band between this shade and the proximal shading of the subterminal, least narrow in posterior half; subterminal whitish, irregularly dentate, thickest and least dentate between R^3 and M^2 , about the fold a little inbent; a fine terminal black line, with punctiform interneural thickenings; fringe somewhat mottled, with a whitish line at base and a second indicated, separating the rather darker proximal part from the rather paler distal. — Hind wing with termen crenulate, but less deeply than in *quisquiliaria*; concolorous with forewing; a minute cell-dot; a curved proximal line, not very sharp, lost anteriorly; postmedian rather less sinous than in *quisquiliaria*, the shade beyond it firmer, darker, forming virtually a duplicating line; the

succeeding whitish band rather even, uninterrupted; subterminal fine, more equal throughout than an forewing, its proximal shade (or line) darker than that of *quisquiliaria*.

Underside also darker and much less brown than in *quisquiliaria*, the hindwing hardly less darkened than the forewing, both showing, in addition to the weak cell-dots, traces of the characteristic pale band of the upper surface outside the postmedian.

Argentina: Capilla del Monte (Prof. Hosseus), 2 ♂♂, the type in coll. Mus. Munich the paratype in coll. L. B. Prout, kindly presented by the Museum.

I have a worn ♀ from La Rioja which is almost certainly this species, and have a note on it that I determined a similar one from the same locality (coll. Dognin) as „sp. near *despecta* Prout (1910), smaller, darker, the ♂ wanted“. The resemblance to *despecta* is not, however, really very close.

41. *Hymenomima amberia* (Schaus) (1901).

N.Argentina: San José, Oct. 1925 (Lindner), 1 ♂ (Chaco Exp.).

Described from S.E.Brazil. Mistaken by Warren (1897) for the ♀ of his *Stenalcidia differens* from Paraguay; redescribed by the same author in 1901 as *Hymenomima subsordida* from Entre Rios, Argentina. A race (?) from E.Colombia and E.Peru seem to differ very little.

42. *Hymenomima conia* sp. n.

♂, 29 mm. Closely related to *amberia* Schaus, with the same large fovea, similar antennal pectinations, dilated hind-tibia, etc. — Forewing with costa and apex slightly more rounded; scaling rather rougher; groundcolour of a more decided brown, a little more yellowish than wood-brown, tolerably uniform throughout the wing, though the lens shows a close irroration of different shades; lines much as in *amberia*, their blackened costal beginnings perhaps more strictly parallel, the postmedian being as oblique as the others. — Hindwing concolorous; median and postmedian lines more as in *Stenalcidia elongaria* (Snell.), *S. pallida* Dogn., etc., than in *amberia* — almost parallel in their hinder half, neither of them at abdominal margin with the markedly oblique direction of those of *amberia*, the median firm as far as the cell-spot, which is only just distal to it. — Underside not definitely dark-bordered; hindwing paler than forewing; both with a cell-dot; forewing with faint indications of a pale postmedian line.

Bolivia: Santa Cruz de la Sierra, August 1926 (Lindner), 1 ♂ (Chaco Exped.).

I have found an unnamed ♂ from Sapucay, Paraguay, 21 October 1903 (W. Foster) in the Tring Museum, slightly aberrant in that the lines of the hindwing are a little more proximally placed.

43. *Leucula toxulca* sp. n.

♂, 49 mm. Head white, tinged with buff; vertex buff; palpus with a dark line above outside. Antennal pectinations moderately long. Thorax and abdomen white, the thorax shaded with buff in front. Legs white, the anterior partly infuscated on upper- and innerside.

Forewing moderately broad, costa gently arched; fovea strong; white; costal edge very narrowly dark grey to beyond $\frac{1}{4}$; the principal veins and cell-fold finely darkened: lines brown-grey, moderately thick; antemedian from SC near end of cell, scarcely bent, oblique inward to $\frac{1}{3}$ hindmargin; postmedian from costa about 5 mm from apex, incurved and faint at first, strong from SC⁵, excurved between this vein and M², then straighter to hindmargin at somewhat beyond $\frac{2}{3}$. — Hindwing with veins as on forewing; no antemedian; postmedian rather slenderer, slightly sinuous, but approximately parallel with termen, about 4 mm therefrom, from SC² to costa weak.

Underside white, without markings only the basal part of costa of forewing rather more broadly but less deeply infuscated than above.

Argentina: Misiones, Tacaaglé, November 1925 (Lindner), 1 ♂ (Chaco Exped.).

Apparently not uncommon at Sapucay, Paraguay, whence a series has long stood in the British Museum unaccountably misidentified as *empusaria* Guen.

44. *Semiothisa peltigerata* (Guen.) (1858).

Bolivia: San José de Chiquitos, October 1926 (Lindner), 1 ♀ (Chaco Exped.).

This species must be rare or much overlooked. From the Amazon, whence Guenée's type was said to come, I know of no further examples. The form which Oberthür figures (Et. Lép. Comp. XX, fig. 4733) and which agrees very well with the type except in the stronger subterminal, is from Comenaty,

Pernambuco (1 ♂, 2 ♀ ♀). A ♀ from La Plata City and a very small ♂ from Patino Cue, Paraguay, both in the Tring Museum, seem clearly the same species, though with the yellow element in the subterminal band rather bright and diffuse. This Bolivian example is larger and more heavily marked above than the la Plata, beneath nearer to Oberthür's figure.

A ♀ aberration (?) from Villa Montes, Bolivia, May 1926 (Lindner) has a quite similar underside to the San José, but is at first sight very different-looking above, having a more fawn-coloured tinge and the blackish costal and hindmarginal marks outside the postmedian almost entirely suppressed, only faintly indicated in brownish. If *peltigerata* can vary so much as this, it is not unlikely that it has been overlooked among the „large Argentine and Bolivian forms of *Tephrinopsis*“ *fragilis* Warr. (1904), to which the Villa Montes ♀ bears considerable resemblance (vide Trans. Ent. Soc. Lond. 1910, p. 295).

45. *Cyclomia vinosa* (Dogn.) (1890).

Argentina: Aguarai, June 1926 (Lindner), 2 ♂ ♂ (Chaco Exp.).

Though varying a little inter se in the intensity of the dark markings, especially the cloudings of the distal area, these two specimens agree essentially in having a large discal ocellus on the forewing and both the lines of the hindwing well developed. Forms like this were only known to me from Cuzco and Bolivia and even there it is rare to find the cell-mark so strongly dark-outlined as in the more extreme of these Argentine examples; otherwise a Chulumani (Bolivia) ♂ presented by M. Schaus to the British Museum as *vinosa* is almost identical. The extreme variability of *Cyclomia* has often been remarked upon, and the delimitation of the species and forms is not yet understood.

46. *Cyclomia* sp.

Misiones: Tacaaglé, Nov. 1925 (Lindner), 1 ♀ (Chaco Exp.).

I can scarcely think this an aberration of the preceding, but do not feel justified in adding a new name until the existing ones have been better analysed and assigned. Materially smaller (17 mm), much more weakly marked, the forewing (and the hindwing in distal area) more terra-cotta. It has about the coloration of *alternata* Warr. (1900) = *vinosaria* Hamps. (1901), from the Bahamas, but is still smaller and with

a strong and rather large cell-spot in the forewing and a small one even developed on the hindwing.

C. jaspidea Warr. (1897) is perhaps still nearer, but is known from Jamaica only. The only at all similarly coloured South American form yet known to me is the much larger *rubida* Warr. (1900) from Rio, which is also without cell-spots, but of which I have only seen one or two ♀ ♀, so that the suspicion remains that we may be dealing with sexual dimorphism.

47. *Narragodes gyda* Prout (1910).

Capilla del Monte, Cordoba (Prof. Hosseus) 1 ♀.

An aberration with band-like blackish suffusion almost filling the space between antemedian and median lines and with the postmedian weak except for costal and hindmarginal blackish spots.

Widely distributed in the northern half of Argentina and decidedly variable. In view of this variability I have reconsidered the question whether Warren's *psychidia* (1901), Parana, Entre Rios, may be conspecific, but the latter has a straighter antemedian line than any *gyda*, the median more proximal, etc.

48. *Narragodes costinota* sp. n.

♂, 17 mm. Characters as in sect. A of the genus (Trans. Ent. Soc. Lond. 1910, p. 280). Head and body concolorous with wings, abdomen above with a narrow pale buff-tinted belt at base, beneath with some buff hair about the 3rd sternite.

Forewing uniform glossy dark fuscous drab, much darker than *comminuta* Dogn. (1906); extreme costal edge a little darker, interrupted by pale buff-tinged dots (proximally) or longitudinal streaks (distally); lines obsolete, the position of the postmedian indicated by a light buff costal spot at $\frac{2}{3}$ and (in some lights) faint traces of a pale continuation, a little nearer the termen, showing two projections much as in *comminuta*, but with the posterior one longer, as well as blunter, than the anterior; fringe slightly less brown than wing, its proximal half (except extreme base) occupied by a very slightly darker band. — Hindwing with termen rounded, very faintly sinuous, so as to appear faller anteriorly and posteriorly than between the radials; concolorous with forewing; traces of two slightly darker, somewhat sinuous, approximated bands, one proximally, the other just distally to the middle of the wing.

Underside slightly greyer, less feebly marked; forewing with costal edge pale-marked as above, indications of a straightish antemedian darker band from beyond $\frac{1}{3}$ costa to near middle of hindmargin, strongest at costa, and a second from about $\frac{2}{3}$ costa, strongest in its anterior half edged distally by a pale buff line which is fairly thick and straight from costa about to R^2 , then alternately excurved and incurved, faint, punctiform; hindwing with the first band strengthened at the discocellulars, presumably fusing with cell-mark, the second rather faint, but edged distally by a fine line of pale vein-dots.

Bolivia: Crecencia, Chiquitos, September 1926 (Lindner), 1 ♂ (Chaco Exped.).

An extremely obscure little species, but well collected. The costal mark from which it is named will probably prove constant and will aid recognition; in the type it is oblique inward (about parallel with termen) so as to form, about SC^5 , an acuter angle with the first projection than in *comminuta*.

49. *Narragodes nyctiscia* sp. n.

♂, 20 mm. Characters (except the hindwing specialisation) as in the preceding species. Face and palpus brown. Head and body concolorous with wings.

Forewing rather more elongate than in *comminuta* Dogn., costa almost straight, only very gently curved near base and near apex, termen not very long, hindmargin slightly expanded in middle; less glossy than *costinota*, less unicolorous, more benzo-brown or fuscous; distinct dark lines, formed nearly as in *comminuta*; antemedian slender, bent near costa, very faintly sinuous; median thick, slightly excurved round (almost touching) the small black cell-dot, very slightly incurved in posterior half; postmedian rather thick, rather distal, angled outward on R^1 , incurved between this and R^3 , slightly bidentate outward at R^3 and M^1 , gently incurved between this latter and SM^2 ; fringe with a weak dark line about middle and faint traces of a second before the rather paler tips. — Hindwing with termen smooth, rounded; ground-colour rather paler than on forewing, but with a very extensive darker patch, reaching abdominal and distal margins, but not reaching base and indefinitely bounded anteriorly about SC and R^1 , this scaling in distal and posterior part becoming blackish and specialised, fore shadowing the developments in (subgenus?) *Eupileta* Warr.; two

dark lines arising at abdominal margin, at about .5 and 1.5 mm from tornus, somewhat oblique, the distal one thick, visible on the blackened area, the proximal more slender, both lost anteriorly.

Underside paler and more drab, the hindwing slightly the greyer; faint indications of cell-dot (on forewing only) and of a pale curved postmedian line; costal margin of forewing pale, tinged with buff, crossed by some dark strigulae.

Bolivia: San José de Chiquitos, September 1926 (Lindner), 1 ♂ (Chaco Exped.).

An interesting link, strengthening the suggestion put forward in Trans. Ent. Soc. Lond. 1910, p. 280 as to the intimate connection between *Narragodes* (sect. A) and *Eupileta*.

50. *Numia deceptrix* Warr. (1905).

Bolivia: Fortin Linares, April 1926 (Lindner), 1 ♀ (Chaco Exp.).

Small (22 mm), both cell-spots apparently grey (the proximal parts of the wings unfortunately much discoloured).

Although I have not seen much material on which to base a judgment, I feel no doubt that this species, founded on 4 ♀ ♀ from Tucuman, and *N. timandrata* Warr. (1907), founded on a ♂ from between Santa Cruz de la Sierra and San José de Chiquitos, are forms of a single species. From Tucuman the Tring Museum has ♂ and 5 ♀ ♀, the ♂ hopelessly discoloured but agreeing in shape with the type of *timandrata*, the ♀ ♀ varying in the size of the cell-marks, which moreover may be either white or blackish, in the former case generally with fine grey circumscription; in the Bastelberger collection a better ♂, which Warren proposed to determine as *timandrata* but which seems to me certainly a *deceptrix* without dark circumscription to the cell-spots. From Bolivia I knew only, prior to the present specimen, the type of *timandrata* and a very homogeneous topotype ♂.

51. *Molybdogompha biseriata* Warr. (1897).

Bolivia: Villa Montes, May 1926 (Lindner), 1 ♂ (Chaco Exp.).

Described from Paraguay, where it is not rare. J. Steinbach has also collected it at some localities in E. Bolivia, including the country between Santa Cruz de la Sierra and San José de Chiquitos. The Tring Museum has a few specimens from La Plata town.



Prout, Louis B. 1931. "Geometridae der Deutschen Gran-Chaco Expedition 1925/26." *Mitteilungen der Münchner Entomologischen Gesellschaft* 21, 17–36.

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