

Notes on New Zealand Geometridae.

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As Mr. Meyrick remarked nearly ten years ago (*Trans. N.Z. Inst.*, 49, 248), our knowledge of this family—or group of families, if his view and that of Dr. A. J. Turner be accepted—is already well advanced, and on that account it seems all the more worth while to bring together such corrections in nomenclature, etc., as have been discovered since the appearance of his valuable “Revision” (*tom. cit.* pp. 251-270). I take that memoir as a basis, so far as regards sequence and classification, except where there are actual discrepancies between the generic diagnosis and included species. I have had some interesting correspondence with Mr. A. Philpott on the questions at issue, and in the few cases where we have not been able to reach practical certitude I think it advisable to postpone definite alterations.

Tatosoma Butl.

Mr. Meyrick remarks on the affinity between this genus and *Rhopalodes* Guen., and says that the former differs “only” in the unusual elongation of the male abdomen. He overlooks the interesting fact that *Tatosoma* has lost one of the proximal spurs of the hindtibia, which is not the case with *Rhopalodes*.

2. *T. tipulata* Walk. The synonym *mistata* Feld. belongs to this species, not to *agrionata*.

4 bis. *T. apicipallida* Prout. This is a quite different species from *alta* Philp.

7. *T. timora* Meyr. The oldest reference is *N.Z. Jour. Sci.* 2 (5), 234 (September, 1884), where the name stands as nom. nov. for “*agrionata* nec. Walk.”

Microdes Guen.

11. *M. quadristrigata* Walk. = *interclusa* Walk. = *toriata* Feld. = *rectilineata* Huds. is at least a race, if not a separate species. *M. villosata* Guen. is Australian.

Phrissogonus Butl.

13. *P. Testulata* Guen., *Lep.*, 10, 352, is the oldest name for *denotata* Walk.

Chloroclystis Hübn.

14. *C. inductata* Walk. Add as further synonym *semilineata* Feld., *Reis Nov.* pl. 131, 36 (♀).

17. *C. plinthina* Meyr. The reference should be 20 (not 21), 49.
32. *C. modesta* Philp., *Trans. N.Z. Inst.*, 47, 193. This name is preoccupied by *Chloroclystis modesta* (Warr.) Hmps., *Faun. Ind. Moths*, 3, 396. I propose the name *acompsa* nom. nov.
36. *C. lichenodes* Purdie. The reference should be 19 (not 20), 70.
37. *C. fumipalpata* Feld., *Reis Nov.* pl. 131, 33, is—as has recently been pointed out by Mr. Philpott (*Trans. N.Z. Inst.*, 56 388)—the oldest name for *maculata* Huds.
39. *C. minima* Huds. This name is preoccupied by *Chloroclystis minima* Warr., *Nov. Zool.*, 4, 227, but as I am inclined to agree with Hudson and Philpott (*Trans. N.Z. Inst.*, 49, 203) in making it a dwarf form of *nereis* Meyr. I leave it in abeyance.

“*Asthena* Hübn.” (Meyr.)

Unless *subpurpureata* Walk. is a remarkable colour-form of *pulchararia*, there are three New Zealand species in this genus, all of “the Australian type” thereof, i.e., the genus *Poecilasthena* of Warren and Turner; but the first one, like *xylocyma* Meyr. (*Proc. Linn. Soc. N.S.W.* (2), 5, 815), does not literally conform to the diagnosis “hindwings normal.” I separate the two which have been confused as *schistaria* by numbering them 58 and 58 bis.

58. *A. schistaria* Walk. Differs from the following in having the hindwing more rounded, not bent at vein 4; on the underside in the male with a specialised tuft of hair at tornus, as in *xylocyma* Meyr.; also often in having the post-median line of the forewing stronger (in any case not accompanied by a band) and the proximal post-median of the hindwing stronger than the distal, whereas in *subpurpureata* the reverse is the case, or the two are equal in expression, often united by a band-like shade. From Mr. Meyrick’s remarks in erecting *xylocyma*, it would be pretty safe to add that name as a synonym to *schistaria*, but I have not yet made acquaintance with the Australian representative.

58 bis. *A. subpurpureata* Walk.= *tukuata* Feld. A further synonymy is *polycymaria* Hmps. (*Jour. Bomb. Nat. Hist. Soc.*, 14, 648), the type of Hampson’s genus *Astheniodes*, based on a single example merely labelled “India,” evidently in error. I have carefully compared Hampson’s type with New Zealand material.

“*Venusia* Curt.” (Meyr.)

61. *V. dissimilis* Philp. Must be transferred to *Xanthorhoe* (sens. lat.), as already noted by the author, *Trans. N.Z. Inst.*, 56, 388.

Orthoclydon Warr.

Orthoclydon Warr., *Nov. Zool.*, 1, 393 (1894); type, *P. praelectata* Walk. (No. 125 in Meyrick.)

This genus has been overlooked, although Turner and Philpott have recently (*Trans. N.Z. Inst.*, 56, 388) noted that *praelectata* Walk. required a separate genus, failing in two of the four signifi-

cant characters which Meyrick uses for *Xanthorhoe*—frontal cone and “moderate rough-scaled” palpus. The face is smooth, slightly rounded (especially in the type species), but not so prominent as in *cambrica* Curt., the type of *Venusia*. Palpus rather short, very shortly rough-scaled beneath (much as in “*Venusia*” *charidema* Meyr.). Antennal pectinations of ♂ very long, with about 10 distal segments non-pectinate (much as in *V. verriculata* Feld.). Thorax and abdomen not crested. Forewing with apex acute, or even sub-falcate, scaling smooth, pattern typically consisting of lines, as in the *Asthenia* group; areole double, vein 6 well stalked, DC more or less strongly inbent in middle, 5 arising from slightly before its middle, 3 considerably proximal to end of cell. Hindwings continuing the scheme of forewing (i.e., presumably exposed at rest), DC oblique, vein 5 arising well before its middle, 3 as in forewing.

Thanks to the kindness of Mr. Philpott, I have been able to study also *pseudostinaria* Huds. (*Ent. Mo. Mag.*, 44, 61), which he rightly transfers here. I do not know *chlorias* Meyr., but fully accept Mr. Philpott’s placing; its synonym *princeps* Huds. was erected in *Venusia*, which was evidently nearly right as to the frons, but overlooked the double areole.

Asaphodes Meyr.

69. *A. parora* Meyr. The oldest reference is *N.Z. Jour. Sci.*, 2 (5), 234 (1884), nom. nov. for “*humeralia* Meyr. nec. Walk.”

Xanthorhoe Hübn. (sens. lat.).

81. *X. lucidata* Walk. Add synonym *robustaria* Walk., *Cat.*, 25, 1320, which represents the male, the types of *lucidata* and *plurimata* being females. Meyrick gives no localities, but the species is known from Porirua, New Plymouth, etc.

84. *X. subductata* Walk. Walker’s type is simply a ♀ *rosearia* Doubl. Is Meyrick’s one Auckland example the same?

91. *X. falcata* Butl. Is an *Asaphodes* and must stand for the present as 70 bis. Personally, I feel satisfied that it is nothing but a large dark rufescens Butl., but as I have not seen any other example like it and Mr. Philpott cannot, from Butler’s description, reconcile the two, I forbear to merge them.

96. *X. subobscurata* Walk. Add the synonym *ascotata* Feld., *Reis. Nov.*, pl. 131, 9.

101. *X. benedicta* Meyr. This species is the true *beata* Butl. (*Proc. Zool. Soc. Lond.*, 1877, 397, pl. 43, 6), as is shown by his type. In his careful separation of the two allies, 101 and 102, Mr. Meyrick (*Trans. N.Z. Inst.*, 46, 102), misjudged which was Butler’s species and gave a name to the wrong one. This was perhaps excusable, if he was unable to visit London at the time, for, as Mr. Philpott has pointed out to me, the original description and figure are very misleading in some ways. But inasmuch as the other species was not even represented in the British Museum collection in 1877, there can be no question of a confusion in labelling the type.

102. “*X. beata* Butl.,” Meyr., *Trans. N.Z. Inst.*, 46, 102; 49, 260. As this species is left without a name I propose for it that of *Larentia*

philpotti, *nom. nov.*, in honour of the entomologist who first recognised that two species were mixed as *beata*. In addition to the differences originally pointed out by Meyrick, which are quite adequate for purposes of recognition, there is a pretty constant distinction in DC of the hindwings, though both are "*Larentia*" in having a definite angulation, with vein 5 arising posteriorly to the cell-fold. By some unexplained discrepancy, Mr. Meyrick (*Trans. N.Z. Inst.*, 49, 249) finds the discocellulars more extreme in *philpotti* (his "*beata*") than in *beata vera* (= *benedicta*), but both Mr. Philpott and myself have examined a very large number, with the results here indicated. In *beat* = *benedicta* (the species with the cell-spot developed on the forewing) vein 5 of the hindwing is always nearer to 4 than to the cell-fold. In *philpotti* (cell-spot absent or vestigial) 5 is nearer to cell-fold than to 4, sometimes only slightly so, occasionally only halfway. The deviation, therefore, is sometimes only small, and it is conceivable that specimens of one or the other species might be found in which the distinction would break down, but it is certainly not without significance.

104-106. *X. chorica* Meyr., *cymozeucta* Meyr. and *obarata* Feld. Mr. Philpott and Mr. Meyrick correctly found (*Trans. N.Z. Inst.*, 51, 350) that there were only two species here, but as there has been a misidentification of Felder's *obarata*, of which the type is extant in the Tring Museum, the synonymy will need rectification. No. 104 will stand as *obarata* Feld., with *chorica* Meyr. sunk to it; No. 105 = 106 as *cymozeucta* Meyr. (= *obarata* Meyr. nec Feld.).

Notoreas Meyr.

139. *N. perornata* Walk. This common species must, on Meyrick's system of classification, be transferred to *Lythria*, as the areole is always simple.

Dasyuris Guen.

152. *D. callicrena* Meyr. Similarly, this species must be transferred to *Dasyternica* Turn. (*Trans. R. Soc. S. Austral.*, 46, 256) on account of the simple areole.

156. *D. fulva* Huds. Has already been transferred to *Notoreas* (Huds., *Trans. N.Z. Inst.*, 40, 107, in erecting *Dichromodes simulans*), and this is right as regards the pectinate male antenna. The areole is variable, though with some bias in the direction of *Notoreas*, in which the species may be provisionally left. Although it is now known that there are a good many species in which the areole can be either simple or double, it is seldom that there is not such a strong preponderance of one or the other condition as to justify the temporary retention of the character as generic. The condition of the male antenna (pectinate or non-pectinate) is quite stable for species, but sometimes gives such arbitrary divisions that it would be impossible to divine, in the absence of the male, whether a species belonged, e.g., to *Dasyuris* or *Notoreas*. The form of the discocellulars of the hindwing, though rejected as generic by Mr. Meyrick, was contemporaneously pronounced by Dr. Forbes (*Journ. N.Y. Ent.*

Soc., 25, 45) to be probably the best differential character yet available in the very difficult *Cidaria* group, as generally correlated with a somewhat fundamental difference in the male genitalia.

Adeixis Warr.

164. *A. inostentata* Walk. It has already been pointed out (*Trans. N.Z. Inst.*, 53, 339) that the New Zealand species is distinct from the Australian, and must be called *griseata* Huds.

Dichromodes Guen.

166 (165 [bis] ex err. typogr.). *D. petrina* Meyr. Sinks to *sphaeriata* Feld. Mr. Meyrick only cites Felder's name with a query, which is not unnatural if he judged only by the bad figure, but overlooks that the type is accessible in the Tring Museum.

“**Epirranthis Hübn.**” (Meyr.)

171 bis. *E. ustaria* Walk. is a separate species from *alectoraria*. Vide Philpott, *Trans. N.Z. Inst.*, 49, 211; Prout in Seitz, *Macrolep.*, 12, 34. Since the latter was written the genitalia have been examined.

“**Selidosema Hübn.**” (Meyr.)

176. *S. cremnopa* Meyr. This sinks to *pungata* Feld. (vera), *Reis. Nov.*, pl. 131, 23, but both are simply male forms of the true *melinata* Feld., pl. 129, 9 (nec Meyr.). As the latter has at least “page priority,” this rather rare species should be registered as *melinata* Feld. (♀) = *pungata* Feld. (♂) = *cremnopa* Meyr. (♂).

176 bis. *S. flava* Warr., *Nov. Zool.*, 3, 406 (1896). Overlooked by New Zealand workers. It may be an aberration of one of the known species, e.g., of *fasciata* Philp. with the dark markings extraordinarily reduced.

177. *S. fasciata* Philp. This name must be resuscitated (see 176 supra).

184. *S. indistincta* Butl. = *melinata* Meyr. nec Feld. This name must be resuscitated (see 176 supra).

“**Azelina Guen.**” (Meyr.)

200. *A. ophiopa* Meyr. Sinks to *variabilis* Warr., *Nov. Zool.*, 2, 153 (1895) (as *Polygonia*). The description was poor, and in the absence of a type locality (though the comparison with *fortinata* might lead to a guess) the name has been lost sight of.

202. *A. gallaria* Walk. Further synonyms are *Ischalis thermochromata* Walk., *Cat.*, 26, 1750 and *cimeria* Feld., *Reis. Nov.*, 132, 22 (as *palthidata* var?).

Declana Walk.

205. *D. griseata* Huds. Belongs in Sect. B.

208. *D. feredayi* Butl. Is the oldest name for *sinuosa* Philp. and must be deleted from the synonymy of No. 207.