

and February (Sunley). The larval habit is very interesting. The natural food of species of this group of genera appears to be dead woody fibre.

*Tinea dicharacta* Meyr.

*Tinea dicharacta* Meyr., Proc. Linn. Soc. N.S.W., 1892, p. 536.

♀. 10 mm. (Australian ♂ 6 mm.). Head pale ochreous. Thorax dark fuscous. Forewings dark fuscous, with four fasciae represented principally by groups of two or three white strigulae each, indistinctly connected by glossy purplish-leadен striation, last supapical. Hindwings dark purplish-fuscous.

Wellington, in November (Hudson); one specimen. Described originally from one specimen, taken at Sydney, New South Wales, in November, which has hitherto remained unique. The species is a very distinct one, and its identity is undoubted. Mr. Hudson has another specimen, but regards the species as very rare; it is probably semi-domestic in habits

ART. XI.—*A Revision of the Classification of New Zealand Tortricina.*

By E. MEYRICK, B.A., F.R.S., F.Z.S.

Communicated by G. V. Hudson, F.E.S.

[Read before the Wellington Philosophical Society, Wednesday, 6th July, 1910.]

I HAVE lately been preparing a paper on the Australian species of *Tortricina*, and it seemed desirable to take the opportunity to revise the New Zealand species also. Considerable progress has been made in the study of the group since my paper in the "Transactions of the New Zealand Institute" for 1884; my views have been modified as to the relative value of some structural characters; the limits of the species, which are often very variable, are now better understood, and many additional forms have been discovered meanwhile. I have also corrected some unfortunate errors of identification. It should be understood that many of Walker's New Zealand types are in the most deplorable condition, sometimes reduced to one or two broken fragments. I therefore lately took up my whole collection of the group to the British Museum, in order to have the advantage of comparing all my material with the types, and I think I have now identified the whole of Walker's species of this group from Australia and New Zealand with approximate certainty.

In regard to structural characters, I have come to the conclusion that the costal fold of the male is not of value as a generic character, and have therefore abandoned its use. More stress, on the other hand, has been laid on certain differences in the neuration of the hindwings and on the structure of the palpi.

After careful study I have concluded that the curious genus *Isonomeutis* is not correctly referable to this group, and it is removed to the *Plutellidae*. I have been assisted in this determination by obtaining an apparently allied genus from Queensland which possesses distinct maxillary palpi. The genus may be distinguished from all New Zealand *Tortricina* by having 6 and 7 of hindwings parallel.

#### ☞ CARPOSINIDAE.

Ocelli absent. Forewings with tufts of scales on surface; 2 from posterior fifth of cell, 7 to termen, separate. Hindwings with or without basal pecten on lower margin of cell; 5 absent, 6 usually absent or rudimentary, parallel to 7 when present, 7 to apex.

Easily known by the peculiar neuration of hindwings. There are six Australian genera, but only one occurs in New Zealand.

##### 1. *Carposina* H. S.

*Carposina* H. S., Schm. Eur., vol. 5, p. 38 (1855); type, *berberidella*.  
*Heterocrossa* Meyr., Proc. Linn. Soc. N.S.W., 1882, p. 178; type, *ad reptella*.

Antennae in ♂ with moderate or long ciliations (1–4). Palpi long or very long, porrected, second joint with projecting scales above and beneath, terminal more or less concealed. Forewings: 8 separate. Hindwings with basal pecten on cell; in ♂ sometimes not developed; 3 and 4 stalked, 6 absent.

Principally characteristic of the Hawaiian Islands and Australia, with stragglers in North America and Europe.

1. *C. contactella* Walk., Cat., vol. 35, p. 1813; Meyr., Trans. Ent. Soc. Lond., 1905, p. 235.  
Wellington.
2. *C. thalamota* Meyr., Trans. N.Z. Inst., 1908, p. 12.  
Invercargill.
3. *C. ad reptella* Walk., Cat., vol. 29, p. 654; Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 698; *ib.*, Trans. N.Z. Inst. 1882, p. 66.  
Hamilton, Christchurch, Lake Wakatipu, Invercargill. Larva in shoots of *Rubus*.
4. *C. iophaea* Meyr., Trans. N.Z. Inst., 1906, p. 118.  
Invercargill.
5. *C. cryodana*, Meyr., Trans. N.Z. Inst., 1884, p. 148.  
Dunedin, Invercargill.
6. *C. exochana* Meyr., Trans. N.Z. Inst., 1887, p. 76.  
Masterton, Wellington, Nelson.
7. *C. charaxias* Meyr., Trans. N.Z. Inst., 1890, p. 98.  
Wellington.
8. *C. eriphylla* Meyr., Trans. N.Z. Inst., 1887, p. 76.  
Wellington.
9. *C. gonosemana* Meyr., Proc. Linn. Soc. N.S.W., 1882, p. 179; Trans. N.Z. Inst., 1882, p. 67; *epomiana* Meyr., Trans. N.Z. Inst., 1884, p. 149.  
Wellington, Nelson, Otira River, Dunedin.

## TORTRICIDAE.

Ocelli present. Forewings with 2 from before  $\frac{3}{4}$  of lower margin of cell. Hindwings without basal pecten on lower margin of cell (except *Epalxiphora* and *Ctenopseustis*), 5 present.

This is the principal family in New Zealand and Australia, but not generally elsewhere. It is distinguished from the *Eucosmidae* by the absence of the basal pecten of cell in hindwings; but three genera which possess this pecten (*Ctenopseustis* and *Epalxiphora* in New Zealand, and *Sparganothis* in America and subsequently Europe) must notwithstanding be included in the family on a consideration of the sum of their characters, the occurrence of the structure being perhaps due to reversion. In no genus of *Eucosmidae* is the pecten absent.

2. *Proselena* Meyr.

*Proselena* Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 421; type, *annosana*. *Prothelymna* Meyr., Trans. N.Z. Inst., 1882, p. 57; type, *antiquana*.

Antennae in ♂ rather strongly ciliated. Palpi moderate, porrected, second joint dilated with rough scales above and beneath, terminal short. Thorax smooth. Forewings with 7 to termen, 8 separate. Hindwings with 3 from much before angle, remote and nearly equidistant from 2 and 4, 4 from angle, 5 rather approximated to 4 at base, transverse vein extremely oblique, 6 and 7 long-stalked.

I now restrict this genus in its original sense, removing from it those forms in which veins 3 and 4 of hindwings are approximated at base, which have no near relationship with the original type. The genus now includes only one Australian species and two from New Zealand.

10. *P. niphostrota* Meyr., Trans. N.Z. Inst., 1906, p. 117.  
Wellington, Invercargill.

11. *P. antiquana* Walk., Cat., vol. 28, p. 307; *maoriana*, *ib.*, p. 308; *fusiferana*, *ib.*, p. 355; *spoliatana*, *ib.*, p. 356; *vctustana*, *ib.*, p. 358; *morosana*, *ib.*, p. 382; *accensana*, *ib.*, vol. 30, p. 983; *nephelotana* Meyr., Trans. N.Z. Inst., 1882, p. 57.  
Christchurch.

3. *Pyrgotis* Meyr.

*Pyrgotis* Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 439; type, *in-signana*.

Antennae in ♂ moderately strongly ciliated. Palpi moderate, sub-ascending, second joint with rough projecting scales beneath and towards apex above, terminal moderate. Thorax with posterior crest. Forewings with 7 and 8 stalked, 7 to termen. Hindwings with 3-5 separate, equidistant, rather approximated towards base, 6 and 7 short-stalked.

Now restricted to one Australian and two New Zealand species.

12. *P. pyramidioides* Meyr., Trans. Ent. Soc. Lond., 1901, p. 571.  
Invercargill.

13. *P. eudorana* Meyr., Trans. N.Z. Inst., 1884, p. 143.  
Taranaki.

4. *Catamacta* n.g.

Antennae in ♂ moderately ciliated. Palpi rather long, porrected, second joint with projecting scales above and beneath, terminal moderate. Thorax without crest. Forewings with 7 and 8 stalked, 7 to termen. Hindwings with 3 and 4 approximated at base, 5 more or less approximated to 4, 6 and 7 stalked.

Type, *gavisana* Walk. Contains only the following species, some of which I formerly wrongly referred to *Adoxophyes*, which is characterized by the peculiar position of vein 3 of forewings, which rises from lower margin of cell considerably before angle; this latter genus does not occur in New Zealand.

14. *C. trichroa* Meyr., Trans. Ent. Soc. Lond., 1901, p. 578.  
Whangarei.
15. *C. rureana* Feld., Reis. Nov., pl. 137, p. 47; *camelina* Meyr., Trans. N.Z. Inst., 1890, p. 97.  
Wellington.
16. *C. lotinana* Meyr., Trans. N.Z. Inst., 1882, p. 40.  
Christchurch. Larva on *Arundo conspicua*.
17. *C. gavisana* Walk., Cat., vol. 28, p. 312; ? *innotatana*, *ib.*, p. 333; *marginana*, *ib.*, p. 371; *porphyreana* Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 443; *aoristana*, *ib.*, p. 446; *conditana* Meyr. (*nec* Walk.), Trans. N.Z. Inst., 1882, p. 40.  
Auckland, Napier, Wellington, Nelson, Christchurch, Dunedin, Invercargill. Larva on *Genista* in gardens, but must also feed on a native plant.

5. *Capua* Steph.

*Capua* Steph., Ill. Brit. Ent., vol. 4, p. 171 (1834); type, *favillaceana*. *Epagoge* Hb., Verz., p. 389 (1826); ? type, *grotiana*. *Dichelia* Guen., Micr. Ind., p. 7 (1845); type, *grotiana*. *Teratodes* Guen., Micr. Ind., p. 34 (1845); type, *favillaceana*.

Antennae in ♂ ciliated. Palpi moderate, porrected, second joint with more or less projecting scales above and beneath, terminal short. Thorax usually with slight crest. Forewings with 7 and 8 stalked, 7 to termen. Hindwings with 3 and 4 connate or seldom stalked, 5 approximated to 4 at base, 6 and 7 stalked.

I do not adopt the name *Epagoge*, because (1) the application of it is dubious, as I do not admit the principle of accidental fixation by Stephens's use; and (2) I hold that the name *Capua*, which has over seventy years' use in a sense undoubtedly correct, is not to be overridden by an obsolete name now revived. Widely distributed, but much more numerous in Australia than elsewhere.

18. *C. cyclobathra* Meyr., Trans. N.Z. Inst., 1906, p. 114.  
Invercargill.
19. *C. zygiana* Meyr., Trans. N.Z. Inst., 1882, p. 39.  
Christchurch.
20. *C. tornota* Meyr., Trans. N.Z. Inst., 1906, p. 115.  
Invercargill.

21. *C. plagiatana* Walk., Cat., vol. 28, p. 370; Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 441; Trans. N.Z. Inst., 1882, p. 38: *recusana* Walk., Cat., vol. 28, p. 371: *luciplagana*, *ib.*, p. 381; Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 470; Trans. N.Z. Inst., 1882, p. 36: *punama* Feld., Reis. Nov., pl. 137, p. 43: *xylinana*, *ib.*, p. 44.  
Taranaki, Wellington, Blenheim, Christchurch, Otira River, Dunedin, Auckland Island. Larva on oak (*Quercus*), but must also feed on a native plant.
22. *C. plinthoglypta* Meyr., Trans. N.Z. Inst., 1891, p. 218.  
Wellington.
23. *C. semiferana* Walk., Cat., vol. 28, p. 306; Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 453; Trans. N.Z. Inst., 1882, p. 37: *detritana* Walk., Cat., vol. 28, p. 356: *admotella*, *ib.*, p. 485: *abnegatana*, *ib.*, vol. 30, p. 991: *constrictana*, *ib.*, vol. 35, p. 1785.  
Whangarei, Hamilton, Taranaki, Napier, Wellington, Nelson, Castle Hill, Christchurch, Dunedin, Invercargill. Walker's type of *constrictana* is said to be from Australia, but this is doubtless an error of record.

#### 6. *Eurythecta* Meyr.

*Eurythecta* Meyr., Trans. N.Z. Inst., 1882, p. 56; type, *robusta*.

Antennae in ♂ ciliated. Palpi moderate, porrected, second joint with projecting scales above and beneath, terminal short. Thorax without crest. Forewings with 4 absent, 7 separate, to termen, or absent. Hindwings 6 and 7 approximated at base.

Confined to New Zealand, being a local development of the following genus. The first two species have vein 7 of the forewings absent, in the others it is present; the alliance being close in all other respects, and the genus being sufficiently defined as a whole, I think it needless to separate the two forms.

24. *E. robusta* Butl., Proc. Zool. Soc. Lond., 1877, p. 403, fig. 17; Meyr., Trans. N.Z. Inst., 1882, p. 56: *negligens* Butl., Proc. Zool. Soc. Lond., 1877, p. 404, fig. 18.  
Christchurch.
25. *E. zelaea* Meyr., Trans. Ent. Soc. Lond., 1905, p. 233.  
Dunedin.
26. *E. potamias* Meyr., Trans. N.Z. Inst., 1908, p. 11.  
Invercargill.
27. *E. paraloza* Meyr., Trans. N.Z. Inst., 1906, p. 117.  
Invercargill.
28. *E. loxias* Meyr., Trans. N.Z. Inst., 1887, p. 74.  
Mount Arthur (4,000 ft.).
29. *E. eremana* Meyr., Trans. N.Z. Inst., 1884, p. 144.  
Castle Hill (2,500 ft.), Invercargill.

#### 7. *Epichorista* n.g.

Antennae in ♂ ciliated. Palpi moderate, porrected, second joint with rough projecting scales above and beneath, terminal short. Thorax without crest. Forewings with 7 separate, to termen. Hindwings with 3 and 4

separate, approximated at base, 5 rather approximated to 4 at base, 6 and 7 closely approximated towards base or seldom stalked.

Type, *E. hemionana*. Veins 6 and 7 of hindwings are normally stalked in *siriana* only, but it does not appear necessary to separate the species. The genus is a development of *Tortrix*; besides the seven New Zealand species there are seven Australian, and I have recently obtained three from South Africa.

30. *E. siriana* Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 521; Trans. N.Z. Inst., 1882, p. 43.  
Hamilton.
31. *E. hemionana* Meyr., Trans. N.Z. Inst., 1882, p. 43.  
Lake Guyon, Arthur's Pass, Dunedin.
32. *E. elephantina* Meyr., Trans. N.Z. Inst., 1884, p. 143.  
Arthur's Pass (4,700 ft.).
33. *E. aspistana* Meyr., Trans. N.Z. Inst., 1882, p. 42.  
Porter's Pass.
34. *E. emphanes* Meyr., Trans. Ent. Soc. Lond., 1901, p. 571.  
Mount Peel.
35. *E. zatrophana* Meyr., Trans. N.Z. Inst., 1882, p. 46; *ib.*, 1884, p. 144.  
Mount Arthur (2,600 ft.), Arthur's Pass (2,600–3,000 ft.), Christchurch.
36. *E. eribola* Meyr., Trans. N.Z. Inst., 1888, p. 156.  
Otira River.

#### 8. *Ascerodes* Meyr.

*Ascerodes* Meyr., Trans. Ent. Soc. Lond., 1905, p. 234; type, *prochlora*.

Antennae in ♂ biciliated with long fascicles. Palpi moderate, porrected, triangularly scaled with long rough projecting hairs diminishing to apex. Thorax without crest, hairy beneath. Forewings with 7 separate, to termen. Hindwings with 3 and 4 separate, approximated at base, 5 parallel, 6 and 7 closely approximated towards base.

At present contains only the one species.

37. *A. prochlora* Meyr., Trans. Ent. Soc. Lond., 1905, p. 234.  
Humboldt Range (4,000 ft.).

#### 9. *Tortrix* L.

*Tortrix* L., Syst. Nat. (ed. 10), vol. 1, p. 496 (1758); type, *viridana*.

Antennae in ♂ ciliated. Palpi moderate or long, porrected, second joint with rough projecting scales above and beneath, terminal short or moderate. Thorax without crest. Forewings with 7 separate, to termen. Hindwings with 3 and 4 connate, 5 approximated towards base, 6 and 7 closely approximated towards base.

This extensive genus is largely represented in all regions. The generic synonymy is considerable, but is not given here, as not affecting the New Zealand species.

38. *T. pictoriana* Feld., Reis. Nov., pl. 137, p. 55; Meyr., Trans. N.Z. Inst., 1882, p. 51.  
Christchurch, Mount Hutt, Lake Guyon, Lake Wakatipu.

39. *T. philopoana* Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 515; Trans. N.Z. Inst., 1882, p. 52.  
Hamilton.
40. *T. leucariana* Walk., Cat., vol. 28, p. 370; Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 517; Trans. N.Z. Inst., 1882, p. 53: *intactella* Walk., Cat., vol. 29, p. 652: *parculama*, *ib.*, vol. 35, p. 1781.  
Whangarei, Auckland, Hamilton, Taranaki, Napier, Wellington, Nelson, Christchurch, Invercargill.
41. *T. demiana* Meyr., Trans. N.Z. Inst., 1882, p. 51.  
Rakaia.
42. *T. indigestana* Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 520.  
Whangarei; common in Australia, whence it may have been artificially introduced. Larva in Australia on *Hibbertia linearis*, but very likely also on other plants.
43. *T. aerodana* Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 520; Trans. N.Z. Inst., 1882, p. 53.  
Whangarei, Hamilton, Napier.
44. *T. charactana* Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 492; Trans. N.Z. Inst., 1882, p. 50.  
Auckland, Nelson, Christchurch.
45. *T. orthropis* Meyr., Trans. Ent. Soc. Lond., 1901, p. 573.  
Wellington, Nelson, Dunedin.
46. *T. postvittana* Walk., Cat., vol. 28, p. 297; Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 502: *retractana* Walk., Cat., vol. 28, p. 288: *scitulana*, *ib.*, p. 298: *basialbana*, *ib.*, p. 299: *secretana*, *ib.*, p. 300: *consociana*, *ib.*, p. 311: *reversana*, *ib.*, p. 321: *foedana*, *ib.*, p. 321: *vicariana* Walk., Char. Het., p. 82.  
Wellington, Christchurch; undoubtedly introduced from Australia, where it is plentiful. Larva polyphagous, on *Grevillea*, *Boronia*, &c.; has been bred from apples.
47. *T. torogramma* Meyr., Trans. Ent. Soc. Lond., 1897, p. 388.  
Wellington.
48. *T. conditana* Walk., Cat., vol. 28, p. 306; *enoplana* Meyr., Trans. N.Z. Inst., 1882, p. 49; *astrologana* Meyr., Trans. N.Z. Inst., 1888, p. 156.  
Wellington. This is a very variable species, hitherto not understood; on the other hand, I think the Tasmanian specimen which I associated with *astrologana* is really not identical.
49. *T. syntona* Meyr., Subantarctic Islands of N.Z., vol. 1, p. 73.  
Auckland Island.
50. *T. alopecana* Meyr., Trans. N.Z. Inst., 1884, p. 147.  
Bealey River. Larva in spun shoots of *Phyllocladus alpinus*.
51. *T. excessana* Walk., Cat., vol. 28, p. 303; Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 491; Trans. N.Z. Inst., 1882, p. 48: *biguttana* Walk., Cat., vol. 28, p. 305: ? *abjectana*, *ib.*, vol. 35, p. 1781.  
Auckland, Wellington, Nelson, Christchurch, Dunedin. Larva between joined leaves of *Panax arboreum*, and probably other shrubs.
52. *T. acrocausta* Meyr., Trans. N.Z. Inst., 1906, p. 116.  
Christchurch, Invercargill.
53. *T. fervida* Meyr., Trans. Ent. Soc. Lond., 1901, p. 572.  
Kaitoke.

54. *T. molybditis* Meyr., Trans. N.Z. Inst., 1906, p. 116.  
Wellington. Larva case-bearing, on moss.

55. *T. crypsidora* Meyr., Trans. N.Z. Inst., 1908, p. 11.  
Tararua Range (3,500 ft.), Invercargill.

#### 10. Epalxiphora Meyr.

*Epalxiphora* Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 647; type, *axenana*.

Antennae in ♂ ciliated. Palpi moderate, subascending, second joint with dense tolerably appressed scales somewhat expanded towards apex, terminal moderate. Thorax with large erect crest on each side of back, and small double posterior crest. Forewings with 7 and 8 stalked, 7 to termen. Hindwings with basal pecten on lower margin of cell, 3 and 4 separate, 3, 4, and 5 more or less closely approximated towards base, 6 and 7 stalked.

The single peculiar species which constitutes this genus is very variable, but can be recognized from all others by the triple thoracic crest.

56. *E. axenana* Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 648; Trans. N.Z. Inst., 1882, p. 58; *ib.*, 1884, p. 147.

Auckland, Taranaki, Palmerston, Wellington.

#### 11. Ctenopseustis Meyr.

*Ctenopseustis* Meyr., Trans. N.Z. Inst., 1884, p. 146; type, *obliquana*.

Antennae in ♂ shortly ciliated. Palpi moderate, porrected, second joint with projecting scales above and beneath, terminal short. Thorax without crest. Forewings with 7 separate, to termen. Hindwings with basal pecten on lower margin of cell, 3 and 4 connate, 5 approximated to 4 at base, 6 and 7 closely approximated towards base.

Also including only one very variable species.

57. *C. obliquana* Walk., Cat., vol. 28, p. 302; Meyr., Trans. N.Z. Inst., 1882, p. 60; *ib.*, 1884, p. 146: *spurcatana* Walk., Cat., vol. 28, p. 305; Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 487: *servana* Walk., Cat., vol. 28, p. 306: *priscana*, *ib.*, p. 307: *congestana*, *ib.*, p. 308: *transtrigana*, *ib.*, p. 354: *turbulentana*, *ib.*, p. 355: *cuneiferana*, *ib.*, vol. 35, p. 1780: *contractana*, *ib.*, p. 1782: *ropeana* Feld., Reis. Nov., pl. 137, p. 45: *taipana*, *ib.*, p. 46: *herana*, *ib.*, p. 52: *imana* Butl., Proc. Zool. Soc. Lond., 1877, p. 403, fig. 13.

Whangarei, Auckland, Hamilton, Taranaki, Napier, Wellington, Nelson, Christchurch, Dunedin. Larva amongst spun leaves of *Veronica*, *Lonicera*, &c.

#### 12. Harmologa Meyr.

*Harmologa* Meyr., Trans. N.Z. Inst., 1882, p. 44; type, *oblongana*.  
*Trachybathra* Meyr., Trans. N.Z. Inst., 1906, 114; type, *scotiastis*.

Antennae in ♂ ciliated. Palpi moderate or long, porrected, second joint with rough projecting scales above and beneath, terminal moderate. Thorax with crest. Forewings with 7 separate, to termen. Hindwings with 3, 4, 5 approximated towards base, 6 and 7 stalked.

Besides the following species there are two Australian. The example described as the type of *Trachybathra* appears to be a singular instance of abnormal neuration; it has 7 and 8 of forewings stalked and 4 of hindwings absent, but a second example subsequently obtained has the normal structure of *Harmologa*. These two examples unquestionably represent the same species, and the only possible conclusion seems that the first is a structural aberration or monstrosity.

58. *H. amplexana* Zell., Zool. Bot. Ver., 1875, p. 222; Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 494; Trans. N.Z. Inst., 1882, p. 47: *vilis* Butl., Proc. Zool. Soc. Lond., 1877, p. 402, fig. 15.

Wellington, Greymouth, Christchurch, Dunedin, Lake Wakatipu.

59. *H. aenea* Butl., Proc. Zool. Soc. Lond., 1877, p. 402; Meyr., Trans. N.Z. Inst., 1882, p. 46.

Porter's Pass, Mount Hutt.

60. *H. siraea* Meyr., Trans. N.Z. Inst., 1884, p. 145.

Arthur's Pass (4,500 ft.), Mount Arthur (4,000–4,500 ft.).

61. *H. epicura* n. sp.

♂. 16 mm. Head, palpi, and thorax fuscous mixed with ferruginous-brownish. Antennal ciliations  $\frac{3}{4}$ . Abdomen bronzy-grey. Forewings elongate, posteriorly dilated, costa gently arched, somewhat bent in middle, with fold reaching to middle, apex obtuse, termen almost straight, rather oblique; fuscous, somewhat tinged with ferruginous-brownish; markings indefinite, formed by brownish suffusion mixed with ferruginous and pale-ochreous scales; a moderate basal patch, outer edge somewhat curved; central fascia moderately broad, oblique, rather narrowed towards costa; apical area beyond a line from  $\frac{2}{3}$  of costa to tornus irregularly striated: cilia pale greyish-ochreous somewhat mixed with ferruginous-ochreous, with a purplish-grey subbasal shade. Hindwings dark grey; cilia whitish-grey, with grey subbasal shade.

Castle Hill (3,000 ft.), in January; one specimen.

62. *H. achrosta* Meyr., Trans. Ent. Soc. Lond., 1901, p. 572.

Mount Arthur.

63. *H. scohastis* Meyr., Trans. N.Z. Inst., 1906, p. 114.

Lake Wakatipu.

64. *H. oblongana* Walk., Cat., vol. 28, p. 303; Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 489; Trans. N.Z. Inst., 1882, p. 45: *inaptana*

Walk., Cat., vol. 28, p. 304: *cuneigera* Butl., Cist. Ent., vol. 2, p. 559.

Blenheim, Christchurch, Castle Hill, Dunedin, Lake Wakatipu.  
Larva in dense web on *Discaria toumatou*, and probably other plants.

65. *H. sisyrana* Meyr., Trans. N.Z. Inst., 1882, p. 44.

Wellington, Christchurch.

66. *H. hemichista* Meyr., Trans. Ent. Soc. Lond., 1905, p. 233.

Wellington.

### 13. Cnephasia Curt.

*Cnephasia* Curt., Brit. Ent., vol. 3, p. 100 (1826); type, *pascuana*.

*Sciaphila* Treits., Schmett. Eur., vol. 7, p. 233 (1829); type,

*wahlbomiana*. *Dipterina* Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 523; type, *imbrijerana*.

Antennae in ♂ ciliated. Palpi moderate or long, porrected, second joint with projecting scales above and beneath, terminal moderate. Thorax

sometimes with small crest. Forewings with 7 separate, to termen. Hindwings with 3 and 4 connate, 5 approximated to 4, 6 and 7 stalked.

A rather extensive genus, but principally in temperate regions.

67. *C. incessana* Walk., Cat., vol. 28, p. 304; Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 529; Trans. N.Z. Inst., 1882, p. 55.  
Auckland, Taranaki, Christchurch.
68. *C. jactatana* Walk., Cat., vol. 28, p. 317; Meyr., Trans. N.Z. Inst., 1882, p. 54: *flexivittana* Walk., Cat., vol. 28, p. 353: *privatana*, *ib.*, p. 382: *voluta* Feld., Reis. Nov., pl. 137, p. 39.  
Whangarei, Auckland, Taranaki, Palmerston, Makotuku, Wellington, Nelson, Christchurch, Dunedin.
69. *C. sphenias* Meyr., Trans. N.Z. Inst., 1908, p. 11.  
Invercargill.
70. *C. latomana* Meyr., Trans. N.Z. Inst., 1884, p. 145.  
Mount Arthur (4,400–4,600 ft.), Arthur's Pass (4,700 ft.).
71. *C. petrias* Meyr., Trans. Ent. Soc. Lond., 1901, p. 572.  
Invercargill.
72. *C. imbriferana* Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 527; Trans. N.Z. Inst., 1882, p. 55.  
Auckland, Wellington, Christchurch, Dunedin.

#### EUCOSMIDAE.

Ocelli present. Forewings with 2 from before  $\frac{3}{4}$  of lower margin of cell. Hindwings with basal pecten on lower margin of cell, 5 present.

This family is very scantily represented in New Zealand, though very numerous throughout the Northern Hemisphere. The total absence of the very large genus *Argyroploce* is particularly noticeable.

#### 14. Hendecasticha Meyr.

*Hendecasticha* Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 691; type, *aethaliana*.

Antennae in ♂ ciliated, with an excavated notch in stalk towards base. Palpi moderate, porrected, second joint with dense rough projecting hairs above and beneath, terminal short. Thorax without crest. Forewings with 7 absent, 8 to costa. Hindwings with 4 absent, 5 somewhat approximated towards 3 at base, 6 and 7 stalked.

Contains only the single species; a local modification of *Spilonota*.

73. *H. aethaliana* Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 692; Trans. N.Z. Inst., 1882, p. 64.  
Hamilton.

#### 15. Spilonota Steph.

*Spilonota* Steph., Cat. Brit. Ins., p. 173 (1829); type, *ocellana*.  
*Tmetocera* Led., Wien. Ent. Mon., 1859, p. 367; type, *ocellana*.  
*Monilia* Walk., Cat., vol. 35, p. 1741 (1866); type, *semicanella*.  
*Strepsiceros* Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 678 (*praeoce.*); type, *ejectana*. *Strepsicrates* Meyr., Trans. N.Z. Inst., 1886, p. 73; type, *ejectana*.

Antennae in ♂ ciliated, with an excavated notch in stalk towards base. Palpi moderate, porrected, second joint with dense rough projecting scales.

above and beneath, sometimes tufted beneath, terminal short. Thorax without crest. Forewings 7 separate, to termen. Hindwings with 3 and 4 long-stalked or coincident, 5 closely approximated to 4 at base, 6 and 7 approximated towards base.

A genus of moderate extent and wide distribution, but principally Australian; two of the New Zealand species occur also in Australia.

74. *S. charopa* Meyr., Trans. N.Z. Inst., 1887, p. 73.  
Whangarei, Auckland.
75. *S. dolopaea* Meyr., Trans. Ent. Soc. Lond., 1905, p. 232.  
Wellington.
76. *S. parthenia* Meyr., Trans. N.Z. Inst., 1887, p. 73.  
Auckland.
77. *S. zopherana* Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 688; Trans. N.Z. Inst., 1882, p. 64.  
Hamilton, Wellington, Christchurch, Dunedin. Also in Australia.
78. *S. emplasta* Meyr., Trans. Ent. Soc. Lond., 1901, p. 571.  
Invercargill.
79. *S. chaophila* Meyr., Trans. N.Z. Inst., 1908, p. 10.  
Wellington.
80. *S. ejectana* Walk., Cat., vol. 28, p. 350; Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 681; Trans. N.Z. Inst., 1882, p. 63: *servilisana* Walk., Cat., vol. 28, p. 356: *saxana*, *ib.*, p. 357: *ligniferana*, *ib.*, p. 363.  
Hamilton, Palmerston, Wellington, Christchurch, Lake Wakatipu. Also common and widely distributed in Australia. Larva amongst spun leaves and shoots of *Kunzea capitata* and *Darwinia fasciculata*.

#### 16. Eucosma Hb.

*Eucosma* Hb., Zutr. Exot. Schm., p. 28 (1823); type, *circulana*.  
*Epiblema* Hb., Verz., p. 365 (1826); type, *foenella*. *Protithona* Meyr., Trans. N.Z. Inst., 1882, p. 62; type, *fugitivana*. *Exoria* Meyr., Trans. N.Z. Inst., 1882, p. 65; type, *mochlophorana*.  
*Parienia* Berg., Com. Mus. Buen. Air., vol. 1, p. 78 (1899); type, *mochlophorana*.

Antennae in ♂ ciliated. Palpi moderate, porrected, second joint with dense rough projecting scales above and beneath, terminal short. Thorax without crest. Forewings with 7 separate, to termen. Hindwings with 3 and 4 usually stalked, sometimes connate or coincident, 5 approximated to 4 at base, 6 and 7 approximated towards base.

A very extensive genus, but principally characteristic of the Northern Hemisphere. The full generic synonymy includes a large number of additional names.

81. *E. mochlophorana* Meyr., Trans. N.Z. Inst., 1882, p. 65.  
Rakaia, Lumsden.
82. *E. aphrias* Meyr., Trans. Ent. Soc. Lond., 1901, p. 578.  
Invercargill.
83. *E. fugitivana* Meyr., Trans. N.Z. Inst., 1882, p. 62.  
Lake Coleridge.

17. *Bactra* Steph.

*Bactra* Steph., Ill., p. 124 (1834); type, *lanceolana*. *Aphelia* Steph., Cat. Brit. Ins., p. 180 (1829) (*praeocc.*); type, *lanceolana*. *Chiloides* Butl., Ann. Mag. N.H. (5), vol. 7, p. 392 (1881); type, *straminea*. *Noteraula* Meyr., Trans. N.Z. Inst., 1891, p. 217; type, *noteraula*.

Antennae in ♂ ciliated. Palpi moderate or long, porrected, second joint with projecting scales above and beneath, terminal short. Thorax without crest. Forewings with 7 separate, to termen. Hindwings with 3, 4, 5 closely approximated at base, 6 and 7 stalked.

A rather considerable genus of wide distribution, of which the species are very similar and puzzling, and have been involved in much confusion. Some of the species, and very possibly all, are attached to various species of *Juncus*. There is often much variability, but the length of palpi, form of forewings, and colour of hindwings are important and reliable characters.

84. *B. noteraula* Wals., Faun. Haw., vol. 1, p. 689; *straminea* Meyr. (*nec* Butl.), Trans. N.Z. Inst. 1884, p. 142.

Taranaki, Wanganui, Otaki, Mangatarera River, Nelson.

85. *B. optanias* n. sp.

♀. 17–18 mm. Head and thorax light brownish-ochreous, sometimes suffused with light brown-reddish, thorax sometimes mixed with grey. Palpi 2½, whitish-ochreous sometimes partially suffused with light brown-reddish, two oblique bands and scales of second joint beneath suffused with grey, base whitish. Abdomen pale grey or whitish-grey. Forewings elongate, narrow, posteriorly slightly dilated, costa slightly arched, apex obtuse, termen straight, oblique; pale brownish-ochreous, sometimes much suffused with ferruginous, variably sprinkled or sometimes largely irrorated with fuscous, veins posteriorly sometimes marked with fuscous lines; costa with short oblique strigulae of dark-fuscous irroration, between which on posterior half are longer oblique leaden-metallic marks, some of which are sometimes continued as indistinct irregular striae across wing; sometimes a broad suffused median streak of blackish irroration from base to apex, or in its place a longitudinal series of several irregular black spots or marks: cilia pale ochreous or grey, more or less sprinkled with black. Hindwings grey-whitish, apex somewhat suffused with grey; cilia grey-whitish, round apex greyer, with grey subbasal line.

Hamilton, in January; three specimens. Also widely distributed in Australia, but the above description is taken solely from my New Zealand examples.

86. *B. sideritis* Meyr., Trans. Ent. Soc. Lond., 1905, p. 232.

Wellington (?).

18. *Laspeyresia* Hb.

*Laspeyresia* Hb., Verz., p. 381 (1826); type, *corollana*. *Carpocapsa* Tr., Schmett. Eur., vol. 7, p. 231; type, *pomonella*.

Antennae in ♂ ciliated. Palpi moderate, more or less ascending, second joint arched, with short projecting scales beneath, terminal joint short. Thorax without crest. Forewings with 7 separate, to termen. Hindwings with 3 and 4 connate or stalked, 5 nearly parallel to 4, 6 and 7 approximated towards base.

A considerable genus, generally distributed, but only represented in New Zealand by a single introduced species.

87. *L. pomonella* Linn., Syst. Nat., vol. 10, p. 538; Meyr., Proc. Linn. Soc. N.S.W., 1881, p. 657; Trans. N.Z. Inst., 1882, p. 61.  
Wellington, Nelson, Christchurch. Larva in apples; a well-known pest, now nearly cosmopolitan.

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## Addendum.

The following names are not included in the above list, in the absence of certain identification :—

*Sciaphila infimana* Walk., Cat., vol. 30, p. 986.

Greatly damaged, but appears to be a species otherwise unknown to me, allied to *Spilonota*.

*Teras punctilineana* Walk., Cat., vol. 35, p. 1780.

Type lost. I cannot recognize the description.

*Paedisca mahiana* Feld., Reis. Nov., pl. 137, p. 40.

Apparently a distinct insect, but it is highly probable that the alleged New Zealand origin is a mistake.

*Teras flavescens* Butl., Proc. Zool. Soc. Lond., 1877, p. 402.

This is apparently a *Tortrix* allied to *excessana* and *acrocausta*; perhaps a good species otherwise unknown, but might be an abnormal variety.