

REVISION OF AUSTRALIAN LEPIDOPTERA, vi.

BY A. JEFFERIS TURNER, M.D., F.E.S.

(Continued from p.336.)

Gen. 20. BOARMIA.

Boarmia Treit., Eur. Schmet., v., ii., p.433. *Selidosema* Hb., Verz., p.299; Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.594 (partim).

Face not projecting, smooth, or slightly hairy. Tongue well-developed. Palpi moderately long, porrect or somewhat ascending, rough-scaled or hairy beneath; terminal joint short, obtuse. Antennæ in ♂ bipectinate, towards apex simple. Thorax not crested, hairy beneath. Femora glabrous; posterior tibiæ in ♂ sometimes strongly dilated, with internal groove and tuft of hairs from base. Forewings of ♂ with well-developed fovea; 10 and 11 long-stalked or coincident, their common stalk often connected with 12, 10 sometimes connected with 9, or rarely 11 apparently from 12, not connected with 10. Hindwings normal.

Type, *B. roboraria* Schiff., from Europe.

The occasional connection of veins 9 and 10 presents no difficulty, but the relations of veins 10, 11, and 12 demand special attention. Veins 11 and 10 may be stalked, as in Fig. 4; or completely coincident, as in Fig. 5. In the first instance, 11 may

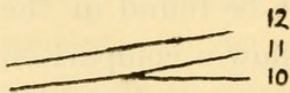


Fig.4.

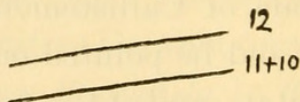


Fig.5.



Fig.6.

be connected with 12 by a short anastomosis, as in Fig. 6; or by a bar, often of considerable length, as in Fig. 7, every gradation between these two being observable. This bar unites 12 with the common stalk of 11 and 10 shortly before, or at their bifurcation; 11 is never connected with 12 after their separation

(except in one very abnormal example). Sometimes one is tempted to imagine that the base of vein 11 has disappeared, and that the long bar represents part of that vein after anastomosis with 12; but an examination of a series of specimens will show that this is not the case; the bar is merely an anastomotic union,

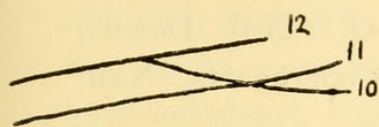


Fig. 7.

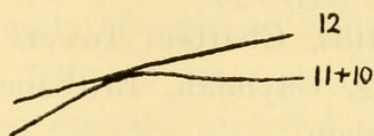


Fig. 8.

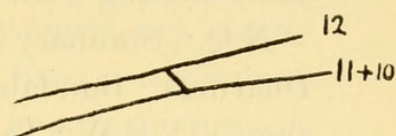


Fig. 9.

which has become lengthened out. When 10 and 11 are completely coincident, they may anastomose with 12, as in Fig. 8; or by a bar, as in Fig. 9. These six figures represent all the varieties present in the great majority of species. But, occasionally, a puzzling variety occurs as in Fig. 10 (*B. suasaria*); here

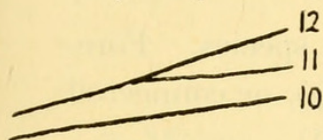


Fig. 10.

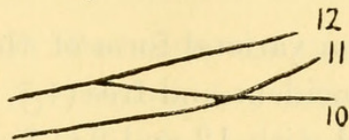


Fig. 11.

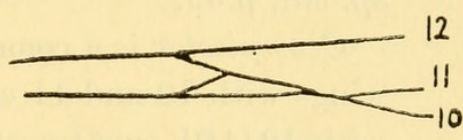


Fig. 12.

11 arises apparently from 12, and is not connected with 10. Fortunately the neuration of the other forewing of the same specimen, Fig. 11, explains the anomaly. Here the oblique connecting bar just touches the bifurcation of 10 and 11; in the abnormal wing, the connection has not developed, and the oblique bar has captured the origin of vein 11, which is now in two disconnected pieces, the basal portion being fused with 10. I have three examples of the new species, *B. nyctopora*, which are even more instructive. In one ♀, 10 and 11 are long-stalked and free, as in Fig. 4; in one ♂, they are connected with 12, as in Fig. 7, except that the bar is short; but, in another ♂, the neuration is of the type of Fig. 10, veins 11 and 10 being more closely approximated but not connected. In the other forewing of the same ♂, 10 and 11 are long-stalked; after their division, 11 almost immediately runs into the connecting bar with which 10 anastomoses a little further on; later, the two veins again separate (Fig. 9). This abnormality clearly demonstrates the correctness of my interpretation of figures 7, 10, and 11.

47. BOARMIA CLARISSA.

Aspilates clarissa Butl., Trans. Ent. Soc., 1886, p.438. *Cosymbia clarissa* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.592.

Forewings with 10 and 11 coincident and free (3♂, 1♀), or anastomosing with 12 (1♂, 4♀).

N.Q.: Stannary Hills, Charters Towers.—Q.: Peak Downs, Duaringa, Bundaberg, Gayndah, Brisbane, Coolangatta, Nanango.—N.S.W.: Tabulam.

48. BOARMIA PENTHEARIA.

Selidosema penthearia Gn., Lep., x., p.146. *Tephрина adustaria* Wlk., Cat. Brit. Mus., xxxv., p.1661. *Panagra rupicolor* Butl., Trans. Ent. Soc., 1886, p.437. *Cosymbia rupicolor* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.591. *C. penthearia* Meyr., *op. cit.*, p.592.

C. rupicolor is a common varietal form of this species. Forewings with 10 and 11 coincident and free (4♂, 7♀), or connected with 12 (1♀), or connected with 12 and 9 (1♂, 1♀).

Q.: Rockhampton, Duaringa, Peak Downs, Eidsvold, Gayndah, Brisbane, Warwick, Stanthorpe, Miles.—W.A.: Perth, York, Geraldton.

49. BOARMIA LEUCOPLECTA.

Selidosema leucoplecta Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.607.

Forewings with 10 and 11 coincident and free (1♀). Mr. Meyrick records two males in which 10 and 11 are coincident, and anastomose with 9.

Vic.: Melbourne.

50. BOARMIA LITHINA.

Scioglyptis lithina Warr., Nov. Zool., 1897, p.99.

♂♀. 32-38 mm. Head ochreous-whitish; face brownish. Palpi $1\frac{1}{2}$; ochreous-whitish. Antennæ ochreous-whitish; pectinations in ♂ 6, apical $\frac{1}{6}$ simple. Thorax, abdomen, and legs ochreous-whitish. Forewings triangular, costa straight to near apex, apex round-pointed, termen bowed, oblique; 10 and 11 long-stalked, their stalk connected by a bar with 12 (1♂, 2♀), or similar but 10 connected with 9 (1♂); whitish-ochreous partly suffused with

pale brownish; lines slender, brown, strongly oblique; traces of a sub-basal line; antemedian from $\frac{1}{6}$ dorsum very obliquely outwards, not reaching costa, nearly touching discal dot; a fuscous discal dot beneath midcosta; median extremely slender or obsolete, not reaching costa; postmedian from mid-dorsum very obliquely outwards, nearly straight or slightly wavy, not reaching costa; sometimes followed by a parallel line; subterminal very indistinct, whitish, dentate, preceded by some pale fuscous dentations; terminal dots minute or obsolete; cilia whitish, bases ochreous-tinged. Hindwings with termen gently rounded; colour as forewings. Underside whitish-ochreous, with fuscous discal dots and subapical blotches, and sometimes some fuscous strigulæ.

N.Q. : Cairns, Mackay.—Q. : Brisbane, Southport.—N.S.W. : Sydney.

51. *BOARMIA EUDELA*, n.sp.

εὐδελος, very distinct.

♀. 36 mm. Head whitish; face brown. Palpi $1\frac{1}{4}$; whitish, upper surface towards apex brown. Antennæ, thorax, abdomen, and legs whitish. Forewings triangular, costa straight, apex round-pointed, termen bowed, oblique; 10 and 11 long-stalked, connected by a bar with 12 at their point of bifurcation; whitish; two very distinct, brown-fuscous, oblique lines from dorsum, not reaching costa; first from near base of dorsum, nearly straight, ending beneath $\frac{1}{3}$ costa; second from $\frac{2}{5}$ dorsum, slightly wavy, ending beneath $\frac{5}{6}$ costa; a very fine, brownish, median line from $\frac{1}{3}$ dorsum, scarcely reaching mid-disc; a short, brown, oblique streak from termen beneath costa; an indistinct terminal series of brownish dots between veins; cilia whitish. Hindwings with termen rounded; colour as forewings; a fine, brown, transverse line from $\frac{2}{5}$ dorsum not reaching costa; two, fine, parallel, brown lines from $\frac{3}{5}$ dorsum not reaching costa; terminal dots and cilia as forewings. Underside whitish; some fuscous dots on costa of forewings; fuscous discal dots and subparallel blotches on both wings.

Closely allied to *B. lithina*, though quite distinct. Type in Coll. Lyell.

N.Q.: Ingham; one specimen, received from Mr. E. T. Dunnegan.

52. *BOARMIA* *TEPHROLEUCA*, n.sp.

τεφρολευκος, ashy-white.

♀. 30 mm. Head grey-whitish, with a few fuscous scales. Palpi $1\frac{1}{4}$; whitish, with a few fuscous scales. Antennæ grey-whitish. Thorax grey-whitish, with a few fuscous scales, and slender, transverse, antemedian and median, fuscous lines. Abdomen grey-whitish. Legs whitish, with some fuscous irroration. Forewings rather narrowly triangular, costa straight to near apex, apex round-pointed, termen bowed, oblique; 11 apparently from 12, 10 connected with 9 (1♀); pale grey irrorated with white; some fuscous strigulations on costa, with a larger spot at $\frac{1}{4}$; lines very slender, strongly oblique, dark fuscous; antemedian from $\frac{1}{4}$ dorsum, not reaching costa; postmedian wavy, from $\frac{3}{5}$ dorsum, not reaching costa; median line faintly indicated in pale grey; a dark fuscous, discal dot beneath mid-costa; subterminal whitish, dentate; a terminal series of dark fuscous dots; cilia grey, apices and an interrupted median line whitish. Hindwings with termen nearly straight, slightly crenulate; colour as forewings, but without first line. Underside whitish, with discal dots, fine median and postmedian lines, and broad, fuscous, terminal bands, leaving whitish apical and tornal blotches.

Allied, by the neuration, to the preceding species, as already explained.

W.A.: Cunderdin; one specimen, taken by Mr. R. Illidge.

53. *BOARMIA* *SUASARIA*.

Boarmia suasaria Gn., Lep., ix., p.243. *B. proposita* Wlk., Cat. Brit. Mus., xxi., p.390. *Tephrosia gratularia* Wlk., *op. cit.*, xxi., p.415. *T. propinquaria* Wlk., *op. cit.*, xxi., p.415. (?) *mollisata* Wlk.

Forewings with 10 and 11 coincident and free (1♂), 10 and 11 long-stalked, their stalk connected by a bar with 12 (1♂), or similar but 10 connected with 9 (3♀). In addition, I have a ♂ with abnormal neuration on one side; on right side, 10 and 11 are long-stalked, and connected by a bar with 12 at their point

of bifurcation; while, on the left side, 11 arises apparently from 12, and is not connected with 10; as previously explained, this abnormality is due to 10 having been captured by the anastomotic bar, and the obliteration of its origin from 12.

N.Q.: Herberton.—Q.: Gympie, Brisbane, Towoomba.—N.S.W.: Newcastle, Sydney.

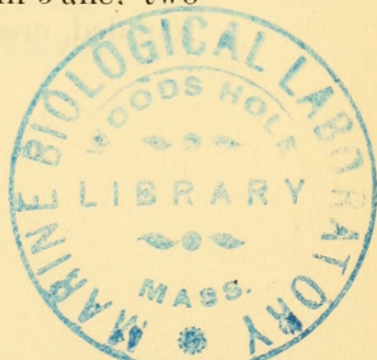
54. *BOARMIA ATMOCYMA*, n.sp.

ἀτμοκύμος, with smoky waves.

♀. 28 mm. Head grey-whitish; face fuscous, lower edge grey-whitish. Palpi $1\frac{1}{2}$; fuscous-grey-whitish. Antennæ fuscous. Thorax with a minute crest at each posterior angle; grey mixed with whitish. Abdomen grey mixed with whitish, apices of segments narrowly whitish; beneath white, with a few fuscous scales. Legs white irrorated and suffused with fuscous-grey. Forewings elongate-triangular, costa straight, apex rounded, termen bowed, oblique; 10 and 11 coincident, free (2♀); grey densely irrorated with white; five oblique lines from dorsum becoming indistinct towards costa; first from $\frac{1}{6}$ dorsum, very fine, blackish, ending in a large, blackish, discal dot at $\frac{1}{3}$; second from $\frac{1}{4}$, grey, running into discal dot, traceable to costa beyond middle; third from near second, blackish, to $\frac{4}{5}$ costa, becoming very fine and acutely dentate towards costa; fourth from before mid-dorsum, grey, parallel to third, but lost in disc; fifth from $\frac{2}{3}$ dorsum, fuscous, to costa near apex, dentate towards costa, immediately followed by a whitish line; a fine, blackish, terminal line, thickened between veins; cilia whitish obscurely barred with grey. Hindwings with termen but little rounded; colour as forewings; with four transverse lines; first at $\frac{1}{3}$, dark fuscous; second and third postmedian, close and parallel; fourth blackish, immediately followed by a whitish line. Underside whitish, with fuscous irroration; large, postmedian, discal spots, and broad, terminal bands on both wings, dark fuscous; the band on forewing ceases before tornus.

Type in Coll. Lyell.

N.Q.: Prince of Wales Island, Torres Straits; in June: two specimens (H. Elgner).



55. †BOARMIA AMPHICLINA.

Selidosema amphiclina Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.599.

N.S.W.: Sydney.

56. †BOARMIA EREMIAS.

Selidosema eremias Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.600.

N.S.W.: Sydney.

57. †BOARMIA THERMÆA.

Selidosema thermæa Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.600.

N.S.W.: Newcastle.

58. BOARMIA CURTARIA.

Tephrosia curtaria Wlk., Cat. Brit. Mus., xxxv., p.1592. *Selidosema curtaria* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.602.

♂♀. 24-26 mm. Head ochreous-whitish; face fuscous. Palpi fuscous. Antennæ grey; pectinations in ♂ 8. Thorax whitish-ochreous mixed with fuscous posteriorly. Abdomen grey-whitish, with some fuscous scales, sometimes basal, antemedian, and subterminal fuscous bars on dorsum. Legs ochreous-whitish more or less irrorated with fuscous. Forewings narrowly triangular, costa slightly arched, apex round-pointed, termen bowed, oblique; 10 and 11 long-stalked, 10 connected with 9 (1♂), 10 and 11 coincident, free (3♀); ochreous-whitish with fuscous irroration and markings; a very oblique wavy line from $\frac{1}{3}$ costa to dorsum near base, sometimes outlining a basal patch; a line from midcosta, angled beneath costa, thence doubly waved to $\frac{1}{3}$ dorsum; a wavy postmedian line from $\frac{3}{4}$ costa to $\frac{2}{3}$ dorsum, sometimes connected by a bar to median line in disc, sometimes dentate beneath costa, usually closely followed by a parallel line; subterminal scarcely traceable, wavy, dentate, edged anteriorly interruptedly with fuscous; subterminal blotches beneath apex and above tornus; a fine, interrupted, blackish, terminal line; cilia ochreous-whitish, with some fuscous scales. Hindwings with termen rounded, crenulate or obtusely dentate; colour as forewings, but

without first line; usually a discal dot before middle. Underside grey, both wings with a fuscous discal dot, postmedian line, and apical blotch.

A variable species; the transverse median bar is present only in one ♀ example.

Q.: Gayndah, in September and April; Brisbane, in January; Stanthorpe, in October; four specimens.

59. *BOARMIA LOXOCYMA*, n.sp.

λοξοκυμος, obliquely waved.

♂. 26 mm. Head whitish; face dark fuscous mixed with whitish. Palpi dark fuscous. Antennæ grey, base of stalk whitish; pectinations in ♂ 4, apical $\frac{1}{8}$ simple. Thorax and abdomen whitish, with fuscous irroration. Legs whitish, with a few fuscous scales; anterior pair fuscous. Forewings narrowly triangular, costa straight to near apex, apex round-pointed, termen bowed, oblique; 10 and 11 coincident, and connected with 12; whitish, with some fuscous irroration; markings dark fuscous; a thick, dentate line from $\frac{1}{3}$ costa, becoming slender in disc and bent strongly inwards to $\frac{1}{6}$ dorsum; median line similar, and in lower half closely approximated to the preceding; postmedian line from $\frac{2}{3}$ costa to $\frac{1}{3}$ dorsum, twice waved in disc; a terminal line with triangular thickenings between veins; cilia whitish barred with grey. Hindwings similar, but without first line. Underside whitish, with some fuscous suffusion; both wings with a fuscous discal dot; forewings with a fuscous postmedian line and apical blotch; hindwings with a fuscous terminal band.

Q.: Gayndah, in October; one specimen, received from Dr. Hamilton Kenny.

60. *BOARMIA ACROTYPA*, n.sp.

ἀκροτυπος, marked at the apex.

♀. 28 mm. Head ochreous-whitish, face with transverse fuscous bars above and below middle. Palpi $1\frac{1}{4}$, projecting slightly beyond frons; dark fuscous, towards base grey-whitish. Antennæ grey, towards base whitish; in ♀ serrate. Thorax grey-

whitish. Abdomen ochreous-grey-whitish, with a few fuscous scales. Legs ochreous-whitish; anterior pair fuscous. Forewings rather elongate, costa very slightly arched, apex tolerably pointed, termen nearly straight, oblique, slightly waved; 10 and 11 long-stalked, 10 connected with 9; grey-whitish, with some fuscous irroration and brownish suffusion; a very fine, dark fuscous line from near base of dorsum very obliquely outwards, not traceable beyond middle of disc; a very faint, oblique, brownish, median line; a thick, dark fuscous, very oblique, strongly waved line from dorsum before middle to beneath $\frac{3}{4}$ costa, followed by a broad brownish suffusion, with one or two dots between its extremity and costa; a thick, dark fuscous, subapical streak nearly reaching apex of postmedian line; an interrupted, fuscous, terminal line; cilia whitish, with an interrupted, fuscous, median line. Hindwings with termen scarcely rounded, dentate; colour as forewings, but lines present towards dorsum only. Underside grey, with a fuscous postmedian line on forewing.

Q.: Eumundi, near Nambour; in October; one specimen.

61. BOARMIA EXTERNARIA.

Tephrosia externaria Wlk., Cat. Brit. Mus., xxxv., p.1591. *Selidosema externaria* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.602.

Forewings with 10 and 11 coincident, connected with 12 (1♀). Mr. Meyrick, who had three specimens, gives 10 and 11 stalked, their stalk connected with 12.

N.Q.: Kuranda, near Cairns.—Q.: Duaringa.

62. BOARMIA CANESCARIA.

Boarmia canescaria Gn., Lep., ix., p.249. *Selidosema canescaria* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.603. *Parathemis irrorata* Warr., Nov. Zool., 1898, p.250. *P. violescens* Warr., Nov. Zool., 1898, p.250.

Forewings with 10 and 11 long-stalked and free (1♂), or with the common stalk connected with 12 (7♂, 3♀); or, in addition, 10 connected with 9 (2♂). The connection with 12 is usually by a bar, sometimes fairly long, so that 11 appears to arise from 12.

Q.: Duaringa, Gayndah, Brisbane, Stradbroke Island.—Vic.: Gisborne.—S.A.: Mt. Lofty.—W.A.: Waroona.

63. BOARMIA LYCIARIA.

Boarmia lyciaria Gn., Lep., ix., p.250. *B. pæcilaria* Gn., *op. cit.*, p.250, Pl. vi., f.1. *B. semitata* Wlk., Cat. Brit. Mus., xxi., p.389. *Selidosema lyciaria* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.604.

Forewings with 10 and 11 long-stalked, their stalk anastomosing (3♂), or connected by a bar (1♂) with 12, 11 apparently from 12 and 10 connected with 9 (1♂), 10 and 11 coincident and connected with 12 (4♀).

Vic.: Melbourne, Gisborne.—Tasm.: Hobart.

64. BOARMIA LOXOGRAPHIA, n.sp.

Λοξογραφος, obliquely marked.

♂. 43 mm. Head fuscous-grey; face black, upper edge grey, lower third whitish. Palpi blackish. Antennæ grey; pectinations in ♂ very long (10), fuscous interrupted by whitish, apical $\frac{1}{3}$ simple. Thorax grey, with whitish irroration, and two obscure, fuscous, transverse lines. Abdomen grey; basal segment and apices of other segments whitish. Legs fuscous; posterior pair ochreous-whitish. Forewings triangular, costa straight almost to apex, apex rounded, termen bowed, slightly wavy, moderately oblique; 10 and 11 long-stalked, their common stalk connected with 12; pale grey without ochreous tinge; a fine line from $\frac{1}{3}$ costa to $\frac{1}{3}$ dorsum enclosing a brownish basal area; discal dot obsolete; a broad, dark fuscous band, succeeded by a brownish shade, from $\frac{2}{5}$ dorsum very obliquely outwards, suddenly narrowing in disc to a fine line forming an outward projection, not reaching costa; a fine line from $\frac{4}{5}$ costa, interrupted beneath costa, and then joining median band; a whitish, dentate, subterminal line preceded by an incomplete fuscous line, and crossed by a dark fuscous, oblique streak from termen beneath apex; an interrupted, dark fuscous, terminal line; cilia whitish, with a fuscous, median line. Hindwings with termen slightly rounded, wavy; colour and markings as forewings but without basal line;

with a blackish, transverse, discal mark preceded by a straight, dark fuscous, transverse line; a fine, sinuate, postmedian line succeeded by a brownish shade; subterminal line preceded by a broad, dark fuscous line. Underside ochreous-whitish; with a dark fuscous, median spot, smaller in hindwing, and a broad terminal band becoming obsolete at tornus.

Allied to *B. lyciaria*, but abundantly distinct.

Type in Coll. Lyell.

Vic.: Emerald; in November; one specimen.

65. BOARMIA COGNATA.

Boarmia cognata Wlk., Cat. Brit. Mus., xxi., p.392. *Selidosema cognata* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.606.

Forewings with 10 and 11 coincident, free (2♂, 3♀), or connected by a bar with 9 (1♀); or, according to Mr. Meyrick, connected also with 12.

N.Q.: Stannary Hills.—Q.: Brisbane.—N.S.W.: Sydney.—Vic.: Melbourne, Gisborne.—Tasm.: Deloraine, Hobart.—S.A.: Mt. Lofty.

66. BOARMIA SYMMORPHA.

Selidosema symmorpha Turn., Trans. Roy. Soc. S. Austr., 1904, p.231.

Forewings with 10 and 11 long-stalked and free (2♂, 1♀), or coincident and free (3♀).

N.Q.: Townsville.—Q.: Gayndah, Brisbane.

67. BOARMIA LEPTODESMA.

Selidosema leptodesma Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.606.

Forewings with 10 and 11 coincident and free (1♂), or connected with 9 (1♂).

Vic.: Birchip, Sea Lake.—S.A.: Port Lincoln.—W.A.: Perth.

68. BOARMIA LUXARIA.

Hemerophila luxaria Gn., Lep., ix., p.220. *Tephrosia dispersa* Wlk., Cat. Brit. Mus. xxi., p.416. *Selidosema luxaria* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.609.

Forewings with 10 and 11 long-stalked and free (1♂), or their stalk connected with 12 by a short anastomosis (1♂, 1♀), or by a bar (1♂); according to Mr. Meyrick, 10 may be connected with 9.

N.S.W.: Sydney.—Vic.: Narracan, Lorne.

69. *BOARMIA DELOSTICHA*, n.sp.

δηλοστικός, with well-marked lines.

♀. 34 mm. Head brownish; face with a pair of fuscous dots. Palpi $1\frac{1}{4}$; brownish. Thorax brown-whitish; tegulae brown. Abdomen brown-whitish with some fuscous-brown irroration. Legs ochreous-whitish; middle tibiae and tarsi irrorated with fuscous; anterior tibiae and tarsi dark fuscous, with ochreous-whitish annulations. Forewings triangular, costa arched at base, thence nearly straight almost to apex, apex rounded, termen bowed, oblique, crenulate; 10 and 11 coincident, free (1♀); brown-whitish suffused with brownish; first line indicated by a few dark scales at edge of a basal brown patch; a broad dark fuscous line from midcosta obliquely outwards, then rather sharply angled inwards, and sinuate to $\frac{1}{3}$ dorsum; a much finer, slightly dentate, dark fuscous line from $\frac{2}{3}$ costa becoming approximated to median line below its angle, and thence running parallel with it to dorsum; an oblique, dark fuscous streak from termen beneath apex to post-median line; a slender, whitish, dentate, subterminal line cutting through subapical streak; a terminal series of dark fuscous dots; cilia brown, apices brown-whitish. Hindwings with termen gently rounded, dentate; colour as forewings, but with only two lines; first straight at $\frac{1}{4}$, second postmedian, finely dentate, somewhat sinuate. Underside brown-whitish; lines faintly indicated; costa of forewings strigulated with pale fuscous; a subterminal, pale fuscous band on forewings not reaching dorsum.

Type in Coll. Lyell.

N.Q.: Herberton, in January; one specimen, received from Mr. F. P. Dodd.

BOARMIA ZALOSCHEMA, n.sp.

ζαλοσχημος, with confused pattern.

♂. 30 mm. Head and palpi ochreous-whitish, with some fuscous scales. Antennae grey; in ♂ with moderately long pectina-

tions (5), apical $\frac{1}{10}$ simple. Thorax with a bifid posterior crest; ochreous-whitish mixed with fuscous; a brownish-fuscous line across middle of patagia. Abdomen with small lateral crests on posterior segments; ochreous-whitish mixed with fuscous, which is more pronounced along dorsum. Legs ochreous-whitish strigulated with fuscous. Forewings rather elongate-triangular, costa straight, apex rounded, termen bowed, oblique; 10 and 11 stalked; ochreous-whitish with patchy brownish suffusion and fuscous irroration; markings very confused; costa strigulated with fuscous; first and median lines not traceable; postmedian line very indistinct, but presenting two, fine, acute, fuscous dentations in middle; succeeded posteriorly by some fuscous suffusion; a fine, acutely dentate, whitish, subterminal line, preceded by some fuscous suffusion and partly outlined by fuscous scales; a terminal series of dark fuscous dots; cilia whitish mixed with fuscous. Hindwings with termen slightly rounded, obtusely dentate; whitish, with brownish strigulations best marked towards dorsum; a fuscous discal dot; a wavy postmedian line from dorsum to mid-disc; subterminal line and cilia as forewings; a dark fuscous terminal line. Underside whitish, with dark fuscous, discrete irroration, discal spots, and subapical and subtornal blotches. Type in Coll. Lyell.

W.A.: Kelmscott, in May; one specimen, received from Mr. G. F. Berthoud.

70. BOARMIA AGORÆA.

Selidosema agoræa Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.608.

Antennæ pectinated in both sexes to $\frac{5}{8}$, pectinations in ♂ 8 or 9, in ♀ 3. Forewings with 10 and 11 long-stalked and free (1♂, 1♀), or 10 connected with 9 (3♀).

N.Q.: Kuranda, near Cairns.—Q.: Bundaberg, Gayndah, Brisbane.—N.S.W.: Sydney.—Vic.: Melbourne.

71. †BOARMIA AGANOPA.

Selidosema aganopa Meyr., Proc. Linn. Soc. N. S. Wales, 1891 p.610.

W.A.: Albany.

72. †BOARMIA ADELPHODES.

Selidosema adelphodes Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.611.

W.A.: Albany.

73. †BOARMIA PALLIDISCARIA.

Selidosema pallidiscaria Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.612.

N.S.W.: Sydney.

74. BOARMIA ZASCIA.

Selidosema zascia Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.613.

Forewings with 10 and 11 long-stalked and free (1♂), or 10 connected with 9 (2♂), or with the common stalk anastomosing with 12 and 10 connected with 9 (1♂).

N.S.W.: Armidale.—Vic.: Melbourne, Beaconsfield.

My two New England examples are smaller and paler than two from Victoria.

75. BOARMIA PANCONITA, n.sp.

παγκονιτος, covered with dust.

♂♀. 32-40 mm. Head white; face blackish, lower $\frac{1}{2}$ or $\frac{2}{3}$ white (in one ♀ the face is wholly blackish). Palpi $1\frac{1}{4}$; fuscous. Antennæ blackish, the stalk and in ♂ the pectinations minutely but irregularly dotted and flecked with white; pectinations in ♂ 10, apical $\frac{1}{6}$ simple. Thorax blackish irrorated with white. Abdomen whitish, with some fuscous irroration, tending to form transverse bars on dorsum. Legs blackish, ventral surface and apices of tibiae and tarsal joints whitish; posterior pair whitish, with a few fuscous scales. Forewings triangular, costa slightly arched, apex round-pointed, termen bowed, oblique, gently crenulate; 10 and 11 long-stalked, their stalk connected by a bar with 12 (4♂), 10 and 11 coincident (4♀) and free (1♀), or connected at a point with 12 (2♀), or connected with 12 and 9 (1♀); white densely strigulated with blackish; first line represented by several blackish dots; median line represented by blackish dots, or by a broad line angulated outwards below middle; postmedian from $\frac{2}{3}$

costa, interrupted or represented by discrete dots, sharply bent inwards below middle to join median line above dorsum; sometimes a discal dot posterior to median line; subterminal partly traceable, white, finely dentate, preceded by blackish dots, which may be partly confluent; a terminal series of blackish dots; cilia whitish and blackish, variably mixed, tending to form bars. Hindwings with termen rounded, subdentate; colour as forewings but without first line, and with a terminal line; discal mark crescentic. Underside whitish, with fuscous discal spots and incomplete terminal bands; apices whitish.

The curiously speckled antennæ suggest that here protective colouration has been carried to a fine point. *

Q.: Gayndah, in September and October (Dr. Hamilton Kenny); Stanthorpe, in October and November; eight specimens. Those from the former locality have the median line on both wings thickened.

76. BOARMIA DESTINATARIA.

Gnophos destinataria Gn., Lep., ix., p.297. *Boarmia attenta* Wlk., Cat. Brit. Mus., xxi., p.393. *Tephrosia indirecta* Wlk., *op. cit.*, xxi., p.418. *T. vagaria* Wlk., *op. cit.*, xxvi., p.1542. *Selidosema destinataria* Meyr., Proc. Linn. Soc. N.S. Wales, 1891, p.613.

Antennæ of ♂ pectinated to $\frac{9}{10}$, pectinations 7; of ♀ pectinated to $\frac{5}{6}$, pectinations 3. Forewings with 10 and 11 long-stalked and free (2♂, 2♀), or 10 connected with 9 (1♂, 2♀).

N.S.W.: Ebor, Sydney, Katoomba.—Tasm.: —.

77. BOARMIA PERFECTARIA.

Tephrosia perfectaria Wlk., Cat. Brit. Mus., xxi., p.418. *Selidosema perfectaria* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.614.

Forewings with 10 and 11 long-stalked, free (1♂), or their common stalk connected by a bar with 12 and 10 connected with 2 (1♂).

N.Q.: Herberton.—Q.: Stradbroke Island, Stanthorpe.—N.S.W.: Sydney.

78. BOARMIA VIRIDARIA.

Boarmia viridaria Pagent. *Selidosema viridis* Turn., Trans. Roy. Soc. S. Austr., 1906, p.133.

Forewings with 10 and 11 long-stalked, their stalk anastomosing with 12, 10 anastomosing with 9 (1♀).

N.Q.: Kuranda, near Cairns.

79. BOARMIA EUGRAPHICA, n.sp.

εὐγραφικός, well-engraved.

♂. 28 mm. Head and palpi whitish. Antennæ grey-whitish; pectinations in ♂ very long, apical $\frac{1}{3}$ simple. Thorax whitish, a dark fuscous spot on each patagium opposite base of costa of forewing. Abdomen whitish; seven pairs of dark fuscous dots on apices of segments; tuft in ♂ large. Legs whitish; anterior and middle tibiæ and tarsi barred on dorsum with dark fuscous; posterior tibiæ in ♂ dilated. Forewings triangular, costa straight to near apex, apex rounded, termen broad, moderately oblique; 10 and 11 stalked, 10 anastomosing with 9; whitish, markings dark fuscous; two spots close to base; first line slender, crenulate, from a dot on $\frac{1}{5}$ costa to $\frac{1}{4}$ dorsum; median line slender, well-marked, from $\frac{2}{5}$ costa to mid-dorsum, bowed outwards beneath costa; a pale-centred discal dot precedes median line; postmedian line finely dentate, sinuate, from $\frac{3}{5}$ costa to $\frac{3}{5}$ dorsum; a subterminal irregular series of large dots outwardly acute, indicating a white, dentate, subterminal line; a terminal series of interneural dots; cilia whitish faintly barred with pale fuscous. Hindwings with termen rounded, crenulate; colour as forewings, but with only one dot on base of dorsum, and without first line. Under-side whitish, with fuscous discal spots, slender postmedian line, and broader subterminal line, a large, fuscous, subapical blotch on forewing, leaving a large, whitish, apical spot.

Similar to *B. perfectaria*, which, however, has different ♂ antennæ, face dark fuscous, first line running to base of dorsum, discal dots not pale-centred, abdomen with only three pairs of dark fuscous dots.

Type in Coll. Lyell.

N.A.: Port Darwin; in September; one specimen, received from Mr. F. P. Dodd.

80. *BOARMIA TÆNIOTA*, n.sp.*ταινιοτος*, banded.

♀. 28 mm. Head, thorax, and palpi grey-whitish. Antennæ grey. Abdomen whitish; third and fourth segments, except apices, fuscous-brown. Forelegs whitish, with some fuscous irroration [the others broken]. Forewings rather elongate-triangular, costa straight to near apex, apex rounded, termen bowed, oblique; 11 apparently out of 12, anastomosing with 9, 10 absent; whitish; markings fuscous-brown; some fuscous irroration along costa; a basal patch extending on costa to $\frac{1}{3}$, on dorsum to $\frac{1}{6}$, its edge obliquely rounded; median line very faintly indicated, a dark fuscous, discal dot before and touching postmedian band; a broad postmedian band, its posterior edge finely and acutely dentate; a suffused dark patch between this and termen beneath apex, and another above tornus; cilia whitish, with some pale fuscous bars beneath apex. Hindwings with termen rounded; colour as forewings, but without basal patch, and with postmedian band incompletely developed, leaving a dentate postmedian line. Underside whitish, with fuscous discal spots and a broad terminal band interrupted in middle of each wing.

Probably 10 and 11 are coincident, but their basal portion before the anastomosis with 12 is not developed.

Type in Coll. Lyell.

N.Q.: Prince of Wales Island, Torres Straits; in June; one specimen, received from Mr. H. Elgner.

81. *BOARMIA CRIMNODES*, n.sp.*κριμνωδης*, floury.

♀. 29-36 mm. Head and face white. Palpi $1\frac{1}{4}$; white partly suffused with pale fuscous. Antennæ grey. Thorax white. Abdomen white, with some grey scales. Legs white; anterior tibiae and tarsi annulated with fuscous. Forewings triangular, costa moderately arched, apex rounded, termen bowed, oblique; 10 and 11 coincident, anastomosing first with 12 and then with 8, 9 beyond 7 (3♀); white sparsely irrorated with grey; markings grey; three transverse dentate lines; first from $\frac{1}{3}$ costa

to $\frac{1}{4}$ dorsum, outwardly curved; second from costa before middle to mid-dorsum, outwardly curved, obscure or interrupted below middle; third from $\frac{2}{3}$ costa to $\frac{3}{4}$ dorsum, first outwardly oblique, then bent inwards after a double dentation in middle, finally bent downwards to dorsum, with a grey mark succeeding it towards dorsum; a grey, terminal band containing a white, dentate, subterminal line; a terminal series of fuscous dots; cilia white. Hindwings with termen strongly rounded; colour as forewings but without first line. Underside whitish, with a fuscous, discal spot on forewings, and a terminal band obsolete towards tornus on both wings.

N.Q.: Herberton; in January; three specimens, received from Mr. F. P. Dodd, of which one is in Coll. Lyell.

82. BOARMIA NYCTOPORA, n.sp.

νυκτοπορος, travelling by night.

♂♀. 44-50 mm. Head fuscous-whitish; face dark fuscous. Palpi rather long ($1\frac{1}{2}$), projecting well beyond frons; dark fuscous, lower edge ochreous-whitish. Antennæ fuscous-whitish; pectinations in ♂ fuscous, 8, apical $\frac{1}{6}$ simple. Thorax and abdomen fuscous or dark fuscous more or less mixed with ochreous-whitish. Legs whitish-ochreous more or less infuscated. Forewings broadly triangular, costa nearly straight except towards base and apex, apex obtuse, termen strongly bowed, crenulate, oblique; 10 and 11 long-stalked, 10 connected with 9 (1♀), similar but the common stalk connected by a bar with 12 (1♂); pale fuscous strigulated, and sometimes almost wholly suffused with fuscous; markings dark fuscous, an ochreous-whitish costal streak well-marked in ♂, in ♀ ill-defined; a line from $\frac{1}{4}$ costa to $\frac{1}{4}$ dorsum, angled outwards above dorsum; a minute discal dot; a line from $\frac{2}{3}$ costa to $\frac{2}{3}$ dorsum, sinuate and finely dentate; traces of a pale subterminal line preceded by fuscous dots; a terminal series of dots; cilia ochreous-whitish more or less suffused with fuscous. Hindwings with termen rounded, dentate; colour and lines as forewings; discal mark linear.

Mr. L. B. Prout identified this for me as *B. marmorata* Warr., for which I do not know the reference, but as there is already a

marmorata of Moore, this name cannot stand. The neuration of the ♂ type is abnormal but instructive; in the left forewing, 11 arises apparently from 12, and is closely applied to 10 but does not coalesce with it (apparently the vein has split); in the right forewing, the condition is more complicated, 11 arises apparently (not really) from 12, the stalk of 10 and 11 divides, 11 immediately runs into the abnormal vein, while 10 does the same some distance further on.

N.Q.: Kuranda, near Cairns, in October and November; Herberton, in January; three specimens, received from Mr. F. P. Dodd.

83. BOARMIA MACULATA.

Hypochroma maculata Luc., Proc. Linn. Soc. N.S. Wales, 1889, p.1095.

♂♀. 48 mm. Head whitish-ochreous; face with an upper and a median, transverse, fuscous bar. Palpi $1\frac{1}{2}$; whitish-ochreous externally fuscous-tinged. Antennæ fuscous towards base mixed with whitish-ochreous; in ♂ with very short pectinations ($\frac{1}{2}$), one to each segment, ending in tufts of long cilia, apical $\frac{2}{5}$ sinuate. Thorax and abdomen whitish-ochreous, greenish-tinged, with more or less brownish-fuscous suffusion. Legs whitish-ochreous more or less mixed with fuscous; anterior and posterior tarsi fuscous, with whitish annulations. Forewings triangular, costa nearly straight, apex rounded, termen slightly bowed, oblique, crenulate; 10 and 11 stalked and free (2♂, 2♀); whitish-ochreous-greenish, rather densely dotted and partly suffused with brownish-fuscous; markings more or less obsolete; sometimes a dentate, transverse line from $\frac{1}{8}$ costa to $\frac{1}{5}$ dorsum, sometimes an oblique shade from costa before middle to $\frac{1}{3}$ dorsum; a dentate, post-median line very incompletely developed; indications of a pale, dentate, subterminal line; a terminal series of dots; cilia ochreous-whitish-greenish, bases brownish-tinged. Hindwings with termen rounded, crenulate; colour as forewings. Underside ochreous-whitish, with fuscous discal spots in forewings, dots in hindwings, and broad terminal bands, leaving apex of forewings and termen of hindwings ochreous-whitish.

The antennal structure of the ♂ differs from that of any other Australian species.

N.Q.: Kuranda, near Cairns, in June and October (Dodd); Innisfail, Mackay.—Q.: Brisbane, in March (R. Illidge).

Gen. 21. *PHILOLOCHMA*.

Philolochma Turn., Proc. Linn. Soc. N. S. Wales, 1914, p.550.

Frons flat. Tongue well-developed. Palpi moderately long, porrect or slightly ascending; second joint densely clothed with rough hairs; terminal joint moderate, obtuse. Antennæ in ♂ thickened, simple, minutely ciliated. Thorax not crested, hairy beneath. Abdomen not crested. Femora slightly hairy; posterior tibiæ of ♂ somewhat dilated. Forewings in ♂ with fovea represented by a triangular patch bare of scales; 10 and 11 arising separately from cell. Hindwings normal.

An endemic development of *Cleora*, the fovea being imperfect, and the male antennæ not pectinate.

84. *PHILOLOCHMA CELÆNOCHROA*.

Philolochma celænochroa Turn., Proc. Linn. Soc. N. S. Wales, 1914, p.550.

Forewings with 10 and 11 separate, free (2♂, 2♀).

N.S.W.: Ebor.

Gen. 22. *SYNEORA*, n.g.

συνηρος, hanging together, united.

Face with a conical or rounded protuberance. Palpi moderate, porrected, rough-scaled; terminal joint very short. Antennæ in ♂ bipectinate, apex simple. Thorax with a small posterior crest; beneath hairy. Femora glabrous; posterior tibiæ of ♂ dilated, with internal groove containing a tuft of long hairs from base. Forewings in ♂ with a well-marked fovea; 11 out of 10 near base, anastomosing or connected with 12, or rarely 10 and 11 separate, 10 sometimes connected with 9. Hindwings normal.

Type, *S. mundifera* Wlk.

1. Face, blackish with a central, transverse, white line..... *silicaria*.

Face ochreous-whitish, with some fuscous scales 2.

2. Forewings with a fuscous spot on base of costa..... *lygdina*.
 Forewings without basal, costal spot..... 3.
3. Forewings with lines faintly marked, antennal pectinations of ♂ $3\frac{1}{2}$ *hemeropa*.
 Forewings with lines distinct except towards costa, ♂ pectinations over 6 4.
4. Forewings with first line scarcely oblique *emmelodes*.
 Forewings with first line strongly oblique 5.
5. Forewings with first line from $\frac{1}{8}$ dorsum *mundifera*.
 Forewings with first line from $\frac{1}{3}$ dorsum *stricata*.

85. †SYNEORA SILICARIA.

Hemerophila silicaria Gn., Lep., ix., p.220. *Selidosema silicaria* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.598.

I have seen only the British Museum examples, and noted that they were of a fine species distinct from *S. mundifera*, the face blackish, with a central, transverse, white line.

86. SYNEORA MUNDIFERA.

Hemerophila mundifera Wlk., Cat. Brit. Mus., xxi., p.322. *Boarmia disrupta* Wlk., op. cit., xxi., p.391. (?) *Hemerophila excursaria* Wlk., op. cit., xxvi., p.1532. *Tephrosia scitiferata* Wlk., Char. Undesc. Lep., p.77.

Frons projecting slightly, rounded. Antennal pectinations of ♂ 7. Forewings with 10 and 11 short-stalked; 11 then strongly anastomosing with 12, 10 connected with 9 (2♂). In one of these, the short portion of vein 11 between 10 and 12 is feebly developed on one side; on the other, it is not traceable; thus the neuration of the abnormal side is indistinguishable from that of *Boarmia*, Text-fig.7, but is structurally and etiologically different.

Vic.: Melbourne.—Tasm.: Strahan.

87. SYNEORA EMMELODES.

Scioglyptis emmelodes Turn., Trans. Roy. Soc. S. Austr., 1904, p.232.

Forewings with 11 out of 10 near origin, connected, after bifurcation, with 12 by a short bar (1♂).

Q.: Brisbane, in August.

88. SYNEORA STRIXATA.

Phibalapteryx strixata Wlk., Cat. Brit. Mus., xxv., p.1340.
Selidosema cheleuta Meyr., Proc. Linn. Soc. N. S. Wales, 1891,
 p.598.

Frons with a strong, rounded projection. Forewings with 11
 out of 10 near base, anastomosing strongly with 12 (1♂).

Vic.: Melbourne.

89. †SYNEORA HEMEROPA.

Scioglyptis hemeropa Meyr., Proc. Linn. Soc. N. S. Wales,
 1891, p.594.

N.S.W.: Newcastle, Sydney.—Vic.: Melbourne.

90. SYNEORA LYGDINA, n.sp.

λυγδινος, like marble.

♀. 32 mm. Head ochreous-whitish; with an acute, wedge-shaped, frontal process. Palpi rather long (2); ochreous-whitish with some fuscous irroration. Thorax with a small, bifid, posterior crest; ochreous-whitish. Abdomen ochreous-whitish. Legs whitish; anterior tibiæ and tarsi fuscous, with whitish annulations. Forewings triangular, costa gently arched, apex rounded, termen bowed, moderately oblique, wavy; 10 and 11 separate; whitish; lines obsolete; a fuscous spot on base of costa; a few fuscous scales or dots on costa; a few fuscous scales beneath costa at $\frac{1}{4}$ representing first line; traces of a fuscous line from termen beneath apex to before tornus, including a double, dark fuscous spot near apex; cilia white. Hindwings with termen rounded; colour and subterminal fuscous line as forewings, but without defined spot; traces of a fuscous, median, discal dot. Underside whitish; forewings with a fuscous, subapical blotch; hindwings with a fuscous, subterminal band becoming obsolete towards tornus.

Possibly the ♂ may show more defined markings.

Type in Coll. Lyell.

W.A.: Waroona; in September; one specimen, received from Mr. G. F. Berthoud,

Gen. 23. PSILOSTICHA.

Psilosticha Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.624.

A development of *Cleora*, with the neuration of *Syneora*, but the ♂ antennæ are simple.

91. PSILOSTICHA MACTARIA.

Tephrosia mactaria Gn., Lep., ix., p.270. *Boarmia attacta* Wlk., Cat. Brit. Mus., xxi., p.392. *Tephrosia integraria* Wlk., op. cit., xxi., p.420. *T. absorpta* Wlk., op. cit., xxi., p.420. *Psilosticha mactaria* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.624.

I have only one example, a ♂, in which 11 appears to rise from 10 near base and immediately run into 12.

N.S.W.: Sydney.—Vic.: Melbourne.—Tasm.: George's Bay.

Gen. 24. AMBLYCHIA.

Amblychia Gn., Lep., ix., p.214; Hmps., Moths Ind., iii., p.241.

Tongue well-developed. Palpi moderate, upturned, closely appressed to frons, thickened in front with densely appressed hairs; terminal joint short, concealed. Antennæ in ♂ bipectinate, extreme apex simple. Thorax and abdomen not crested; thorax hairy beneath. Femora glabrous; posterior tibiæ in ♂ sometimes dilated. Forewings in ♂ with fovea, 10 and 11 separate or short-stalked, 11 sometimes anastomosing with 12, 10 sometimes connected with 9. Hindwings very long; neuration normal.

Type, *A. angeronaria* Gn. The two species differ somewhat in shape of wing, but I see no ground for generic separation. The genus *Elphos* Gn., (Lep., ix., p.285; Hmps., Moths Ind., iii., p.249. Type, *E. hymenaria* Gn.) appears to differ in vein 10 arising out of 9.

1. Hindwings angled and produced on vein 4..... *angeronaria*.
Hindwings with termen rounded, subdentate..... *subrubida*.

92. AMBLYCHIA ANGERONARIA.

Amblychia angeronaria Gn., Lep., ix., p.215, Pl. iv., f.9; Hmps., Moths Ind., iii., p.242.

♀. 88mm. Head and palpi brown. Antennæ fuscous. Thorax

brown. Abdomen brownish-ochreous. Legs brown-whitish irrorated with fuscous. Forewings broadly triangular, costa gently arched, more strongly towards apex, apex acute, termen sinuate beneath apex, then bowed, slightly oblique; 10 and 11 from cell, not anastomosing (1♀); reddish-brown with minute fuscous strigulæ; suffused with whitish along costa to $\frac{3}{4}$; a rounded, dentate, fuscous line from $\frac{1}{4}$ costa to $\frac{1}{4}$ dorsum, preceded by a white spot below middle; a fuscous, subcostal, discal spot before middle; median line faintly indicated; a nearly straight, broad, fuscous line from $\frac{3}{4}$ costa to tornus; a series of white lunules on anterior margin of this line to vein 2, connected by a sinuate, white line with $\frac{2}{3}$ termen; a triangular, white blotch on costa before apex, giving off a faintly marked, strongly dentate, subterminal line, which soon becomes obsolete; cilia fuscous, apices brown. Hindwings rhombiform, produced on vein 4 in a strong tooth, and less strongly on veins 5 and 6; colour as forewings; a median, fuscous, discal spot at $\frac{1}{4}$; a fine, dentate, whitish, median line; a similar subterminal line, towards costa edged strongly anteriorly with fuscous. Underside similar but pale grey-brown.

N.Q.: Cape York; one specimen, in January (Coll. Lyell). Also from Java, Sumatra, Ceylon, and India.

93. AMBLYCHIA SUBRUBIDA.

Elphos subrubida Warr., Nov. Zool., 1896, p.300.

♂. 30 mm. Head and palpi fuscous. Antennæ fuscous; pectinations in ♂ 5. Apical $\frac{1}{12}$ simple. Thorax fuscous. Abdomen pale fuscous, with paired darker spots on dorsum of first four segments. Legs pale fuscous. Forewings triangular, costa moderately arched, apex round-pointed, termen bowed, oblique, crenulate; 10 and 11 short-stalked, 11 anastomosing with 12, 10 connected by a short bar with 12 (1♂); whitish densely dotted with fuscous throughout; lines fuscous; a curved, crenulate line from $\frac{1}{3}$ costa to $\frac{1}{4}$ dorsum, preceded by a parallel line; a line from costa before middle to mid-dorsum, obtusely angled above middle, containing a darker discal mark above angle; a dentate line from $\frac{2}{3}$ costa to dorsum near tornus, preceded by a parallel line, both lines obscured above dorsum; a dentate, whitish, subterminal

line, edged anteriorly with fuscous; a dark fuscous, terminal line; cilia fuscous barred with whitish. Hindwings with termen rounded, subdentate; colour as forewings but without first line. Underside of forewings whitish, much strigulated with fuscous, base and terminal area, except at apex, wholly fuscous, a blackish discal spot; of hindwings fuscous, with a large, dorsal, reddish-orange blotch extending from base to middle.

♀. 33 mm. Thorax and base of abdomen partly white. Wings white, with much fewer fuscous dots; underside of hindwings with a white, terminal band. Neuration of forewings as given above (1♀).

Q.: Brisbane; in September, one ♀; and a fine ♂ from Queensland without locality. Also from Louisiades.

Gen. 25. OSTEODES.

Osteodes Gn., Lep., x., p.177; Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.589.

Head smooth; face with a long, projecting tuft. Tongue present. Palpi rather long, porrect, rough-scaled; terminal joint short, acute, bent downwards. Antennæ of ♂ shortly bipectinate, with two pairs of pectinations to each segment. Thorax and abdomen not crested; thorax not hairy beneath. Femora glabrous. Posterior tibiæ of ♂ slightly dilated. Forewings with fovea in ♂ present; 10 and 11 short-stalked, 11 anastomosing with 12, 10 connected at a point with 9, (10 absent in exotic species). Hindwings normal.

Type, *O. procidata* Gn., from Africa.

94. OSTEODES PROCURATA.

Tephрина procurata Wlk., Cat. Brit. Mus., xxiii., p. 965. *Panagra ferritinctaria* Wlk., *op. cit.*, xxiii., p.1002. *Osteodes procurata* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.589. *Tephrinopsis plana* Warr., Nov. Zool., 1898, p.253.

Q.: Duaringa, Caloundra, Brisbane, Stradbroke Island, Coolangatta, Blackbutt, Warwick, Stanthorpe.—N.S.W.: Sydney.—S.A.: Adelaide.—Tasm.: Hobart.

Gen. 26. HETEROPTILA, n.g.

ἑτεροπτιλος, with dissimilar wings.

Frons rounded, somewhat projecting. Tongue well-developed. Palpi moderate, porrect; second joint densely hairy beneath; terminal joint very short. Antennæ of ♂ shortly bipectinate, towards apex simple. Thorax with a dense, bifid, posterior crest, beneath hairy. Femora glabrous; posterior tibiæ of ♂ dilated. Forewings with 10 and 11 separate and free, or anastomosing with each other, and then 10 with 9. Hindwings normal. Type, *Selidosema argoplaca* Meyr.

An endemic derivative of *Cleora*, distinguished by the strong, thoracic crest. From *Symmetroctena*, it differs in the separate origin of veins 10 and 11. It is remarkable that, while the fovea is large and well-developed in *H. argoplaca*, it is obsolete in the closely allied *H. xylina*. In three males of the latter, I can distinguish a shallow fovea on one side in one example only; but, on the other hand, the posterior tibiæ are abnormally dilated so as to be almost club-shaped. The usual neuration of *H. xylina* is very exceptional.

1. Underside of fore- and hindwings with an apical, whitish spot *argoplaca*.
 Underside of fore- and hindwings without an apical, whitish spot *xylina*.

95. HETEROPTILA ARGOPLACA.

Selidosema argoplaca Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.615.

Antennal pectinations of ♂ $2\frac{1}{2}$, apical $\frac{2}{5}$ simple. Forewings with 10 and 11 separate, not anastomosing (5♂, 4♀); 10 frequently runs very close to 9, and, according to Mr. Meyrick, the two may be connected.

N.Q.: Stannary Hills.—Q.: Eidsvold, Caloundra, Brisbane.—N.S.W.: Sydney.—Vic.: Birchip.—S.A.: Quorn.

96. HETEROPTILA XYLINA, n.sp.

ξύλινος, wooden.

♂♀. 32-38 mm. Head fuscous. Palpi fuscous mixed with whitish. Antennæ fuscous; in ♂ shortly bipectinate ($1\frac{1}{2}$), apical $\frac{1}{3}$ simple. Thorax fuscous, with some ochreous-whitish scales.

Abdomen ochreous-whitish; bases of segments fuscous. Legs whitish irrorated with fuscous; tarsi fuscous annulated with whitish; posterior tibiæ of ♂ strongly dilated. Forewings with costa nearly straight, apex round-pointed, termen bowed, oblique; 10 and 11 separate at origin, then anastomosing, and 10 anastomosing with 9 (2♂, 3♀), 10 and 11 separate, not anastomosing (1♂); ochreous-whitish densely striated with fuscous throughout; a wavy blackish line from $\frac{2}{5}$ costa to $\frac{2}{3}$ dorsum; a dark fuscous discal spot, sometimes pale-centred, connected with midcosta; a blackish line from $\frac{2}{5}$ costa, at first transverse and wavy, then curved inwards, and again outwards to $\frac{2}{3}$ dorsum; a thick, inwardly oblique, short streak from costa before apex; an interrupted, fuscous, terminal line; cilia whitish obscurely barred with fuscous. Hindwings with termen gently rounded; whitish with a few fuscous strigulæ; a fuscous, discal spot preceded by an incomplete, fuscous, terminal line; a broad, dark fuscous, terminal band containing some whitish striæ towards tornus; cilia as forewings. Underside whitish; forewings with discal spot and apical blotch fuscous; hindwings as on upper surface.

Very similar to the preceding, but the lines on forewings are better marked, ♂ antennal pectinations shorter, ♂ posterior tibiæ more strongly dilated, and readily distinguished from it by the underside.

N.Q.: Townsville.—Q: Brisbane.

Gen. 27. CLEORA.

Cleora Curtis, Brit. Ent., p.88. *Alcis* Curtis, *op. cit.*, p.113.

Face flat, with anterior tuft of hairs. Tongue well-developed. Palpi moderately long, porrect or somewhat ascending, densely hairy beneath; terminal joint short, obtuse. Antennæ of ♂ bipectinate, towards apex simple. Thorax not crested, hairy beneath. Femora glabrous; posterior tibiæ of ♂ often dilated, with internal groove and tuft. Forewings of ♂ with well-marked fovea; 10 and 11 arising separately from cell, or very rarely 11 out of 10 near origin, 11 sometimes connected with 12, and 10 with 9. Hindwings normal.

Type, *C. cinctaria* Schiff., from Europe. This genus is more

commonly known as *Alcis*, of which the type is *repandata* Linn., from Europe.

1. Forewings with 10 out of 11 near origin *bathyscia*.
Forewings with 10 and 11 separate 2.
2. Male with apical $\frac{1}{6}$ of antennæ simple 3.
Male with apical $\frac{2}{3}$ or more of antennæ simple 4.
3. Forewings with a dark streak from termen beneath apex *euboliaria*.
Forewings without subapical streak *præcisa*.
4. Wings with discal marks dot-like, not pale-centred *biteniaria*.
Wings with discal marks pale-centred, or large and spot-like, rarely obsolete 5.
5. Forewings with postmedian line with one or two large teeth only 6.
Forewings with postmedian line finely dentate 7.
6. Discal spot of forewings obscure and connected with postmedian line *callicrossa*.
Discal spot of forewings distinctly marked, and separate from postmedian line *perlepidaria*.
7. Forewings with subterminal line preceded by a continuous series of fuscous spots, female antennæ pectinate *pupillata*.
Forewings without a continuous series of fuscous spots preceding subterminal line, female antennæ simple ... 8.
8. Postmedian lines of both wings nearly straight *inflexaria*.
Postmedian line of forewings with supramedian, of hindwings with median projecting curve 9.
9. Wings with minute, scattered, fuscous strigulæ ... *acaciaria*.
Wings without strigulæ except on costa of forewings... 10.
10. Wings more or less dusky, with thick postmedian lines *compactaria*.
Wings paler, with fine postmedian lines 11.
11. Wings whitish, antemedian line of forewings slightly oblique *illustraria*.
Wings grey, antemedian line of forewings strongly oblique *displicata*.

97. CLEORA BATHYSCIA, n.sp.

βαθυσκίος, deep-shaded.

♀. 28 mm. Head, thorax, and abdomen whitish irrorated with dark fuscous. Palpi $1\frac{1}{4}$; whitish irrorated with dark fuscous. Antennæ grey-whitish mixed with fuscous. Legs whitish irrorated dorsally with fuscous. Forewings triangular, costa nearly straight except near base and apex, apex round-pointed, termen bowed, oblique; 10 and 11 short-stalked,

11 soon after origin running into 12 (1♀): whitish irrorated and terminal area thickly shaded with fuscous; markings dark fuscous; an outwardly curved line from $\frac{1}{4}$ costa to $\frac{1}{4}$ dorsum; a discal dot beneath costa before middle; a dot on midcosta; post-median line well-marked, slightly dentate, from $\frac{2}{3}$ costa first inwards, then turned outwards, forming an obtuse prominence, then bent inwards and strongly oblique to mid-dorsum; a fine, whitish, dentate, subterminal line preceded and followed by fuscous suffusion; a terminal series of dots; cilia grey, apices whitish, a median whitish line barred with fuscous. Hindwings with termen rounded, crenulate; colour as forewings. Under-side grey-whitish, with fuscous discal dots, and a broad terminal band; apex of forewings whitish.

Q.: Brisbane; in April; one specimen.

98. CLEORA EUBOLIARIA.

Tephrosia euboliaria Wlk., Cat. Brit. Mus., xxi., p.419. *Scotosia fractata* Wlk., op. cit., xxv., p.1359. *Selidosema euboliaria* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.615.

Forewings with 10 and 11 separate, free (1♂).

W.A.: Perth, Geraldton.

99. CLEORA PRÆCISA, n.sp.

præcisus, steep, abrupt.

♂♀. 38 mm. Head whitish finely mixed with grey; face, except lower edge, dark fuscous. Palpi ochreous-whitish mixed with fuscous. Antennæ grey; basal joint in ♂ whitish; pectinations in ♂ moderate (5), apical $\frac{1}{6}$ simple. Thorax grey irrorated with whitish. Abdomen whitish with some fuscous irroration towards base. Legs grey; posterior pair whitish. Forewings elongate-triangular, costa straight to near apex, then strongly arched, apex obtuse, termen bowed, wavy, strongly oblique; 10 and 11 separate, 11 sometimes anastomosing with 12; grey-whitish suffused with grey except on median area, with sparse fuscous irroration; a very oblique, blackish line from $\frac{1}{6}$ dorsum towards, but not reaching, midcosta; a fine fuscous line from $\frac{2}{5}$ dorsum parallel to preceding, not reaching costa; a twice sinuate blackish line from $\frac{3}{5}$ dorsum towards, but not reaching, apex;

followed by a fuscous shade, which is prolonged to termen beneath apex; a pale, wavy, subterminal line; a dark fuscous, terminal line; cilia whitish, with a fuscous line before middle. Hindwings with termen rounded, wavy; colour as forewings but without basal line. Underside whitish; dorsum of hindwings in ♂ suffused with ochreous; fuscous discal dots and terminal bands more or less developed.

In structure, this species resembles *C. euboliaria*.

Type in Coll. Lyell.

Vic.: Melbourne; two specimens.

100. CLEORA BITÆNIARIA.

Boarmia bitæniaria Le Guill., Rev. Zool., 1841, p.257; Gn., Lep., ix., p.249, Pl. iii., f.1. *Gastrina(?) erebina* Wlk., Cat. Brit. Mus., xxi., p.326. *Selidosema bitæniaria* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.616.

Forewings with 10 and 11 separate, not anastomosing (1♀), 10 connected with 9 (1♀).

Q.: Brisbane.—Vic.: Melbourne.—Tasm.: Campbelltown, Hobart.

101. CLEORA CALLICROSSA.

Boarmia callicrossa Meyr., Trans. Ent. Soc., 1889, p.498.

This species is, no doubt, variable. I have two examples, as to whose identification I am fairly certain. Good points of distinction are the rather narrow forewings, with long and strongly oblique termen; and also (though not mentioned by Meyrick) the absence of whitish spots on apices of wings on undersurface. Forewings with 10 and 11 separate, not anastomosing (1♂, 1♀).

N.Q.: Thursday Island. Also from New Guinea.

102. CLEORA PERLEPIDARIA.

Chogada perlepidaria Warr., Nov. Zool., 1900, p.112.

♂. 36 mm. Head whitish, with some fuscous scales between antennæ; face and palpi brown. Antennæ fuscous, towards base whitish; antennal pectinations in ♂ very long, apical $\frac{1}{2}$ simple. Thorax whitish, tegulæ, except at bases, and a posterior spot brown; patagia pale grey. Abdomen whitish with fus-

cous suffusion. Legs dark fuscous with whitish annulations; posterior pair whitish, with some fuscous irroration; posterior tibiæ in ♂ dilated, with internal groove and tuft. Forewings with costa straight to near apex, apex round-pointed, termen bowed, oblique, crenulate; 10 and 11 separate, not anastomosing (1♂); whitish, with tips of scales lustrous white, some brownish suffusion; some fine, brownish, costal strigulæ; first line obliquely curved from $\frac{1}{4}$ costa to $\frac{1}{5}$ dorsum, dark fuscous, preceded by a parallel brown line; discal spot rather large, white, narrowly edged with dark fuscous, connected with costa by a brown spot, and with mid-dorsum by a fine, brown, strongly dentate line; postmedian line dark fuscous, from $\frac{2}{3}$ costa to $\frac{2}{3}$ dorsum, with a strong outward tooth on vein 5, and a slighter tooth on vein 2, followed by a parallel brown line; subterminal whitish, indistinct, preceded by an interrupted, dentate, fuscous line, and followed by a brown suffusion; an interrupted, fuscous, terminal line; cilia whitish, with an obscure, brown, median line and fuscous bars. Hindwings with termen strongly rounded, crenulate; colour as forewings but without first line, median line straight, postmedian line once angled on vein 4. Underside grey-whitish, with lines and subapical blotches obscurely marked; discal spot of forewings dark fuscous.

N.Q.: Kuranda, near Cairns, in May; Innisfail.

103. CLEORA PUPILLATA.

Boarmia pupillata Wlk., Cat. Brit. Mus., xxi., p.491. *Ophthalmodes pupillata* Swin., Cat. Oxf. Mus., ii., p.285, Pl. v., f.2. *Carecomotis perfumosa* Warr., Nov. Zool., 1896, p.402.

♂♀. 38-44 mm. Head, palpi, and thorax grey, sometimes ochreous-tinged. Antennæ fuscous; in ♂ with very long pectinations, which become twisted and distorted when dried; apical $\frac{2}{5}$ simple; in ♀ with similar but shorter pectinations to about middle. Abdomen grey mixed with whitish, sometimes ochreous-tinged, bases of segments fuscous. Legs grey-whitish; anterior pair fuscous. Forewings rather narrow and elongate, costa straight to near apex, then strongly arched, apex rounded, termen bowed, oblique; 10 and 11 separate, not anastomosing

(5♂, 3♀), 10 connected with 9 (1♂); whitish partly suffused with grey, sometimes ochreous-tinged; some fuscous dots on costa; two basal fuscous dots succeeded by a subbasal dot; lines fuscous or dark fuscous, finely dentate; first from $\frac{1}{4}$ costa to $\frac{1}{4}$ dorsum, curved first outwardly then inwardly; a median line sometimes ill-defined, interrupted by a fuscous, pale-centred, discal spot; postmedian from $\frac{3}{4}$ costa to $\frac{2}{3}$ dorsum, sinuate, followed usually by a parallel grey line; a subterminal series of fuscous dots, usually well-marked; a terminal series of dark fuscous dots; cilia whitish, obscurely barred with grey. Hindwings with termen strongly rounded; colour and markings as forewings. Underside whitish, with fuscous, discal spots and subterminal blotches, obsolete towards tornus, connected with termen beneath apex, and leaving a whitish spot at apex.

N.Q.: Cape York, Cooktown, Cairns, Townsville.—Q.: Gayndah, Nambour, Brisbane. Also from Borneo.

104. CLEORA INFLEXARIA.

Boarmia inflexaria Snel. *B. epistictis* Meyr., Trans. Ent. Soc., 1889, p.499. *Selidosema epistictis* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.619.

This species is best distinguished by the form of the postmedian lines of both wings, which are much straighter than in allied species. It varies much in the development of the median lines in both wings. These may be very fine, or even obsolete, but are often thickened to a marked degree. I have one ♀ in which the whole median area of the forewings, and the median and basal areas of the hindwings, are densely irrorated with blackish. Forewings with 10 and 11 separate, not anastomosing (5♂, 6♀).

N.A.: Melville Island.—N.Q.: Cairns, Atherton, Townsville.—Q.: Bundaberg, Gayndah, Brisbane, Stradbroke Island. Also from Lord Howe Island, New Guinea, and Malay Peninsula.

105. CLEORA ACACIARIA.

(?) *Boarmia acaciaria* Bdv., Faun. Madag., p.116, Pl. xvi., f.4; Hmps., Moths Ind., iii., p.264, f.137; *nec* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.617.

♂♀. 45-50 mm. Male with apical $\frac{2}{5}$ of antennæ simple. Wings with groundcolour white, in ♂ more or less suffused with ochreous, with generally scattered, small, transverse, fuscous strigulations, postmedian lines with strongly marked projections; 10 and 11 separate, not anastomosing (4♂, 4♀).

This is probably Boisduval's species, and has a wide distribution. I have one ♂ in which the median area of both wings is suffused with fuscous.

Q.: Gayndah, Brisbane. Also from Java, Ceylon, India, and Africa.

106. CLEORA COMPACTARIA.

Boarmia compactaria Wlk., Cat. Brit. Mus., xxvi., p. 1538. *Selidosema acaciaria* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p. 617 (? Bdv).

This species, although closely allied to the preceding, appears to be readily distinguishable. It is considerably smaller in size, and lacks the transverse strigulations except towards costa of forewings. The dark bars across face, sometimes very distinct, are not invariably present. Forewings with 10 and 11 separate, not anastomosing (6♂); according to Meyrick, 10 may be connected with 9, and 11 with 10; the latter anastomosis is so unusual as to need confirmation.

N.Q.: Townsville.— Q.: Bundaberg, Brisbane.— N.S.W.: Newcastle.— W.A.: Geraldton. Also from Borneo and Malay Peninsula.

107. CLEORA ILLUSTRARIA.

Boarmia illustraria Wlk., Cat. Brit. Mus., xxvi., p. 1539. *Selidosema illustraria* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p. 618.

♂♀. 36-43 mm. Much whiter than the preceding species, and usually, at least in the ♂, with more or less reddish-ochreous suffusion. Certainly much care is needed in distinguishing individual specimens from *C. compactaria* and *C. displicata*, but examination of good series makes me confident of their distinctness. Male with apical $\frac{2}{5}$ of antennæ simple. Forewings with 10 and 11 separate, not anastomosing (7♂, 11♀), 10 connected

with 9 (1♀). A ♂ from Port Darwin is much smaller than the average (28 mm.). An aberration of the ♀, with a strong, black, median line on both wings, is occasionally seen; in this form, the other markings may be largely obsolete.

N.A.: Port Darwin.—N.Q.: Cairns, Ingham, Townsville.—Q.: Gayndah, Brisbane, Stradbroke Island.

108. CLEORA DISPLICATA.

Boarmia displicata Wlk., Cat. Brit. Mus., xxi., p.389.

♂♀. 32-45 mm. Wings uniformly suffused with grey. The postmedian line of hindwings is sinuate, and less projecting than in *C. illustraria*, and the antemedian line is more strongly oblique. Male with apical $\frac{2}{3}$ of antennæ simple. Forewings with 10 and 11 separate, not anastomosing (6♂, 6♀), 11 connected with 12 (1♂, 1♀), 11 normal at origin but obsolete soon after (1♀). This species is very uniform in colouration, and shows little variation, except in the discal spot on each wing, which is sometimes wholly dark fuscous.

N.Q.: Townsville.—Q.: Gayndah, Caloundra, Brisbane, Dalby.

Gen. 28. LOPHOSEMA, n.g.

λοφοσημος, marked with crests.

Face somewhat projecting, shortly rough-haired. Palpi moderate, porrect or slightly ascending, rough-scaled; terminal joint short. Thorax with a small, bifid, posterior crest; beneath densely hairy. Abdomen with dorsal crests on 3rd, 4th, 5th, and 6th segments. Femora glabrous. Forewings with 10 and 11 arising separately from cell and free, or 10 connected with 9. Hindwings normal.

Unfortunately, the ♂ is unknown, but I conjecture that it will have pectinated antennæ and a fovea; and that the genus is closely allied to *Cleora*, differing in the crested abdomen. It has no near relationship to *Gastrina*.

109. LOPHOSEMA CATASTICTA.

Gastrina catasticta Turn., Trans. Roy. Soc. S. Austr., 1904, p.237.

Q.: Mt. Tambourine.

Gen. 29. LYELLIANA.

Lyelliana Turn., Proc. Linn. Soc. N. S. Wales, 1916, p.252.

Face smooth, or with an anterior tuft of hairs. Tongue well-developed. Palpi rather long, porrect, shortly rough-haired; terminal joint short, concealed. Antennæ of ♂ bipectinate, apex simple. Thorax not crested, hairy beneath. Femora smooth or slightly hairy; posterior tibiæ of ♂ not dilated. Forewings oblong, base of costa very strongly arched; in ♂ with a well-marked fovea; 10 long-stalked with 9, 11 from cell, free, or connected with 12. Hindwings broader than forewings; neuration normal.

Type, *L. phæochlora* Turn. Allied, I think, to *Metrocampa*.

- | | |
|---|---------------------|
| 1. Forewings greenish | 2. |
| Forewings without greenish tinge | <i>ancyloma</i> . |
| 2. Forewings with a pale-centred, discal spot..... | <i>phæochlora</i> . |
| Discal mark of forewings dot-like, not pale-centred | <i>dryophila</i> . |

110. LYELLIANA PHÆOCHLORA.

Lyelliana phæochlora Turn., Proc. Linn. Soc. N.S. Wales, 1916, p.253.

Forewings with 11 connected with 12 by a short bar (1♂), or anastomosing with 12 (1♀).

N.S.W.: Ebor.

111. LYELLIANA DRYOPHILA, n.sp.

δρυοφιλος, a tree-lover.

♀ 38 mm. Head and palpi green-whitish. Antennæ grey. Thorax pale greenish, with an anterior, dark fuscous bar. Abdomen whitish-ochreous. Legs ochreous-whitish; anterior pair fuscous. Forewings oblong, costa very strongly arched near base, thence nearly straight, apex obtuse, termen bowed, oblique; 11 separate (1♀); green-whitish; markings dark fuscous; a blackish line from near base of costa half across wing; a thick line from bend of costa transversely to fold; a double transverse row of dots at $\frac{1}{3}$, and another from $\frac{2}{3}$ costa, sinuate and then bent outwards to dorsum before tornus; a discal dot preceding second line; some faint, fuscous strigulae beyond second line, containing an indistinct, whitish, dentate, subterminal line; a

terminal series of dots; cilia whitish. Hindwings much broader than forewings, termen rounded, indented above middle; whitish; some scarcely perceptible, postmedian dots; cilia whitish.

The type is worn.

Q.: Mt. Tambourine; in May; one specimen, received from Mr. R. Illidge.

112. *LYELLIANA ANCYLOMA*, n.sp.

ἀγκυλωμος, with curved shoulders.

♀. 46. mm. Head, palpi, and antennæ ochreous-whitish. Thorax ochreous-whitish; tegulæ, except anterior margin, dark fuscous. Abdomen pale ochreous. Legs ochreous-whitish; anterior pair infuscated. Forewings oblong, costa very strongly arched at base, thence straight to near apex, apex rounded-rectangular, termen bowed, slightly oblique; ochreous-whitish; costa strigulated with fuscous; a dark fuscous spot on base of dorsum, a transverse, dark fuscous line close to base, and a dentate, oblique, dark fuscous line shortly beyond this; a double row of fuscous dots from $\frac{1}{6}$ costa to $\frac{1}{3}$ dorsum; a fuscous line from $\frac{2}{5}$ costa to mid-dorsum, with two, prominent, posterior teeth, one median, one subdorsal; a double row of dark fuscous dots from $\frac{3}{4}$ costa to $\frac{3}{4}$ dorsum; a terminal series of dark fuscous dots; cilia ochreous-whitish. Hindwings with termen rounded; whitish-ochreous; a fine, indistinct, dentate, fuscous, postmedian line; cilia whitish-ochreous. Underside whitish-ochreous with obsolete markings.

Type in Coll. Lyell.

Vic.: Healesville; one specimen.

Gen. 30. *METROCAMPA*.

Metrocampa Latr., Règne Animal, p 477; Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.644, and Trans. Ent. Soc., 1892, p.111.

Face smooth or with slight tuft of hairs. Tongue well-developed. Palpi moderately long, porrect, or somewhat ascending, densely rough-haired: terminal joint very short. Antennæ of ♂ shortly bipectinate almost to apex. Thorax not crested, beneath hairy. Femora smooth or slightly hairy; posterior tibiæ of ♂ sometimes dilated, with internal groove and tuft.

Forewings in ♂ with or without fovea; 10 out of 9 anastomosing with 11 which arises separately from cell, but very often the basal part of 10 is undeveloped, so that 10 appears to be long-stalked with 11, 10 usually anastomosing with 9. Hindwings normal.

In exotic species, 11 may anastomose first with 12, then with 11. With two exceptions, the specimens I have examined appear to have 10 and 11 long-stalked; this fallacy must be noted.

113. METROCAMPA BIPLAGA.

Azelina biplaga Wlk, Char. Undesc. Lep., p.75. *Metrocampa glaucias* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.644.

Antennal pectinations of ♂ short, broad, obtuse (less than 1). Forewings in ♂ without fovea; 10 out of 9 anastomosing with 11, 10 afterwards connected with 9 (1♂), 10 apparently out of 11, anastomosing with 9 (2♂, 6♀).

Q.: Nambour, Mt. Tambourine.—N.S.W.: Sydney.—Vic.: Melbourne, Beaconsfield, Gisborne.

114. METROCAMPA ADA.

Gynopteryx ada Butl., Ann. Mag. Nat. Hist., 1882, p. 91. *Metrocampa ada* Meyr., Proc. Linn. Soc. N.S. Wales, 1891, p.645.

Forewings in ♂ with a shallow fovea; 10 apparently out of 11 and free (1♂), or anastomosing with 9 (2♂, 1♀).

N.S.W.: Sydney, Bathurst.—Vic.: Melbourne, Gisborne.—Tasm.: Hobart.

115. METROCAMPA CELÆNEPHES, n.sp.

κελαινεφης, darkly clouded.

♂. 24 mm. Head fuscous. Palpi $1\frac{1}{2}$; fuscous. Antennæ pale fuscous; pectinations in ♂ 3. Thorax and abdomen fuscous. Legs fuscous; tarsi with obscure whitish annulations; posterior pair mostly whitish; posterior tibiæ of ♂ dilated, with internal groove and tuft. Forewings triangular, costa strongly arched at base, thence slightly sinuate to apex, apex acutely dentate, termen dentate on vein 6, thence bowed and crenulate; basal half fuscous-brown, limited by a line slightly beyond middle, with an obtuse, median, posterior projection; beyond this, grey-whitish finely strigulated with pale grey; a whitish, subterminal

line faintly indicated; a dark fuscous, subapical mark; a faint, fuscous, terminal line; cilia grey-whitish. Hindwings with termen rounded, slightly crenulate; grey, with three, slightly darker, transverse lines; cilia grey-whitish. Underside pale grey; forewings with a short, whitish, transverse line from costa near apex; hindwings with a fuscous, discal dot, and obscure, antemedian and postmedian, transverse lines.

Forewings in ♂ with a small, but well-developed fovea; 10 out of 9, 11 from cell, 10 anastomosing first with 11, then with 9 (1♂). This species is interesting as illustrating the origin of *Metrocampa* (provided the Australian species are rightly referred to this genus) from the *Boarmia*-stem. In *M. ada*, the fovea is distinct though incompletely developed; in *M. biplaga*, it appears to be absent.

Q.: Mount Tambourine; in December; one specimen.

Gen. 31. HYPOCHROSIS.

Hypochrosis Gn., Lep., x., p.536; Hmps., Moths Ind., iii., p.170.

Frons flat. Tongue well-developed. Palpi moderate, porrect; second joint thickened with appressed scales. Antennæ bipectinate in both sexes, towards apex simple. Thorax not crested, beneath slightly hairy. Anterior tibiæ with a long pencil of hairs from base beneath. Posterior tibiæ with all spurs present; in ♂ not dilated. Forewings in ♂ without fovea; 10 and 11 long-stalked from cell, their common stalk joined by a bar to 12. Hindwings normal.

116. HYPOCHROSIS CHLOROSTICHA, n.sp.

χλωροστιχος, green-striped.

♂. 35 mm. Head grey-whitish; face fuscous. Palpi ochreous, terminal joint grey. Antennæ grey-whitish; pectinations in ♂ 8, apical $\frac{1}{6}$ simple. Thorax and abdomen grey, beneath ochreous. Legs ochreous; anterior and middle tibiæ and tarsi fuscous on dorsal surface. Forewings triangular, costa straight to near apex, then strongly arched, apex rounded, termen gently rounded, oblique; grey suffused with ochreous; a broad, green fascia from costa before middle obliquely outwards, not reaching costa, towards extremity dentate posteriorly; a fuscous spot on mid-

costa touching green fascia; another fuscous spot on $\frac{3}{4}$ costa; a fuscous, oblique streak from beneath apex to green fascia near dorsum; costal edge ochreous; cilia grey. Hindwings with termen rounded; colour as forewings; a transverse, green fascia before middle. Underside bright ochreous; forewings with a dark red, posterior suffusion, a fuscous blotch on dorsum connected with midcosta; fuscous spots on $\frac{3}{4}$ costa and tornus, and an oblique streak as on upperside; hindwings with a fuscous, median fascia, apical and tornal spots.

Type in Coll. Lyell.

Mr. Prout informs me that this is allied to, and may possibly be a geographical race of, *H. cryptorhodata* Wlk.

N.Q.: Cape York; one specimen.

Gen. 32. ABRAXAS.

Abraxas Leach, Edin. Encycl., ix., p.134,(1815); Meyr., Brit. Lep., p.267; Hmps., Moths Ind., iii., p.297.

Type, *A. grossulariata*, from Europe.

Face smooth. Tongue present. Antennæ of ♂ shortly laminate, ciliated in fascicles. Palpi short, slender, porrect, rough-scaled, not hairy. Thorax hairy or glabrous beneath. Femora glabrous; posterior tibiæ in ♂ dilated. Forewings in ♂ without fovea; 10 and 11 stalked, 11 running into or anastomosing with 12, or absent; 10 sometimes connected with 9.

The Australian species differ from the type only in the absence of hairiness on the underside of the thorax. The slender, short palpi are characteristic.

1. With a row of yellow spots in terminal band of both wings *flavimacula*.
Terminal band wholly fuscous..... *expectata*.

117. ABRAXAS FLAVIMACULA.

Potera flavimacula Warr., Nov. Zool., 1896, p.395. *Chooreechillum distitans* Luc., Proc. Roy. Soc. Qsld., 1901, p.73.

♂♀. 50-65 mm. Head orange, with two, posterior, dark fuscous dots, and sometimes another between antennæ. Palpi short (barely 1); dark fuscous, towards base ochreous. Antennæ dark fuscous; ciliations in ♂ 1. Thorax dark fuscous; edges of patagia, a bar behind middle, and posterior edge orange. Abdomen orange, each segment with a terminal band thicker in

middle, and two basal spots dark fuscous. Legs dark fuscous; anterior coxæ partly, middle and posterior coxæ wholly ochreous. Forewings elongate-triangular, costa gently arched, apex round-pointed, termen slightly arched, oblique; dark fuscous; 10 and 11 stalked, 11 running into 12 (2♂), similar but 10 connected by a short bar with 9 (2♂, 1♀), 11 anastomosing with 12 and 10 connected with 9 (1♂); one or two orange dots at base; a broad, postmedian, white band, not quite reaching costal edge, narrowed at costal edge and in middle, anterior edge very irregular, posterior edge strongly sinuate; a narrow, whitish, ochreous-tinged, subcostal mark beyond band; a subterminal series of whitish, ochreous-tinged spots variably developed; cilia dark fuscous. Hindwings with termen strongly rounded; colour as forewings, but white band broader and median, its anterior edge nearly straight; subterminal spots sometimes absent. Underside as upperside.

N.Q.: Cooktown, Cairns, Atherton.

118. *ABRAXAS EXPECTATA*.

Abraxas expectata Warr., Nov. Zool, 1902, p.365.

♂. 45-50 mm. Head orange, with three dark fuscous dots, two posterior and one between antennæ; face with a central, dark fuscous spot. Palpi short (barely 1); dark fuscous. Antennæ dark fuscous; ciliations in ♂ 2. Thorax orange, base and apex of patagia, a central and a posterior spot dark fuscous. Abdomen orange, with seven rows of dark fuscous spots. Legs dark fuscous; coxæ partly ochreous. Forewings broadly triangular, costa strongly arched, apex rounded, termen broad, oblique; 10 and 11 stalked, 11 running into 12, 10 connected by a short bar with 9 (3♂); dark fuscous; a large, irregularly quadrate, white blotch occupying central part on disc, but well separate from costa, on dorsum extending from $\frac{1}{5}$ to $\frac{4}{5}$; a smaller quadrate blotch between this and apex; cilia dark fuscous. Hindwings with termen strongly rounded; white; base narrowly dark fuscous; a dark fuscous, terminal band with a wavy edge rather acutely angled in middle; cilia dark fuscous. Underside similar.

N.Q.: Cairns, Herberton.

Gen. 33. PRÆSOS.

Præsos Wlk., Cat. Brit. Mus., ii., p.409 (1854). *Tigridoptera* H.-Sch., (date ?); Meyr., Proc. Linn. Soc. N.S. Wales, 1891, p.631. *Craspedosis* Butl., Proc. Zool. Soc., 1876, p.767.

Face smooth or shortly rough-haired, somewhat projecting, without tuft. Tongue well-developed. Palpi moderate, porrect or ascending; first joint with long, rough hairs; second joint thickened with smoothly appressed scales; terminal joint short. Antennæ of ♂ simple, ciliated. Thorax not crested; beneath more or less hairy. Femora smooth; posterior tibiæ of ♂ not dilated. Forewings in ♂ with fovea present, but usually imperfectly developed; 10 and 11 long-stalked or coincident, their common stalk connected by a bar with 9. Hindwings with 8 diverging from cell before middle.

Type, *P. mariana* White. Mr. Meyrick states that 10 arises out of 11 and runs into 9, and this appears sometimes to be the case; but comparison with the species in which 10 and 11 are long-stalked shows, beyond doubt, that what he has mistaken for vein 10 is merely a connecting bar. I see no reason to separate the following species. The fovea is always present, but only in *P. leucosticta* and *P. catadela* is it well-developed; in the former, it is found partly developed in the ♀ also, an unusual circumstance. In *P. mariana*, vein 12 gives off two or three, short, accessory spurs towards costa, probably only a mechanical adaptation to its large size, but comparable with the accessory, costal veinlets present in the hindwings of many *Lasiocampidæ*.

- | | |
|---|----------------------|
| 1. Both wings similarly spotted with blackish | 2. |
| Wings not spotted with blackish | 3. |
| 2. Wings with a terminal series of blackish spots | <i>matutinata</i> . |
| Wings with termen not spotted | <i>rotundata</i> . |
| 3. Hindwings yellowish, with black markings | 4. |
| Hindwings grey, with central, white blotch | <i>leucosticta</i> . |
| 4. Hindwings with base fuscous | <i>mariana</i> . |
| Hindwings with base yellow | <i>catadela</i> . |

119. PRÆSOS MATUTINATA.

Pancæthia matutinata Wlk., Cat. Brit. Mus., xxiv., p.1109. *Tigridoptera matutinata* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.632.

Antennal ciliations of ♂ $\frac{2}{3}$. Forewings with fovea in ♂ imperfectly developed; 10 and 11 coincident, connected by a bar with 9 (5♂, 2♀).

Q.: Caloundra, Brisbane, Mt. Tambourine.

120. PRÆSOS ROTUNDATA.

Tigridoptera rotundata Butl., Ent. Mo. Mag., xiv., p.108; Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.632.

Forewings with 10 and 11 coincident, connected by a bar with 9 (4♀).

N.Q.: Cairns, Innisfail, Cardwell.

121. PRÆSOS MARIANA.

Eusemia mariana White, Voy. Rattlesnake. *Præsos mariana* Wlk., Cat. Brit. Mus., ii., p.409. *Tigridoptera mariana* Meyr., Proc. Linn. Soc. N. S. Wales, 1891, p.631.

Antennal ciliations of ♂ $\frac{1}{3}$. Forewings in ♂ with fovea imperfectly developed; 10 and 11 long-stalked, their stalk connected by a bar with 9 (3♂).

N.Q.: Cape York.

122. PRÆSOS CATADELA, n.sp.

καταδηλος, very conspicuous.

♂. 48 mm. Head and thorax dark fuscous. Palpi $1\frac{1}{4}$; dark fuscous. Antennæ fuscous; ciliations in ♂ $\frac{2}{3}$. Abdomen yellow. Legs grey. Forewings triangular, costa slightly sinuate, apex rounded, termen bowed, oblique; in ♂ with a well-marked fovea, visible on upper surface; 10 and 11 long-stalked (almost coincident), their stalk connected by a bar with 9; dark fuscous; markings white; a small subcostal spot at $\frac{1}{3}$; an oval blotch reaching from beneath costa at $\frac{2}{3}$ nearly to tornus; a small subapical spot, from which a slender, interrupted, subterminal line runs to dorsum before tornus; cilia dark fuscous. Hindwings with termen rounded, slightly wavy; bright yellow, with blackish markings; a median, discal, circular spot; a postmedian fascia at $\frac{2}{3}$, interrupted above middle; three, large, subterminal spots from costa, and two from tornus, between these series a minute dot rather further from termen; a terminal line, broader towards apex, not reaching tornus; cilia on costal half of termen blackish,

on tornal half yellow. Underside similar, but with subterminal line not developed on forewing; hindwings with a broad costal streak terminating in a large apical blotch,

Very similar to *P. mariana* in colouration, but much smaller.

N.Q.: Cape York, in March; one specimen, in Coll. Lyell; taken by the late Mr. Elgner.

123. PRÆSOS LEUCOSTICTA.

Craspedosis leucosticta Warr., Nov. Zool., 1896, p.398.

♂♀. 43-52 mm. Head and palpi grey. Antennæ fuscous; ciliations in ♂ 1. Thorax grey. Abdomen yellow-ochreous, basal $\frac{1}{4}$ grey. Legs grey. Forewings elongate-triangular, costa straight to near apex, apex rounded, termen longer than dorsum, bowed, strongly oblique; 10 and 11 coincident, connected by a short bar with 9 (3♂, 4♀); grey; a transverse, white mark, its edges suffused from mid-costa across end of cell; a grey whitish, rather broad line from tornus towards $\frac{3}{4}$ costa, but lost in disc; cilia grey. Hindwings rather long, termen strongly rounded; grey; a broad, white, median band, its anterior edge straight, posterior edge with a strong, rounded, median projection; a narrow, grey-whitish fascia beyond and parallel to this; cilia grey. Underside similar.

N.Q.: Cooktown, Cairns, Herberton.

Gen. 34. EPIDESMA.

Epidesma Hb., Verz., p.176. *Milionia* Wlk., Cat. Brit. Mus., ii., p.364; Hmps., Moths Ind., iii., p.312.

Head and face smooth-scaled. Tongue well-developed. Palpi moderate, porrect; basal joint with long, spreading hairs beneath; second and terminal joints smooth-scaled. Thorax hairy beneath. Femora glabrous. Posterior tibiæ of ♂ dilated. Forewings in ♂ with a small fovea; 10 absent (coincident with 11), 11 free. Hindwings normal.

I refer this also to the *Abraxas*-group. The genus is Indo-Malayan.

124. EPIDESMA QUEENSLANDICA.

Milionia queenslandica Roths., Nov. Zool., 1895, p.464.

♂♀. 57-65 mm. Head and palpi peacock-blue, with metallic

lustre. Antennæ blackish. Thorax ochreous-brown, loose-haired. Abdomen peacock-blue, with metallic lustre; beneath blackish; tuft ochreous-brown. Legs blackish; femora and tibiæ with peacock-blue lustre. Forewings elongate-triangular, costa straight to near apex, apex rounded, termen nearly straight, oblique; 10 and 11 coincident, free (4♂, 2♀); black; base, except costal edge, ochreous-brown, a broad, red streak from base to tornus, gradually attenuated, indented before tornus; an orange fascia from midcosta to tornus, where it blends with dorsal streak; cilia black. Hindwings with termen rounded; an orange spot on tornal side of middle of disc; a few orange scales near tornus; an orange, terminal line indented or interrupted on veins; cilia orange. Underside similar, but without dorsal, red streak on forewings, and with a short, subcostal, peacock-blue streak on each wing from base.

N.Q.: Cooktown, Cairns, Innisfail.

Gen. 35. APROSITA, n.g.

ἀπροσιτος, unapproachable.

Face smooth. Tongue well-developed. Palpi rather short and stout, porrect, rough-scaled, not hairy. Antennæ of ♂ unipectinate(?), of ♀ simple. Thorax hairy beneath. Femora glabrous. Forewings with 10 and 11 coincident and free.

Probably allied to *Epidesma*. Mr. Lower describes the antennæ of the ♀ as unipectinate. This is certainly not so, and probably his specimen was a ♂. Unfortunately I have not seen that sex.

125. APROSITA MACROCOSMA.

Satraparchis(?) *macrocosma* Low., Proc. Linn. Soc. N. S. Wales, 1899, p.85.

Vic.: Gisborne, in February; one ♀ specimen found dead, impaled on a thistle-prickle (Lyell).

Gen. 36. LychnoGRAPHIA, n.g.

λυχνογραφος, brilliantly marked.

Head smooth, rounded, not projecting. Tongue well-developed. Palpi short, porrect or subascending; second joint with rough hairs beneath; terminal joint short. Antennæ of ♂

simple, minutely ciliated. Thorax without crest, beneath slightly hairy. Femora glabrous. Posterior tibiæ of ♂ dilated. Forewings of ♂ without fovea; 10 out of 7, 8, 9, 11 from cell, not anastomosing. Hindwings normal.

Type, *L. heroica*.

126. *LYCHNOGRAPHA HEROICA*, n.sp.

ἥρωϊκος.

♂. 50 mm. Head and thorax dark fuscous. Palpi reddish-ochreous, towards apex fuscous. Antennæ fuscous; in ♂ slightly laminate towards apex, ciliations minute ($\frac{1}{5}$). Abdomen dark fuscous; beneath reddish-ochreous. Legs fuscous; posterior pair, except tarsi, pale reddish-ochreous. Forewings triangular, costa gently arched, apex rounded, termen evenly bowed, slightly oblique; blackish-fuscous; two, straight, whitish-fuscous fasciæ; first from $\frac{1}{4}$ costa to dorsum just before tornus, broad on costa, gradually narrowing; second from $\frac{2}{3}$ costa to termen just above tornus, of nearly uniform breadth; cilia blackish-fuscous, on fasciæ whitish-ochreous. Hindwings rather long, termen scarcely rounded; blackish-fuscous, a triangular, bright reddish-orange blotch beneath costa before middle; a very irregular blotch of the same colour from tornus, forming a broad terminal band, which leaves tornus about middle and ends in disc beneath first blotch; its edge is irregularly indented and, towards tornus, it contains two blackish spots and some blackish strigulæ; cilia blackish-fuscous, on middle third of termen whitish-ochreous, on dorsum fuscous-brown. Underside similar.

Q.: Mt. Tambourine; in January. One example of this magnificent species was taken by Mr. R. J. Tillyard, flying by day in a deep gully beneath a waterfall.

127. *LYCHNOGRAPHA AGAURA*, n.sp.

ἀγαυρος, proud, stately.

♀. 38-40 mm. Head, palpi, and antennæ grey. Thorax grey, posteriorly whitish-grey. Abdomen ochreous. Legs pale ochreous; anterior pair grey. Forewings triangular, costa bisinuate, being arched at base, slightly concave in middle, and arched again just before apex, apex rounded, termen bowed, scarcely

oblique, slightly crenulate; fuscous-grey; markings clear white partially edged with blackish; an orange, median dot close to base, edged posteriorly with blackish, and succeeded by some whitish suffusion; an oblique, oblong, white patch from costa at $\frac{1}{3}$; a similar but less distinct patch from dorsum before middle nearly touching preceding at apex; a fascia from costa at $\frac{2}{5}$ to termen above tornus, sharply defined anteriorly, suffused posteriorly; a narrow fascia from costa before apex, sharply angulated in disc, then broadening and confluent with preceding, its anterior edge sharply defined; cilia grey. Hindwings with termen rounded, irregularly waved; bright yellow, a large, blackish, subapical blotch connected by a bar with costa near apex; some blackish scales on termen towards tornus; cilia yellow. Underside similar; but basal half of forewings yellow, apical half dark fuscous, with three, white blotches.

Type in Coll. Wyld.

N.S.W.: Sydney, in May; two specimens received from Mr. G. H. Wyld.

Gen. 37. *LAROPHYLLA*, n.g.

λαροφυλλος, with dainty wings.

Frons forming an obtuse, triangular, smooth projection. Tongue well-developed. Palpi moderately long, ascending; second joint shortly rough-haired above and beneath; terminal joint very short, obtuse. Antennæ of ♂ simple, with very minute ciliations. Thorax not crested; hairy beneath. Femora slightly hairy. Posterior tibiæ of ♂ dilated. Forewings in ♂ without fovea; dorsum with a prominent scale-tooth; 7, 8, 9, 10 stalked, 11 from cell, anastomosing with 12. Hindwings normal.

Differs from *Lychnographa* in the projecting frons, anastomosis of vein 11, and dorsal scale-tooth of forewing.

128. *LAROPHYLLA AMIMETA*, n.sp.

ἀμίμητος, inimitable.

♂. 43-45 mm. Head and thorax purple-brown. Palpi purple-fuscous, beneath white. Antennæ grey; ciliations in ♂ extremely minute. Abdomen whitish-ochreous. Legs whitish-ochreous; anterior pair suffused with fuscous on upper surface. Forewings

triangular, costa nearly straight, arched towards base and apex, apex rectangular, termen bowed, oblique, dorsum with a large, projecting, median scale-tooth; fuscous-brown usually sparsely strigulated with fuscous; dorsal edge purple-grey; sometimes with three costal blotches, ochreous-whitish reticulated with fine streaks of reddish-brown, but these are often entirely absent; first on base extending to $\frac{1}{5}$, subtriangular, projecting outwards in disc; second median, discal edge irregularly rounded; third apical, similar to second but smaller; cilia fuscous-brown. Hindwings with termen rounded; orange-yellow; a large, irregularly outlined, blackish, subapical blotch. Underside of hindwings similar; of forewings yellow, with a blackish oblique bar from $\frac{1}{3}$ costa not reaching dorsum, and a very large, blackish, subapical blotch connected with costa and termen.

Type in Coll. Wyld.

N.S.W.: Sydney, in May; one specimen, received from Mr. G. H. Wyld. Wentworth Falls, near Katoomba, in April; four specimens received from Mr. G. Lyell.



Turner, Alfred Jefferis. 1917. "Revision of Australian Lepidoptera, vi."
Proceedings of the Linnean Society of New South Wales 42, 344–390.

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